

Installation/Owner's Manual

Appliance Setup, Care and Operation

INSTALLER: Leave this manual with party responsible for use and operation.

OWNER: Retain this manual for future reference.

Contact your dealer with questions regarding installation, operation or service.

NOTICE: DO NOT discard this manual!

Lyric Series



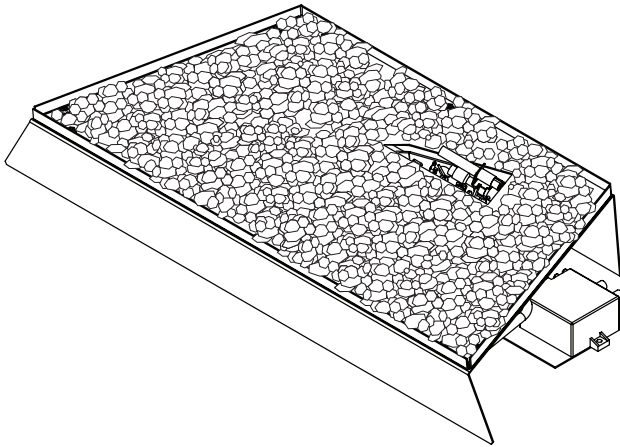
Models:

LYR18NV/PV

LYR24NV/PV

LYR30NV/PV

GAS-FIRED



▲ WARNING:

DO NOT attempt to access or change the setting of the fuel selection means.

Access to and adjustment of the fuel selection means must only be performed by a qualified service person when connecting this appliance to a specified fuel supply at the time of installation.

Change of this selector setting to other than the fuel type specified at the time of installation could damage this appliance and render it inoperable.

The installer shall replace the access cover before completing the installation and operating this appliance.

▲ WARNING:

FIRE OR EXPLOSION HAZARD

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal 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.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

- 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 Section 2, page 8.

- This appliance may be installed in an after-market, permanently located, manufactured (mobile) home, where not prohibited by local codes.
- This appliance only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

▲ Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Used to address practices not related to personal injury.

Table of Contents

Installation Standard Work Checklist 3

1 Product Specific & Important Safety Information

- A. Appliance Certification 4
- B. BTU Specifications 4
- C. High Altitude Installations 4
- D. Non-Combustible Materials Specification 4

2 Getting Started

- A. Design and Installation Considerations 5
- B. Tools and Supplies Needed 5
- C. Inspect Appliance and Components 5
- D. Check Parts 6
- ▶ E. Installation Information 6
- F. Millivolt Ignition Controls 7
- G. Pilot/ODS 7
- H. Adequate Combustion Ventilation Air 8

3 Clearances & Height Requirements

- A. Clearances and Height Requirements 9

4 Gas Information

- A. Gas Line Connection 15
- B. Millivolt Valve Controls 15
- C. Fuel Type 16
- D. Gas Pressure 16
- E. Gas Service Access 16
- F. Connect Optional Wall Switch or Thermostat 17
- G. Connect Remote Receiver 18
- H. Check System Operation 18

5 Media Placement

- A. Glass Media Placement 19
- B. Flame Appearance 20

6 Owner's Manual

- A. Congratulations 22
- B. Limited Lifetime Warranty 23

7 Important Safety & Operating Information

- A. Appliance Safety 25
- B. Clear Space Requirements 27
- C. Fuel Specifications 27
- D. Before Lighting Appliance 27

8 Product Specification Information

- A. Application Certification 28
- B. BTU Specifications 28

9 Lighting Instructions

- A. Millivolt Control Lighting Instructions 30
- B. Match Lighting Instructions 31

10 Maintenance & Service

- A. Maintenance: Frequency & Tasks 32
- B. Maintenance Tasks: Qualified Service Technician 32
- C. Burner Ignition & Operation 33
- D. Cleaning & Servicing 33

11 Troubleshooting

- A. Millivolt Control System 34

12 Service Parts & Accessories

- ▶ A. Service Parts 35
- B. Accessories 39
- C. Contact Information 40

Installation Standard Work Checklist

ATTENTION INSTALLER: Follow this Standard Work Checklist

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: _____

Date Installed: _____

Lot/Address: _____

Location of Fireplace: _____

Installer: _____

Model (circle one): L Y R 1 8 N V / P V , L Y R 2 4 N V / P V , L Y R 3 0 N V / P V

Dealer/Distributor Phone # _____

Serial #: _____



WARNING! Risk of Fire or Explosion! Failure to install appliance according to these instructions could lead to a fire or explosion.

Glass Media Install Sections 2 and 4 (Pg. 5 & 20)

Verified clearances to combustibles.
Glass Media is level and secured.
See page 8 for adequate provisions for combustion and ventilation air have been verified.

YES

IF NO, WHY?

Gas Section 4 (Pg 15)

Proper appliance for fuel type.
Leak check performed and inlet pressure verified.
Verified proper air shutter setting for installation type.

Electrical Section 4 (Pg 17)

Switch wires properly installed

Glass Media Section 5 (Pg 20-23)

All packaging and protective materials removed (inside & outside of appliance).
Glass media installed correctly.
Accessories installed properly.

Finishing Section 3 (Pg 9)

Verified all clearances meet installation manual requirements.
Mantels and wall projections comply with installation manual requirements.

Manual bag and all of its contents are removed and the engine assembly given to party responsible for use and operation.
Started appliance and verified no gas leaks exist.

Hearth & Home Technologies recommends the following:

- Photographing the installation and copying this checklist for your file.
- That this checklist remain visible at all times on the appliance until the installation is complete.

Comments: Further description of the issues, who is responsible (Installer/ Builder/ Other Trades, etc) and corrective action needed _____

Comments Communicated to party responsible _____ by _____ on _____
(Builder / Gen. Contractor/) (Installer) (Date)

➔ = Contains updated information.

1 Product Specific and Important Safety Information

A. Appliance Certification

MODEL: LYR18NV/PV, LYR24NV/PV, LYR30NV/PV
LABORATORY: Underwriters Laboratories, Inc. (UL)
TYPE: Unvented Room Heater
STANDARD: ANSI Z21.11.2-2016 (Unvented Application)
 ANSI Z21.60-2017/CSA2.26-2017 (Vented Application)

State and local codes may allow operation of this appliance in a vented configuration. Check your local codes.

This product is listed to ANSI standards for "Unvented Room Heaters" and applicable sections of "Gas Burning Heating Appliances for Manufactured Homes" and "Gas Fired Appliances for Use at High Altitude."

NOTICE: This installation must conform with local codes. In the absence of local codes you must comply with the National Fuel Gas Code, ANSI Z223.1-latest edition in the U.S.A.

NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.
 This appliance is tested and approved as either supplemental room heater or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

B. BTU Specifications

Models	Maximum Input BTU/h	Minimum Input BTU/h	Orifice
LYR18NV	28,000	19,000	#38
LYR18PV	27,000	22,000	#52
LYR24NV	37,000	25,000	1/8"
LYR24PV	36,000	28,000	#49
LRY30NV	37,000	25,000	1/8"
LRY30PV	36,000	28,000	#49

NOTE: For LP models an external regulator is required to reduce supply pressure to a maximum of 13" w.c.

GAS PRESSURES

	NATURAL	PROPANE (LP)
Inlet Minimum	5.0" w.c.	11.0" w.c.
Inlet Maximum	10.5" w.c.	13.0" w.c.
Gas Valve Manifold Pressure Setting	3.5" w.c.	10" w.c.
Pilot Regulator	3.5" w.c.	—

NATURAL GAS: An external regulator is required to reduce supply pressure to a maximum of 10½" w.c. on natural gas systems operating at higher pressure.

PROPANE/LPG: An external regulator is required to reduce supply pressure to a maximum of 13" w.c.

Millivolt Ignition Controls

The auto spark allows ignition of the pilot with a simple press of a button.

Millivolt control has four (4) positions:

OFF: All gas to the gas logs is shut off at the valve.

IGN: Valve position to light/maintain a standing pilot.

ON: Valve position to turn ON/OFF log set with remote switch/thermostat.

LOW/HI: Variable position to control flame height (heat output).

Pilot/ODS

The gas log heater is fitted with a specially designed safety pilot (ODS assembly) which senses the amount of oxygen available in the room and shuts the gas log heater off if the oxygen level begins to drop below a satisfactory level. The pilot can only be relit when adequate fresh air is available.

Thermal Generator

The millivolt gas log pilot is fitted with a millivolt (thermopile) generator to provide power for remote activation.

C. High Altitude Installations

NOTICE: If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation: Reduce input rate 4% for each 1000 feet above 2000 feet.

Check with your local gas utility to determine proper orifice size.

D. Non-Combustible Materials Specification

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

Materials that are reported as passing **ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 °C** shall be considered non-combustible materials.

2 Getting Started

A. Design and Installation Considerations

Installation **MUST** comply with local, regional, state and national codes and regulations. Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

Before installing, determine the following:

- Where burner assembly is to be installed.
- Gas supply piping.
- Whether optional accessories—devices such as a wall switch or remote control—are desired.
- Approved wood burning masonry fireplace or vent-free fireplace.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified service technician, service agency or your dealer.

B. Tools and Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

- Tape measure
- Gloves
- Voltmeter
- Manometer
- Phillips screwdriver
- Safety glasses
- Flat blade screwdriver
- Soapy water solution for gas leak testing
- Electric drill and bits (1/4 in. magnetic)
- External regulator (for propane/LPG only & 1/2 psi Natural gas system)
- Piping which complies with local codes
- Pipe sealant approved for use with propane/LPG (Resistant to sulfur compounds)
- Manual shutoff valve
- Sediment trap
- Tee joint
- Pipe wrench

C. Inspect Appliance and Components

- Carefully remove the appliance and components from the packaging.
- Report to your dealer any parts damaged in shipment.
- **Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**


WARNING! Risk of Fire or Explosion! Damaged parts could impair safe operation. DO NOT install damaged, incomplete or substitute components. Keep appliance dry.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.

Any such action may cause a fire hazard.

WARNING! Risk of Fire, Explosion or Electric Shock! DO NOT use this appliance if any part has been under water. Call a qualified service technician to inspect the appliance and to replace any part of the control system and/or gas control which has been under water.

 **WARNING: This product and the fuels used to operate this product (liquid propane or natural gas), and the products of combustion of such fuels, can expose you to chemicals including benzene, which is known to the State of California to cause cancer and reproductive harm. For more information go to: www.P65Warnings.ca.gov.**

CAUTION

Gloves are recommended when handling glass media. Pieces are sharp and jagged and may cause small cuts or splinters to hands. Always make sure glass is cool before handling

D. Check Parts

Verify contents to ensure you have received all parts. You should have the following:

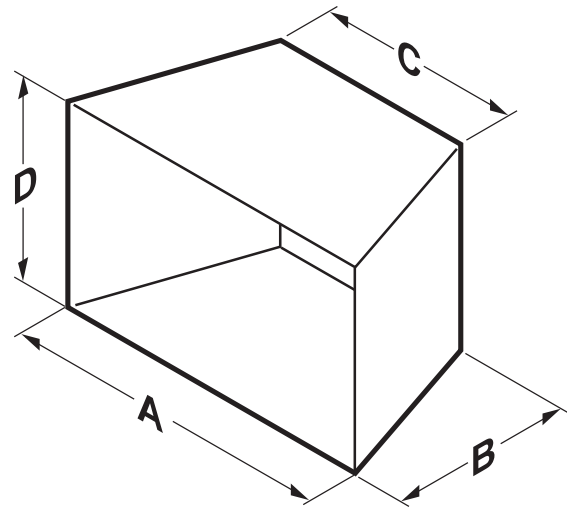
Models

- Unvented gas burner assembly
- Installation/operating instructions
- One (1) anchoring bracket
- Three (3) anchoring screws
- Two (2) bags of glass media (LYR18, LYR24)
- Three (3) bags of glass media (LYR30)

The following options may be used with the millivolt controlled heater. These options are *not* packaged with the log set.

- Hand-held remote with receiver (MV)
- Wall switch with 15' wire
- HILOKT (an accessory kit for flame adjustment from a hand held remote)

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately inform the dealer from whom you purchased the appliance. **Do not attempt to install any part of the appliance unless you have all parts in good condition.**



Dimensions for Engine

Model	A	B	C	D
LYR18	25"	11"	20"	12"
LYR24	30"	11"	24"	13"
LYR30	34"	11"	24"	13"

Figure 2.1 - Dimensions for Engine

E. Installation Information

⚠ WARNING

This appliance is for installation only in a solid-fuel burning masonry or UL127 factory-built fireplace or in listed ventless firebox enclosure. It has been design certified for these installations.

Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating it has not been tested or should not be used with unvented gas logs.

Use manufacturer's installation and clearance requirements as defined in their manual.

- ▶ This Gas-Fired Unvented Gas Log Type Room Heater is approved for installation into a CSA/ANSI Z21.91:20 listed Ventless Firebox Enclosure for Gas-Fired Unvented Gas Log Type Room Heaters, so long as the firebox hearth dimensions meet the minimum hearth dimensions listed in this manual.

Placement in Fireplace with a Restrictive Barrier

The following are guidelines for placing a Lyric burner in a fireplace that has a restrictive barrier of the fireplace for vented appliance only.

Height of Restriction (x)	Minimum Depth of Fireplace/Firebox
No Restriction	11"
0" to 3"	16"
Greater than 3"	*

*Any barrier greater than 3" placed in front of the Lyric is not recommended by the manufacturer.

NOTE: Non-combustible material such as refractory brick may be used to line the floor of the fireplace in order to raise the height of the burner in relation to a restrictive barrier. If the unit is raised, the minimum height dimension listed in the homeowner's manual must be met or exceeded.

NOTE: If the burner is equipped with a remote receiver, a restrictive barrier may reduce the battery life by increasing the ambient temperature inside the fireplace. Placement of the receiver outside of the fireplace will extend the battery life.

⚠ WARNING

Barriers such as the bottom of a glass door frame placed in front of appliance set can change the air flow characteristics of the fireplace which in turn can cause the unit to overheat and malfunction when installed as a vented burner.

⚠ WARNING

DO NOT INSTALL ANY GLASS OR BARRIERS ON A VENTLESS FIREBOX UNLESS APPROVED FOR THAT APPLIANCE AS PER THE LISTING.

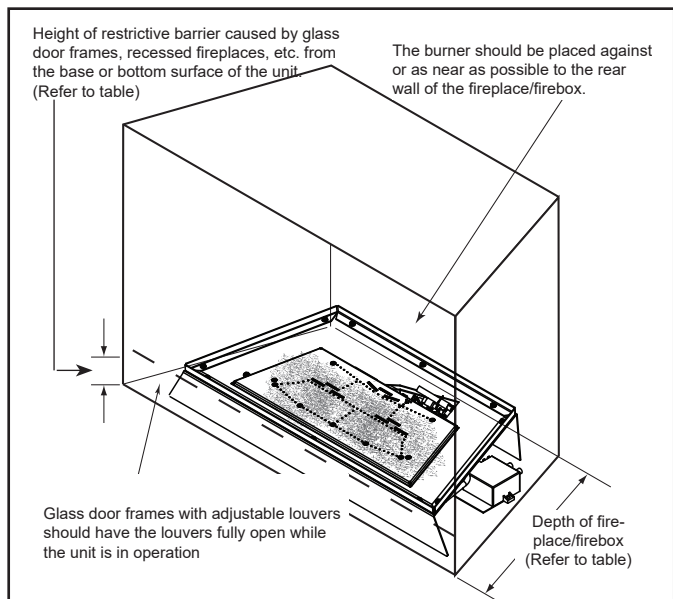


Figure 2.2 - Reference Drawing of a Lyric in an Enclosure with Glass Door or Barrier Installed

F. Millivolt Ignition Controls

Natural Gas: An external regulator is required to reduce supply pressure to a maximum of 10-1/2" w.c. on natural gas systems operating at higher pressure.

The auto spark ignitor allows ignition of the pilot without the use of matches or batteries.

Millivolt control has four (4) positions:

- OFF:** All gas to the burner is shut off at the valve.
- IGN:** Valve position to light/maintain a standing pilot.
- ON:** Valve position to turn ON/OFF burner with remote switch/thermostat.
- LOW/HI:** Variable position to control flame height (heat output).

G. Pilot/ODS

The gas heater is fitted with a specially designed safety pilot (ODS assembly) which senses the amount of oxygen available in the room and shuts the gas log heater off if the oxygen level begins to drop below a satisfactory level. The pilot can only be relit when adequate fresh air is available.

⚠ WARNING

Do not install the heater:

- Where curtains, furniture, clothing, or other flammable objects are less than 36" from the front of the heater.
- In high traffic areas.
- In windy or drafty areas.

CAUTION

Gloves are recommended when handling glass media. Pieces are sharp and jagged and may cause small cuts or splinters to hands. Always make sure glass is cool before handling

H. Adequate Combustion Ventilation Air

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

The National Fuel Gas Code, (ANSI Z223.1/NFPA54), defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour (4.8m³ per kw) of the aggregate 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 (4.8 m³ 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 a confined space.

Unusually tight construction is defined as construction where:

- Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 perm (6 x 10⁻¹¹ kg per pa/sec-m²) or less with openings gasketed or sealed, and
- Weather stripping has been added to windows and doors, and
- Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines and other openings.

The following formula can be used to determine the maximum heater rating per the definition of unconfined space:

$$\frac{\text{BTU/Hr} = (L_1 + L_2) \text{ Ft} \times (W) \text{ Ft} \times (H) \text{ Ft}}{50}$$

Consider two connecting rooms with an open area between, with the following dimensions:

$$L_1 = 15\frac{1}{2} \text{ Ft.}, L_2 = 12 \text{ Ft.}, W = 12 \text{ Ft.}, H = 8 \text{ Ft.}$$

$$\frac{\text{BTU/Hr} = (15\frac{1}{2} + 12) \times (12) \times (8)}{50}$$

If there were a door between the two rooms the calculation would be based only on the room with the heater.

$$\frac{\text{BTU/Hr} = (15\frac{1}{2}) \times (12) \times (8)}{50}$$

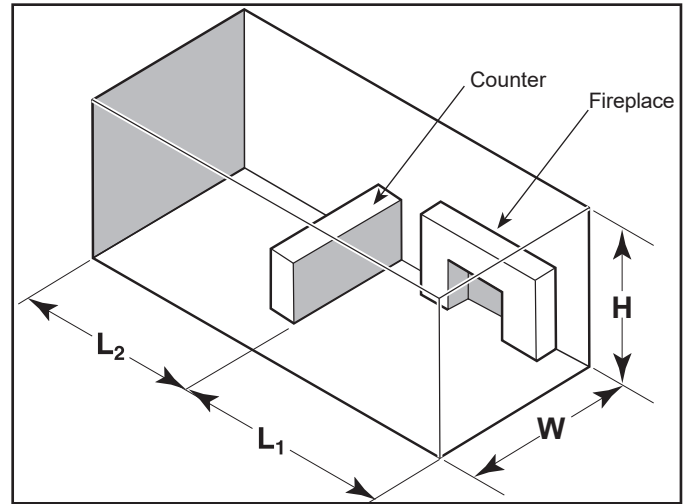


Figure 2.3

⚠ WARNING

If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.

3 Clearances and Height Requirements

⚠ WARNING

The dimensions shown in *Figures 3 through 11* and defined in the fireplace manufacturer's instructions are minimum clearances to maintain when installing this heater. Left and right clearances are determined when facing the front of the heater.

When heater is installed into a ventless firebox, minimum clearances, as specified by the ventless firebox manufacturer, must be met.

Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

Heat resistant material (minimum requirements) with no wooden mantel or other combustible projection:

To install the Lyric into a fireplace with no wooden mantel, shelf or other combustible projection above the fireplace opening, measure the heat resistant material height, according to *Figure 3.2* and **TABLE A**.

Heat resistant materials such as slate and marble must be **at least 1/2" thick**. Sheet metal should not be installed onto combustible material.

IMPORTANT: If you cannot meet these minimum clearances you must operate the heater with chimney flue damper open. Refer to "Installing Vented Applications" found on page 13.

Sidewall and ceiling clearances: The *sides* of the fireplace opening must be **at least 16"** from any combustible wall. The **ceiling** must be **at least 42"** from the top of the fireplace opening.

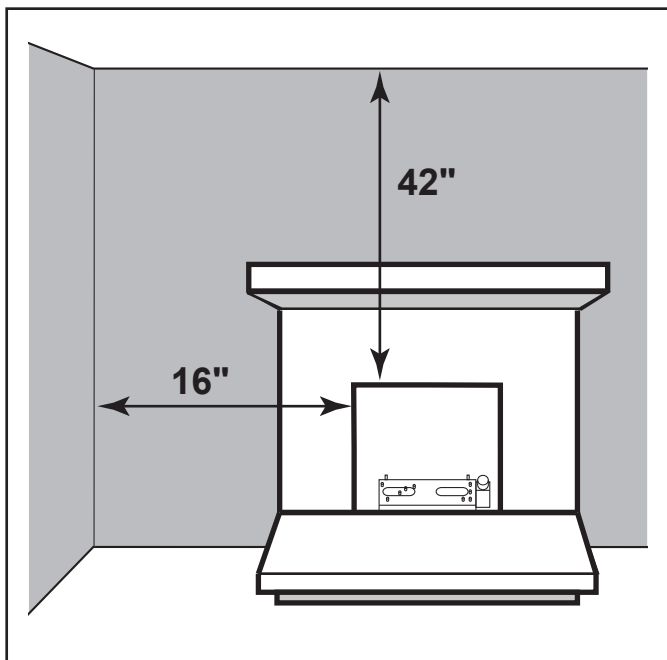


Figure 3.1 - Sidewall and Ceiling Clearances

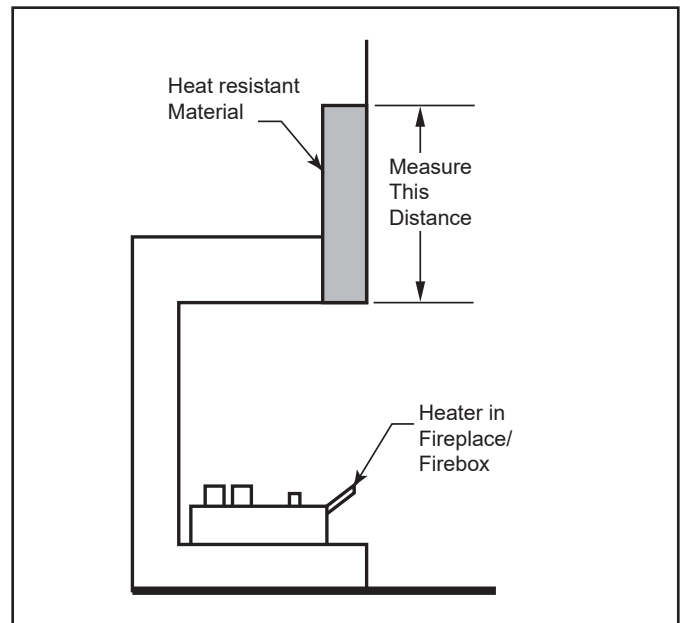


Figure 3.2 - Measure Heat Resistant Material

Table A — Heat Resistant Material Requirements with No Mantel or Combustible Projection

Heat Resistant Material Measurement	Requirements for Safe Installation	
	LXR18	LXR24 LXR30
12" or more	Hood not required	Hood not required
8" or less than 12"	Hood not required	Extend heat resistant material to 12" or install hood. <i>Figure 4</i>
Less than 8"	Extend heat resistant	Extend heat resistant material to 8" AND install hood <i>Figure 5</i> . OR Extend heat resistant material to a height of at least 12".

Heat resistant material (minimum requirements) with wooden mantel or other combustible projection:

To install the heater with a wooden mantel, shelf or other combustible projection above, first measure the heat resistant material shown in *Figure 3.3*, then refer to Table B.

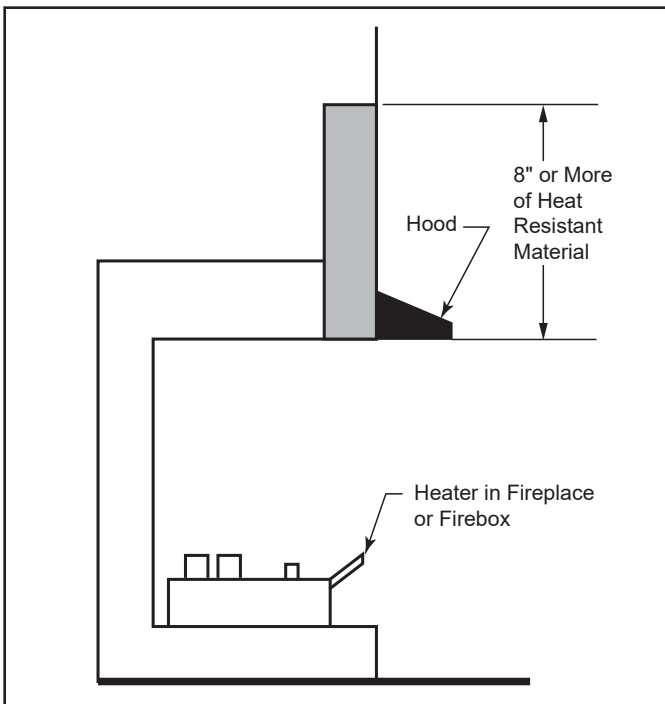


Figure 3.3 - Measuring Heat Resistant Material for Mantel

Table B - Heat Resistant Material Requirements Height and Mantel Location

Heat Resistant Material Measurement	Requirements for Safe Installation with Wooden Mantel, Shelf or other Combustible Projection	
	LYR18	LYR24 LYR30
12" or more	Hood not required. Observe profiles (side elevations) shown in <i>Figure 3.4</i> .	Hood not required. Observe profile (side elevations) shown in <i>Figure 3.6</i> .
8" or less than 12"	Install hood and observe profiles shown in <i>Figure</i> OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure</i>	Install hood and observe profiles shown in <i>Figure 3.5</i> . OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.6</i> .
Less than 8"	Extend heat resistant to at least 8", install hood and observe profiles shown in <i>Figure 3.5</i> . OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.4</i> .	Extend heat resistant material to least 8", install install hood and observe profiles shown in <i>Figure 3.5</i> . OR Extend heat resistant material to at least 12" and observe profiles shown in <i>Figure 3.4</i> .

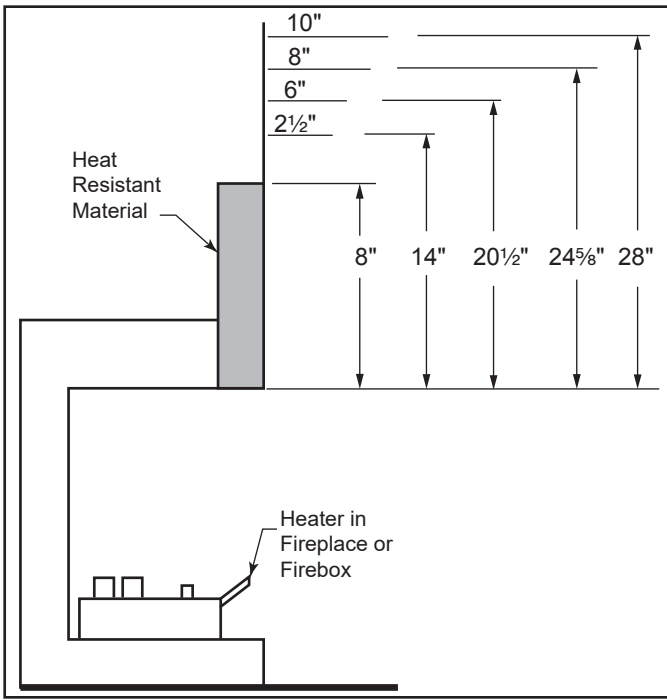


Figure 3.4 - Minimum Mantel Clearance with No Hood — LYR18

Example: A mantel may project from the wall a maximum of 2½" at a minimum of 14" above the opening, and a maximum of 6" at a minimum of 20½" above the opening.

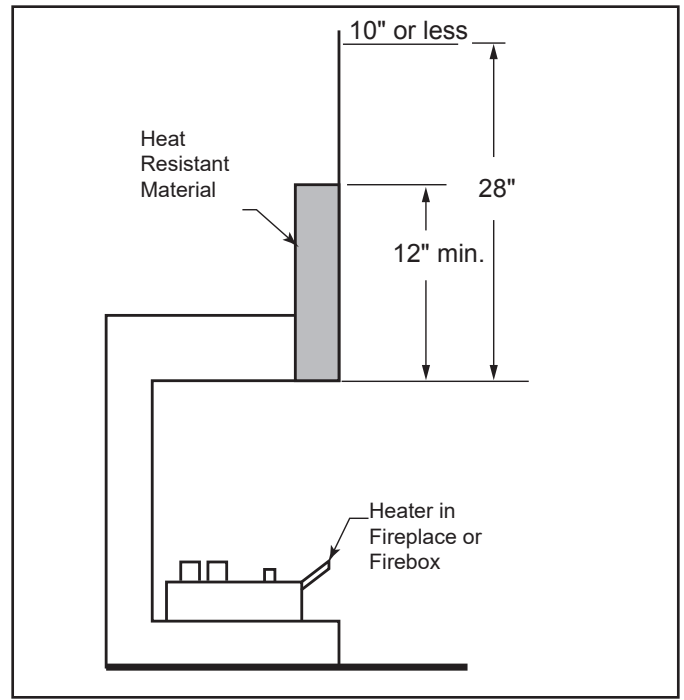


Figure 3.6 -Minimum Mantel Clearance with No Hood — LYR24/30

Example: The bottom of the mantel may project from the wall a maximum of 10" at a minimum of 28" above the opening.

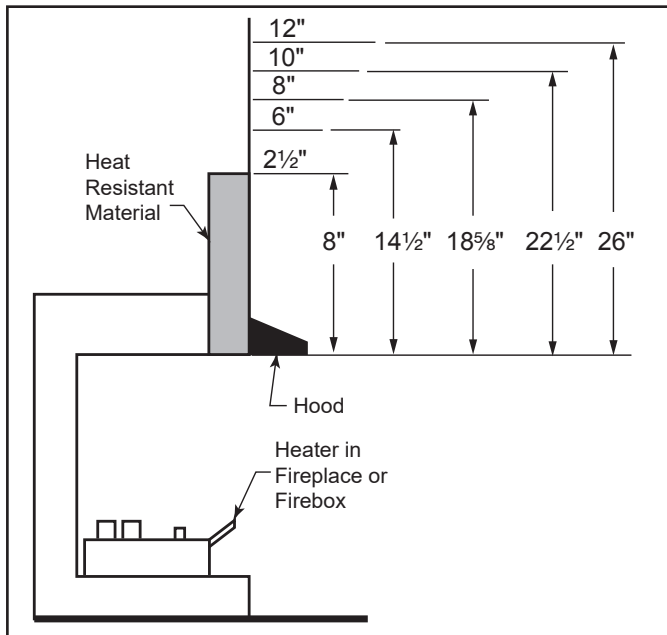


Figure 3.5 - Minimum Mantel Clearance with Hood — All Models

Example: A mantel may project from the wall a **maximum** of 2½" at a **minimum** of 8" above the opening, and a maximum of 6" at a **minimum** of 14½" above the opening.

The appliance must be installed at least 1 $\frac{3}{8}$ " above any combustible flooring material, such as carpeting or tile, which is closer than 14" to the base of the fireplace. The minimum distance must be maintained from the top surface of carpeting, tile, etc. *Figure 3.7*

OR

The appliance may be installed nearer to the floor if a minimum of 14" of noncombustible material such as slate or marble is installed between the base of the fireplace and the combustible flooring. *Figure 3.8*

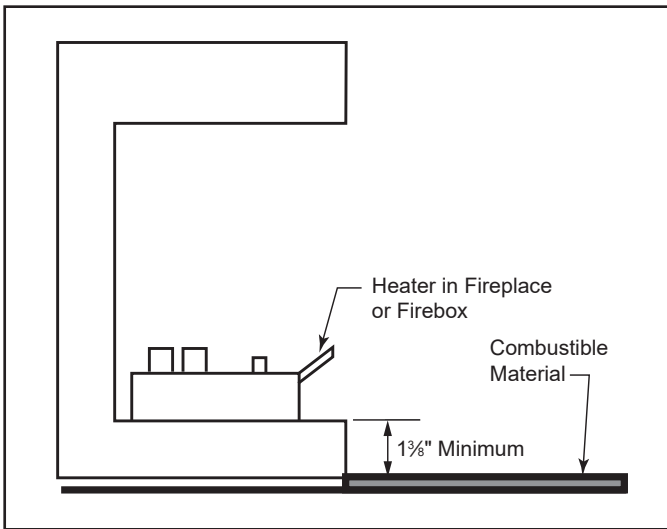


Figure 3.7 - Minimum Clearance above Combustible Flooring

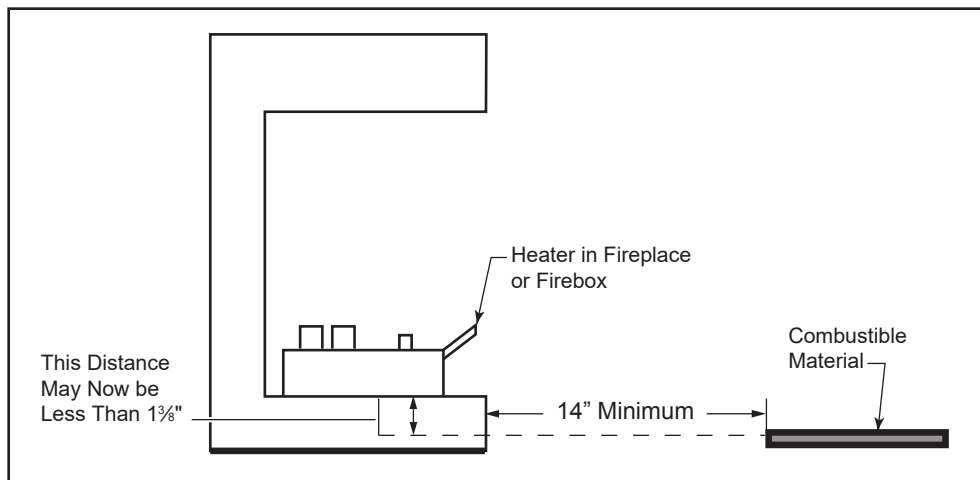


Figure 3.8 - Minimum Clearance above Combustible Flooring with Noncombustible Material Installed at Base of Fireplace

⚠ WARNING

Before installing in a solid fuel burning fireplace, The chimney flue and firebox must be cleaned of soot, creosote, ashes and loose paint by a qualified chimney cleaner.

⚠ WARNING

This appliance can be installed in a solid fuel burning fireplace (masonry fireplace or manufactured fireplace) with a working flue and constructed of non combustible material or in a vent-free firebox.

Exception: DO NOT install this appliance in a factory-built fireplace that includes instructions stating that it has not been tested or should not be used with unvented gas logs. This appliance may be installed as a vented burner.

⚠ WARNING

The use of thermostat is not allowed on vented burner application. It is only allowed on unvented room heater classification.

Before Fully Installing the Unit:

- Turn **OFF** the gas supply to the fireplace or firebox.
- Seal any fresh air vents and/or ash clean-out doors located on the floor or wall of the fireplace. If left unsealed, drafting may cause pilot outage or sooting. Use a heat resistant sealant. **Do not seal the chimney flue damper.**

Vented Application Installations

Millivolt controlled gas burner may be installed as a vented decorative burner in compliance with ANSI Z21.60 and National Fuel Gas Code, Section 6.6. **(Since, the gas burners are operated with the damper open, non-combustible material and minimum mantel requirements do not apply.)**

NOTE: The use of a thermostat is prohibited in vented installations.

Before installing the appliance:

- Turn off gas supply to fireplace or firebox.
- Have the fireplace floor and chimney professionally cleaned to remove ashes, soot, creosote or other obstructions. Have this cleaning performed annually after installation.
- Seal any fresh air vents or ash clean-out doors located on floor or wall of fireplace. If not, drafting may cause pilot outage or sooting. Use a heat-resistant sealant.

Install and operate the appliance as directed in this manual.

⚠ WARNING

For installation in a solid-fuel burning fireplace only. The fireplace chimney must have a permanent vent opening to atmosphere of not less than 29 square inches, or as determined from the manufacturer's installation instructions.

Damper stop installation:

A damper stop must be provided with the unit. Contact your dealer to obtain one. The damper stop must be installed as shown in *Figure 3.9* to prevent full closure of the fireplace damper blade and provide a minimum 29 square inch flue opening.

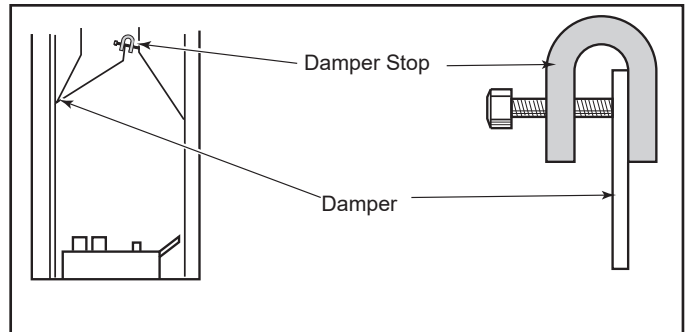


Figure 3.9 - Damper Stop Installation.

⚠ WARNING

When this appliance is installed in a vented application, the damper must be clamped to be fully open.

Assembly Procedure

1. Remove the three (3) screws holding the burner cover in place. Remove the cover and set aside until the appliance is fastened inside the firebox. See Figure 4.4.
2. Center the burner assembly inside the fireplace or firebox. Make certain that the front of the burner assembly sits inside the front edge of the fireplace or the firebox with the cover installed.
3. With the cover removed, locate the two (2) rear mounting points on each side of the pilot assembly on the bracket attached to the rear engine base.
4. Fold down the single mounting tab on the front of the engine base.
5. With the burner assembly correctly centered, mark the two (2) holes in the rear and single hole in the front on the firebox floor. Drill three (3) 5/32" diameter holes approximately 1/4" deep. Anchor the burner assembly with the three (3) supplied anchoring screws using a 1/4" hex head driver.
6. Remove the auto spark module from its shipping position. Move the module to the left side of the engine. Once the cover is reinstalled, position the auto spark module outside the footprint of the burner assembly and secure the hearth area with supplied velcro.

⚠ WARNING

You must secure the gas log heater to the fireplace floor. If not, the entire unit may move when you adjust the controls. Movement of unit may cause shifting of the media which leads to sooting and improper burning. Burner movement could cause a gas leak.

Special care is required if you are installing the unit into a sunken fireplace. You must raise the fireplace floor to allow access to burner controls. This will insure adequate air flow and guard against sooting. Raise the fireplace floor using noncombustible materials, as described in Placement in a Fireplace with Restrictive Barrier on Page 7.

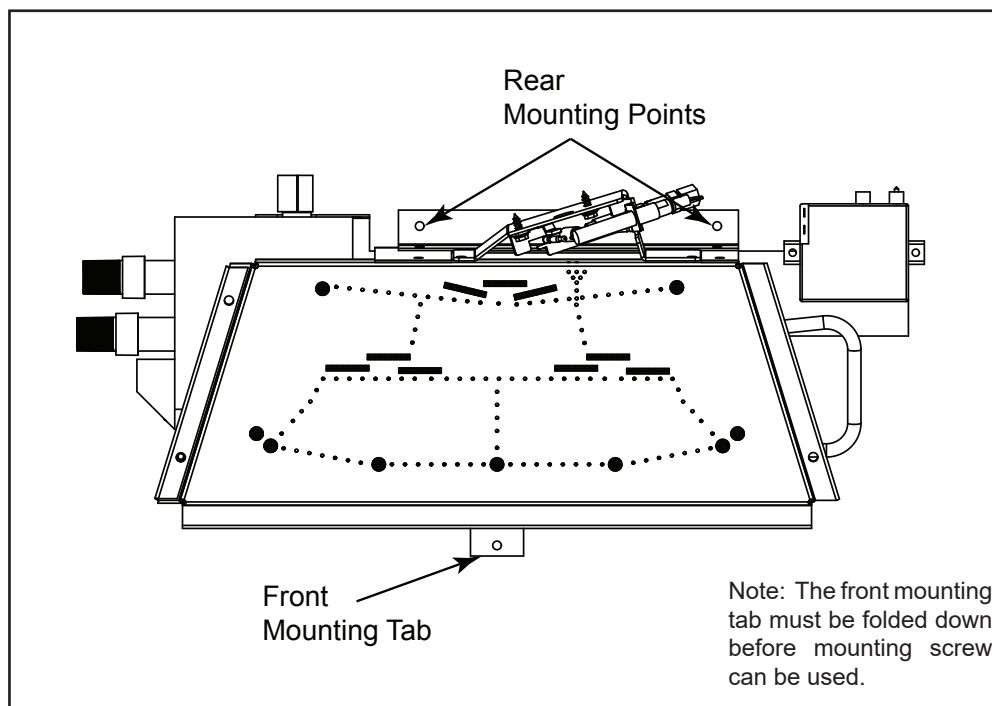


Figure 3.10 - Securing Heater to Floor of Fireplace/Firebox

4 Gas Information

⚠ WARNING

Use new black iron or steel pipe. Internally tinned copper or copper tubing can be used per National Fuel Code, section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (Listed on Data Plate) at the maximum flow rate (BTU/hr). Undue pressure loss will occur if the pipe is too small.

A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance.

A. Gas Line Connection

NOTICE: A qualified gas appliance installer must connect the heater to the gas supply. Consult all local codes.

IMPORTANT: Hold heater valve firmly with a wrench to prevent movement when connecting to inlet pipe.

Always use an external regulator for all propane/LPG heaters and high pressure one to two-pound systems only, to reduce the supply tank pressure to a maximum of 13" w.c. This is in addition to the internal regulator in the heater valve.

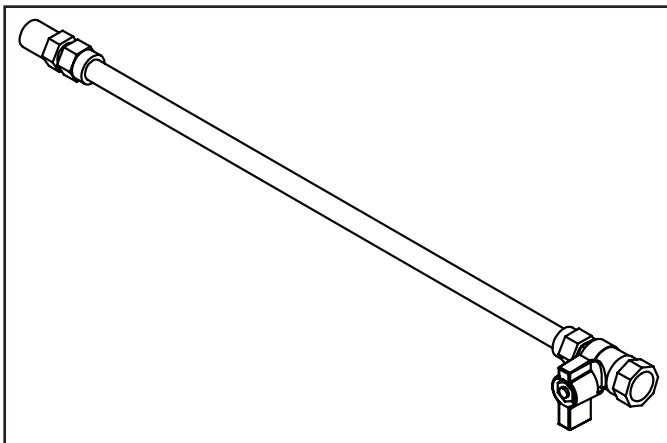


Figure 4.1 Gas Connection

⚠ WARNING

CHECK GAS TYPE: The gas supply must be the same as stated on the heater's rating plate. If the gas supply is different, **DO NOT INSTALL THE HEATER.** Contact your dealer for the correct model.

⚠ WARNING

Connecting directly to an unregulated propane/LPG tank can cause an explosion.

The heater gas inlet connection is a 3/8" NPT at the valve. On all control type units, the inlet connection is on the right side of unit. To connect from the opposite side, route the pipe around the back portion of the unit.

When tightening up the joint to the valve, hold the valve securely to prevent movement.

Test all gas joints from the gas meter to the heater valve for leaks using a gas analyzer or soap and water solution after completing connection. **DO NOT USE AN OPEN FLAME.**

Check the gas pressure with the appliance burning and the control set to **HIGH**.

B. Millivolt Valve Control

The valve regulator controls the burner pressure which should be checked at the pressure test point.

Turn captured screw counter clockwise two or three turns and then place tubing to pressure gauge over test point (Use test point "OUT" closest to control knob). After taking pressure reading, be sure and turn captured screw clockwise firmly to re-seal. Do not over torque. Check for gas leaks. See Figure 4.2.

C. Fuel Type

- This appliance is equipped for either natural or propane gas. **Field conversion is not permitted.**
- Make sure the appliance is compatible with available gas types.

D. Gas Pressure

- Optimum appliance performance requires proper input pressures.
- Gas line sizing requirements will be determined in ANSI Z223.1 National Fuel Gas Code in the USA.
- Pressure requirements are:

	NATURAL	PROPANE (LP)
Inlet Minimum	5.0" w.c.	11.0" w.c.
Inlet Maximum	10.5" w.c.	13.0" w.c.
Gas Valve Manifold Pressure Setting	3.5" w.c.	10" w.c.
Pilot Regulator	3.5" w.c.	—

WARNING! Risk of Fire or Explosion! High pressure will damage valve. Low pressure could cause explosion.


- Verify inlet pressures. Verify minimum pressures when other household gas appliances are operating.
- Install regulator upstream of valve if line pressure is greater than 1/2 psig.
- Valve pressure taps are accessible on the left side of the appliance. See Figure 4.2.

Note: Have the gas supply line installed in accordance with local codes, if any. If not, follow ANSI 223.1. Installation should be done by a qualified installer approved and/or licensed as required by the locality. (In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter).

E. Gas Service Access

Depending upon local code, a manual gas shutoff, in a readily accessible area may be required and located upstream from the appliance.

⚠ WARNING



Fire Risk.
Explosion Hazard.
High pressure will damage valve.

- Disconnect gas supply piping **BEFORE** pressure testing gas line at test pressures above 1/2 psig.
- Close the manual shutoff valve **BEFORE** pressure testing gas line at test pressures equal to or less than 1/2 psig.

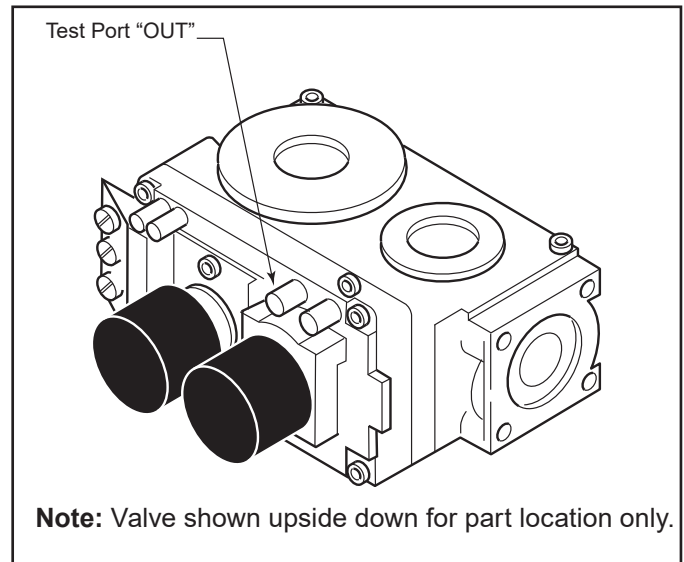


Figure 4.2 - Pressure Test Point Location Millivolt Control

CAUTION

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

The millivolt valve is a self-powered combination gas control **THAT DOES NOT REQUIRE 110 VAC TO OPERATE.**

F. Connect Optional Wall Switch or Thermostat (vent free application only)

1. Use 18 awg, two-wire cable, 15 feet maximum length.
2. At one end of the cable, connect both wires to the wall switch or thermostat. At the other end, connect one wire to TP/TH and one wire to TH, using fork terminal or connect the wall switch/thermostat to the two male (0.25") terminals on the left side of the unit. The color of the wires does not matter.

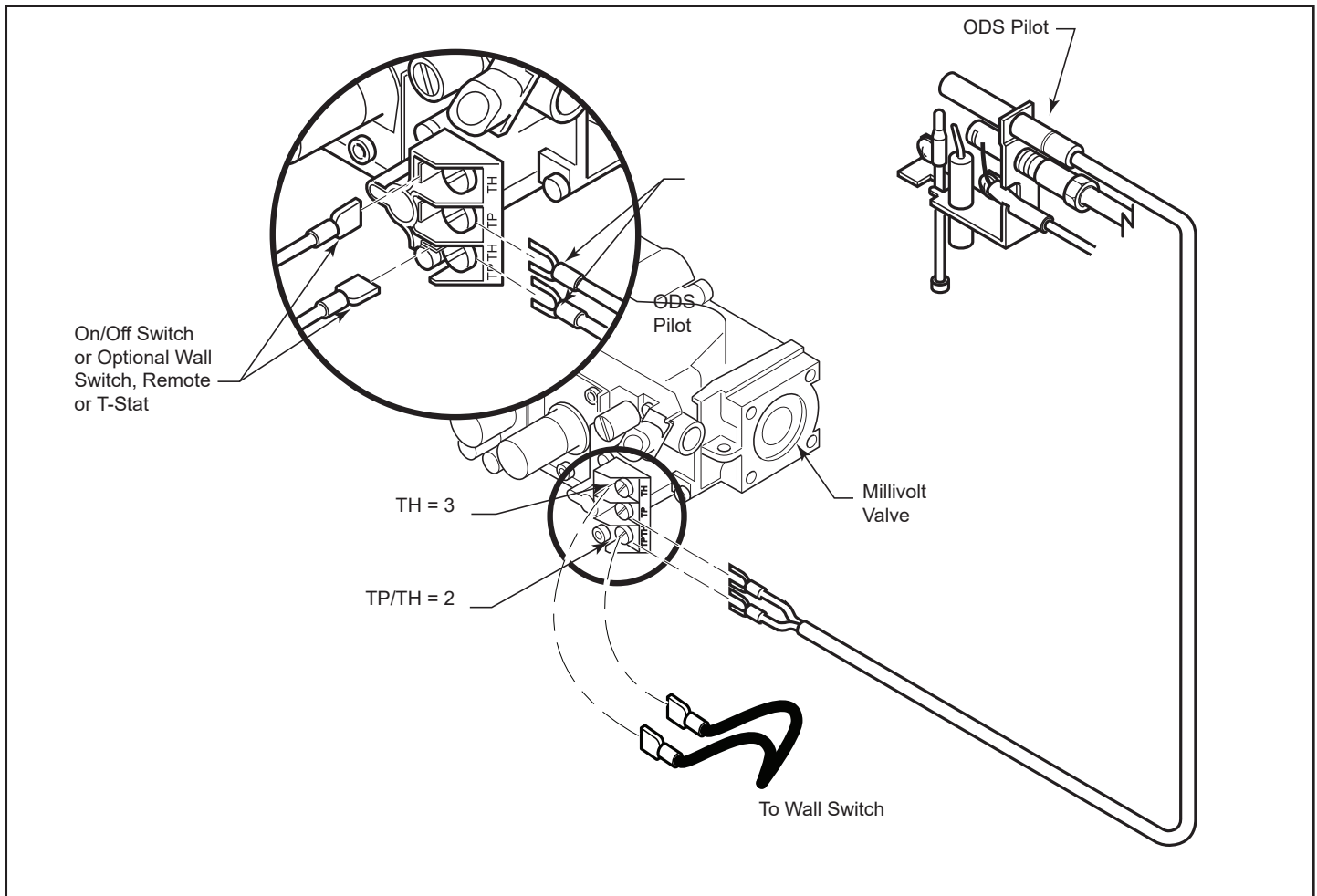


Figure 4.3 - Wiring Diagram

NOTE: Switch wires are not factory connected. Connect switch wires to the TH/TP and TH valve terminals as shown.

G. Connect Optional Remote Receiver

1. Set remote receiver. See instructions included in receiver kit.
2. Unplug the two terminals for the log switch from the valve, connect the piggy back terminal of the receiver to the TH and TP/TH on the valve. Slide the terminal of the log switch onto the piggy back terminal on the receiver

NOTE: Do not allow wires touch grate or burner.

NOTE: Heat reduces battery life. You can protect the receiver and extend battery life by mounting receiver in wall or other location outside the fireplace.

H. Check System Operation

The millivolt system and individual components may be checked with a millivolt meter having a 0-1000 mV range. Conduct each check shown in chart below by connection meter test leads to terminals as indicated.

1. Complete Millivolt System Check

(“A” Reading - Thermostat contacts CLOSED - Control Knob “ON” - Main burner should turn ON)

- a. If the reading is more than 175 millivolts and the automatic valve still does not come on, replace the control.
- b. If the closed circuit reading (“A” reading) is less than 175 millivolts, determine cause for low reading, proceed to Section B below.

2. Thermopile Output Reading Check

(“B” Reading - Thermostat contacts OPEN - Main burner OFF)

- a. Check gas pressure to the unit. If gas pressure is within minimum and maximum on data plate, then check pilot voltage, 500 millivolts minimum. If the minimum millivolt reading is not obtainable, replace pilot.

3. Auto Spark System Check

- a. Check that auto spark switch is fastened on valve and secure.
- b. Check that battery door is correctly attached to the auto spark module. Battery is correctly installed.

Check Test	To Test	Connect Meter Leads to Terminals	Switch or Thermostat Contacts	Meter Should Read
A	Complete System	2 and 3	Closed	Minimum 175
B	Thermopile Output	1 and 2	Open	Minimum 500

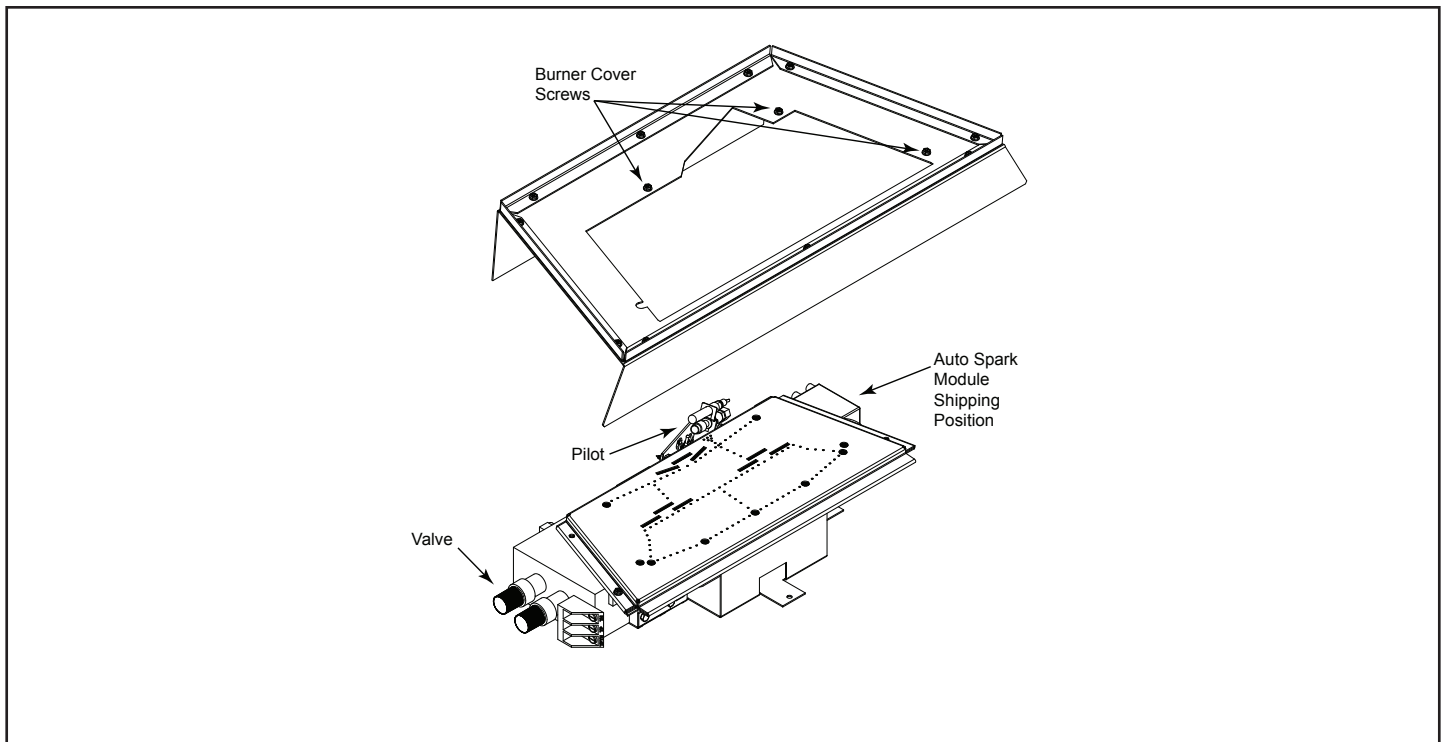


Figure 4.4 - Installing Remote Receiver

5 Gas Media Sets

⚠ WARNING

The positioning of the media is critical to the safe and clean operation of this heater. Sooting and other problems may result if the media is not properly positioned in the appliance. Never add additional media or embellishments such as pine cones, vermiculite or rock wool to the heater. Only use the media supplied with the unit.

Failure to position the parts in accordance with diagrams below or to use only parts specifically approved for this heater may result in property damage or personal injury.

⚠ WARNING

- Gloves are recommended when handling media to prevent skin irritation from sharp glass.
- Use only media provided with kit.
- **DO NOT ADD ADDITIONAL MEDIA.**

Wash hands after placing media. Itching may occur.

NOTE: Installation instructions are the same for 18", 24" and 30" sets. Pictures used in this instruction illustrate the 24" set. Some variation may exist between the images and the set included with the instructions. Only use the correct amount of media for each SKU. LRY18/24-2 bags, LRY30-3 bags.

A. Media Placement

NOTE: When installing glass media, use caution around the pilot area. After glass is placed, make sure to clear any media from the pilot tube, thermopile and bracket.

1. Use all supplied bags of media and place on top of the engine assembly with cover in place. Smooth out the glass into an even layer over the engine assembly as shown in the figure below. See Figure 5.1.

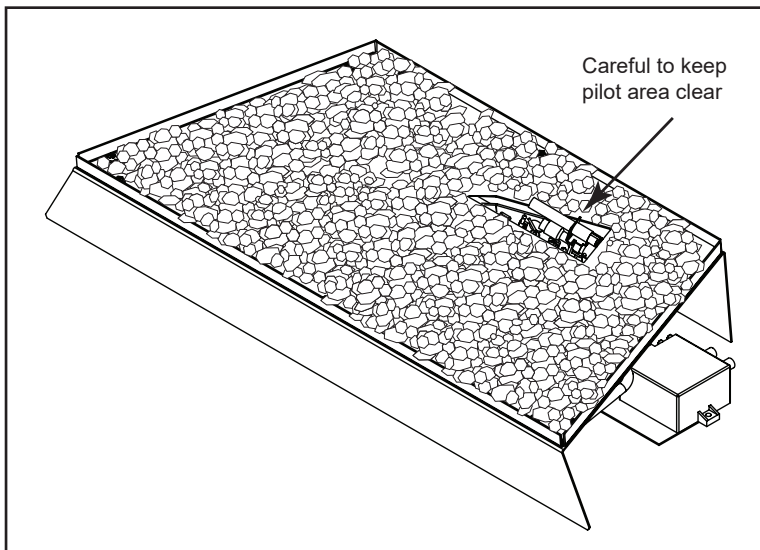


Figure 5.1 - Media Placement

CAUTION

DO NOT sprinkle volcanic rocks around the pilot or near the burners. This may cause sooting. Place volcanic rocks only on the floor of the fireplace.

During initial operation of the new heater, new burning appliances will give off a paper burning smell and orange flames will be present. Simply open the windows for a few hours to vent the odor.

C. Flame Appearance

Flames from the pilot and burner should be visually checked as soon as the heater is installed. In addition, periodically check the flames visually during operation.

Check the Pilot Flame (refer to lighting instructions)

The pilot flame must always be present when the heater is in operation. It should just touch the top of the thermocouple tip for natural. Refer to Figure 5.2 for correct pilot flame.

If the pilot flame does not touch the thermocouple, then the main burner cannot function reliably. Figure 5.3 for incorrect shape of pilot flame.

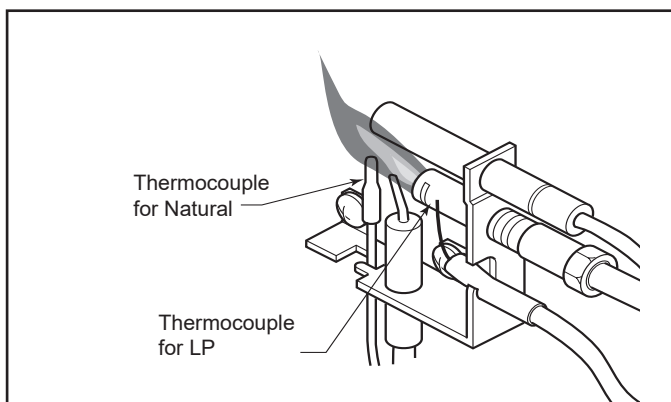


Figure 5.2 - Correct Appearance of Pilot Flame

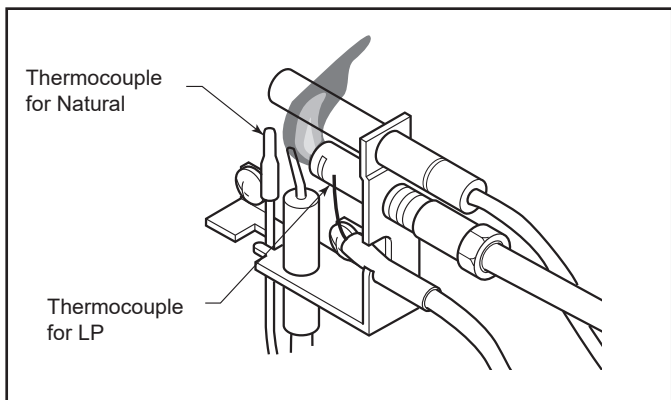


Figure 5.3 - Incorrect Appearance of Pilot Flame

In normal operation at full rate after 15 minutes, the following flame appearances should be observed:

Burner will have a random pattern of yellow flames as shown in Figure 5.4. **NOTE: The flames will be an opaque orange color during the burn off time.**

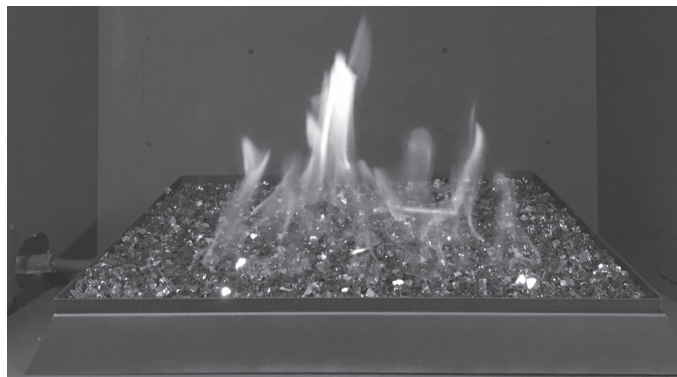


Figure 5.4 - Flame

Operating Instructions

Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into the fireplace. Do not place a blower inside the burn area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.

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 four hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

This appliance must not be used with glass doors in the closed position. This can lead to pilot outages and severe sooting outside the fireplace.

Owner's Manual

Care and Operation

INSTALLER: Leave this manual with party responsible for use and operation.

OWNER: Retain this manual for future reference.

Contact your dealer with questions regarding installation, operation or service.

NOTICE: DO NOT discard this manual!

Lyric Series

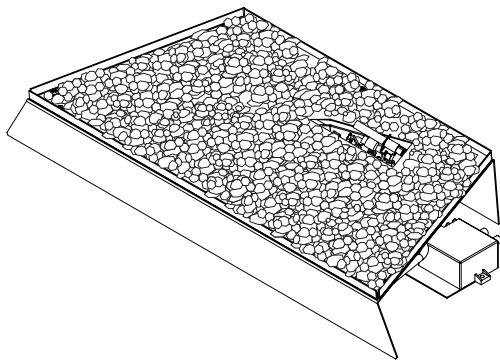


Models:

LYR18NV/PV

LYR24NV/PV

LYR30NV/PV



▲ WARNING:

DO NOT attempt to access or change the setting of the fuel selection means.

Access to and adjustment of the fuel selection means must only be performed by a qualified service person when connecting this appliance to a specified fuel supply at the time of installation.

Change of this selector setting to other than the fuel type specified at the time of installation could damage this appliance and render it inoperable.

The installer shall replace the access cover before completing the installation and operating this appliance.

▲ WARNING:

FIRE OR EXPLOSION HAZARD

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal 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.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.
- 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 Section 2, page 8.
- This appliance may be installed in an after-market, permanently located, manufactured (mobile) home, where not prohibited by local codes.
- This appliance only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

Read this manual before operating this appliance.
 Please retain this Owner's Manual for future reference.
 Read the Installation Manual before making any installation or finishing changes.

A. Congratulations

Congratulations and thank you for selecting a Monessen vent free gas set, an elegant and clean alternative to wood burning fireplaces. The gas set you have selected is designed to provide the utmost in safety, efficiency, and style.

As the owner of a new vent free set, you'll want to read and carefully follow all of the instructions contained in this owner's manual. Pay special attention to all cautions and warnings.

This owner's manual should be retained for future reference. We suggest that you keep it with your other important documents and product manuals.

The information contained in this owner's manual, unless noted otherwise, applies to all models and gas control systems noted on the cover page.

Your new Monessen gas set will give you years of durable use and trouble-free enjoyment. Welcome to the Monessen family. We are glad you joined us!

Local Dealer Information

Dealer: Fill in your name, address, phone and email information here and appliance information below.

Dealer Name: _____
 Address: _____

 Phone: _____
 Email: _____



Appliance Information:

Brand: _____ Model Name: _____
 Serial Number: _____ Date Installed: _____

Listing Label Information/Location

The model information regarding your specific gas log set can be found on the rating plate usually located in the control area of the gas set.

Type of Gas

<p>Hearth & Home Technologies 7571 - 215th Street West Lakeville, MN 55044</p> <p>ITEM NO: LYR18PV SERIAL NO: GAS: PROPANE MFG. DATE: Input Rating: Max. 27000 BTU/Hr. Min. 22000 BTU/Hr. Manifold Pressure: 10" W.C. For Purpose of Input Adjustment: Min. Supply Pressure: 11" W.C. Max. Supply Pressure: 13" W.C. Control Type: 35 Burner Orifice Size: #52 This unit complies with: ANSI Z21.11.2-2016 unvented heaters ANSI Z21.60-2017/CSA-2.26-2017</p> <p>MODEL: LYR18PV </p>	<p>UNVENTED GAS ROOM HEATER NOT FOR USE WITH SOLID FUEL</p> <p>Decorative Appliance for Installation in Solid-Fuel Burning Fireplace</p> <p>Mantel clearances from top of unit opening: At 28" from opening, a mantel of 10" or less is allowed. This appliance equipped only for altitudes 0-2000 feet. This appliance must be installed in accordance with local codes, if any; if none, follow the National Fuel Gas Code, ANSI Z223.1.</p> <p>GAS-FIRED  LISTED MH62954</p> <p>4616-201</p>
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SERIAL:


Model Number

Serial Number

B. Limited Lifetime Warranty

Hearth & Home Technologies LLC

LIMITED LIFETIME WARRANTY

Hearth & Home Technologies LLC (“HHT”) extends the following warranty for HHT gas, wood, pellet and electric hearth appliances (each a “Product” and collectively, the “Product(s)”) and certain component parts set forth in the table below (“Component Part(s)”) that are purchased from a HHT authorized dealer or distributor.

WARRANTY COVERAGE:

HHT warrants that the Products and their Component Parts will be free from defects in materials and workmanship for the applicable period of Warranty coverage set forth in the table below (“Warranty Period”). If a Product or Component Parts are found to be defective in materials or workmanship during the applicable Warranty Period, HHT will, at its option, repair the applicable Component Part(s), replace the applicable Component Part(s), or refund the purchase price of the applicable Product(s). The maximum amount recoverable under this Warranty is limited to the purchase price of the Product. This Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer. This Warranty is subject to conditions, exclusions, and limitations as described below.

WARRANTY PERIOD:

Warranty coverage begins at the date of installation. In the case of new home constructions, Warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the Product(s) by an independent, authorized HHT dealer or distributor, whichever occurs earlier. However, the Warranty coverage shall commence no later than 24 months following the date of Product shipment from HHT, regardless of the installation or occupancy date.

The term “Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood and pellet appliances. These time periods reflect the minimum expected useful lives of the designated Component Parts under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Component Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Component Parts Covered by this Warranty
1 Year		X	X	X		X	All parts including handles, external enameled components and other material except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 Years					X		All parts except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 years			X	X			Igniters, Auger Motors, Electronic Components, and Glass
		X					Electrical components limited to modules, remotes/wall switches, valves, pilots, blowers, junction boxes, wire harnesses, transformers and lights (excluding light bulbs)
		X		X			Molded Refractory Panels, Glass Liners
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years	1 year	X					Vent Free Burners, Vent Free Logs
			X	X			Castings, Medallions and Baffles
6 years	3 years			X			Catalysts
7 years	3 years		X	X			Manifold tubes, HHT Chimney and Terminations
10 years	1 year	X					Burners, logs and refractory
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, FlexBurn® System (engine, inner cover, access cover and fireback)
1 Year	None	X	X	X	X	X	All purchased replacement parts

B. Limited Lifetime Warranty (*continued*)

WARRANTY CONDITIONS:

- Because HHT cannot control the quality of any Products sold by unauthorized sellers, this Warranty only covers Products that are purchased through an HHT authorized dealer or distributor unless otherwise prohibited by law; a list of HHT authorized dealers is available on the HHT branded websites.
- This Warranty is only valid while the applicable Product remains at the site of original installation.
- This Warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the applicable Product is authorized to sell applicable Product.
- Contact your installing distributor or dealer for Warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking Warranty service from a dealer other than the dealer from whom you originally purchased the applicable Product.
- No HHT consumer should bear cost of warranty service or costs incurred while servicing warranty claims (i.e., travel, gas, or mileage) when the service is performed within the terms of this Warranty. Check with your dealer or distributor in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this Warranty.

WARRANTY EXCLUSIONS:

This Warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under the Warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the Warranty Period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this Warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the applicable Product in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the applicable Product; (2) failure to install the applicable Product in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the applicable Product or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the applicable Product.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the applicable Product.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas applicable Product is installed.
- HHT's obligation under this Warranty does not extend to the Product's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper Product for the application. Consideration must be given to the Product location and configuration, environmental conditions, insulation and air tightness of the structure.

This warranty is void if:

- The applicable Product has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The applicable Product is subjected to prolonged periods of dampness or condensation.
- There is any damage to the applicable Product due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

LIMITATIONS OF REMEDIES AND LIABILITY:

- **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. The owner's exclusive remedy and HHT's sole obligation under this Warranty or in contract, tort or otherwise, shall be limited to replacement of the Component Part(s), repair of the Component Part(s), or refund of the original purchase price of the applicable Product(s), as specified above; provided, however, that (i) if HHT is unable to provide replacement of the Component Part(s) and repair of the Component Part(s) is not commercially practicable or cannot be timely made, or (ii) the customer is willing to accept a refund of the purchase price of the applicable Product(s), HHT may discharge all such obligations by refunding the purchase price of the applicable Product. In no event will HHT be liable for any incidental or consequential damages caused by defects in the applicable Product. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from State to State. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE FOR THE APPLICABLE PRODUCT. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.**

7 Important Safety and Operating Information

A. Appliance Safety

WARNING! DO NOT operate appliance before reading and understanding operating instructions. Failure to operate appliance according to operating instructions could cause fire or injury.

WARNING! Choking Hazard! Keep media out of reach of children.

- Alert children and adults to hazards of high temperatures.

High temperatures may ignite clothing or other flammable materials.

- Clothing, furniture, draperies, and other flammable materials must not be placed on or near the appliance.

Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns.

- A physical barrier is recommended if there are at risk individuals in the house.
- To restrict access to a fireplace, install an adjustable safety gate to keep toddlers, young children, pets and other at risk individuals out of the room and away from hot surfaces.
- Install a switch lock or a wall/remote control with child protection lockout feature.
- Keep remote controls out of reach of children.
- Never leave children alone near a hot fireplace, whether operating or cooling down.
- Teach children to NEVER touch the fireplace.
- Consider not using the fireplace when children will be present.

Contact your dealer for more information, or visit: www.hpba.org/safety-information.

To prevent unintended operation when not using your fireplace for an extended period of time (summer months, vacations, trips, etc):

- Remove batteries from remote controls.
- Turn off wall controls.

Clear Space

WARNING! DO NOT place combustible objects in front of the fireplace. High temperatures may start a fire. See Figure 7.1.

Avoid placing candles, electronics and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

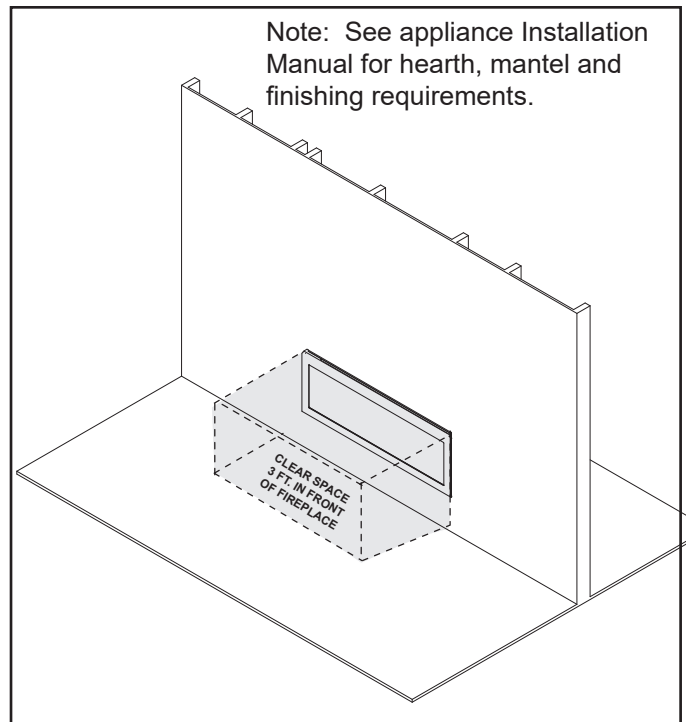


Figure 7.1 Clear Space

Over Firing

The appliance is considered to be over firing if the flames are contacting the top of the firebox. Call a qualified service technician to service the appliance.

Important Safety and Operating Information (con't)

OWNER

Please retain these instructions for future reference.

WARNING

- **Any change to this heater or its controls can be dangerous.**
- **Improper installation or use of the heater can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.**
- **Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.**
- **Do not use a blower insert, heat exchanger insert or other accessory, not approved for use with this heater where applicable.**

1. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
3. Young children should be carefully supervised when they are in the same room with the appliance.
4. Do not place clothing or other flammable material on or near the appliance.
5. Any safety screen removed for servicing an appliance, must be replaced prior to operating the heater.
6. Installation and repair should be done by a qualified service person. To prevent malfunction and/or sooting, an unvented gas heater should be cleaned before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that control compartments, burners and circulating air passageways be kept clean.
7. **WARNING:** Any change to this heater or its controls can be dangerous.
8. Unvented gas room heaters are a supplemental zone heater. They are not intended to be the primary heating appliance.
9. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.
10. The installation must conform with local codes or, in the absence of local codes, with the **National Fuel Gas Code, ANSI Z223.1/NFPA54.**
11. This unit complies with ANSI Z21.11.2 *Unvented Heaters*, latest edition and **ANSI Z21.60-2012/CSA2.26-2012. Decorative vented.**
12. Do not install the heaters in a bathroom or bedroom.
13. Correct installation of the media, proper location of the heater, and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. Refer to media placement instructions for proper installation.
14. Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside burn area of firebox. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
15. **Caution:** Candles, incense, oil lamps, etc. produce combustion by-products including soot. Vent-free room heater will not filter or clean soot produced by these types of products. In addition, the smoke and/or aromatics (scents) may be reburned in the vent-free appliance which can produce odors. It is recommended to minimize the use of candles, incense, etc. while the vent-free appliance is in operation.
16. This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.
17. Keep room area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
18. Unvented gas room heaters emit moisture into the living area. In most homes of average construction, this does not pose a problem. In houses of extremely tight construction, additional mechanical ventilation is recommended.
19. 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.

20. Input ratings are shown in BTU per hour and are for elevations up to 4,500 feet. For elevations above 4,500 each 1,000 feet above sea level. Refer to the National Fuel Gas Code.
21. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psig (3.5 kPa).
22. The appliance must be isolated from gas supply piping system by closing its equipment shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psig (3.5 kPa).
23. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
24. Never burn solid fuels in a fireplace where a unvented room heater is installed.

BUILDING CODE INFORMATION

Adhere to all local codes or, in their absence, the latest edition of THE NATIONAL FUEL GAS CODE ANSI Z223.1 or NFPA54 which can be obtained from:

American National Standards Institute, Inc.

1430 Broadway
New York, NY 10018

or

National Fire Protection Association, Inc.

Batterymarch Park
Quincy, MA 02269

B. Clear Space Requirements

WARNING! Risk of Fire or Explosion!

- DO NOT place combustible objects in front of the appliance. High temperatures could start a fire. See Figure 7.2. Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat could damage other objects.

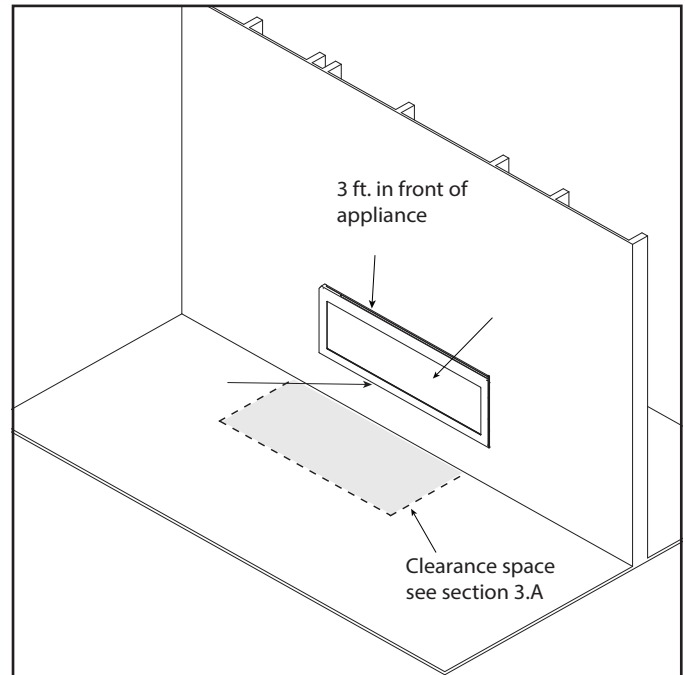


Figure 7.2 Clear Space Requirements

C. Fuel Specifications

WARNING! Risk of Fire or Explosion! Appliance must be set up for compatible gas type!

- This appliance is designed to operate on either natural gas or propane. Make sure the appliance is compatible with gas type selected for installation site.

WARNING! Risk of Fire! Comply with all minimum clearances to combustibles as specified in the installation instructions.

D. Before Lighting Appliance

Before operating this fireplace for the first time, **have a qualified service technician:**

- Verify all shipping materials have been removed from inside and/or underneath the appliance
- Review proper placement of media
- Ensure that there are no gas leaks

8 Product Specific Information

A. Appliance Certification

MODEL: LYR18NV/PV, LYR24NV/PV, LYR30NV/PV
LABORATORY: Underwriters Laboratories, Inc. (UL)
TYPE: Unvented Room Heater
STANDARD: ANSI Z21.11.2-2016 (Unvented Application)
ANSI Z21.60-2012/CSA2.26-2012 (Vented Application)

This product is listed to ANSI standards for “Unvented Room Heaters” and applicable sections of “Gas Burning Heating Appliances for Manufactured Homes and Recreational Vehicles”, “Decorative Vented Heaters” and “Gas Fired Appliances for Use at High Altitudes”.

NOTICE: *This installation must conform with local codes. In the absence of local codes you must comply with the National Fuel Gas Code, ANSI Z223.1—latest edition in the U.S.A.*

NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.
 This appliance is tested and approved as either supplemental room heat or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



B. BTU Specifications

Models		Maximum Input BTU/h	Minimum Input BTU/h	Orifice
LYR18NV	(0-2000 FT)	28,000	19,000	#38
LYR18PV	(0-2000 FT)	27,000	22,000	#52
LYR24NV	(0-2000 FT)	37,000	25,000	1/8"
LYR24PV	(0-2000 FT)	36,000	28,000	#49
LYR30NV	(0-2000 FT)	37,000	25,000	1/8"
LYR30PV	(0-2000 FT)	36,000	28,000	#49

9 Lighting Instructions

FOR YOUR SAFETY READ BEFORE LIGHTING

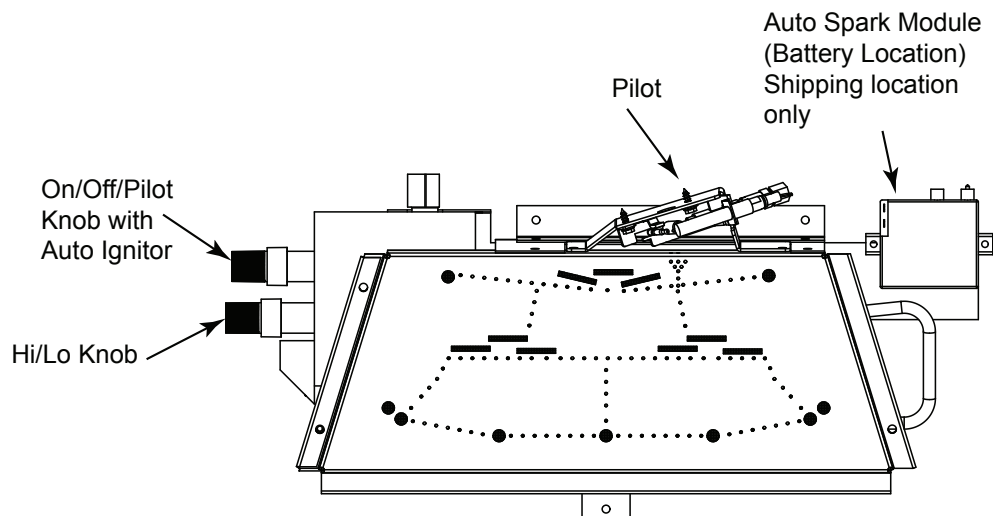
WARNING

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

- A. This appliance is equipped with an auto spark automatic ignitor which lights the pilot. If ignitor is not working properly see *Match Lighting Instructions*.
- B. BEFORE OPERATING smell all around the appliance 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 attempt to light any appliance.
 - 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.
 - If you cannot reach your gas supplier, call the fire department.
- C. Use only your hand to push in, or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.
 - D. Do not use this appliance if any part of it has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.



NOTE: Image shown with cover removed.

Figure 9.1 - Location of Control Knobs and Switch

Lighting Instructions (con't)

MILLIVOLT CONTROL LIGHTING INSTRUCTIONS

1. STOP! Read the safety information label.
2. Make sure the manual shutoff valve is fully open.
3. This gas burner is equipped with an auto spark automatic ignition device which automatically lights the pilot. If automatic ignitor does not light the pilot, refer to instructions for *Match Lighting Instructions*.
4. Turn gas control knob clockwise ↻ to the OFF position and turn ON/OFF switch to OFF position.
5. Wait (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow the instructions under *What To Do If You Smell Gas*.
6. From OFF position, turn the gas control knob counterclockwise ↻ to IGN position. Push in control knob for 5 seconds. **NOTE: If you are running the heater for the first time, it may be necessary to press in the control knob for 30 seconds or longer to allow air to bleed out of the gas piping.**
7. With the control knob pushed in fully, the auto spark will begin to spark.
8. Continue pushing the control knob in for a further 60 seconds to prevent the flame detector from shutting off the gas while the probe is warming up. Release the control knob.
9. Turn gas control knob counterclockwise ↻ to the ON position.
10. After the pilot has been lit for one minute, the burners can be turned on. Turn the ON/OFF switch to ON position.
11. If the gas burner will not operate, follow the instructions To Turn Off Gas To Heater below and call your service technician or gas supplier.

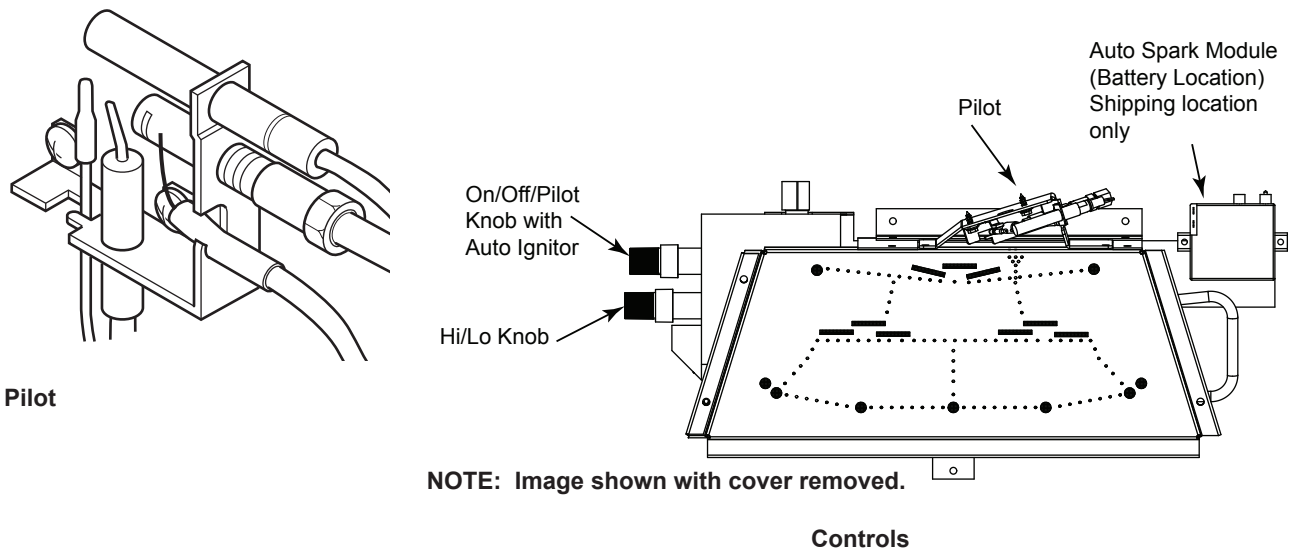


Figure 9.2 - Automatic Ignitor

TO TURN OFF GAS TO HEATER

1. Turn control knob clockwise ↻ to OFF position to completely shut off the heater.
2. If applicable: Turn ON/OFF switch to OFF position and/or set thermostat (if present) to lowest setting.
3. If applicable: Turn off all electric power to the heater.

Lighting Instructions (con't)

MATCH LIGHTING INSTRUCTIONS

1. Remove any items necessary for easy access to the pilot (for example: media, screens, etc.).
2. Follow appropriate lighting instructions found previously. Instead of pushing in fully the on/off button, light a match and hold the flame to the end of the pilot and ignite the pilot.
3. After control knob has been released and pilot stays lit, reinstall any items that were removed for pilot access.
4. Call a qualified service technician for repair or replacement of the automatic ignitor.

10 Maintenance and Service

Any safety screen removed for servicing must be replaced prior to operating the unvented room heater.

When properly maintained, your fireplace will give you many years of trouble-free service. **Contact your dealer** to answer questions regarding proper operation, troubleshooting and service for your appliance. Visit www.monessenhearth.com to locate a dealer. We recommend annual service by a qualified service technician.

A. Maintenance: Frequency and Tasks

The matrix below is an overview of maintenance tasks to be performed on the appliance. Section B gives details and instructions needed to assist the appropriate person in performing the tasks.

Task	Frequency	To be completed by
Pilot Inspection & Cleaning	Annually	Qualified Service Technician
Media	Annually	
Firebox Inspection	Annually	
Burner Ignition & Operation	Annually	
Auto Spark Battery	As needed	

B. Maintenance Tasks: Qualified Service Technician

The following tasks must be performed by a qualified service technician.

Pilot

Frequency: Annually

By: Qualified Service Technician

Tools needed: Small soft brush, pipe cleaner

- Inspect and remove dust, spider webs and lint
- Gently run pipe cleaner through air intake port

Firebox

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves, sandpaper, steel wool, cloths, mineral spirits, primer and touch-up paint.

- Inspect for paint condition, warped surfaces, corrosion or perforation. Sand and repaint as necessary.
- Replace fireplace if firebox has been perforated.

C. Burner Ignition and Operation

Frequency: Annually

By: Qualified Service Technician

Tools needed: Protective gloves, vacuum cleaner, whisk broom, flashlight, voltmeter, indexed drill bit set, and a manometer.

- Verify burner is properly secured and aligned with pilot or igniter.
- Clean off burner top, inspect for plugged ports, corrosion or deterioration. Replace burner if necessary.
- Inspect for lifting or other flame problems.
- Inspect orifice for soot, dirt and corrosion. Verify orifice size is correct. See Service Parts List for proper orifice sizing.
- Verify manifold and inlet pressures. Adjust regulator as required.
- Inspect pilot flame pattern and strength. See Figure 10.1 and 10.2 for proper pilot flame pattern. Clean or replace orifice spud as necessary.

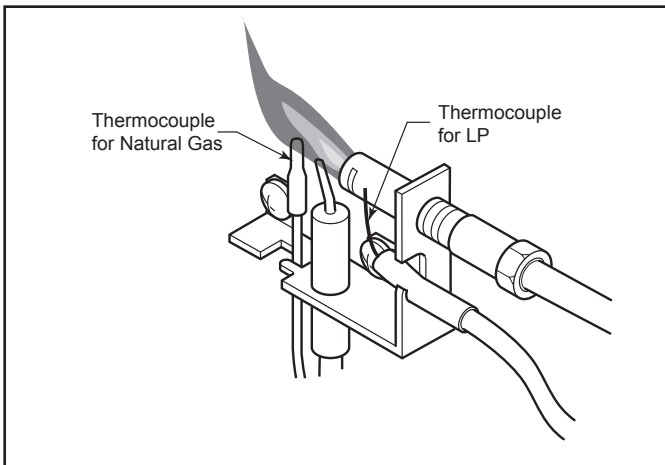


Figure 10.1 Correct Pilot Flame Appearance

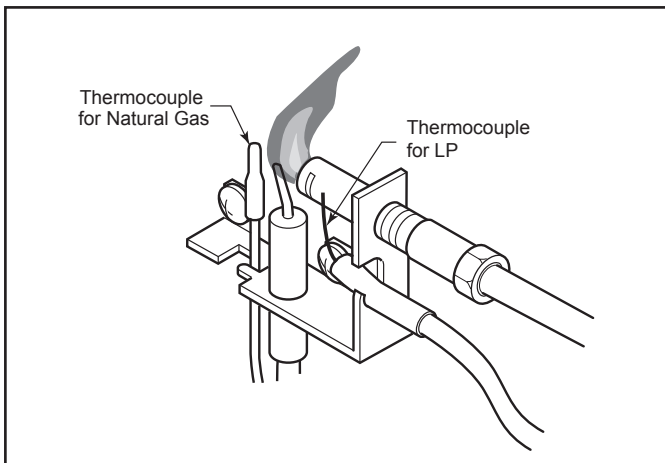


Figure 10.2 Incorrect Pilot Flame Appearance

D. Cleaning and Servicing

Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.

⚠ WARNING

Turn off heater and allow to cool before cleaning.

PERIODIC CLEANING - Refer to parts diagram for location of items discussed below.

- Do not use cleaning fluid to clean media or any part of heater.
- Vacuum loose particles and dust from the burner, control and auto spark module.
- Inspect and clean burner air intake holes. Remove lint or particles with vacuum, brush, or pipe cleaners. **Failure to keep air intake holes clean will result in sooting and poor combustion.**
- External case should be dusted and wiped with a wet soapy cloth.
- Carefully remove media from appliance and soak in a bucket of clean water. Drain and place on a flat clean surface to dry before installing.

ANNUAL CLEANING/INSPECTION - Refer to parts diagram for location of items discussed below.

- Inspect and clean burner air intake holes. Remove lint or particles with vacuum, brush or pipe cleaners. **Failure to keep air intake holes clean will result in sooting and poor combustion.**
- Inspect and clean all burner ports.
- Inspect ODS pilot for operation and accumulation of lint at air intake holes.
- Verify flame pattern and media placement for proper operation.
- Verify smooth and responsive ignition of main burner and rear burner.

11 Troubleshooting

WARNING

Turn appliance OFF and allow to cool before servicing. Only a qualified service person should service and repair the heater.

MILLIVOLT CONTROL SYSTEM

NOTE: All troubleshooting items are listed in order of operation.

PROBLEM	POSSIBLE CAUSE	SOLUTION
When ignitor button is pressed, there is no spark at ODS/pilot.	Ignitor electrode positioned wrong.	Replace ignitor.
	Ignitor electrode is broken.	Replace ignitor.
	Ignitor electrode not connected to ignitor cable.	Reconnect ignitor cable.
	Ignitor cable pinched or wet. Keep ignitor cable dry.	Free ignitor cable if pinched by any metal or tubing.
	Broken ignitor cable.	Replace ignitor cable.
	Bad piezo ignitor.	Replace piezo ignitor.
Appliance produces unwanted odors.	Appliance burning vapors from paint, hair spray, glues, etc.	Ventilate room. Stop using odor causing products while heater is running.
	Gas leak.	Locate and correct all leaks.
	Initial burn off.	Ventilate room and turn unit on high until odor is gone. Odor should be gone after six hours of continuous use.
Appliance shuts off during use.	Not enough fresh air is available for ODS/pilot to operate.	Open window and/or door for ventilation.
	Low line pressure.	Contact local gas company.
	ODS/pilot is partially clogged.	Clean ODS/pilot.
	Defective thermopile.	Check wire connections. Check output should be 500 millivolts across TH/TP and TP Terminals with ON/OFF switches off.
	Restrictions in incoming air flow.	Check for bottom riser on glass door, sunken fireplace, excessive lava rock/cinders densely packed against grate.
Gas odor even when control knob is in OFF position.	Gas leak.	Locate and correct all leaks.
	Control valve defective.	Replace control valve.
When ignitor button is pressed, there is spark at ODS pilot, but no ignition.	Gas supply turned off or manual shutoff valve closed.	Turn on gas supply or open manual shutoff valve.
	Control knob not in PILOT position.	Turn control knob to PILOT position.
	Control knob not pressed in while in PILOT position.	Press in control knob while in PILOT position.
	Air in gas lines when installed.	Continue holding down control knob. Repeat igniting operation until air is removed.
	ODS/pilot is clogged.	Replace ODS/pilot assembly or get it serviced.
	Gas regulator setting is not correct.	Check incoming pressure. Replace gas regulator.

12 Service Parts

► A. Service Parts



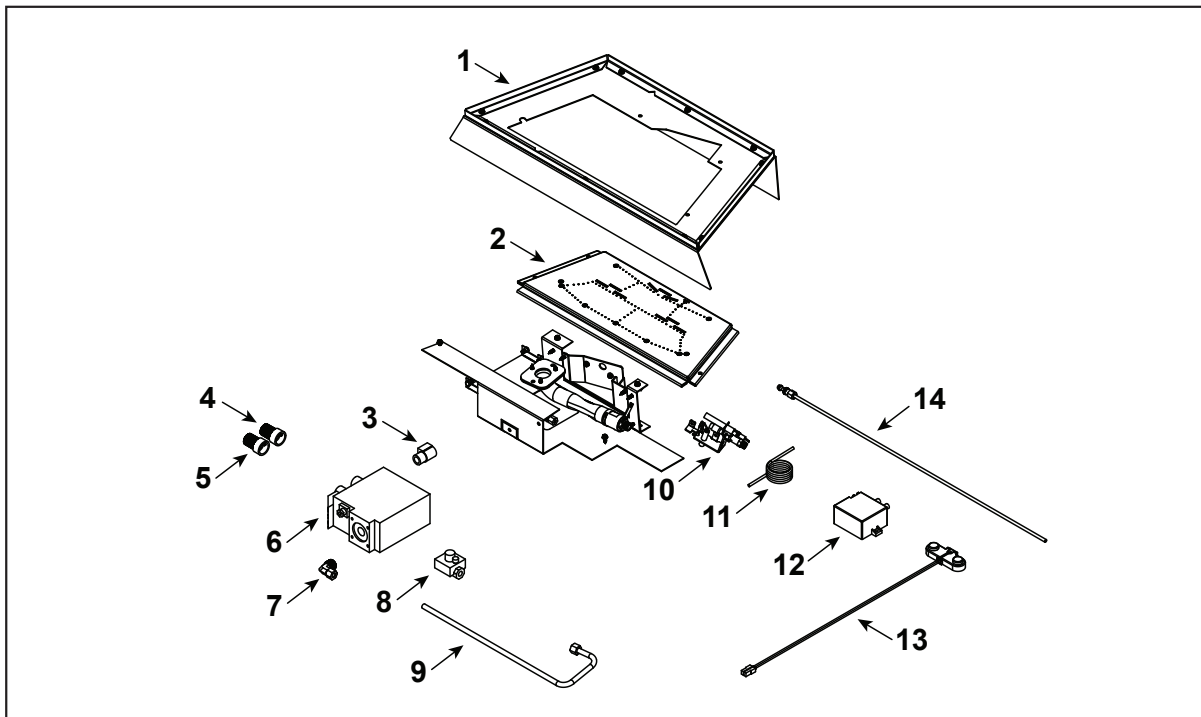
Service Parts

LYR18NV, LYR18PV

Beginning Manufacturing Date: June 2018

Ending Manufacturing Date: Active

Lyric18" Contemporary Burner Assembly



IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.

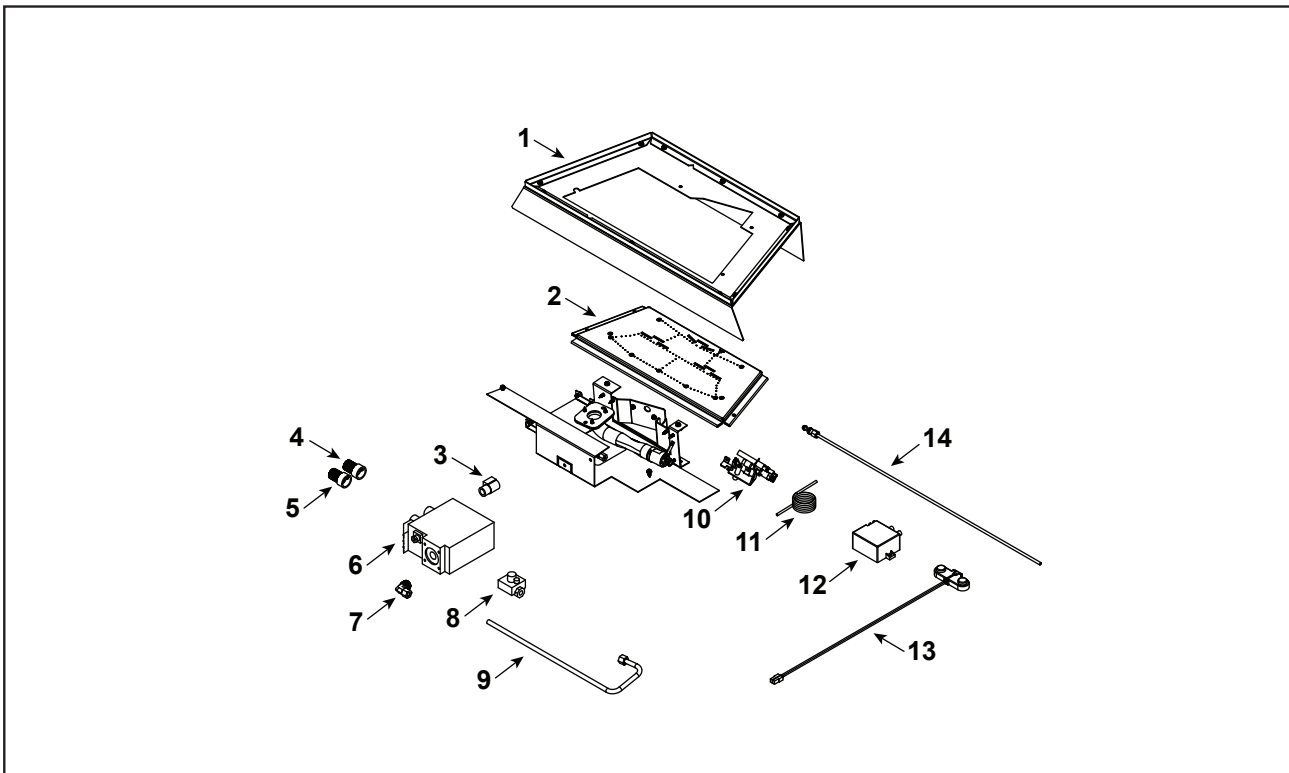


Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Burner Cover Assembly		SRV4616-002	
2	Burner		SRV4616-001	Y
3	Fitting 3/8 MTP x 3/8 FPT		SRV0069882	
4	Knob SIT Ext On/Off		SRV37D0010	
5	Knob SIT Ext Hi/Lo		SRV37D0011	
6	Control Valve	NG	SRV14D0467	Y
		Propane	SRV14D0468	Y
7	Fitting 5/16 FPT x 3/8 MPT		SRV39D0096	
8	Pilot Regulator	NG Only	SRV14D0469	Y
9	G.V. to Orifice, 5/16 Tube		SRV4616-109	Y
10	Pilot ODS MV	NG	SRV14D0473	Y
		Propane	SRV14D0477	Y
11	Wire Assembly		SRV00K0632	Y
12	Piezo, Battery Module		SRV45D0077	Y
13	Switch, Piezo SIT 820		SRV45D0078	Y
14	Pilot Tube Assembly		SRV20304115	Y
	Wire Assembly, Wall Switch		SRV28602	Y

4/21

Lyric24" Contemporary Burner Assembly



IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.

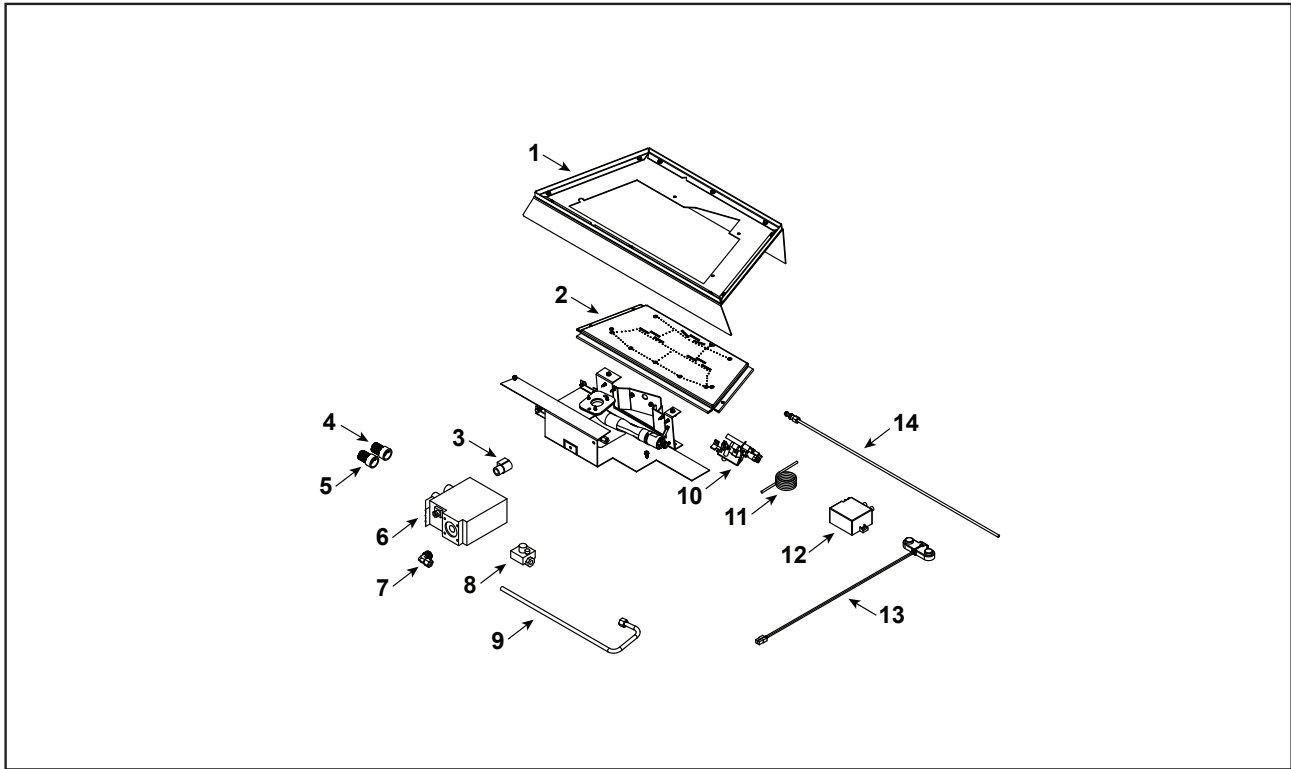


Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Burner Cover Assembly		SRV4617-002	
2	Burner		SRV4617-001	Y
3	Fitting 3/8 MTP x 3/8 FPT		SRV0069882	
4	Knob SIT Ext On/Off		SRV37D0010	
5	Knob SIT Ext Hi/Lo		SRV37D0011	
6	Control Valve	NG	SRV14D0467	Y
		Propane	SRV14D0468	Y
7	Fitting 5/16 FPT x 3/8 MPT		SRV39D0096	
8	Pilot Regulator	NG Only	SRV14D0469	Y
9	G.V. to Orifice, 5/16 Tube		SRV4616-109	Y
10	Pilot ODS MV	NG	SRV14D0473	Y
		Propane	SRV14D0477	Y
11	Wire Assembly		SRV00K0632	Y
12	Piezo, Battery Module		SRV45D0077	Y
13	Switch, Piezo SIT 820		SRV45D0078	Y
14	Pilot Tube Assembly		SRV20304115	Y
	Wire Assembly, Wall Switch		SRV28602	Y



Lyric30" Contemporary Burner Assembly



IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Burner Cover Assembly		SRV4618-002	
2	Burner		SRV4617-001	Y
3	Fitting 3/8 MTP x 3/8 FPT		SRV0069882	
4	Knob SIT Ext On/Off		SRV37D0010	
5	Knob SIT Ext Hi/Lo		SRV37D0011	
6	Control Valve	NG	SRV14D0467	Y
		Propane	SRV14D0468	Y
7	Fitting 5/16 FPT x 3/8 MPT		SRV39D0096	
8	Pilot Regulator	NG Only	SRV14D0469	Y
9	G.V. to Orifice, 5/16 Tube		SRV4616-109	Y
10	Pilot ODS MV	NG	SRV14D0473	Y
		Propane	SRV14D0477	Y
11	Wire Assembly		SRV00K0632	Y
12	Piezo, Battery Module		SRV45D0077	Y
13	Switch, Piezo SIT 820		SRV45D0078	Y
14	Pilot Tube Assembly		SRV20304115	Y
	Wire Assembly, Wall Switch		SRV28602	Y

B. Accessories

HILOKTN - Hi/Lo Kit Natural

HILOKTP - Hi/Lo Kit Propane

Media

MASSACHUSETTS RESIDENTS ONLY

Please read and follow these special requirements

NOTE REGARDING VENTED PRODUCTS

This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

Any residence with a direct vent product must have a carbon monoxide (CO) detector installed in the residence.

Installation of the fireplace or vented gas log in the State of Massachusetts requires the damper to be permanently removed or welded in the fully open position.

In addition, a naturally vented gas log may not be installed in a bedroom or bathroom in the State of Massachusetts.

Flex line installation must not exceed 36 inches and must have a T shutoff valve.

NOTE REGARDING VENT FREE PRODUCTS

This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

In addition, vent free products may not be installed in a bedroom or bathroom regardless of size or type in the State of Massachusetts.

Flex line installation must not exceed 36 inches and must have a T shutoff valve.

CARBON MONOXIDE DETECTOR REQUIREMENTS

(2) Revise 10.8.3 by adding the following additional requirements:

(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. **Installation of carbon monoxide detectors.** At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gas fitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors

a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

2. **Approved Carbon Monoxide Detectors.** Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

3. **Signage.** A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, "GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS."

4. **Inspection.** The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

(b) **Exemptions:** The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and

2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) **Manufacturer requirements — Gas Equipment Venting System Provided.** When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

1. Detailed instructions for the installation of the venting system design or the venting system components; and

2. A complete parts list for the venting system design or venting system.

(d) **Manufacturer requirements — Gas Equipment Venting System Not Provided.** When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems," the following requirements shall be satisfied by the manufacturer:

1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and

2. The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

(e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design

