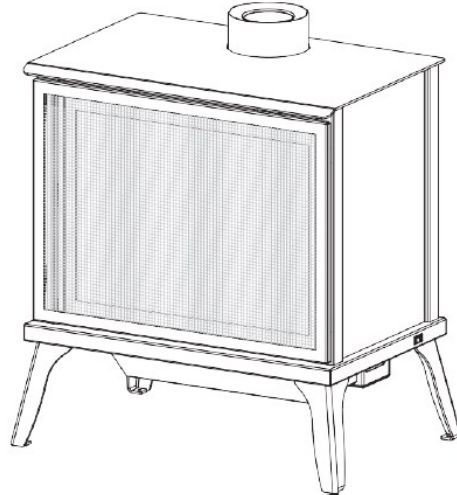


Lakefield XL

Model #LXL-22-L & LXL-22-MV
Direct Vent Gas Stove

English and French installation manuals are available through your local dealer. Visit our website www.kozyheat.com.

Les manuels d'installation en français et en anglais sont disponibles chez votre détaillant local. Visitez www.kozyheat.com.



⚠ 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**

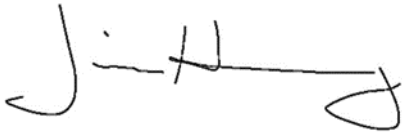
A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

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

CONGRATULATIONS!

Hussong Manufacturing welcomes you as a new owner of a Kozy Heat gas fireplace. Kozy Heat products are designed with superior components and materials, assembled with care 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



Read this manual before installing or operating this appliance
Please retain this owner's manual for future reference.

Homeowner Reference Information

We recommend you record the following Information:

Model Name: _____

Date Purchased / Installed: _____

Serial Number: _____

Location of fireplace: _____

Dealership purchased from: _____

Dealership phone number: _____

Notes: _____

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1.0 Introduction

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.

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 (½) 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.

1.3.6.2 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

	LXL-22-L		LXL-22-MV	
	Natural Gas	Propane	Natural Gas	Propane
Maximum Input Rating	40,000 Btu/h (11.72 kW)	40,000 Btu/h (11.72 kW)	40,000 Btu/h (11.72 kW)	40,000 Btu/h (11.72 kW)
Minimum Input Rating	27,500 Btu/h (8.06 kW)	29,500 Btu/h (8.65 kW)	27,500 Btu/h (8.06 kW)	29,500 Btu/h (8.65 kW)
Orifice Size (DMS)	3.20mm	1.90mm	3.20mm	1.90mm
Minimum Inlet Pressure	5"WC (1.25kPa) 7" WC (1.74 kPa) recommended	11"WC (2.74 kPa)	5"WC (1.25kPa) 7" WC (1.74 kPa) rec- ommended	11"WC (2.74 kPa)
Maximum Inlet Pressure	10"WC (2.49 kPa)	13"WC (3.24 kPa)	10"WC (2.49 kPa)	13"WC (3.24 kPa)
Manifold Pressure (Low)	1.6" WC (0.40 kPa)	6.4" WC (1.59 kPa)	1.6" WC (0.40 kPa)	6.4" WC (1.59 kPa)
Manifold Pressure (High)	3.5" WC (0.875 kPa)	10" WC (2.49 kPa)	3.5" WC (0.875 kPa)	10" WC (2.49 kPa)
Venturi Opening Settings	1/4" (6.35mm) Open	5/8" (15.88mm) Open	1/4" (6.35mm) Open	5/8" (15.88mm) Open

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.

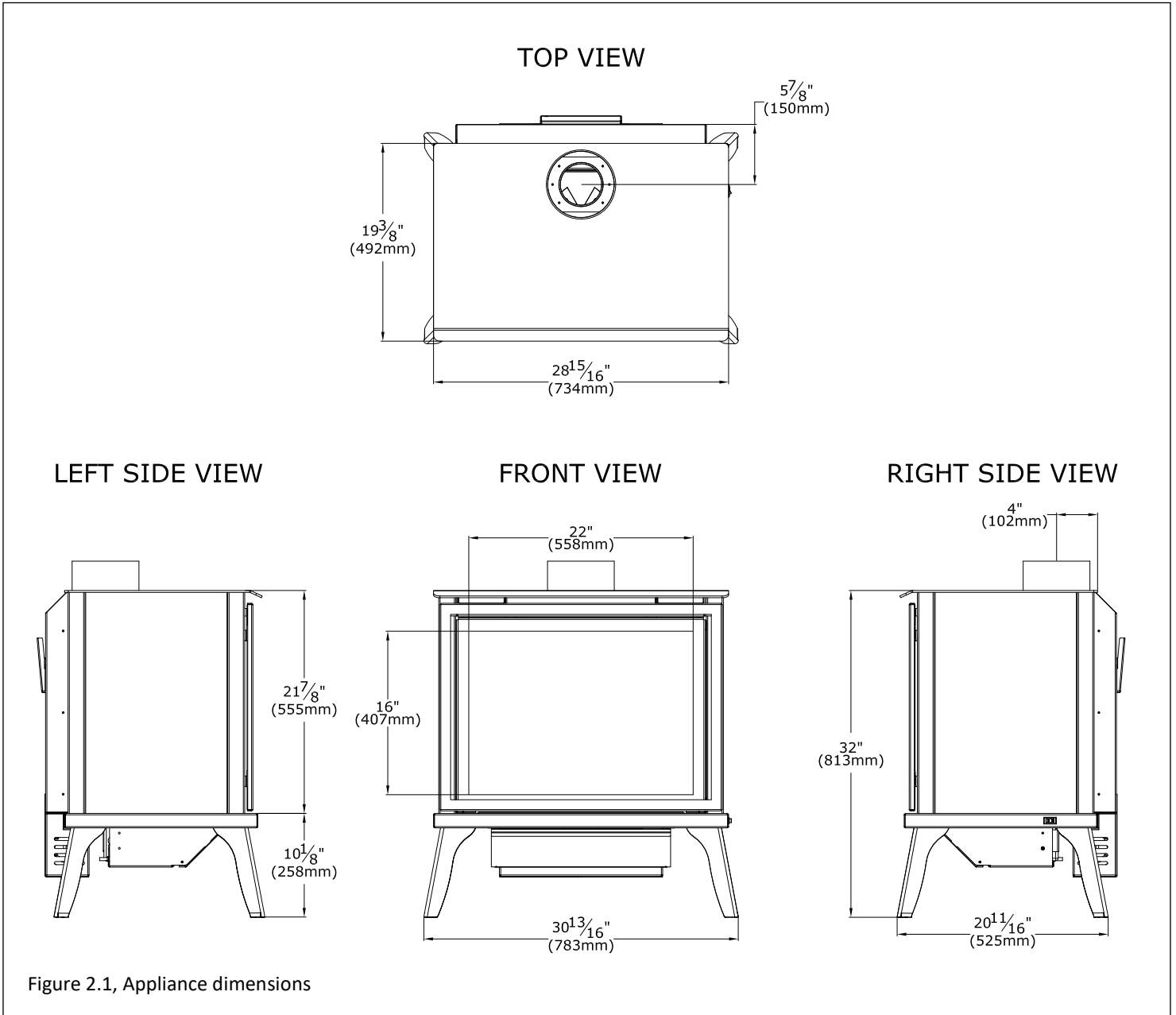
2.1.1.2 Canadian Installations

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

- 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.
- LXL-22-L
 - The AC power supply to this appliance must be hot at all times and shall not have a switch installed in it.
- LXL-22-MV
 - Electrical specifications ONLY apply to when the optional fan kit (#LX22-028MV) is used.

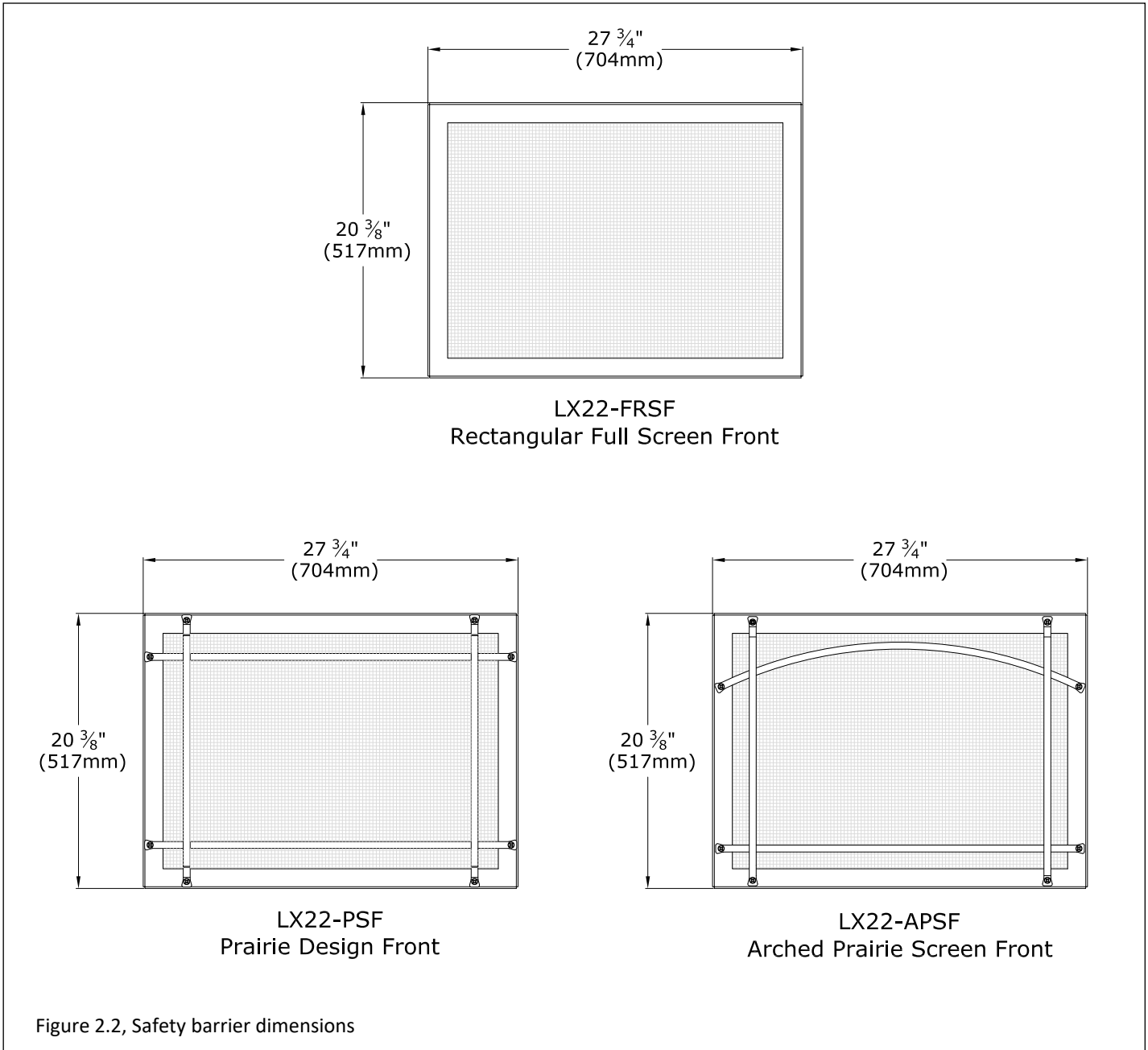
2.3 Appliance Dimensions



2.4 Safety Barrier Dimensions

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.'s barriers for this appliance.
- Please refer to Section 7.1 Safety Barrier Installation for installation and removal of safety barriers.



3.0 Framing

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 for more information.
- Masonry Application allows the gas stove to sit inside an existing masonry fireplace. Refer to section 3.5, MASONRY APPLICATION for more information.
- If planning to convert to propane, it is easier to complete the gas conversion before installing the gas stove. For LXL-22-L see the #LCK-LX22L-S30 conversion kit manual for complete conversion instructions. For LXL-22-MV See the #OCK-S190A conversion kit manual for complete conversion instructions. Refer to section 7.4, CONTROL BOARD REMOVAL AND INSTALLATION 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.
- When installing the stove ensure there is adequate space between the back the of stove and the adjacent wall for access to remove the fan kit for maintenance. See Section 13.2 for fan maintenance.

3.2 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.

3.3 Setting the Appliance

- This section outlines information on setting the appliance in the framed opening and starting the installation process. .

General Procedure

1. Find the desired location of the stove.
2. Determine the vent path and the type of termination (vertical or horizontal).
3. See Section 5.0 and 6.0 for venting requirements. If the appliance will be installed as a horizontal vent termination see Section 3.4 for framing information.
4. Determine the location of electrical (if needed) and gas line.
5. Complete any finishing material below or around the appliance location.
6. Place and secure the appliance.
7. Install vent system.

3.4 Clearances to Combustibles

- See Figure 3.1 below for minimum clearances for typical installation options.
- Refer to Figure 3.3 for rough-in clearances.

Table 3.1, Minimum Appliance Clearances to Combustible Materials		
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

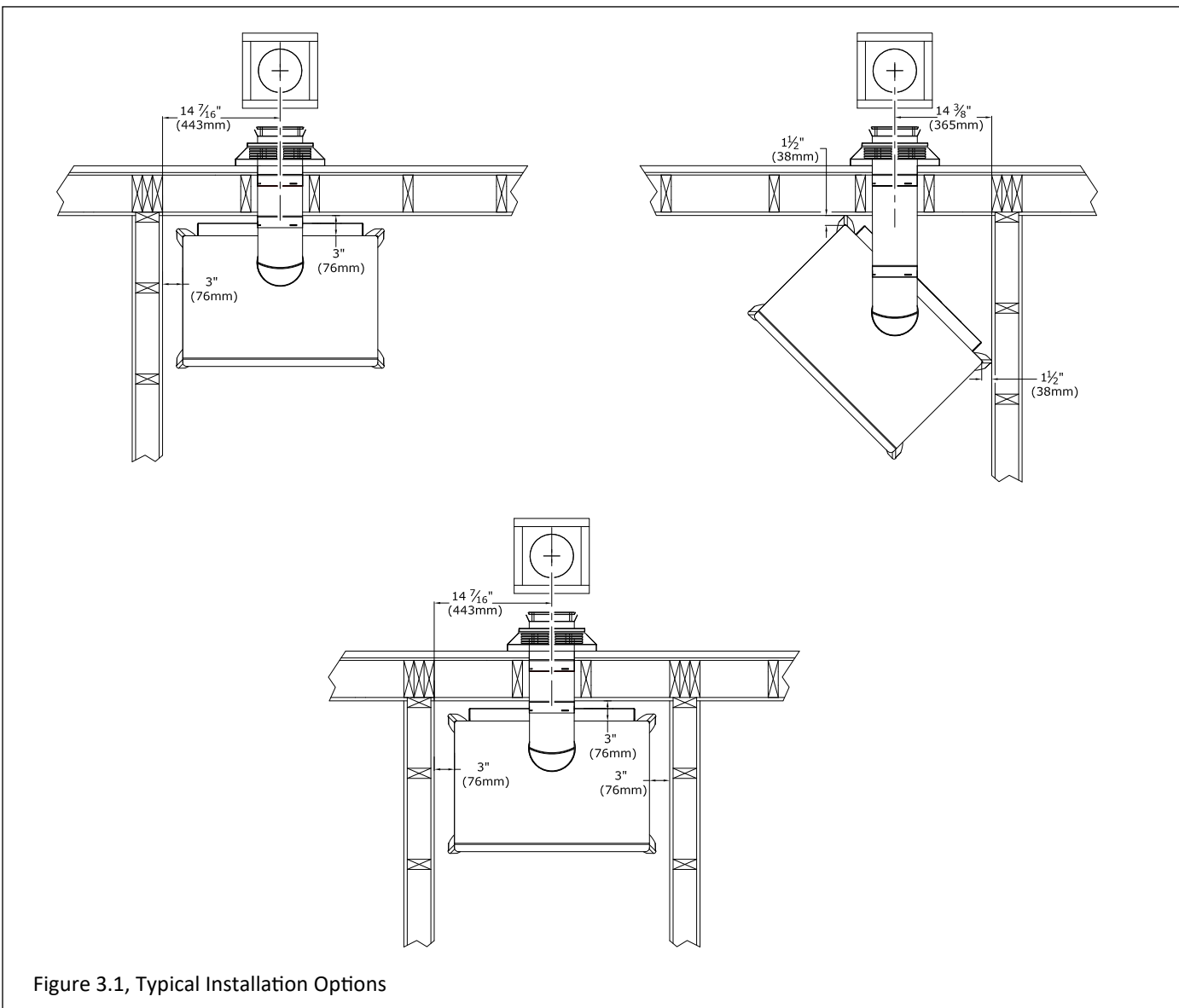


Figure 3.1, Typical Installation Options

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. DO NOT RECESS THE VENT CAP INTO WALL OR SIDING.

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.

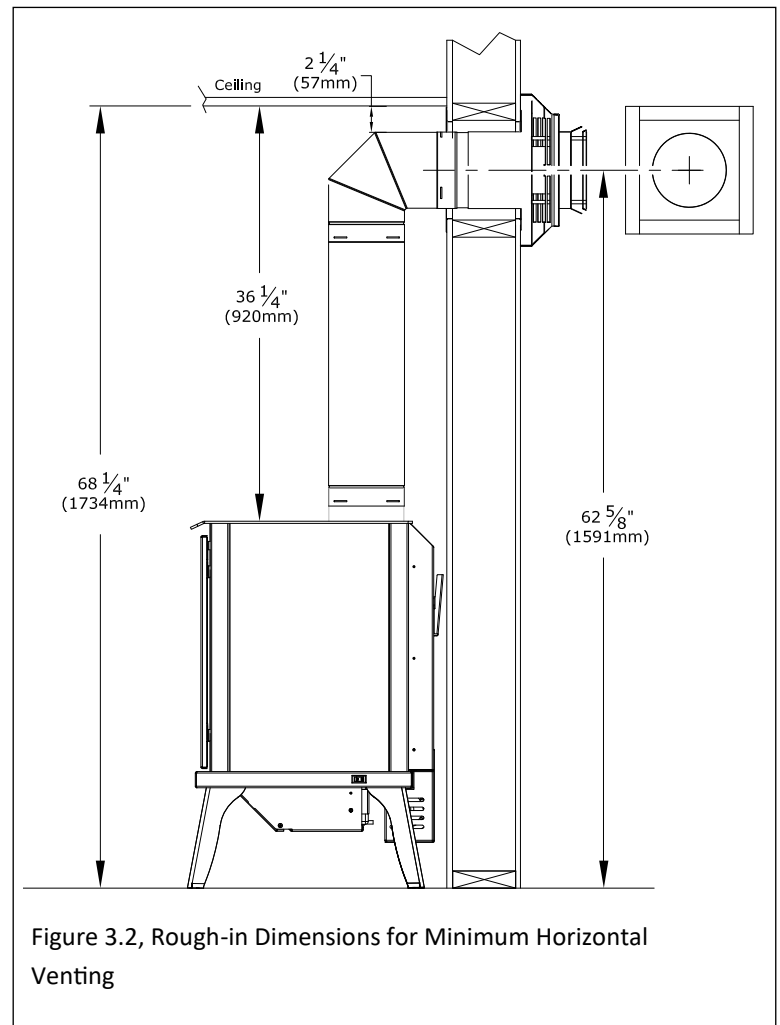
3.3.3 Horizontal Terminations

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. The 8" mantel shown in Figure 3.4 is the maximum mantel projection allowed in any alcove installation.

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

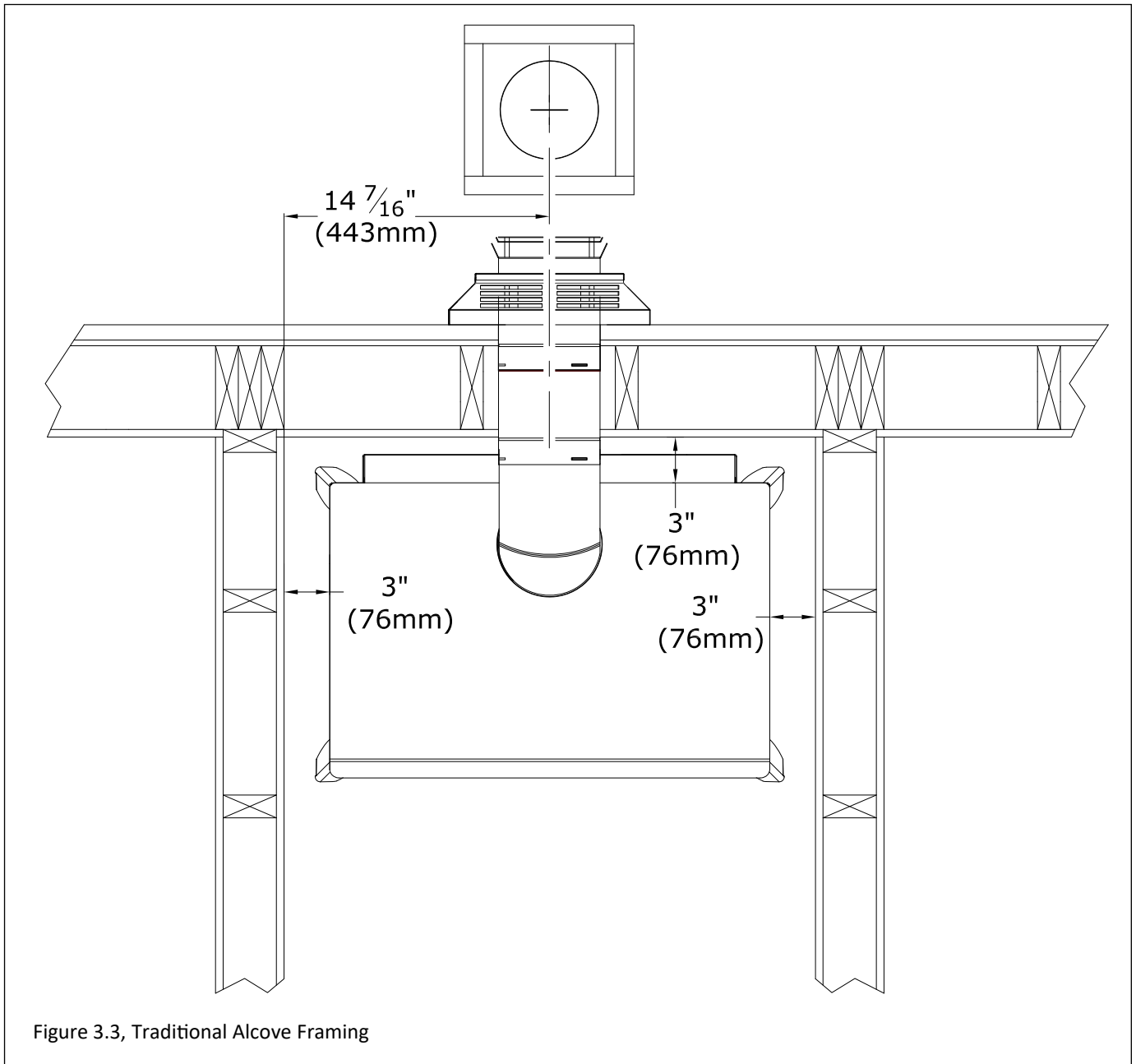


Figure 3.3, Traditional Alcove Framing

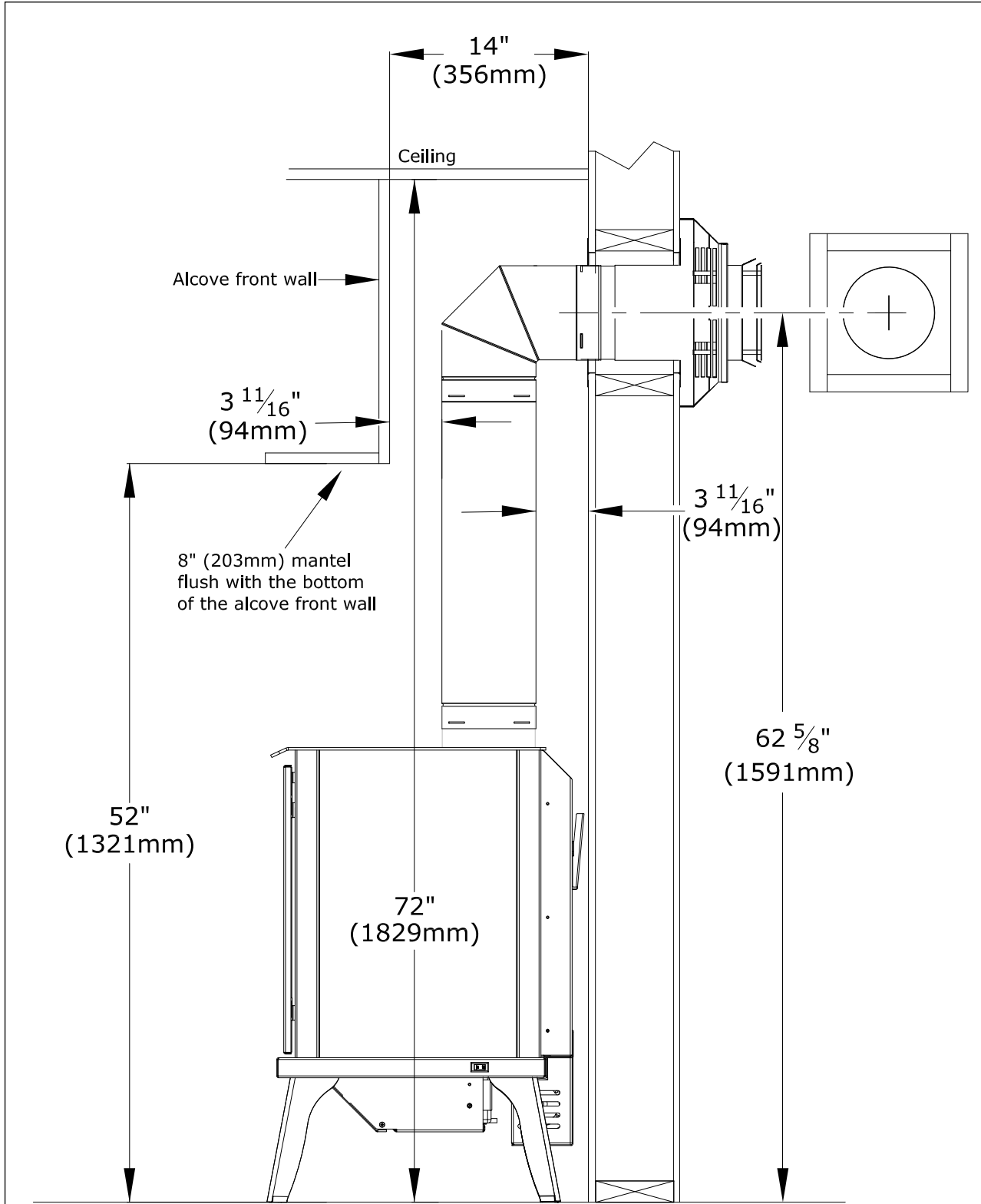
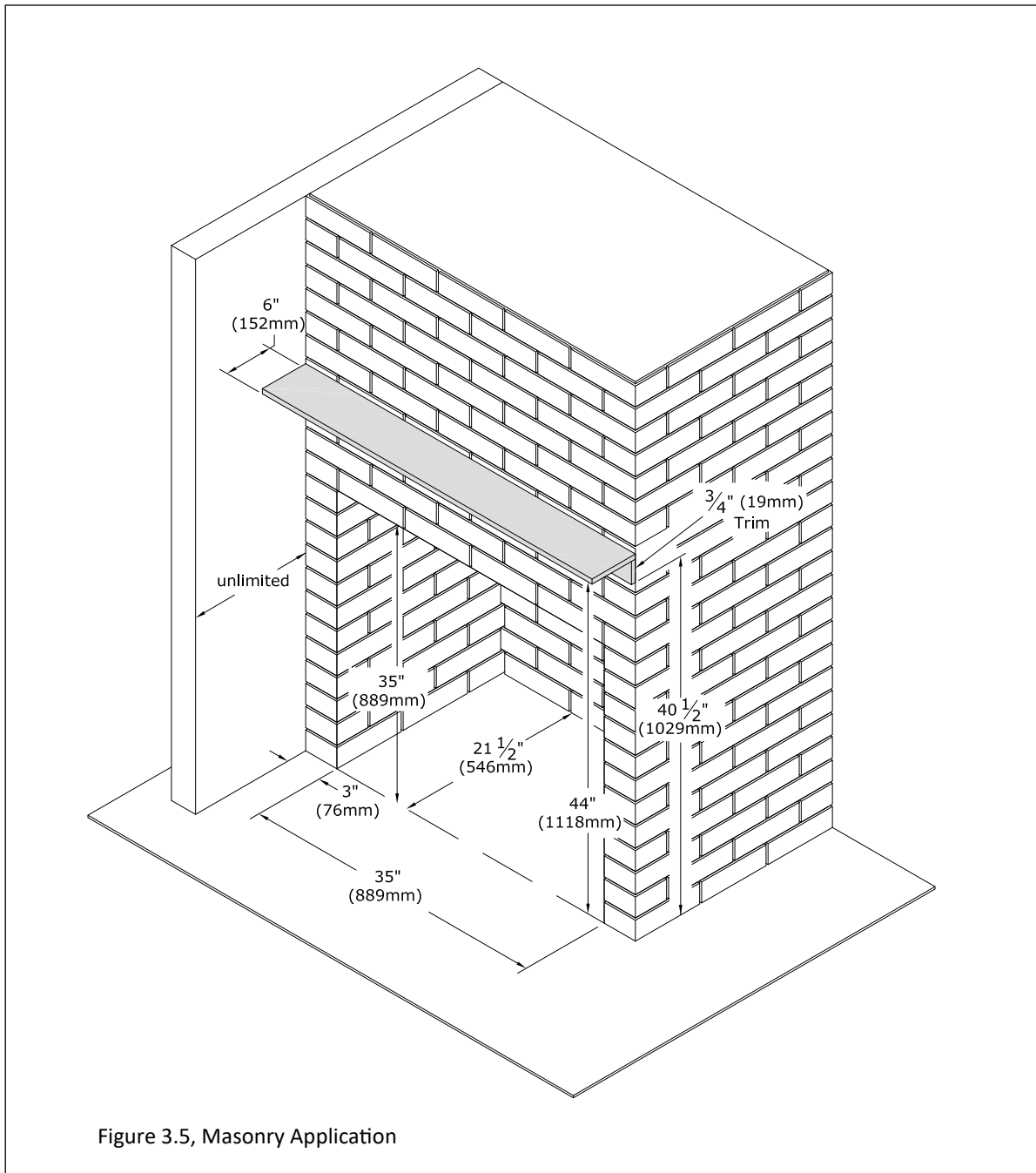


Figure 3.4, Alcove Front Wall Framing

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 3/4" (19mm) mantel trim can start at 40-1/2" (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.
- The mantel project shown is the minimum mantel allowed. You are able to increase the mantel projection by 1" (25mm) out by going 1" (25mm) up. An example of this would be if you wanted a 9" (229mm) mantel you would need to go another 3" (76mm) higher than the minimum height shown. The 9" (229mm) mantel would be 43-1/2" (1105mm) off the floor.



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.

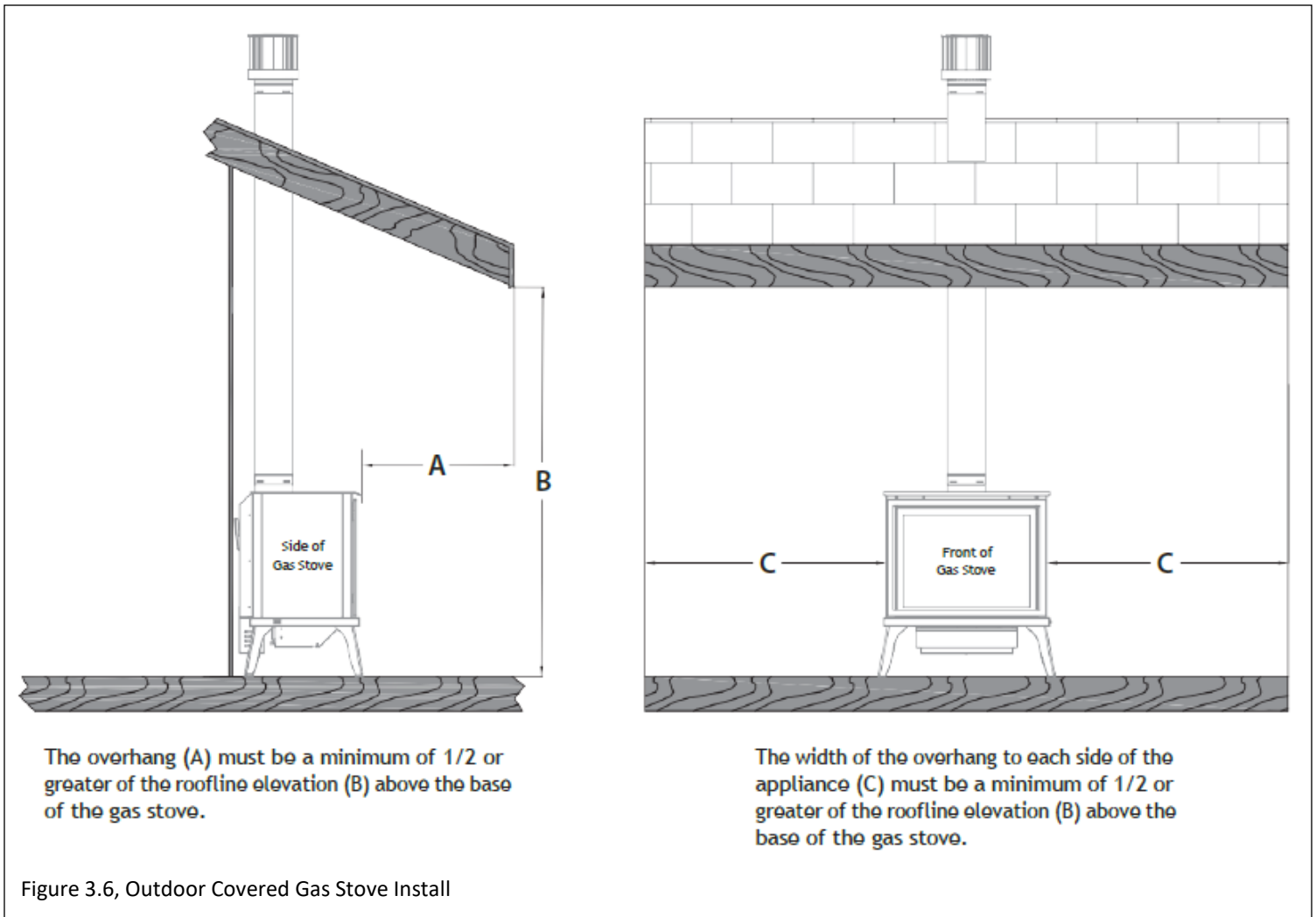
Follow the instructions and illustrations in this section for installation procedures.

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.

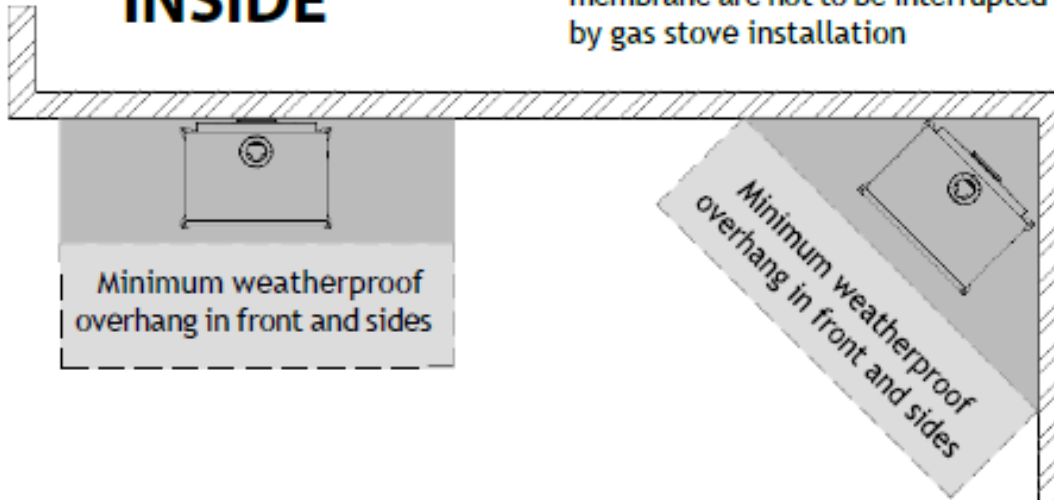
3.6.2 Requirements

- 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.
- 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.



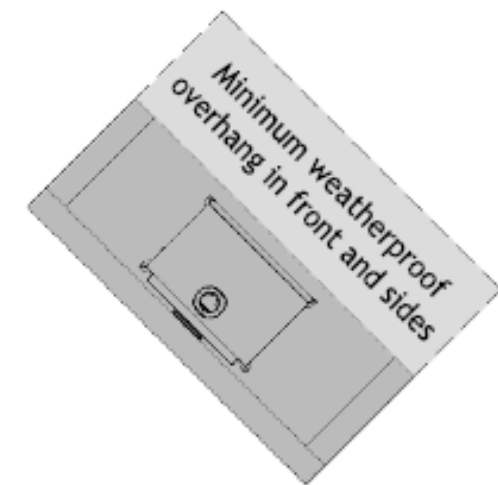
Continuous insulated building envelope and weatherproof membrane are not to be interrupted by gas stove installation

INSIDE



OUTSIDE

INSIDE



Free standing structure
(weatherproof enclosure)

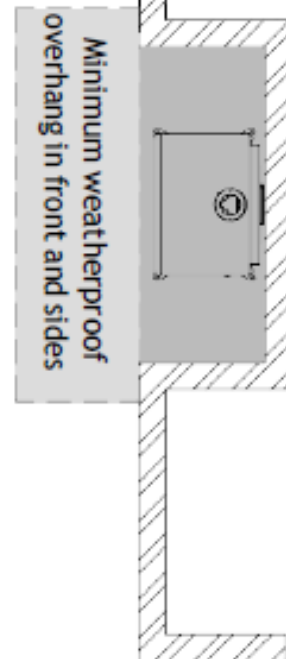


Figure 3.7, Outdoor Covered Gas Stove Install

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-L DIMENSIONS.
- 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.

Gas Pressure	Natural Gas	Propane
Minimum Inlet Pressure	5" WC (1.25 kPa) 7" WC (1.74 kPa) recommended	11" WC (2.74 kPa)
Maximum Inlet Pressure	10" WC (2.49 kPa)	13" WC (3.24 kPa)

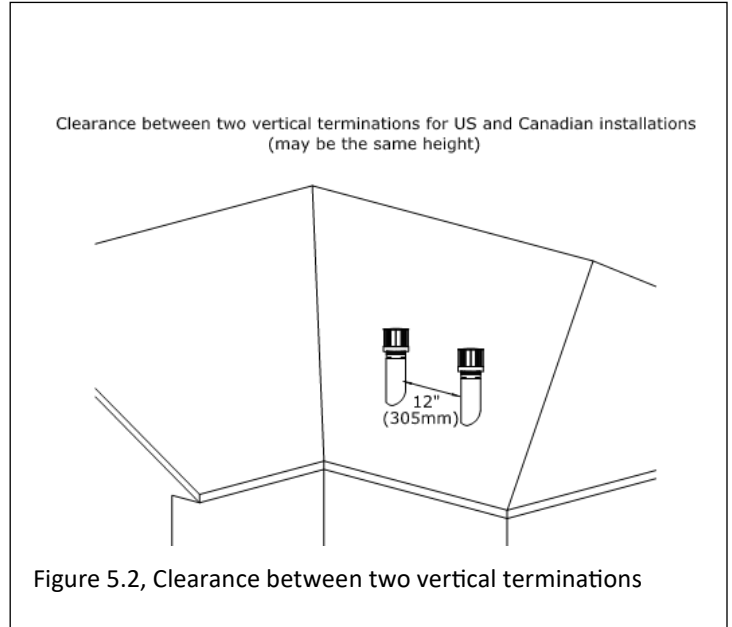
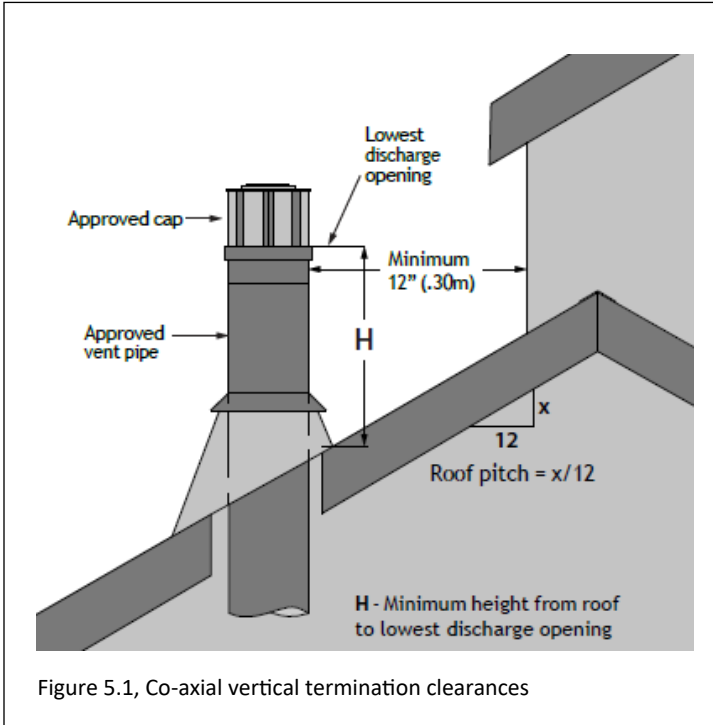
Gas Pressure	Natural Gas	Propane
Minimum Inlet Pressure	5" WC (1.25 kPa) 7" WC (1.74 kPa) recommended	11" WC (2.74 kPa)
Maximum Inlet Pressure	10" WC (2.49 kPa)	13" WC (3.24 kPa)

5.0 Termination Locations

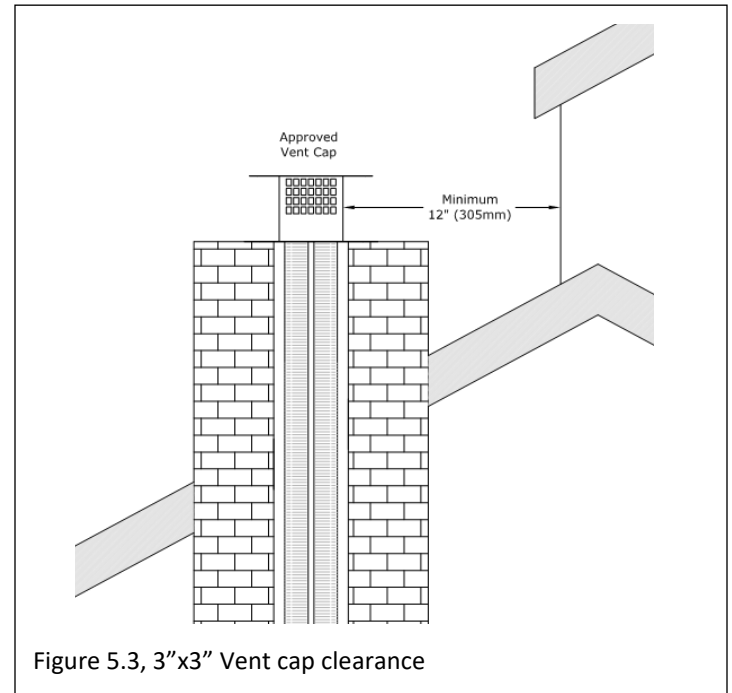
5.1 Vertical Vent Termination

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

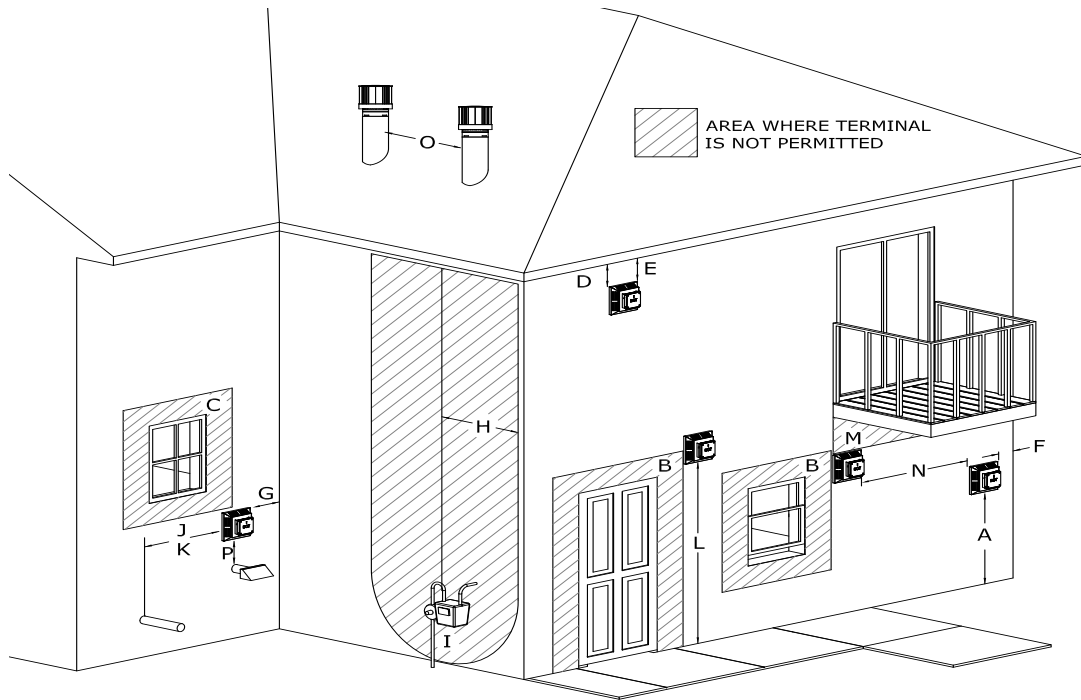
- Refer to Figure 5.1 for vertical vent termination clearances.
- Refer to Figure 5.2 for clearance between two vertical vent terminations.
- Refer to Figure 5.3 for clearance between a masonry application (shown with co-axial to co-linear venting)



Roof Pitch	Minimum height (H) from roof	
	Feet	Meters
Flat to 6/12	1.0	0.30
Over 6/12 to 7/12	1.25	0.38
Over 7/12 to 8/12	1.5	0.46
Over 8/12 to 9/12	2.0	0.61
Over 9/12 to 10/12	2.5	0.76
Over 10/12 to 11/12	3.25	0.99
Over 11/12 to 12/12	4.0	1.22
Over 12/12 to 14/12	5.0	1.52
Over 14/12 to 16/12	6.0	1.83
Over 16/12 to 18/12	7.0	2.13
Over 18/12 to 20/12	7.5	2.27
Over 20/12 to 21/12	8.0	2.44



5.2 Minimum Termination Clearances



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

6.0 Venting

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.
- 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 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 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.

6.2 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 11.4, Vent Restriction. For vent restriction use the baffle restrictor (Section 11.4.1) first and then if needed use the restrictor plate (Section 11.4.2).

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
Simpson DuraVent	46DVA-HC
	46DVA-HSC
	46DVA-HSCH
	46DVA-VCH
	46DVA-VC
ICC	TM-4HT
	TM-4RHT
Metal Fab	4DHT
	4DST36
Olympia Chimney Supply, Inc.	VDV-HC04
	VDV-VC04
	VDV-SNC0414
	VDV-SNC0436
Selkirk	4DT-HC
	4DT-HCR
	4DT-VC
	4DT-ST36

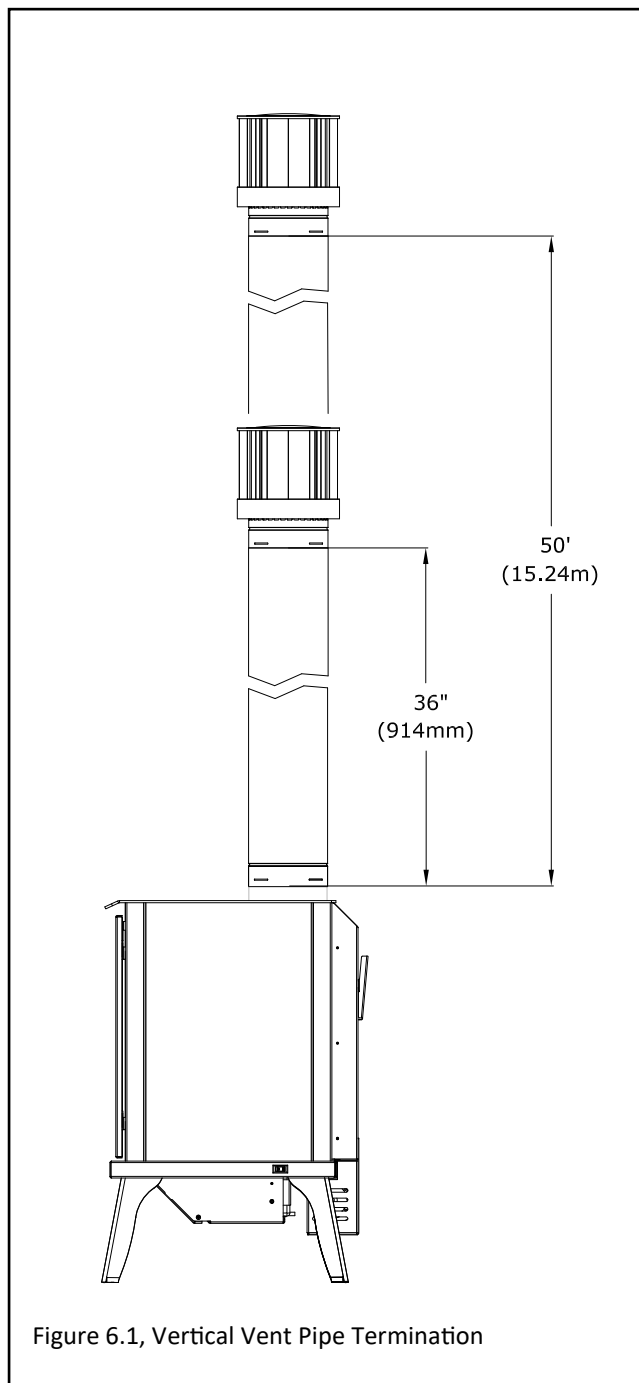
6.4 Vent Installation

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



6.4.2 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 / Minimum Horizontal 36" (914mm) vertical vent pipe + 90° horizontal elbow + 8' (2.44m) maximum horizontal run + (termination cap
- (iii) Minimum 48" Vertical Vent Pipe / Maximum Horizontal 48" (1219mm) vertical vent pipe + 90° horizontal elbow + termination cap
- (iii) Minimum 48" Vertical Vent Pipe / Minimum Horizontal 48" (1219mm) vertical vent pipe + 90° horizontal elbow + 12' (3.66m) maximum horizontal run + termination cap

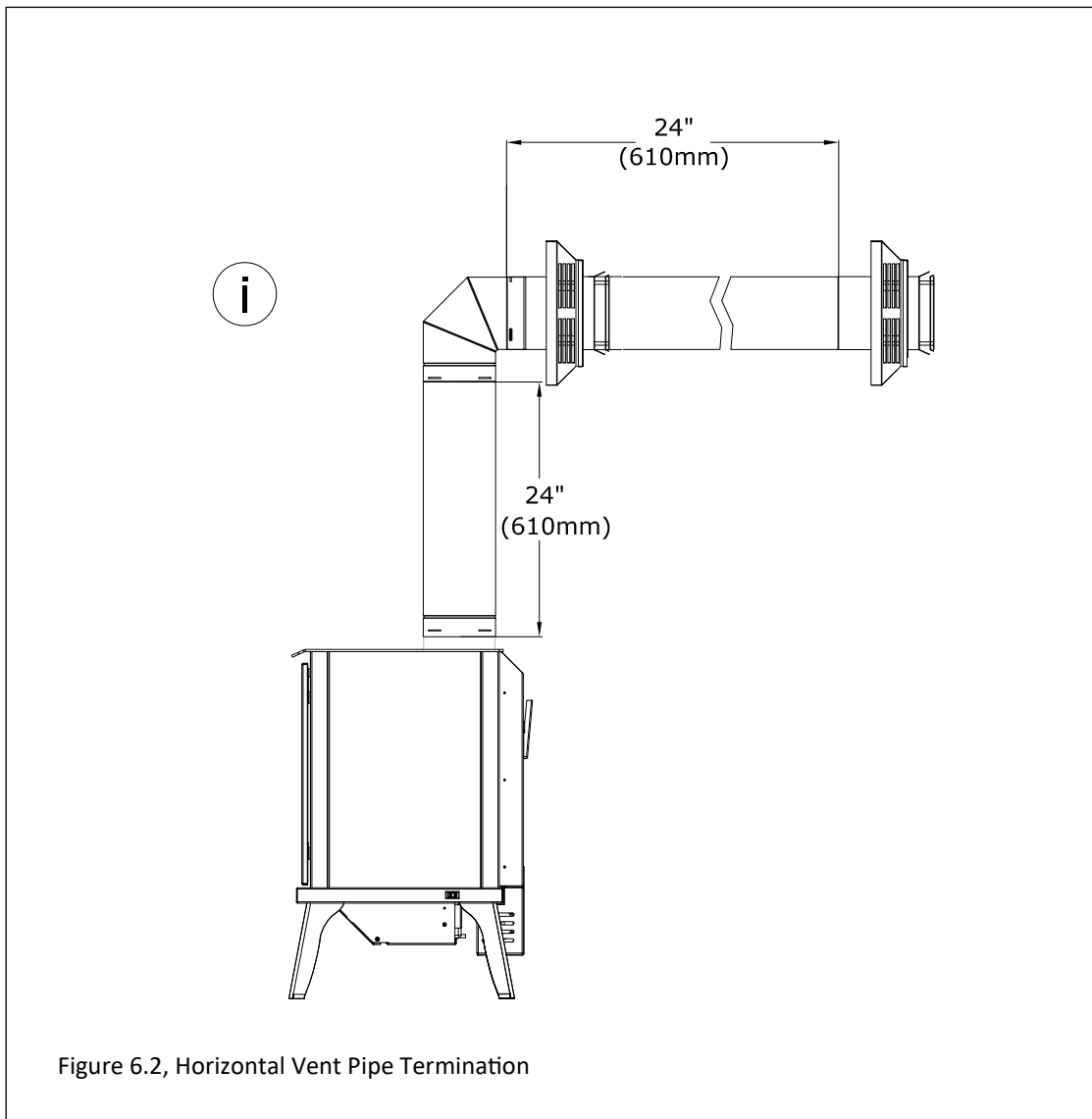


Figure 6.2, Horizontal Vent Pipe Termination

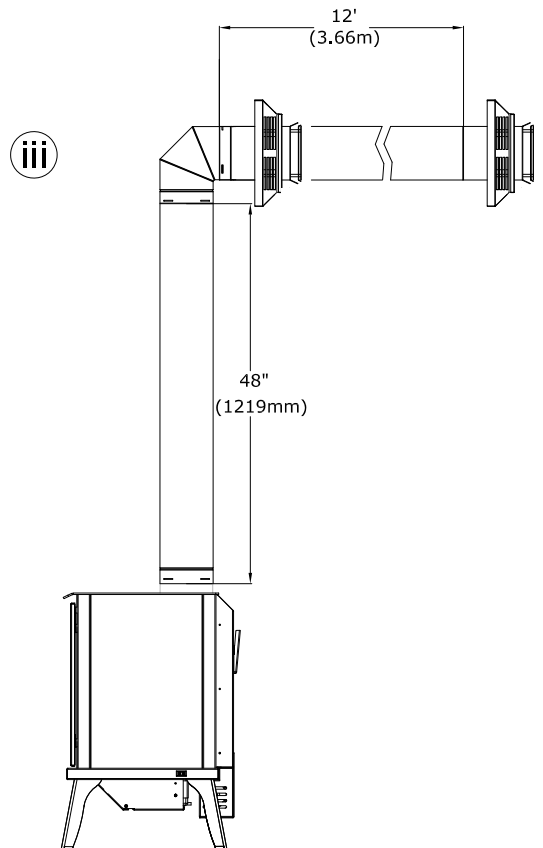
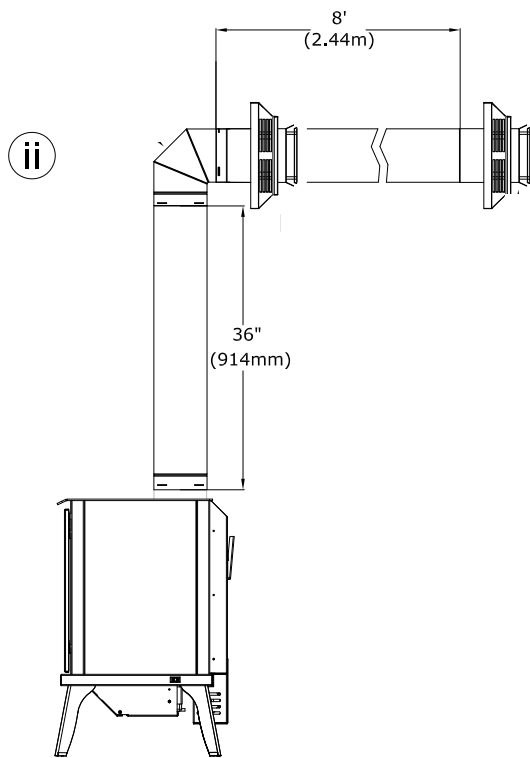


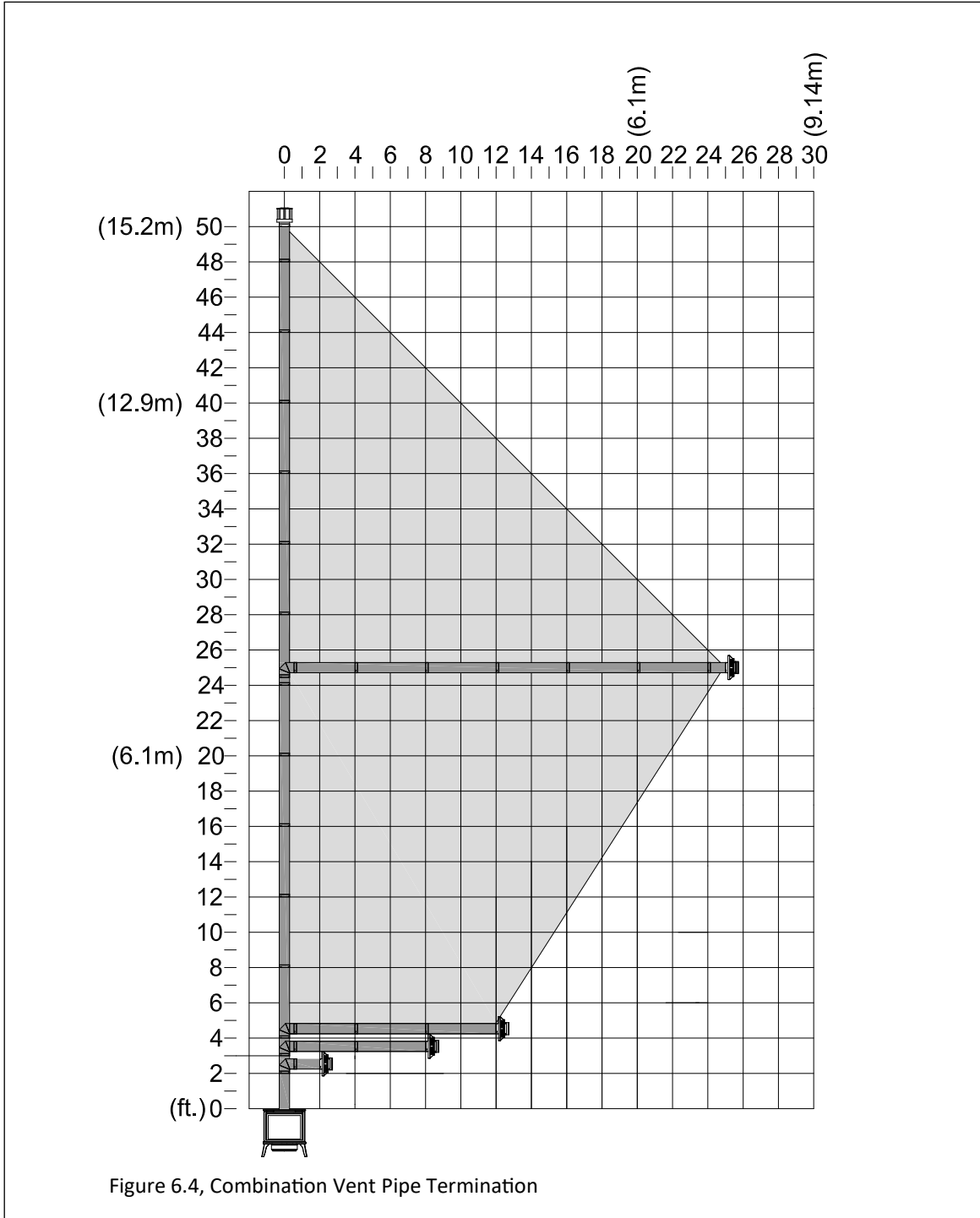
Figure 6.3, Horizontal Vent Pipe Termination

6.4.3 Combination Venting

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.



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.

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 Figure 6.5 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.

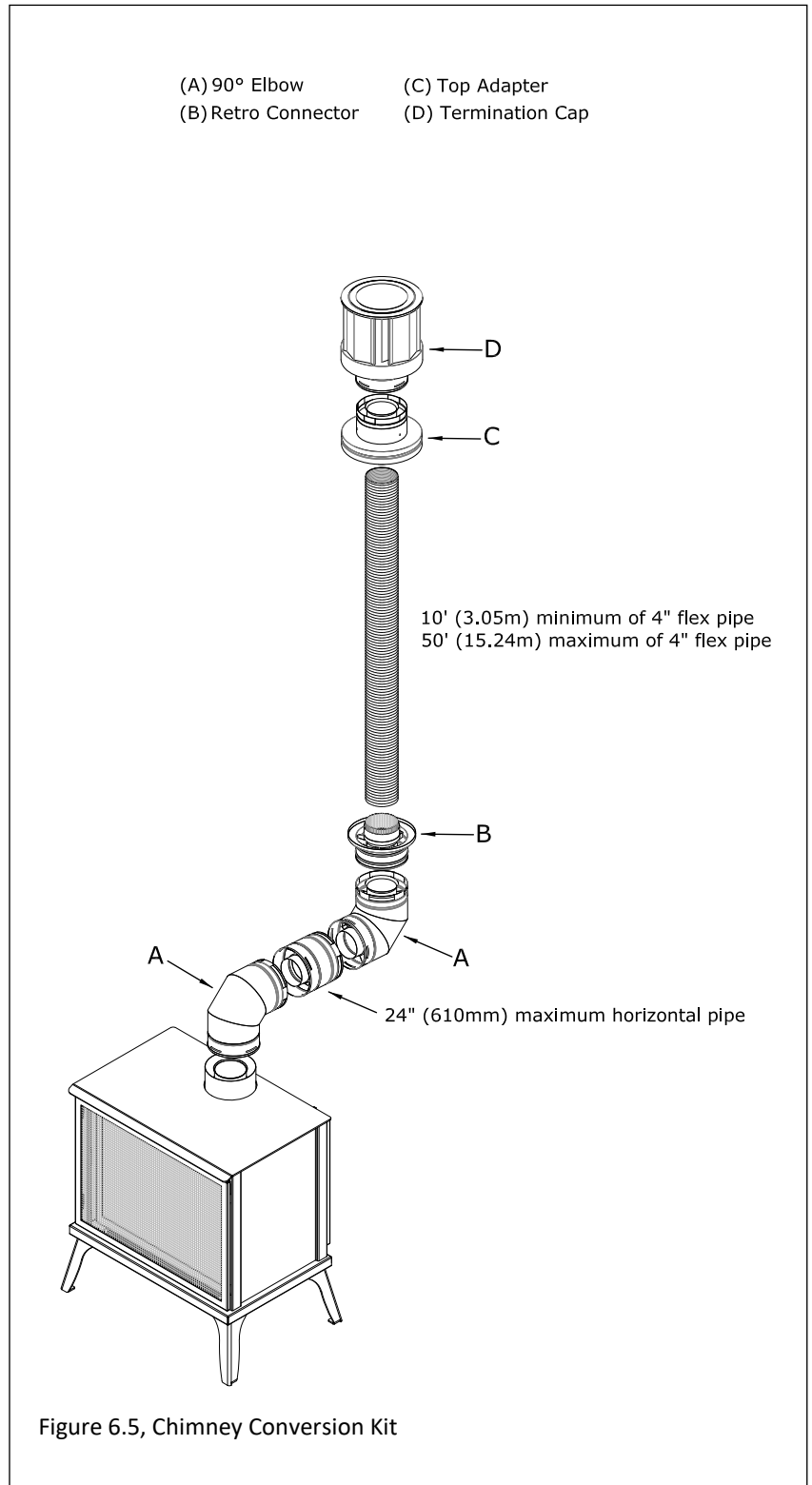
IMPORTANT: The vent heat shield assembly must be installed when incorporating minimum horizontal venting off the top of the appliance.

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 + 24" maximum horizontal pipe + 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 Figure 6.6 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

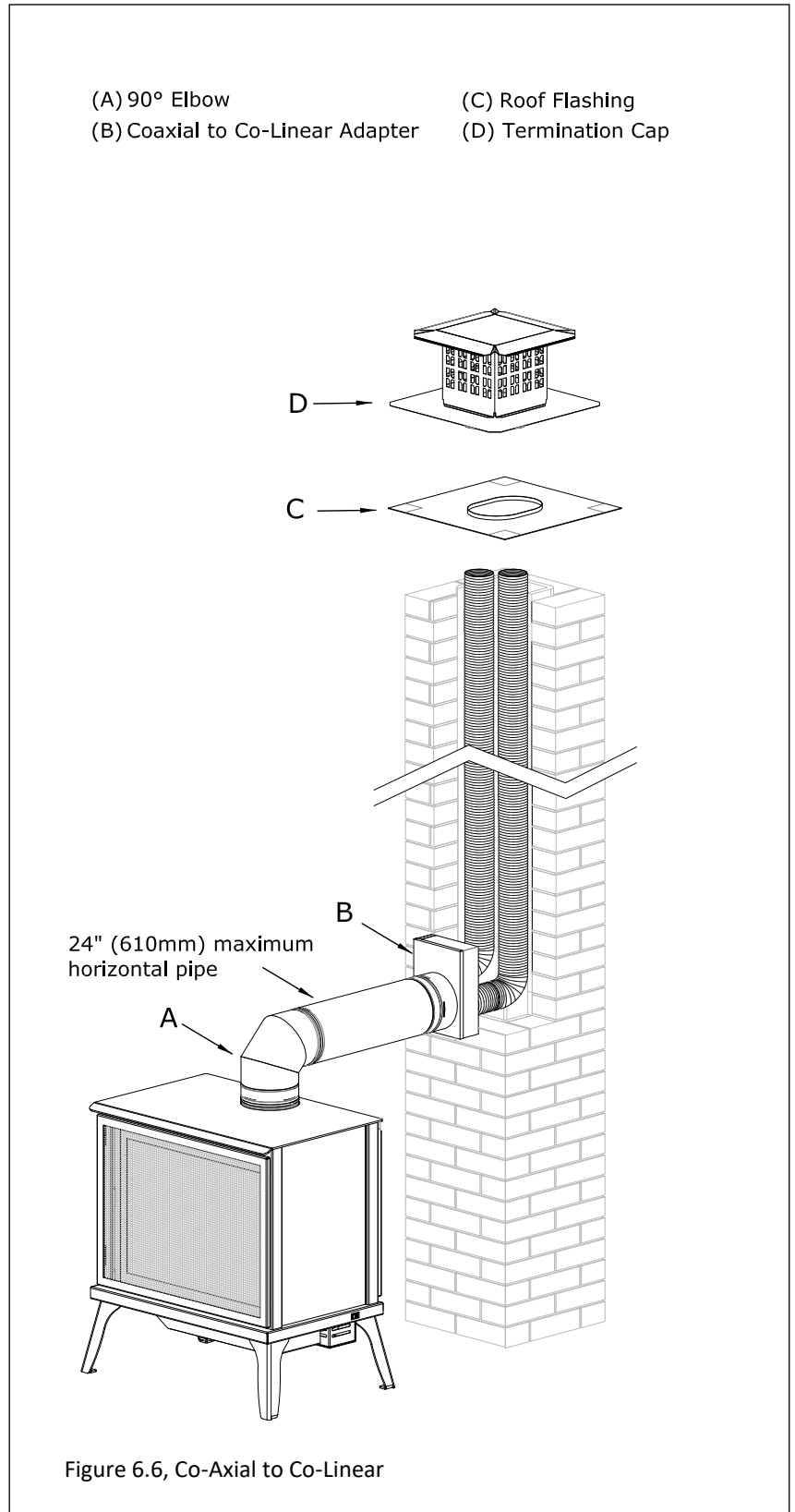
IMPORTANT: Horizontal vent sections require at least 1/4" (6mm) rise for every 12" (305mm) of travel.

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:

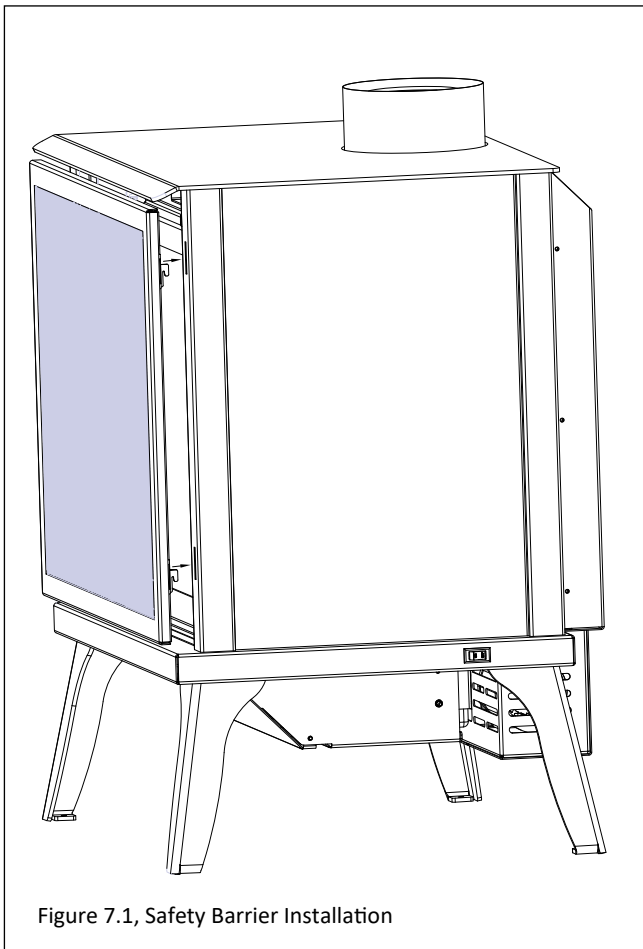
90° elbow + 24" (610mm) maximum horizontal vent pipe + co-axial to co-linear adapter + 10' (3.05m) minimum length of 3" x 3" aluminum flexible pipe / 50' (15.24m) maximum length of 3" x 3" aluminum flexible pipe + roof flashing + termination cap



7.0 Fireplace Setup

7.1 Safety Barrier

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 Figure 7.1.
- To remove safety barrier screen: lift the screen up and out of slots.



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.

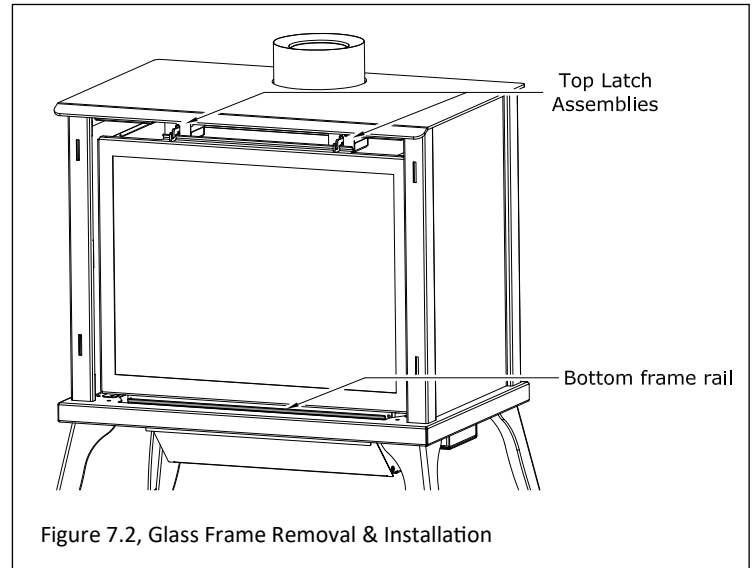
7.2.1 Remove Glass Frame Assembly

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.



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.

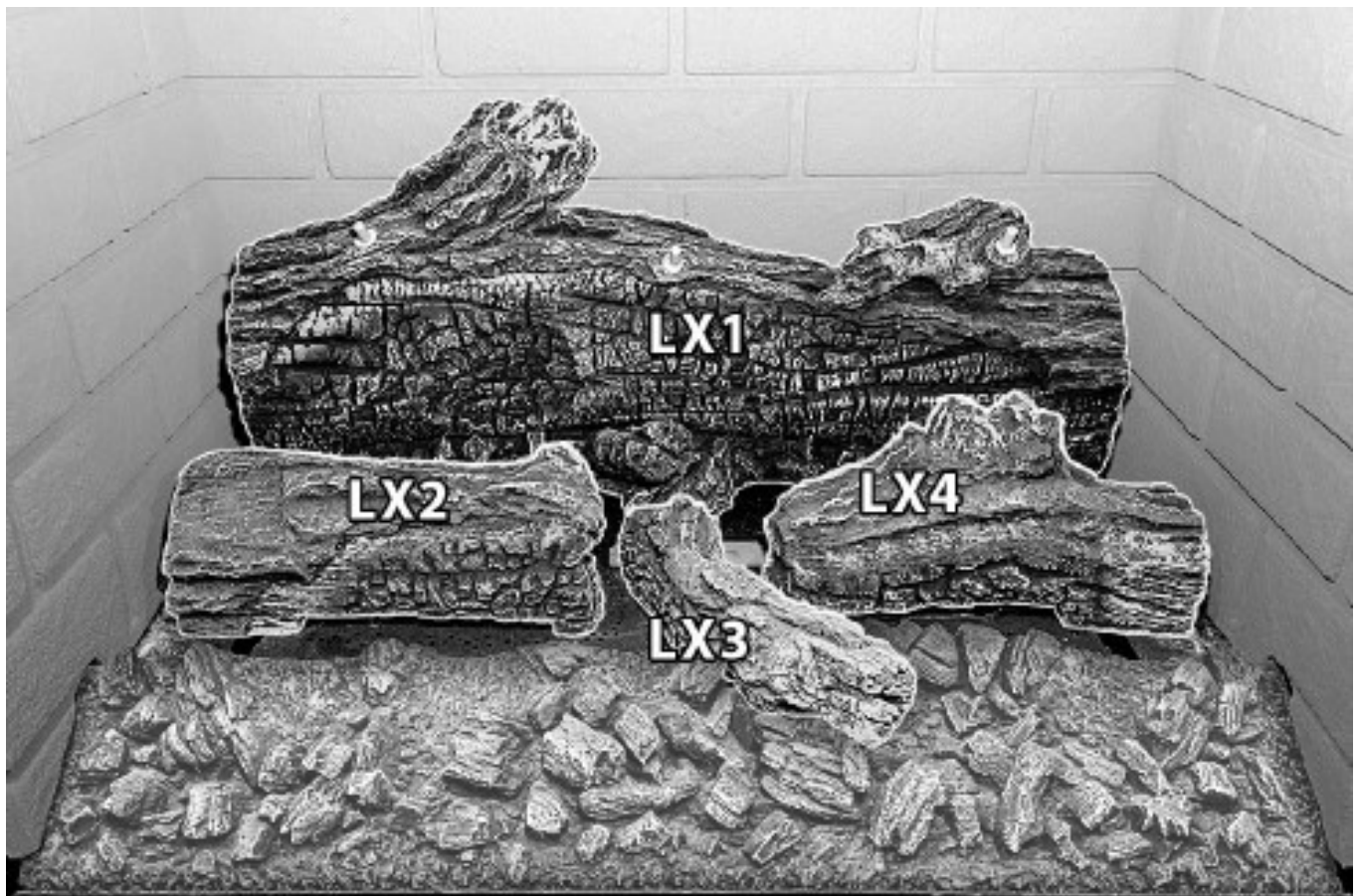


Figure 7.3, Base Logs

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 rock-wool embers onto logs and burner.

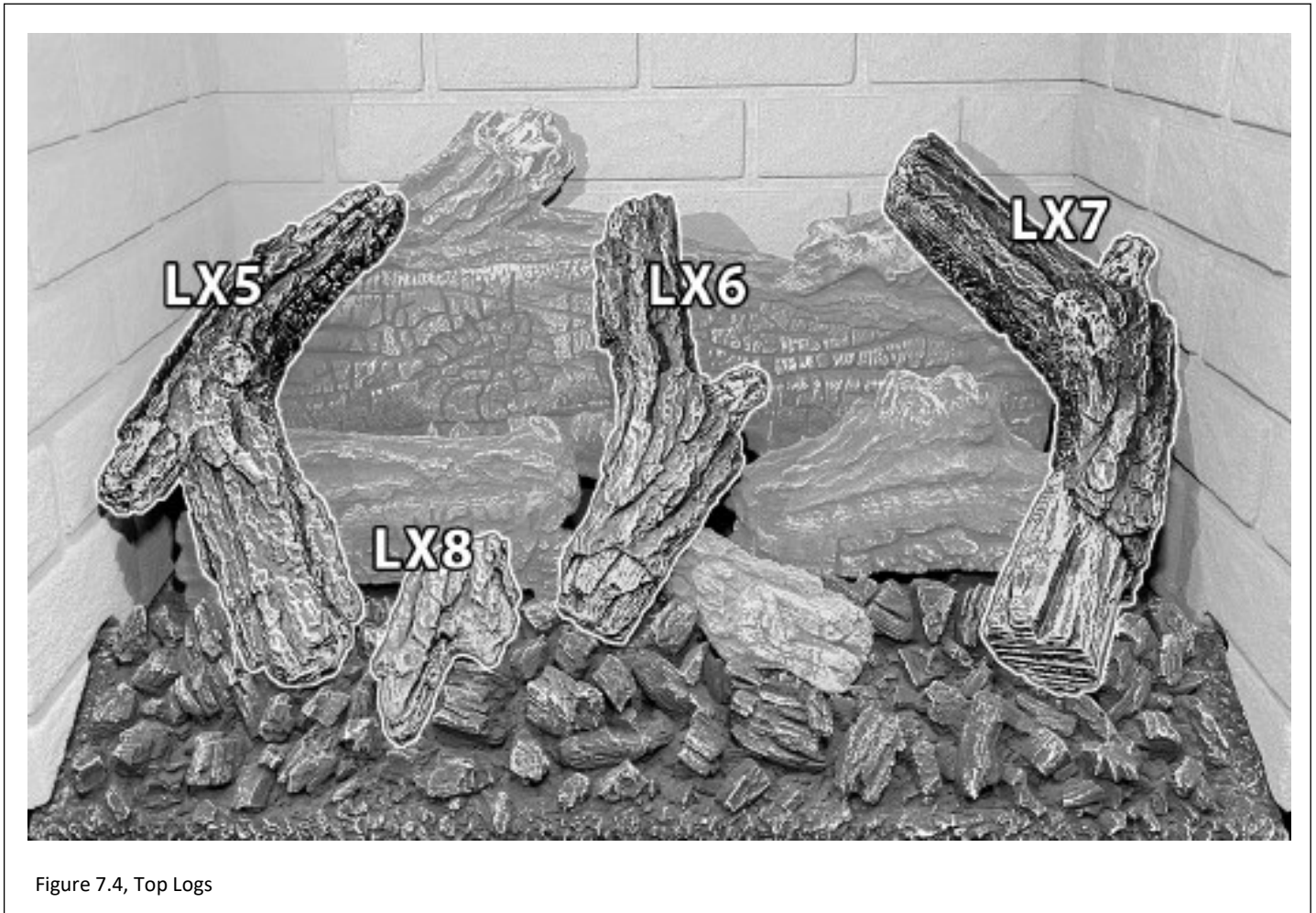


Figure 7.4, Top Logs

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.

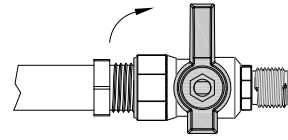
Refer to Figure 7.5 for the following instructions.

7.4.1 Control Board Removal

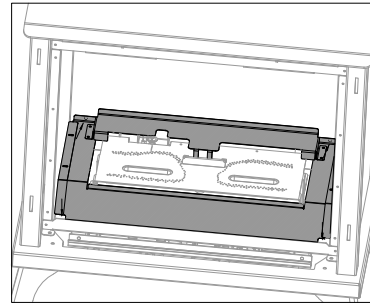
1. Disconnect electrical power.
2. Locate the manual valve installed by your qualified service technician. Turn the manual valve clockwise to the OFF position.
3. Remove the safety barrier, glass frame assembly, and the log set.
4. Remove the panel clips securing the refractory or panel set (if installed).
5. Remove the ash panel.
6. 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.
7. 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.
8. 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

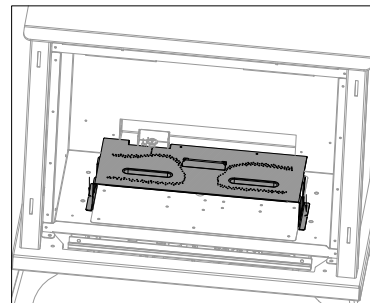
1. Place the control board in the firebox, aligning the holes in control board with the holes and alignment screws in firebox bottom. **VERIFY SEALING GASKET IS IN PLACE.** Secure the control board with screws previously removed.
2. Reinstall burner assembly. Position the burner tube over the burner 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, glass frame assembly, and safety barrier.
7. Turn the manual valve counterclockwise to the ON position.
8. 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

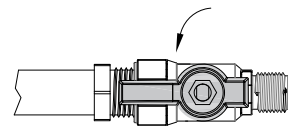
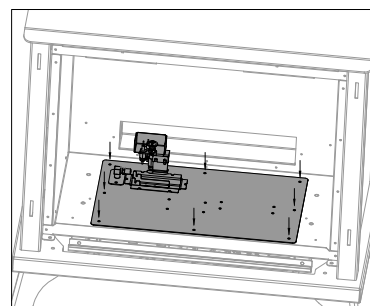


Figure 7.5, Control Board Removal

7.5 LX22-028MV Optional Fan Kit (LXL-22-MV Only)

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.

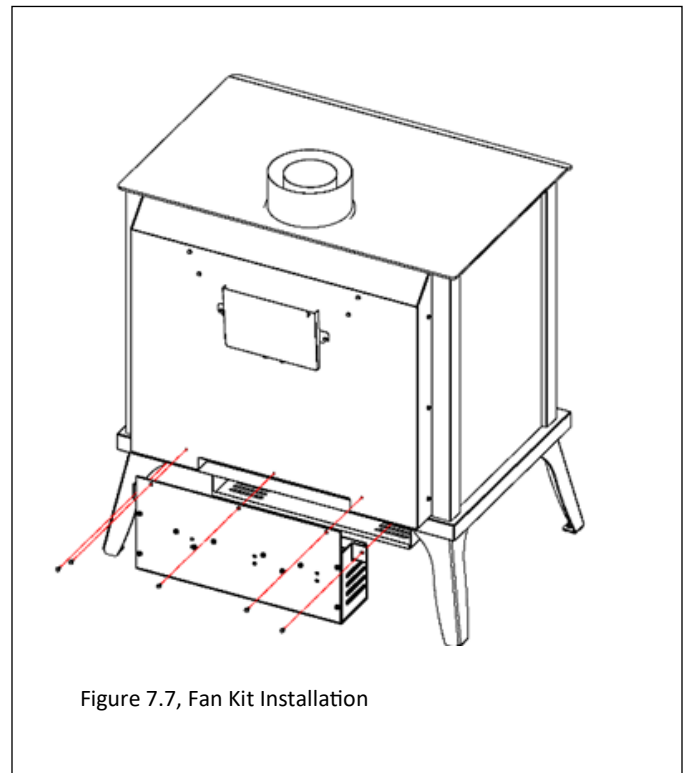
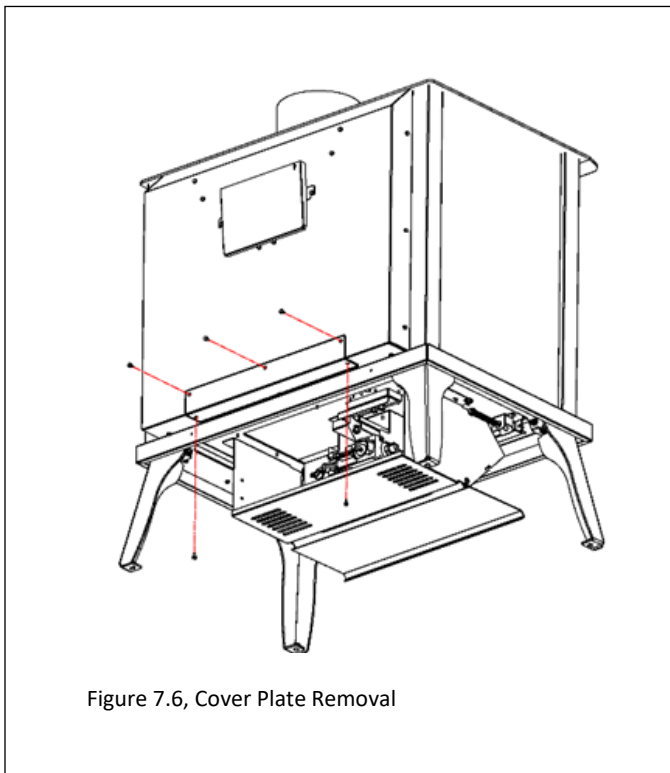
- Hussong Manufacturing recommends to install an electrical outlet near the gas stove.

This kit includes:

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

Instructions:

1. Remove cover plate and retain screws (Figure 7.6).
2. Mount the replacement fan assembly by aligning with existing holes in the back and underneath of unit using the (5) screws previously removed (Figure 7.7).
3. 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 7.8).
4. Place the temperature control switch (magnet attached) onto the firebox floor on the right, as far back as possible to the fan motor. (Figure 7.9)
5. Plug fan cord into the electrical box receptacle.
6. Plug the speed control box cord into a properly grounded three-prong receptacle.
7. 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.



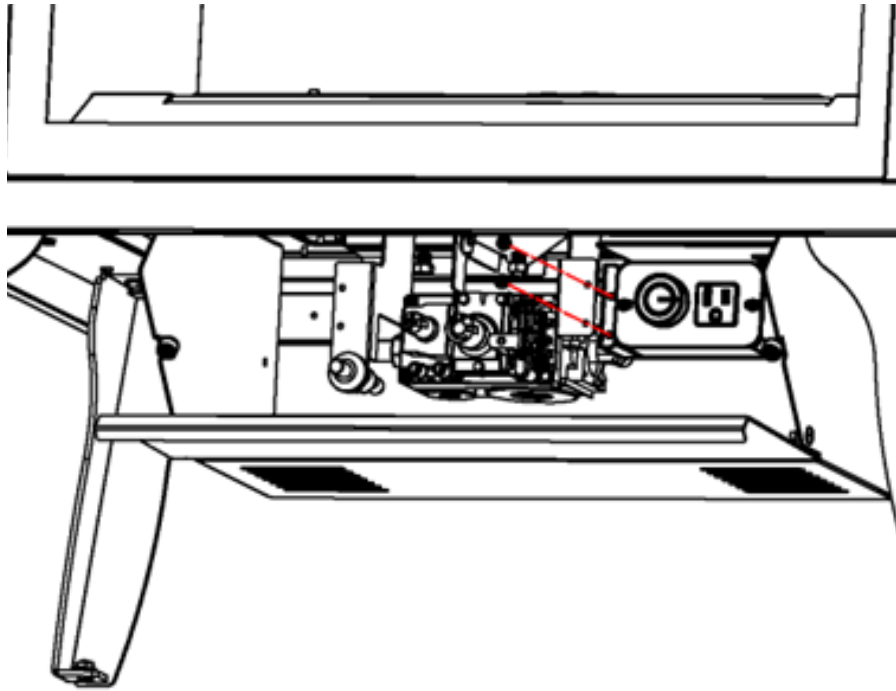


Figure 7.8, Speed Control Box



Figure 7.9, Temperature Control Switch Location

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.

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

8.1 Electrical Specifications

WARNING: An optional component connection for the LXL-22-MV is for low voltage battery or direct current only. Do not connect to 120 or 240 volts. The optional fan kit is the only component on the MV system that connects to 120 volts.

This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.1.

8.2 Wiring Requirements

8.2.1 LXL-22-L Wiring Requirements

- The system requires 120 VAC of electricity and/or batteries to operate.
- Using the battery backup will operate flame modulation of the burner only.
- If desired, a thermostat or a wall switch may be installed for main burner operational control using low-voltage wires. A thermostat wire assembly is not included with this appliance.
- It is optional to disable the main ON/OFF rocker switch operating the main burner by disconnecting the wires from the control module
- If the rocker switch wires are not disconnected, the main ON/OFF rocker switch must be in the OFF position for proper operation of optional controls. If the main ON/OFF rocker switch is ON, the main burner will operate until it is turned OFF by the rocker switch. The thermostat/wall switch 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 thermostat is to be used, mount it in a convenient location on a wall near the fireplace. Follow instructions included with assembly.

8.2.2 LXL-22-MV Wiring Requirements

- The millivolt gas valve system does not require 120 VAC supply to operate. Do not connect 120 VAC to the gas valve.
- If desired, a thermostat or a wall switch may be installed for main burner operation control using low voltage wires (not included).
 - The ON/OFF rocker switch will override the thermostat / wall switch. If you choose to leave the rocker switch wired up it must be placed in the OFF position to allow the thermostat / wall switch to operate correctly. If you place the rocker switch in the ON position it will turn the fireplace on and override any command from the thermostat / wall switch
 - It is optional to disable the ON/OFF rocker switch by disconnecting the wire from the back of the gas valve. If you do this then the fireplace burner will only operate from the commands received from the thermostat / wall switch.
- If you choose to install the optional LX22-028MV fan kit then you will need 120 VAC at the appliance to power the fan kit.
- An optional remote receiver mounting bracket may be installed on the control compartment using (2) screws.
- If a wall-mounted ON/OFF control or thermostat is to be used, mount it in a convenient location on a wall near the fireplace. Follow instructions included with assembly.

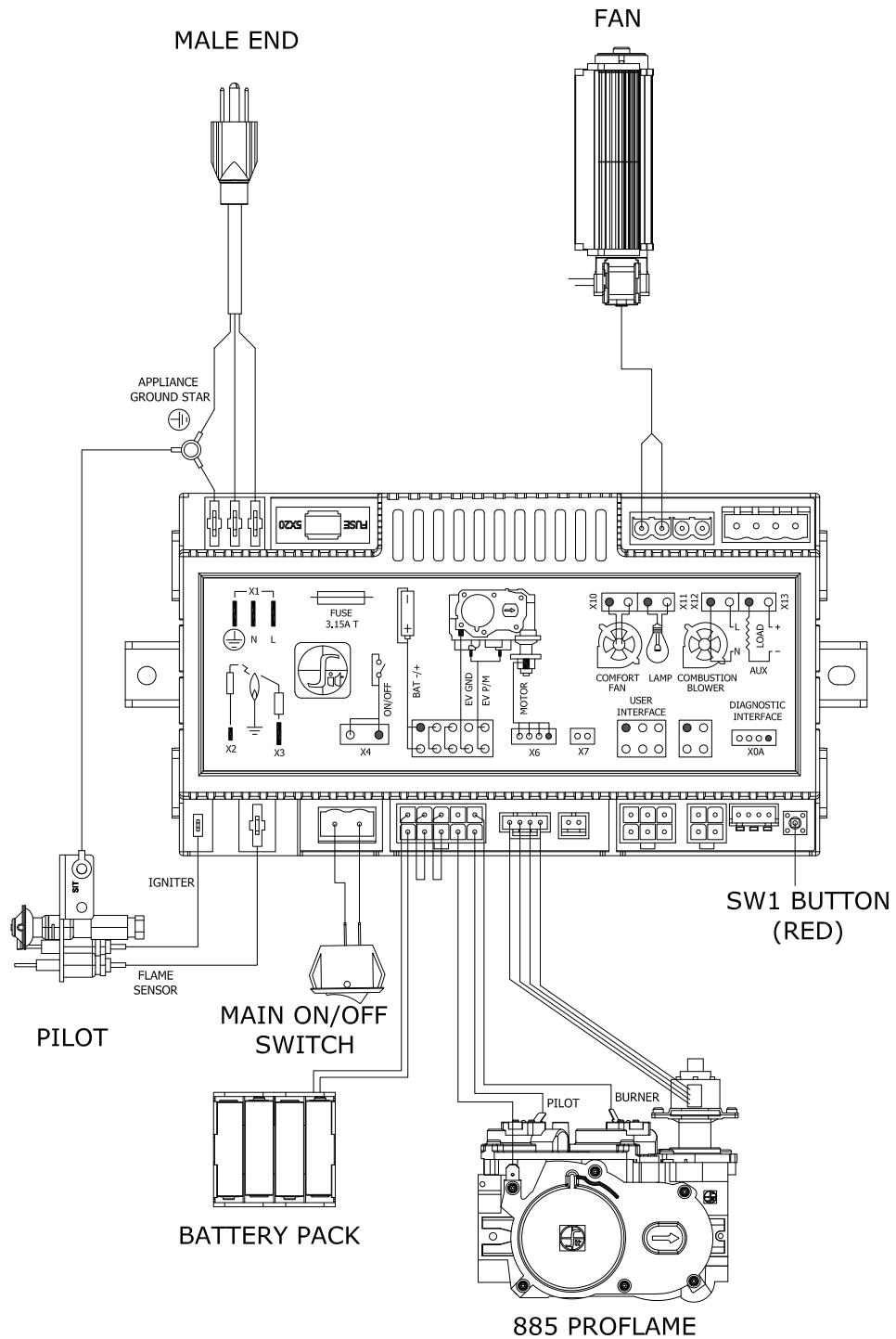
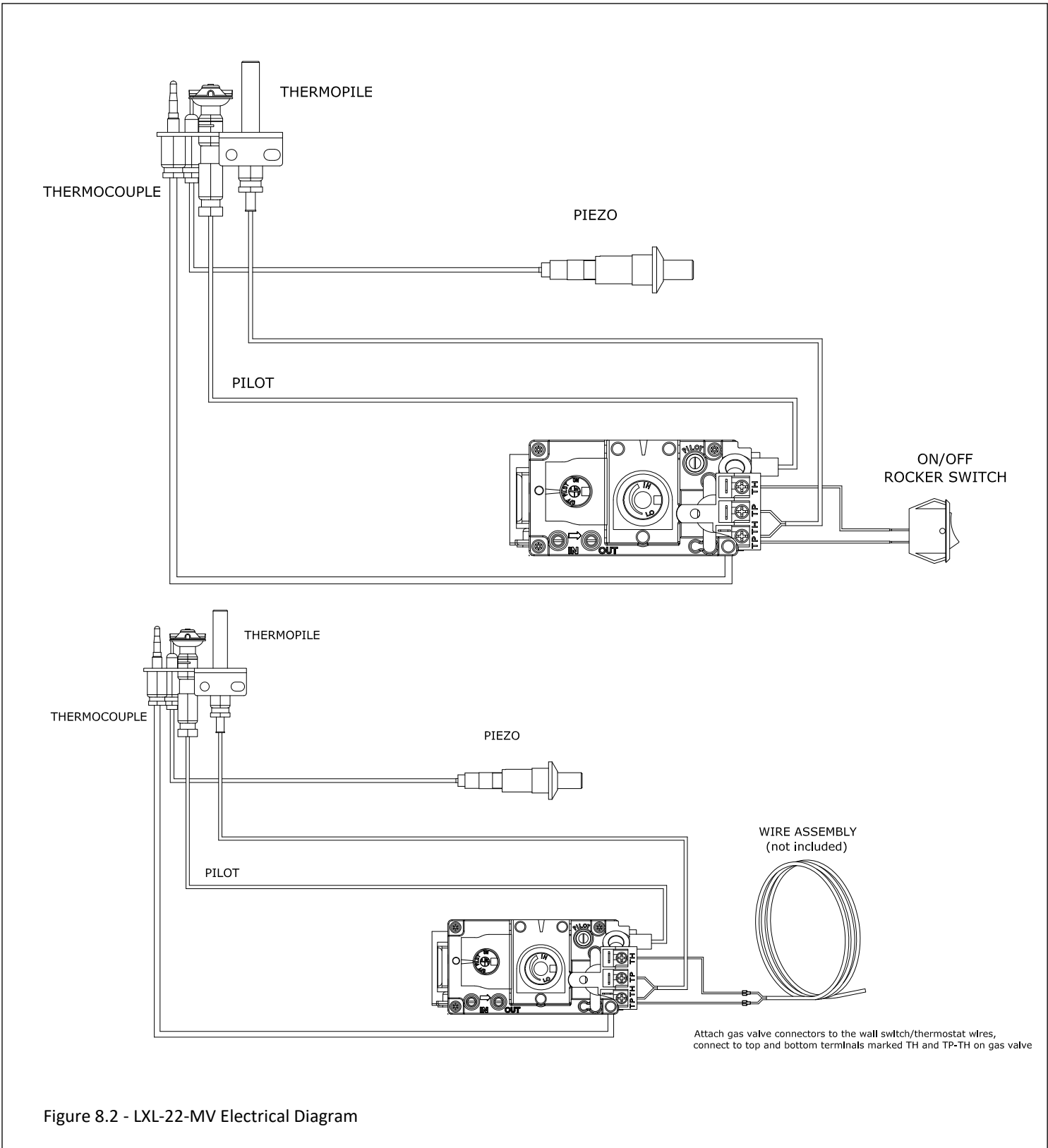


Figure 8.1 - LXL-22-L Electrical Diagram



Attach gas valve connectors to the wall switch/thermostat wires, connect to top and bottom terminals marked TH and TP-TH on gas valve

Figure 8.2 - LXL-22-MV Electrical Diagram

9.0 Operating Instructions - LXL-22-L

FOR YOUR SAFETY READ BEFORE OPERATING

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 is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
- B. **BEFORE OPERATING** 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.
- C. Use only your hand to turn the gas control manual valve. Never use tools. If the valve will not turn by hand, do not 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 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.

Follow the gas supplier's instructions.

- If you cannot reach your gas supplier, call the fire department.

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.

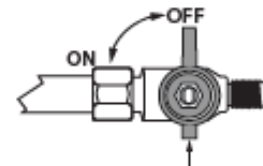
CAUTION

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.

OPERATING INSTRUCTIONS

1. **STOP!** Read all the safety information above on this page.
2. Press the wireless remote OFF button.
3. Turn off all electric power to the appliance.
4. This appliance is equipped with an ignition device which automatically lights the pilot. Do not try to light the pilot by hand.
5. Locate the manual valve installed by your qualified service technician.
6. Turn the manual valve clockwise  to the OFF position.
7. Wait five (5) minutes to clear out any gas. Then, smell for gas, including near the floor. If you smell gas, **STOP!** Follow 'B' in the safety information above. If you do not smell gas, go to the next step.
8. Turn the manual valve counterclockwise  to the ON position.
9. Turn on all electric power to the appliance.
10. Press the wireless remote ON button.
11. If the appliance will not operate, follow the instructions, "To Turn Off Gas To Appliance" and call your service technician or gas supplier.



TO TURN OFF GAS TO APPLIANCE

1. Press the wireless remote OFF button.
2. Turn off all electric power to the appliance if service is to be performed.
3. Locate the manual valve installed by your qualified service technician.
4. Turn the manual valve clockwise  to OFF position.

NOTE

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.

9.1 Setup Proflame 2 IFC Module

1. Set the main ON/OFF rocker switch in the OFF position.
2. Install (4) AA batteries (not included) into backup battery holder on the control module.
3. Install (3) AAA batteries (included in the components packet) in the remote control battery bay, located at the base of the remote.
4. Connect the IFC Module to an AC power supply.

9.2 Initialize the Control System

IMPORTANT: Remove all packaging and combustible material from the firebox before initializing the control system.

NOTE: Performing the next steps will initiate pilot start-up in manual mode, where the pilot igniter will spark repeatedly. The pilot will ignite if gas is supplied to the fireplace.

1. To access the ON/OFF toggle switch and remote learn button on, remove the safety barrier screen by lifting up and out of its slots.
2. Remove the bottom frame piece (See Section 9.2). Locate the remote sync button by sliding out the control module.
3. Press the remote sync button. The IFC module will BEEP (3) times and illuminate an amber LED. This indicates the receiver is ready to synchronize with the transmitter.
4. Within (5) seconds, push the ON/OFF button on the remote control. The receiver will BEEP (4) times to indicate the transmitter's command is accepted, and is set to the transmitter's particular code. The pilot will automatically ignite.
5. Press the remote control ON/OFF button again. The pilot will extinguish, confirming the remote control command. The control system is now initialized.
6. Set the main ON/OFF rocker switch to ON position for remote control operation of the main burner and fireplace features. Reinstall safety barrier screen.

9.3 Reset the System for Manual Operation

1. Access the toggle switch and remote learn button on the left side of the unit by removing the safety barrier screen by lifting up and out of its slots.
 2. Remove the bottom frame piece (See Section 9.2). Locate the remote sync button by sliding out the control module.
 3. Set the ON/OFF rocker switch to OFF position.
 4. Press and hold the remote sync button until it emits (3) beeps and an amber LED is illuminated.
 5. Within (5) seconds, press the remote sync button again. This will close synchronization with the remote control. The pilot will automatically light.
- Turn the main burner ON by setting the ON/OFF switch in ON position. The main burner will only operate on HI.
 - Turn the main burner OFF by setting the ON/OFF switch in the OFF position. The pilot will remain lit even if burner is turned off, provided CPI mode is turned on.

9.4 Automatic Safety Turn-off

- This system will execute an automatic turn OFF command for approximately (5) seconds within (24) hours of a continued pilot flame ignition to perform a safety check. This allows the system to verify correct safety functions.
- After the turn OFF sequence is completed, the IFC module will re-execute the latest command.

9.5 Backup Battery Operation

This appliance will operate on the backup battery pack when electric power is interrupted, or in a power outage. During the power outage, the appliance burner and flame height adjustment will function. The fan and accent light kit will not function.

- The lifespan of the backup batteries depend on various factors, such as the quality of the batteries, number of ignitions, etc.
- When the backup battery pack is low, the IFC module will emit a double-beep while receiving an ON/OFF command. No commands will be accepted after this alert until the back up batteries are replaced. Once replaced, the IFC module will emit a 'beep' as soon as it is powered.

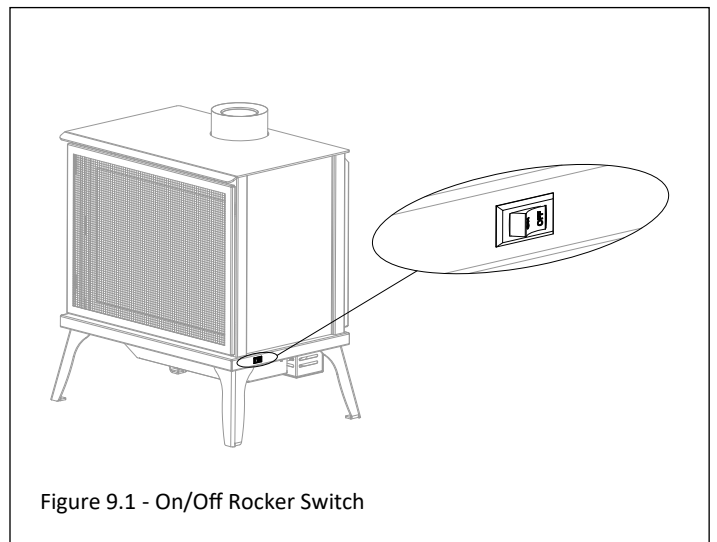


Figure 9.1 - On/Off Rocker Switch

9.6 Control System 7 Day Timeout

- If you have your Proflame 2 system set to CPI (continuous pilot ignition) with 7 consecutive days without ignition of the main burner, the pilot will turn off. This is a standard safety feature of the SIT Proflame 2 system.
- Once you turn CPI 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.
- See section 9.9.3 PILOT IGNITION SELECTION for more information.

How to check if your system is set to CPI:

The LCD screen will display the snowflake icon.

To select the preferred pilot ignition feature,

1. With the system in the OFF position, press the mode key to index the CPI mode icon.
2. Press the up arrow key to activate CPI.
3. Press the down arrow key to return to IPI. A single 'beep' will confirm reception of the command.

To Turn ON the appliance

1. With the system in the OFF position, press the remote control ON/OFF key to turn ON the appliance. A single 'beep' will emit from the IFC module to confirm reception of the command.

The LCD screen will display all active icons, and the IFC module will start the ignition sequence.

9.7 IFC Module Ignition Sequence

The IFC module will try (2) times for ignition, each lasting approximately (60) seconds, with approximately (35) seconds between each attempt.

1. With the system in OFF position, press the remote control ON/OFF key. Approximately (4) seconds after this key is depressed, the IFC module will generate sparks to the pilot hood.
2. First ignition attempt will generate sparks for (60) seconds.
3. If there is no flame ignition (rectification) within the (60) second time frame, the IFC module will stop generating sparks for approximately (35) seconds.
4. After (35) seconds of wait time, the IFC module will generate sparks for another (60) seconds for the second ignition attempt.
5. If there is no positive rectification after (60) seconds, the IFC module will go into a lock out. The red LED will blink (3) times, in intervals, until the system is reset.

9.7.1 Reset IFC Module after Lockout

9.7.1.1 ON/OFF Rocker Switch

1. Set the ON/OFF rocker switch to the OFF position.
2. After approximately (2) seconds, move the switch to the ON position. The ignition sequence will start again.

9.7.1.2 Remote Control ON/OFF Key

1. Press the remote control ON/OFF key to turn the system OFF.
2. After approximately (2) seconds, press the ON/OFF key again. The ignition sequence will start again.

9.7.1.3 Cycling Flame

1. Press the remote control down arrow key during flame adjustment mode to reduce the flame to OFF (indicated by OFF displayed on the LCD screen).
2. After approximately (2) seconds, press the up arrow key. The ignition sequence will start again.

9.8 Additional Diagnostic Information

Low Battery Condition (<4V) Remote Control:

- Battery Icon will appear on LCD remote control display.
- Replace batteries.

Low Battery Condition (<4V) Battery Backup:

- The red LED Indicator will blink (1) time in intervals.
- A low double-beep emits from the IFC control module when it receives an ON/OFF command from the remote control.
- Replace Batteries.

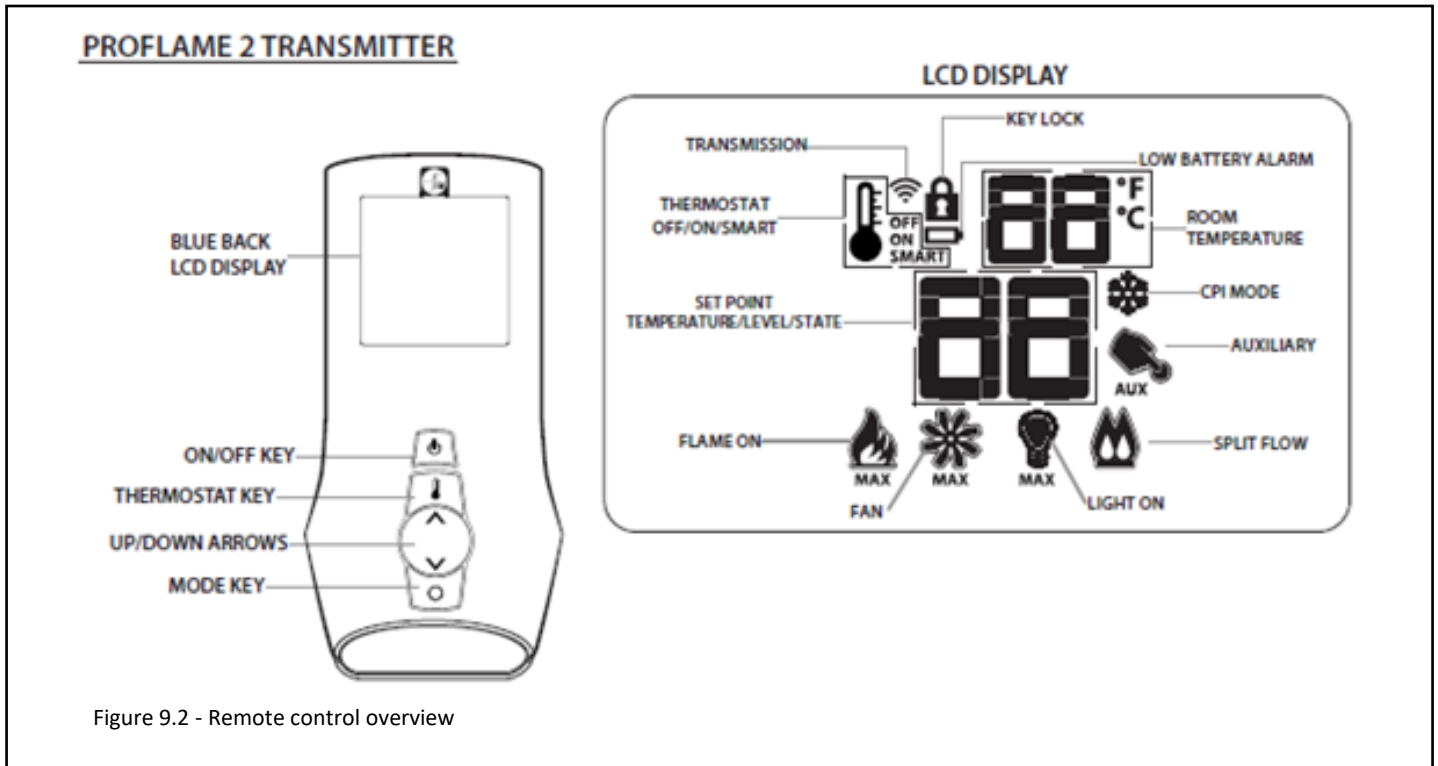
Pilot Flame Error Condition:

- Red LED Indicator will blink (2) times in intervals. Contact your dealer if this occurs.

System Lock Out Condition:

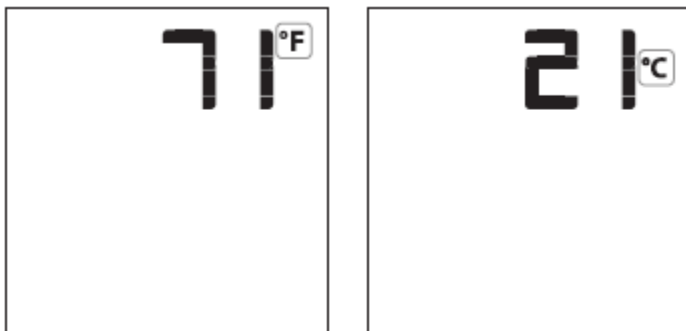
- Red LED Indicator will blink (3) times in intervals.
- Verify gas is turned on.
- Verify sensor is not shorted.
- Follow section 9.2, INITIALIZE THE CONTROL SYSTEM.

9.9 Remote Control Operation



9.9.1 Temperature Display

1. With the system in the OFF position, simultaneously press the thermostat key and the mode key to change degrees from °F to °C
2. Visually check the LCD screen to verify either °F or °C is displayed on the right side of the room temperature display.



9.9.2 Key Lock

This function locks the keys to avoid unsupervised operation. Once activated, a lock icon will appear on the LCD screen.

1. Simultaneously press the mode key and the up arrow key to activate or deactivate this function.



9.9.3 Pilot Ignition Selection (IPI/CPI)

This system has the option of a continuous (standing) pilot. This feature allows the system to change from a spark-to-pilot system to the standing pilot option. The standing pilot will keep the firebox warm and establish a draft in the vent, which allows the main burner to ignite with less air-flow disruption.

When the system is OFF, the LCD screen will display the snowflake icon during the setup of either IPI or CPI mode. To select the preferred pilot ignition feature,

1. With the system in the OFF position, press the mode key to index the CPI mode icon.
2. Press the up arrow key to activate CPI.
3. Press the down arrow key to return to IPI. A single 'beep' will confirm reception of the command.

When the system is ON,

IPI mode: LCD screen will not display the snowflake icon

CPI mode: LCD screen will display the snowflake icon

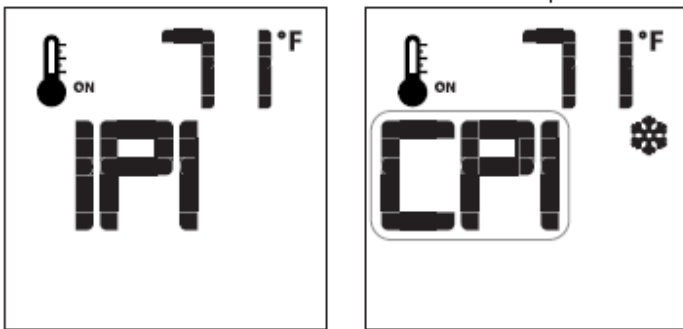


Figure 9.5 - Pilot Selection

9.9.4 Turn ON the Appliance

1. With the system in the OFF position, press the remote control ON/OFF key to turn ON the appliance. A single 'beep' will emit from the IFC module to confirm reception of the command.

The LCD screen will display all active icons, and the IFC module will start the ignition sequence.

9.9.5 Turn OFF the appliance

1. With the system in the OFF position, press the remote control ON/OFF key to turn ON the appliance. A single 'beep' will emit from the IFC module to confirm reception of the command.

The LCD screen will only display the room temperature and its icon, and the IFC module will turn off the main burner.

9.9.6 Remote Control Flame Adjustment

This control system has (6) flame levels. If the smart thermostat operation is activated, then the manual adjustment of the flame height will be disabled.

1. Verify the system is in the ON position and the flame level is set at maximum.
2. Press the down arrow key once to reduce flame height by one level until the flame is turned off.
3. Press the up arrow key once to increase flame height by one step. If the up arrow key is pressed while the system is on, but the flame is off, the flame will ignite on HI.
4. A single 'beep' will confirm reception of the command.

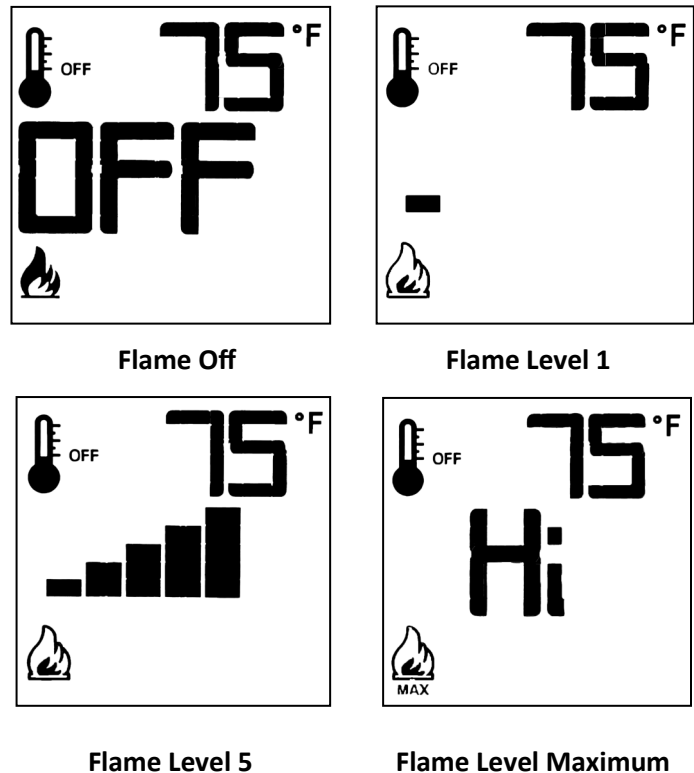


Figure 9.6 - Flame Adjustment

9.9.6.1 Deactivate Flame Modulation

1. Verify all (3) AAA batteries are installed in the remote control battery bay.
2. Remove (1) AAA battery.
3. Press and hold the on/off key and the mode key at the same time.
4. Reinsert (1) AAA battery.
5. While still holding the on/off key, let go of ONLY the mode key.
6. Index over to the flame graphic on the LCD screen to edit. Use the up or down arrow key to choose 'SEL' or 'CLR'. "SEL" means flame modulation is turned on and "CLR" means flame modulation is turned off.

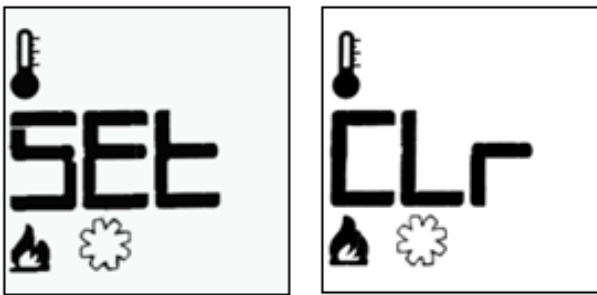


Figure 9.7 - Deactivate Flame Modulation

9.9.7 Remote Control Thermostat Operation

9.9.7.1 Room Thermostat

The remote control can operate as a room thermostat. The thermostat can be set to a desired temperature to control a room's comfort level. To activate this function,

1. Press the thermostat key. The LCD screen will display a temperature bulb graphic, the room temperature and set temperature.
2. To adjust the set temperature, press the up or down arrow keys until the desired temperature is displayed on the LCD screen.

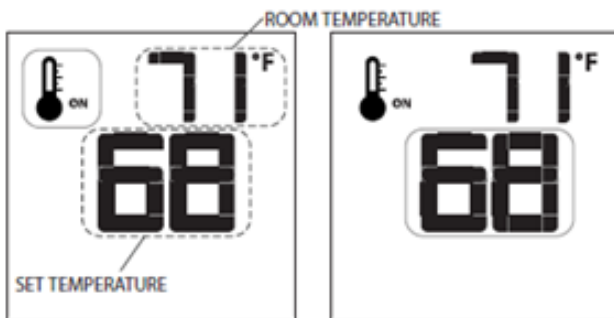


Figure 9.8 - Thermostat Operation

9.9.7.2 Smart Thermostat

The smart thermostat function will adjust the flame height based on the set temperature and the actual room temperature. The smart thermostat function automatically adjusts the flame down when the room temperature reaches the set point. To activate this function,

1. Press the thermostat key until the 'SMART' appears on LCD screen on the right side of the temperature bulb graphic.
2. To adjust the set temperature, press the up or down arrow keys until the desired temperature is displayed on the LCD screen.

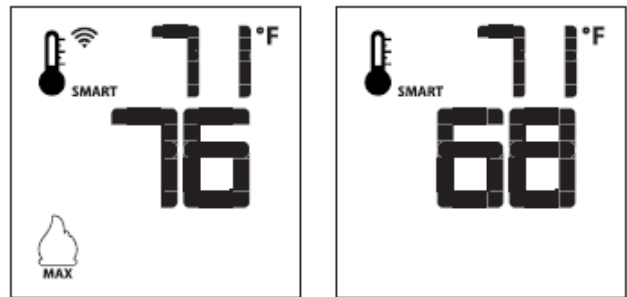


Figure 9.9 - Smart Thermostat Operation

9.9.7.3 Deactivate Remote Control Thermostat Operation

The thermostat operation function can be deactivated. The remote control will still operate the main burner on and off, and function flame, fan, and light modulation. To deactivate this function,

1. Verify all (3) AAA batteries are installed in the remote control.
 2. Remove (1) AAA battery.
 3. While reinserting the battery, push and hold the thermostat key. You will see "CLR" across the screen. This means the thermostat function is turned off. The temperature bulb graphic will not be displayed on the LCD screen.
- To reactivate remote thermostat operation, follow the same key sequence procedure above. The screen will then say "SEL" which means the thermostat function is turned on. The temperature bulb graphic will reappear on the LCD screen.

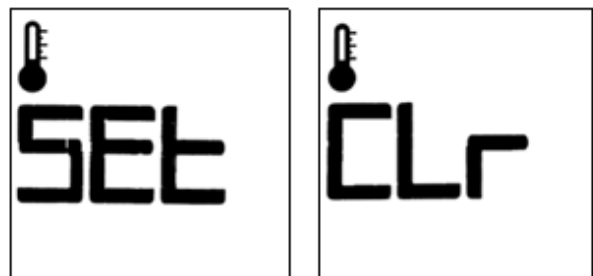


Figure 9.10 - Deactivate Thermostat Operation

9.9.8 Fan Speed Control

Fan speed can be adjusted through (6) speeds. To activate this function,

1. Press the mode key to index to the fan control icon.
2. Press the up or down arrow keys to turn on, off, or to adjust fan speed.

Thermostat mode: Fan(s) have a (5) minute delay time when the fireplace is lit. This allows time for heat to build in fireplace before fan operation. The fan will continue to operate for approximately (12) minutes after the fireplace has been turned off.

Manual mode: Fan(s) will operate at previous setting. There is no delay in start up or stop time.

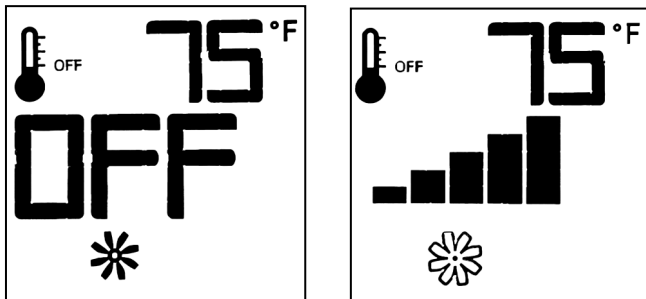


Figure 9.11 - Fan adjustment

9.9.8.1 Deactivation Fan Speed Control

Fan speed can be adjusted through (6) speeds. To activate this function,

1. Verify all (3) AAA batteries are installed in the remote control battery bay.
2. Remove (1) AAA battery.
3. Press and hold the on/off key and the mode key at the same time.
4. Reinsert (1) AAA battery.
5. While still holding the on/off key, let go of ONLY the mode key.
6. Index over to the fan control icon on the LCD screen to edit. Use the up or down arrow key to choose 'SEL' or 'CLR'.

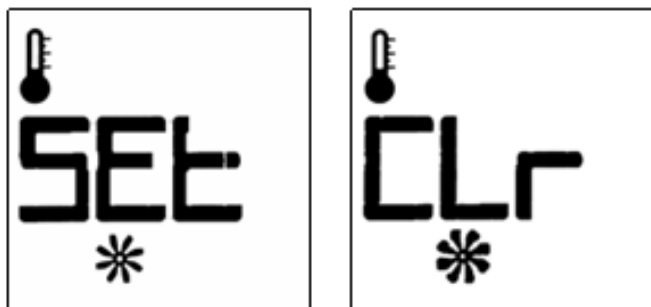


Figure 9.12 - Fan Control Deactivation

9.9.9 Remote Control Low Battery Detection

Remote control battery lifespan depends on various factors including battery quality, number of ignitions, changes to room thermostat set point, etc.

- When the remote control batteries are low, a battery icon will appear on the LCD display before all battery power is lost.
- When the batteries are replaced, this icon will disappear.



Figure 9.13 - Low Battery

10.0 Operating Instructions - OAK-18-MV

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.
- C. 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 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, etcetera) 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.

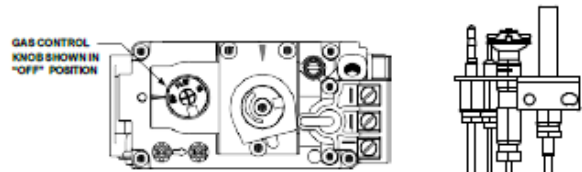
Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at risk individuals in the house. To restrict access to a fireplace or stove, 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


1. STOP! Read all the safety information above on this page.
2. Set thermostat to lowest setting (if applicable).
3. Turn off all electric power to the appliance.
4. Open the control compartment access panel.
5. 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.
6. Wait five (5) minutes to clear out any gas. Then, smell for gas, including near the floor. If you smell gas, STOP! Follow 'B' in the safety information above. If you do not smell gas, go to the next step.
7. Locate pilot - follow metal tube from gas control. The pilot is located inside the combustion chamber.
8. Push in gas control knob slightly and turn counterclockwise to "PILOT".

9. 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.
10. 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.
11. Turn the gas control knob counterclockwise to "ON".

 12. If you desire only the pilot flame to be lit and not ignite the main burner, push the gas control knob in slightly and turn clockwise to 'PILOT'.
 13. Set control compartment access panel back into position.
 14. Turn on all electric power to the appliance.
 15. Set thermostat to desired setting (if applicable).



TO TURN GAS OFF TO APPLIANCE

1. Set thermostat to lowest setting (if applicable).
2. Turn off all electric power to the appliance if service is to be performed.
3. Open the control compartment access panel.
4. Push in gas control knob slightly and turn clockwise to "OFF".

5. Set control compartment access panel back into position.

10.1 Main Burner On/Off Rocker Switch Location

The ON/OFF Rocker Switch location for the LXL-22-MV is located at the rear of the appliance as shown in Figure 10.1. Once you turn the appliance on via the gas control knob, see operating instructions, the main burner will turn on and off via this rocker switch. If you wish to turn off just the burner, flip the ON/OFF switch to OFF. The pilot will stay lit.

10.2 Flame Height and Heat Output Adjustment

Model #LXL-22-MV (millivolt system) 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.

- Open the control compartment access panel 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.

10.3 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 is 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 control compartment access panel to access the gas valve and gas control knob. Refer to the lighting instructions on the previous page for lighting procedures and safety information.

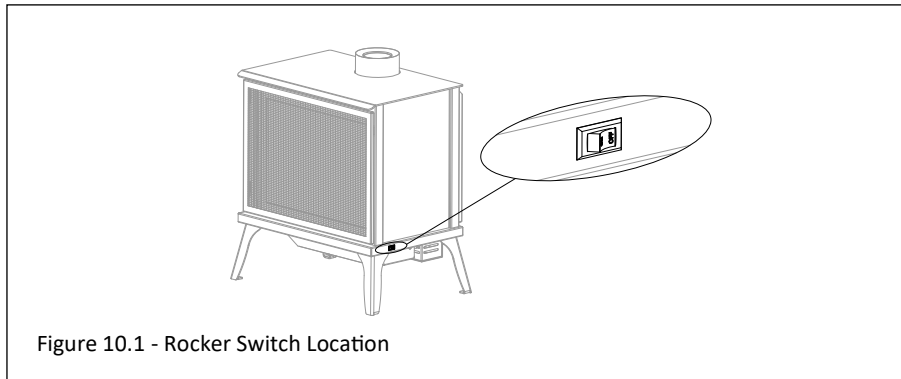


Figure 10.1 - Rocker Switch Location

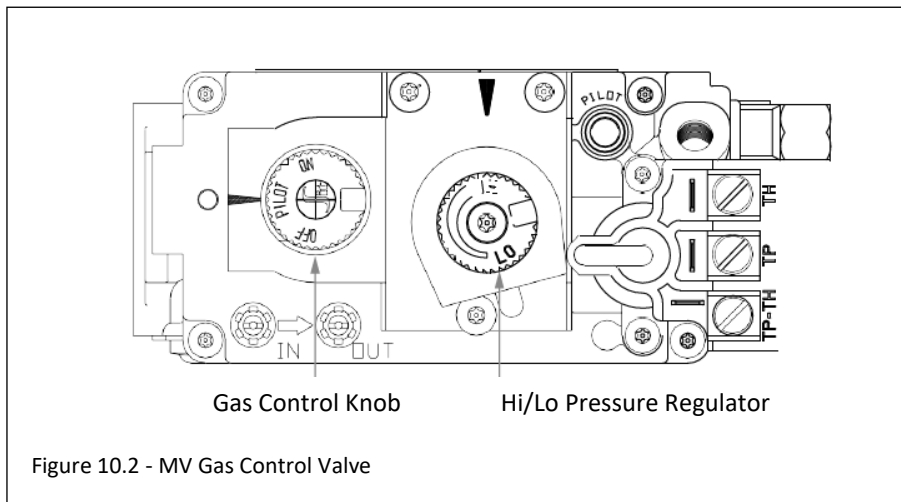


Figure 10.2 - MV Gas Control Valve

11.0 Pressure Testing and Burner Adjustments

11.1 Pressure Testing (LXL-22-L)

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.

11.1.1 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.

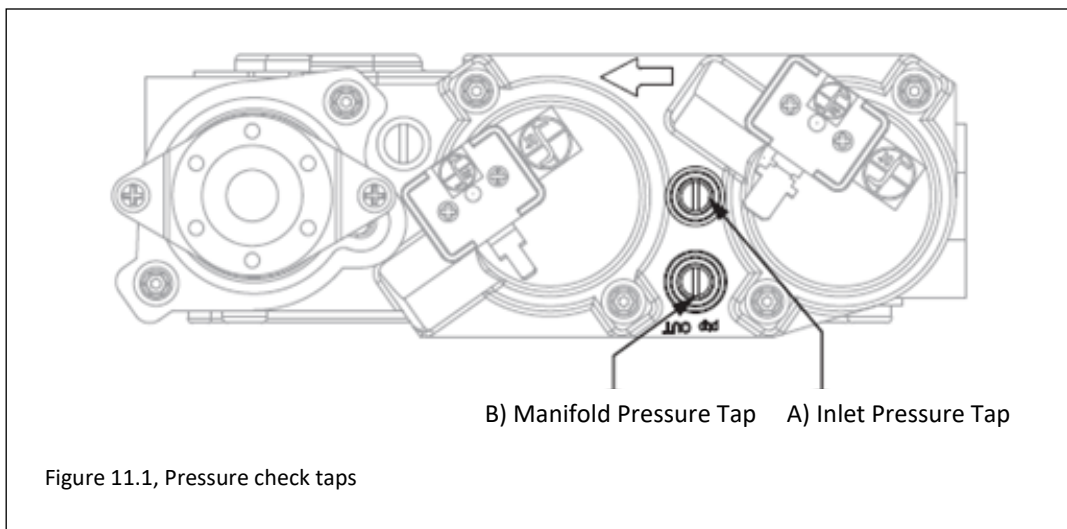
1. Loosen the inlet (IN) pressure tap by turning screw counter-clockwise. See (A) in FIGURE 11.1.
2. Attach manometer using a 1/4" (6mm) I.D. hose.
3. Light pilot and burner. Check pressure to ensure it is between the minimum and maximum recommended pressure settings (TABLE 11.1).
4. Turn off burner and pilot.
5. Disconnect hose and tighten the inlet (IN) pressure tap by turning screw clockwise. Screw should be snug. Do not over tighten.
6. Relight pilot and burner. Then reattach manometer to the inlet pressure tap (A) to verify the tap is completely sealed. Manometer should read no pressure.

11.1.2 Manifold Pressure Test

1. Light pilot.
2. Loosen manifold (OUT) pressure tap by turning screw counter-clockwise. See (B) in FIGURE 11.1.
3. Attach manometer to pressure tap using a 1/4" (6mm) I.D. hose.
4. Light burner. Check manometer reading. Refer to TABLE 11.2.
5. Turn burner and pilot off.
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 pilot and burner are on.

Table 11.1 Inlet Pressures - LXL-22-L		
Fuel	Natural Gas	Propane
Gas Supply	Min - Max	Min - Max
Inlet Pressure Tap (A)	5" - 10.0" WC (1.25 - 2.49 kPa) 7" WC (1.74 kPa) recommended	11" - 13" WC (2.74 - 3.24 kPa)

Table 11.2 Manifold Pressures - LXL-22-L		
Fuel	Natural Gas	Propane
Gas Supply	Low - High	Low - High
Inlet Pressure Tap (B)	1.6" - 3.5" WC (0.41 - 0.87 kPa)	6.4" - 10" WC (1.59 - 2.48 kPa)



11.2 Pressure Testing (LXL-22-MV)

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.

11.2.1 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 11.2.
2. Attach manometer using 1/4" (6mm) I.D. hose.
3. Light pilot.
4. Turn the gas control knob to ON. Burner should not light. Note the 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. Re-attach manometer to the inlet pressure tap (A) to verify the tap is completely sealed. Manometer should read no pressure.

11.2.2 Manifold Pressure Test

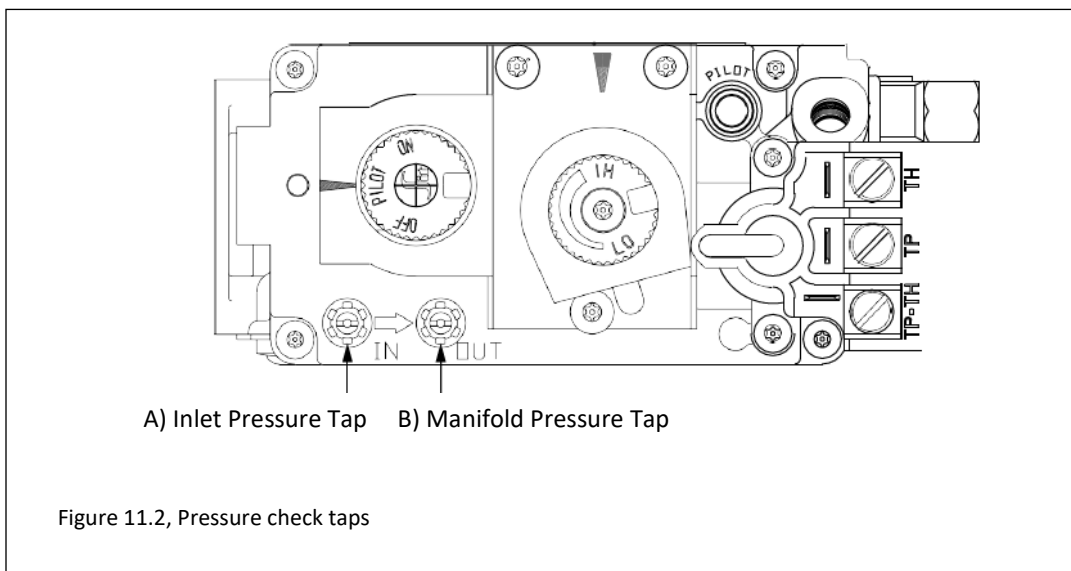
1. Light pilot.
2. Loosen manifold (OUT) pressure tap by turning screw counterclockwise. See (B) in FIGURE 11.3.
3. Attach manometer to pressure tap using a 1/4" (6mm) I.D. hose.
4. Turn gas control knob to ON.
5. Press the rocker switch to ON and note manometer reading.
6. Disconnect manometer hose 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 pilot and burner are on.

Table 11.3 Inlet Pressures - LXL-22-MV

Fuel	Natural Gas	Propane
Gas Supply	Min - Max	Min - Max
Inlet Pressure Tap (A)	5" - 10.0" WC (1.25 - 2.49 kPa) 7" WC (1.74 kPa) recommended	11" - 13" WC (2.74 - 3.24 kPa)

Table 11.4 Manifold Pressures - LXL-22-MV

Fuel	Natural Gas	Propane
Gas Supply	Low - High	Low - High
Inlet Pressure Tap (B)	1.6" - 3.5" WC (0.41 - 0.87 kPa)	6.4" - 10" WC (1.59 - 2.48 kPa)



11.3 Flame Appearance Adjustment

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.

11.3.1 Burner Venturis

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

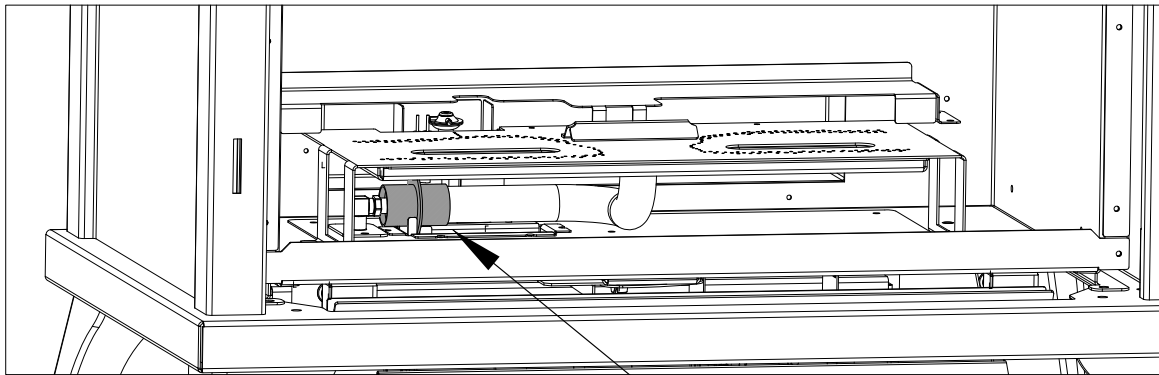
NOTE: Burner venturi air shutter settings have been factory set. Refer to TABLE 11.5.

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.

Fuel	Venturi Opening
Natural Gas	1/4" (6.35mm) OPEN
Propane	5/8" (15.88mm) OPEN

Flame Characteristics	Cause	Solution
Dark, orange flame with	Venturi closed too	Open venturi slightly
Short, blue flames	Venturi open too far	Close setting slightly
Lifting (ghosting) flames	Gas pressure too high and/or venturi closed too far	Check manometer settings and/or open venturi setting slightly



Burner venturi

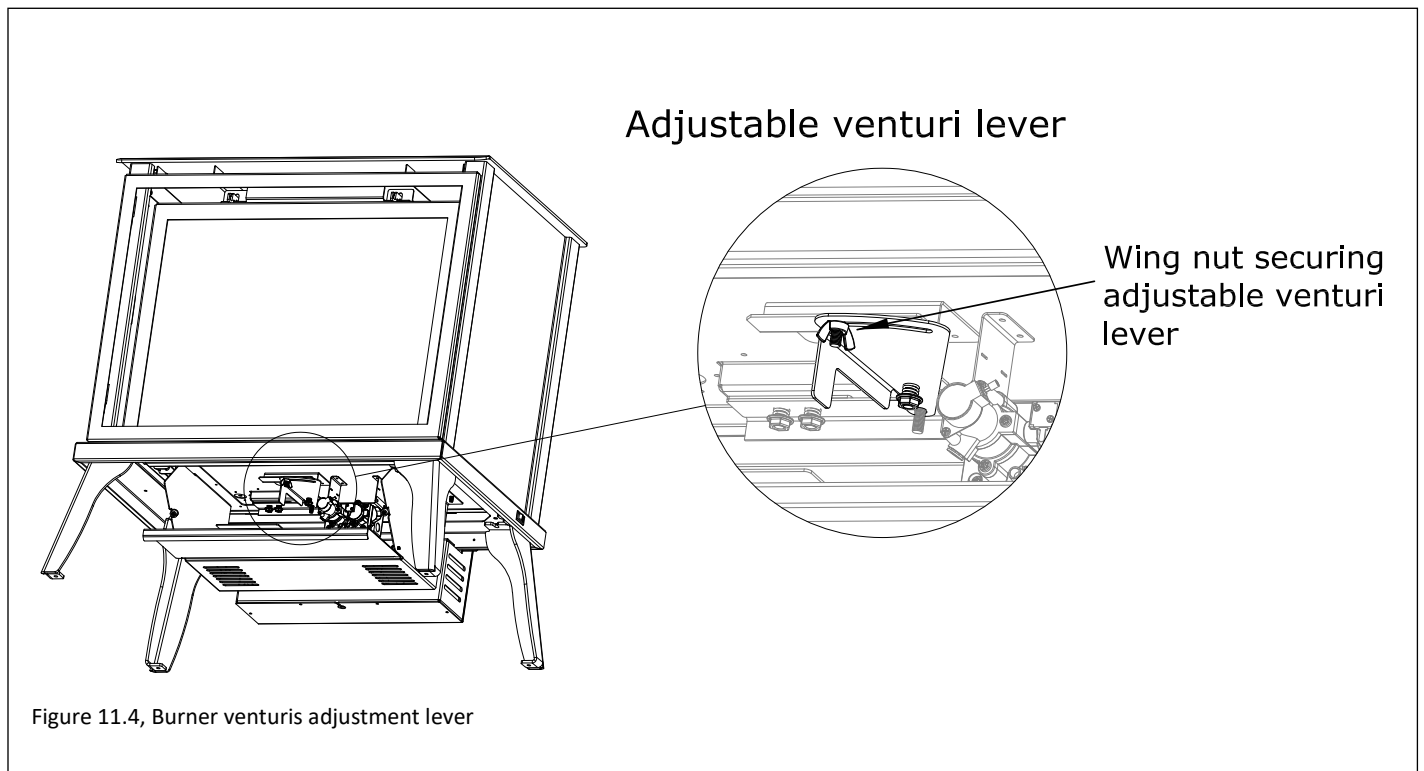
Figure 11.3, Venturi on burner

11.3.2 Venturi Opening Adjustments

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

Note: There is a provided burner venturi adjustment tool. This tool provides an easy mechanism to adjust the venturi to the gas specific factory setting shown in Table 11.5. See Figure 11.5 and 11.6 for use of the adjustment tool.

1. Open the door of the control enclosure located below the firebox of the gas stove.
2. Locate the adjustable venturi lever (Figure 11.4)
3. Loosen the wing nut securing the lever and adjust the burner venturi (Figure 11.4) as necessary. See flame adjustment guidelines in Table 11.6. 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.



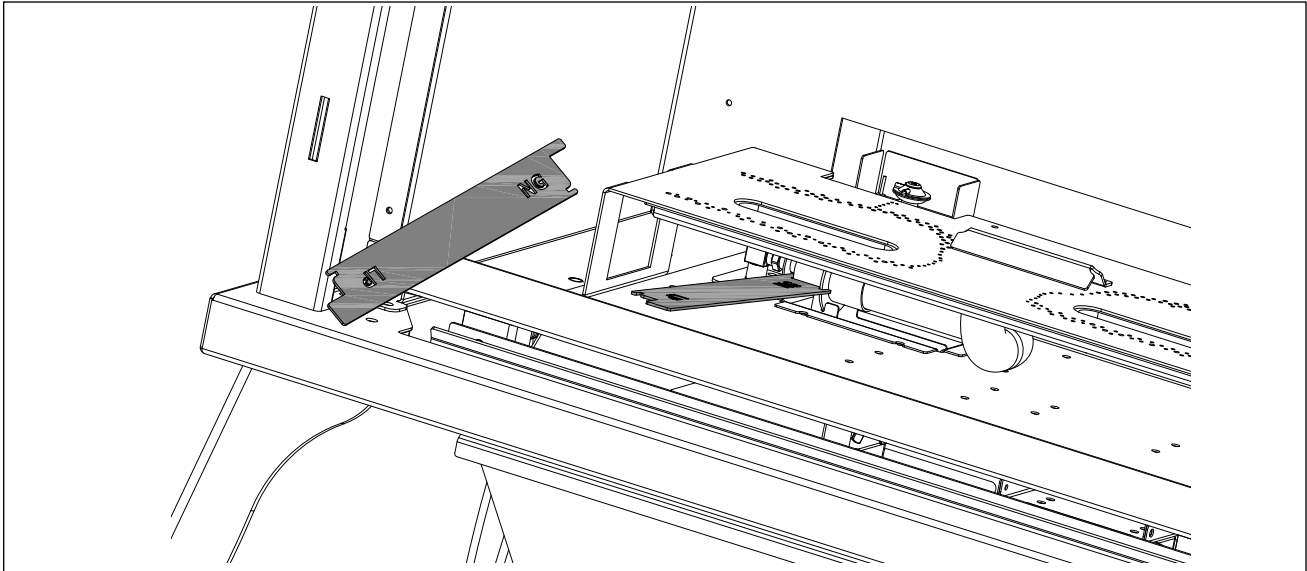


Figure 11.5, Burner venturi adjustment tool

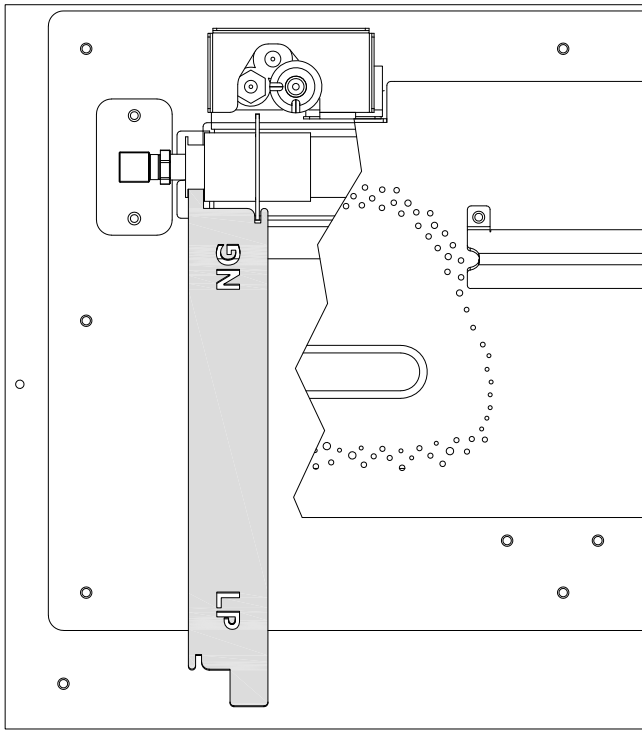


Figure 11.6, Burner venturi adjustment tool

11.4 Vent Restriction Adjustments

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

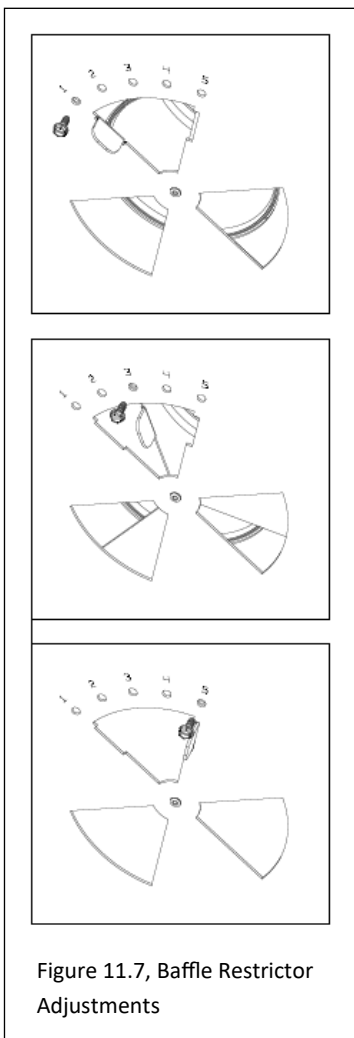
WARNING: Improper vent installation may cause the burner flames to lift or “ghost.” Perform a visual check on flame appearance after restriction adjustment to ensure proper performance.

Vertical terminations may display an active, compact flame. If this appearance is not desirable then start with vent restriction via Section 11.4.1 Baffle Restrictor. If you need additional restriction then follow the instruction in section 11.4.2 Vent Pipe Restrictor Plate.

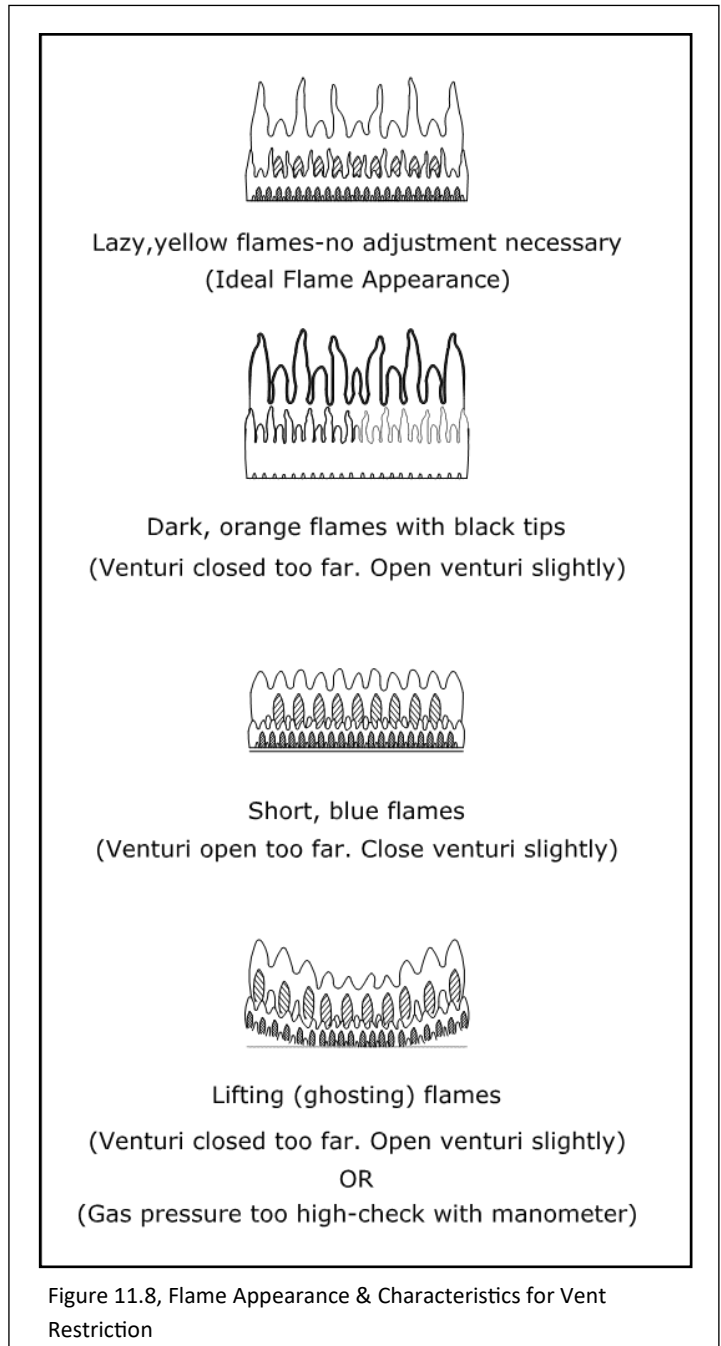
Refer to Figure 11.7, 11.8, 11.9 and Table 11.7 for additional information.

11.4.1 Baffle Restrictor Adjustment (Primary Restriction)

First close the baffle restrictor from the factory set position of #1 to Position #5. Position #5 provides the greatest restriction from this restriction mechanism. If this causes the flame to become dark with black tips open the baffle restrictor to position in between #2 and #4. See Figure 11.7.



Flame Characteristics	Draft Problem	Solution
Short, flickering	Excessive draft	Add restrictor plate
	Not enough restriction	Close baffle restrictor
Lifting or ghosting*	Insufficient draft	Remove inner ring/rings on restriction 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		



11.4.2 Vent Pipe Restrictor Plate (Secondary Restriction)

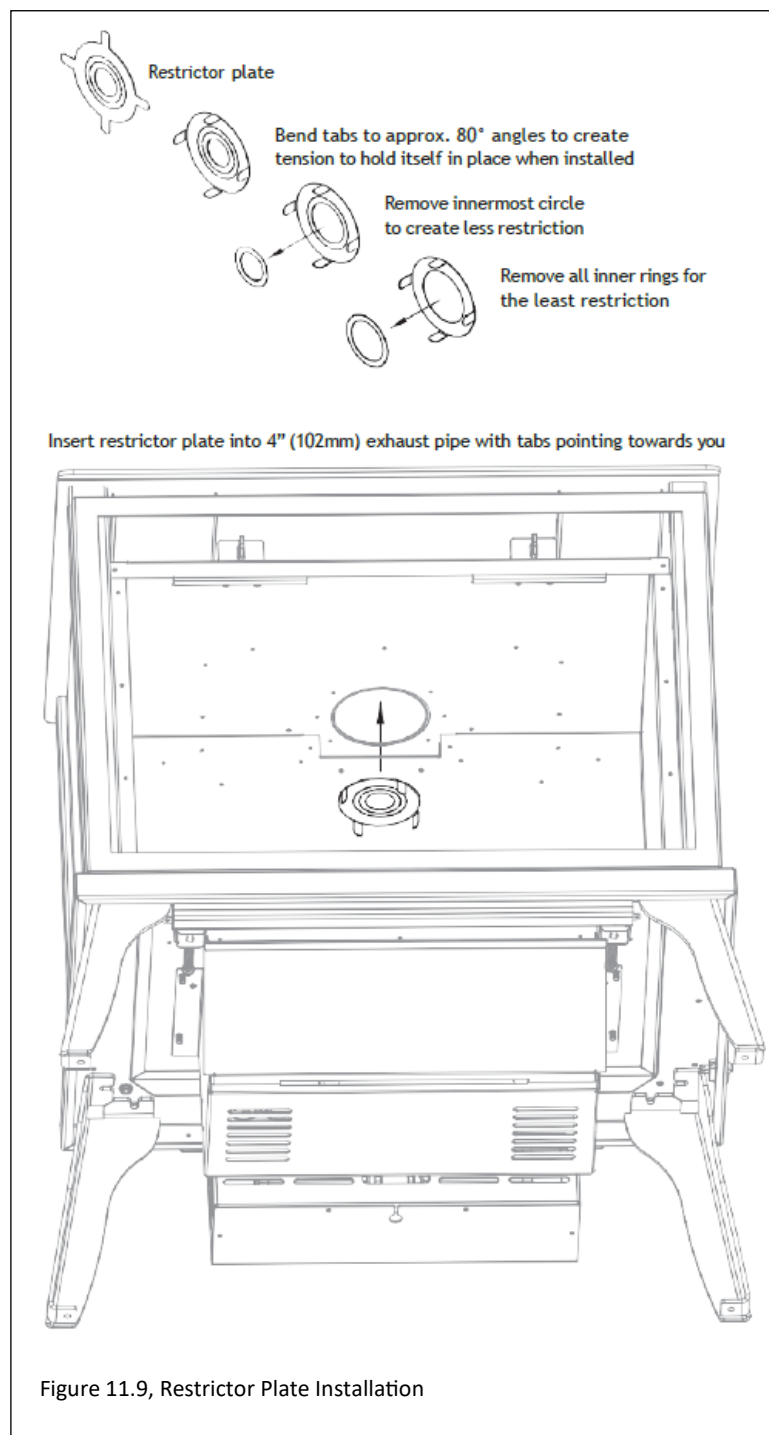
There is a vent pipe restrictor plate that is provided with the appliance in the parts packet. See Figure 11.9.

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 11.9.
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.

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 11.6 and Figure 11.8 for flame appearance adjustments.
4. Insert restrictor plate into the 4" (102mm) exhaust pipe with the tabs pointing towards you. See FIGURE 11.9.
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.



12.0 Troubleshooting

12.1 Electronic Ignition System (LXL-22-L)

ATTENTION: Troubleshooting must be performed by a qualified technician.

Before proceeding with the steps in the following troubleshooting guide,

- Verify proper 120VAC power supply to the control module.
- Verify the control module back-up battery pack and the remote control batteries are fresh and installed with correct polarity.
- Verify all connections between the wire harnesses and the system components are proper and positive.
- Verify inlet pressure meets the recommended inlet pressure. If necessary, adjust line pressure regulator.
- Verify the communication link is established between the remote control and the IFC module.
- CAUTION: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Issue	Cause	Solution
Pilot will not light	Electrical power interrupted or disconnected	Restore electrical power to appliance or use battery back-up
	Wiring disconnection	Ensure batteries are fully charged if using battery back-up as power source. Use wiring schematic in this manual to determine that all wiring connections are secure and correct.
	Gas supply turned off	Check remote shut-off valves from the appliance. Usually there is a valve near the main gas line. There may be more than (1) valve between the appliance and main gas line.
Pilot will not stay lit	No propane in tank	Check propane tank. Refill if necessary.
	Low gas pressure	Consult a plumber or gas supplier Can be caused by situation such as a bent line, too narrow diameter or pipe, or a low line pressure
	Pilot adjustment screw not sealed	Seal pilot adjustment screw. Do not over-tighten.
	Pilot flame not making contact with the flame rectification sensor on the pilot assembly	Verify the pilot envelopes the top of the flame sensor and extends far enough onto the burner for ignition
Pilot flame always on, or will not extinguish	Control system set to CPI mode.	Set control system to IPI mode.

Issue	Cause	Solution
Burner flame will not light	ON/OFF rocker switch in OFF position	Switch rocker switch to ON position.
	Gas supply turned off	Check for multiple shut-offs in the supply line. Verify gas supply is turned on.
	Low gas supply	Consult with plumber or gas supplier. Check propane tank. Refill if necessary.
	Wiring disconnection or improper wiring	Check for faulty or incorrect wiring. Refer to FIGURE 8.0, Electrical Information.
	Plugged burner orifice	Remove blockage.
	Pilot flame	Verify the pilot flame is properly directed to ignite burner. See pilot flame troubleshooting in this section.
	Remote control not working	Replace Batteries.
	No call for heat	Verify remote control is powered ON and thermostat operation is turned OFF.
Pilot and burner extinguish while in operation	No propane in tank	Check propane tank, Refill if necessary.
	Incorrect glass assembly installation	Refer to section 7.2, GLASS FRAME ASSEMBLY.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
	Improper pitch on horizontal venting	1/4" (6mm) rise for ever 12" (305mm) of travel is required on horizontal venting.
	Exhaust vent pipe leaking exhaust gases back into firebox	Check for leaks and repair if necessary.
	Excessive draft	A restrictor may need to be installed or modified. Refer to section 11.4.2 Vent Pipe Restrictor Plate
Soot appears on glass	Improper log placement	Refer to section 7.3, OP18-500 LOG SET INSTALLATION.
	Improper venturi settings	Venturi air shutters may need to be opened slightly to allow more air into the gas mix. Refer to section 11.3.1, BURNER VENTURIS.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.

Issue	Cause	Solution
Flame burns blue and lifts off burner	Improper venturi setting	The venturi air shutter may need to be close slightly to allow less air into the gas mix. Refer to section 11.3.1, BURNER VENTURIS.
	Incorrect vent cap installation	Adjust if necessary.
	Blockage or leakage of the vent system	Check the vent pipes for leaks and the vent cap for debris. Repair the vent pipes or remove debris from vent cap, if necessary.
No reaction to command	Battery backup batteries or remote control batteries low	Replace the batteries.
	No communication between remote control and control module	Reprogram remote control to IFC module
	A maximum number of failed ignitions or flame restorations has been reached.	Reset IFC module

12.2 Millivolt Ignition System (LXL-22-MV)

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.
	Wiring disconnection	Check the 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 the 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 from valve is fully inserted and tight—hand tight plus 1/4 turn.
	Thermocouple reading below 15 millivolts	Disconnect the thermocouple from the 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 envelope 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.		

Issue	Cause	Solution
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.
Burner will not light	Light instructions not followed	Turn gas control knob to ON position. Turn the ON/OFF rocker switch to ON position. Put wall switch, remote, or thermostat in heat demand position .
	Plugged main burner orifice	Remove blockage as necessary.
	Switching device is defective	<p>Check remote, thermostat, or wall switch wires for proper connection.</p> <p>Place jumper wires across terminals at switch. If burner lights, replace the defective switch, thermostat, or batteries in remote control as necessary.</p> <p>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.</p>
Burner will not stay lit	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.

Issue	Cause	Solution
Pilot and burner extinguish while in operation	No propane in tank	Check propane tank. Refill if necessary.
	Incorrect glass frame assembly installation	Refer to Section 7.2 Glass Frame Assembly.
	Improper pitch on horizontal venting	1/4" (6mm) rise per 12" (30mm) horizontal pipe is required.
	Defective thermopile or thermocouple	Check thermopile and thermocouple for proper millivolts.
	Inner vent pipe leaking exhaust gas back into the 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 11.4.2 Vent Pipe Restrictor Plate
Glass Sooting	Improper log placement	Refer to Section 7.3 #OP18-500 Log Set Installation.
	Improper venturi setting	Venturi may need to be opened slightly to allow more air into gas mix. Refer to Section 11.3.1 Burner Venturi.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
Flame burns blue and lifts off burner	Improper venturi setting	Venturi may need to be opened slightly to allow more air into the gas mix. Refer to Section 11.3.1 Burner Venturi.
	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.

13.0 Maintenance

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.

13.1 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

13.2 Fan

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: Annually

Action:

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

13.2.1 Fan Kit Removal

1. Disconnect electrical power.
2. Disconnect the wiring from the fan assembly from the auxiliary module. Remove the (5) screws securing the fan plate from the fireplace. See Figure 12.1 Pull the fan plate away from the fireplace.
3. Install in reverse order.

13.3 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**.

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.

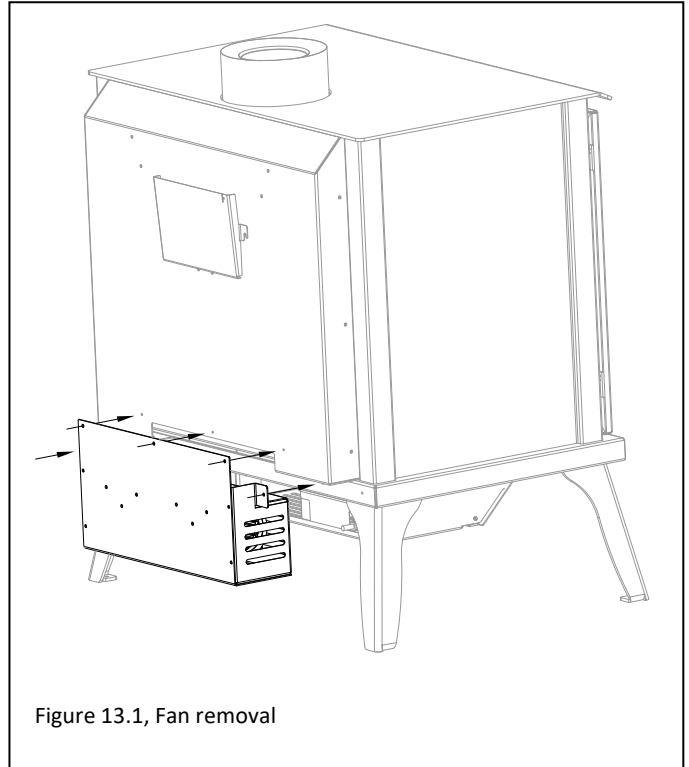


Figure 13.1, Fan removal

13.4 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.

13.5 Burner and Pilot System

The burner assembly may be removed for easier access to the control compartment. See Section 7.4 Control Board Removal and Installation for instructions.

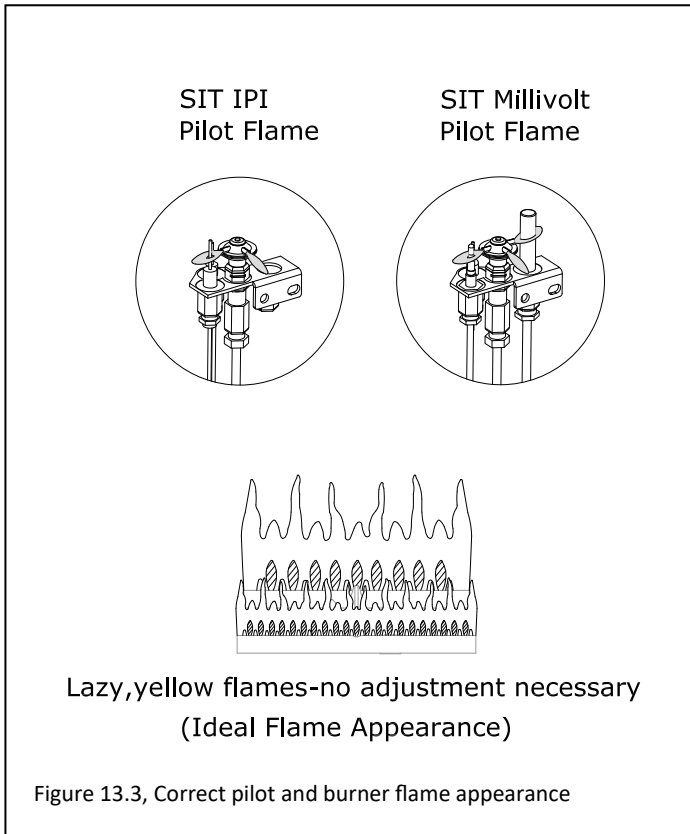
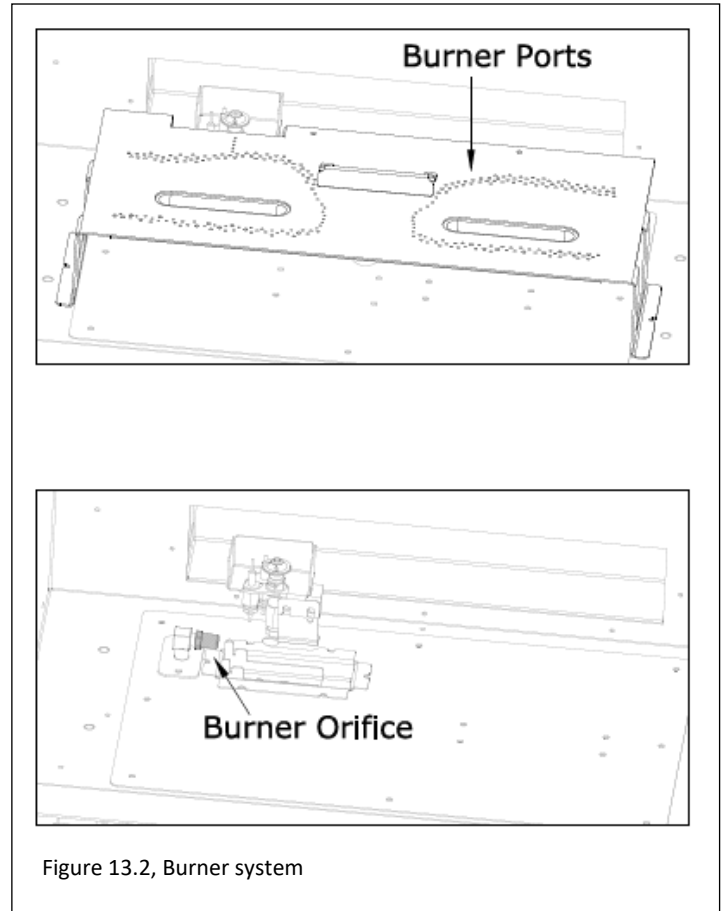
Verify gas supply is turned on and filled. Consult with plumber or gas supplier as necessary.

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.
- 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.



14.0 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.

LXL-22-L Control Board and Parts			
S.I.T. Complete Board Assembly - Natural Gas	LX22-130		S.I.T. Conversion Kit - Natural Gas NCK-LX22-S30
S.I.T. Complete Board Assembly - Propane	LX22-131		S.I.T. Conversion Kit - Propane LCK-LX22-S30
S.I.T. IPI Gas Valve - Natural Gas	700-660		Natural Gas - Valve Stepper Motor (30% Turndown) 700-503
S.I.T. IPI Gas Valve - Propane	700-660-1		Propane - Valve Stepper Motor (30% turndown) 700-503-1
Proflame 2 IFC Module	700-652		S.I.T. IPI Pilot Assembly - Natural Gas 700-551
IFC Wire Harness Assembly	700-653		S.I.T. IPI Pilot Assembly - Propane 700-551-1
Main Line Wire Harness	700-654		Burner Orifice - #3.20mm - Natural Gas 700-320M
ON/OFF Wire Harness	700-656		Burner Orifice - #1.90mm - Propane 700-190M
Fan Receptacle / Light Kit Wire Harness	700-657		36" Black Flex Tube (Gas line to valve) 700-236B
Pilot Orifice - Natural Gas #62	700-166		12.5" Flare x Brazed Elbow Casting 700-194
Pilot Orifice - Propane #35	700-168		Burner Plate LX22-350
S.I.T. Transmitter (Remote Control)	700-408		Burner Tube LX22-035S
SIT IPI Pilot Hood	700-598		

LXL-22-MV Control Board and Parts

Millivolt Control Board - Natural Gas	LX22MV-770		#51 Pilot Orifice - Natural Gas	700-165
Millivolt Control Board - Propane	LX22MV-770		#30 Pilot Orifice - Propane	700-095
SIT Gas Valve - Natural Gas	700-086A		Burner Orifice - #3.20MM - Natural Gas	700-320M
SIT Gas Valve - Propane	700-087A		Burner Orifice - #1.90MM - Propane	700-190M
SIT Gas Valve – Natural Gas – 7 Day Timeout	700-086A-7		SIT Millivolt Pilot Hood	700-098
SIT Gas Valve – Propane – 7 Day Timeout	700-087A-7		Manual Gas Shut-off Valve	700-203
SIT Pilot Assembly - Natural Gas	700-088		Burner Plate	LX22-035
SIT Pilot Assembly - Propane	700-089		Burner Tube	LX22-035S
On/Off Rocker Switch	700-023		12.5" Flare x Brazed Elbow Casting	700-194
Piezo Igniter with nut (no wire)	700-032		36" Black Flex Tube (Gas line to valve)	700-236B
Flexible Pilot Tubing (valve to pilot)	700-091		Conversion Kit - Natural Gas	OCK-S320A
Millivolt Generator	700-092		Conversion Kit - Propane	OCK-S190A
Thermocouple	700-093			

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

Safety Barriers	
Arched Prairie Screen Front	LX22-APSF
LX22-APSF Replacement Screen	LX22-ES
Prairie Screen Front	LX22-PSF
LX22-PSF Replacement Screen	LX22-ES
Rectangular Screen Front	LX22-FRSF
LX22-FRSF Replacement Screen	LX22-ES

Additional Components	
Glass Latch Tool	JOR-GLT
Manual Gas Shut-off Valve	700-203
4" (102mm) Restrictor Plate	900-085
Remote Receiver Mounting Bracket	700-308RB

Fan Kit	
Fan Kit (standard - LXL-22-L)	LX22-028
Fan Kit (optional - LXL-22-MV)	LX22-028MV

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

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.

Limited Lifetime Warranty

EXCLUSIONS AND LIMITATIONS (continued)

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.

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