

## TRF-41 MILLIVOLT

Model #TRF-41-MV

Direct Vent Gas Fireplace

### **▲ 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.

English and French installation manuals are available through your local dealer. Visit our website [www.kozyheat.com](http://www.kozyheat.com) or scan the QR code for our mobile app.

Les manuels d'installation en français et en anglais sont disponibles chez votre détaillant local. Visitez [www.kozyheat.com](http://www.kozyheat.com) ou scannez ce code QR pour notre application mobile.



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



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

**CONGRATULATIONS!**

*We welcome you as a new owner of a Kozy Heat gas fireplace. Kozy Heat products are designed with superior components and materials, and assembled by trained craftsmen who take pride in their work. To ensure you receive a quality product, the burner and valve assembly are 100 percent test-fired, and the complete fireplace is thoroughly inspected before packaging. Our commitment to quality and customer satisfaction has remained the same for over 30 years. We offer a complete line of gas and wood fireplaces, along with stylish accessories to complement any decor. Adding a fireplace is one of the best ways to increase the value of your home, and we are proud to offer a network of dealers throughout the country to help make your experience everything you imagine. We pride ourselves in being dedicated not only to functionality and reliability, but also customer safety. We offer our continual support and guidance to help you achieve the maximum benefit and enjoyment from your Kozy Heat gas fireplace.*

Jim Hussong  
President



Dudley Hussong  
Board Chairman



**Homeowner Reference Information**

*We recommend you record the following information:*

Model Name: \_\_\_\_\_ Date purchased/installed: \_\_\_\_\_

Serial Number: \_\_\_\_\_ Location of fireplace: \_\_\_\_\_

Dealership Purchased from: \_\_\_\_\_ Dealer phone: \_\_\_\_\_

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

\_\_\_\_\_

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# 1.0 INTRODUCTION

## 1.1 Appliance Certification

Laboratory: OMNI-Test Laboratories in Portland, Oregon

Standards:

ANSI Z21.88-2014/CSA 2.33-2014, Vented Gas Fireplace Heaters  
CGA 2.17-M91 (R2014), 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 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:

### 1.2.1 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.

### 1.2.2 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.

### 1.2.3 Signage

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

OBSTRUCTIONS".

### 1.2.4 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.

### 1.2.5 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.

### 1.2.6 Manufacturer Requirements

#### 1.2.6.1 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.

#### 1.2.7 Gas Equipment Venting System NOT Provided

When the manufacturer of Product Approved side wall horizontally vented gas equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:

- The referenced "special venting systems" instructions shall be included with the appliance or equipment installation instructions and;
- The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

## 2.0 SPECIFICATIONS

### 2.1 Appliance Components

Part Number	Description
TRF-770	Control Board Assembly
700-203	Manual Gas Shut-off Valve
TRF-35	Burner Plate
TRF-035	Burner Tube
TRF-500B	Log Package
TRF-057T	Glass Frame Assembly
TRF-028	Fan Kit (2) - 75 CFM
900-085	4 in (102 mm) Restrictor Plate

#### 2.1.1 Additional Components Required

Refer to Section 7.0 Venting on page 22, for approved vent systems.

### 2.2 Heating Specifications

	Natural Gas	LP Gas
<b>Maximum Input Rating</b>	28,000 Btu/h (8.2 kW)	28,000 Btu/h (8.2 kW)
<b>Minimum Input Rating</b>	20,000 Btu/h (5.86 kW)	21,000 Btu/h (6.15 kW)
<b>Manifold Pressure (High)</b>	3.5" WC (0.87 kPa)	10" WC (2.49 kPa)
<b>Manifold Pressure (Low)</b>	1.6" WC (0.40 kPa)	6.4" WC (1.59 kPa)
<b>Orifice Size (DMS)</b>	#39	#.0625

#### 2.2.1 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.*

##### 2.2.1.1 US Installations

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

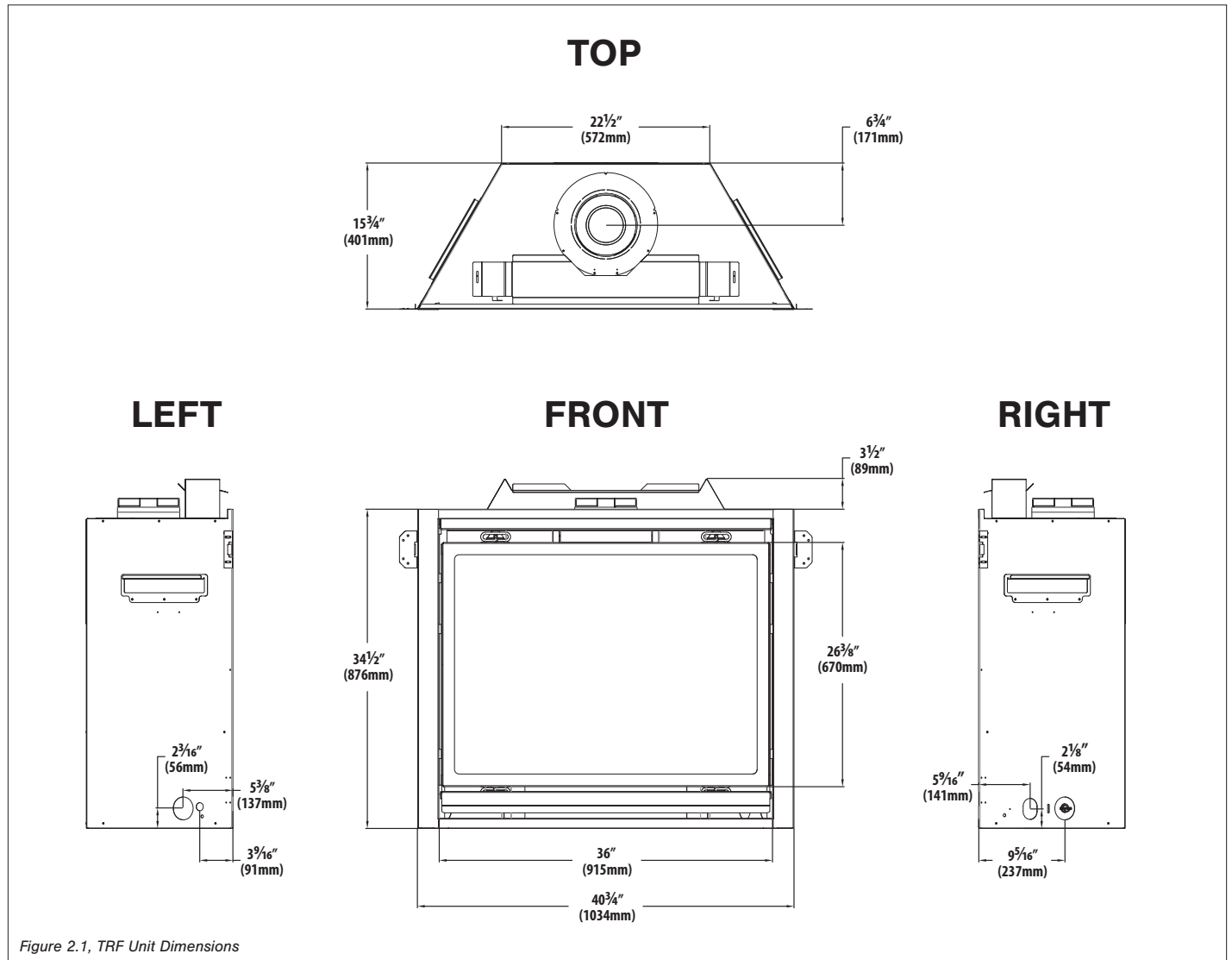
##### 2.2.1.2 Canadian Installations

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



## 2.3 Appliance Dimensions

Table 2.1, Physical Dimensions								
Description	Height	Width	Back Width	Depth	Opening Width	Opening Height	Stand-off Height	Back to Vent Center
Inches	34-1/2	40-3/4	22-1/2	15-3/4	36	26	3-1/2	6-3/4
Millimeters	876	1035	572	400	914	660	89	171



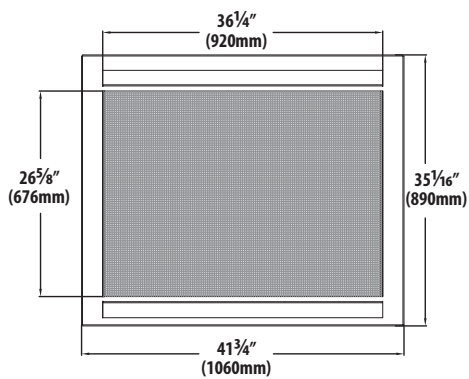
## 2.4 Safety Barrier Dimensions

**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.

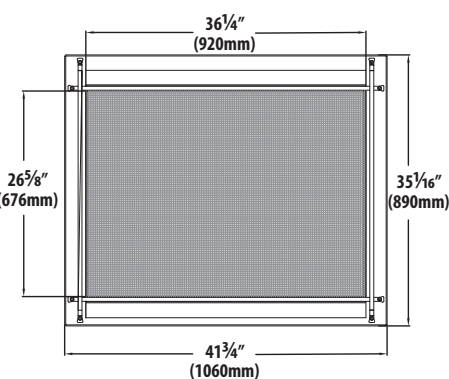
If the barrier becomes damaged, the barrier shall be replaced with Hussong Mfg.'s barriers for this appliance. Only doors certified with the appliance shall be used.

**IMPORTANT:** Consider the height of hearth finish material when building a fireplace platform. Proper installation of safety barriers with an overlap fit design require the bottom of the fireplace to be level with finished hearth.

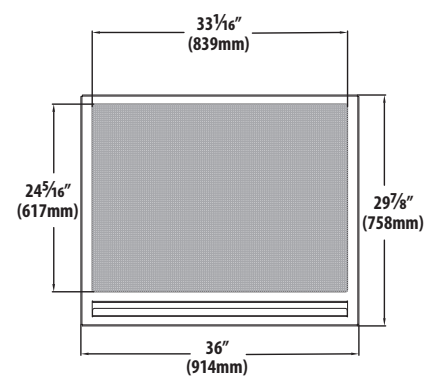
For installation and mounting options, please refer to Section 4.3 Safety Barrier Installations on page 18.



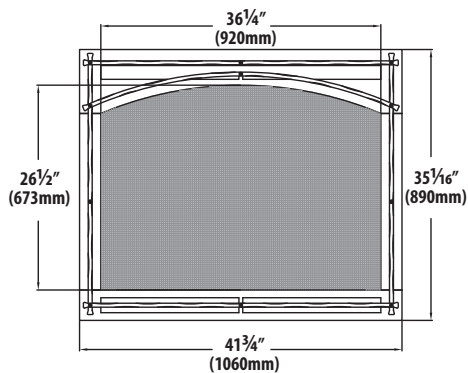
TRF-FRSF



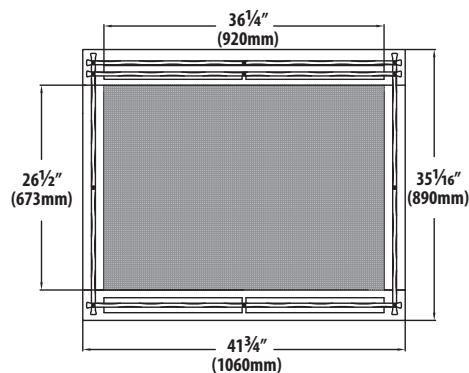
TRF-PSF



TRF-RSF



TRFA-MSF



TRFR-MSF

## 3.0 FRAMING

### 3.1 Appliance Placement Considerations

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

**FIRE HAZARD:** Do NOT install this appliance directly on carpeting, vinyl, or any other combustible material other than wood.

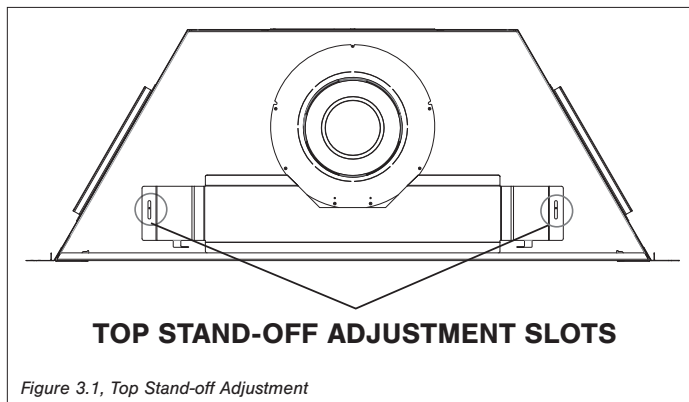
- This appliance must be installed on a level surface capable of supporting the fireplace and venting. If possible, place the fireplace in a position where the vent terminates between two studs, eliminating the need for any additional framing.
- This fireplace may be installed in a bedroom.
- Please be aware of the large amount of heat this fireplace will produce when determining a location.

### 3.2 Top Stand-off Adjustment

**WARNING:** The top stand-offs provide the 3-1/2 in (89 mm) minimum clearance to the header. Use only non-combustible material in this area for the entire width of the fireplace. DO NOT use wood, sheetrock, et cetera, in this zone.

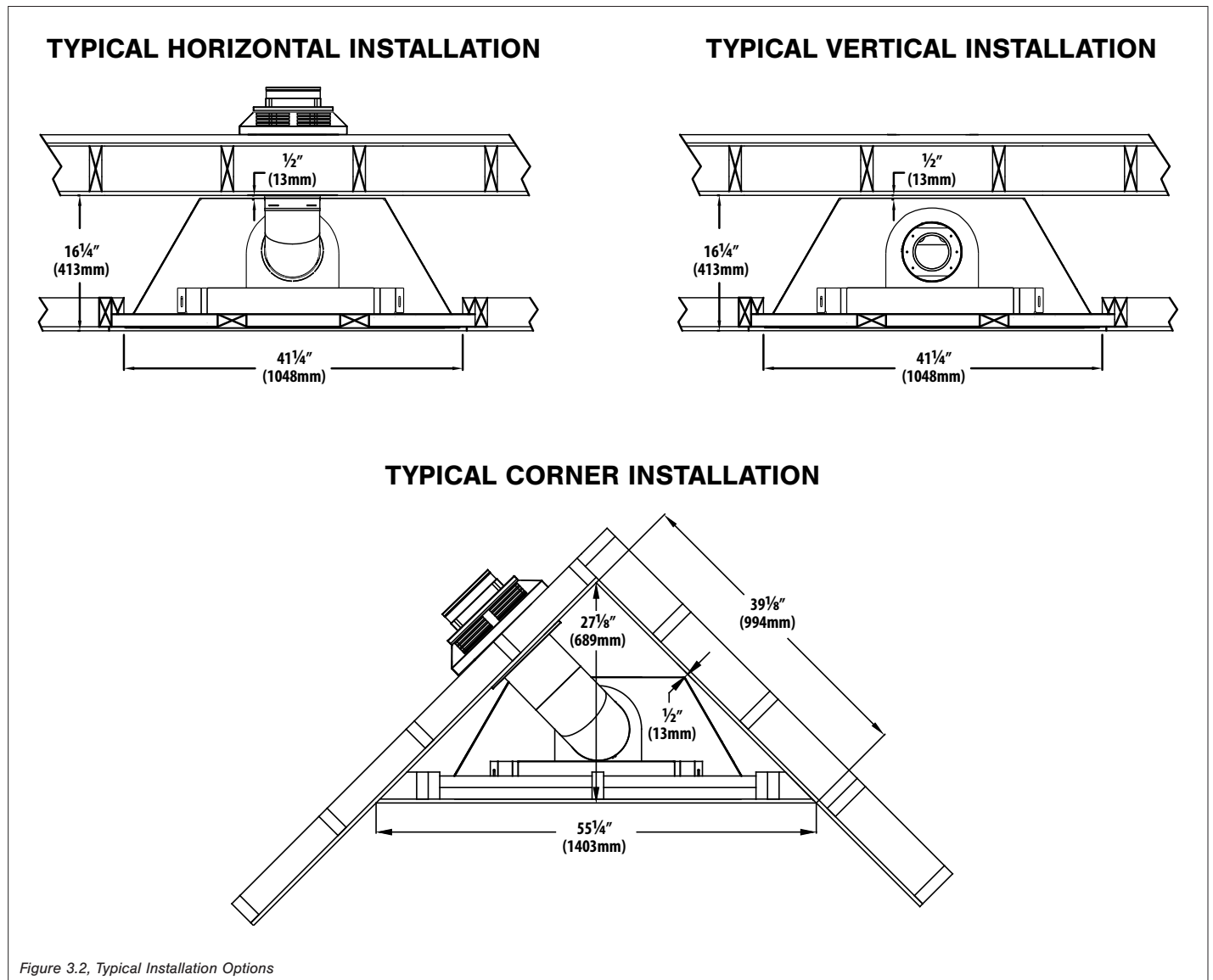
The top stand-off is adjustable to accommodate non-combustible finish material thickness.

1. Loosen screws located on top of the fireplace.
2. Slide top stand-off to desired position to accommodate finish material.
3. Re-tighten screws.



### 3.3 Clearances to Combustibles

Table 3.1, Minimum Appliance Clearances to Combustible Material		
Top of unit face to framing	3-1/2 in	89 mm
From unit left and right sides and back	1/2 in	13 mm
Unit front corners to framing	1/4 in	6 mm
To flooring	0 in	0 mm
Unit top to ceiling	19-3/4 in	502 mm
Unit side to adjacent sidewall	1-1/4 in	32 mm
Unit front to side trim	1 in	25 mm
Mantel 9 in (229 mm) deep from fireplace enclosure floor	42 in	1067 mm



### 3.4 Wall Enclosure Rough Opening

**WARNING:** Provide adequate clearances around air openings into the combustion chamber. Provide adequate clearance in front of the fireplace for barrier removal, component access, gas line installation, service access, etc.

- Framing dimensions should allow for wall covering thickness and fireplace facing materials. If using a hearth, adjust the rough opening size as necessary to maintain minimum clearance requirements.

- If masonry is to be used (optional), prepare the necessary foundation for the masonry load. When masonry construction is to be used, a lintel must be used over the top of the appliance to support the additional weight.

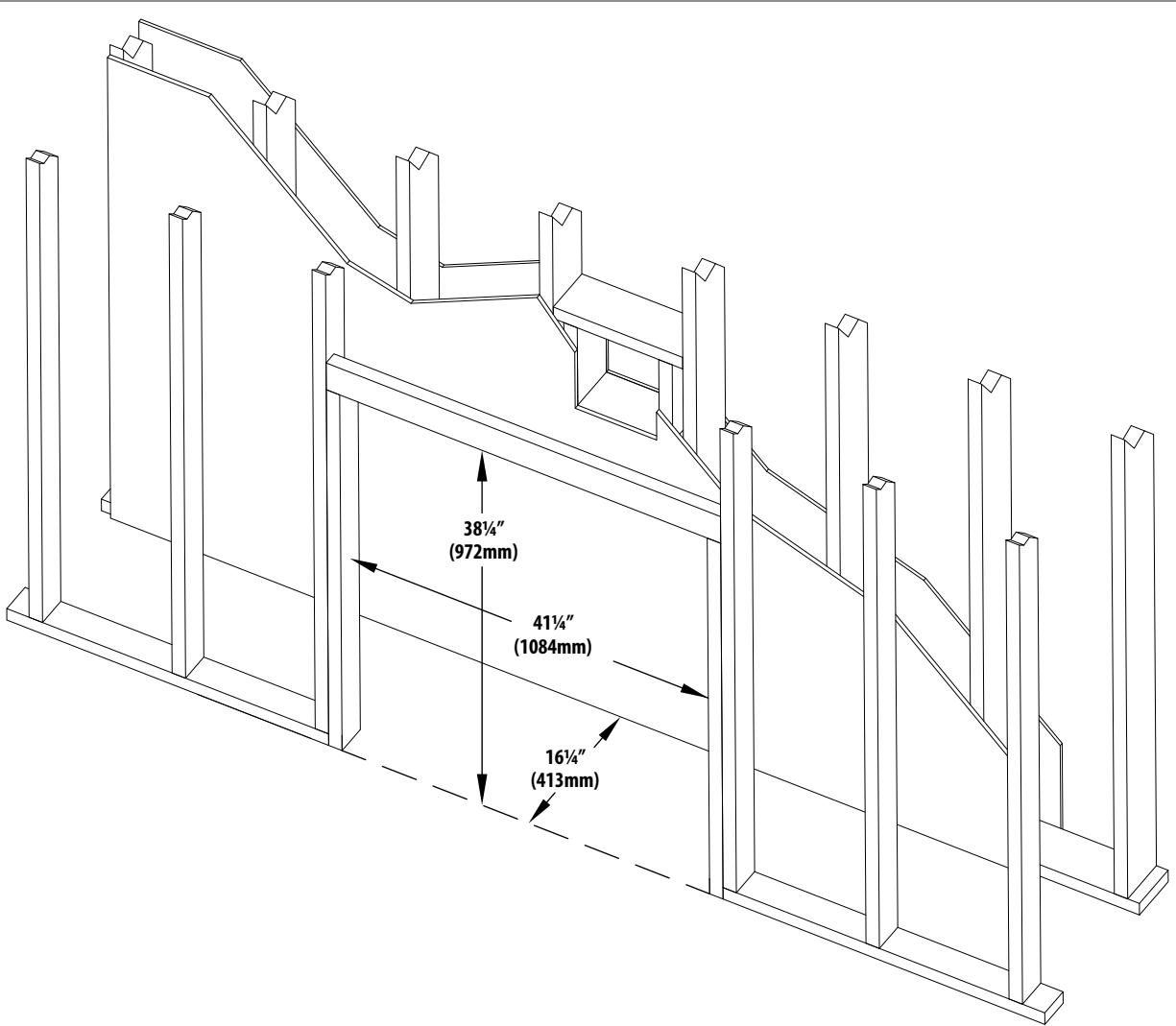


Figure 3.3, Finished Opening Dimensions

### 3.5 Floor Support and Protection

- The fireplace must be placed directly on a wood or non-combustible surface (not linoleum or carpet) extending the entire depth and width of the fireplace
- 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.
- Consider the height of hearth finish material (stone, brick, et cetera) when building a fireplace platform. The bottom of the fireplace must be level with finished hearth to allow for a proper fit of the safety barriers.
- Build the hearth to desired size and height. If a hearth extension is desired, combustible material may be used.

### 3.6 Recess Construction

**WARNING: All clearances to venting must be maintained.**

Mounting a television above a fireplace has become a common practice. Television surface temperatures are affected by mantel depth, ceiling heights, and wall and mantel construction material. Most television manufacturers specify in their instructions that a television should not be installed on, near, or above a heat source.

Television location rests solely on the homeowner. It is the homeowner's responsibility that the preferred TV mounting and mantel design will not exceed the listed maximum operation temperature of their electronic goods.

**Tests performed determined that surface temperatures did not exceed 150°F (66°C) when a 4¼ in (108mm) deep recess is constructed above the fireplace. See illustrations below.**

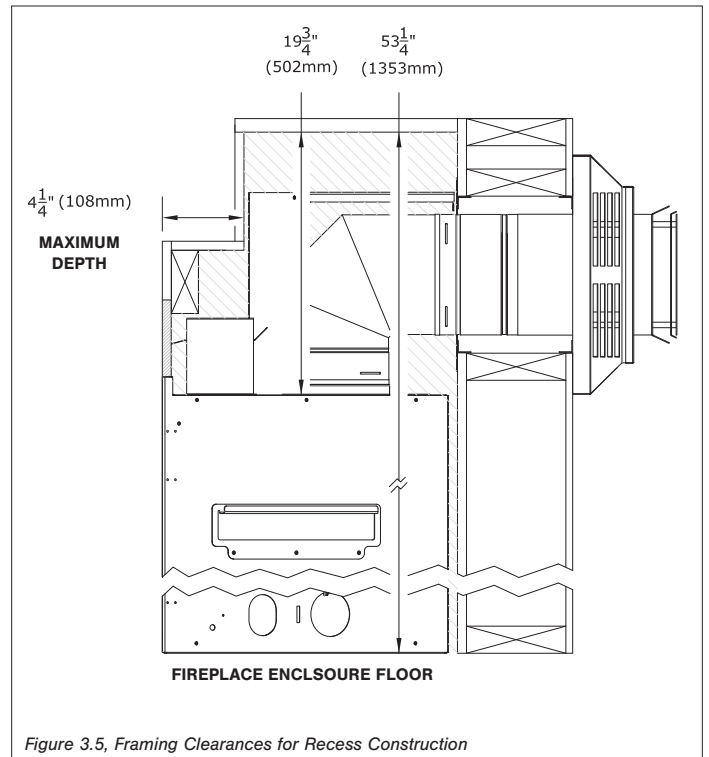


Figure 3.5, Framing Clearances for Recess Construction

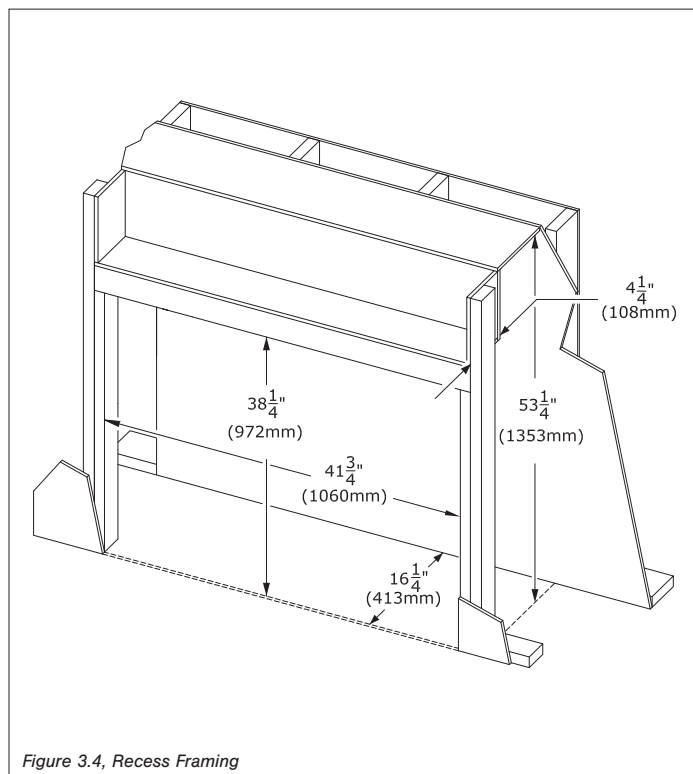


Figure 3.4, Recess Framing

### 3.7 Vent Termination Framing

**IMPORTANT:** Vent cap location must be in compliance with Section 6.2 Minimum Termination Clearances on page 21.

**WARNING:** DO NOT RECESS THE VENT CAP INTO WALL OR SIDING.

#### 3.7.1 Vertical Terminations

**CAUTION:** Cold air transfer area. The surround fireplace chase 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.

- Follow vent pipe manufacturer’s installation instructions for vertical terminations.
- A minimum of 1 in (25 mm) clearance on all sides of the vertical vent pipe must be maintained.

#### 3.7.2 Horizontal Terminations

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

**NOTE:** 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 as necessary to maintain clearance requirements.

- Follow vent pipe manufacturer’s installation instructions for vent installation.
- Flex pipe vent systems require a minimum of 1 in (25 mm) clearance from the top, sides, and bottom surfaces of horizontal pipe.
- Rigid pipe vent systems require a minimum of 1½ in (38 mm) from the top surface of horizontal pipe, and 1 in (25 mm) from the sides and bottom surfaces of horizontal pipe.
- Refer to Table 3.2 and Figure 3.6 for horizontal vent framing.

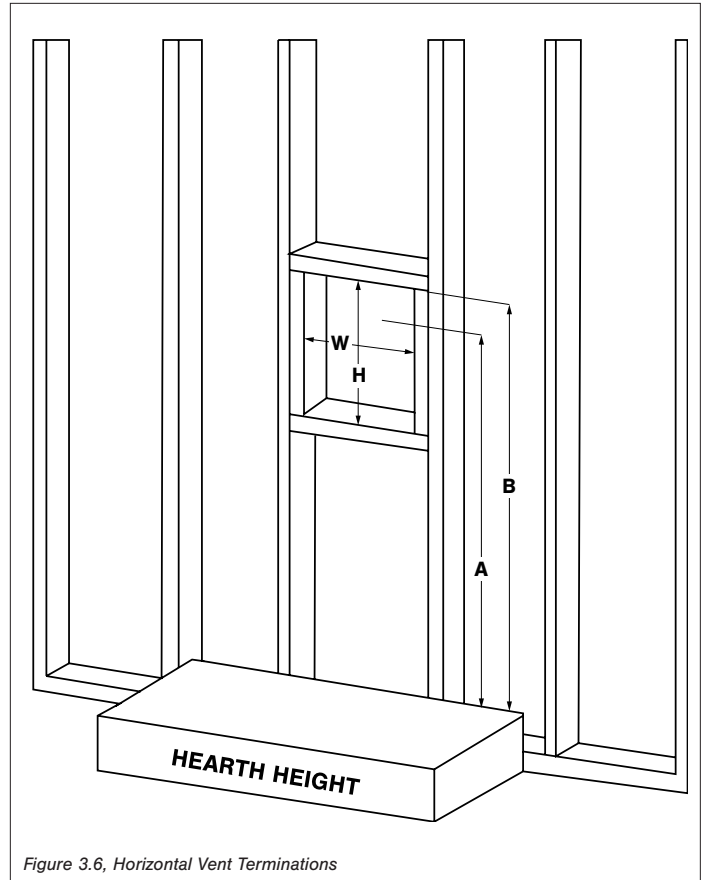


Figure 3.6, Horizontal Vent Terminations

**Table 3.2, NG & LPG - Minimum Horizontal Venting**

Minimum Vertical Rise	Vent Pipe Top (A)		Framed Opening Top (B)	
<b>Rigid Vent System</b>	44-1/8 in	1121 mm	45-5/8 in	1159 mm
<b>Flex Vent System</b>	52-1/2 in	1333 mm	53-1/2 in	1359 mm

## 4.0 FACING AND FINISHING

### 4.1 Nailing Flange Assembly and Installation

**NOTE:** Depending on facing material, tabs can be adjusted forward or backward up to 1/2 in (13 mm).

**CAUTION:** Never permanently remove these assemblies from the fireplace—they must be secured regardless of finish material used.

1. Remove (2) nailing flanges from the right and left side of the fireplace.
2. Align nailing flange with holes on outside corners of fireplace, with the stand-off flanges on the nailing flanges facing away from the fireplace

3. Secure the nailing flanges to the fireplace with screws (provided) through the slots in nailing flanges.
  4. Bend perforation on nailing flange until parallel with fireplace face. Do not bend toward fireplace face.
  5. Position framing stud against the small stand-off (located on backside of nailing flange). Secure with nails or screws.
- **When installed, the nailing flanges provide the minimum 1/4 in (6 mm) clearance from the front corners of the fireplace to framing.**

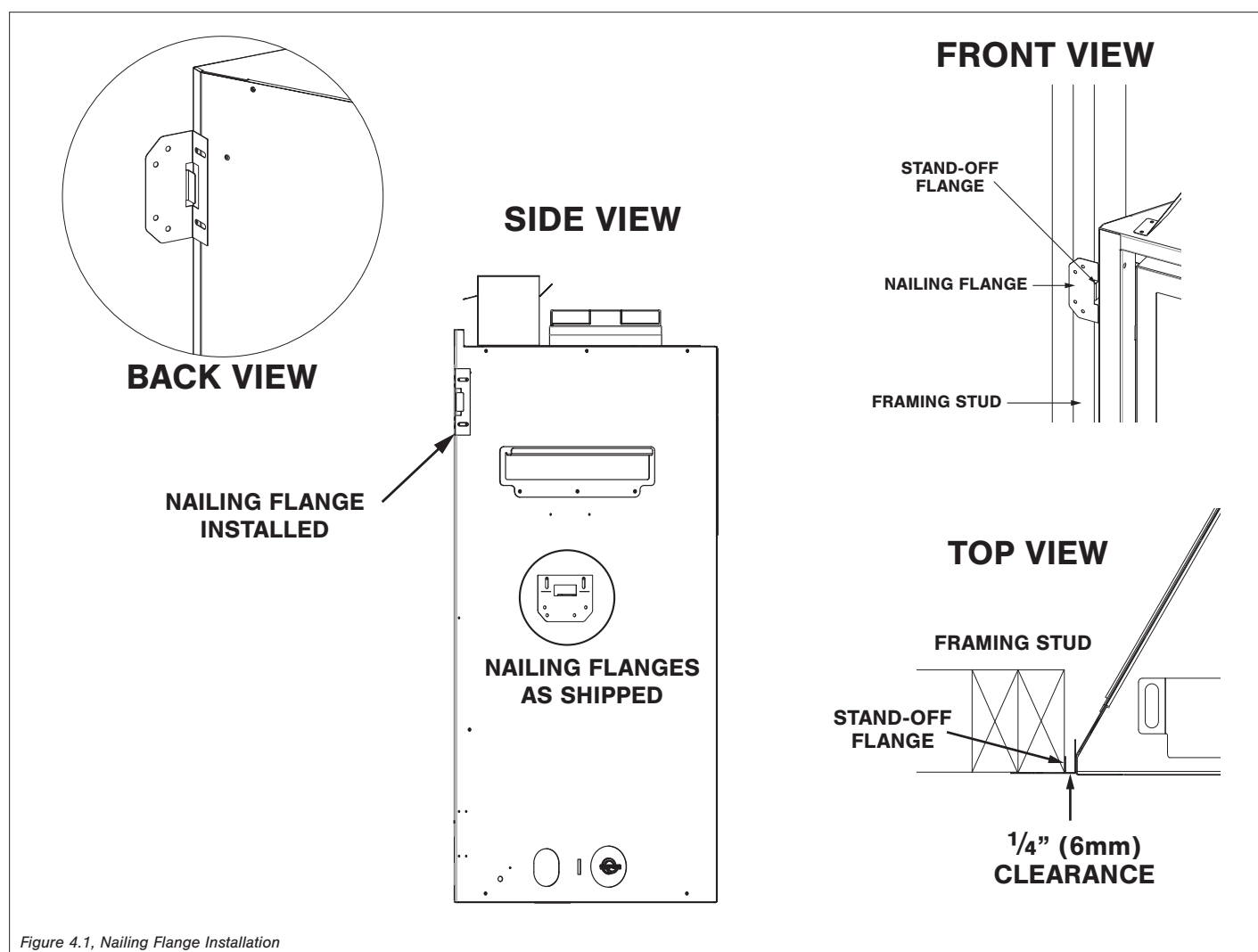


Figure 4.1, Nailing Flange Installation



## 4.2 Mantel and Finishing Requirements

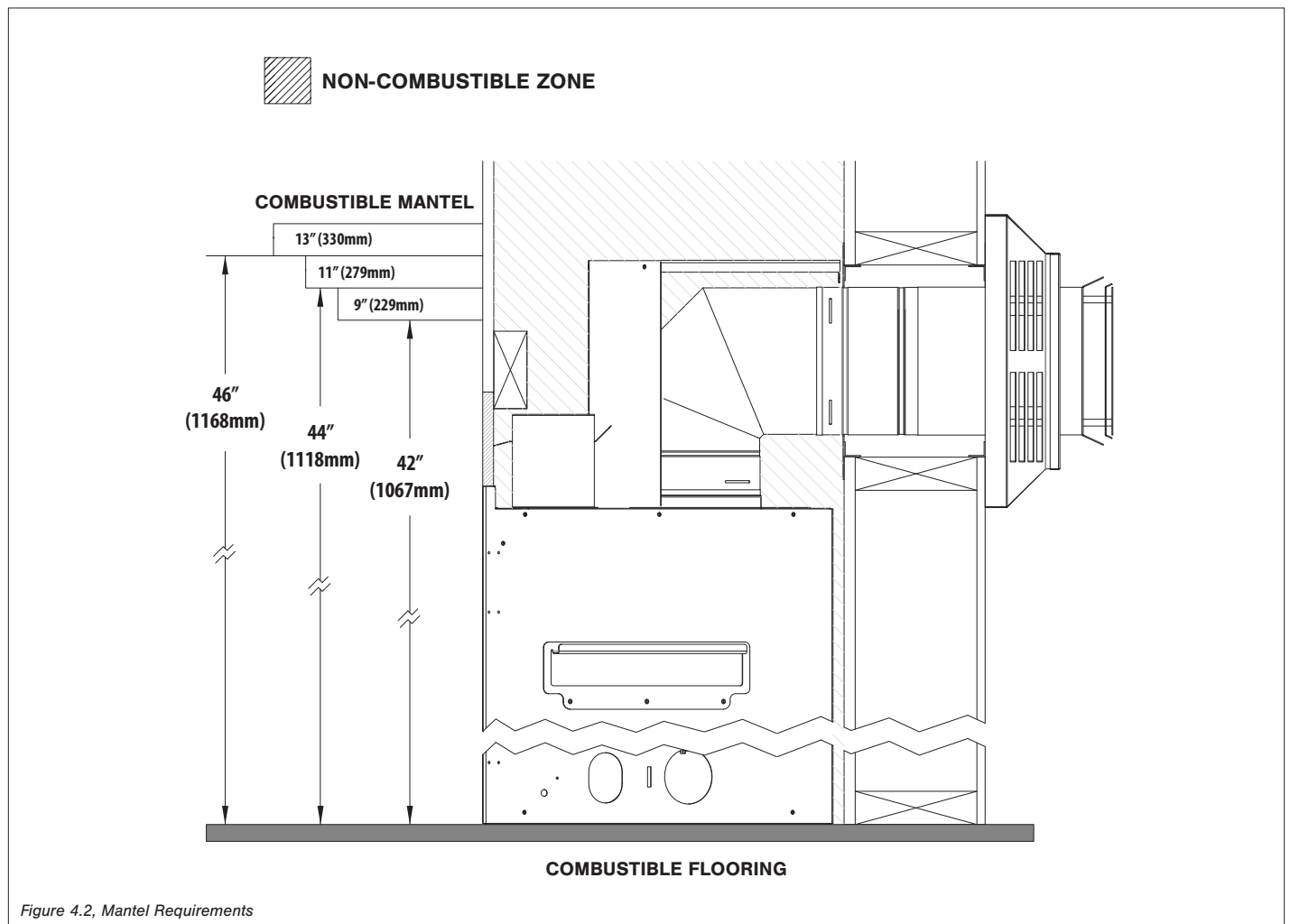
### 4.2.1 Finishing Recommendations

**NOTE:** The surface area above the appliance may be affected by high temperatures emitted from this appliance. To help avoid or reduce the possibility of the sheetrock to crack, Hussong Mfg. recommends the following methods:

Ensure the non-combustible material and sheetrock is dry and dust free.

For taping and mudding seams, we recommend heat resilient tape, mesh and joint compounds, such as Durabond. Mud must be cured as per manufacturer's recommendations.

For a painted surface, use a high quality acrylic latex primer and finish coat. Avoid flat or light-colored paints to prevent discoloring.



## 4.3 Safety Barrier Installations

### 4.3.1 Inside Fit - Hanging Installation

#### **Model #TRF-RSF**

1. Center the screen front over the glass frame assembly, allowing the screen front's mounting brackets to fit inside the air openings.
2. Align the notched tabs (located on the back) with the slots in the fireplace. Raise slightly and push back to desired position.
3. Lower the screen front until the notched tabs are firmly in position.
  - To remove safety screen: lift the screen up and out of slots.

### 4.3.2 Overlap Fit - Hanging Installation

#### **Models #TRF-PSF, #TRF-FRSF, #TRFR-MSF and #TRFA-MSF.**

1. Center the screen front over the glass frame assembly, allowing the screen front's mounting brackets to fit inside the air openings.
2. Align the notched tabs (located on the back) with the slots in the fireplace. Raise slightly and push back to desired position.
3. Lower the screen front until the notched tabs are firmly in position, verifying the depth accommodates finish material.
  - To remove safety screen: lift the screen up and out of slots.

## 5.0 GAS LINE CONNECTION

### 5.1 Gas Conversion (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 LP gas.

### 5.2 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 223.1. 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 1/2 psi (3.5 kPa). For test pressures equal to or less than 1/2 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 in. (13 mm) tee handle manual shut-off valve and flexible gas connector are to be connected to the 1/2 in. (13 mm) control valve inlet. If substituting for these components, please consult local codes for compliance.
- This fireplace is equipped with a 10" (254 mm) x 18" (457 mm) 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.
- Do not run gas line in a manner that would obstruct fan operation.
- For high altitude installations, consult the local gas distributor or the authority having jurisdiction for proper rating methods.

**Table 5.1, Inlet Gas Supply Pressures**

Fuel	Minimum Pressure	Maximum Pressure
Natural Gas	5" WC (1.25 kPa)	10.5" WC (2.62 kPa)
LP Gas	11" WC (2.74 kPa)	13" WC (3.24 kPa)

## 6.0 TERMINATION LOCATIONS

### 6.1 Vertical Vent Cap Termination

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

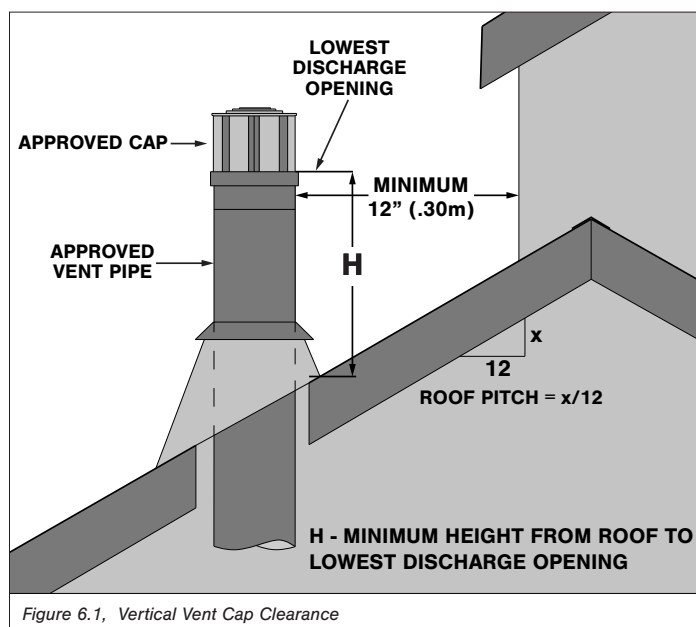
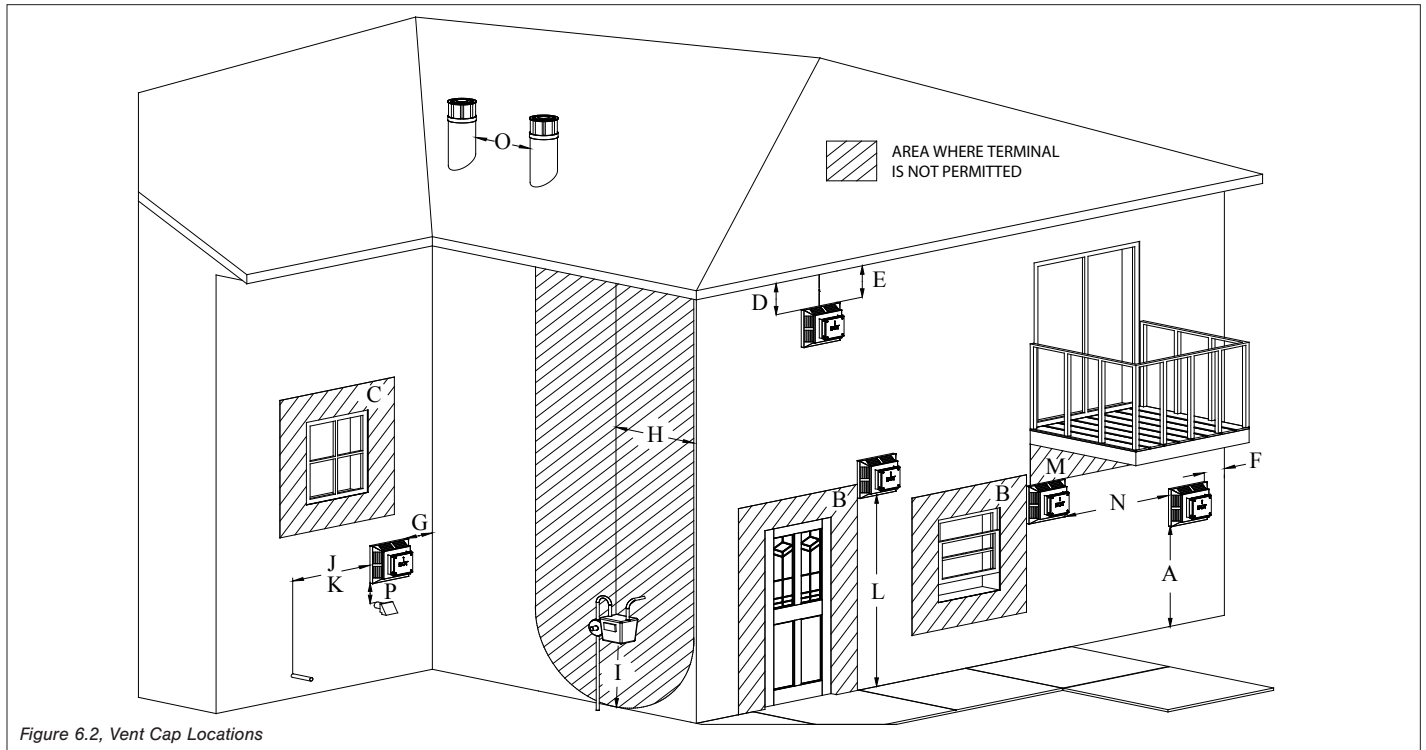


Figure 6.1, Vertical Vent Cap Clearance

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

## 6.2 Minimum Termination Clearances



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

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

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

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

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

# 7.0 VENTING

## 7.1 Approved 4" x 65/8" Vent Systems

Vent Manufacturer	Direct Vent System	Termination
American Metal Products	Ameri-Vent	Horizontal & Vertical
BDM	Pro-Form	Horizontal & Vertical
ICC	EXCELDirect	Horizontal & Vertical
Kozy Heat	700 Series Flexible Vent System	Horizontal Only
Metal Fab	Direct Vent Chimney	Horizontal & Vertical
Olympia Venting Supply, Inc.	Ventis Direct Vent	Horizontal & Vertical
Security	Direct Vent Chimney	Horizontal & Vertical
Selkirk	Direct Temp	Horizontal & Vertical
Simpson DuraVent	DirectVent Pro	Horizontal & Vertical

## 7.2 Venting Requirements

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

- Flame height and appearance will vary depending upon venting configuration and the type of fuel used.
- Refer to the vent manufacturer's installation manual for complete installation instructions. Vent installation must conform with venting requirements and restrictions as outlined in this manual.
- Provide a means for visually checking the vent connection to the appliance after the fireplace is installed.

### 7.2.1 Vent Section Clearances

Table 7.1, Vertical Pipe Section Clearances	
Surface	Sides
All Approved Venting	1 in (25 mm)

Table 7.2, Horizontal Pipe Section Clearances			
Surface	Top	Bottom	Sides
Flex Pipe	1 in (25 mm)	1 in (25 mm)	1 in (25 mm)
Rigid Pipe	1-1/2 in (38 mm)	1 in (25 mm)	1 in (25 mm)

## 7.3 Use of Elbows

- For each additional 90° elbow used after the first elbow, 3 ft (91.4 cm) must be subtracted from maximum venting allowed.
- For each 45° elbow used, 1½ ft (457 mm) must be subtracted from maximum venting allowed.
- (2) 45° degree elbows may be used in place of (1) 90° elbow.

## 7.4 Restrictor Assembly and Installation

A restrictor (included in components packet) may be used to achieve desired flame appearance on any top venting configuration with 6 ft (1.83 m) of vertical pipe or more. Section 11.2.2 Restrictor outlines restrictor recommendations depending on burner flame appearance, and instructions on installation after venting is completed.

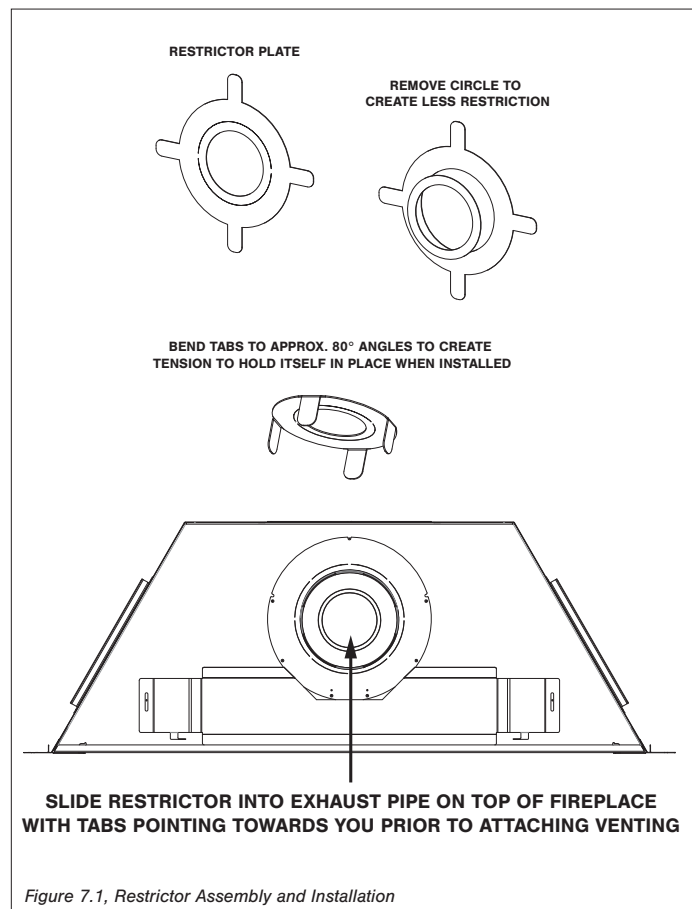


Figure 7.1, Restrictor Assembly and Installation

## 7.5 Vertical Terminations

**NOTE:** The flange on the top stand-off must be bent upwards to a 90° angle.

**IMPORTANT:** The vertical vent heat shield must be installed for all venting applications. Refer to Section 7.8 on page 25.

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

Table 7.3, NG & LPG - Minimum / Maximum Vertical Terminations			
Minimum Vertical Length		Maximum Vertical Length	
3 ft	914 mm	50 ft	15.2 m

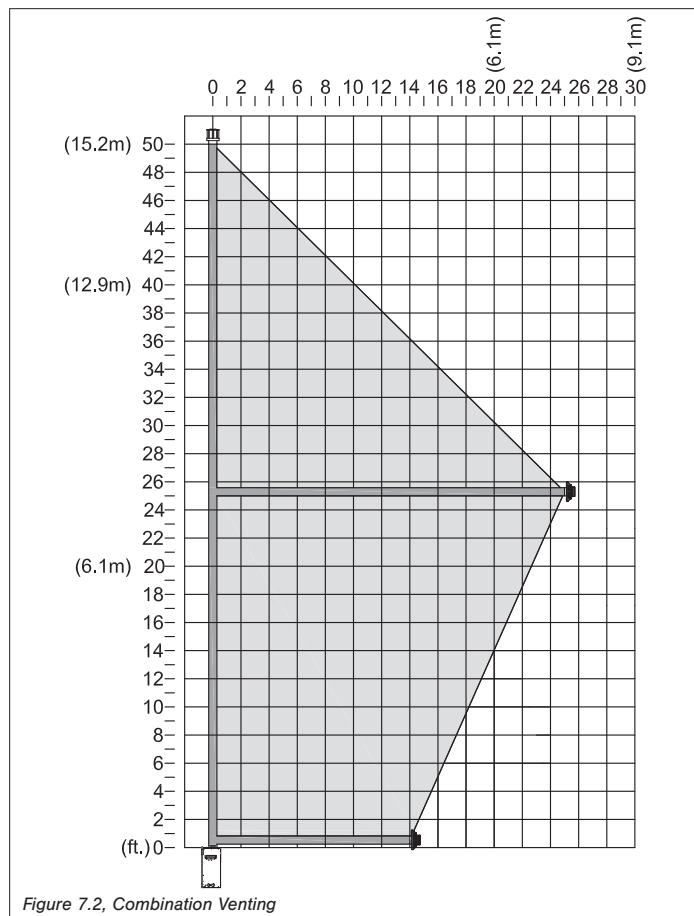
## 7.6 Combination Venting

**IMPORTANT:** The horizontal vent heat shield must be installed when incorporating minimum horizontal venting. Refer to Section 7.8 on page 25.

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

Table 7.4, NG & LPG - Minimum Horizontal Vent Terminations				
Minimum Vertical Rise ( $V_{MIN}$ )	Minimum Horizontal Run ( $H_{MIN}$ )		Maximum Horizontal Run ( $H_{MAX}$ )	
90° elbow	6 in	152 mm	14 ft	4.27 m

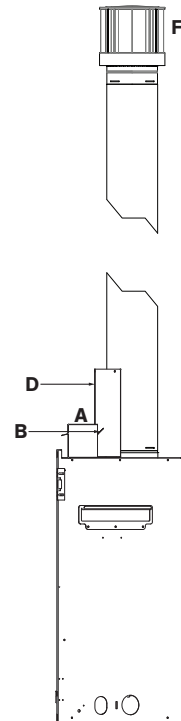
Table 7.5, NG & LPG - Max Vertical / Max Horizontal Combination					
Maximum Vertical Rise		Maximum Horizontal Run		Total Length	
25 ft	7.6 m	25 ft	7.6 m	50 ft	15.2 m



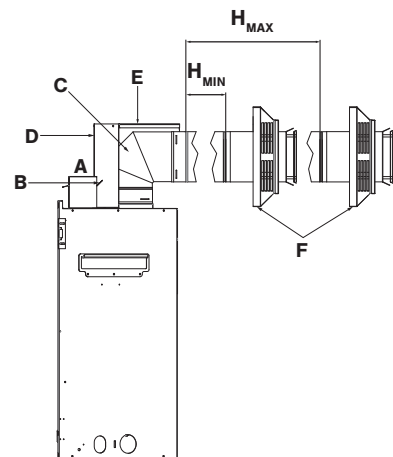
### VENTING DIAGRAM (VERTICAL & HORIZONTAL TERMINATIONS)

- (A) Stand-off Brackets
- (B) Stand-off Heat Shields
- (C) 90° Elbow
- (D) Vertical Vent Heat Shield
- (E) Horizontal Vent Heat Shield
- (F) Termination Cap

3ft (914mm) MIN / 50ft (15.2m) MAX



90° ELBOW + 6 in (152mm)  $H_{MIN}$  / 14 ft (4.27m)  $H_{MAX}$



## 7.7 #700-2 Series Direct Vent Termination Kit(s)

**IMPORTANT:** The vertical vent heat shield included with this fireplace must be installed for every type of venting application. The horizontal vent heat shield must be installed when incorporating minimum horizontal venting.

**IMPORTANT:** The flex pipe is permanently attached to the exterior plate. **DO NOT ATTACH** either #745-2 or #718-2 termination kit to fireplace (or extension kit) until it has passed through the wall. Install termination plates to the outside wall exterior.

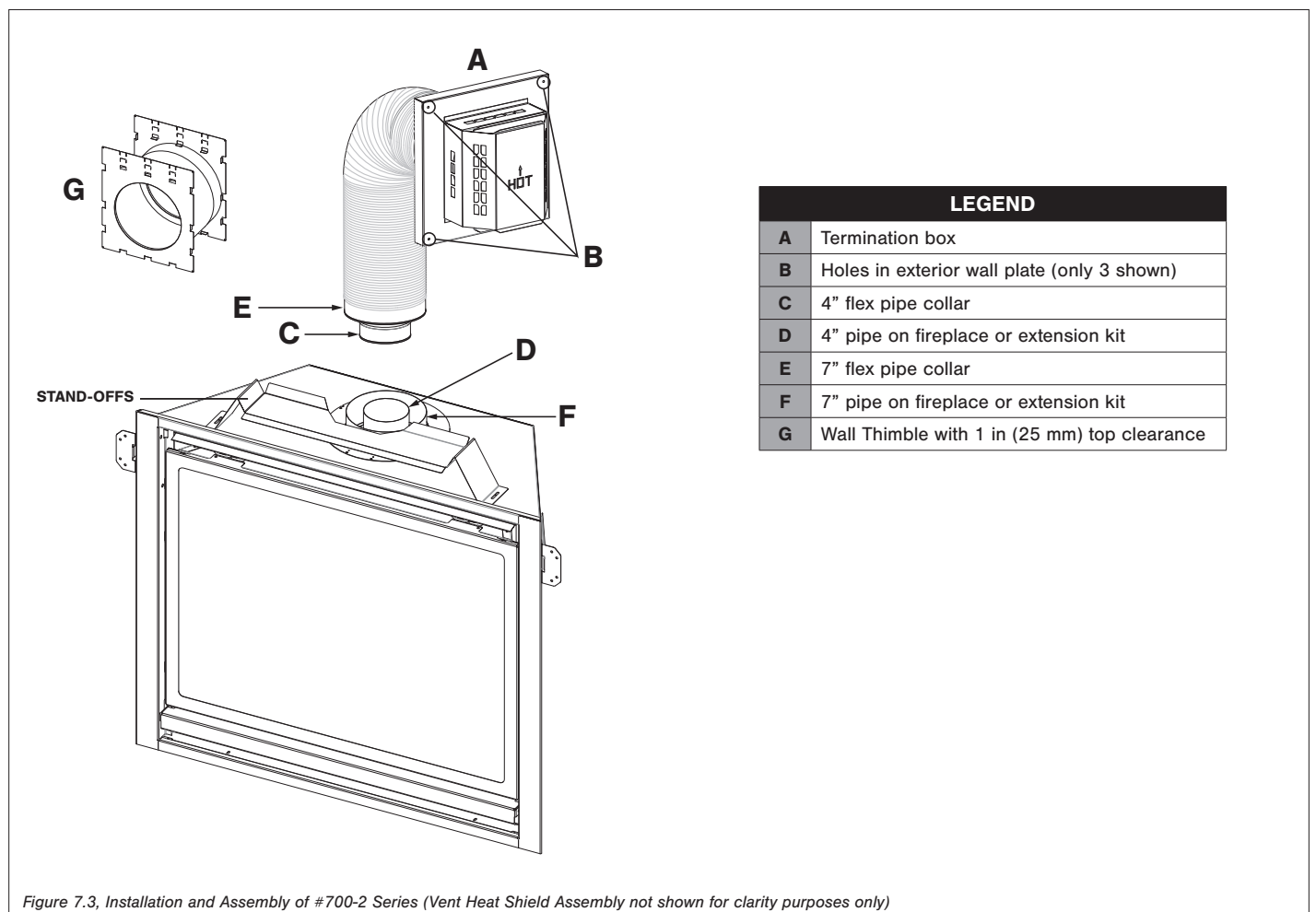
- If terminating against vinyl siding, a vinyl siding protector must be used (included with the #745-2 and #718-2 direct vent kits). Follow instructions included.
- Each #746-2 extension kit contains enough 4" & 7" flexible aluminum pipe to extend chimney an additional 6 ft (1.83 m).

### 7.7.1 Assembly and Installation

1. Mount the required wall thimble (G) with 1 in (25 mm) top clearance and 1 in (25 mm) side clearance to the exterior wall, and seal. (OPTIONAL) insulate the wall thimble with any unfaced insulation products listed as non-combustible per ASTM E 136.
2. Apply a liberal bead of exterior sealant around outer edge of

termination box (A), placing assembly through the wall-pass through in exterior wall. Place screws through the four holes (B), securing it in place.

3. Form the 4" & 7" flexible aluminum pipes on termination kit (#745-2 or #718-2), and if applicable, on each extension kit.
4. Gently pull 4" & 7" pipes down to the top of the fireplace, or if applicable, the extension kit.  
**IMPORTANT: DO NOT stretch extension kit beyond 6 ft (1.83 m); DO NOT stretch beyond what is required. It is very difficult to decompress flex pipes once stretched.**
5. Place a bead of sealant outside 4" flex pipe collar (C) (end with EXTERNAL LIP) and sliding it into 4" pipe on extension kit or top of fireplace (D). Secure with 3 evenly spaced screws.
6. Place a bead of sealant inside 7" flex pipe collar (E) (end with the INTERNAL lip), sliding it over 7" pipe on top of fireplace (F). Secure with 3 evenly spaced screws.
7. If additional extension kits are required, repeat Steps 4 and 5, placing 4" & 7" pipes onto previous extension kit.





## 7.8 Vent Heat Shield Assembly Installation

**IMPORTANT:** The vertical vent heat shield **MUST** be installed for every type of venting application. The horizontal vent heat shield must be installed when incorporating minimum horizontal venting.

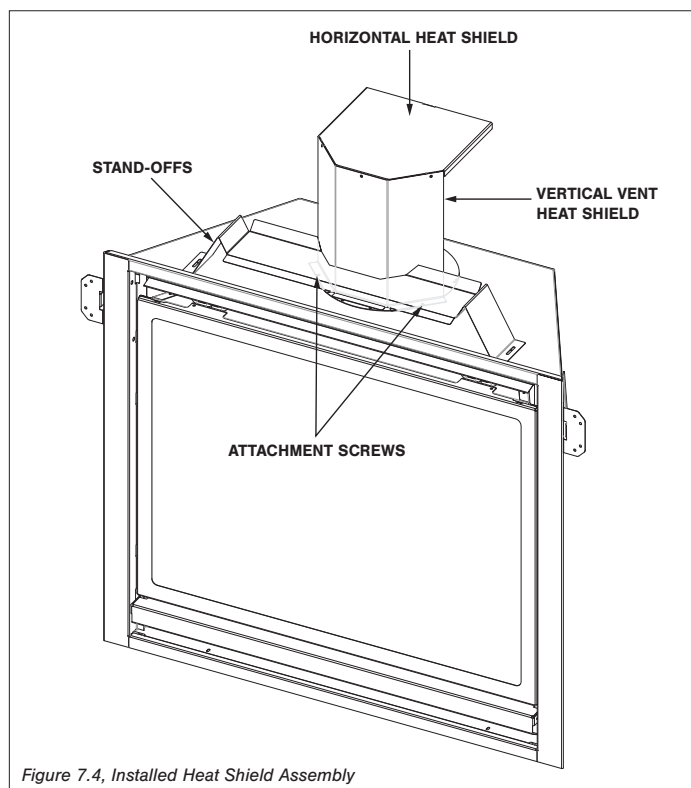
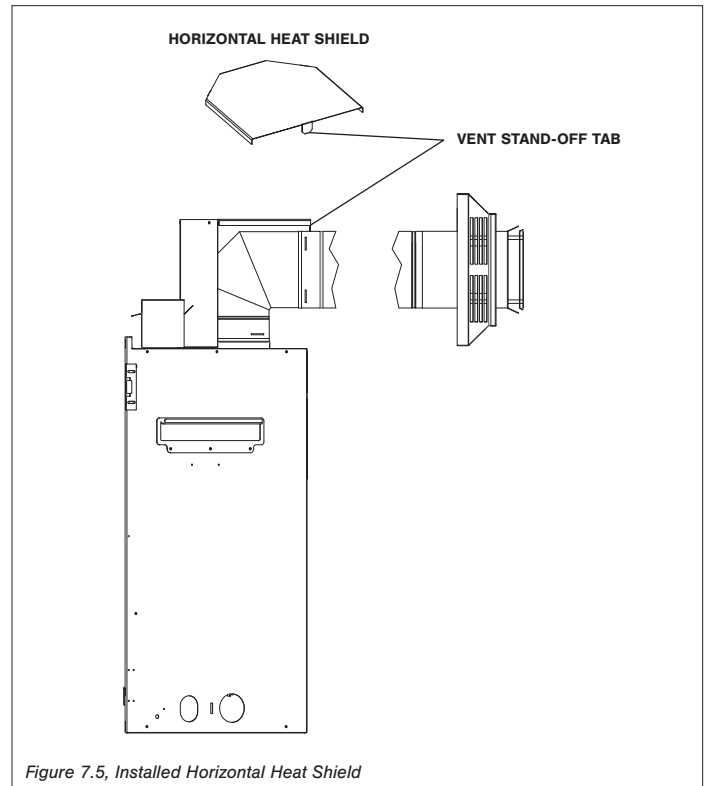
**NOTE:** There are (6) screw holes located in front of the flue outlet to offset the vent heat shield assembly in front of the vent pipe. Align the heat shield as necessary for your venting installation.

### 7.8.1 Vertical Vent Heat Shield Installation

1. Position the vertical vent heat shield in front of the vent pipe, with the flanges facing towards the fireplace face as necessary for the type of installation.
2. Align the (2) slots on the vertical heat shield flanges with corresponding screw holes located in front of the flue outlet on the top of the fireplace.
3. Secure the vertical vent heat shield to the fireplace with (2) attachment screws (provided in the components package).

### 7.8.2 Minimum Horizontal Venting

1. Bend perforation on the (3) hand-tabs down on the horizontal vent heat shield.
2. Locate (3) screw holes on the vertical vent heat shield.
3. Align the (3) slots on horizontal vent heat shield tabs to the corresponding (3) screws holes on the vertical vent heat shield.
4. Attach the horizontal vent heat shield with screws (provided) through the screw holes on the vertical vent heat shield. The 1 in (25 mm) vent stand-off tab will rest on top of the vent pipe.



## 8.0 FIREPLACE SETUP

### 8.1 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.**

#### 8.1.1 Remove Glass Frame Assembly

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

1. Locate (2) spring-loaded latches securing the glass assembly at the bottom of the firebox.
2. Pull the spring-loaded latches out and down to release the bottom of the glass assembly.
3. Lift glass assembly up and off of the (2) tabs located at the top of the firebox.

#### 8.1.2 Install Glass Frame Assembly

1. Align the slots on top of the glass assembly over the tabs at the top of the firebox while lowering the bottom of the glass assembly into position.
2. Pull the spring-loaded latches out and up to secure the bottom of glass to the bottom of the fireplace.

### 8.2 #TRF-028 Optional Fan Kit

**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.**

**NOTE: It is easier to install the fan kit before connecting the gas line to the control board.**

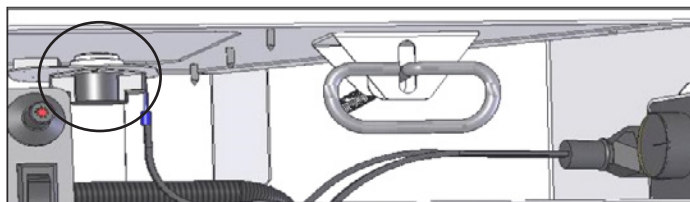
- This appliance, when installed, must be electrically grounded in accordance with local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70, or the Canadian Electrical Code, CSA C22.1.
- Code-approved line voltage wiring, 14 gauge or better, must be used when wiring this assembly. Refer to your local electrical codes for specific requirements.
- A pre-installed electrical box is included with the appliance, along with a receptacle/box cover assembly in the fireplace components packet.

Kit Components: (2) 75 CFM fan with temperature control switch  
(4) 1/4" nuts

1. Remove safety barrier, glass assembly and log set.
2. Insert fans through lower grill opening on left side of the gas valve and push to the back of the firebox. Position fans behind mounting studs located at the rear of the fireplace, positioning as far apart as possible. Magnetic strips are attached to bottom of brackets to help secure in place.
3. Insert 115V wiring (with ground) through romex connector and wire to speed control / receptacle assembly matching black (hot) white (neutral) and green (ground) wires to corresponding wires on speed control / receptacle assembly. See Figure 8.1.

4. Secure speed control/receptacle assembly to electrical box with (2) screws provided in the fireplace components packet.
5. Reinstall electrical access panel. Tighten screw.
6. Attach the temperature control switch to the bottom of the firebox.
7. Plug fan cord into the electrical box receptacle.
8. 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.
9. Reinstall all components previously removed.

**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.**

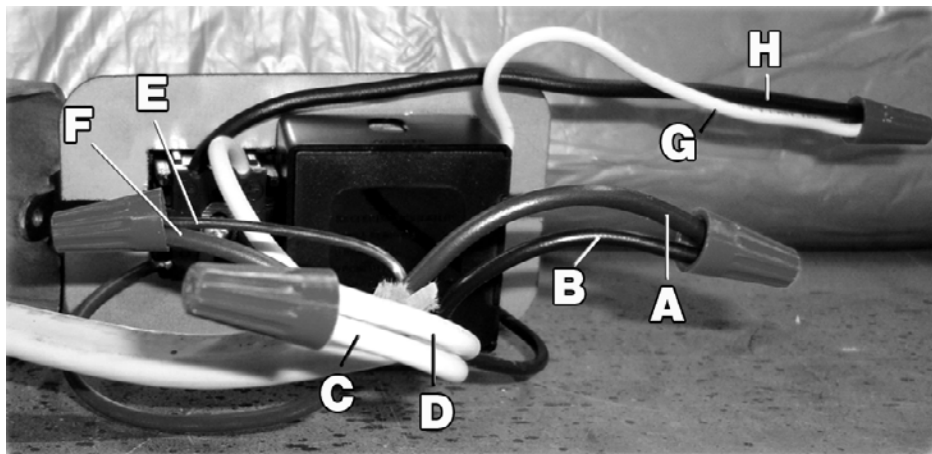
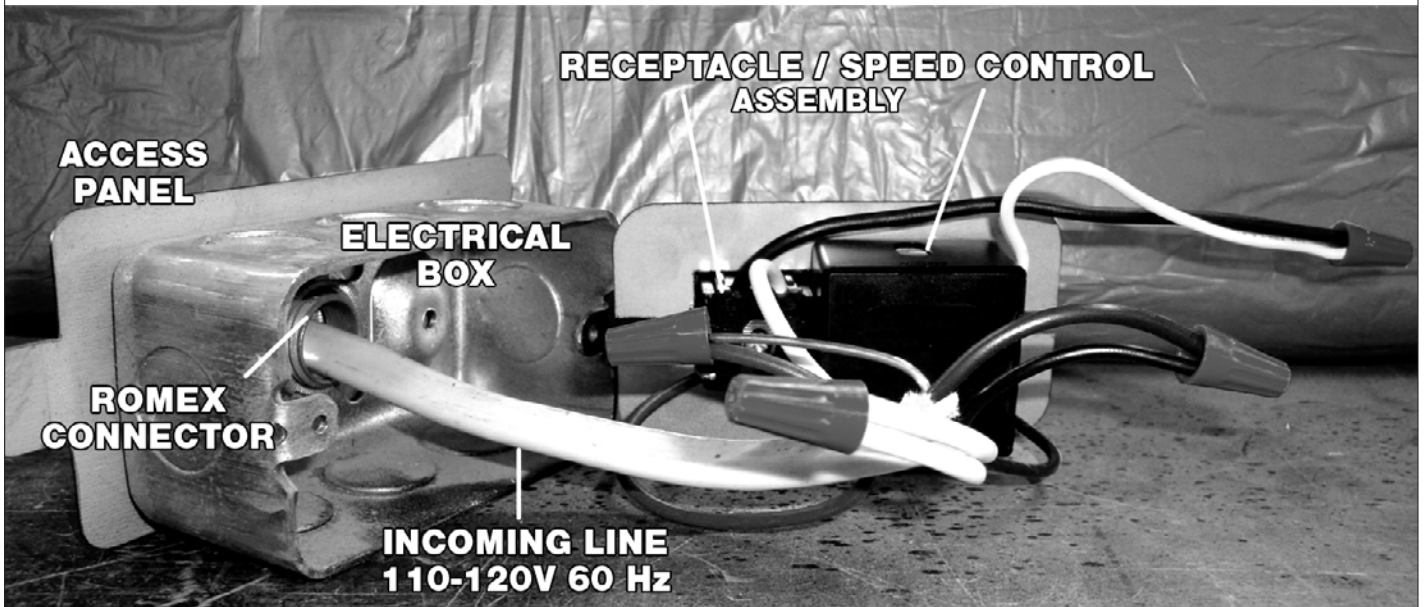
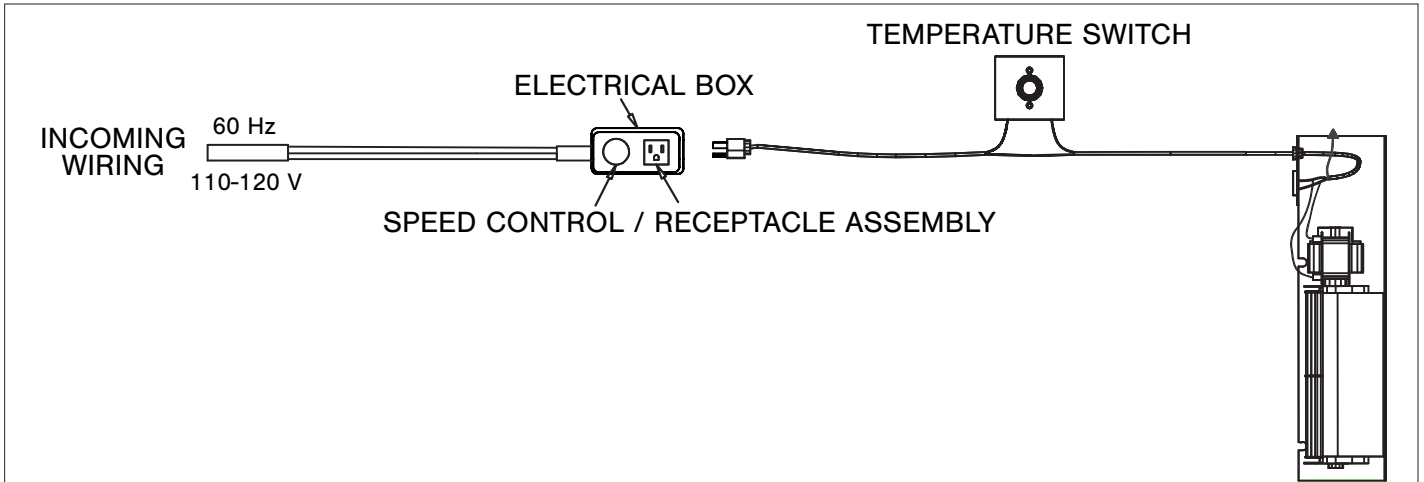


#### TEMPERATURE CONTROL SWITCH POSITION

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

Adjust position of temperature control switch to a warmer location under firebox to turn fan ON sooner or move it to a cooler location under firebox to turn fan ON later. The fan will turn on when sensor in temperature control switch reaches 110° F and will turn OFF when sensor reaches 90° F.

After adjustment, plug 3-prong plug on fan cord into receptacle.



**CONNECT A-B, C-D, E-F, G-H**

LEGEND	
A	Black (hot) from incoming line
B	Black from speed control
C	White (neutral) from incoming line
D	White (neutral) from receptacle
E	Ground (bare) from incoming line
F	Ground (green) from receptacle
G	White from speed control
H	Black from receptacle

Figure 8.1, Fan Wiring

## 8.3 #TRF-500B Log Set Installation

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

- If converting to LP (propane) gas, complete the conversion before installing the log set. Follow the conversion instructions included with the kit.
- Log numbers are located on the bottom of each log. Refer to the following instructions and illustrations for proper log placement.

### 8.3.1 LP Log Plate

If an optional firebrick refractory set is to be installed for LP gas models,

1. Remove the break away tab at the front of the LP log plate.
2. Position LP Log plate onto the back log bracket.
3. When the plate is properly seated, the sides will sit between the back log brackets and the sides of the burner heat shield.

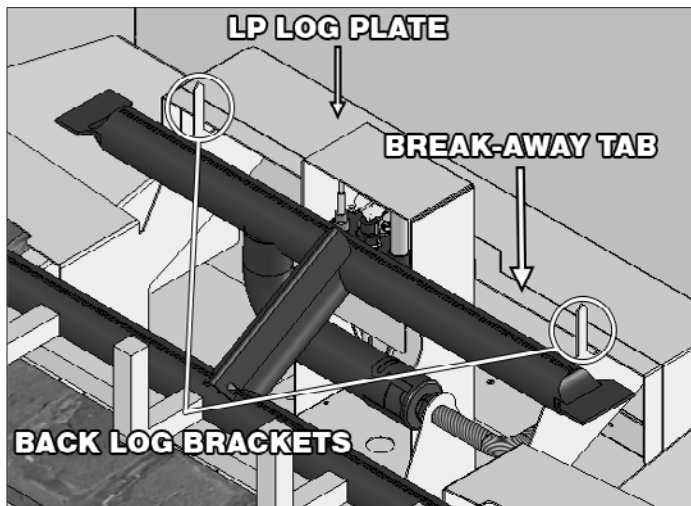


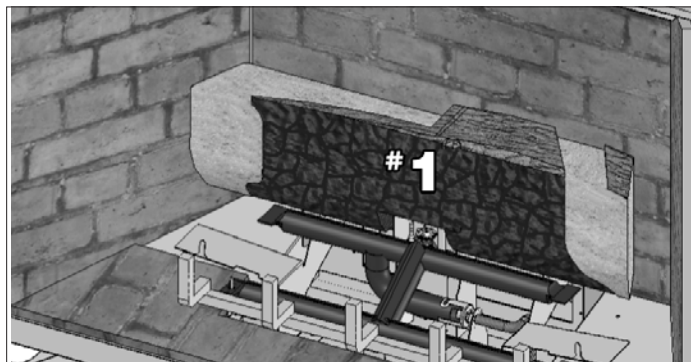
Figure 8.2, LP Log Plate

### 8.3.2 Log Placement

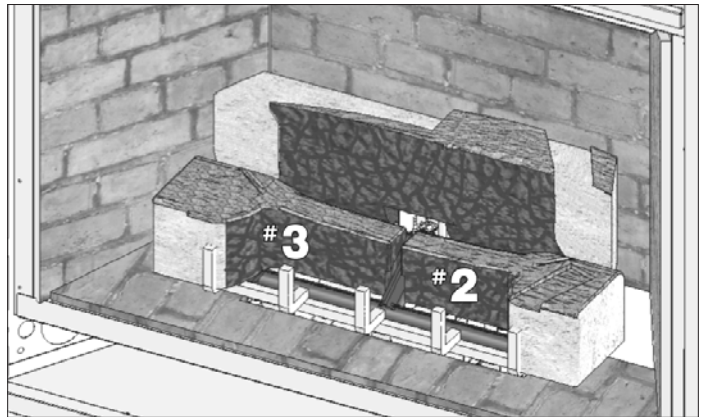
1. Position the ember panel in front of the burner.
2. Position #1 log onto the back log brackets, aligning the holes in the bottom of the log with log bracket pins. Position the notch over the pilot shield.

**LP GAS MODELS: Position back log to create 1/4 in (6mm) air space between the front of the log and the back of burner.**

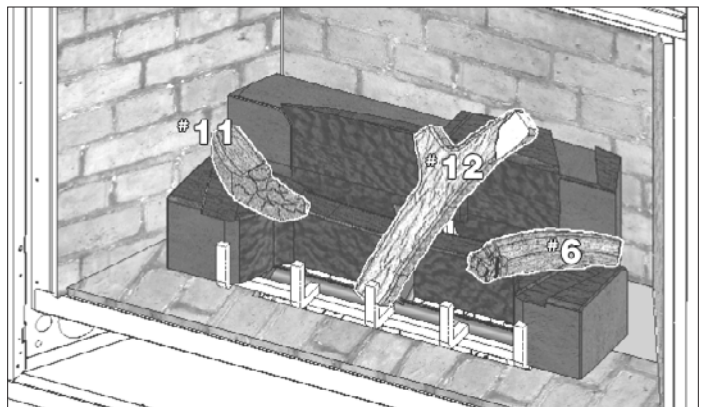
**NATURAL GAS MODELS: Position back log so the front side of the log rests against the backside of the burner tube.**



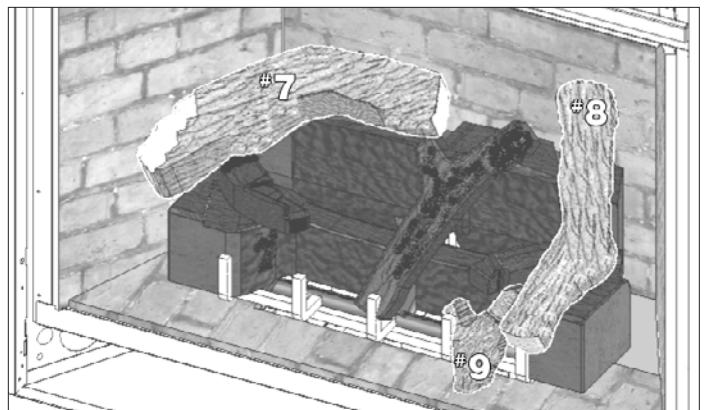
3. Position #2 log cutouts over log grate. Align the log's left side alignment hole over the pin on the front of the log brackets. Push to seat. Repeat with #3 log on the right side.



4. Position #11 log, #12 log, and #6 log onto the corresponding cutouts / notches on the base logs. The #6 log must not extend over the front of #2 log.



5. Position #7 log, #8 log, and #9 log onto the corresponding cutouts and notches located on the base logs, center logs, and the log grate.



6. Use a steel or stiff bristle nylon brush to distribute rock wool embers onto logs and burner.

## 8.4 Control Board Removal and Installation

**WARNING:** If burner and/or pilot have been burning, use appropriate protection to avoid burns or damage to personal property before removing any components. **DO NOT OPERATE THIS APPLIANCE WITHOUT THE SEALING GASKET (LOCATED UNDER THE CONTROL BOARD) IN PLACE. IF GASKETING IS DAMAGED, IT MUST BE REPLACED.**

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

### 8.4.1 Control Board Removal

1. Turn the fireplace off.
2. Remove the safety barrier.
3. Locate the manual valve installed by your qualified service technician. Turn the manual valve clockwise to the OFF position.
4. Disconnect any wall switch, remote control, or thermostat from the top and bottom terminals on the gas valve, OR unplug all components from receptacle and disconnect all wiring harnesses attached to the gas valve.
5. Remove the glass frame assembly and log set.
6. Remove the pilot shield and bottom refractory panels. LP GAS MODELS: Remove LP log plate.
7. Remove refractory panel set (if installed).
8. Remove burner tube from firebox by lifting it up off the tabs, slide to the left and off the orifice.
9. Remove front log supports. Save supports and screws.
10. Remove log grate / burner heat shield.
11. Remove and save (6) screws securing control board. Lift the control board out of the firebox, being careful not to damage the sealing gasket underneath.

### 8.4.2 Control Board Installation

1. Place the control board in the firebox, aligning the holes in control board with the holes in firebox bottom. **VERIFY SEALING GASKET IS IN PLACE.**
2. Secure the control board to the firebox using (6) screws previously removed.
3. Install log grate / burner heat shield into fireplace. Ensure entire assembly (the front flange) is inside firebox when completed.
4. Reinstall front log supports, securing with screws previously removed.
5. Reinstall burner tube. Slide venturi over the orifice and place the burner tube mounting holes over the tabs on the log grate/ burner heat shield assembly. LP GAS MODELS: Reinstall LP log plate.
6. Reinstall pilot shield.
7. Reinstall refractory panel set and log set.
8. Reconnect any wall switch, remote control, or thermostat wires to the top and bottom terminals on the gas valve, OR reconnect all wiring harnesses to the gas valve. Plug all components into an electrical outlet.
9. Reinstall the glass frame assembly and safety barrier.
10. Turn the manual valve counter clockwise to the ON position.
11. Verify proper log placement, operation of fireplace, and any electrical components.

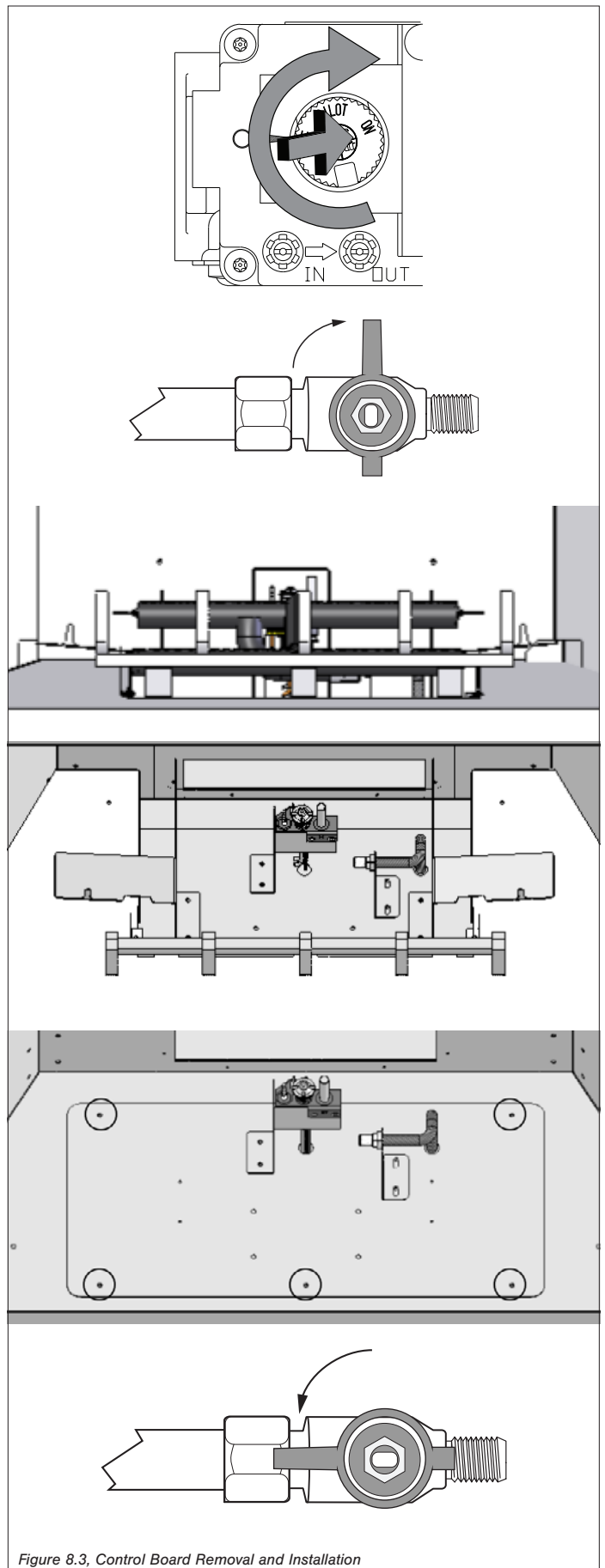


Figure 8.3, Control Board Removal and Installation

## 9.0 THERMOSTAT, WALL SWITCH, REMOTE

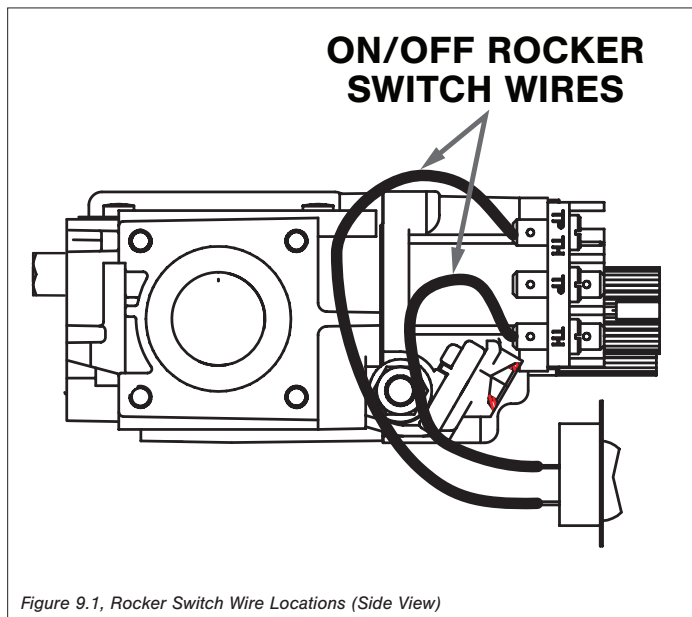
**NOTE:** The fireplace must be turned ON and OFF by the same method. For example, if the fireplace insert is turned on by the remote control, it must be turned off by the remote control.

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

If desired, a thermostat, a wall switch, or a remote control assembly may be installed to enable ON/OFF control of the main burner. Only one of these components may be installed. Follow instructions included with your chosen assembly.

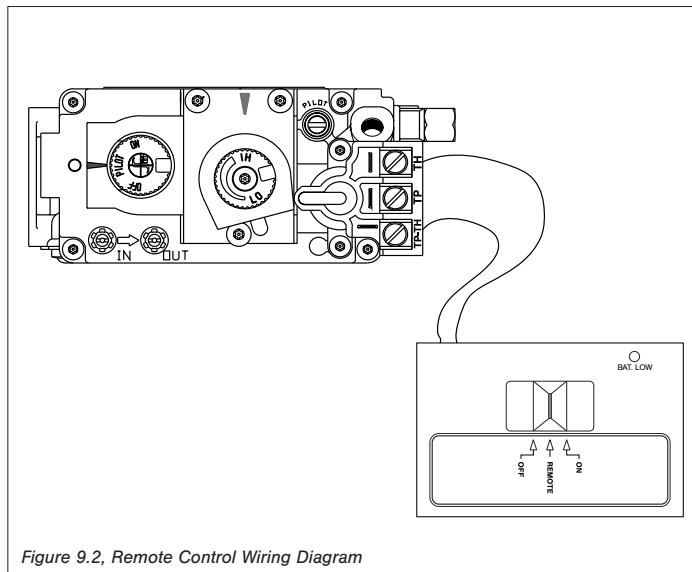
### 9.1 Rocker Switch Operation

- It is optional to disable the rocker switch operation of the main burner by disconnecting the rocker switch wires from the back of the gas valve.
- If the rocker switch wires are not disconnected, the ON/OFF rocker switch on the millivolt board must be in the OFF position for proper operation of the thermostat, wall switch, or remote control.
- If the rocker switch is ON, the main burner will operate until it is turned OFF by the rocker switch. These components will not turn the main burner OFF when it has been turned ON by the rocker switch.



### 9.2 Remote Control

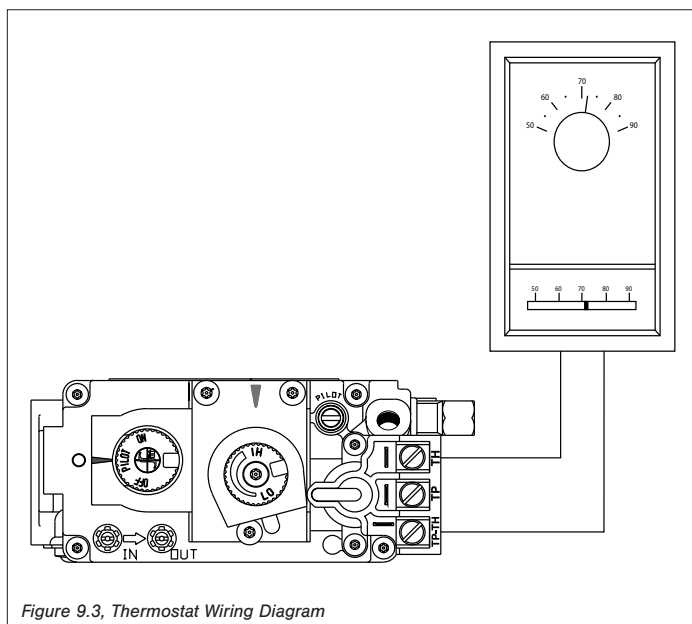
- Follow instructions included with the remote control.
- The insulated cover included with the remote control must be in place over the remote receiver to prevent overheating.



### 9.3 Thermostat and Wall Switch

**NOTE:** Installation of the thermostat or wall switch should only be performed by a qualified installer.

1. Run low-voltage wires from the terminals on the gas valve to the desired location of the component (thermostat or wall switch).
2. Attach the appropriate connectors to the wall switch wires or thermostat wires. Connect to top and bottom terminals marked TH and TP-TH on the gas valve.



# 10.0 LIGHTING AND SHUTDOWN

## FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. **BEFORE LIGHTING** smell around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS**
- Do not try to light any appliance.
  - Do not touch any electric switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- C. If you cannot reach your gas supplier, call the fire department.
- 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.

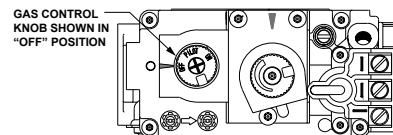
### CAUTION

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 toddler, 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. Remove the safety barrier to access the gas controls.
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. Reinstall the safety barrier.
13. Turn on all electric power to the appliance.
14. 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. Remove the safety barrier to access the gas controls.
4. Push in gas control knob slightly and turn clockwise to "OFF".  

5. Reinstall the safety barrier.

### 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.

# 11.0 ADJUSTMENT

## 11.1 Pressure Testing

**NOTE:** The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressure 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 the incoming pressure test with all other gas appliances on, or at full capacity in the house for a proper pressure reading. 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. A low pressure can cause a delayed ignition.

1. Loosen the inlet (IN) pressure tap by turning screw counterclockwise. See (A) in Figure 11.1.
2. Attach manometer using a 1/4 in (6 mm) I.D. hose.
3. Light pilot.
4. Turn the gas control knob to ON. Burner should not light. Note manometer reading.
5. Press the rocker switch to ON. Check pressure to ensure it is near maximum inlet pressure.
6. Press the rocker switch to OFF.
7. Turn the gas control knob to OFF.
8. Disconnect hose and tighten the inlet (IN) pressure tap by turning screw clockwise. Screw should be snug. Do not over tighten.

9. Relight pilot and turn the gas control knob to ON. Reattach manometer to the inlet pressure tap (A) to verify the tap is completely sealed. Manometer should read no pressure.

### 11.1.2 Manifold Pressure Test

1. Light pilot.
2. Loosen manifold (OUT) pressure tap by turning screw counterclockwise. See (B) in Figure 11.1.
3. Attach manometer to pressure tap using a 1/4 in (6 mm) I.D. hose.
4. Turn gas control knob to ON.
5. Press the rocker switch to ON and note manometer reading.
6. Disconnect manometer hose and tighten the manifold (OUT) pressure tap by turning screw clockwise. Screw should be snug. Do not over tighten.
7. Attach the manometer to the manifold pressure tap (B) to verify it is completely sealed. The manometer should read no pressure when the rocker switch is pressed to ON.

Table 11.1, Inlet Pressure

Fuel	Natural Gas	LP Gas
Gas Supply	Min - Max	Min - Max
Inlet Pressure Tap (A)	5" - 10.5" WC (1.25 - 2.62 kPa)	11" - 13" WC (2.74 - 3.24 kPa)

Table 11.2, Manifold Pressure

Fuel	Natural Gas	LP Gas
Gas Supply	Low - High	Low - High
Manifold Pressure Tap (B)	1.6" - 3.5" WC (0.40 - 0.87 kPa)	6.4" - 10" WC (1.59 - 2.49 kPa)

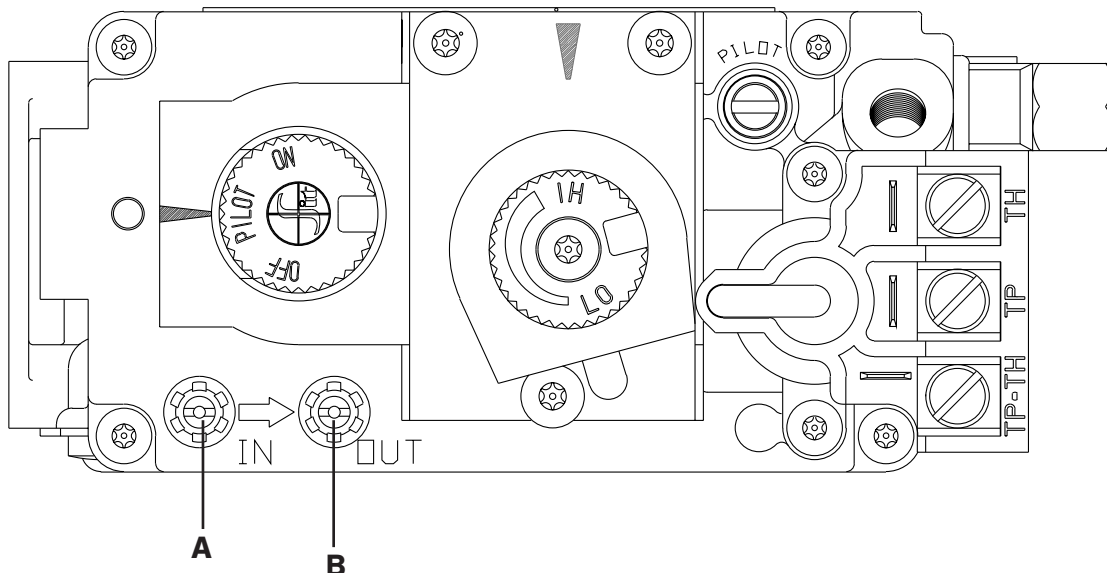


Figure 11.1, Pressure Check Taps Locations



## 11.2 Burner Flame Adjustments

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

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

### 11.2.1 Burner Venturi

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

**NOTE:** Burner venturi air shutter settings have been factory set. Refer to Table 11.3.

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	Air Shutter Opening
Natural Gas	1/8" (3 mm) OPEN
LP Gas	5/8" (15 mm) OPEN

#### 11.2.1.1 Venturi Adjustment

**NOTE:** If soot is present on the glass, check log positioning before adjusting the venturi. Logs must not block burner ports.

1. Remove the safety barrier and glass frame assembly.
2. Remove the log set and burner tube from firebox.
3. Loosen screw on venturi and adjust as necessary. Re-tighten screw.
4. Reinstall all components previously removed.

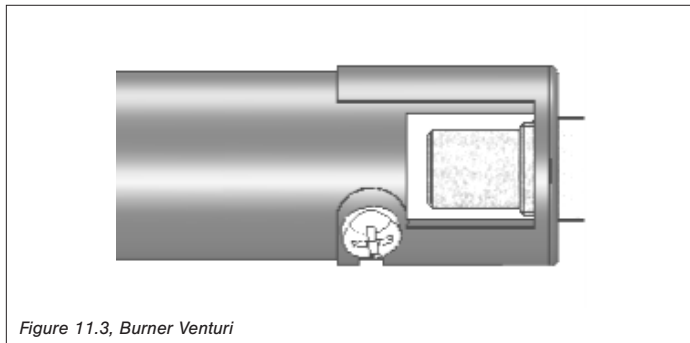


Figure 11.3, Burner Venturi

**IMPORTANT:** Slight adjustments to the venturi opening will create dramatic results. Adjust at slight increments until desired look is achieved. Always burn the fireplace insert for at least 15 minutes, and allow the appliance ample time to cool before making any further adjustments.

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

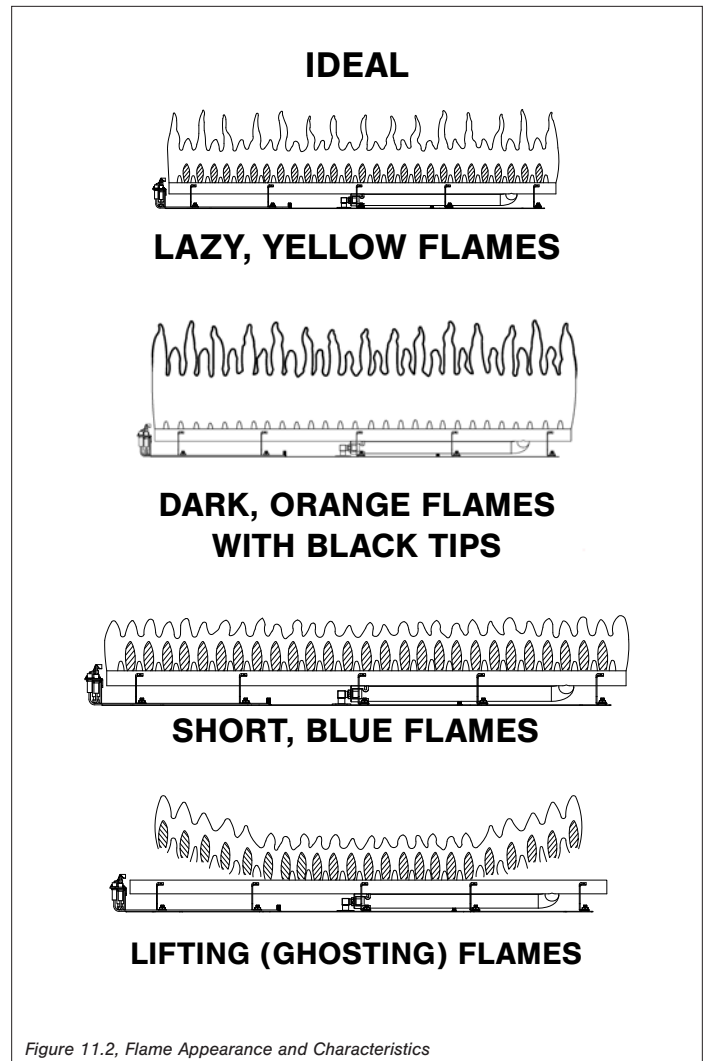


Figure 11.2, Flame Appearance and Characteristics

## 11.2.2 Restrictor

**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 restrictor adjustment to ensure proper performance.

Vertical terminations may display an active, compact flame. If this appearance is not desirable, a restrictor may need to be installed or modified after vent termination installation. Access to the vent exit for restriction can be reached through the fireplace baffle. Allow the fireplace to burn for 15 minutes before making any adjustments.

Flame Appearance	Draft Problem	Solution
Short, flickering	Excessive draft Not enough restriction	Add restrictor
Lifting or ghosting*	Insufficient draft	Remove inner ring(s) on restrictor, or Remove restrictor
*If flames continue to lift or ghost after opening the restrictor and verifying correct vent installation, shut off the gas supply and call a qualified service technician.		

### 11.2.2.1 Restrictor Installation

1. Remove the safety barrier and glass frame assembly.
2. Remove refractory (if installed) and log set.
3. Remove (2) screws securing baffle. Remove baffle to expose venting.
4. Bend the tabs on the restrictor (included in fireplace components packet) to approximately 80° angles. This will create tension when the restrictor is inserted into the exhaust pipe.
5. Insert restrictor into the 4 in (102 mm) exhaust pipe with the tabs pointing towards you.
6. Reinstall baffle by resting baffle front above flange along inside top of firebox opening. Tip baffle against rear firebox wall. Secure with (2) screws previously removed.
7. Reinstall all other components previously removed.

### 11.2.2.2 Restrictor Modification

1. Remove the safety barrier and glass frame assembly.
2. Remove refractory (if installed) and log set.
3. Remove (2) screws securing baffle. Remove baffle to expose venting.
4. Remove the restrictor from the 4 in (102 mm) exhaust pipe by pulling the restrictor down and out.
5. Make necessary modifications to achieve desired flame appearance.
6. Insert restrictor into the 4 in (102 mm) exhaust pipe with the tabs pointing towards you.
7. Reinstall baffle by resting baffle front above flange along inside top of firebox opening. Tip baffle against rear firebox wall. Secure with (2) screws previously removed.
8. Reinstall all other components previously removed.

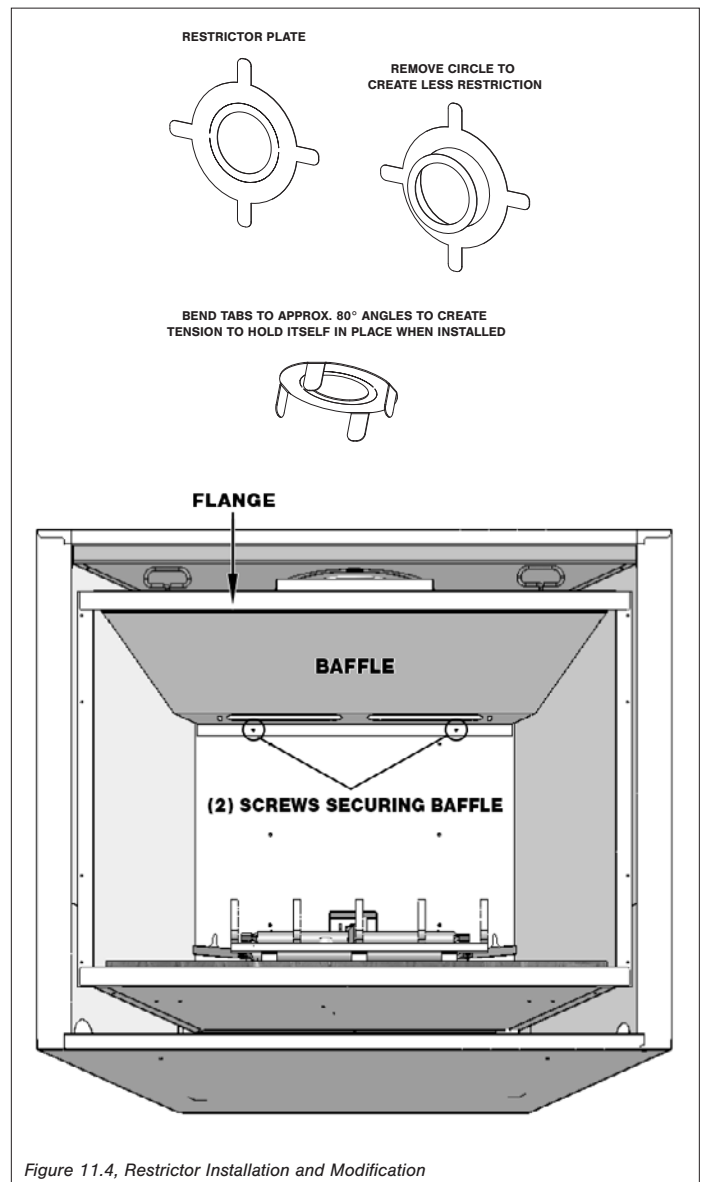


Figure 11.4, Restrictor Installation and Modification

# 12.0 TROUBLESHOOTING

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

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

Issue	Cause	Solution
<b>Burner will not light</b>	Lighting instructions not followed	Turn gas control knob to ON position. Turn the ON/OFF rocker switch to ON position. Put wall switch, remote control, or thermostat in heat demand position.
	Plugged main burner orifice	Remove blockage as necessary.
	Switching device is defective	Check remote, thermostat, or wall switch wires for proper connection. Place jumper wires across terminals at switch. If the burner lights, replace the defective switch, thermostat, or batteries in remote control as necessary. If switching device checks out as described above, place jumper wires across switches on the gas valve. If the burner lights, the switching wires are faulty or connections are bad. Replace as necessary.
<b>Burner will not stay lit</b>	Thermopile wires loose at valve terminals	Tighten if necessary.
	Thermopile wires ground out due to pinched wires	Free pinched wires if necessary.
	Improper refractory panel placement (if installed)	Refractory panels must be tight against firebox walls. It may be necessary to secure panels with high-temperature sealant, especially around the intake duct.
<b>Pilot and burner extinguish while in operation</b>	No LP gas in tank	Check LP (propane) tank. Refill if necessary.
	Incorrect glass frame assembly installation	Refer to Section 8.1 Glass Frame Assembly on page 26.
	Improper pitch on horizontal venting	¼ in (6 mm) per 12 in (30 cm) is required on horizontal venting
	Defective thermopile or thermocouple	Check thermopile and thermocouple for proper millivolts
	Inner vent pipe leaking exhaust gases back into firebox	Check for leaks and repair if necessary.
	Vent cap blockage	Remove debris if necessary.
<b>Glass sooting</b>	Improper log placement	Refer to Section 8.3 #TRF-500B Log Set Installation on page 28.
	Improper venturi setting	Venturi may need to be opened slightly to allow more air into the gas mix. Refer to Section 11.2.1 Burner Venturi on page 33.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
<b>Flame burns blue and lifts off burner</b>	Improper venturi setting	Venturi may need to be opened slightly to allow more air into the gas mix. Refer to Section 11.2.1 Burner Venturi on page 33.
	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.

## 12.1 Burner and Pilot System

The burner assembly may be removed for easier access to the control compartment. Refer to Section 8.4 Control Board Removal and Installation on page 29, for instructions.

**Performed by:** Qualified Service Person

**Frequency:** Annually

**Action:**

- Vacuum all components of the burner system.
- Visually check burner ports for blockage, especially near the pilot.
- Visually check pilot light and burner flame pattern when in operation. Flames should be steady, not lifting or floating. Refer to Figure 11.2, Flame Appearance and Characteristics on page 33 for more information.

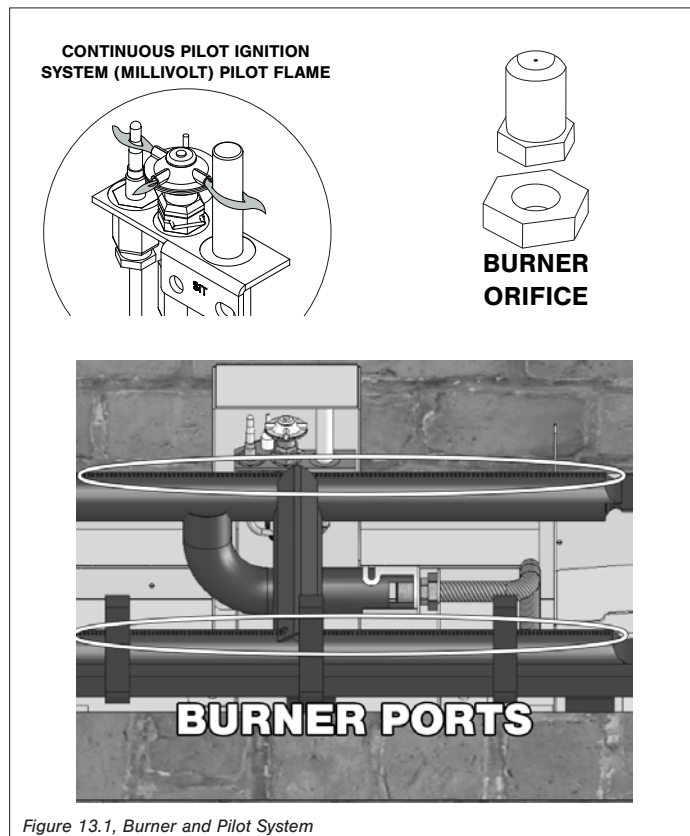


Figure 13.1, Burner and Pilot System

## 13.1 Fan(s)

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

**Performed by:** Qualified Service Person

**Frequency:** Every 6 months

**Action:**

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

## 13.2 Vent System

**NOTE:** If the vent-air intake system is disassembled for any reason, reinstall per instructions provided with installation. Refer to Section 7.0 Venting on page 22.

**Performed by:** Qualified Service Person

**Frequency:** Annually

**Action:**

- Examination of the vent system is required.
- The flow of combustion and ventilation air must not be obstructed.

## 13.3 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 with a soft cloth and a non-abrasive cleaner.
- Reinstall glass assembly and safety screen.
- Any safety screen, guard, or barrier removed for servicing the appliance must be replaced prior to operating the appliance.

**Performed by:** Qualified Service Person

**Frequency:** Annually

**Action:**

- Inspect the glass for cracks, scratches, and nicks.
- Verify the glass assembly is properly intact and not damaged.
- Replace the glass and the assembly #TRF-057T as necessary.
- Only Hussong Mfg. Co., Inc. will supply the replacement of glass assembly as a complete unit.

# 14.0 REPLACEMENT PARTS LIST

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

CONTROL BOARD AND PARTS			
Control Board - NG	TRF-770	Pilot Orifice - LPG	700-095
Control Board - LPG	TRF-771	Pilot Hood	700-098
S.I.T. Gas Valve - NG	700-086N	18 in. Flexible Gas Line - Black	700-213B
S.I.T. Gas Valve - LPG	700-087A	Flexible Gas Line - Valve to Burner Connection	700-226
On/Off Rocker Switch	700-023	NG Burner Orifice #39	700-239
Pilot/Generator/Thermocouple - NG	700-063	LPG Burner Orifice #.0625	700-625
Pilot/Generator/Thermocouple - LPG	700-063-1	Conversion Kit - NG	OCK-S39A
Piezo Igniter with nut (no wire)	700-090	Conversion Kit - LPG	OCK-S625A
Flexible Pilot Tubing (valve to pilot)	700-091	Burner Tube	TRF-035
Millivolt Generator	700-092	Burner Plate	TRF-35
Thermocouple	700-093	Pilot Shield	TRF-043
Pilot Orifice - NG	700-165		

GLASS AND GLASS GASKET	
Glass with gasket 26" x 35"	701-019T
Glass Gasket	900-006

SAFETY BARRIERS	
Full Rectangular Screen Front	TRF-FRSF
Prairie Screen Front	TRF-PSF
Rectangular Screen Front	TRF-RSF
Arched Mission Screen Front	TRFA-MSF
Rectangular Mission Screen Front	TRFR-MSF

LOG SET	
12 Piece Log Set	TRF-500B
Ember Panel	TRF-901E
#1 Log	T1
#2 Log	T2
#3 Log	T3
#4 Log	T4
#5 Log	T5
#6 Log	T6
#7 Log	T7
#8 Log	T8
#9 Log	T9
#10 Log	T10
#11 Log	T11
#12 Log	T12
Rock Wool Embers	900-REMB

**Hussong Manufacturing Co., Inc.**  
**P.O. Box 577**  
**204 Industrial Park Drive**  
**Lakefield, MN 56150-0577**  
**USA**  
**TRF-41-MV**

# LIMITED WARRANTY

## Kozy Heat Limited 10 Year Warranty

This limited 10 Year Warranty will not become effective until the Warranty Registration Form has been completed and mailed to Hussong Manufacturing Co., Inc., P.O. Box 577, Lakefield, MN 56150. This registration form must be received within 30 days of installation. Failure to do so may result in delayed warranty coverage and submission of proof of purchase will be required.

Hussong Manufacturing Co., Inc. warrants to the original purchaser of this Kozy Heat Fireplace, that it is free of defects in materials and workmanship at the time of manufacture.

Subject to the following conditions & requirements, Hussong Manufacturing Co., Inc. extends the following limited warranty under normal use and service, with respect to the Kozy Heat line of gas burning fireplaces.

### Year 1

Subject to the conditions & requirements listed below, within the first year from date of purchase, Hussong Manufacturing Co., Inc. shall, at its discretion, replace or repair any such defect in material or workmanship, at Hussong Manufacturing Co., Inc.'s expense, including reasonable labor costs to repair or replace the defective component, if a factory pre-authorization is given for the repair.

### Years 2 through 10

Subject to the conditions & requirements listed below, beginning with the first day of the second year and continuing through the tenth year, Hussong Manufacturing Co., Inc., will at its discretion, provide repair or replacement parts at current list prices for any defect in material or workmanship of components, including optional components and accessories (if available). Hussong Manufacturing Co., Inc. shall not be responsible for any installation, labor, transportation of other indirect costs.

## Limitation of Liability

To make a claim under this warranty, the purchaser must first contact the dealer/installer from whom the fireplace was purchased.

This limited warranty will be void if the fireplace is not installed by a qualified installer and according to the installation instructions. Use of unauthorized components will make this warranty null and void.

This limited warranty also is void if the fireplace is not operated, at all times, according to the operating instructions furnished.

This warranty is limited to defects in material and workmanship. It does not apply to any product that has been subject to negligence, misapplication, improper installation.

No person is authorized to extend the time of this warranty or to accept on Hussong Manufacturing Co., Inc.'s behalf any additional obligation of liability connected with the unit.

It is expressly agreed and understood that this warranty is Hussong Manufacturing Co., Inc.'s sole obligation and purchaser's exclusive remedy for defective fireplace equipment. Hussong Manufacturing Co., Inc. shall not be liable for any consequential, incidental or contingent damages whatsoever. The foregoing warranty is exclusive and in lieu of all other expressed warranties. Hussong Manufacturing Co., Inc. shall not be held to implied warranties or merchantability and fitness for a particular purpose. This warranty replaces all previous warranty policies.

Some states do not allow the exclusion or limitation of incidental or consequential damages or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

Hussong Manufacturing Co., Inc. reserves the right to make changes at any time, without notice, in design, material, specifications and prices. Hussong Manufacturing Co., Inc. reserves the right to discontinue models and products.

December 2014

## Warranty Conditions and Requirements

1. You are the original purchaser. This warranty is not transferable.
2. Installation of the fireplace is performed by a qualified installer.
3. Installation and operation must comply with installation and operation instructions.
4. Paint and glass gaskets are covered for 30 days from date of purchase.
5. Remote controls and all optional accessories are covered for 1 year from date of purchase.
6. This warranty does not offer coverage for Light Bulbs, Batteries or Fuses (whether factory, dealer or installer supplied). This includes any damage stemming from either component's nonuse.
7. Components broken, (including glass panels), during shipping, careless handling of components, or defects resulting from improper installation, misuse of the fireplace and components are not covered under this warranty.
8. This warranty does not cover any part of the fireplace or any components which have been exposed to or submerged underwater.
9. Hussong Manufacturing Co., Inc. must be notified by the dealer the fireplace was purchased from or a qualified installer/service technician of the defect.
10. Annual service of the fireplace as required in the installation manual, is performed by a qualified installer/service technician. (Copies of such service records may be required to claim a warranty).
11. All previous warranty/service has been performed by a qualified installer or service technician. (Copies of such service records may be required to claim a warranty).





# LIFETIME WARRANTY

LIFETIME WARRANTY COVERAGE WILL BE EXTENDED AS DESCRIBED BELOW PROVIDED ALL WARRANTY CONDITIONS AND REQUIREMENTS ARE MET AS OUTLINED IN THE 10 YEAR LIMITED WARRANTY POLICY.

## Lifetime Warranty Coverage

### LIFETIME WARRANTY IS EXTENDED AS FOLLOWS:

Hussong Manufacturing Co., Inc. warrants to the original purchaser that the firebox, heat exchanger, fiber logs, burner tube and glass panel of this Kozy Heat Fireplace will not be defective in material or workmanship under normal use and service for as long as you own this product. If any of these components fail due to defects in material and workmanship under normal use and service, Hussong Manufacturing Co., Inc. will, at its sole discretion, repair or replace the defective component. This LIFETIME WARRANTY does not cover any installation, labor, transportation or other indirect cost arising from defective components.

## Limitation of Liability

This Lifetime Warranty will be void if the fireplace is not installed by a qualified installer and according to the installation instructions. Use of unauthorized components will make this warranty null and void. This Lifetime Warranty also is void if the fireplace is not operated, at all times, according to the operating instructions furnished. This warranty is limited to defects in material and workmanship of components specified. It does not apply to any product that has been subject to negligence, misapplication, improper installation.

No person is authorized to extend the time of this Lifetime Warranty or to accept on Hussong Manufacturing Co., Inc.'s behalf any additional obligation of liability connected with the unit.

Hussong Manufacturing Co., Inc. may fully discharge all obligations with respect to this Lifetime Warranty by refunding the wholesale price of the defective component(s).

It is expressly agreed and understood that this Lifetime Warranty is Hussong Manufacturing Co., Inc.'s sole obligation and original purchaser's exclusive remedy for defective fireplace equipment. Hussong Manufacturing Co., Inc. shall not be liable for any consequential, incidental or contingent damages whatsoever other than those incurred by Hussong Manufacturing Co., Inc. to repair or replace the defective component. The foregoing warranty is exclusive and in lieu of all other expressed warranties. Hussong Manufacturing Co., Inc. shall not be held to implied warranties, including but not limited to the implied warranties or merchantability and fitness for a particular purpose. This lifetime warranty replace all previous lifetime warranty policies.

Hussong Manufacturing Co., Inc. reserves the right to make changes at any time, without notice, in design, material, specifications and prices. Hussong Manufacturing Co., Inc. reserves the right to discontinue models and products.

**To activate this Lifetime Warranty coverage, this registration card must be completed and mailed with your completed 10 Year Limited Warranty form within 30 days of installation to the following address:**

**Hussong Manufacturing Co., Inc.  
P.O. Box 577  
204 Industrial Park Drive  
Lakefield, MN 56150-0577**

September 2011

CUT ALONG DOTTED LINE

**PURCHASER NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**TELEPHONE:** \_\_\_\_\_  
\_\_\_\_\_

**INSTALLER NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_  
\_\_\_\_\_

**TELEPHONE:** \_\_\_\_\_  
\_\_\_\_\_

**INSTALLATION DATE:** \_\_\_\_\_

**MODEL NUMBER:** \_\_\_\_\_

**SERIAL NUMBER:** \_\_\_\_\_

**KOZY  HEAT**  
FIREPLACES  
HUSSONG MANUFACTURING CO., INC.