

# LAKEFIELD-22-MV

## INSTALLATION AND OPERATION MANUAL

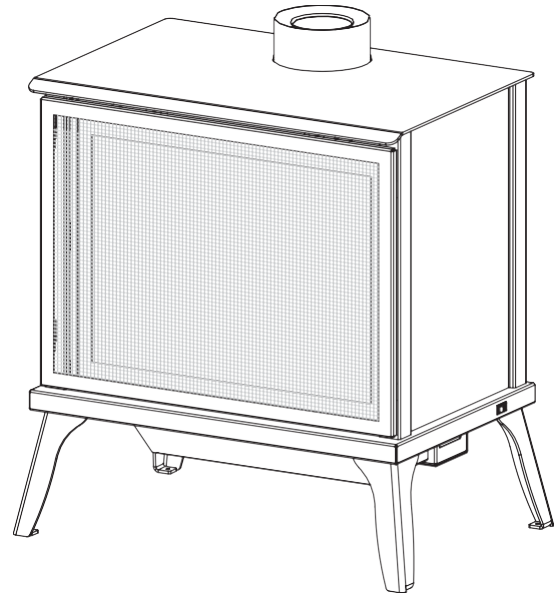
Model #LXL-22-MV  
Direct Vent Gas Stove

KOZY  HEAT  
FIREPLACES

English and French installation manuals are available through your local dealer. Visit our website [www.kozyheat.com](http://www.kozyheat.com).  
Les manuels d'installation en français et en anglais sont disponibles chez votre détaillant local. Visitez [www.kozyheat.com](http://www.kozyheat.com).



We suggest that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.



### ⚠ WARNING:

#### FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

❖ 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.
- Leave the building immediately.
- 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 appliance may be installed in an aftermarket, permanently located, manufactured home (USA only) or 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, unless a certified kit is used.

# ⚠ DANGER



**HOT GLASS WILL  
CAUSE BURNS**

**DO NOT TOUCH GLASS  
UNTIL COOLED**

**NEVER ALLOW CHILDREN  
TO TOUCH GLASS**

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

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



## CONGRATULATIONS!

We welcome you as a new owner of a Kozy Heat gas fireplace. Kozy Heat products are designed with superior components and materials, and assembled by trained craftsmen who take pride in their work. To ensure you receive a quality product, the burner and valve assembly are 100 percent test-fired, and the complete fireplace is thoroughly inspected before packaging. Our commitment to quality and customer satisfaction has remained the same for over 40 years. We offer a complete line of gas, wood, and electric fireplaces, along with stylish accessories to complement any decor. Adding a fireplace is one of the best ways to increase the value of your home, and we are proud to offer a network of dealers throughout the country to help make your experience everything you imagine. We pride ourselves in being dedicated not only to functionality and reliability, but also customer safety. We offer our continual support and guidance to help you achieve the maximum benefit and enjoyment from your Kozy Heat gas fireplace.

Jim Hussong  
President



Dudley Hussong  
Board Chairman



### Homeowner Reference Information

*We recommend you record the following information:*

Model Name: \_\_\_\_\_

Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_

Location of fireplace: \_\_\_\_\_

Dealership Purchased from: \_\_\_\_\_

Dealer phone: \_\_\_\_\_

Notes: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



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## 1.1 Appliance Certification

Laboratory: PFS in Cottage Grove, Wisconsin


Standards:

ANSI Z21.88-2019/CSA 2.33-2019, Vented Gas Fireplace Heaters

CSA 2.17 2017, Gas-Fired Appliances for Use at High Altitudes

This installation must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, or the Natural Gas and Propane Installation Code, CSA B149.1.

## 1.2 California Proposition 65 Warning

 **WARNING:** This product can expose you to chemicals including Carbon Monoxide, that is an externally vented by-product of fuel combustion, which is [are] known to the State of California to cause birth defects or other reproductive harm. For more information, visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## 1.3 Requirements for the Commonwealth of Massachusetts

*The following requirements reference various Massachusetts and national codes not contained in this manual.*

For all sidewall 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 (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:

### 1.3.1 Installation of Carbon Monoxide Detectors

At time of installation of side wall horizontally 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 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.

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

### 1.3.2 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.

### 1.3.3 Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum 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 no less the one-half inch (1/2) in size, "GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS".

### 1.3.4 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.

### 1.3.5 Exemptions

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

### 1.3.6 Manufacturer Requirements

#### 1.3.6.1 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:

- Detailed instructions for the installation of the venting system design or the venting system components; and
- A complete parts list for the venting system design or venting system.

#### 1.3.7 Gas Equipment Venting System NOT Provided

When the manufacturer of Product Approved side wall horizontally vented gas 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:

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

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 instructions shall remain with the appliance or equipment at the completion of the installation.

## 2.0 SPECIFICATIONS

### 2.1 Heating Specifications

	Natural Gas	Propane
Maximum Input Rating	40,000 Btu/h 11.72 kW	40,000 Btu/h 11.72 kW
Minimum Input Rating	27,500 Btu/h 8.0594 kW	29,500 Btu/h 8.6455 kW
Manifold Pressure (High)	3.5" WC (0.87 kPa)	10" WC (2.48 kPa)
Manifold Pressure (Low)	1.6" WC (0.40 kPa)	6.4" WC (1.59 kPa)
Orifice Size (DMS)	3.20mm	1.90mm

#### 2.1.1 Altitude Adjustment

*This appliance may be installed at higher altitudes. Please refer to National Fuel Gas Code ANSI Z223.1/NFPA 54, CSA-B149.1 Natural Gas and Propane Installation Code local authorities, or codes having jurisdiction in your area regarding derate guidelines.*

##### 2.1.1.1 US Installations

Refer to the American Gas Association guidelines for the gas designed appliances derating method. For elevations above 2,000' (610m), input ratings are to be reduced by 4% for each 1,000' (305m) above sea level.

##### 2.1.1.2 Canadian Installations

When the appliance is installed at elevations above 4,500' (1,372m), the certified high altitude rating shall be reduced at the rate of 4% for each additional 1,000' (305m).

### 2.2 Electrical Specifications

*Electrical specifications ONLY apply to optional fan #LX22-028MV*

- The junction box in this appliance requires 120VAC, 60Hz, and 6 Amps.
- Verify the household breaker is shut off prior to working on any electrical lines.



## 2.3 Appliance Dimensions

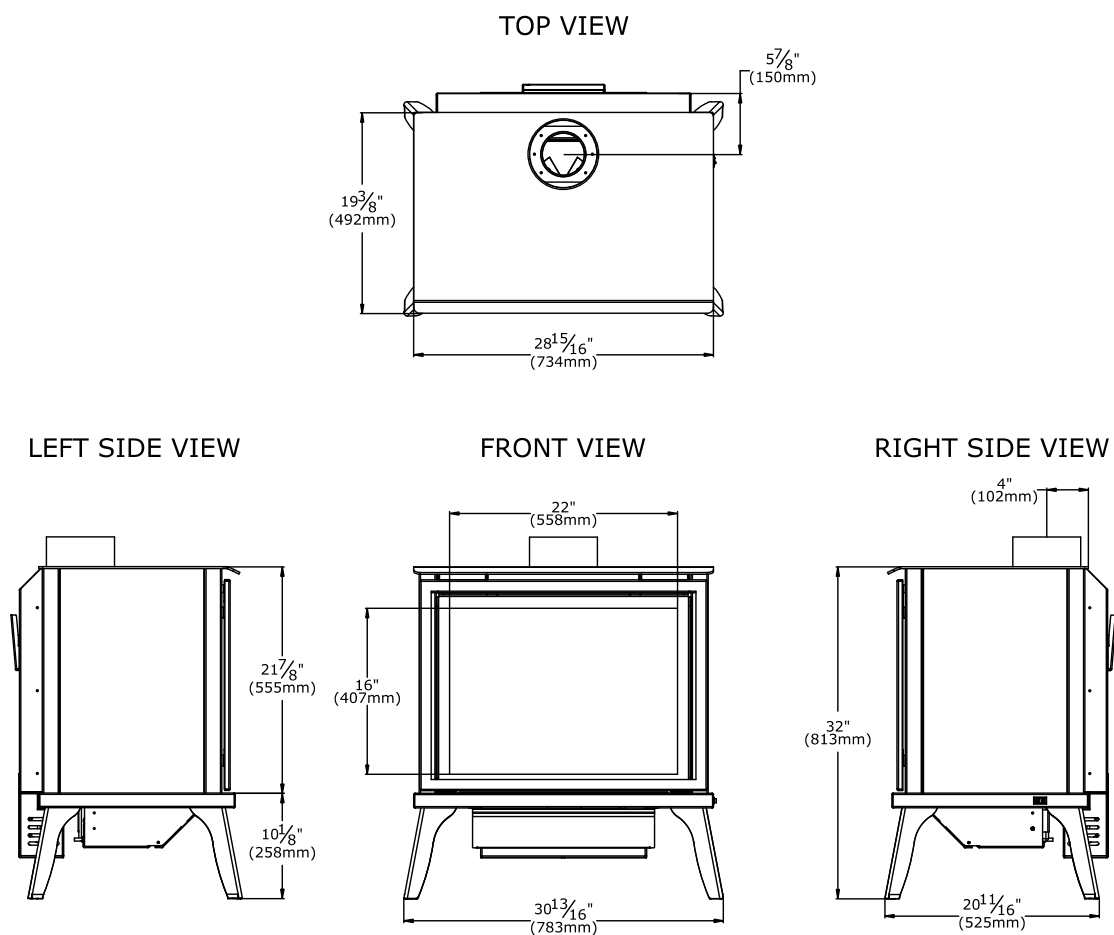


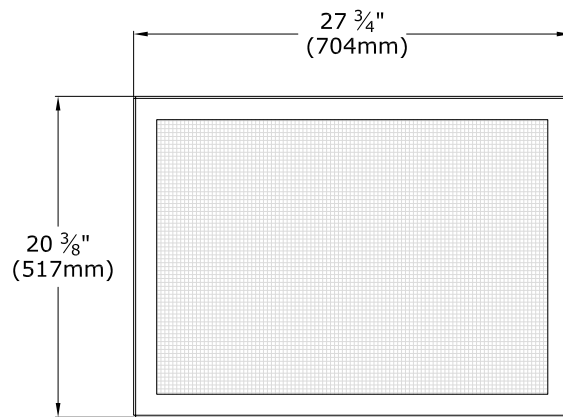
FIGURE 2.1 LXL-22-MV Dimensions

## 2.4 Safety Barrier Screen and Overlays

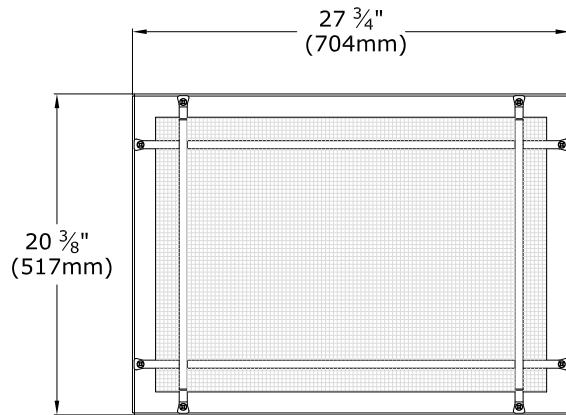
**WARNING:** A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

If the barrier becomes damaged, the barrier shall be replaced with Hussong Mfg. Co., Inc.'s barriers for this appliance.

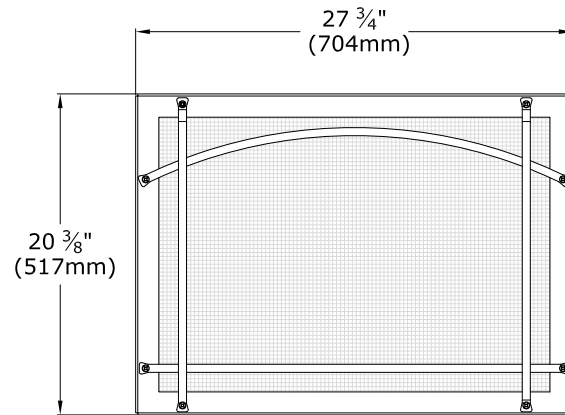
Refer to section 7.1, SAFETY BARRIER SCREEN AND OVERLAY INSTALLATION on page 28 for installation instructions.



LX22-FRSF  
Rectangular Full Screen Front



LX22-PSF  
Prairie Design Front



LX22-APSF  
Arched Prairie Screen Front

FIGURE 2.2 Safety Barrier and Overlay Dimensions

### 3.1 Installation Planning

- **Alcove Installation** allows the gas stove to be located within a recessed section of a room. Refer to section 3.4, **ALCOVE INSTALLATION** on page 14 for more information.
- **Masonry Application** allows the gas stove to sit inside an existing masonry fireplace. Refer to section 3.5, **MASONRY APPLICATION** on page 15 for more information.
- If planning to convert to propane, it is easier to complete the gas conversion before installing the gas stove. See the # conversion kit manual for complete conversion instructions. Refer to section 8.3, **CONTROL BOARD REMOVAL AND INSTALLATION** on page 11 for access to the burner and pilot system before and after installation.

#### 3.1.1 Appliance Placement Considerations

**WARNING:** Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

- This gas stove must be installed on a level surface capable of supporting the gas stove and venting. Determine your vent requirements before framing your appliance
- This appliance may be installed in a bedroom.
- Please be aware of the large amount of heat this gas stove will produce when determining a location.

#### 3.1.2 Floor Support and Protection

- The appliance must be placed directly on a wood or non-combustible surface (not linoleum or carpet) extending the entire depth and width of the gas stove.
- If this appliance is to be installed directly on carpeting, tile, or other combustible material other than wood flooring, this appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.
- If the appliance is to be installed above floor level, a solid, continuous platform must be constructed below the appliance.

## 3.2 Clearances to Combustibles

See FIGURE 3.1 below for minimum clearances for typical installation options. Refer to FIGURE 3.2 (page 13) for rough-in clearances.

<i>Table 3.1, Minimum Appliance Clearances to Combustible Material</i>		
From appliance top to sidewall	3"	76mm
From appliance top to back wall	3"	76mm
From appliance top corner to wall	1-1/2"	38mm
Floor to ceiling	68-1/4"	1734mm
From appliance top to ceiling	36-1/4"	920mm
From top of horizontal pipe surface to ceiling	2-1/4"	57mm

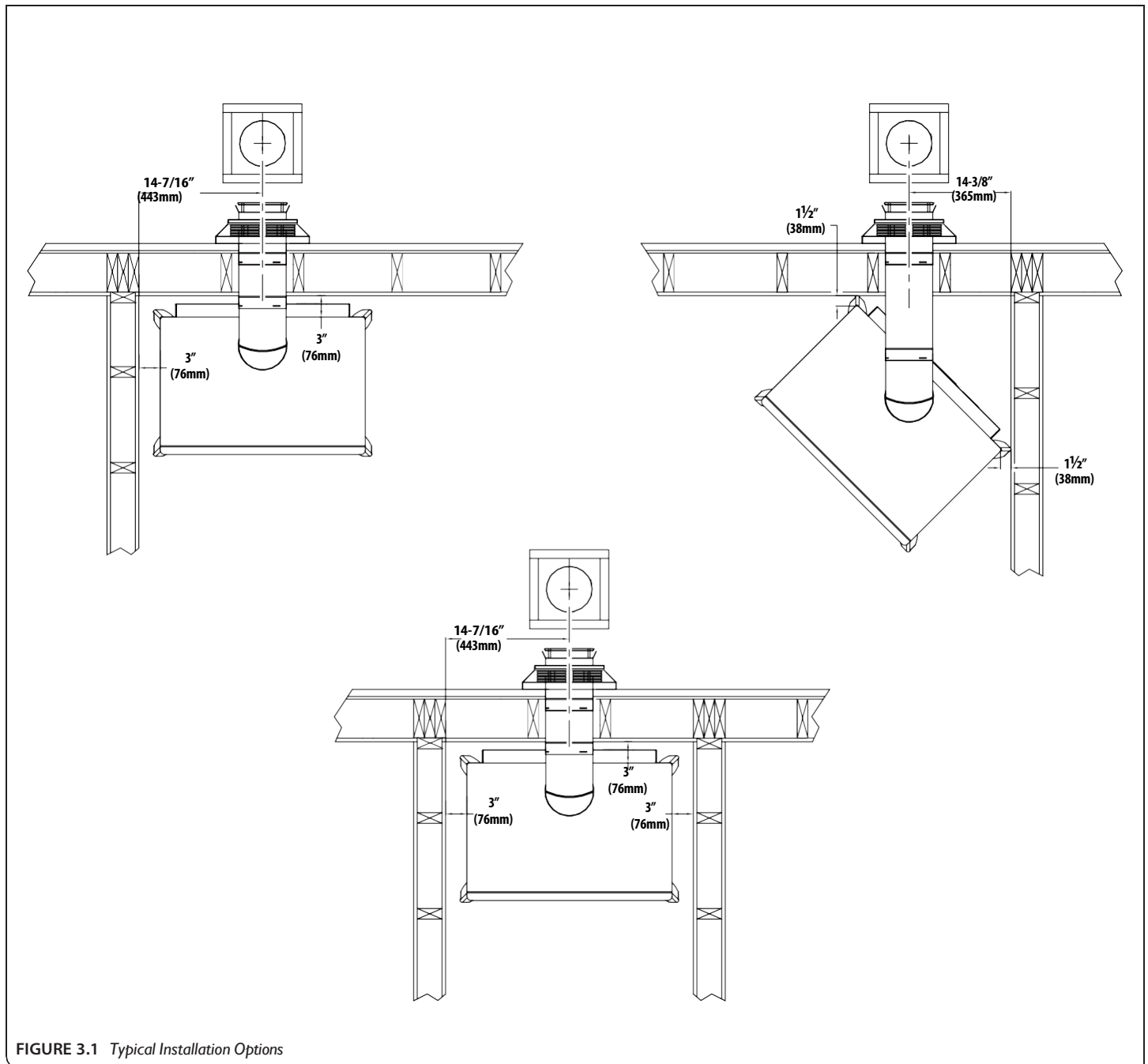


FIGURE 3.1 Typical Installation Options

### 3.3 Rough-in Vent Termination

This is a cold air transfer area. The gas stove rough-in must comply with all clearances as outlined in this manual, and be constructed in compliance with local building codes. Outside walls should be insulated to prevent cold air from entering room.

Exterior vent termination location must be in compliance with section 5.2, **MINIMUM TERMINATION CLEARANCES** on page 20. DO NOT RECESS THE VENT CAP INTO WALL OR SIDING.

**IMPORTANT - METAL FAB VENT SYSTEM:** When installing Metal Fab vent pipe, an adapter must be used. This will increase the minimum height for the center of the vent pipe by 3-1/4" (83mm) when framing the wall pass through.

#### 3.3.1 Clearances

- A minimum of 1" (25mm) clearance on all sides of the vertical vent pipe must be maintained.
- A minimum of 1" (25mm) clearance from the top surface on the horizontal pipe must be maintained.
- A minimum of 1" (25mm) clearance on the sides and bottom surfaces on the horizontal pipe must be maintained.
- A minimum of 2-1/4" (57mm) clearance from the top of the horizontal pipe to the ceiling is required. The horizontal pipe after the wall pass-through must maintain a 1" (25mm) clearance to combustibles on all surfaces of the pipe.

#### 3.3.2 Vertical Terminations

Follow vent pipe manufacturer's installation instructions for vertical terminations.

- Attic insulation shields may be insulated using unfaced insulation products listed as non-combustible per ASTM E 136.

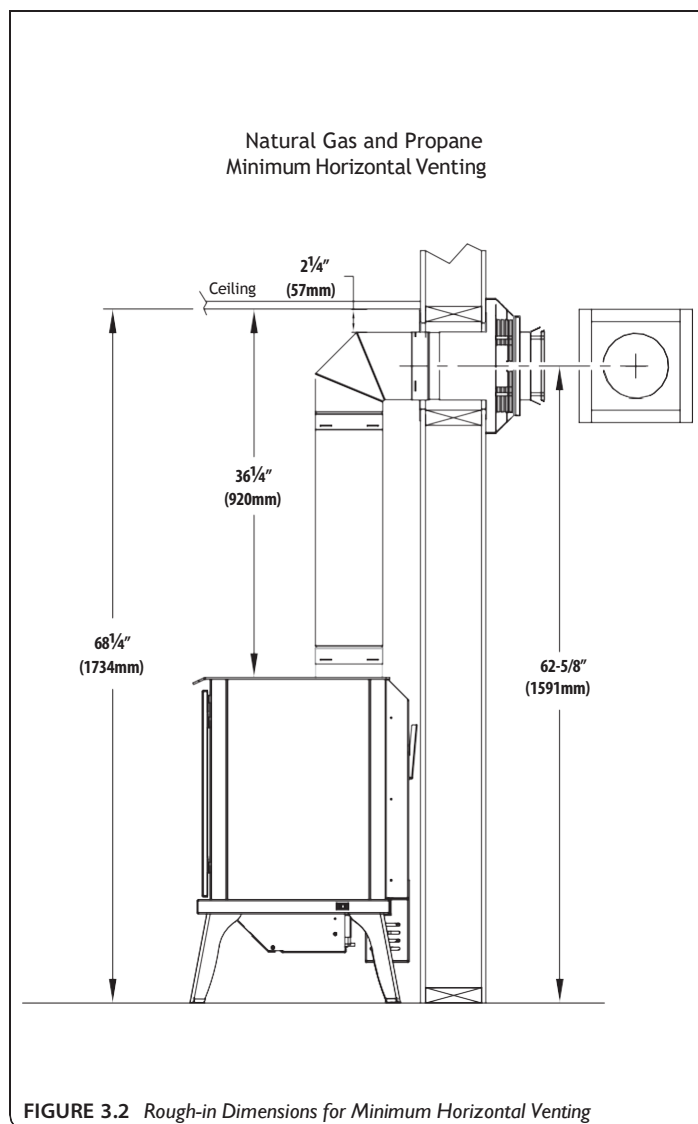
#### 3.3.3 Horizontal Terminations

**IMPORTANT:** Horizontal vent sections require 1/4" (6mm) rise for every 12" (305mm) of travel.

- Wall thimble products that comply with the required 1" (25mm) clearances to combustibles must be installed for all horizontal vent runs that pass through interior or exterior walls. These wall thimble products may be insulated using unfaced insulation products listed as noncombustible per ASTM E 136.
- Elbows listed with approved vent systems for this appliance vary in vertical length. Please consult the vent manufacturer's instructions to determine the elbow dimension used for installation. Adjust the wall pass-through rough opening dimensions to maintain clearance requirements.

##### 3.3.3.1 Wall Pass Through Information and Framing

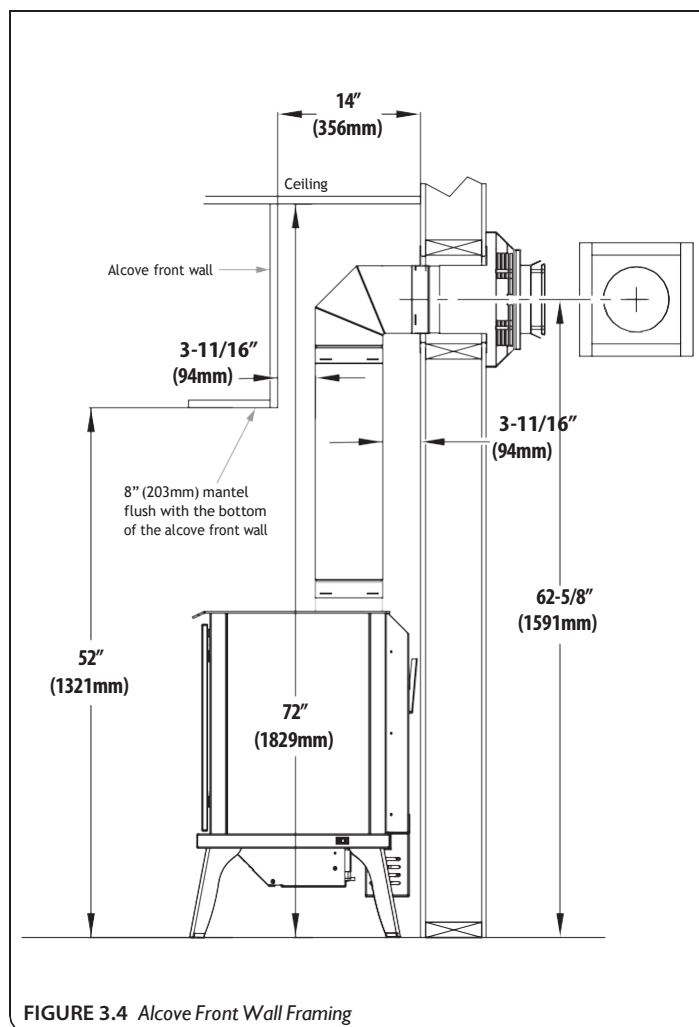
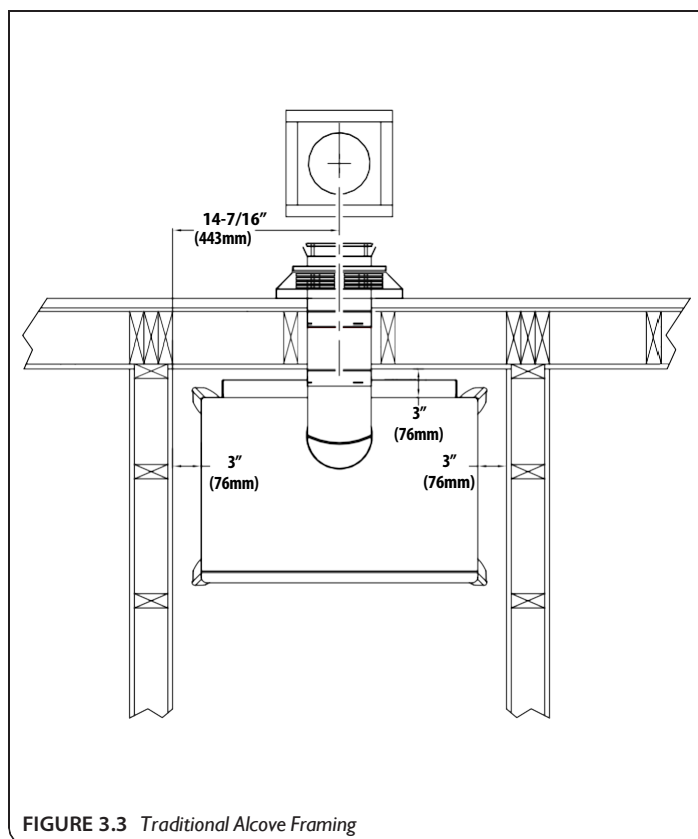
1. Measure from floor level of the gas stove to the center of where the vent pipe will penetrate the wall. The dimensions in **FIGURE 3.2** is used with a Simpson DuraVent elbow.
  2. Cut and frame an opening in the wall to allow the vent system to run level through the wall pass-through.
  3. Follow the vent pipe manufacturer's installation instructions for vent installation.
- Rigid pipe dimensions in **FIGURE 3.2** reflect Simpson DuraVent 4" x 6-5/8" coaxial pipe. Other manufacturers product dimensions may vary.



## 3.4 Alcove Installation

Shown in **FIGURE 3.3** is a top-down view of a traditional alcove installation. The alcove installation may have a front wall, as shown in **FIGURE 3.4**, to visually hide the vent pipe and vent elbow, as long as required clearances are met.

Minimum clearances **MUST** be maintained in order to provide adequate air circulation around the appliance and venting within the alcove.



### 3.5 Masonry Application

FIGURE 3.5 shown below is a masonry application where the gas stove sits inside of a masonry fireplace.

As referenced in FIGURE 3.5, the  $\frac{3}{4}$ " (19mm) mantel trim can start at  $40\frac{1}{2}$ " (1029mm) above the floor with a 6" (152mm) mantel starting at 44" (1118mm) above the floor.

As referenced in FIGURE 3.5, clearances to combustibles sided in the front (such as a mantel leg or a sidewall) is 3" (76mm) from the masonry fireplace opening with an unlimited projection.

There are no requirements for a hearth or non-combustible in front of the gas stove.

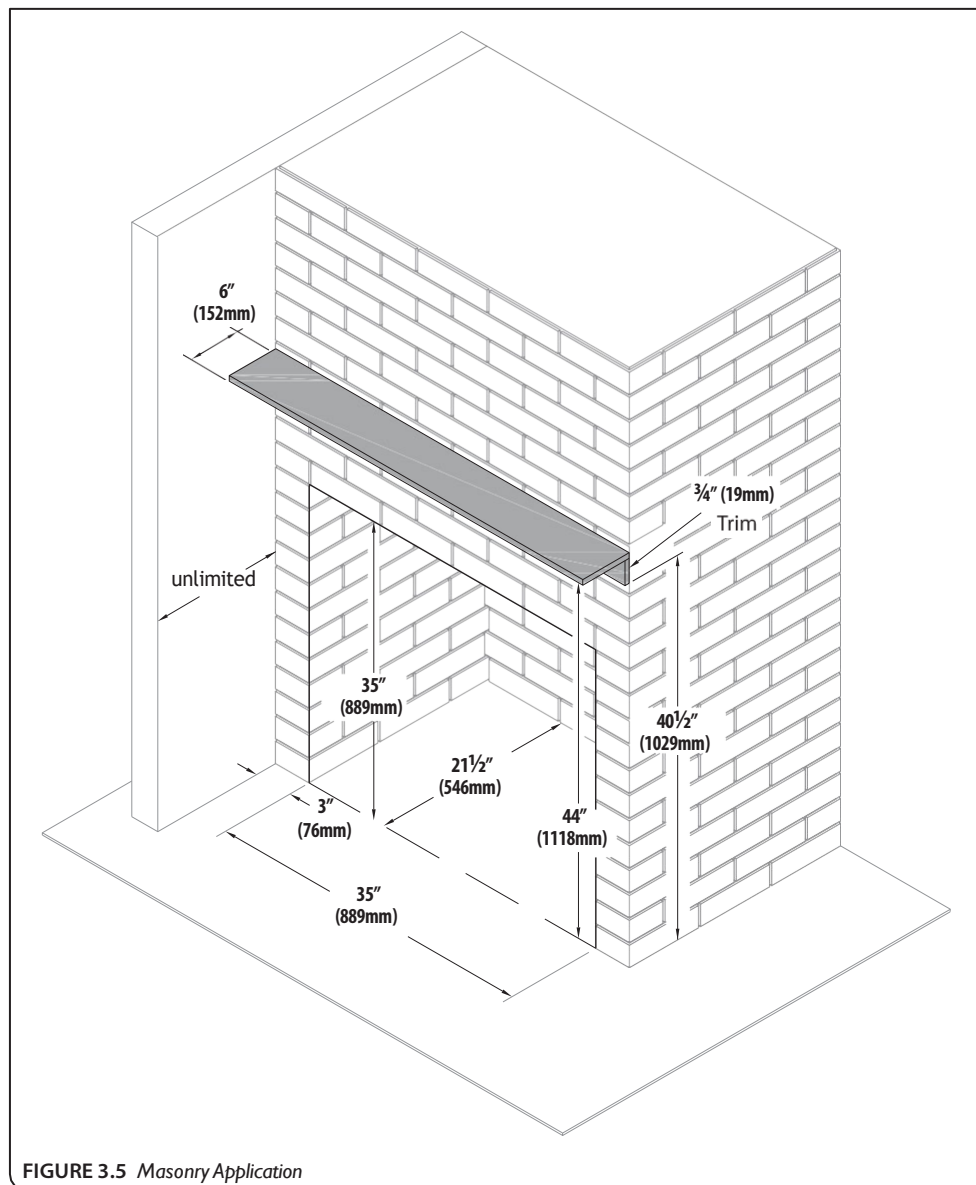


FIGURE 3.5 Masonry Application

## 3.6 Outdoor Covered Gas Stove Installation

An outdoor covered gas stove installation allows a gas stove to be installed in an outdoor covered area, where the appliance is protected from direct precipitation.

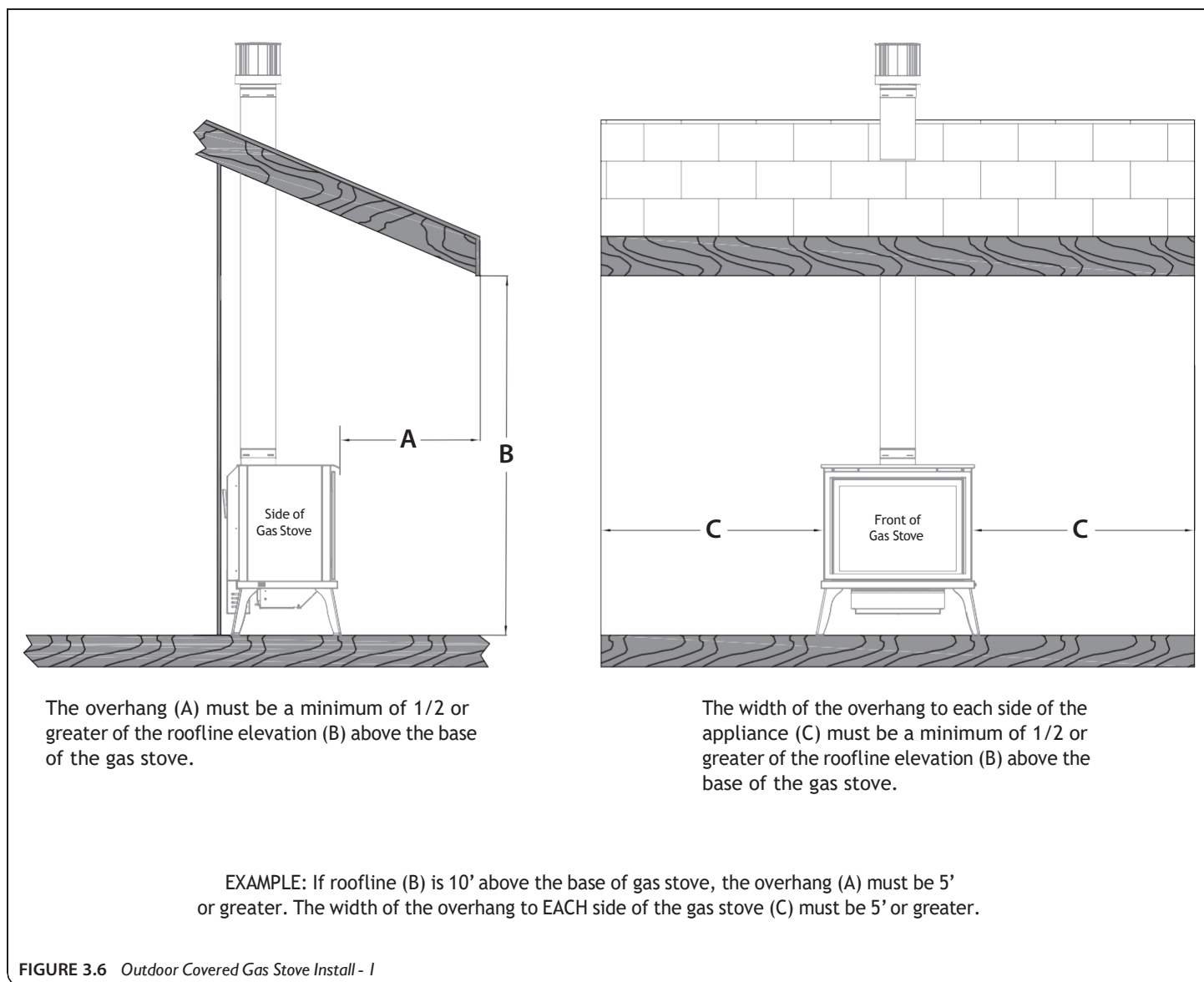
Follow the instructions and illustrations in this section for installation procedures.

### 3.6.1 Safety Screen Barriers

Hussong Mfg. highly recommends to use black painted safety barriers in outdoor installations. Other screen barriers that incorporate a plated or patina finish are highly susceptible to oxidation and discoloration.

### 3.6.2 Requirements

- Calculate your roof overhang dimensions by following **FIGURE 3.6** below.
- The continuous insulated building envelope and weatherproof membrane are not to be interrupted by gas stove installation. See **FIGURE 3.7** on page 17.
- Gas stove operation is approved from 40°F to 110°F.
- All wiring connections shall be in accordance with outdoor requirements of NECA NFPA 70.
- All clearances and requirements in your appliance manual must be adhered to.





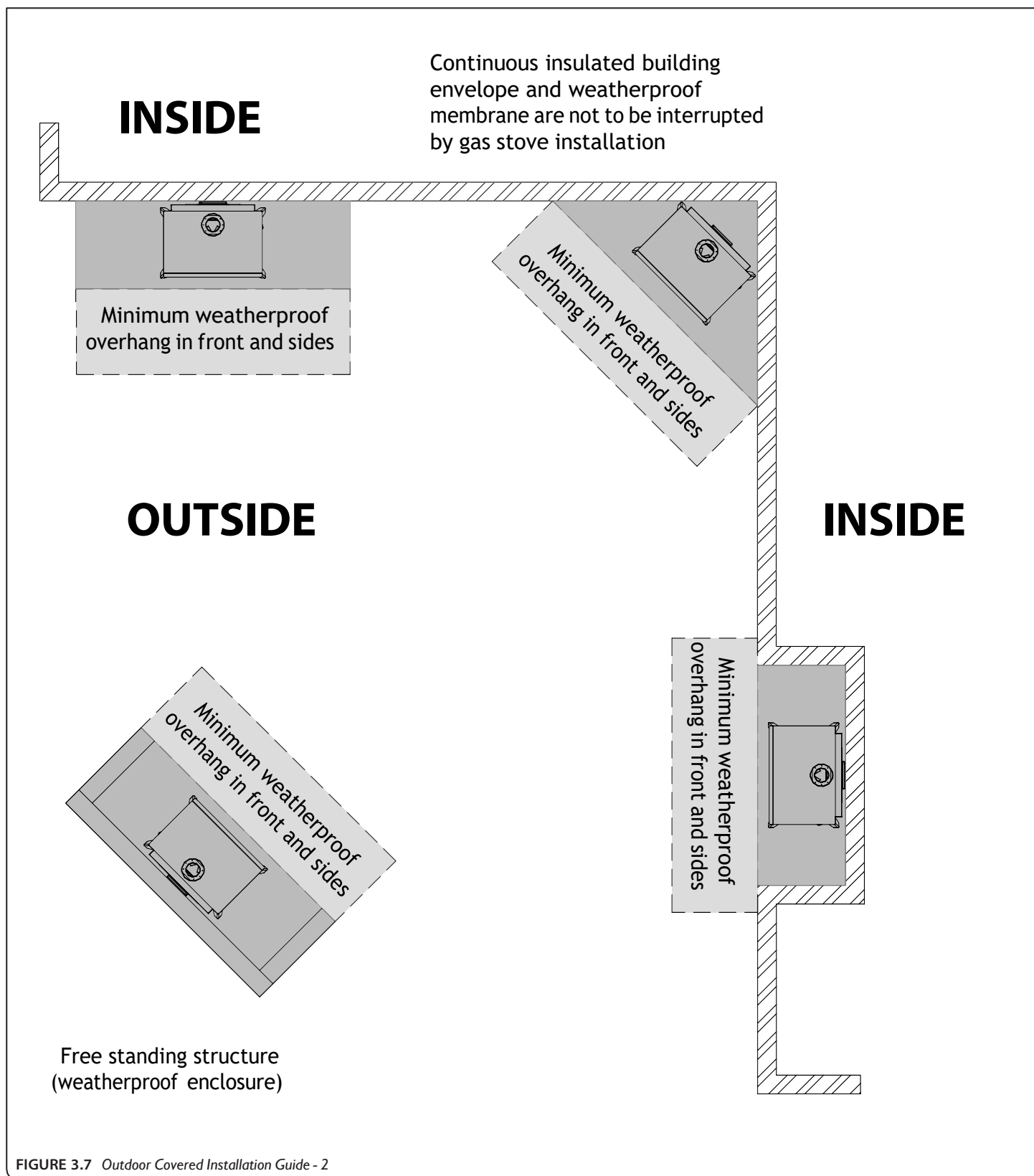


FIGURE 3.7 Outdoor Covered Installation Guide - 2

## 4.0 GAS LINE CONNECTION

### 4.1 Gas Conversion

*The gas conversion kit is sold separately.*

**ATTENTION:** The conversion shall be carried out in accordance with the requirements of the provincial authorities having jurisdiction and in accordance with the requirements of the ANSI Z223.1 installation code.

This fireplace is manufactured for use with natural gas. Follow the instructions included with the conversion kit if converting to propane.

### 4.2 Gas Line Installation

**CAUTION:** Installation of the gas line must only be done by a qualified person in accordance with local building codes, if any. If not, follow ANSI Z223.1. Commonwealth of Massachusetts installations must be done by a licensed plumber or gas fitter.

**NOTE:** The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at pressures in excess of ½ psi (3.5 kPa). For test pressures equal to or less than ½ psi (3.5 kPa), the appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve.

- A listed (and Commonwealth of Massachusetts approved) 1/2" (13mm) tee handle manual shut-off valve and flexible gas connector are to be connected to the 1/2" (13 mm) control valve inlet. If substituting for these components, please consult local codes for compliance.
- This fireplace is equipped with a 3/8" (10mm) x 18" (457mm) long flexible gas connector and manual shut-off valve.
- Run gas line into fireplace. The gas line should be run to the point of connection where the shut-off valve and flexible gas line will connect. See **FIGURE 2.1, LXL-22-MV DIMENSIONS** on page 9.
- Do not run gas line in a manner that would obstruct the optional fan operation.
- For high altitude installations, consult the local gas distributor or the authority having jurisdiction for proper rating methods.

*Table 4.1, Inlet Pressure Requirements*

Gas Pressure	Natural Gas	Propane
Minimum Inlet Pressure	5" WC (1.25 kPa) 7" WC (1.74 kPa) recommended	11" WC (2.74 kPa) recommended
Maximum Inlet Pressure	10.5" WC (2.62 kPa)	13" WC (3.24 kPa)

5.1 Vertical Vent Termination

**WARNING:** This gas appliance must not be connected to a chimney flue serving a separate solid-fuel burning appliance.

Refer to **FIGURE 5.1** below for vertical vent termination clearances.

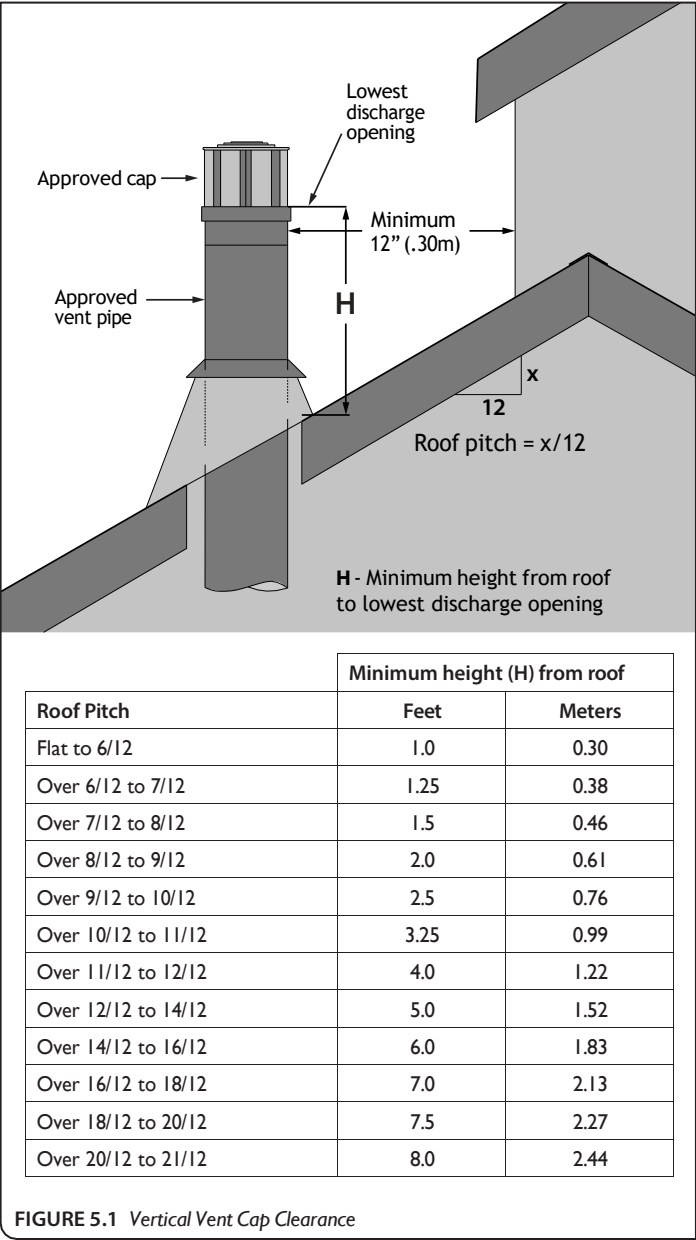
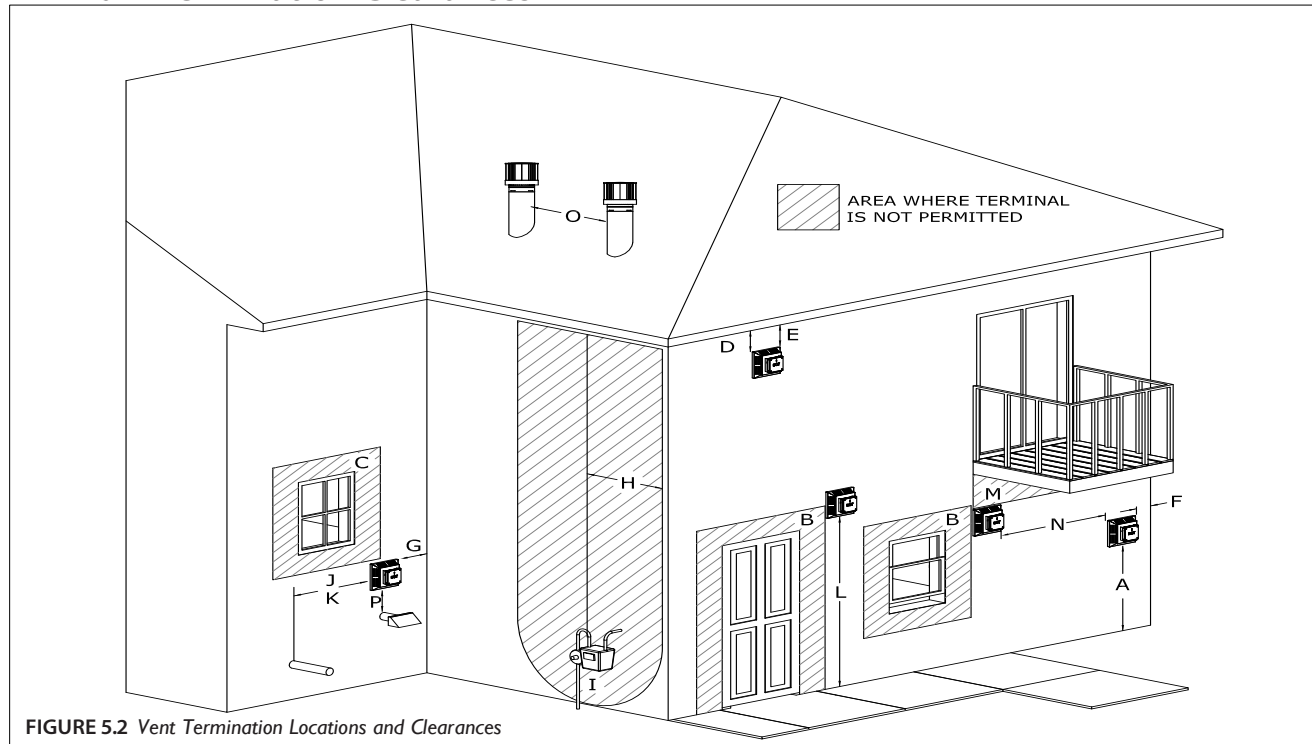


FIGURE 5.1 Vertical Vent Cap Clearance

## 5.2 Minimum Termination Clearances



		Canadian installations	US installations
<b>A</b>	Clearance above grade, veranda, porch, deck, or balcony	12" (30cm)	12" (30cm)
<b>B</b>	Clearance to window or door that may be opened	12" (30cm)	9" (23cm)
<b>C</b>	Clearance to permanently closed window (recommended to prevent condensation on window)	12" (30cm)*	12" (30cm)*
<b>D</b>	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2' (61 cm) from the edge of the terminal	24" (61 cm)*	24" (61 cm)*
<b>E</b>	Clearance to unventilated soffit	12" (30cm)*	12" (30cm)*
<b>F</b>	Clearance to outside corner	0" (0cm)*	0" (0cm)*
<b>G</b>	Clearance to inside corner	0" (0cm)*	0" (0cm)
<b>H</b>	Clearance to each side of center line extended above meter/regulator assembly	3' (91 cm) within a height 15' (4.5m) above the meter/regulator assembly	*
<b>I</b>	Clearance to service regulator vent outlet	3' (91 cm)	*
<b>J</b>	Clearance to non mechanical air supply inlet to building or the combustion air inlet to any other appliance	12" (30cm)	9" (23cm)
<b>K</b>	Clearance to mechanical air supply inlet	6' (1.83m)	3' (91 cm) above if within 10' (3m) horizontally Massachusetts: 10' (3m)
<b>L</b>	Clearance above paved sidewalk or paved driveway located on public property	7' (2.13m)†	*
<b>M</b>	Clearance under veranda, porch deck, or balcony	12" (30cm)‡	12" (30cm)
<b>N</b>	Clearance between two horizontal terminations	12" (30cm)	12" (30cm)
<b>O</b>	Clearance between two vertical terminations (may be same height)	12" (30cm)	12" (30cm)
<b>P</b>	Above furnace exhaust or inlet	12" (30cm)	12" (30cm)

\* Clearance in accordance with local installation codes and the requirements of the gas supplier.

† A vent shall not terminate directly above a sidewalk or paved driveway that is located between two single family dwellings and serves both dwellings.

‡ Permitted only if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

**VINYL SOFFIT, VINYL CEILING, AND VINYL OVERHANG DISCLAIMER:** Clearances to heat resistant material (i.e. wood, metal). This does not include vinyl. Hussong Manufacturing Co., Inc. will not be held responsible for heat damage caused from terminating under vinyl overhangs, vinyl ceilings, or vinyl ventilated/unventilated soffits.

## 6.1 Approved Vent Systems

This appliance is equipped for use with a 4" (102mm) exhaust by 6-5/8" (168mm) air intake co-axial vent pipe system.

Vertical 4" x 6-5/8" co-axial flexible vent pipe is not approved for use with this gas stove.

This appliance is approved for use with manufacturers (horizontal and vertical terminations): American Metal Products (Ameri-Vent), BDM, ICC, Metal Fab\*, Olympia Chimney Supply, Inc., Selkirk, and Simpson DuraVent. See section 6.1.1 below.

**\*WHEN INSTALLING METAL FAB VENT SYSTEM** with this appliance adapter part number 4DDA must be used. Refer to section 3.3, **ROUGH-IN VENT TERMINATION** on page 13 for more information.

This appliance can be adapted to use 4" diameter aluminum flexible pipe by any listed vent manufacturer when used in combination with an existing minimum 7" ID Class A metal/masonry chimney. Refer to section 6.5 on page 26 for more information.

This appliance can be adapted to use 3" x 3" flexible co-linear vent pipes with a 4" x 6-5/8" reducer when used in combination with an existing minimum 6" x 8" ID masonry or 7" ID Class A metal chimney. Refer to section 6.6 on page 27 for more information.

Refer to the vent manufacturer's installation manual for complete installation instructions. Installation must conform with the requirements and restrictions specified in this manual.

### 6.1.1 Approved 4" x 6-5/8" Vent Systems

Table 6.1, Approved 4" x 6-5/8" Vent Systems

Vent Manufacturer	Vent Cap Part Number
American Metal Products (Ameri-Vent)	4DHCS 4DHC 4D36S
BDM	DVR6-HCP DVR6-HC DVR6-VCLP DVR6-SNK14 DVR6-SNK36
Simpson DuraVent	46DVA-HC 46DVA-HSC 46DVA-HSCH 46DVA-VCH 46DVA-VC 46DVA-SNK36 46DVA-HTC
ICC	TM-4HT TM-4RHT TM-4ST36
Metal Fab <i>Adapter 4DDA must be used</i>	4DHT 4DST36
Olympia Chimney Supply, Inc.	VDV-HC04 VDV-VC04 VDV-SNC0414 VDV-SNC0436
Selkirk	4DT-HC 4DT-HCR 4DT-VC 4DT-ST36

## 6.2 Venting Requirements

**NOTE: Consult the local and national installation codes to assure adequate combustion and ventilation air is available. Venting requirements apply to both natural gas and propane.**

- Flame height and appearance will vary depending upon venting configuration and the type of fuel used.
- Provide a means for visually checking the vent connection to the appliance after the fireplace is installed.
- A minimum of 1" (25mm) clearance on all sides of the vertical vent pipe must be maintained. Attic insulation shields may be insulated using unfaced insulation products listed as noncombustible per ASTM E 136.
- Wall thimble products that comply with a minimum of 1" (25mm) clearance on the top side and a minimum of 1" (25mm) clearance on the bottom, left, and right sides of the horizontal vent pipe at the wall pass-through must be maintained. Wall thimble products that comply with the required clearances to combustibles must be installed for all horizontal vent runs that pass through interior or exterior walls. These wall thimble products may be insulated using unfaced insulation products listed as noncombustible per ASTM E 136.

## 6.3 Vent Restriction

Burner flame appearance and characteristics are affected by altitude, fuel quality, venting configuration, and other factors. To achieve desirable flame appearance, the vent exhaust may be restricted by the restrictor plate (included in components packet) and/or by adjusting the built-in restrictor wheel located in the baffle in the gas stove firebox.

For vent restriction recommendations and adjustments, see section 10.2.2, VENT RESTRICTION (AFTER INSTALLATION) on page 36.

### 6.3.1 Restrictor Plate

The restrictor plate is shipped with all inner rings intact, and when installed, provides the most vent restriction. There are (2) inner rings that can be knocked out. The innermost ring knocked out will create less restriction, and the outer most ring knocked out will create the least amount of restriction.

Follow FIGURE 7.1 for restrictor plate installation before attaching venting, or through the baffle if venting is already attached.

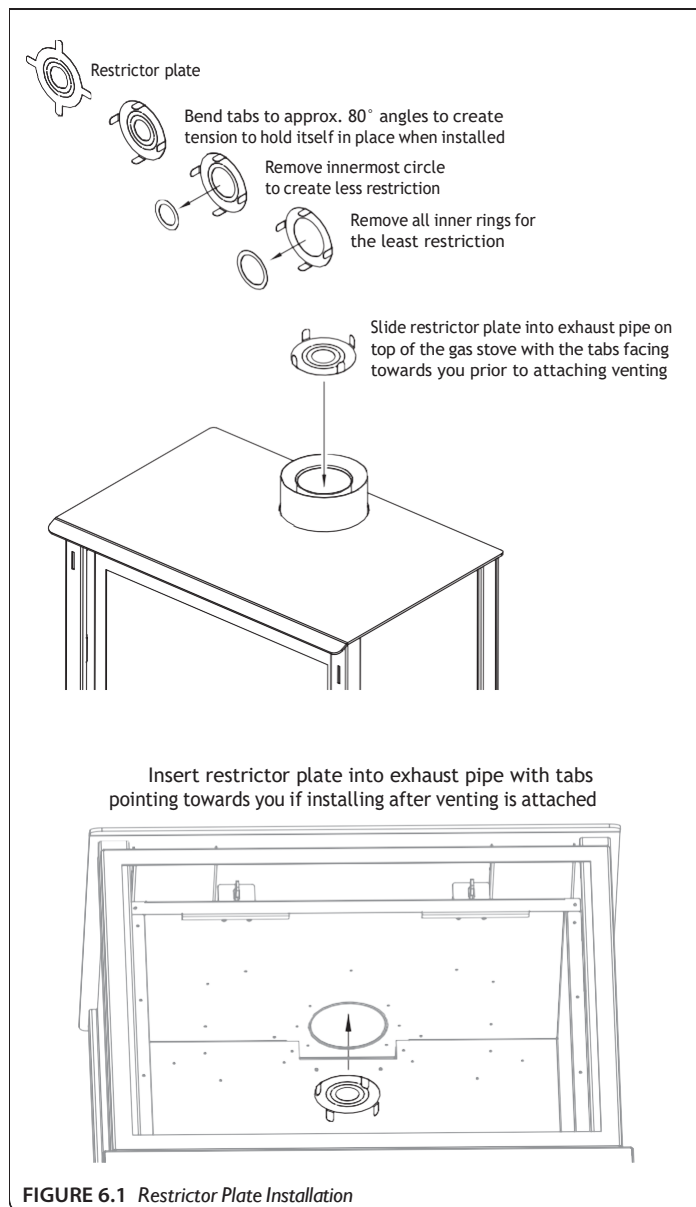


FIGURE 6.1 Restrictor Plate Installation

### 6.3.2 Baffle Restrictor

This gas stove is shipped with the baffle restrictor set in position 1 (wide open). Position 1 is the least restriction, and position 5 is the most restriction. To adjust the baffle restrictor,

1. Remove the safety barrier and glass frame assembly.
2. Remove and save (1) screw to adjust the baffle restrictor to achieve desired flame appearance.
3. Secure the baffle restrictor when finished with (1) screw previously removed.
4. Reinstall all components previously removed.

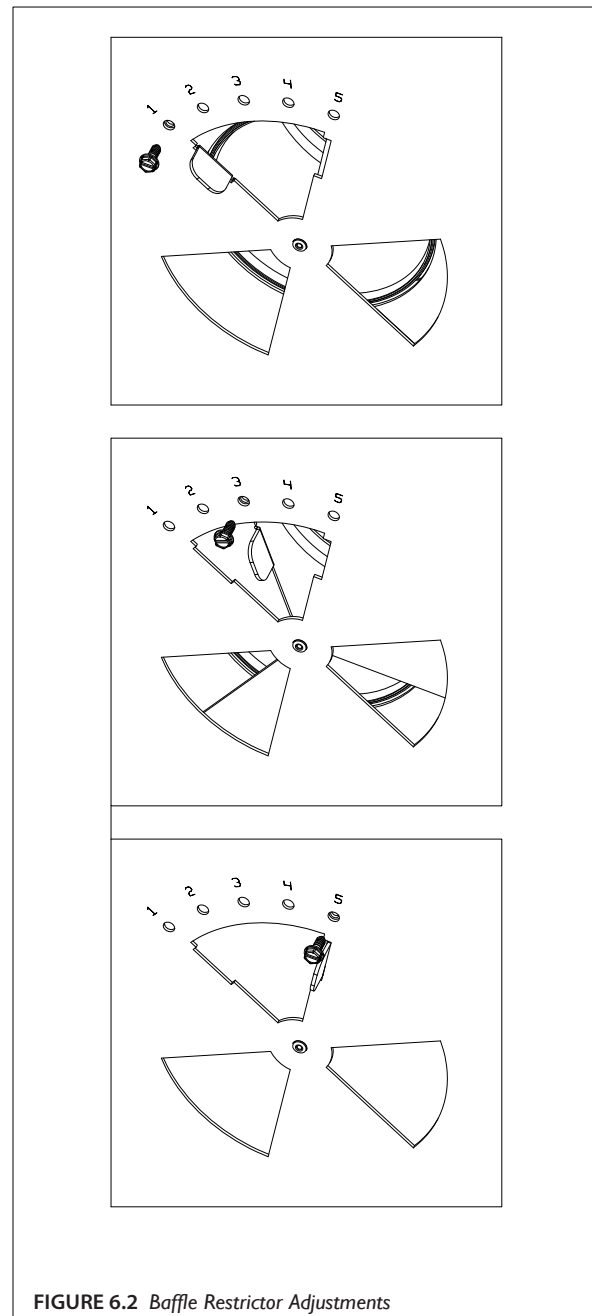


FIGURE 6.2 Baffle Restrictor Adjustments

## 6.4 Vent Installation

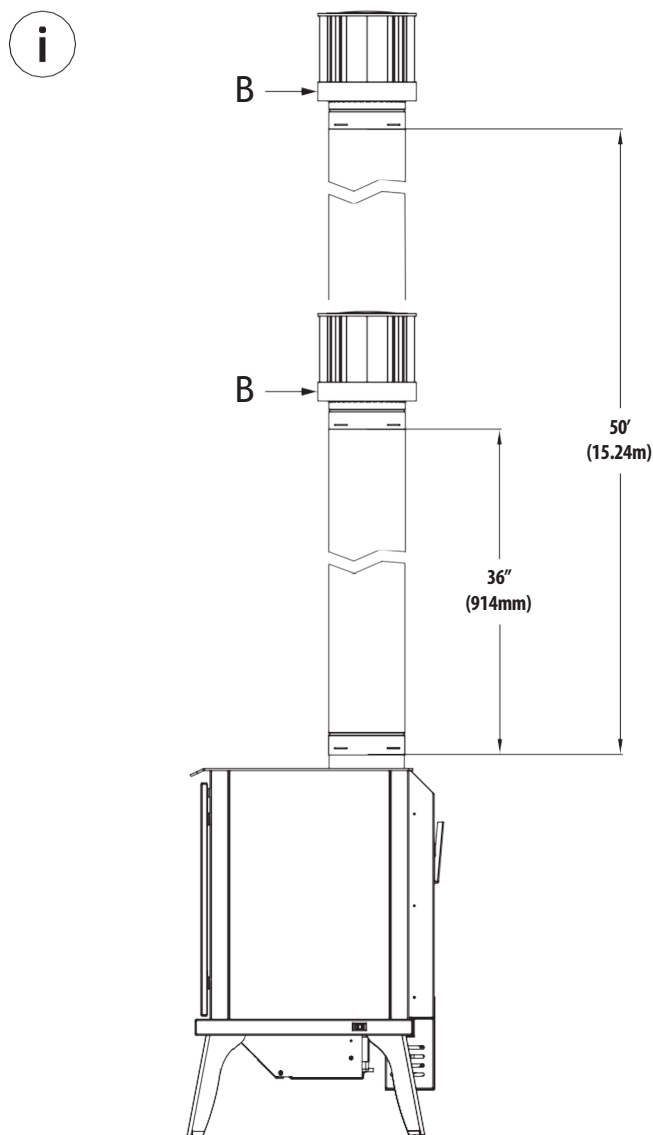
### 6.4.1 Vertical Terminations

*Natural Gas and Propane Installations*

- (i) **Minimum / Maximum Vertical Terminations:**  
36" (914mm) minimum vertical length / 50' (15.24m) maximum  
vertical length + termination cap

DIAG. 1 NATURAL GAS & PROPANE VERTICAL TERMINATIONS

(A) 90° Elbow (not applicable) (B) Termination Cap



## 6.4.1 Horizontal Terminations

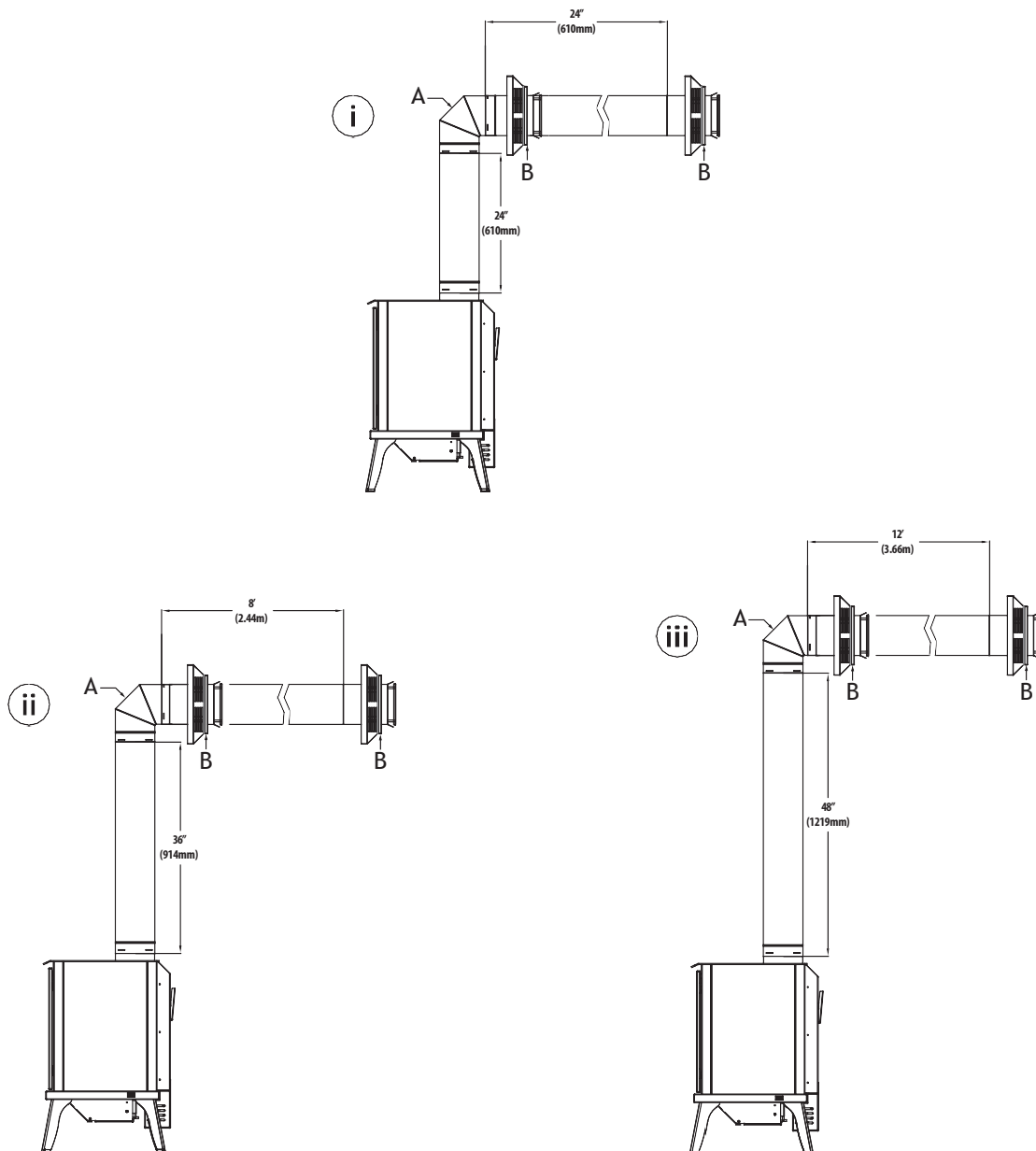
### Natural Gas and Propane Installations

**IMPORTANT:** Horizontal vent sections require 1/4" (6mm) of rise for every 12" (305mm) of travel.

- (i) **Minimum 24" Vertical Vent Pipe / Minimum Horizontal**  
24" (610mm) vertical vent pipe + 90° horizontal elbow + termination cap
- (i) **Minimum 24" Vertical Vent Pipe / Maximum Horizontal**  
24" (610mm) vertical vent pipe + 90° horizontal elbow + 24" (610mm) maximum horizontal run + termination cap
- (ii) **Minimum 36" Vertical Vent Pipe / Minimum Horizontal**  
36" (914mm) vertical vent pipe + 90° horizontal elbow + termination cap

- (ii) **Minimum 36" Vertical Vent Pipe / Maximum Horizontal**  
36" (914mm) vertical vent pipe + 90° horizontal elbow + 8' (2.44m) maximum horizontal run + termination cap
- (iii) **Minimum 48" Vertical Vent Pipe / Minimum Horizontal**  
48" (1219mm) vertical vent pipe + 90° horizontal elbow + termination cap
- (iii) **Minimum 24" Vertical Vent / Maximum Horizontal**  
48" (1219mm) vertical vent pipe + 90° horizontal elbow + 12' (3.6m) maximum horizontal run + termination cap

DIAG. 2 NATURAL GAS & PROPANE HORIZONTAL TERMINATIONS  
(A) 90° Elbow (B) Termination Cap





## 6.4.2 Combination Venting

### Natural Gas and Propane Installations

**IMPORTANT:** Horizontal vent sections require 1/4" (6mm) of rise for every 12" (305mm) of travel.

Vent termination must be within the shaded area in FIGURE 6.3.

25' (7.6m) maximum vertical rise + 25' (7.6m) maximum horizontal run  
= 50' (15.2m) of total length

- Maximum of (5) 90° elbows. For each additional 90° elbow used after the first elbow, 3' (914mm) must be subtracted from maximum venting allowed.
- (2) 45° degree elbows may be used in place of (1) 90° elbow. For each 45° elbow used, 18" (457mm) must be subtracted from maximum venting allowed.

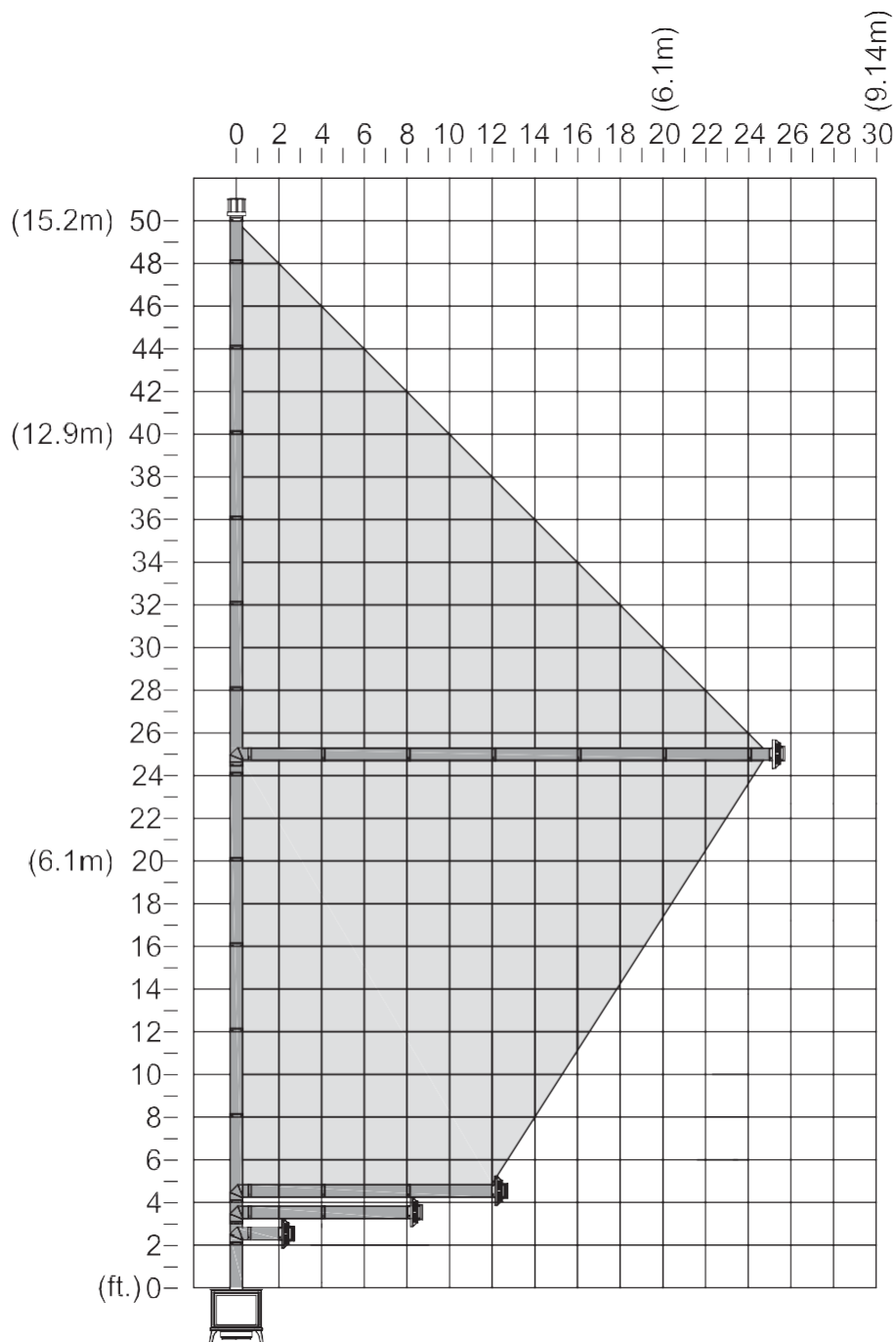


FIGURE 6.3 Combination Venting

## 6.5 Class A Chimney/Masonry Chimney Conversion

This appliance is approved to be adapted for Class A/Masonry Chimney conversion with kits utilizing a 4" (102mm) flexible exhaust by any vent manufacturers listed in section 6.1, **APPROVED VENT SYSTEMS** on page 21.

Before conversion, have the existing installation inspected by a qualified chimney sweep or professional installer. The existing chimney system must be in serviceable condition, and functionally sound. Before proceeding with following installations, check with local building jurisdiction to verify this type of installation is allowed in your area.

Follow **DIAG. 3** for allowable venting configurations for installation in existing through-the-ceiling, Class A/Masonry chimney. Route the exhaust gases and intake air through the existing Class A/Masonry chimney.

### 6.5.1 4" Flex Pipe Venting Configurations

**IMPORTANT:** Horizontal vent sections require at least 1/4" (6mm) rise for every 12" (305mm) of travel.

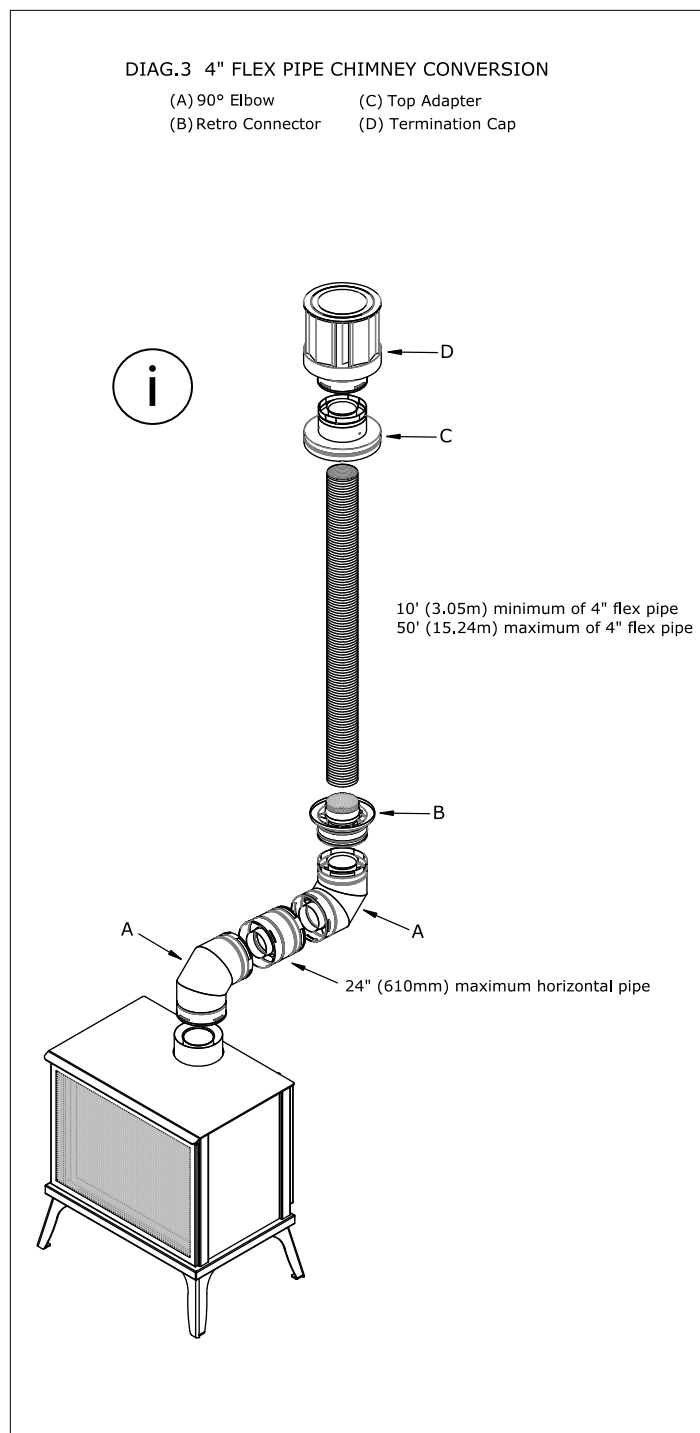
**IMPORTANT:** The vent heat shield assembly must be installed when incorporating minimum horizontal venting off the top of the appliance.

**IMPORTANT:** Care should be taken when installing flexible pipe to avoid a tight bend that may cause abrasion or damage to the flexible pipe.

The vent option listed below allow for a minimum of 0" (0mm) to a maximum of 24" (610mm) horizontal run using rigid or flexible pipe.

(i) **Minimum / Maximum Vertical Terminations:**

90° elbow + retro connector + 10' (3.05m) minimum length of 4" aluminum flexible pipe / 50' (15.24m) maximum length of 4" aluminum flexible pipe + top adapter + termination cap



## 6.6 Coaxial to Co-Linear Chimney Conversion

Before conversion, have the existing installation inspected by a qualified chimney sweep or professional installer. The existing chimney system must be in serviceable condition, and functionally sound. Before proceeding with following installations, check with local building jurisdiction to verify this type of installation is allowed in your area.

Follow **DIAG. 4** for allowable venting configurations for installation in existing masonry chimney. Route the exhaust gases and intake air through the existing masonry chimney.

### 6.6.1 Coaxial to Co-Linear Venting Configurations

**IMPORTANT:** Horizontal vent sections require at least 1/4" (6mm) rise for every 12" (305mm) of travel.

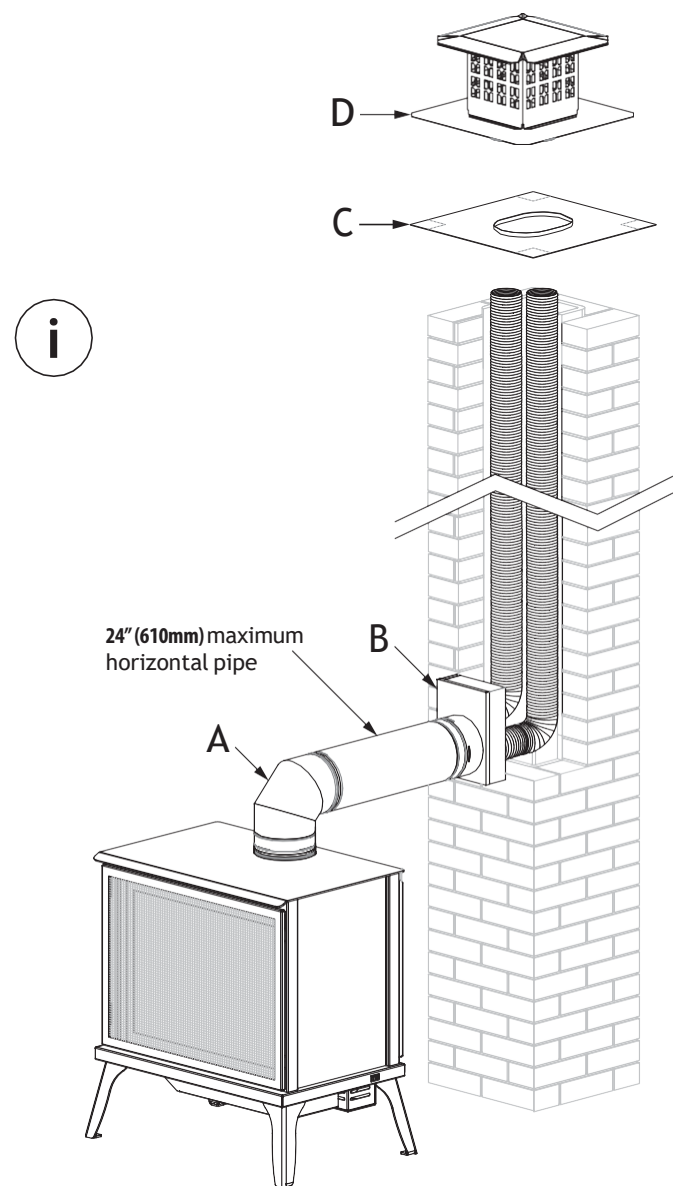
**IMPORTANT:** Care should be taken when installing flexible pipe to avoid a tight bend that may cause abrasion or damage to the flexible pipe.

The vent option listed below allows for a minimum of 0" (0mm) to a maximum of 24" (610mm) horizontal run using rigid or flexible pipe.

#### (i) Minimum / Maximum Vertical Terminations:

90° elbow + 24" (610mm) maximum horizontal vent pipe + coaxial to co-linear adapter + 10' (3.05m) minimum length of 3" x 3" aluminum flexible pipe / 50' (15.24m) maximum length of 3" x 3" aluminum flexible pipe + roof flashing + termination cap

**DIAG. 4 COAXIAL TO CO-LINEAR CHIMNEY CONVERSION**  
(A) 90° Elbow (B) Coaxial to Co-Linear Adapter (C) Roof Flashing (D) Termination Cap



## 7.0 FIREPLACE SETUP

### 7.1 Safety Barrier Screen and Overlay Installation

#### 7.1.1 Safety Barrier Screen

1. Locate the (4) slots located on each side of the gas stove frame.
  2. Align the notched tabs located on the back of the safety barrier screen/overlay with the slots on the gas stove frame.
  3. Raise the safety barrier screen front slightly into slots and allow the tabs to lower into position. See
- To remove safety barrier screen: lift the screen up and out of slots.

#### 7.1.2 Overlay

1. If installed, remove the safety barrier screen.
  2. Align the overlay over the safety barrier screen.
  3. Locate the (4) tabs on the rear of the overlay and hand bend tabs to secure the overlay to the safety screen front.
  4. Locate the (4) slots located on each side of the gas stove frame.
  5. Align the notched tabs located on the back of the safety screen with the slots on the gas stove frame.
  6. Raise the safety barrier screen with overlay slightly into slots and allow the tabs to lower into position.
- To remove safety barrier screen: lift the screen up and out of slots.

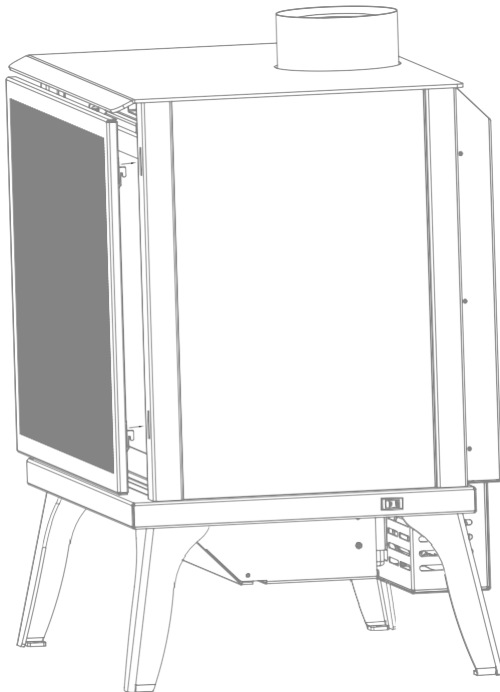


FIGURE 7.1 Safety Barrier Screen Installation

### 7.2 Glass Frame Assembly

**WARNING:** Do not operate this fireplace with the glass removed, cracked, or broken. Replacement of the glass assembly should be done by a licensed or qualified service person.

Refer to FIGURE 7.2 with the following instructions.

#### 7.2.1 Remove Glass Frame Assembly

**WARNING:** Do not remove the glass assembly when hot.

1. Remove the safety barrier screen.
2. Locate (2) spring-loaded latches securing the glass assembly at the top of the firebox. Use the provided tool to unlatch the latch assemblies from the flange on top of the glass valance.
3. Tilt the top of the glass valance forward and lift up to remove the valance resting on the bottom frame rail.

#### 7.2.2 Install Glass Frame Assembly

1. Tilt the top of the glass valance forward and align the glass valance with the bottom frame rail.
2. Use the provided tool to pull the (2) latch assemblies to latch with the flange on top of the glass valance.
3. Reinstall safety barrier screen.

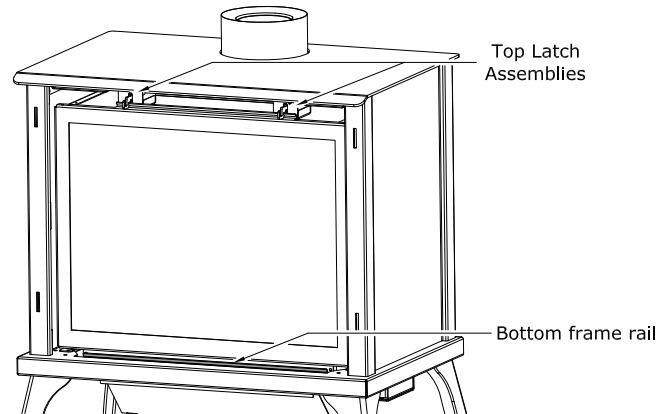


FIGURE 7. Glass Frame Assembly Removal and Installation



## 7.3 #LX22-500 Log Set Installation

**CAUTION:** Do not place logs directly over burner portholes. Improper log placement may affect flame appearance and cause excessive soot to build upon the logs and glass.

- If converting to propane, complete the conversion before installing the log set. Follow the conversion instructions included with the kit.
  - Log numbers are located on each log. Refer to the following instructions and illustrations for proper log placement.
1. Set log LX1 on the rear log plate, as shown in FIGURE 7.3.
  2. Align the holes in the bottom of log LX2 with the studs on the left side of the burner and place log LX2 in to position, as shown in FIGURE 7.3.
  3. Align log LX3 with the notch in the ash panel and place into position, as shown in FIGURE 7.3.
  4. Align the holes in the bottom of log LX4 with the studs on the right side of the burner and place log LX4 in to position, as shown in FIGURE 7.3.
  5. Align log LX5 with the left pin in log LX1 and the notch in log LX2 and position as shown in FIGURE 7.4.
  6. Align log LX6 with the pin in the middle of log LX1 and the notch in the middle of the ash panel, and position as shown in FIGURE 7.4.
  7. Align log LX7 with the right pin log LX1 and the notch in the right side of the ash panel, as shown in FIGURE 7.4.
  8. Align log LX8 with the notch in the ash panel, as shown in FIGURE 7.4.
  9. Use a stiff or steel bristle nylon brush to distribute rockwool embers onto logs and burner.

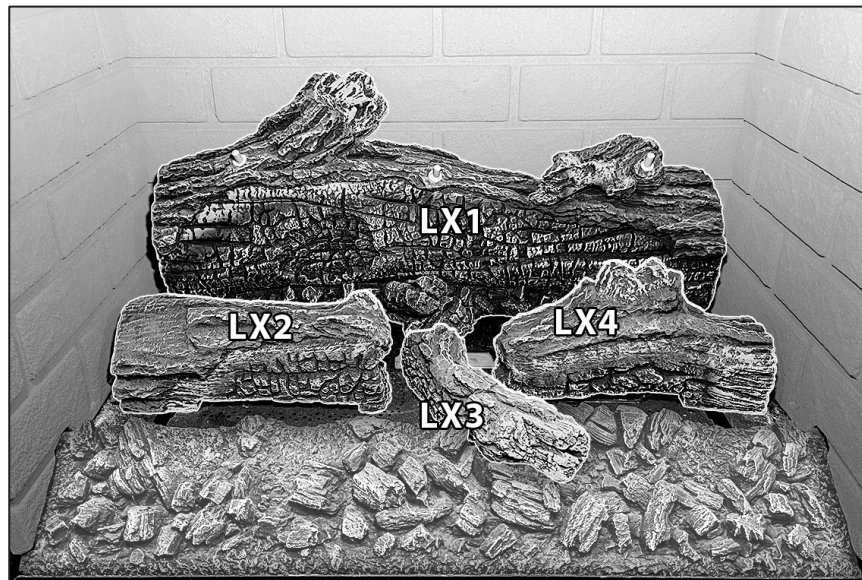


FIGURE 7.3 Base Logs

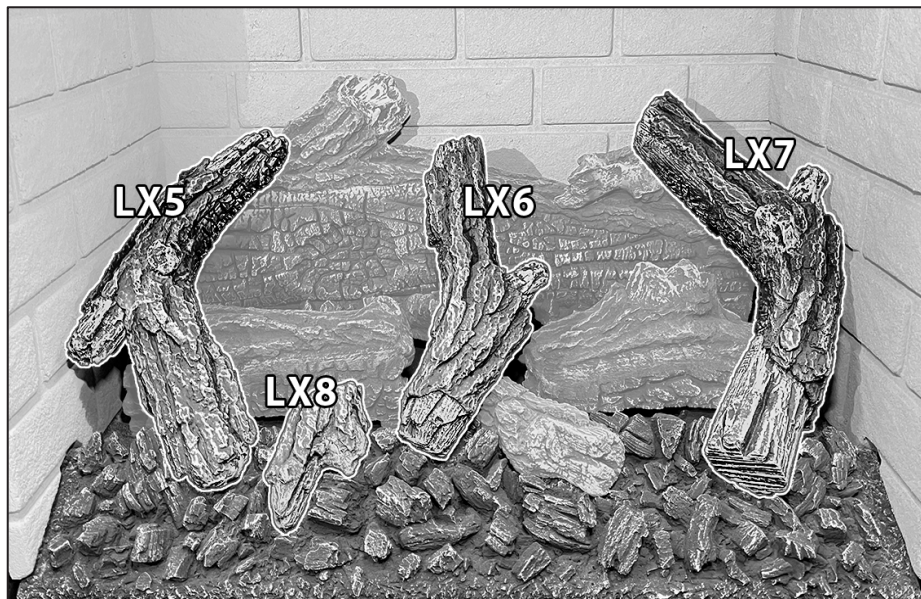


FIGURE 7.4 Completed Installation

## 7.4 Control Board Removal and Installation

**WARNING:** Avoid burns or personal property damage by using appropriate protection to remove any components if the burner and/or pilot have been burning.

**WARNING:** DO NOT operate this appliance without the sealing gasket (located under the control board) in place. If the sealing gasket is damaged, it must be replaced.

**CAUTION:** Check all connections for leaks with soapy water, whether field or factory made.

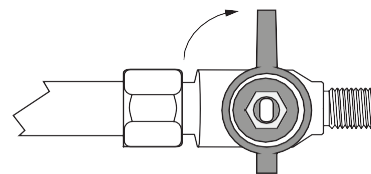
Refer to FIGURE 7.5 CONTROL BOARD REMOVAL AND INSTALLATION for the following instructions.

### 7.4.1 Control Board Removal

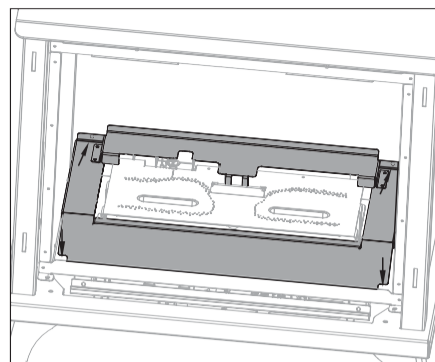
1. Disconnect electrical power.
2. Locate the manual valve installed by your qualified service technician. Turn the manual valve clockwise to the OFF position.
3. Remove the safety barrier and glass frame assembly.
4. Remove the log set.
5. Remove the panel clips securing the refractory or panel set (if installed).
6. Remove the ash panel.
7. Remove burner surround. There are (2) screws on the firebox back wall and (2) screws at the front of the firebox floor. Remove the (4) screws securing the burner surround and remove from firebox.
8. Remove (2) screws securing the burner assembly. Release the burner tube, with sliding venturi shutter still attached, off of the burner orifice and remove from firebox.
9. Remove and save (8) screws securing the control board. Lift the control board out of the firebox, being careful not to damage the sealing gasket underneath.

### 7.4.2 Control Board Installation

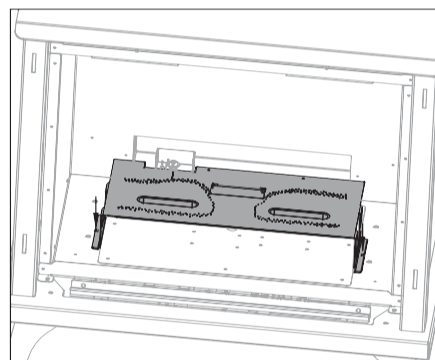
1. Place the control board in the firebox, aligning the holes in control board with the holes and alignment screws in firebox bottom. **VERIFY SEALING GASKET IS IN PLACE.** Secure the control board with screws previously removed.
2. Reinstall burner assembly. Position the burner tube over the burner orifice while aligning the flange on the sliding venturi shutter with the slots on adjustable venturi mount. Align the holes in the burner assembly with the holes in the firebox floor. Secure with (2) screws previously removed.
3. Reinstall burner surround. Align the holes in the burner surround with the (2) holes in the firebox back wall and (2) holes in the firebox floor. Secure with (4) screws previously removed.
4. Reinstall ash panel.
5. Reinstall the refractory or panel set and secure with panel clips previously removed (if applicable).
6. Reinstall the log set.
7. Reinstall the glass frame assembly and safety barrier.
8. Turn the manual valve counterclockwise to the ON position.
9. Verify proper log placement, operation of fireplace, and any electrical components.



Remove burner surround (4) screws



Remove burner assembly (2) screws



Remove control board (8) screws

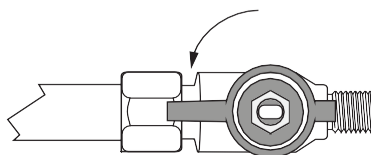
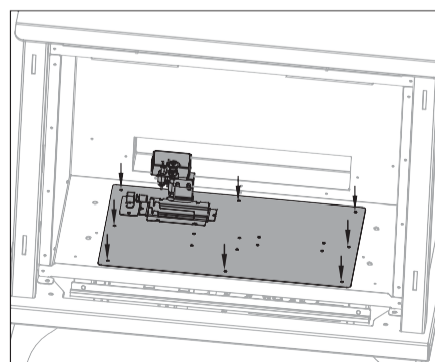


FIGURE 7.5 Control Board Removal and Installation

## 8.0 ELECTRICAL INFORMATION

**WARNING:** Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect this appliance and to replace any part of the control system and any gas control which has been under water.

### 8.1 Wiring Requirements

**CAUTION:** Do not connect high voltage (115V) wire to the gas valve.

- The millivolt gas valve system does not require 110-120 VAC supply to operate.
- If desired, a wall switch, remote, or thermostat switch may be installed for main burner operational control using low-voltage wires (not included). A thermostat wire assembly is not included with this appliance.
- It is optional to disable rocker switch operating the main burner

by disconnecting the wires from the back of the gas valve (FIGURE 8.1).

- If the rocker switch wires are not disconnected, the ON/OFF rocker switch must be in the OFF position for proper operation of optional controls. If the ON/OFF rocker switch is ON, the main burner will operate until it is turned OFF by the rocker switch. The wall switch, remote or thermostat components will not turn the main burner off if the main burner has been turned on by the rocker switch.
- If a wall-mounted ON/OFF control or a thermostat is to be used, mount it in a convenient location on a wall near the fireplace. Follow instructions included with assembly.
- If an optional component is to be used, run the low-voltage wires from the gas valve to the location of component.

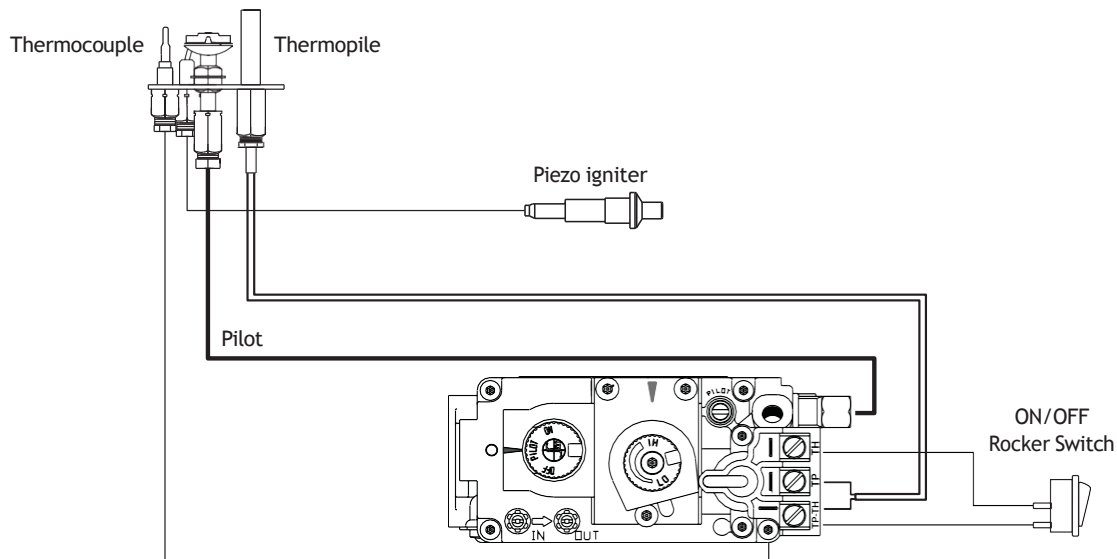


FIGURE 8.1 Wiring Schematic with ON/OFF Rocker Switch

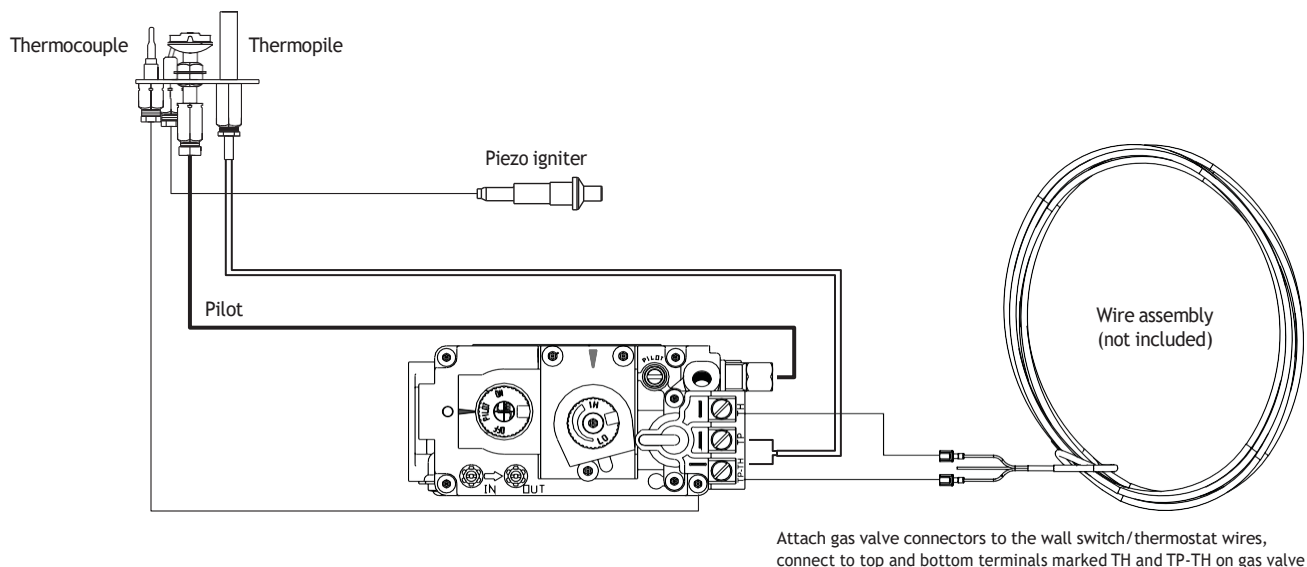


FIGURE 8.2 Wiring Schematic with Thermostat or Wall Switch Wiring



## 9.0 LIGHTING INSTRUCTIONS

- When this fireplace is initially lit, condensation will appear on the glass. This is normal in all gas fireplaces and will disappear after several minutes.
- A paint smell will occur during the first few hours of burning. It is recommended to leave the fan off during this period to help speed the paint curing process.
- This fireplace may produce noises of varying degree as it heats and cools due to metal expansion and contraction. This is normal, and does not affect the performance or longevity of the fireplace.

### 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 appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell 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 try 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.
- C. If you cannot reach your gas supplier, call the fire department.
- D. 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.
- E. Do not use this appliance if any part 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.

#### WARNING

Do not operate appliance with the glass front removed, cracked, or broken. Replacement of the glass should be done by a licensed or qualified service person.

Under no circumstances should any solid fuel (wood, coal, paper, cardboard, etc.) be used in this appliance.




Children and adults should be alerted to the hazards of high surface temperature and should stay away to avoid burns or clothing ignition.

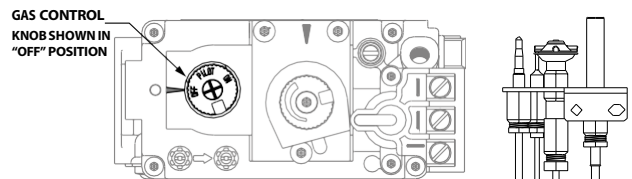
#### CAUTION

Clothing or other flammable material should 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 or stove, install an adjustable safety gate to keep toddlers, young children and other at risk individuals out of the room and away from hot surfaces.

### LIGHTING INSTRUCTIONS

- STOP! Read all the safety information above on this page.
- Set thermostat to lowest setting (if applicable).
- Turn off all electric power to the appliance.
- Open the door of the control enclosure.
- Open the glass frame assembly.
- Push in gas control knob slightly and turn clockwise  to "OFF".  
NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.
- 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, close and secure glass frame assembly, and go to the next step.
- Locate pilot - follow metal tube from gas control. The pilot is located inside the combustion chamber.
- Push in gas control knob slightly and turn counterclockwise  to "PILOT".
- Push in control knob all the way and hold. Press the piezo igniter button repeatedly until the pilot is lit and continue to hold in the gas control knob.
- Hold the gas control knob in for one (1) minute after pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 10.
  - If the knob does not pop out when released, stop and immediately call your service technician or gas supplier.
  - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
- Turn the gas control knob counterclockwise  to "ON".
- Secure the glass frame assembly and close the door of the control enclosure.
- Turn on all electric power to the appliance.
- Set thermostat to desired setting (if applicable).



### TO TURN GAS OFF TO APPLIANCE

- Set thermostat to lowest setting (if applicable).
- Turn off all electric power to the appliance if service is to be performed.
- Open the door of the control enclosure.
- Push in gas control knob slightly and turn clockwise  to "OFF".
- Close the door of the control enclosure.



## 9.1 Flame Height and Heat Output Adjustment

This gas stove is equipped with a manual HI/LO pressure modulator knob, located on the gas valve, for adjusting main burner flame height and the heat output of the fireplace. See **FIGURE 9.1**.

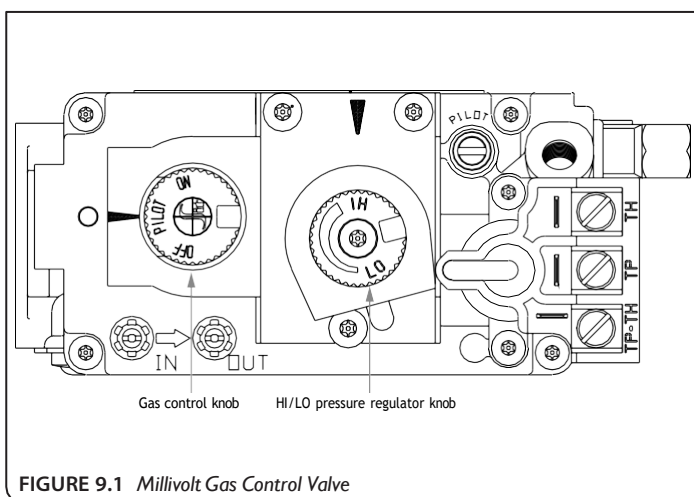
- Open the door of the control enclosure to access the gas valve and the HI/LO pressure regulator knob.
- To adjust, turn the HI/LO knob counterclockwise to LO position or clockwise to HI position, until desired flame appearance and heat output is achieved. Close the control enclosure door when finished.

### 9.1.1 7 Day Time-out Pilot-on-Demand Installations

For regions that require installations a 7 day time-out (refer to your local dealer to see if this applicable to your installation), model #LXL-22-MV is fitted with a millivolt Pilot-on-Demand gas control valve equipped with a timer set for **7 consecutive days** once the pilot has been ignited. If there is no appliance operation within the **7 days**, the main burner and/or the pilot will turn off, *but the gas control knob will still be set in its original position ('PILOT' or 'ON')*.

- You must manually cycle the system to reignite operation.
- This a standard safety feature of the SIT Millivolt Pilot-on-Demand control system.
- Once you turn the pilot on, the **7 day** timer will start. If at any time during the following **7 days** your main burner ignites, it will reset the timer back to **7 days**.

To operate your millivolt pilot-on-demand system, open the door of the control enclosure to access the gas valve and gas control knob. Refer to the lighting instructions on the previous page for lighting procedures and safety information.



**FIGURE 9.1** Millivolt Gas Control Valve

## 10.0 ADJUSTMENT

### 10.1 Pressure Testing

**NOTE:** The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of 1/2 psi (3.5 kPa).

**IMPORTANT:** Pressure check taps for manifold (outgoing) and inlet (incoming) pressure have been incorporated into the valve. The pressure tap marked OUT measures outgoing pressure. The pressure tap marked IN measures incoming pressure.

#### 10.1.1 Inlet Pressure Test

**NOTE:** Make sure to apply these incoming pressure test with all other gas appliances on, or at full capacity, in the house for proper pressure reading.

**IMPORTANT:** If the inlet pressure reading is too high or too low, contact the gas company. Only a qualified gas service technician should adjust incoming gas pressure.

1. Loosen the inlet (IN) pressure tap by turning screw counterclockwise. See (A) in FIGURE 10.1.
2. Attach manometer using a 1/4" (6mm) I.D. hose.
3. Light pilot.
4. Turn the gas control knob to ON. Burner should not light. Note manometer reading.
5. Press the ON/OFF rocker switch to ON. Check pressure to ensure it is near maximum inlet pressure.
6. Press the ON/OFF rocker switch to OFF.
7. Turn the gas control knob to OFF.

8. Disconnect hose and tighten the inlet (IN) pressure tap by turning screw clockwise. Screw should be snug. Do not over tighten.
9. Relight pilot and turn the gas control knob to ON. Reattach manometer to the inlet pressure tap (A) to verify the tap is completely sealed. Manometer should read no pressure.

#### 10.1.1.1 Manifold Pressure Test

1. Light pilot.
2. Loosen manifold (OUT) pressure tap by turning screw counterclockwise. See (B) in FIGURE 10.1.
3. Attach manometer to pressure tap using a 1/4" (6mm) I.D. hose.
4. Turn gas control knob to ON.
5. Press the rocker switch to ON and note manometer reading.
6. Disconnect manometer hose and tighten the manifold (OUT) pressure tap by turning screw clockwise. Screw should be snug. Do not over tighten.
7. Attach the manometer to the manifold pressure tap (B) to verify it is completely sealed. The manometer should read no pressure when the ON/OFF rocker switch is pressed to ON.

Table 10.1, Pressure Requirements

Gas Pressure	Natural Gas	Propane
Inlet Pressure Tap (A)	5" - 10.5" WC (1.25 - 2.62 kPa)	11" - 13" WC (2.74 - 3.24 kPa)
Manifold Pressure Tap (B)	1.6" - 3.5" WC (0.41 - 0.87 kPa)	6.4" - 10" WC (1.59 - 2.48 kPa)

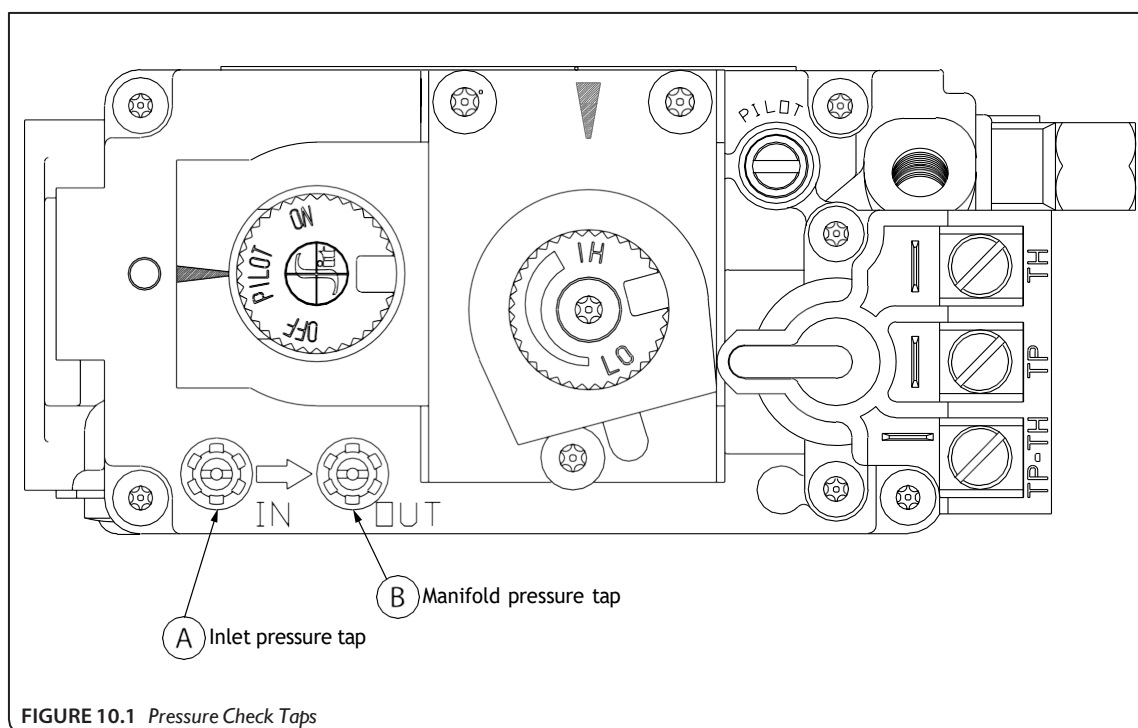


FIGURE 10.1 Pressure Check Taps

## 10.2 Burner Flame Adjustments

**WARNING:** To avoid property damage or personal injury, allow the fireplace ample time to cool before making any adjustments.

Burner flame appearance and characteristics are affected by altitude, fuel quality, venting configuration, and other factors. After installation, this appliance may need additional adjustments to achieve optimum flame appearance and visual aesthetics.

### 10.2.1 Burner Venturi

**WARNING:** VENTURI ADJUSTMENT MUST BE DONE BY A QUALIFIED SERVICE TECHNICIAN.

When this appliance is first lit, the burner flames will appear blue. During the first 15 minutes of operation, flame appearance will gradually turn to the desired yellow appearance. If the flames remain blue, or become dark orange with evidence of sooting (black tips), adjustment of the air shutter opening may be necessary.

Regardless of venturi orientation, closing the air shutter will achieve a desired yellow flame, but may produce soot on the glass. Opening the air shutter will cause a short, blue flame that may lift off the burner.

Slight adjustments to the venturi opening will create dramatic results. Adjust at slight increments until desired look is achieved.

**NOTE:** If soot is present on the logs, check log placement (section 7.3 on page 29) before adjustment.

Table 10.2, Factory Set Venturi Openings	
Fuel	Venturi Opening
Natural Gas	1/4" (6.35mm) OPEN
Propane	5/8" (15.88mm) OPEN

1. Open the door of the control enclosure located below the firebox of the gas stove.
2. Locate the adjustable venturi lever (FIGURE 10.2)
3. Loosen the wing nut securing the lever and adjust the burner venturi (FIGURE 10.3) as necessary. See flame adjustment guidelines in FIGURE 10.4. Re-tighten wing nut when finished.  
**Moving the adjustable venturi lever to the right opens the air shutter opening and increases air.**  
**Moving the adjustable venturi lever to the left closes the air shutter opening and decreases air.**
4. Close the door of the control enclosure.

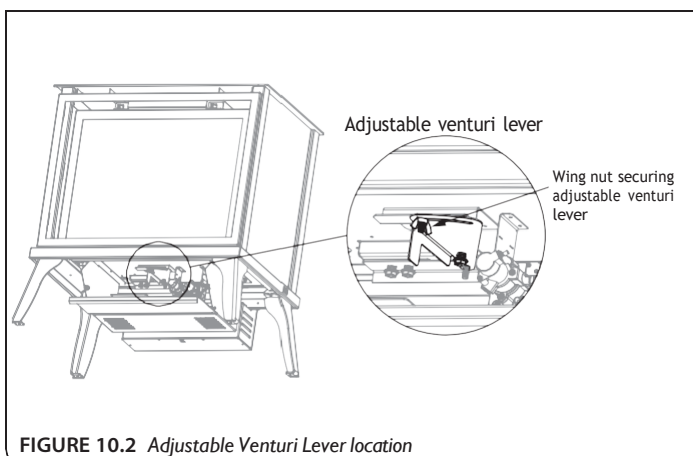


FIGURE 10.2 Adjustable Venturi Lever location

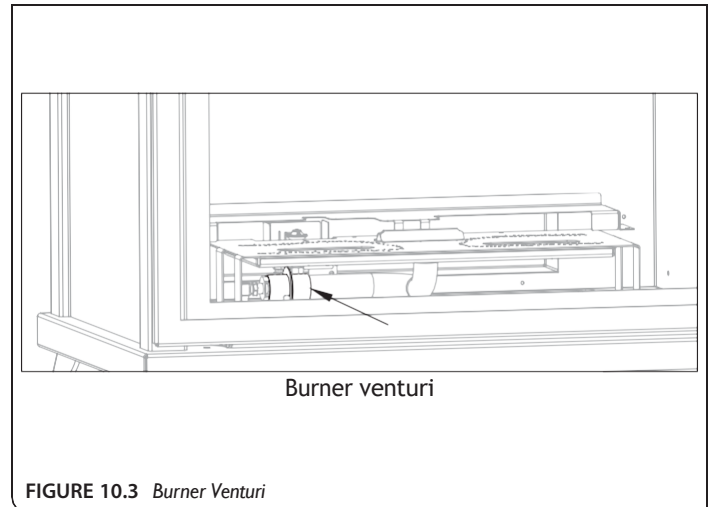


FIGURE 10.3 Burner Venturi

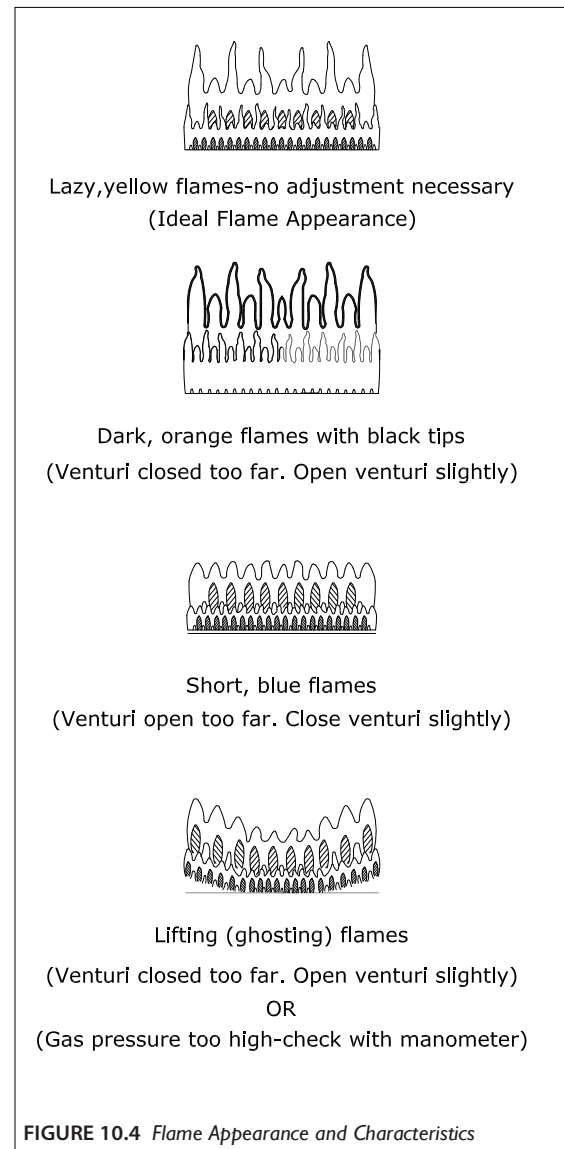


FIGURE 10.4 Flame Appearance and Characteristics

## 10.2.2 Vent Restriction (after installation)

**WARNING:** To avoid property damage or personal injury, allow the fireplace ample time to cool before making any adjustments.

**WARNING:** Improper vent installation may cause the burner flames to lift or "ghost." Perform a visual check on flame appearance after restriction adjustment to ensure proper performance.

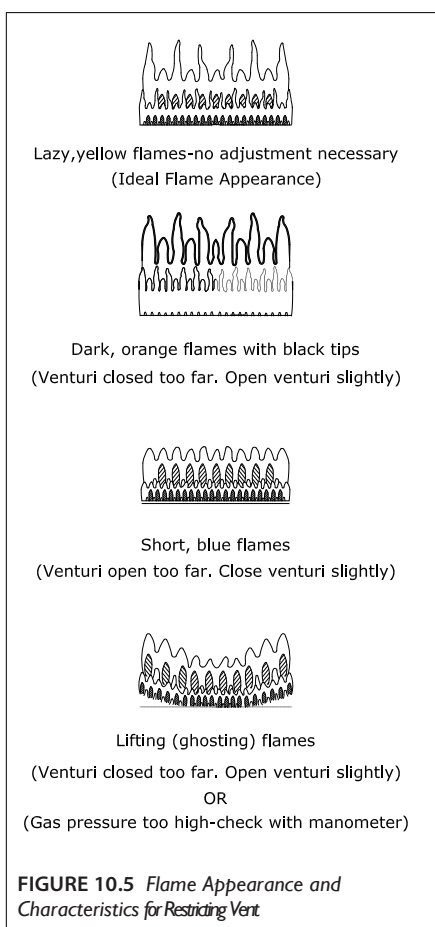
Vertical terminations may display an active, compact flame. If this appearance is not desirable, a restrictor plate may need to be installed or modified after vent termination installation. Access to the vent exit for restriction can be reached through the fireplace baffle.

Refer to **TABLE 10.3** and **FIGURE 10.5** for flame appearance adjustments. Allow the fireplace to burn for 15 minutes before making any adjustments.

Table 10.3, Restrictor Plate Adjustment Guidelines

Flame Appearance	Draft Problem	Solution
Short, flickering	Excessive draft	Add restrictor plate
	Not enough restriction	Close baffle restrictor
Lifting or ghosting*	Insufficient draft	Remove inner ring(s) on restrictor plate, or; remove restrictor plate
		Open baffle restrictor

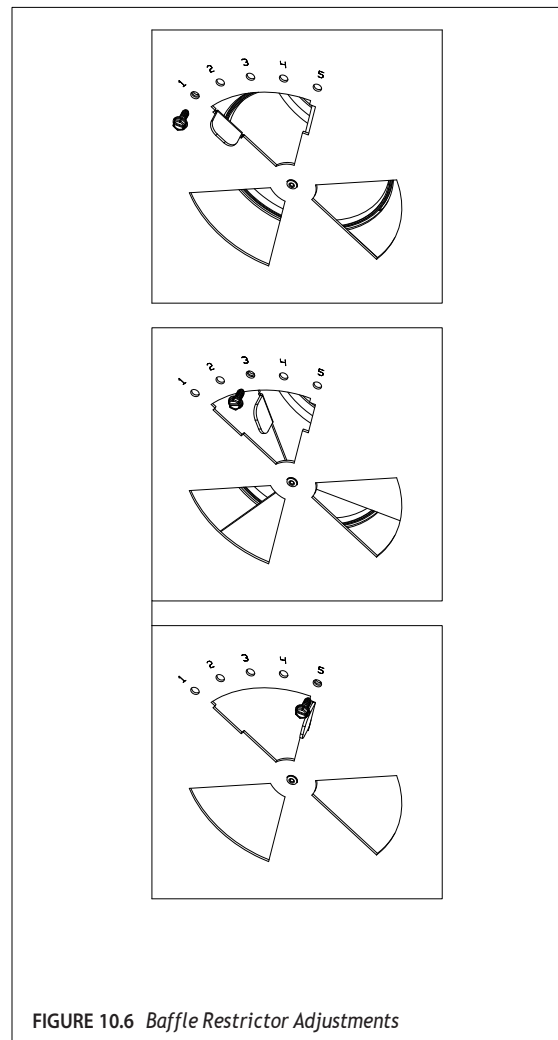
\*If flames continue to lift or ghost after opening the restrictor plate and verifying correct vent installation, shut off the gas supply and call a qualified service technician.



**FIGURE 10.5** Flame Appearance and Characteristics for Restricting Vent

### 10.2.2.1 Baffle Restrictor Adjustment

1. Remove the safety barrier and glass frame assembly to access the baffle restrictor.
2. Remove and save (1) screw to adjust the baffle restrictor to achieve desired flame appearance. Position 1 is the least restriction, and position 5 is the most restriction
3. Secure baffle restrictor with (1) screw previously removed.
4. Reinstall the glass frame assembly and safety barrier.

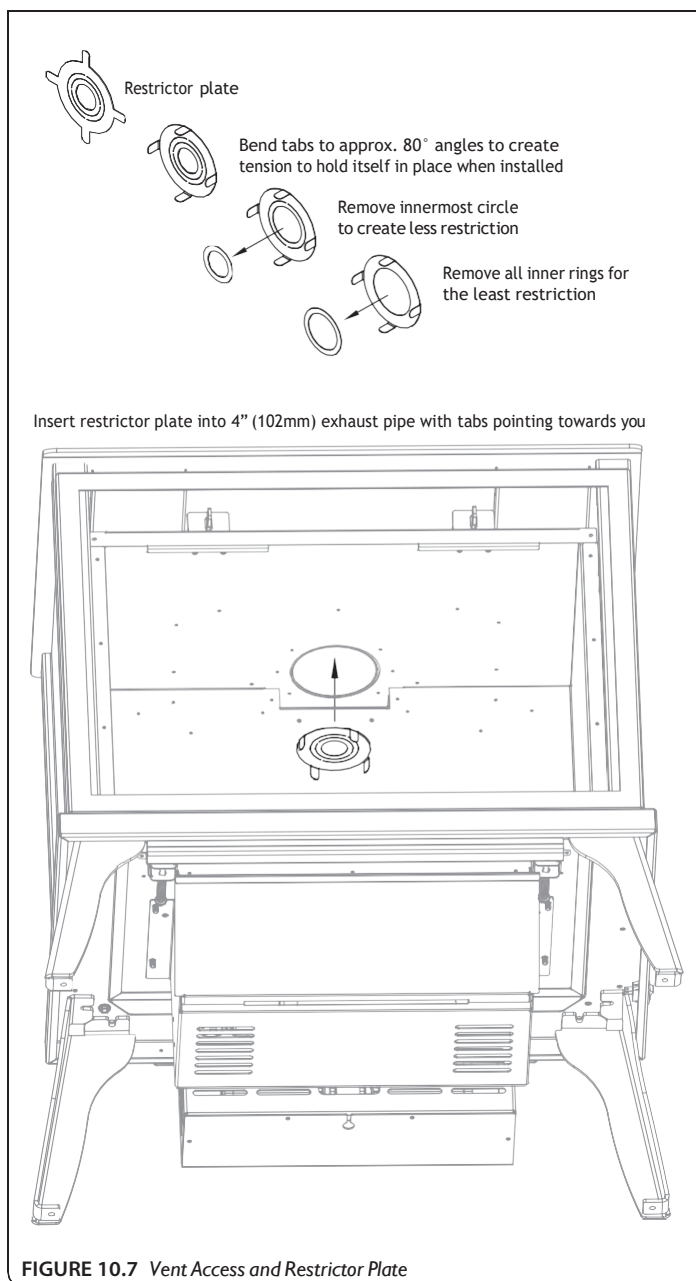


### 10.2.2.2 Restrictor Plate Installation

1. Remove the safety barrier and the glass frame assembly.
2. Remove (3) screws at the firebox back wall securing the baffle. Remove baffle to access the 4" (102mm) exhaust pipe.
3. Bend the tabs on the restrictor plate (included in components packet) to approximately 80° angles. This will create tension when the restrictor plate is inserted into the exhaust pipe.
4. Insert restrictor plate into the 4" (102mm) exhaust pipe with the tabs pointing towards you. See **FIGURE 10.7**.
5. Reinstall baffle by resting the front of the baffle above flange along the inside top of firebox opening. Tip the baffle against the firebox back wall, and secure with (3) screws previously removed.
6. Reinstall all components previously removed.

### 10.2.2.3 Restrictor Plate Modification

1. Remove the safety barrier and the glass frame assembly.
2. Remove (3) screws at the firebox back wall securing the baffle. Remove baffle to access the 4" (102mm) exhaust pipe.
3. Remove the restrictor plate by pulling it down and out of the 4" (102mm) exhaust pipe. Make necessary modifications to achieve desired flame appearance. Refer to **TABLE 10.3** and **FIGURE 10.4** (page 35) for flame appearance adjustments.
4. Insert restrictor plate into the 4" (102mm) exhaust pipe with the tabs pointing towards you. See **FIGURE 10.7**.
5. Reinstall baffle by resting the front of the baffle above flange along the inside top of firebox opening. Tip the baffle against the firebox back wall, and secure with (3) screws previously removed.
6. Reinstall all components previously removed.



**FIGURE 10.7** Vent Access and Restrictor Plate

# 11.0 TROUBLESHOOTING

**ATTENTION:** Troubleshooting must be performed by a qualified technician.

Issue	Cause	Solution
No spark from electrode to pilot when piezo button is triggered	Piezo igniter wiring disconnection	Verify piezo igniter is properly grounded. Tighten mounting fastener, if required. Check and repair, if necessary, the wire connections between the piezo igniter and igniter electrode.
	Check wiring disconnection	Check wiring at back of electrode igniter for proper connection.
	Incorrect electrode position	Verify there is a 1/8"(3mm) gap between the electrode and pilot. Readjust if necessary. Direct metal contact may cause an arc below the electrode and along the electrode wire.
Spark igniter will not light after repeated triggering of piezo button	No gas	Check for multiple shut-off valves in the supply line.
		Check propane tank for gas supply. Refill if necessary.
Pilot will not stay lit after carefully following lighting instructions	Pilot flame does not impinge on thermocouple	Clean pilot hood
		Adjust pilot flame at gas valve for proper flame impingement.
	Loose thermocouple connection	Ensure thermocouple connection at gas valve is full inserted and tight - hand tight plus 1/4 turn.
	Thermocouple reading below 15 millivolts	Disconnect the thermocouple from valve. Place one millivolt meter lead wire on the end of the thermocouple, and the other millivolt meter lead wire on the thermocouple's copper wire. Start the pilot while holding the gas valve control knob in. If the millivolt reading is less than 15 millivolts, replace thermocouple.
	Thermopile not generating sufficient millivolts	Adjust, if necessary, the pilot flame to envelop thermopile.
		Check thermopile connections are properly wired to the gas control valve. Tighten if necessary.  Measure millivolt production with a millivolt meter. Turn remote/ thermostat/wall switch, or ON/OFF rocker switch to OFF. Turn the gas valve control to the PILOT position (pilot should remain lit). Take millivolt reading at TH-TP and TP terminals on gas valve. Reading should be 350 millivolts, minimum. If reading is less than 350 millivolts, replace thermopile.
Frequent pilot outages	Pilot shield not installed	Install pilot shield.
	Pilot safety dropout	Pilot flame is too high or too low. Clean pilot hood and adjust pilot flame for maximum flame impingement on thermopile.

Issue	Cause	Solution
<b>Burner will not light</b>	Lighting instructions not followed	Turn gas control knob to ON position. Turn the ON/OFF rocker switch to ON position. Put wall switch, remote control, or thermostat in heat demand position.
	Plugged main burner orifice	Remove blockage as necessary.
	Switching device is defective	Check remote, thermostat, or wall switch wires for proper connection. Place jumper wires across terminals at switch. If the burner lights, replace the defective switch, thermostat, or batteries in remote control as necessary.  If switching device checks out as described above, place jumper wires across switches on the gas valve. If the burner lights, the switching wires are faulty or connections are bad. Replace as necessary.
<b>Burner will not stay lit</b>	Thermopile wires loose at valve terminals	Tighten if necessary.
	Thermopile wires ground out due to pinched wires	Free pinched wires if necessary.
	Improper refractory panel placement (if installed)	Refractory panels must be tight against firebox walls. It may be necessary to secure panels with high-temperature sealant, especially around the intake duct.
<b>Pilot and burner extinguish while in operation</b>	No propane in tank	Check propane tank. Refill if necessary.
	Incorrect glass frame assembly installation	Refer to section 7.2, <b>GLASS FRAME ASSEMBLY</b> on page 28.
	Improper pitch on horizontal venting	1/4" (6mm) per 12" (30cm) is required on horizontal venting
	Defective thermopile or thermocouple	Check thermopile and thermocouple for proper millivolts
	Inner vent pipe leaking exhaust gases back into firebox	Check for leaks and repair if necessary.
	Vent cap blockage	Remove debris if necessary.
	Excessive draft	A restrictor plate may need to be installed or modified. Refer to section 11.2.2, <b>VENT RESTRICTION (AFTER INSTALLATION)</b> on page 41.
<b>Glass sooting</b>	Improper log placement	Refer to section 7.3, <b>#LX22-500 LOG SET INSTALLATION</b> on page 29 on page 41.
	Improper venturi setting	Venturi may need to be opened slightly to allow more air into the gas mix. Refer to section 10.2.1, <b>BURNER VENTURI</b> on page 35.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
<b>Flame burns blue and lifts off burner</b>	Improper venturi setting	Venturi may need to be closed slightly to allow less air into the gas mix. Refer to section 10.2.1, <b>BURNER VENTURI</b> on page 35.
	Incorrect vent cap installation	Adjust if necessary.
	Blockage or leakage of the vent system	Check the vent pipe for leaks, and the vent cap for debris. Repair vent pipe or remove debris from vent cap if necessary.



**ATTENTION:** Installation and repair should only be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning might be required due to excessive lint from carpeting, bedding material, et cetera. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean. Use a vacuum to clean all components.

**WARNING:** The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapors and liquids.

### 12.1 Firebox

**Performed by:** Qualified Service Person

**Frequency:** Annually

**Action:**

- Vacuum and clean any debris in the firebox that is not supposed to be there.
- Inspect and operate the bottom latch assembly. Verify the assembly is free from obstruction to operate. The handles must have spring tension but be able to move forward freely.

### 12.2 Fans

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

**Performed by:** Qualified Service Person

**Frequency:** Every 6 months

**Action:**

- Disconnect the fan from electrical current and vacuum.
- The bearings are sealed and require no oiling.

### 12.3 Vent System

**NOTE:** If the vent-air intake system is disassembled for any reason, reinstall per instructions provided with installation. Refer to section 6.0, VENTING on page 21.

**Performed by:** Qualified Service Person

**Frequency:** Annually

**Action:**

- Examination of the vent system is required.
- Inspect the condition of vent and vent terminal for sooting or obstruction and correct if present.
- The flow of combustion and ventilation air must not be obstructed.

### 12.4 Glass Assembly

**CAUTION:** Do not operate appliance with the glass assembly removed, cracked, or broken. Use protective gloves to handle any broken or damaged glass assembly components.

**WARNING:** Do not use substitute materials.

**WARNING:** Avoid striking or slamming glass assembly. Avoid abrasive cleaner. DO NOT clean glass while it is hot.

**IMPORTANT:** Any safety screen, guard, or barrier removed for servicing the appliance must be replaced prior to operating the appliance.

**Performed by:** Homeowner

**Frequency:** Annually

**Action:**

- Prepare a work area large enough to accommodate the glass assembly on a flat, stable surface.
- Remove safety screen and glass frame assembly.
- Clean glass window with a suitable fireplace glass cleaner using a soft cloth. Abrasive cleaners must not be used. Be careful not to scratch the glass when cleaning.
- Reinstall glass assembly and safety screen. Do not operate fireplace without safety screen.

**Performed by:** Qualified Service Person

**Frequency:** Annually

**Action:**

- Clean glass window with a suitable fireplace glass cleaner using a soft cloth. Abrasive cleaners must not be used. Be careful not to scratch the glass when cleaning.
- Inspect the glass for cracks, scratches, and nicks.
- Verify the glass assembly is properly intact and not damaged.
- Replace the glass and the assembly 701-063T as necessary.
- Only Hussong Mfg. Co., Inc. will supply the replacement of glass assembly as a complete unit.



## 12.5 Burner and Pilot System

Verify gas supply is turned on and filled. Consult with plumber or gas supplier as necessary.

Certain components may be removed for easier access to the burner and pilot system. Refer to section 7.0, **FIREPLACE SETUP** on page 28.

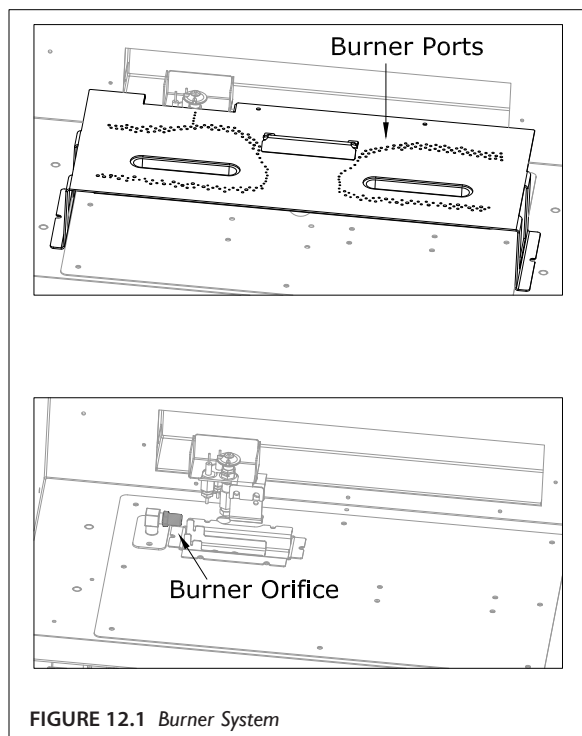
Refer to **FIGURE 12.2** for inspection of the burner system. Refer to **FIGURE 12.2** for proper flame appearance.

**Performed by:** Qualified Service Person

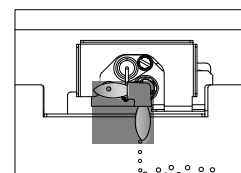
**Frequency:** Annually

**Action:**

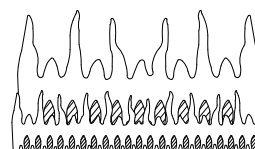
- Vacuum all components of the burner system.
- Check all accessible gas-carrying tubes, connections, pipes and other components for leaks.
- Ensure pilot flame impinges on thermocouple. Flame should envelop upper 3/8" (10mm) to 1/2" (13mm) of thermocouple and thermopile. Clean pilot hood and adjust pilot flame at gas valve for proper flame impingement. Verify thermocouple connections and millivolt production.
- Inspect the operation of the flame safety system Pilot or Flame rectification device. Visually check pilot light when in operation.
- Inspect and ensure the lighting of the main burner occurs within (4) seconds of the main gas valve opening. Check for faulty or incorrect wiring and correct or replace as necessary. Inspect primary air openings (burner ports) for blockage, especially near the pilot.
- Visually check burner flame pattern when in operation. Flames should be steady, not lifting or floating.
- Test and measure the flame failure response time of the flame safety system. It must de-energize the safety shutoff in no more than (30) seconds.



**FIGURE 12.1** *Burner System*



**Correct Pilot Flame Appearance**



**Lazy, yellow flames-no adjustment necessary  
 (Ideal Flame Appearance)**

**FIGURE 12.2** *Pilot and Burner Correct Flame Appearance*

# 13.0 REPLACEMENT PARTS LIST

Replacement parts are available through your local dealer. Contact your local dealer for availability and pricing.

The following warning is for replacement parts for this appliance.

**WARNING:** This product can expose you to chemicals including Lead, which is [are] known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

## LXL-22-MV CONTROL BOARD AND PARTS

LX22MV-770	Control Board - Natural Gas	700-165	#5 I Pilot Orifice - Natural Gas
LX22MV-771	Control Board - Propane	700-095	#30 Pilot Orifice - Propane
700-086A	SIT Gas Valve - Natural Gas	700-098	SIT Millivolt Pilot Hood
700-087A	SIT Gas Valve - Propane	700-236B	36" Flexible Gas Line - Black
700-086N-7	SIT Gas Valve – Natural Gas – 7 Day Timeout	700-194	12.5" Flare x Brazed Elbow Casting
700-087A-7	SIT Gas Valve – Propane – 7 Day Timeout	700-203	Manual Gas Shut-off Valve
700-023	On/Off Rocker Switch	700-320M	Natural Gas Burner Orifice #3.20mm
700-088	Pilot/Generator/Thermocouple - Natural Gas	700-190M	Propane Burner Orifice #1.90mm
700-089	Pilot/Generator/Thermocouple - Propane	OCK-S320A	Conversion Kit - Natural Gas
700-032	Piezo Igniter with nut (no wire)	OCK-S190A	Conversion Kit - Propane
700-091	Flexible Pilot Tubing (valve to pilot)	LX22-035	Burner Plate
700-092	Millivolt Generator	LX22-035S	Burner Tube
700-093	Thermocouple		

## GLASS AND GLASS GASKET

701-063T	"23.625" x 18" Glass with Gasket
900-006	1-1/8" Glass Gasket with Adhesive
LX22-005	Replacement Valance

## SAFETY BARRIER & OVERLAYS

LX22-FRSF	Rectangular Full Screen Front (Black)
LX22-PSF	Prairie Design Front (Black)
LX22-APSF	Arched Prairie Screen Front (Black)

## ADDITIONAL COMPONENTS

900-085	4" (102mm) Restrictor Plate
700-203	Manual Gas Shut-off Valve
JOR-GLT	Glass Latch Tool

## FAN KIT

LX22-028MV	Fan Kit (optional)
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## TRADITIONAL LOG SET

LX22-500	8 Piece Log Set
LX22-LX1	#LX-1 Log
LX22-LX2	#LX-2 Log
LX22-LX3	#LX-3 Log
LX22-LX4	#LX-4 Log
LX22-LX5	#LX-5 Log
LX22-LX6	#LX-6 Log
LX22-LX7	#LX-7 Log
LX22-LX8	#LX-8 Log
LX22-900E	Ember Refractory
900-REMB	Rock Wool Embers

## BLACK GLASS PANEL SET

LX22-BG900	Black Glass Panel Set
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## REFRACTORY PANEL SETS

LX22-I900	Traditional Brick Refractory Set
LX22-M900	Masonry Refractory Set

Hussong Manufacturing Co., Inc.  
204 Industrial Park Drive PO Box 577  
Lakefield, MN 56150-0577, USA  
**LXL-22-MV**

# 14.0 LX22-028MV OPTIONAL FAN KIT

For use with model # #LXL-22-MV

**WARNING:** This product can expose you to chemicals including Ethylbenzene which is (are) known to the State of California to cause cancer, birth defects, or other reproductive harm. For more information, visit [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**WARNING - Electrical Grounding Instructions:** This appliance is equipped with a three-prong (grounding) plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.

**WARNING:** Installation of this fan kit should be done by a qualified installer. Verify household breaker is shut off prior to working on any electrical lines.

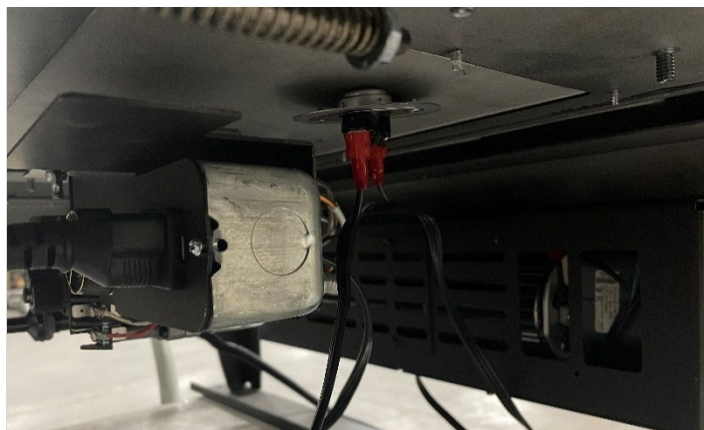
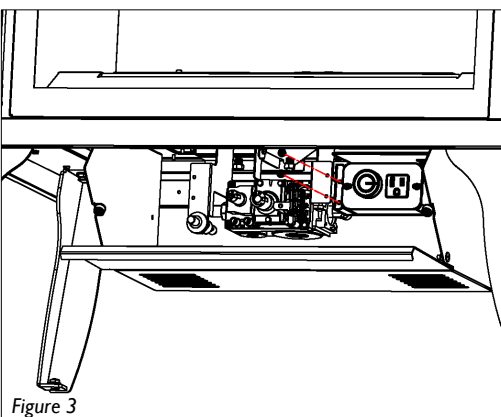
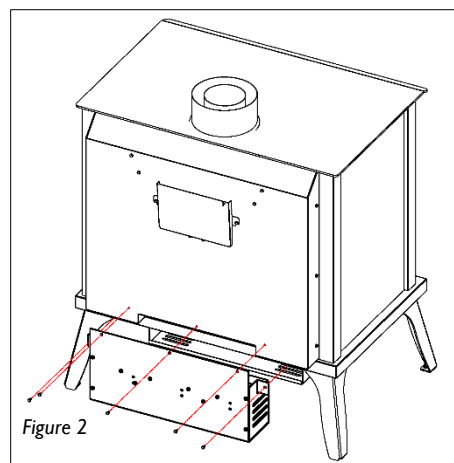
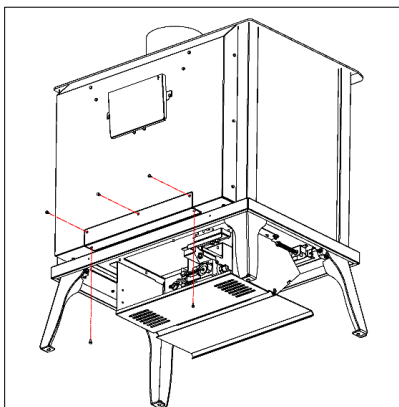
**IMPORTANT:** This fan will not operate unless speed control has been turned ON and sufficient heat has been applied to temperature control switch. The fan will turn ON and OFF automatically as fireplace heats and cools. Adjust fan to desired speed while it is running.

- Hussong Manufacturing recommends to install an electrical outlet near the gas stove.

This kit includes:

- |   |   |
|---|---|
| (1) Fan assembly - mounted                          | (4) Flange nuts                               |
| (1) Temperature control switch with magnet attached | (1) Speed control box with 5 ft (1524mm) cord |
| (2) Philips head screws (black)                     |   |

- Remove cover plate and retain screws (Figure 1).
- Mount the replacement fan assembly by aligning with existing holes in the back and underneath of unit using the (5) screws previously removed (Figure 2).
- Mount the speed control box onto the right side of the gas valve bracket. Align the slots in the speed control box to the holes in bracket. Secure with (2) black philips head screws (included) (Figure 3).
- Place the temperature control switch (magnet attached) onto the firebox floor on the right, as far back as possible to the fan motor.
- Plug fan cord into the electrical box receptacle.
- Plug the speed control box cord into a properly grounded three-prong receptacle.
- Turn speed control counter-clockwise until it 'clicks'. This is the OFF position. Turn speed control ON by turning knob clockwise past the 'click' - this is the highest setting.



## TEMPERATURE CONTROL SWITCH POSITION

Before adjusting temperature control switch, unplug 3-prong plug on fan cord from receptacle.

Adjust position of temperature control switch to a warmer location under firebox to turn fan ON sooner or move it to a cooler location under firebox to turn fan OFF later. The fan will turn on when sensor in temperature control switch reaches 110° Fan will turn OFF when sensor reaches 90° F. After adjustment, plug 3-prong plug on fan cord into receptacle.



# 15.0 LIMITED LIFETIME WARRANTY

## Warranty Coverage

Hussong Manufacturing Company, Inc. (Hussong Mfg.) warrants this Kozy Heat gas appliance from the date of purchase to the original purchaser, that it is free of defects in materials and workmanship at the time of manufacture. Registering your fireplace warranty does not require any documents to be sent in to Hussong Mfg. Please retain your proof of purchase reflecting the date of purchase along with the serial number and model of your fireplace for any future warranty claims.

*If a defect is noted within the warranty period, the customer should contact their authorized dealer for service within 30 days.*

### 30 Days: Parts & Labor\*

- Paint
- Light bulbs
- Gasket material
- Glass media and media dam

### Year 1: Parts & Labor\*

- All parts and material except the items listed in the 30 day warranty and any exclusions or limitations that may apply.
- \*Hussong Mfg. will issue labor reimbursement to an authorized dealer only. Hussong Mfg. will not be liable for charges occurred as a result of any service performed by a non-authorized service provider, without pre-authorization.*

### Years 2 through Lifetime: Parts Only

- Firebox
- Heat Exchanger
- Logs
- Burner tube or pan
- Outer shell
- Heat shield(s)
- Front Viewing Glass (thermal shock only)
- Refractory Firebox liner (excluding enamel and glass panels)

## EXCLUSIONS AND LIMITATIONS

1. This appliance must be installed by a licensed, authorized service technician or contractor. It must be installed, operated and maintained at all times in accordance with the instructions in the owner's manual or the warranty is void.
2. This warranty is nontransferable and is made to the original purchaser only.
3. This warranty excludes standard wear and tear of the appliance which is considered normal usage over time.
4. Discoloration and some minor expansion, contraction or movement of certain parts, resulting in noise, is normal and not a defect.
5. Warranty is automatically voided if the appliance's serial number and/or testing label is removed or if the appliance is altered or tampered with in any way.
6. Warranty is void if the appliance is subject to submersion in water or prolonged periods of dampness or condensation. Any damage to any part of the appliance due to water or weather damage which is the result of, but not limited to, improper chimney/venting installation will also render this warranty void.
7. This warranty does not cover installation and operational related problems such as environmental conditions, nearby trees, buildings, hilltops, mountains, inadequate venting or ventilation, excessive offsets, negative air pressures caused by any mechanical systems.
8. Chimney components and other Non-Hussong Mfg. accessories used in conjunction with the installation of this appliance are not covered under this warranty.
9. Damage to plated surfaces or accessories, if applicable, caused by scratches, fingerprints, melted items or other external sources left on the surfaces from the use of cleaners is not covered under this warranty.
10. It is expressly agreed and understood that this warranty is Hussong Mfg.'s sole obligation and purchaser's exclusive remedy for defective fireplace equipment. Hussong Mfg. is free of liability for any damages caused by this appliance, as well as inconvenience expenses and materials. Incidental or consequential damages are not covered by this warranty. In some states, the exclusion of incidental or consequential damage may not apply. Hussong Mfg. shall not be held to implied warranties and this warranty shall replace all previous warranties.
11. This limited lifetime warranty is the only warranty supplied by Hussong Mfg. Any warranties extended to the purchaser by the dealer/distributor, whether expressed or implied, are hereby disclaimed and the purchaser's recourse is expressly limited to the warranties set forth herein.
12. Any part repaired or replaced during the limited warranty period will be warranted under the terms of the limited warranty for a period not to exceed the remaining term of the original limited warranty.
13. Any replacement part repaired after the warranty period will include a 90 day parts coverage
14. Hussong Mfg. may require the defective part to be returned using a pre-authorized RGA number or a photo of the defective component. Failure to provide either can result in a denied claim.
15. This warranty does not cover the appliances ability to heat a desired space, as there are many factors that can impact the heating performance in each home. Consideration should be implied to the appliance's location, room size, home design, environmental conditions, insulation, and tightness of the home.
16. Hussong Mfg. reserves the right to make changes at any time, without notice, in design, material, specifications, and prices. Hussong Mfg. reserves the right to discontinue models and products.

