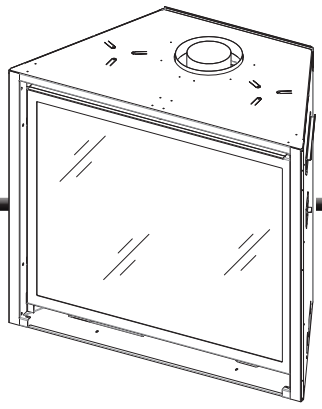
KOZY HEAT
FIREPLACES
HUSSONG MANUFACTURING CO., INC.



Installation and Operation Manual

CARLTON-39

Model #CAR-39
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.**

Tested & Listed By O-T-L Portland Oregon USA C US
OMNI-Test Laboratories, Inc.

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

⚠ 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.

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.

English and French installation manuals are available through your local dealer. Visit our website *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* ou scannez ce code QR pour notre application mobile.

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

Report No: 0216GF046S • Rev. 05, May 2017

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, 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 40 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 to 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 Z21.88-2016/CSA 2.33-2016, 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 (½) 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
C39-160A	Control Board Assembly
700-203	Manual Gas Shut-off Valve
C39-50A	Log Package
C39-057T	Glass Frame Assembly
IPI-075	Fan Kit (1)-75 CFM
700-508	Remote Control
SL-085	5 in (127 mm) Restrictor Plate
C39-HHS	Vent Heat Shield Assembly

2.1.1 Additional Components Required

Refer to 8.0 Venting on page 27, for approved vent systems.

2.2 Heating Specifications

	Natural Gas	Propane
Maximum Input Rating	40,000 BTU/h (11.7 kW)	41,000 BTU/h (12.0 kW)
Minimum Input Rating	13,000 BTU/h (3.8 kW)	13,500 BTU/h (4.0 kW)
Manifold Pressure (High)	3.8” WC (0.95 kPa)	11” WC (2.74 kPa)
Manifold Pressure (Low)	1.1” WC (0.27 kPa)	2.9” WC (.72 kPa)
Orifice Size (DMS)	FRONT: 44 BACK: 47	FRONT: 55 BACK: 56

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 you 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	38-3/4	19-15/16	22	35-3/4	29-7/16	10	8-7/16
Millimeters	876	984	50	559	908	747	254	214

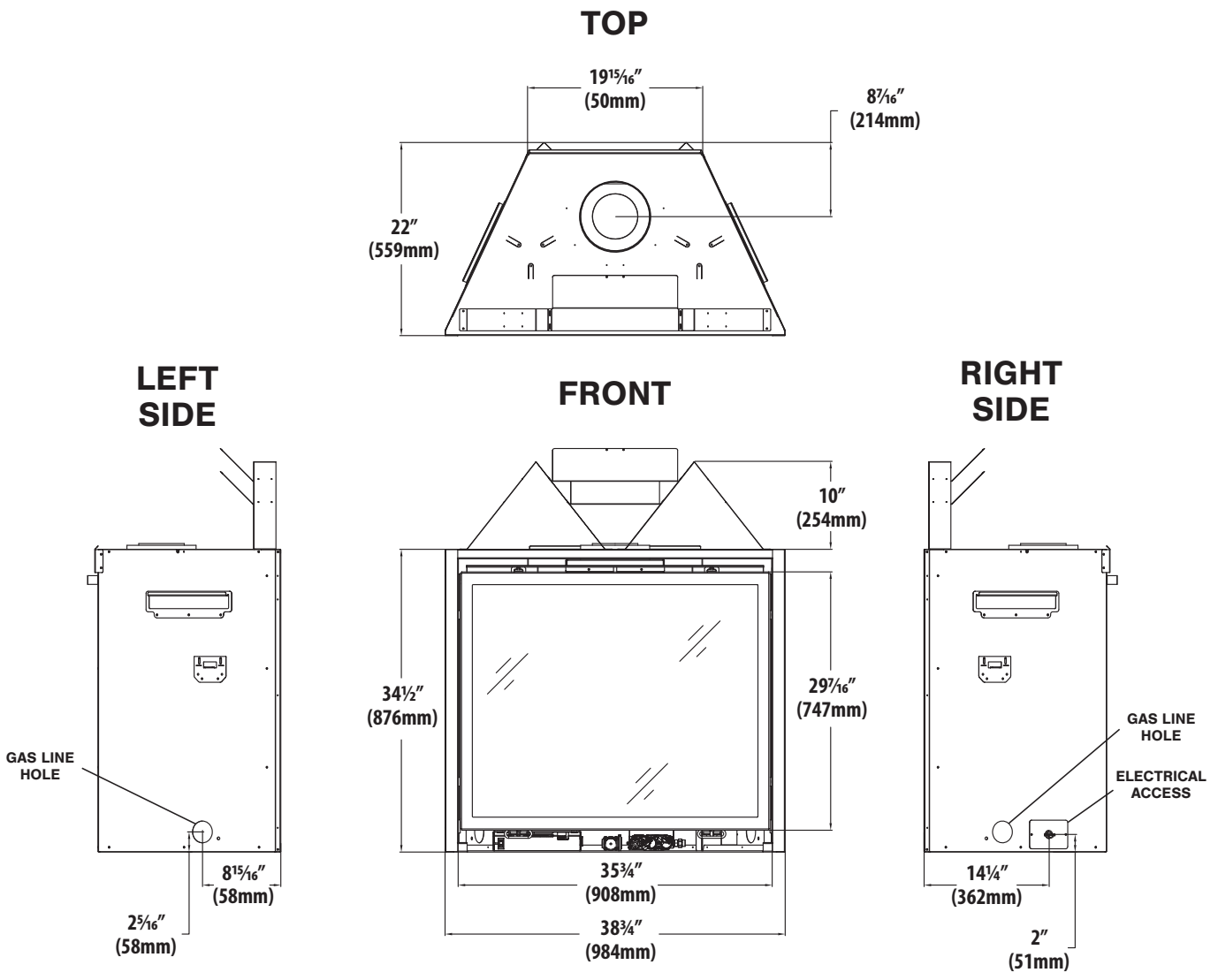


Figure 2.1, Appliance Dimensions

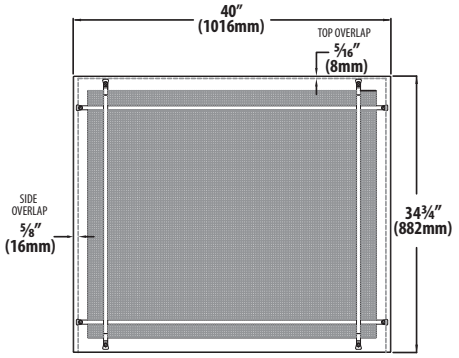
2.4 Safety Barrier Dimensions

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.

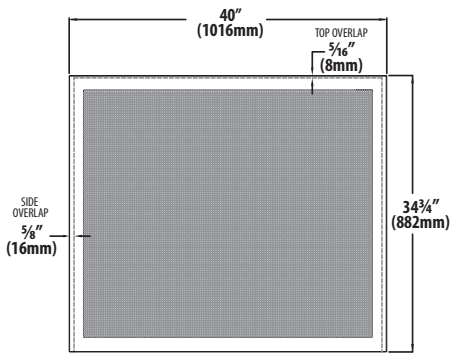
If the barrier becomes damaged, the barrier shall be replaced with Hussong Mfg.'s barriers for this appliance. Only doors certified with the appliance shall be used.

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.

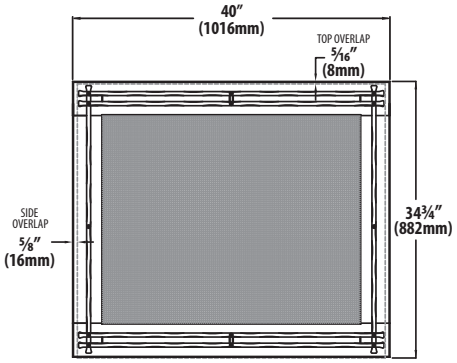
Please refer to 5.4 Safety Barrier Installations on page 22 for installation, adjusting the built-in louver, and mounting options.



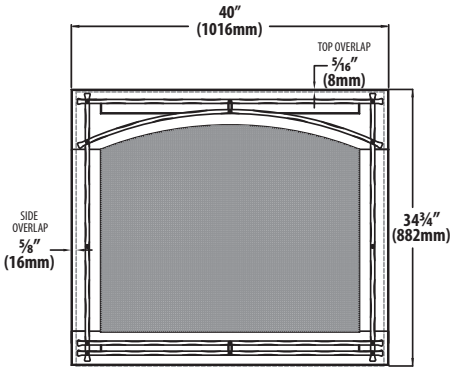
C39-PSF
TOP AND SIDES OVERLAP



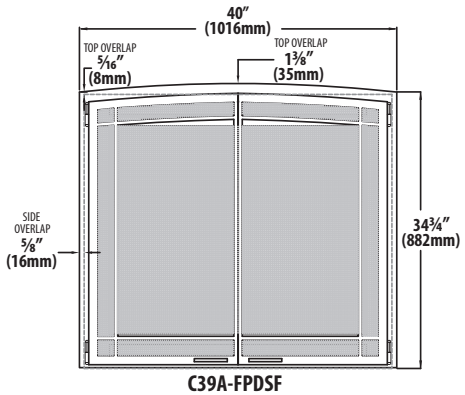
C39-FRSF
TOP AND SIDES OVERLAP



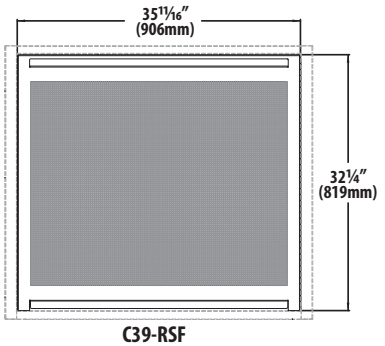
C39R-MSF
TOP AND SIDES OVERLAP



C39A-MSF
TOP AND SIDES OVERLAP



C39A-FPDSF
TOP AND SIDES OVERLAP



C39-RSF
NO OVERLAP - INSIDE FIT

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 Stand-off Assembly and Installation

WARNING: The top stand-offs provide the 10 in (254 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.

Top stand-off brackets must be formed and attached prior to positioning fireplace into framed opening.

NOTE: If installing trim kit assembly #C39-FTK, please refer to Section 5.3 Optional Trim Kit Assembly #C39-FTK on page 21 before installing stand-offs.

1. Remove and save (4) screws securing stand-off heat shields and stand-off brackets on top of the fireplace.
2. Form each top stand-off bracket by bending at perforations, as shown.
3. Align the holes in the formed top stand-offs with the holes in the fireplace top. Secure with the (4) screws previously removed along with (4) screws located on top of the fireplace.
4. Form stand-off heat shields as shown. The flange will face up and to the back of the fireplace.
5. Align the in the stand-off heat shields with the holes in the top stand-off brackets Secure with (8) screws provided in the fireplace components packet.

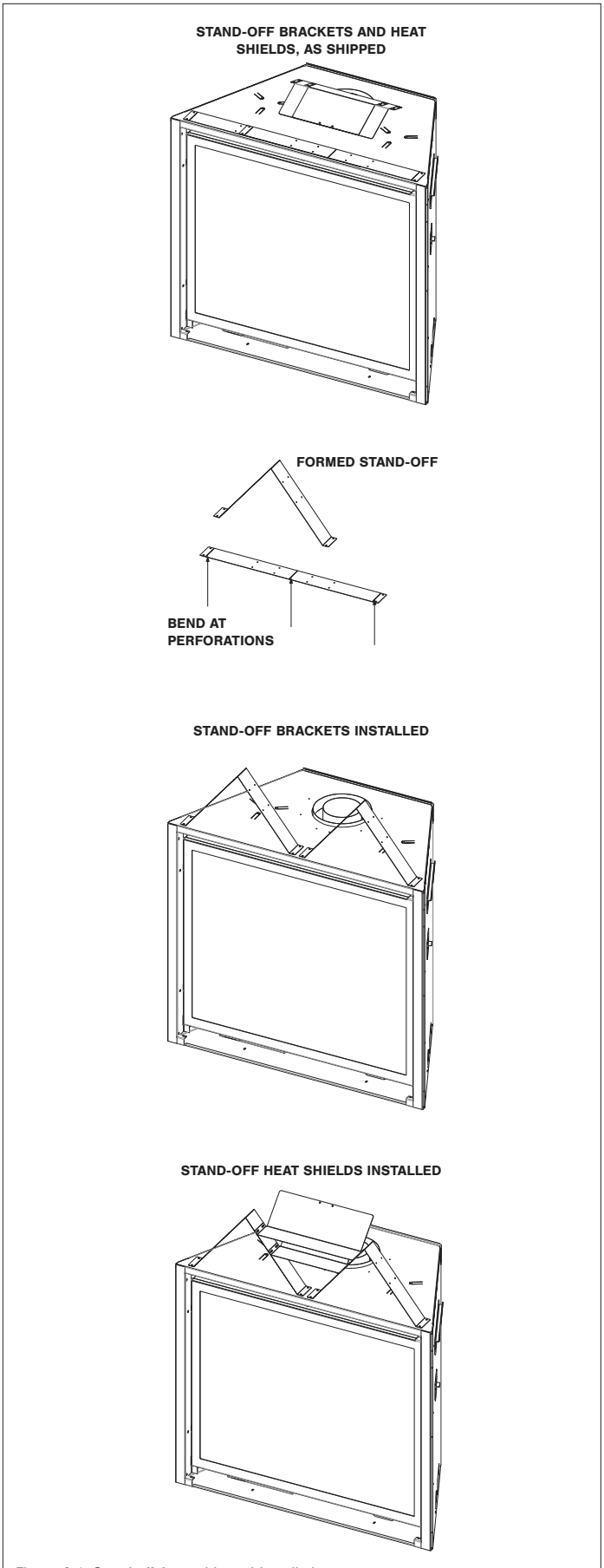


Figure 3.1, Stand-off Assembly and Installation

3.3 Clearances to Combustibles

Table 3.1, Minimum Appliance Clearances to Combustible Material		
From appliance top stand-offs	0 in	0 mm
From appliance left and right side stand-offs	0 in	0 mm
From appliance back stand-offs	0 in	0 mm
From appliance corners	1/4 in	6 mm
From appliance front	36 in	914 mm
From appliance top to ceiling	30 in	762 mm
Appliance sides to adjacent sidewall	1-1/4 in	32 mm
Top of appliance to 3/4 in (19 mm) trim	10 in	254 mm
Mantel 10 in (254 mm) deep from appliance top	14 in	356 mm

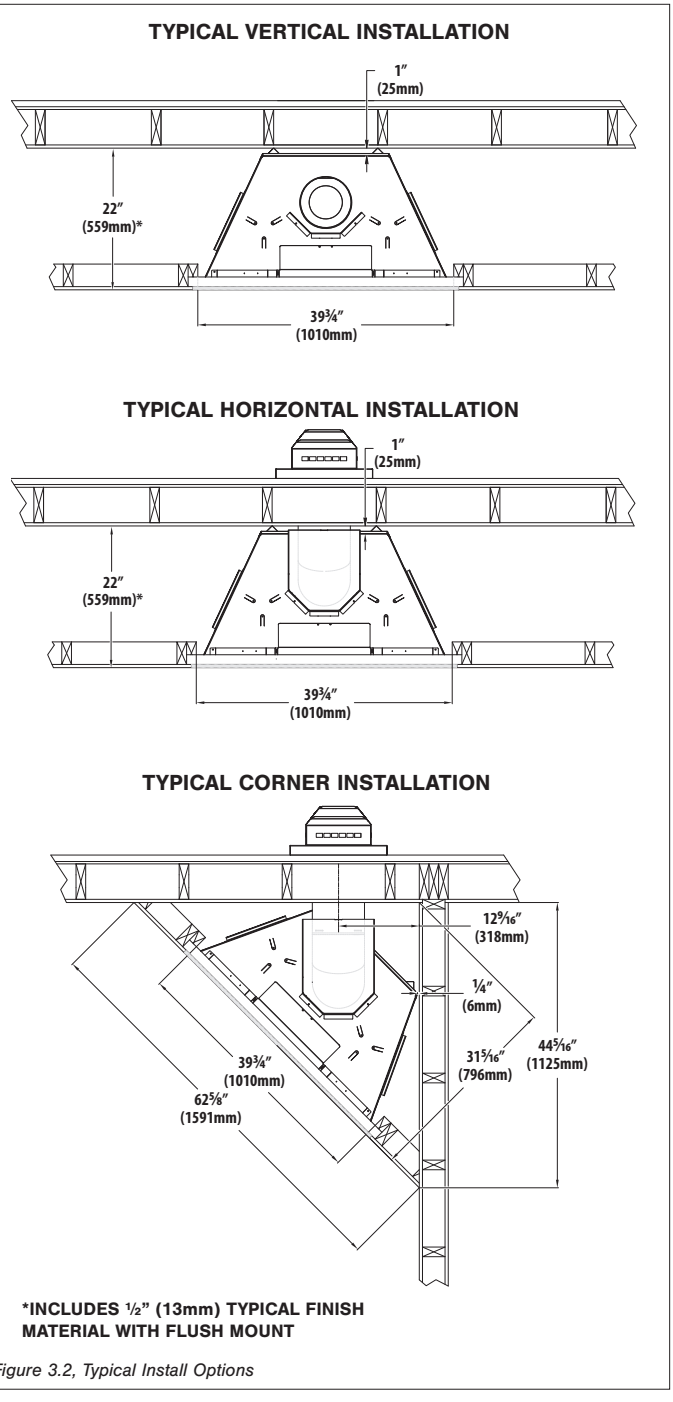


Figure 3.2, Typical Install Options

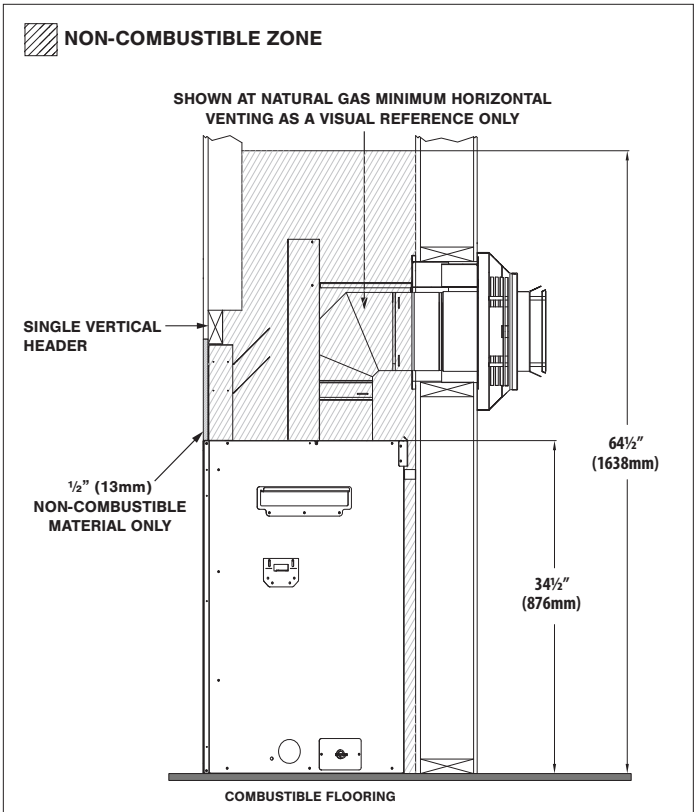


Figure 3.3, Non-Combustible Zone

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.
- If installing the optional heat duct kit, refer to Section 4.0 #970 Heat Duct Kit on page 16.

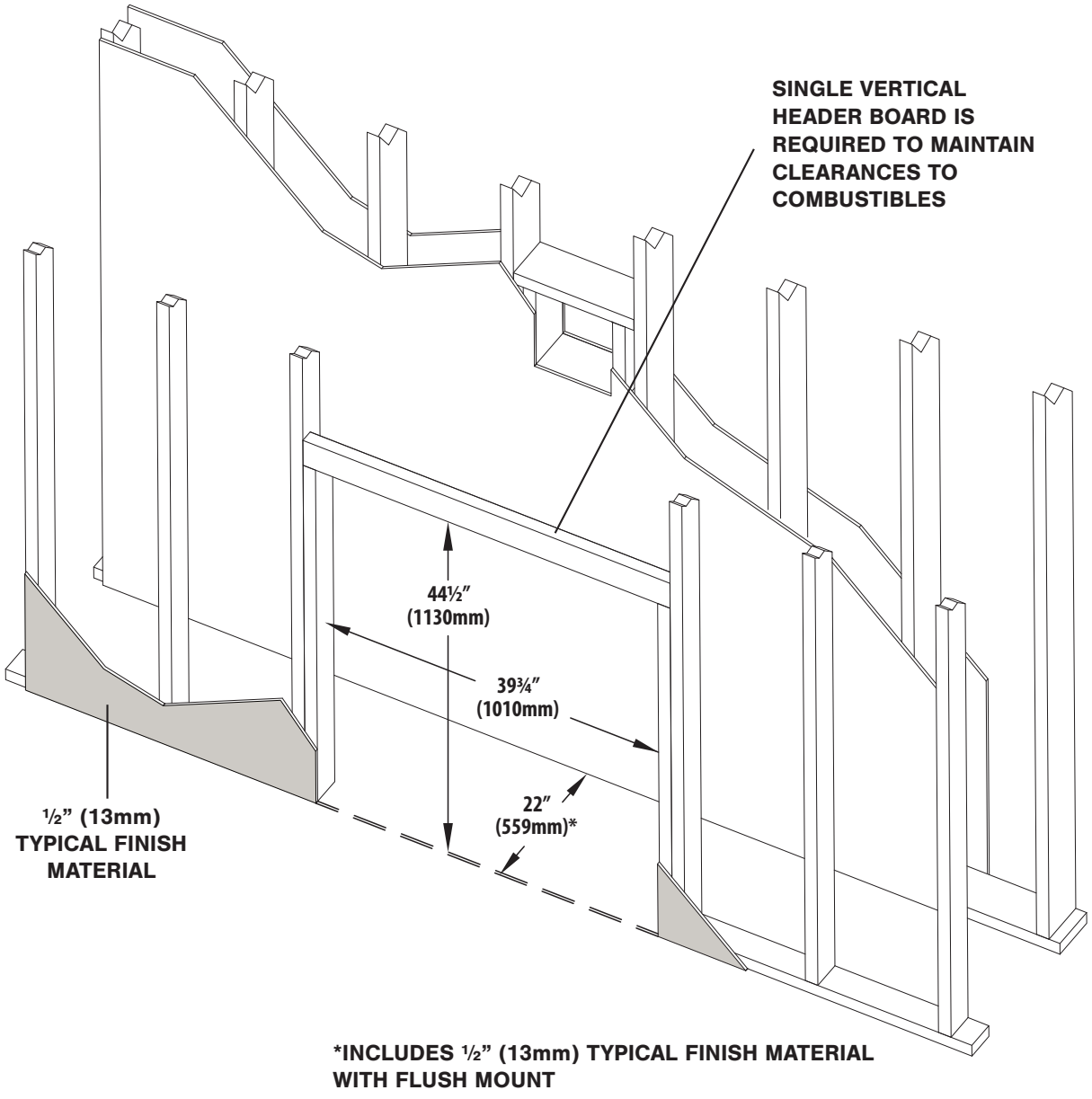


Figure 3.4, Finished Opening Dimensions

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.

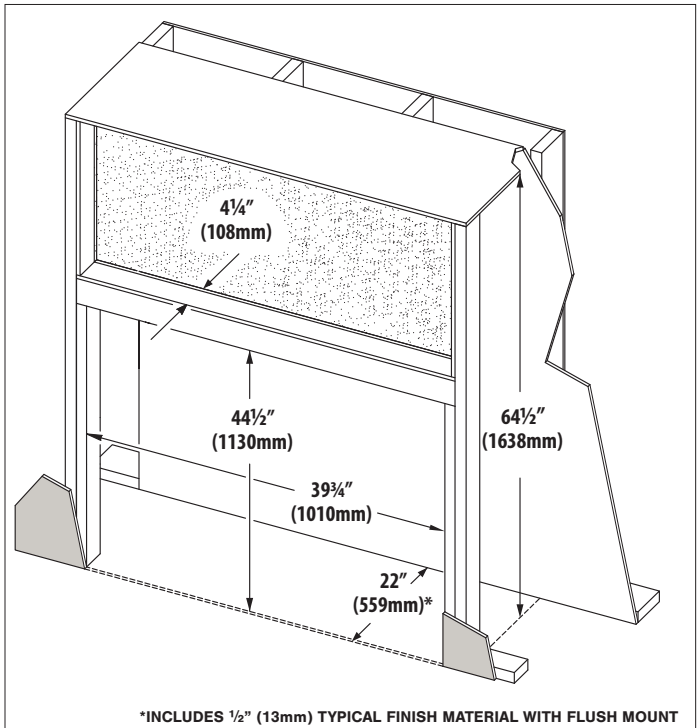


Figure 3.5, Recess Framing

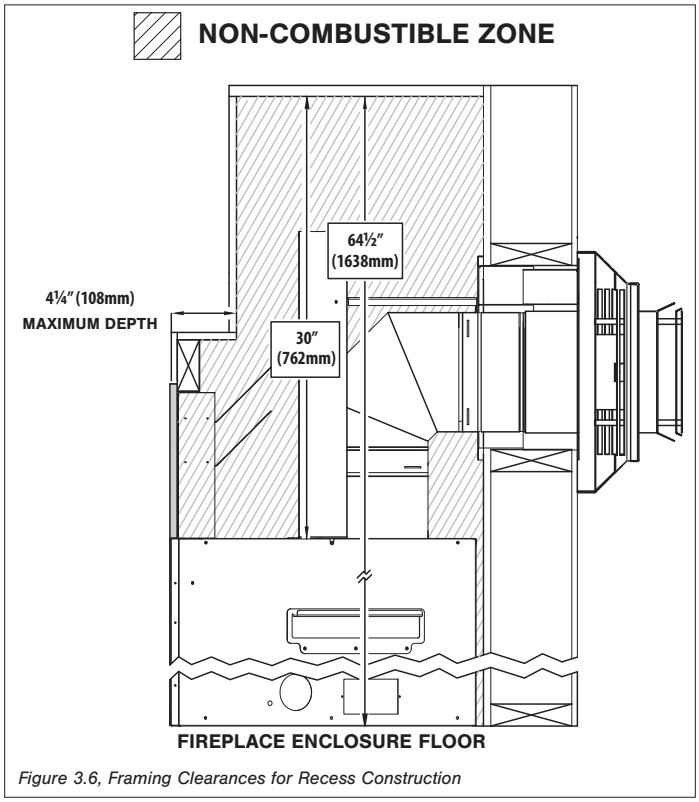


Figure 3.6, Framing Clearances for Recess Construction

3.7 Vent Termination Framing

IMPORTANT: Vent cap location must be in compliance with Section 7.2 Minimum Termination Clearances on page 26.

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

3.7.2 Horizontal Terminations

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

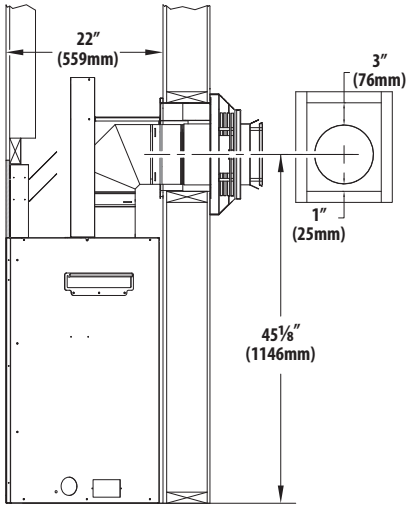
3.7.2.1 Wall Pass Through

Kozy Heat's #800-WPT series, or wall thimble products that comply with the required 3 in (76 mm) top clearance 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.

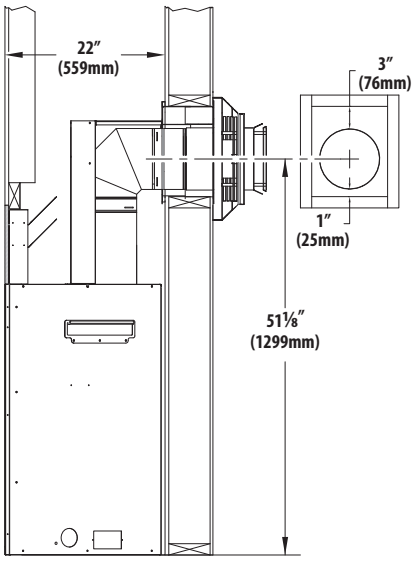
Wall Thickness	**Part Number**
4½ in (114 mm) to 6½ in (165 mm)	#800-WPT
6½ in (165 mm) to 12½ in (318 mm)	#800-WPT2
7½ in (191 mm) to 12 in (305 mm)	#800-WPT3

1. Measure from floor level of the fireplace to the center of where the vent pipe will penetrate the wall. 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.
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.

NATURAL GAS MINIMUM HORIZONTAL TERMINATION



PROPANE MINIMUM HORIZONTAL TERMINATION



NATURAL GAS AND PROPANE FLEX PIPE MINIMUM HORIZONTAL TERMINATION

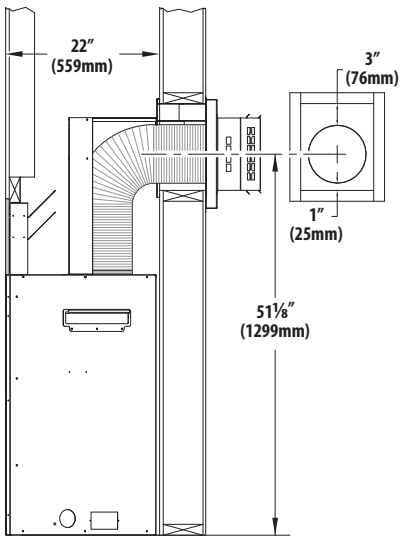


Figure 3.7, Vent Termination Locations

4.0 #970 HEAT DUCT KIT

CAUTION : Read and follow instructions carefully prior to and during the installation of the optional heat duct kit.

WARNING: Installation of this heat duct kit and its electrical wiring must be performed by a qualified service person, and must be 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.

Do not substitute the flexible heat duct pipe with plastic vent pipe.

4.1 Kit Components

NOTE: A junction box, cover, and hardware must be purchased to mount the speed control.

(1) 6" (152 mm) diameter flexible heat duct pipe, expandable to 20 ft. (6.10 m)

(1) Register mounting frame with collar

(1) Register cover with screws

(1) Duct collar

(1) Fan assembly

(1) Fan housing cover plate

(1) Speed control mounting bracket

(1) Speed control

(2) Mounting brackets

(11) Sheet metal screws

(4) Sheet rock screws

(3) Flange nuts

(1) Strapping cord

(3) Wire nuts

(2) Fan wire connectors

4.2 Specifications

- The appliance is manufactured with (2) heat duct knock-outs. One, or both, may be utilized.
- The register mounting frame is designed to fit between 2" x 4" stud walls, 16 in (406mm) on center.
- An oval duct pipe (equivalent to 6 in [152 mm] round) can be used in conjunction with the included 6 in (152 mm) diameter flexible heat duct pipe, included with this kit. It must be purchased from a HVAC supplier.
- Carefully plan location of duct pipe runs and register in relation to fireplace.

Table 4.1, Heat Duct Clearances

From flexible duct to combustibles	0 in	0 mm
From air duct to ceiling	2 in	51 mm

Table 4.2, Heat Duct Vent runs

Vent Run	Minimum		Maximum	
Any direction, including downward	2 ft	609 mm	20 ft	6.1 mm

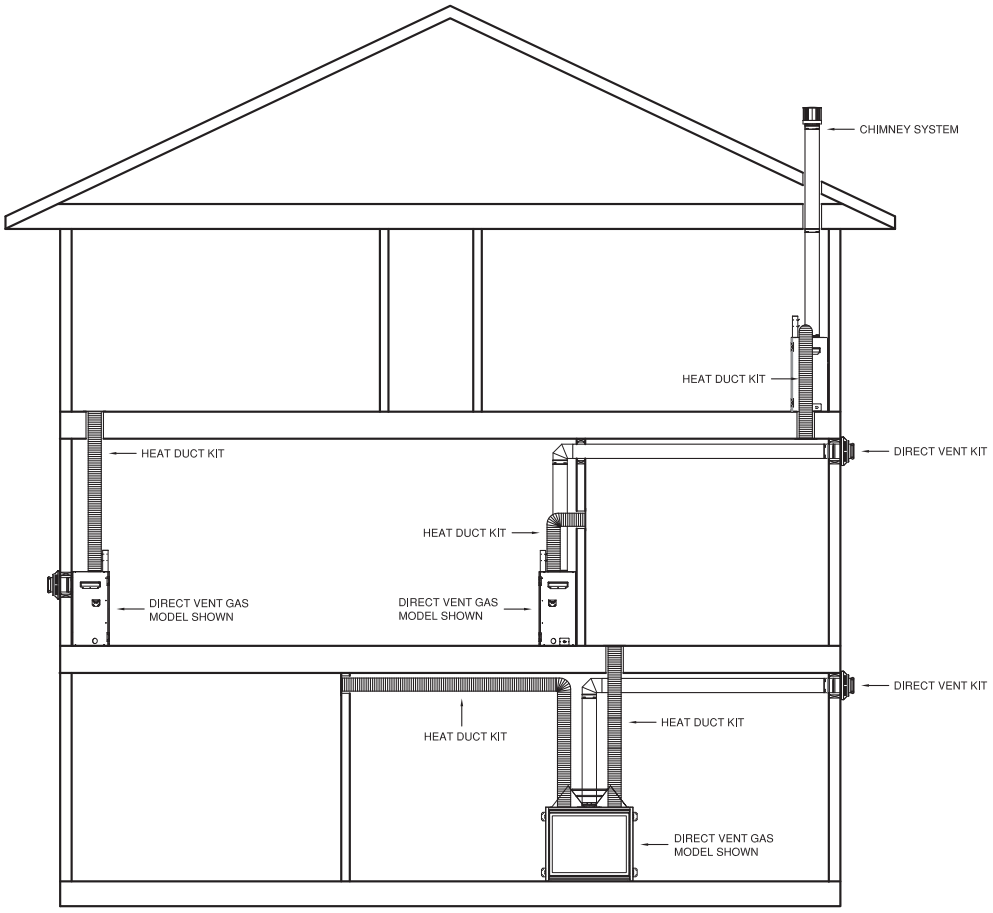


Figure 4.1

4.3 Attach Heat Duct to Fireplace

1. Bend the tabs on fireplace top up. With circulation holes facing down, use (3) screws to fasten the tabs to the duct collar.
2. Secure the flexible pipe to the duct collar. Verify screws penetrate both the flexible pipe and the duct collar.
3. Do not cover circulation holes on the duct pipe.
4. Position the fireplace in the desired location.

Figure 4.2

4.4 Install Register Mounting Frame and Junction Box

1. The register mounting frame and the fan housing are designed to fit between 2" x 4" stud walls, 16 in (406mm) on center. Additional framing is required if larger opening exists.
2. Locate and mark the position of the register.
3. Insert the register mounting bracket into the 16 in (406 mm) opening.
4. Level and adjust the mounting bracket. The sides of the bracket should be flush with the front of the framing studs, and the front of the bracket should protrude ½ in from the studs to allow for ½" sheetrock installation.
5. Secure the mounting bracket to framing with the provided (4) sheetrock screws.
6. Install the junction box on the wall at desired location. The junction box is used to house the speed control assembly, which controls fan speed and operation.

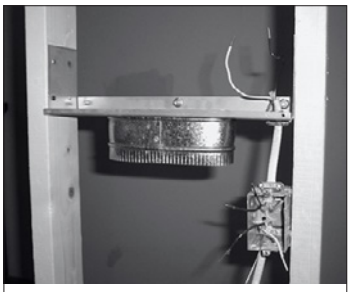


Figure 4.3

4.5 Install and Wire Fan Assembly

1. Attach, but do not tighten, flange nuts to the mounting studs on the back of the register mounting bracket.
2. Align (3) slots on the fan assembly to studs, then slide the fan into position. Tighten the flange nuts to secure.
3. Slide the included fan wire connectors into the fan terminals.
4. Properly wire the 110 VAC wire to the hot and neutral fan wires, and the speed control wires, with provided wire nuts.
5. Run 110 VAC to fan speed control, then from the fan speed control through the romex connector (on the register bracket).
6. Secure grounding wire to the grounding screw installed in register mounting bracket. **Fan must be properly grounded.**

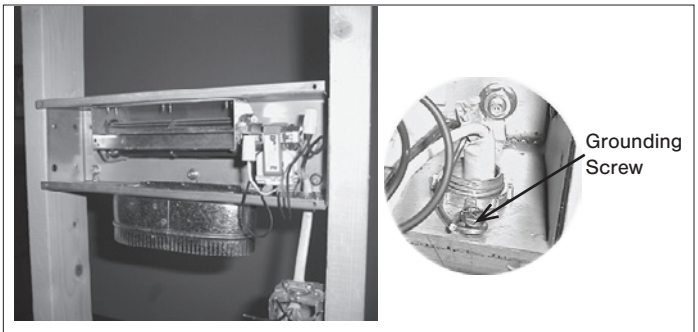


Figure 4.4

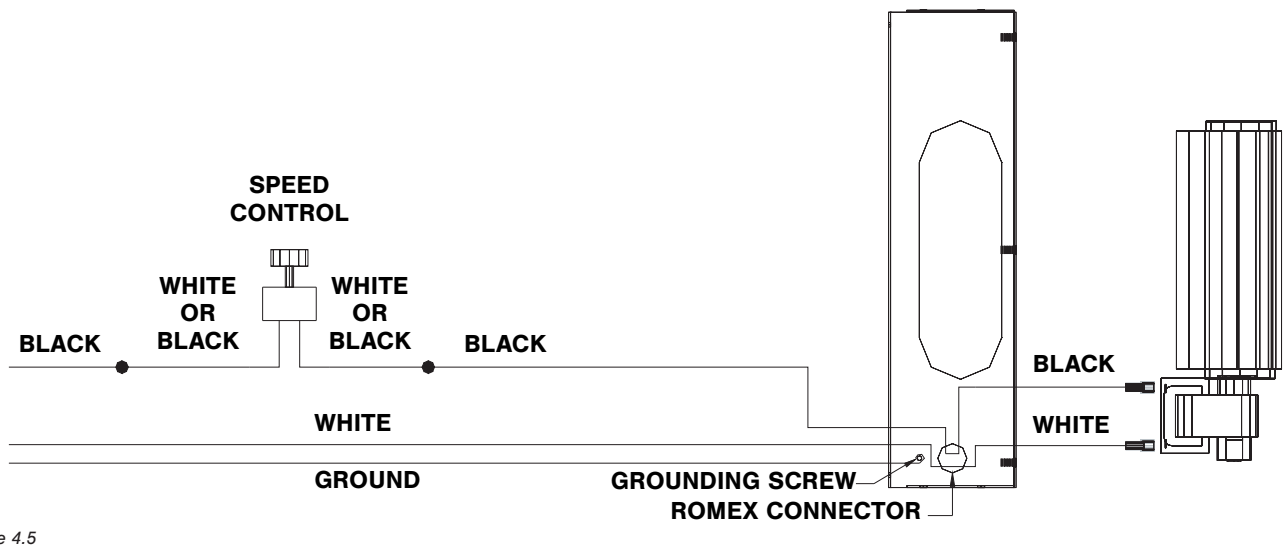


Figure 4.5

4.6 Run and Secure Duct Pipe

4.6.1 Oval Duct Pipe

1. Run the oval and round duct pipe to the register location.
2. Shape the 6 in (152 mm) round duct pipe to fit outside the oval duct pipe. Secure with the screws provided.
3. Slide the oval duct pipe over the oval collar on the register mounting bracket. Secure with the sheet metal screws provided.
4. OPTIONAL: Secure duct pipe with any additional screws provided.

Figure 4.6

4.6.2 Round Duct Pipe

1. Run the round duct pipe to the register location.
2. Shape the 6 in (152 mm) round duct pipe so it will fit outside the oval collar on the register mounting bracket.
3. Slide the round duct pipe until it touches the register mounting bracket.
4. Position the locking strap around the 6 in (152 mm) duct pipe, above the crimped metal.
5. Pull the locking strap tight enough to firmly secure the duct pipe.

4.7 Complete the Installation

1. Install sheetrock or wall finish material as desired before attaching the register cover and fan housing cover plate.
2. Position the cut-out portion of the fan housing cover plate over the fan chute to allow air flow. Align the holes in the fan housing cover plate to the corresponding holes in the register mounting plate and fan assembly. Secure with (4) screws provided.
3. Slide the speed control through the mounting bracket. Secure with the mounting nut.
4. Secure mounting bracket to the junction box with the (2) screws provided.
5. Center the register cover over the fan housing cover plate to install. Secure register cover to stud wall with the provided mounting screws.
6. Attach a cover plate (not provided), then install the control knob for the speed control.
7. Complete the fireplace installation by following the instructions included with the fireplace.

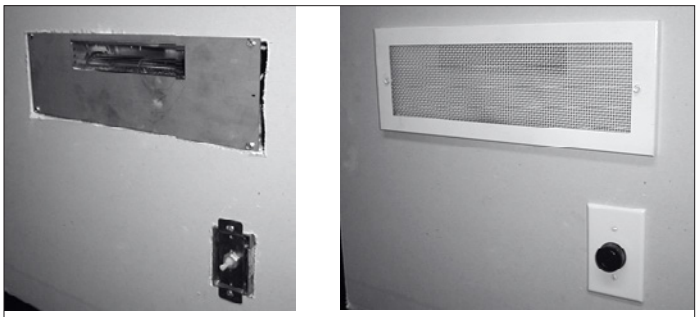


Figure 4.7

4.8 Operating Instructions

1. After complete fireplace installation and subsequent initial burn period, turn the fireplace burner ON by following the lighting instructions included with the fireplace.
2. Allow the fireplace to produce heat for approximately 15 minutes.
3. To operate the heat duct fan, turn the wall-mounted speed control clockwise until it stops. The fan should turn on and be operating at its highest speed. Adjust the speed to desired air flow level by turning the speed control knob counter-clockwise until it ‘clicks’ off.

4.9 Maintenance

- The duct register must be kept clear and unobstructed. Clean and vacuum as necessary to remove dust, lint, etc. from fan which will inhibit air flow.
- Detach the register cover and the fan housing cover plate at least once a year to remove dust, lint, etc. from the fan. More frequent cleaning may be necessary.
- The fireplace must be maintained and serviced as outlined in the unit installation and operating instructions.

5.0 FACING AND FINISHING

5.1 Nailing Flange Assembly and Installation

NOTE: Depending on facing material, tabs can be adjusted forward or backward up to ½ 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 ½ in (13 mm) clearance from the sides of the fireplace to framing.**

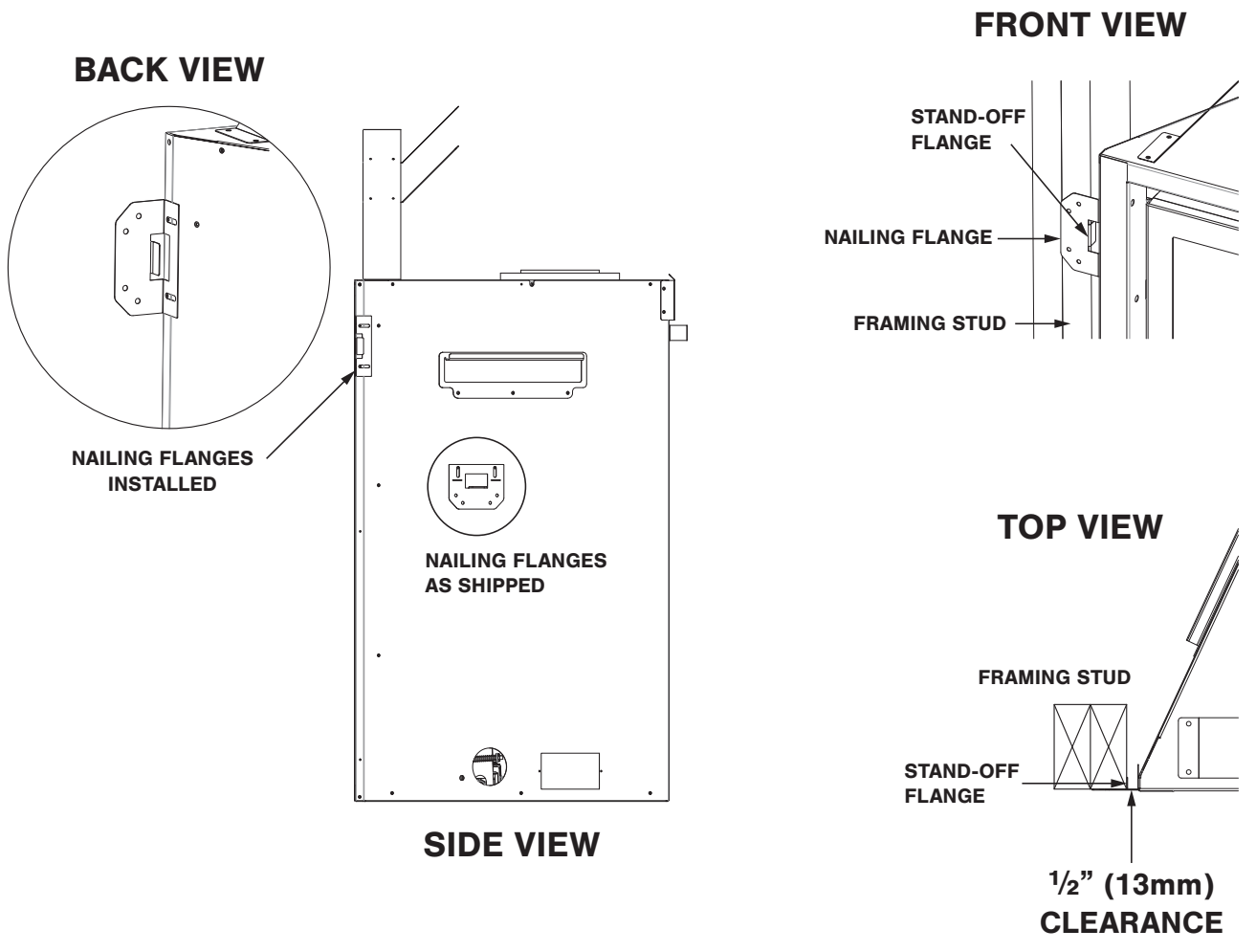


Figure 5.1, Nailing Flange Installation

5.2 Mantel and Finishing Requirements

5.2.1 Mantel Projections

WARNING: All minimum clearances to combustible material MUST be maintained.

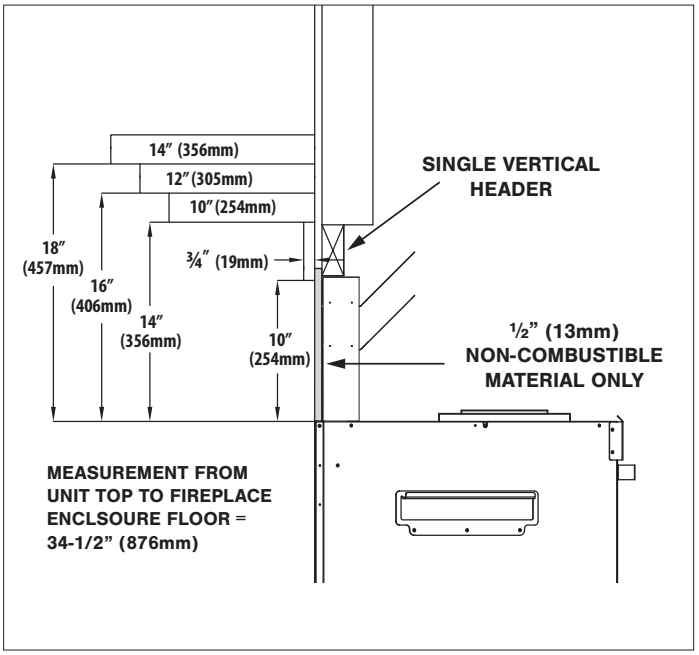
Combustible Mantel Projections - Minimum Vertical and Maximum Horizontal: 14 in (356 mm) is the minimum vertical clearance from the top of the appliance to 10 in (254 mm) maximum depth of a combustible mantel. Combustible mantels at the minimum vertical clearance may be 0 in (0 mm) to 10 in (254mm) depth with minimum vertical clearance 14 in (356 mm).

Non-combustible Mantel Projections - Minimum Vertical and Maximum Horizontal: A minimum vertical clearance of 6 in (152 mm) above the appliance to a maximum 6 in (152 mm) depth of a non-combustible mantel. Follow projection 1 in (25 mm) up for every 1 in (25 mm) deeper.

5.2.2 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.



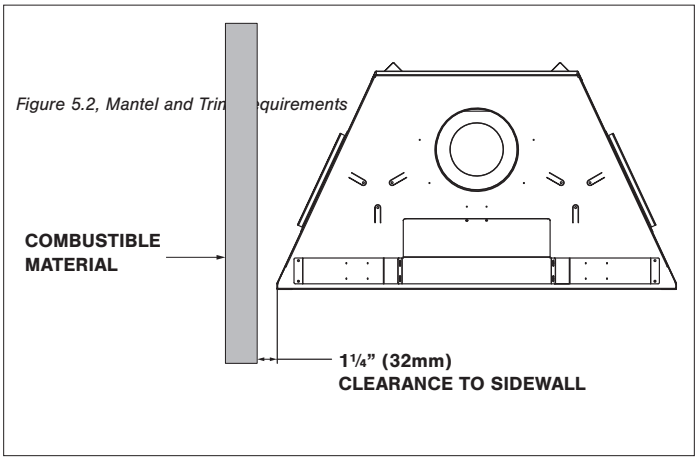


Figure 5.3, Clearance to Adjacent Sidewall

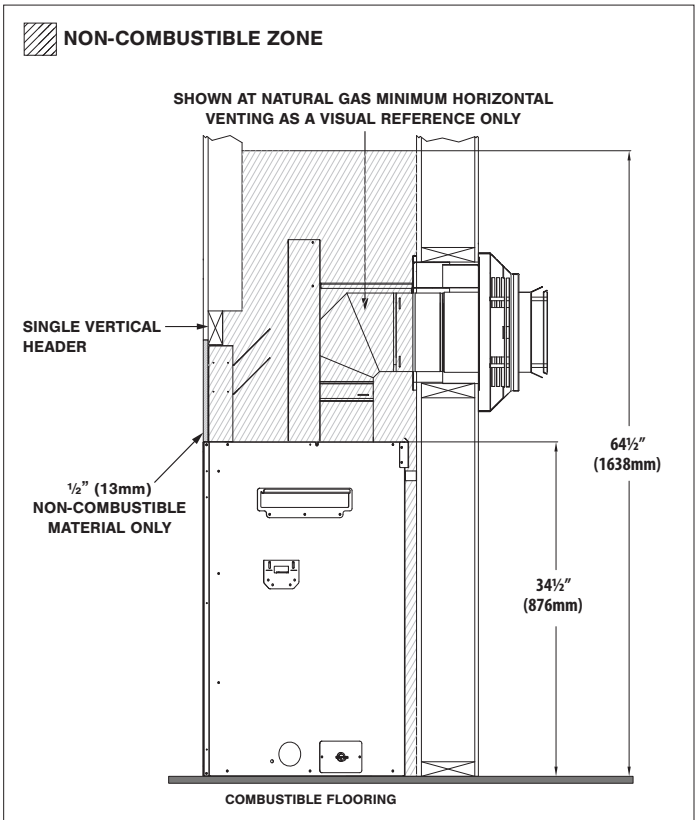


Figure 5.4, Non-Combustible Zone

5.3 Optional Trim Kit Assembly #C39-FTK

NOTE: This optional finishing trim kit can be used with any safety barrier. The finishing trim kit provides a finished edge (black metal) to hide the unfinished edge of drywall, tile, stone and other finishing materials.

NOTE: This trim panel assembly should be installed with the top stand-off brackets. Please refer to Section 3.2 Stand-off Assembly and Installation on page 11.

1. If installed, remove and discard the existing bottom front frame portion.
2. Install the bottom trim panel with the flange positioned as shown below. Secure with (2) screws included in the fireplace components packet.
3. If installed, remove the top stand-offs.
4. Install the top trim panel. Align the holes in the top trim panel with the front holes in the stand-offs and attach to the fireplace top. Secure with the screws previously removed and included in the components packet.
5. If installed, remove the nailing flanges from the sides of the fireplace.
6. Install side trim panels, utilizing the existing screws from the top and bottom sides of the fireplace. Install nailing flanges after trim panels, using screws previously removed. Use screws included in the components packet to complete side panel installation.

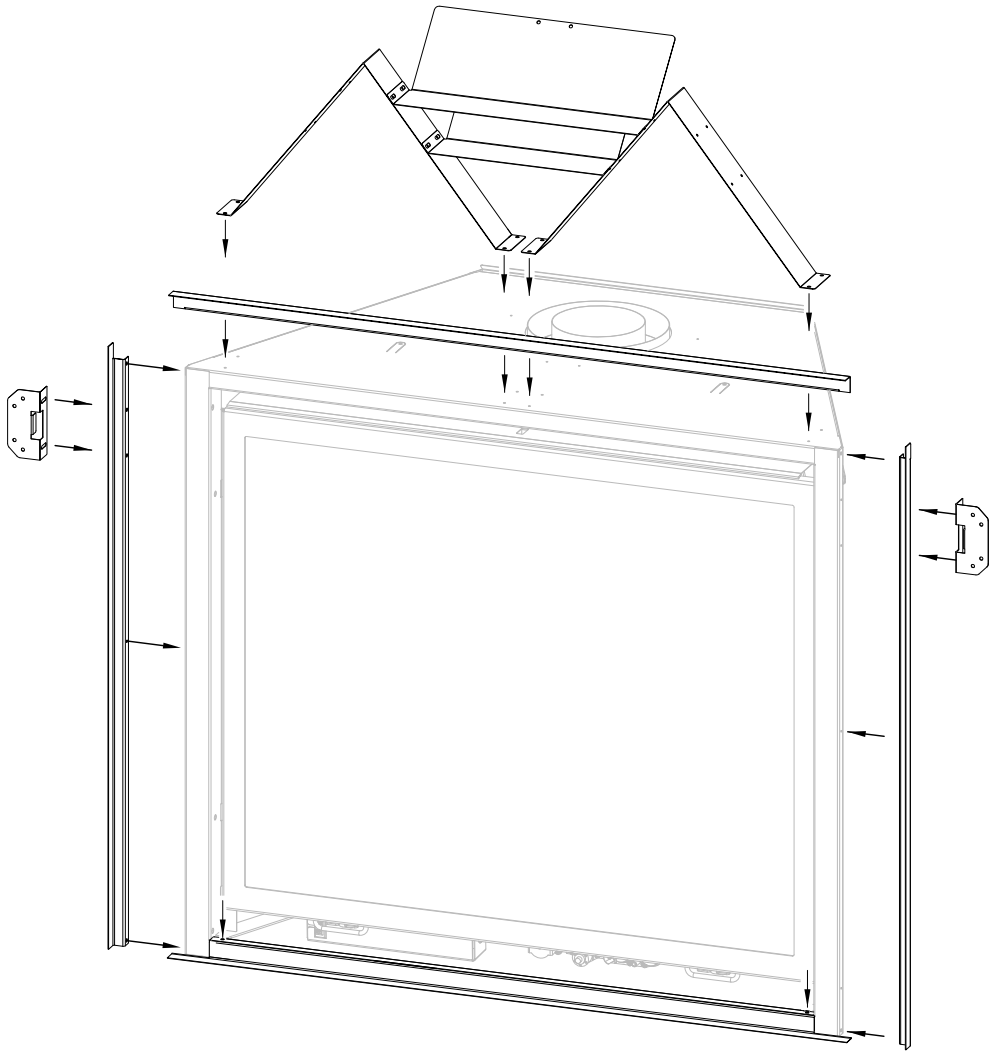


Figure 5.5, Trim Kit Installation

5.4 Safety Barrier Installations

5.4.1 Inside Fit - Recessed Installation

Model #C39-RSF

1. Locate the slots on the back side of the screen front.
2. Partially thread (4) truss head screws, included with this assembly, into each mounting hole on the fireplace (2 each side).
3. Align the slots on the screen front with the truss head screws on the fireplace, then slide the screen front unto fireplace.
4. Tighten all screws.

- Fireplace accessibility: loosen, but do not remove, the (4) truss head screws located on the sides of the fireplace. Raise the screen up slightly and out.

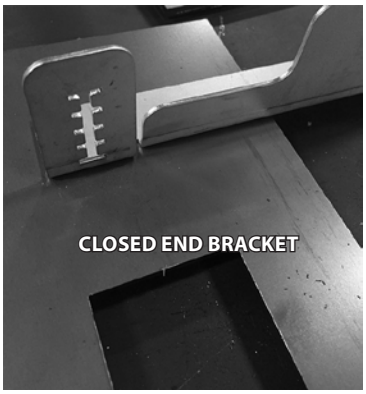
5.4.2 Overlap Fit - Hanging Installation with Adjustable Louvers (Open Bracket)

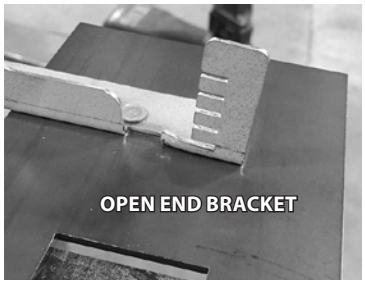
Models #C39A-MSF, #C39R-MSF, and #C39A-FPDSF

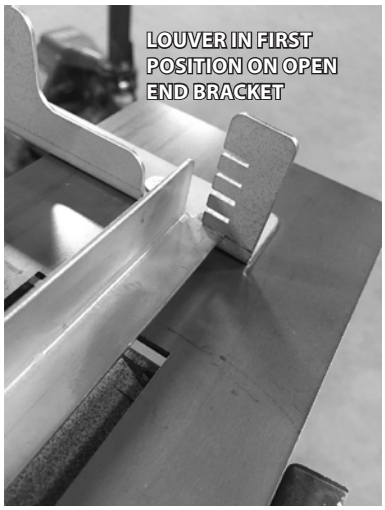
The listed safety barriers are equipped with the louver built into the safety screen face. The hanging brackets located on the back of screen front are equipped with (2) notched brackets to allow the louver to be adjusted to accommodate facing material thickness. The safety barrier is shipped with the louver in the first notch position.

To adjust louver position:

1. Locate the (2) louver brackets at the bottom of the safety screen. One of the louvers bracket end is open at the top to allow removal and adjustment of the louver depending on the safety barrier position for installation and facing material thickness.
2. Slide the louver up and out on the open bracket end and pull it out of the closed bracket end.
3. Adjust the louver to the desired notch in order to accommodate facing material and to cover the control compartment as you see fit.
   NOTE: The position of the louver should match with the desired position of the notched tabs needed for your installation. The louver in the first notch position will match with the first notch position in the notched tabs, the louver in the second notch position will match the second notch in the notched tabs, etc.
4. Reinstall the louver into the closed bracket first, then slide the other end into the open bracket
5. Install safety barrier. Center the screen front over the glass frame assembly, allowing the hanging brackets to fit inside the air openings.
6. Align the notched tabs with the slots in the fireplace. Raise slightly and push back to desired position.
7. Lower the screen front until the notched tabs are firmly in position. Verify the depth of accommodates finish material, and the notched tabs position matches the louver notch position.
8. To remove safety screen: lift the screen up and out of slots.







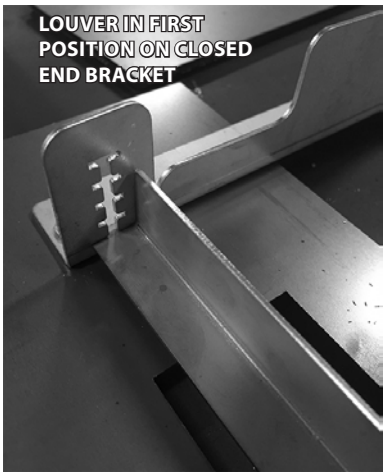


Figure 5.6, Adjustable Louver for C39A-MSF. R-MSF, and A-FPDSF

5.4.3 Overlap Fit - Hanging Installation with Adjustable Louvers (Closed Brackets)

Models #C39-FRSF and #C39-PSF

The listed safety barriers are equipped with the louver built into the safety screen face. The hanging brackets located on the back of screen front are equipped with notches to allow the louver to be adjusted to accommodate facing material thickness. The safety barrier is shipped with the louver in the first notch position.

To adjust louver position:

1. Locate the (3) screws on each hanging bracket at the back of the screen front.
2. Loosen (6) screws on both hanging brackets. This will allow you to bend the bracket outward to adjust the louver to the desired position.
   NOTE: The position of the louver should match with the desired position of the notched tabs needed for your installation. The louver in the first notch position will match with the first notch position in the notched tabs, the louver in the second notch position will match the second notch in the notched tabs, etc.
3. Adjust the louver to the desired notch in order to accommodate facing material and to cover the control compartment as you see fit. Re-tighten screws on hanging brackets.
4. Install safety barrier. Center the screen front over the glass frame assembly, allowing the hanging brackets to fit inside the air openings.
5. Align the notched tabs with the slots in the fireplace. Raise slightly and push back to desired position.
6. Lower the screen front until the notched tabs are firmly in position. Verify the depth of accommodates finish material, and the notched tabs position matches the louver notch position.
7. To remove safety screen: lift the screen up and out of slots.

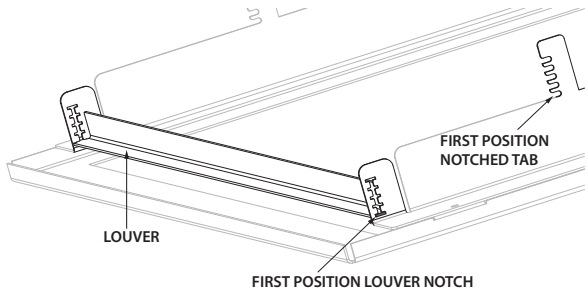


Figure 5.7, Safety Screen Louver and Notch locations

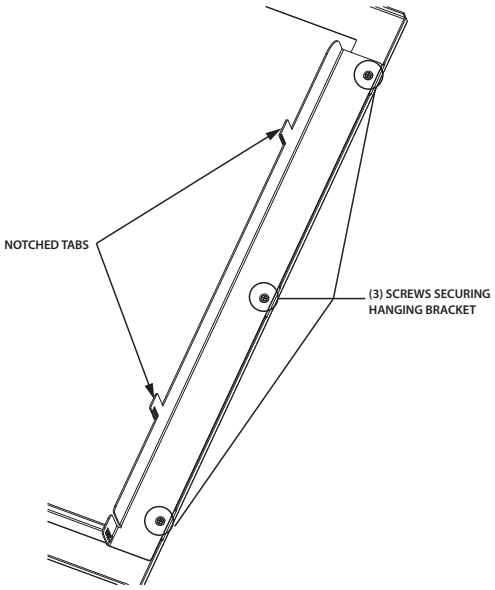


Figure 5.8, Screw Location on Hanging Bracket

Figure 5.9, Adjust Louver

6.0 GAS LINE CONNECTION

6.1 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 Propane.

6.2 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 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) ½ in. (13 mm) tee handle manual shut-off valve and flexible gas connector are to be connected to the ½ in. (13 mm) control valve inlet. If substituting for these components, please consult local codes for compliance.
- This fireplace is equipped with a 3/8” (10 mm) x 18” (457 mm) long flexible gas connector and manual shut-off valve.
- Run gas line into fireplace, preferably through left or right gas line holes provided. 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 6.1, Inlet Gas Supply Pressures

Fuel	Minimum Pressure	Maximum Pressure
Natural Gas	5” WC (1.25 kPa)	10.5” WC (2.62 kPa)
Propane	12” WC (2.99 kPa)	13” WC (3.24 kPa)

7.0 TERMINATION LOCATIONS

7.1 Vertical Vent Cap Termination

WARNING: This gas appliance must not be connected to a chimney serving any other appliance.

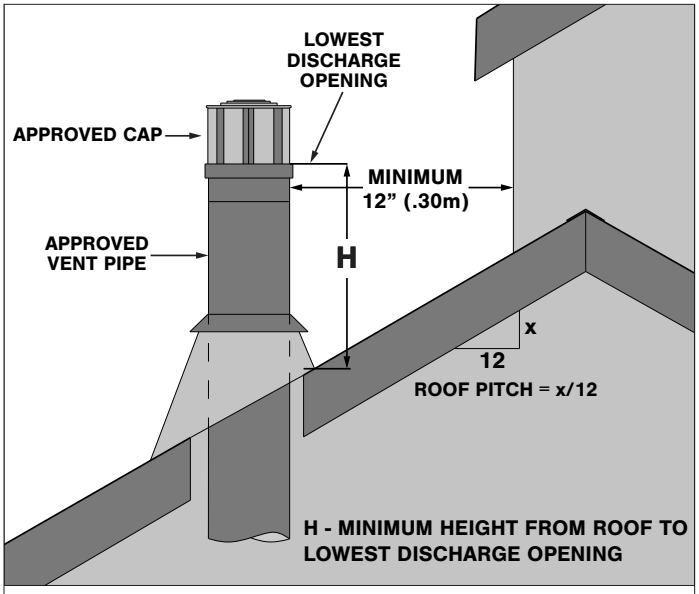


Figure 7.1, Vertical Vent Cap Clearance

	Minimum height (H) from roof	
Roof Pitch	**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

7.2 Minimum Termination Clearances

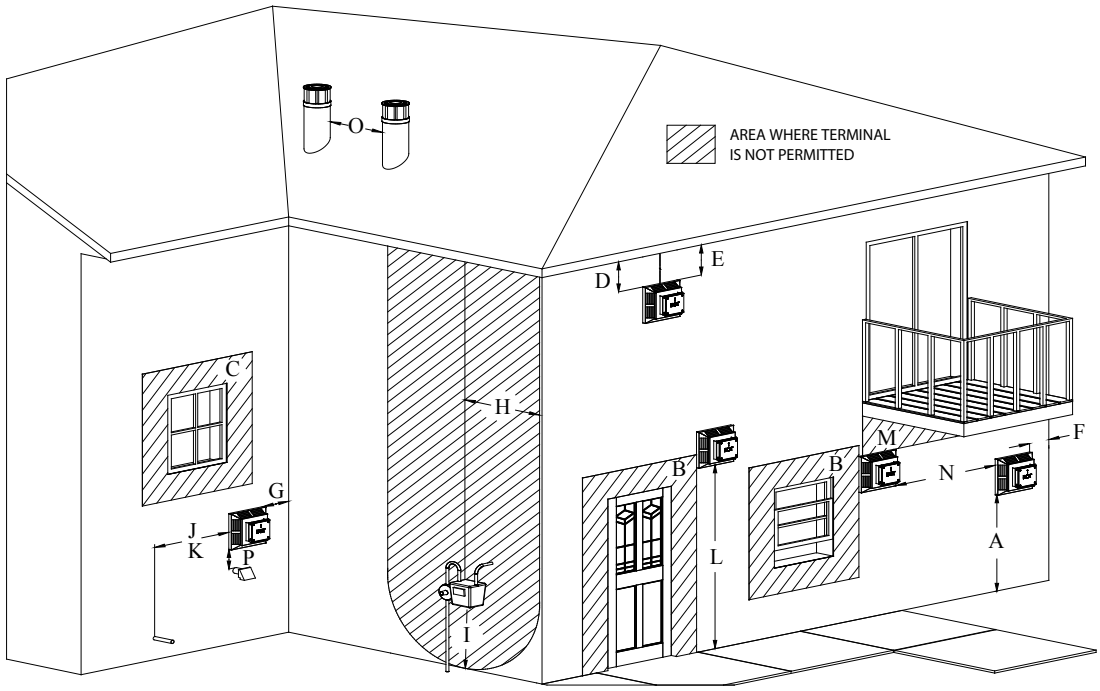


Figure 7.2, Vent Cap Locations

		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 cent 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.

8.0 VENTING

8.1 Approved Vent Systems

Vent Manufacturer	Direct Vent System	Termination
American Metal Products	Ameri-Vent 5” x 8”	Horizontal & Vertical
BDM	Pro-Form 5” x 8” *EXCEPT CAPS 940285 ROUND; 94040836 SNORKEL*	Horizontal & Vertical
ICC	EXCELDirect 5” x 8”	Horizontal & Vertical
Kozy Heat	800 Series Flexible Vent Kit	Horizontal Only
Metal Fab	Direct Vent Chimney 5” x 8”	Horizontal & Vertical
Olympia Venting Supply, Inc.	Ventis Direct Vent 5” x 8”	Horizontal & Vertical
Selkirk	Direct Temp 5” x 8”	Horizontal & Vertical
Simpson DuraVent	DV-GS 5” x 8”	Horizontal & Vertical

8.2 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 Propane.

IMPORTANT: Natural gas and Propane vent installations terminating with a snorkel cap require a minimum of 12 in (305mm) of vertical venting off the top of the appliance before the use of an elbow.

- 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.

8.2.1 Vent Section Clearances

Table 8.1, Vertical Pipe Section Clearances	
Surface	**Sides**
All Approved Venting	1 in (25 mm)

Table 8.2, Horizontal Pipe Section Clearances			
Surface	**Top**	**Bottom**	**Sides**
All Approved Venting	3 in (76 mm)	1 in (25 mm)	1 in (25 mm)

8.2.2 Wall Pass-Through

Kozy Heat’s #800-WPT series, or wall thimble products that comply with the required 3 in (76 mm) top clearance 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.

Wall Thickness ..... Part Number

4½ in (114 mm) to 6½ in (165 mm) ..... #800-WPT

6½ in (165 mm) to 12½ in (318 mm) ..... #800-WPT2

7½ in (191 mm) to 12 in (305 mm) ..... #800-WPT3

8.3 Elbows

- MAXIMUM NUMBER OF 90° ELBOWS: 5
- 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.

8.4 Restrictor Plate Assembly and Installation

A restrictor plate (included in components packet) may be used to achieve desired flame appearance on any venting installation with at least 8 ft (2.4 m) of vertical pipe or more. Section 12.2.2 Vent Restriction on page 45 outlines restrictor plate recommendations depending on burner flame appearance, and instructions on installation after venting is completed.

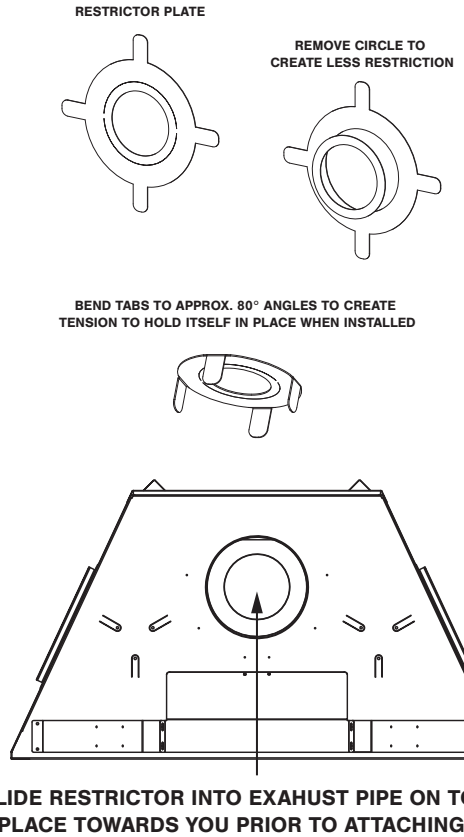


Figure 8.1, Restrictor Assembly and Installation

8.5 Vertical Terminations

IMPORTANT: The vertical vent heat shield must be installed for every type of venting application. Refer to Section 8.8 on page 32.

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

Table 8.3, NG & Propane - Minimum / Maximum Vertical Terminations			
Minimum Vertical Length		**Maximum Vertical Length**	
4 ft	1219 mm	50 ft	15.2 m

8.5.1 Flame Appearance Adjustments

Burner flame appearance and characteristics are affected by altitude, fuel quality, venting configuration, and other factors. The burner venturi is factory set for horizontal terminations at 3/16 in (4.8mm) open for natural gas.

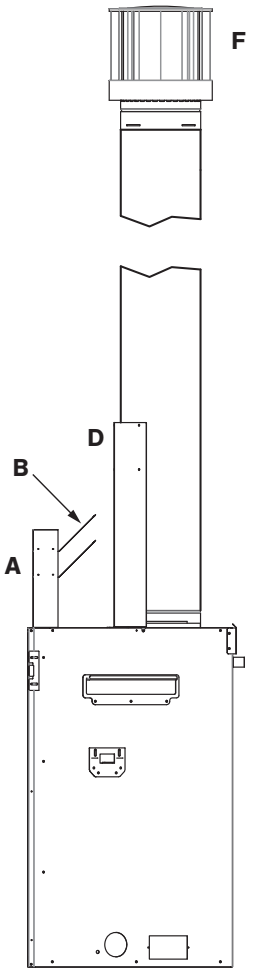
Vertical terminations may display a very compact, active flame. If this appearance is not desirable, a qualified installer may adjust the air shutter for optimum flame appearance and visual aesthetics.

Hussong Manufacturing recommends natural gas venting installations, with at least 4 ft (1219 mm) of vertical vent height, to adjust the front air shutter opening to 1/8 in (3 mm), and to close the back air shutter opening. Refer to Section 8.6.1 Natural Gas Installations on page 29 and Section 12.2.1 Burner Venturi on page 44 for more information.

NATURAL GAS AND PROPANE VERTICAL VENT DIAGRAM

(A) Stand-off Brackets
(B) Stand-off Heat Shields
(C) 90° Elbow (not applicable)
(D) Vertical Vent Heat Shield
(E) Horizontal Vent Heat Shield (not applicable)
(F) Termination Cap

NATURAL GAS AND PROPANE -
4ft (1219mm) MIN / 50ft (15.2m) MAX



8.6 Combination Venting

8.6.1 Natural Gas Installations

IMPORTANT: The vertical vent heat shield included with this fireplace must be installed for all venting configurations. The horizontal vent heat shield must be installed when incorporating minimum horizontal venting. Refer to Section 8.8 on page 32.

IMPORTANT: Horizontal vent sections require ¼ in (6 mm) rise for every 12 in (305 mm) of travel.

IMPORTANT: Natural gas and Propane vent installations terminating with a snorkel cap require a minimum of 12 in (305mm) of vertical venting off the top of the appliance before the use of an elbow.

Table 8.4, NG - Minimum Horizontal Vent Terminations

Minimum Vertical Rise (V_{MIN})		Minimum Horizontal Run (H_{MIN})		Maximum Horizontal Run (H_{MAX})	
6 in	152 mm	6 in	152 mm	10 ft	3 m
18 in	457 mm	6 in	152 mm	20 ft	6.1 m

Table 8.5, NG - 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
Maximum number of 90° elbows: 5					

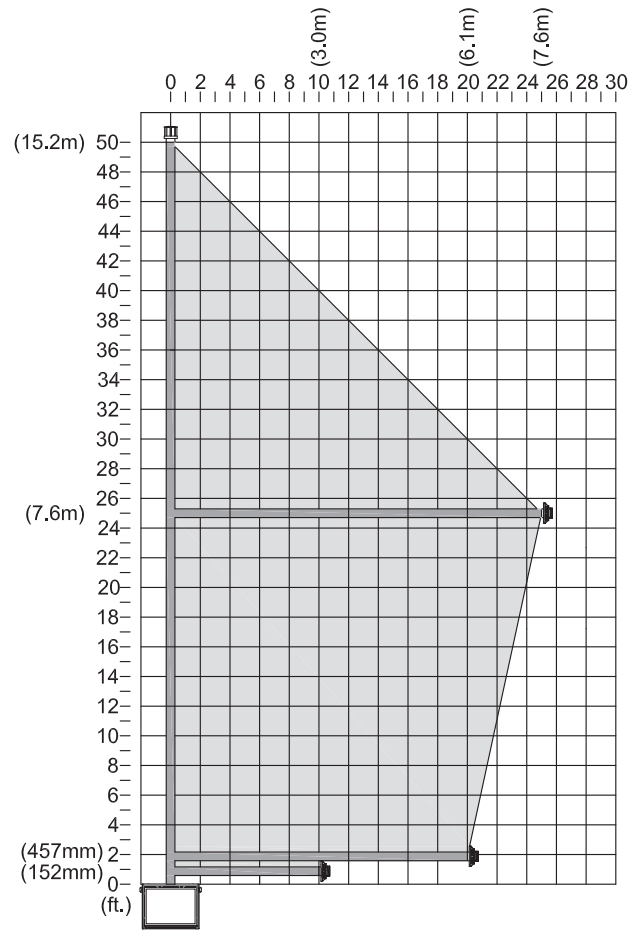
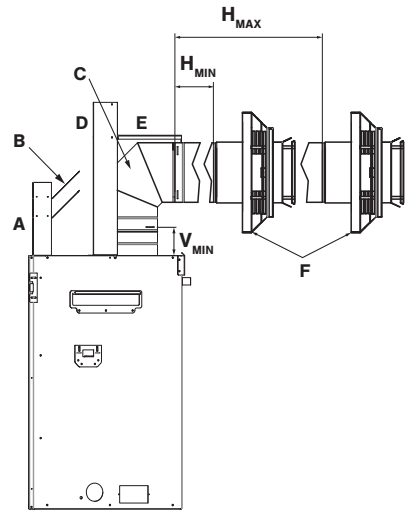


Figure 8.2, Natural Gas Combination Venting

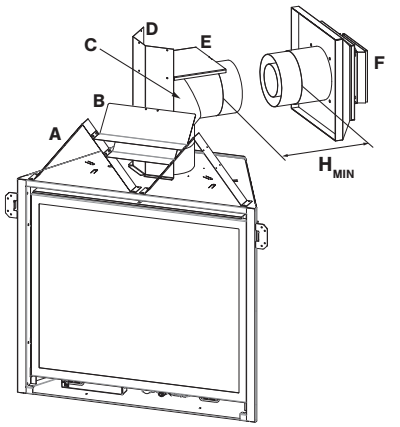
NATURAL GAS MINIMUM HORIZONTAL VENTING DIAGRAM

(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

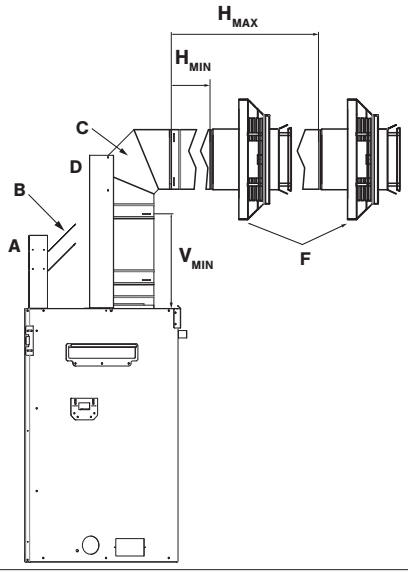
6” (152mm) V_{MIN} + 90° ELBOW + 6” (152mm) H_{MIN} / 10ft (3m) H_{MAX}



CORNER INSTALL - 6” (152mm) V_{MIN} + 90° ELBOW + 6” (152mm) H_{MIN}



18” (457mm) V_{MIN} + 90° ELBOW + 6” (152mm) H_{MIN} / 20ft (6.4m) H_{MAX}



8.6.2 Propane Installations

IMPORTANT: The vertical vent heat shield included with this fireplace must be installed for all venting configurations. The horizontal vent heat shield must be installed when incorporating minimum horizontal venting. Refer to Section 8.8 on page 32.

IMPORTANT: Horizontal vent sections require ¼ in (6 mm) rise for every 12 in (305 mm) of travel.

NOTE: Natural gas and Propane vent installations terminating with a snorkel cap require a minimum of 12 in (305mm) of vertical venting off the top of the appliance before the use of an elbow.

Table 8.6, Propane - Minimum Horizontal Vent Terminations

Minimum Vertical Rise (V_{MIN})		Minimum Horizontal Run (H_{MIN})		Maximum Horizontal Run (H_{MAX})	
12 in	305 mm	6 in	152 mm	4 ft	1219 mm
18 in	457 mm	6 in	152 mm	8 ft	2.4 m

Table 8.7, Propane - 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
Maximum number of 90° elbows: 5					

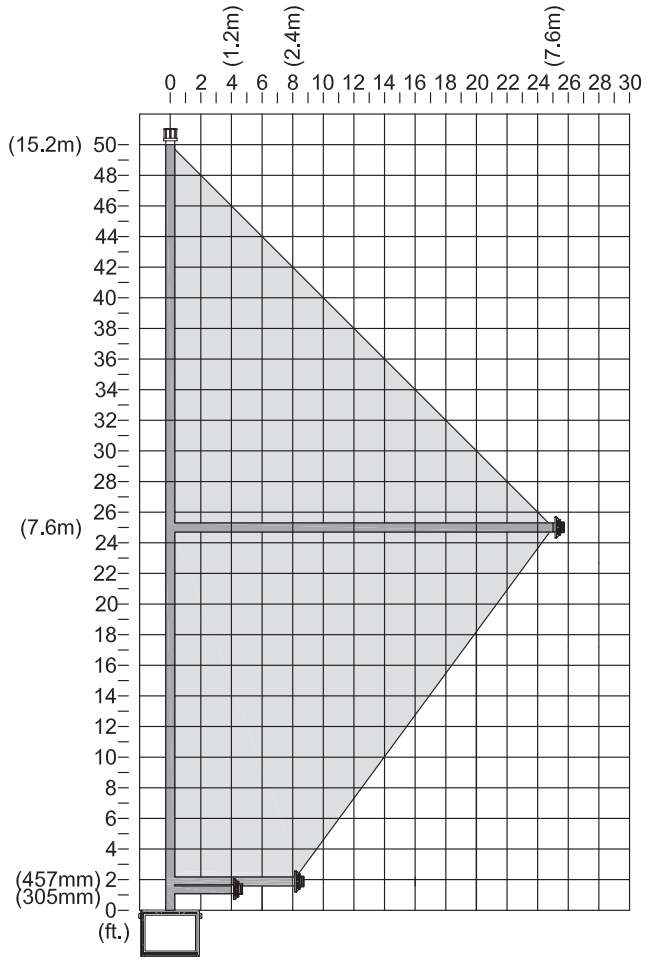
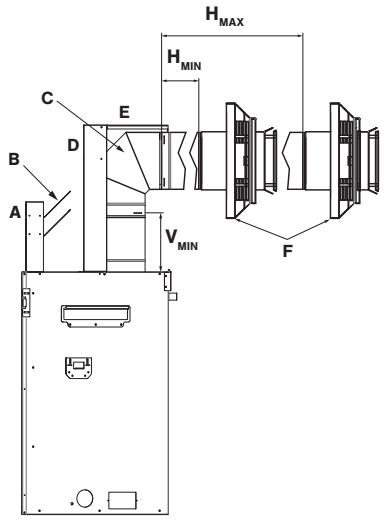


Figure 8.3, Propane Combination Venting

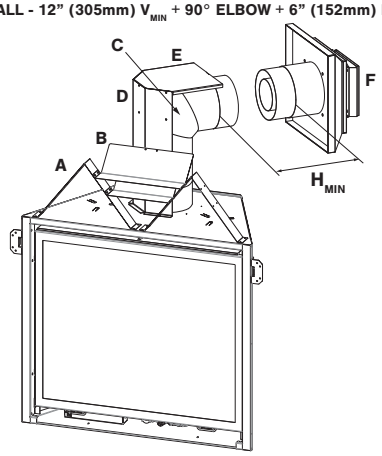
PROPANE MINIMUM HORIZONTAL VENTING DIAGRAM

(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

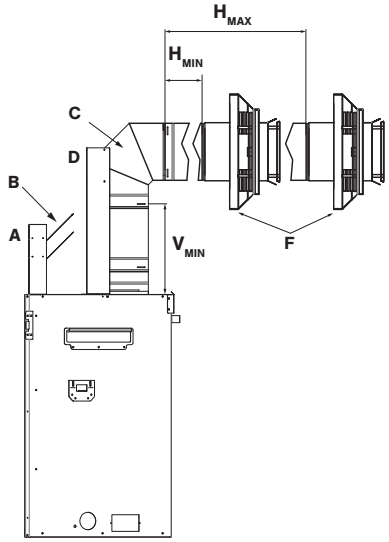
12" (305mm) V_{MIN} + 90° ELBOW + 6" (152mm) H_{MIN} / 4ft (1.2m) H_{MAX}



CORNER INSTALL - 12" (305mm) V_{MIN} + 90° ELBOW + 6" (152mm) H_{MIN}



18" (457mm) V_{MIN} + 90° ELBOW + 6" (152mm) H_{MIN} / 8ft (2.4m) H_{MAX}



8.7 #800-2 Series Direct Vent Termination Kit(s)

IMPORTANT: The vertical vent heat shield included with this fireplace must be installed for all venting configurations. The horizontal vent heat shield must be installed when incorporating minimum horizontal venting. Refer to Section 8.8 on page 32.

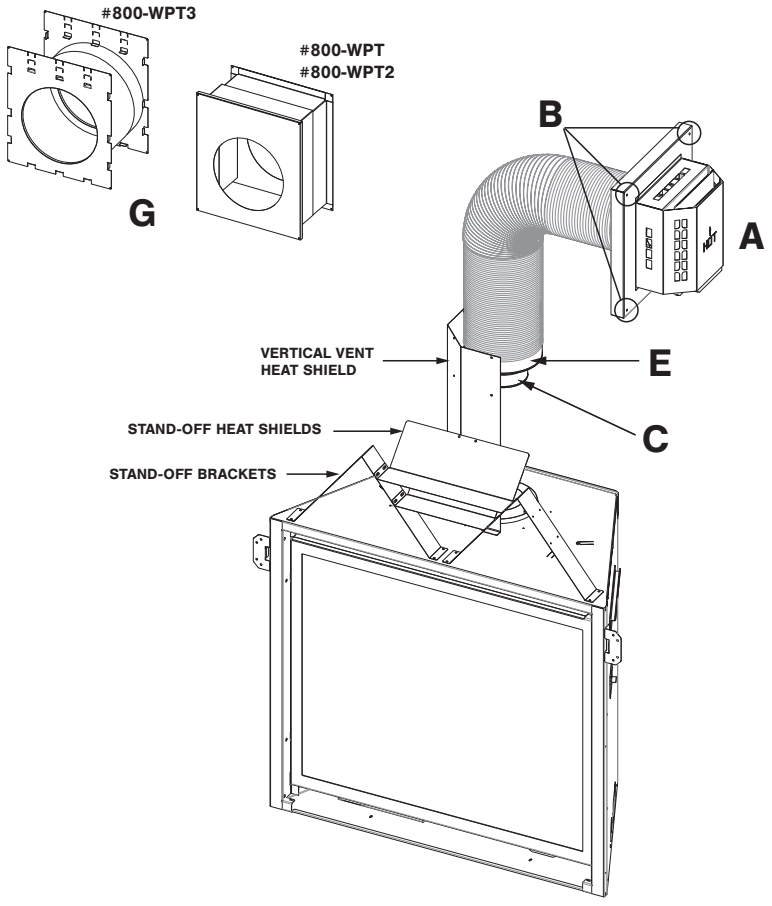
IMPORTANT: The flex pipe is permanently attached to the exterior plate. DO NOT ATTACH either #844-2 or #845-2 termination kit to fireplace (or extension kit) until it has passed through the wall. Install termination plates to the outside wall exterior.

IMPORTANT: The minimum bend radius to center is 6 in (152 mm) required for installation of the flexible vent pipe. Care should be taken when installing the flexible vent pipe to avoid a tight bend that may cause abrasion or damage to the flexible pipe.

- If terminating against vinyl siding, a vinyl siding protector must be used (included with the #844-2 and #845-2 direct vent kits). Follow instructions included.
- Each #846-2 extension kit contains enough 5” & 8” flexible aluminum pipe to extend chimney an additional 6 ft (1.83 m).

8.7.1 Assembly and Installation

1. Mount the required wall thimble (G) with 3 in (76 mm) top clearance and 1 in (25 mm) side clearance to the exterior wall, and seal.
2. (OPTIONAL) insulate the wall-pass through with any unfaced insulation products listed as non-combustible per ASTM E 136.
3. 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.
4. Form the 5” & 8” flexible aluminum pipes on termination kit (#844-2 or #845-2), and if applicable, on each extension kit.
5. Gently pull 5” & 8” pipes down to the top of the fireplace, or if applicable, the extension kit.
   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.
6. Place a bead of sealant outside 5” flex pipe collar (C) (end with EXTERNAL LIP) and sliding it into 5” pipe on extension kit or top of fireplace (D). Secure with 3 evenly spaced screws.
7. Place a bead of sealant inside 8” flex pipe collar (E) (end with the INTERNAL lip), sliding it over 8” pipe on top of fireplace (F). Secure with 3 evenly spaced screws.
8. If additional extension kits are required, repeat Steps 4 and 5, placing 5” & 8” pipes onto previous extension kit.



LEGEND	
A	Termination box
B	Holes in exterior wall (only 3 shown)
C	5” flex pipe collar
D	5” pipe on fireplace or extension kit (not shown)
E	8” flex pipe collar
F	8” pipe on fireplace or extension kit (not shown)
G	Wall pass-through

Figure 8.4, Installation and Assembly #800-2 Series

8.8 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.

8.8.1 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).

8.8.2 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. There are (2) sets of screws holes, allowing for either natural gas or propane minimum horizontal venting. See Figure 8.6.
3. Align the (3) slots on horizontal vent heat shield tabs to the corresponding (3) screws holes on the vertical vent heat shield necessary for your installation.
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.

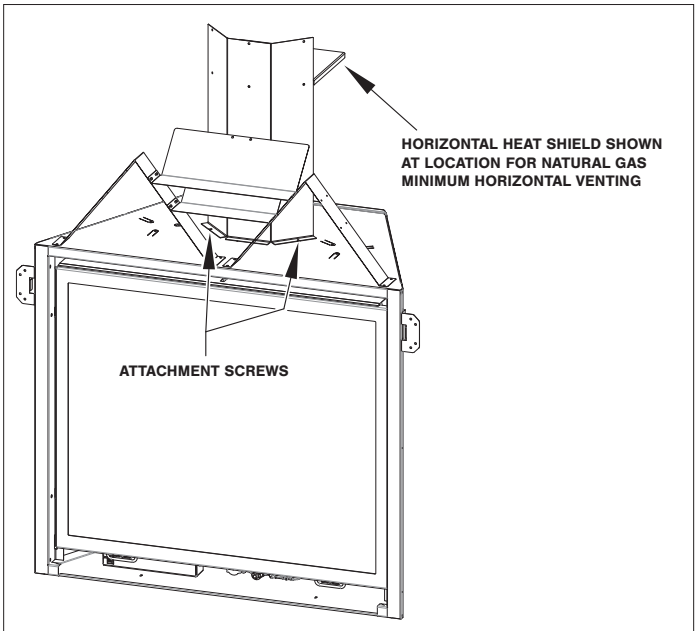


Figure 8.5, Installed Vent Heat Shield Assembly

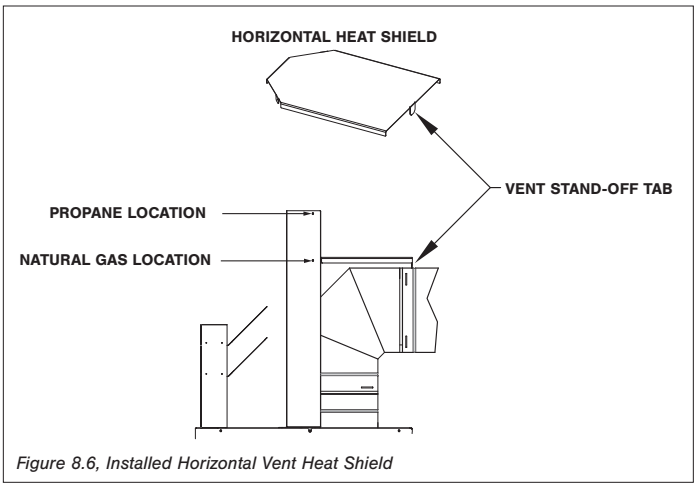


Figure 8.6, Installed Horizontal Vent Heat Shield

9.0 FIREPLACE SET UP

9.1 Glass Frame Assembly

WARNING: Do not operate this fireplace with the glass removed, cracked, or broken. Replacement of the glass assembly #C39-057T, should be done by a licensed or qualified service person.

9.1.1 Remove Glass Frame Assembly

WARNING: Do not remove the glass assembly when hot.

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

9.1.2 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.
3. Reinstall safety barrier.

9.2 Light Kit

CAUTION: Disconnect all electrical power from the fireplace before performing this task.

ATTENTION: If converting to propane, complete the conversion before installing any light kit components. Follow instructions provided with the conversion kit (sold separately).

NOTE: To avoid damage and prolong the life of the halogen bulbs, never touch with bare hands. Always use a soft cloth when handling.

9.2.1 Install Light Kit

1. Remove the safety barrier and glass frame assembly.
2. Remove log set (if installed).
3. Remove the front burner from the firebox (2 screws).
4. Remove the back burner tube.
5. Remove the back log plate / burner bracket (2) screws.
6. Remove the burner heat shield (2) screws.
7. Install (4) halogen bulbs (included in component packet) into lamp bases.
8. Reinstall the heat shield, the back log plate/ burner bracket, the back burner tube, and the front burner.
9. Place the crushed glass media (included with the fireplace) into cavity in front of the burner.
10. Randomly place klinkers on top of glass media.
11. Reinstall log set, glass frame assembly, and safety barrier.

9.3 #C39-50B 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 propane, 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.

1. Position the ember panel in front of the burner.
2. Align the slots in the bottom of log C39-1B with the mounting pins on the back log plate / burner bracket required for your installation. Push log down to seat.
3. Align the holes in the bottom of base logs C39-2B, C39-3B, C39-4B, C39-5B, C39-6B and C39-13B with the mounting pins on the burner. Push logs down on to pins to seat.
4. Align logs C39-7B, C39-8B, and C39-9B with the notches on the base logs.
5. Align log C39-11B with the notch on log C39-8B.
6. Align logs C39-10B and C39-12B with the notches on the ember panel.
7. Distribute rockwool embers onto the logs and burner using a stiff bristle brush.

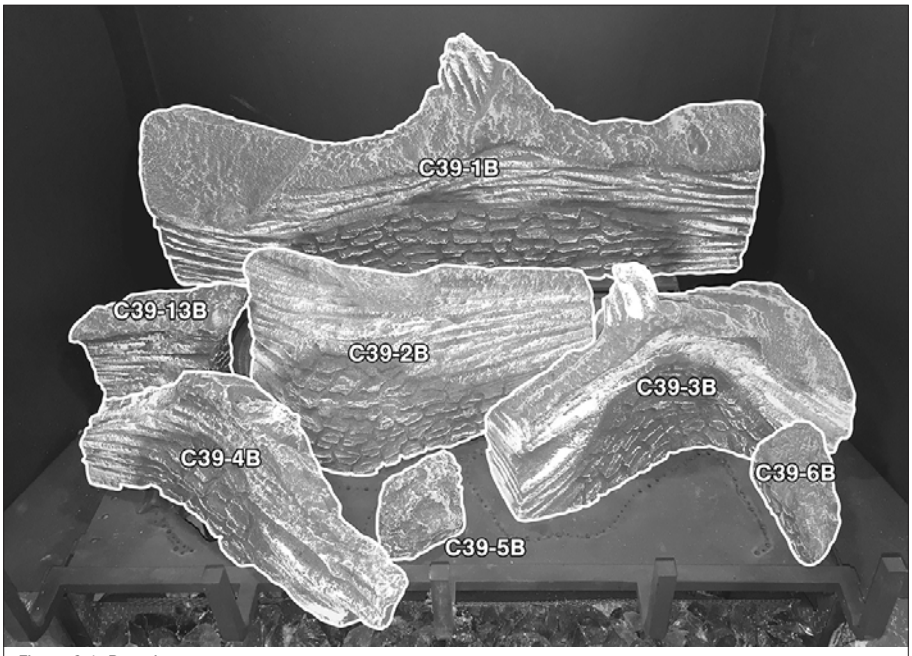


Figure 9.1, Base Logs

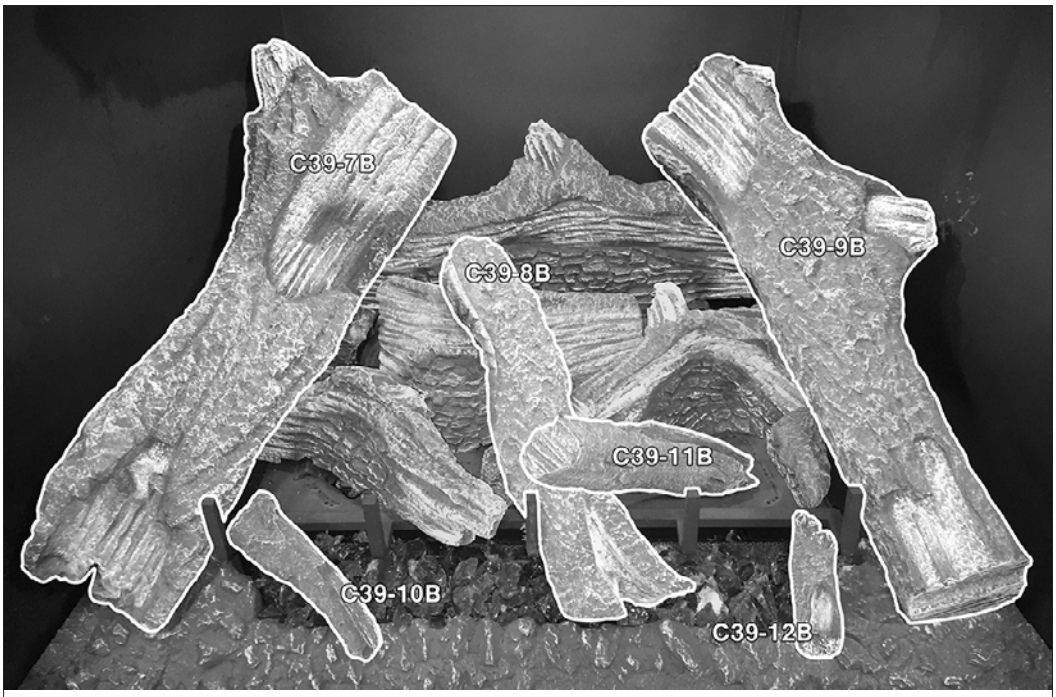


Figure 9.2, Installed Log Set

9.4 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.

9.4.1 Control Board Removal

1. Disconnect electrical power.
2. Locate the manual valve installed by your qualified service technician.
3. Turn the manual valve clockwise to the OFF position.
4. Remove the safety barrier and glass frame assembly.
5. Remove logs.
6. Remove the front burner from the firebox (2 screws).
7. Remove the back burner tube.
8. Remove the back log plate/burner bracket (2) screws.
9. Remove the burner heat shield (2) screws.
10. Remove the light kit assembly.
11. Remove and save (10) screws securing the control board. Raise the control board to unplug control module and fan wiring from the control module.
12. Lift the control board and control module out of the firebox, being careful not to damage sealing gasket underneath.

9.4.2 Control Board Installation

1. Place the control module through the firebox and into the control compartment. Plug in control module and fan wiring. **VERIFY SEALING GASKET IS IN PLACE.**
2. Secure the control board to the firebox using (10) screws previously removed.
3. Reinstall the light kit assembly.
4. Reinstall the burner heat shield (2) screws.
5. Reinstall the back log plate/burner bracket (2) screws.
6. Reinstall the front burner. Align the burner over the ports and position the venturi over burner orifice. Secure with (2) screws.
7. Reinstall the back burner tube, positioning the venturi over the burner orifice.
8. Reinstall log set.
9. Reinstall the glass frame assembly and safety barrier.
10. Turn the manual valve counterclockwise to the ON position.
11. Reconnect electrical power.
12. Verify proper log placement, operation of fireplace, and any electrical components.

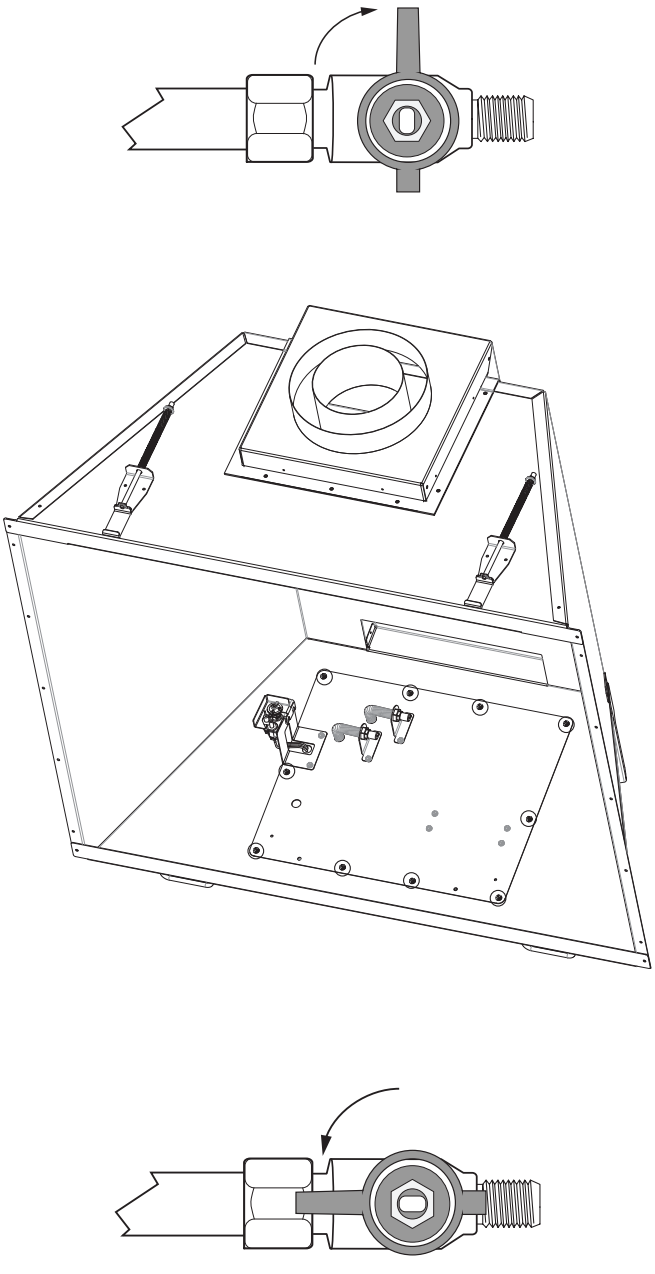


Figure 9.3, Control Board Removal and Installation

10.0 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.

10.1 Electrical Specifications

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.

10.2 Wiring Requirements

- The IFC System Module requires 120V of electricity and/or batteries to operate.
- Using the battery back-up will operate the burner only.
- Fan and light components will not function on battery back up power.

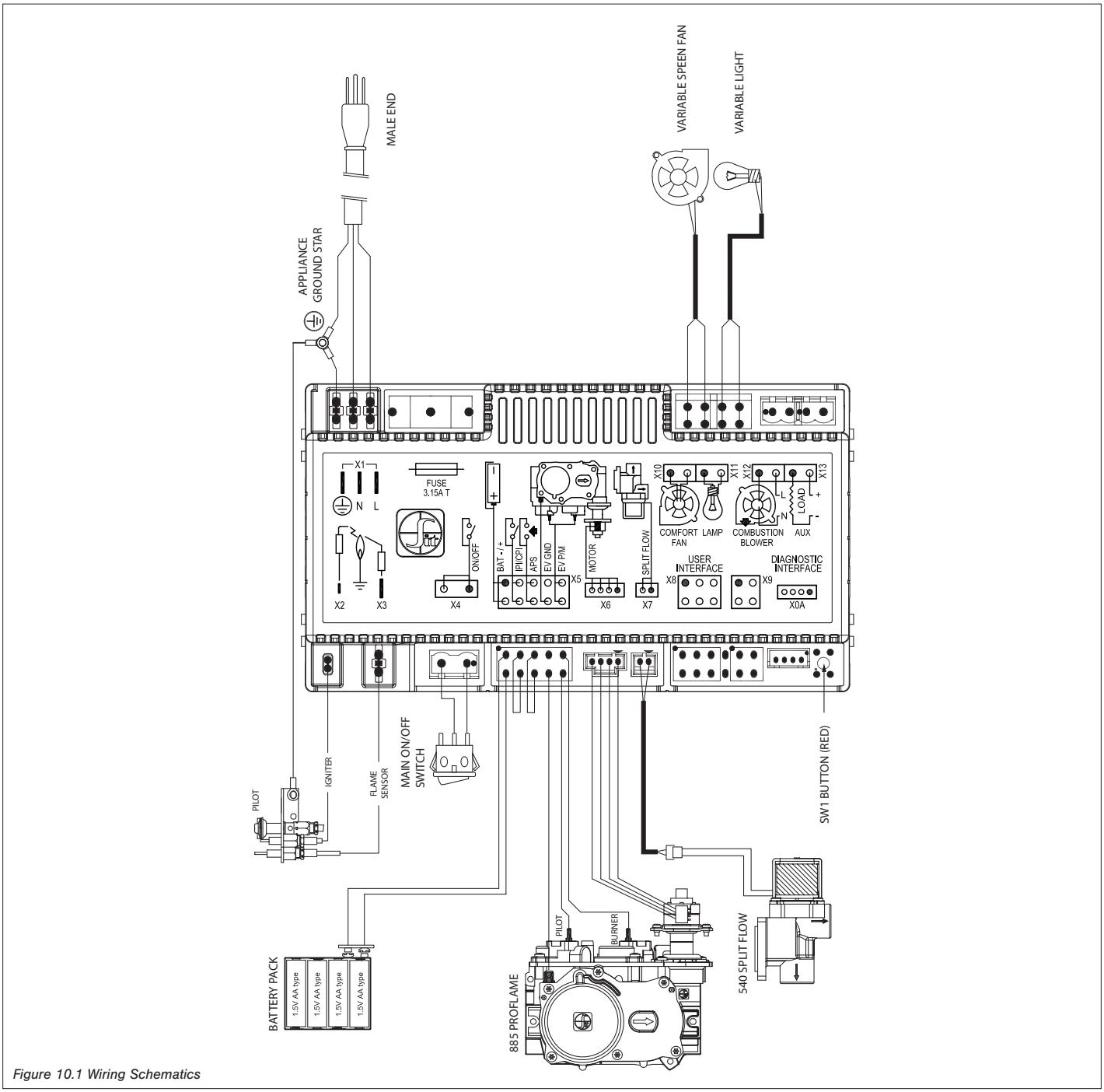


Figure 10.1 Wiring Schematics

11.0 OPERATING INSTRUCTIONS

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. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

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.

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.

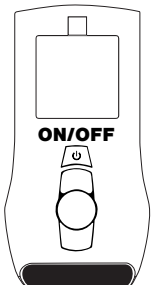
CAUTION

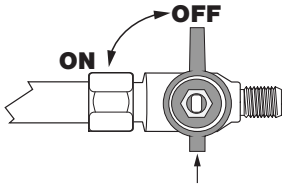
Clothing or other flammable material should not be placed on or near the appliance.

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 toddler, 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.

11.1 Setup Proflame 2 IFC Module

1. Set the main ON/OFF rocker switch in the OFF position.
2. Install (4) AA batteries (included in the components packet) 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.

11.2 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. Locate the red SW1 button the IFC module.
2. Press the button. The IFC module will BEEP (3) times and illuminate an amber LED. This indicates the receiver is ready to synchronize with the transmitter.
3. 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.
4. Press the remote control ON/OFF button again. The pilot will extinguish, confirming the remote control command. The control system is now initialized.
5. Set the main ON/OFF rocker switch to ON position for remote control operation of the main burner and fireplace features.

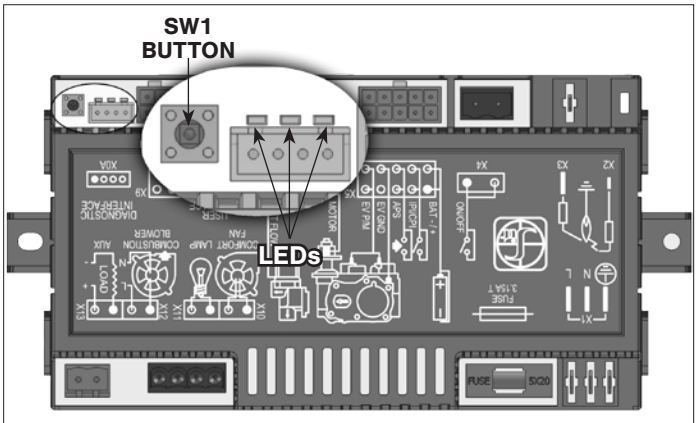


Figure 11.1, IFC Module

11.3 Reset the System for Manual Operation

1. Set the ON/OFF rocker switch to OFF position.
2. Press the red SWI button on the IFC module until it emits (3) beeps and an amber LED is illuminated.
3. Within (5) seconds, press the red SWI 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.

11.4 Automatic Safety Restart

- This system will execute an automatic turn OFF command within (24) hours of a continued pilot flame ignition. 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.

11.5 Backup Battery Operation

This appliance will operate on the backup battery pack when electric power is interrupted, or in a power outage. The lifespan of the backup batteries depend on various factors, such as the quality of the batteries, number of ignitions, et cetera.

- 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.

11.6 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.

11.6.1 Reset IFC Module after Lockout

11.6.1.1 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.

11.6.1.2 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.

11.6.1.3 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.

11.7 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.

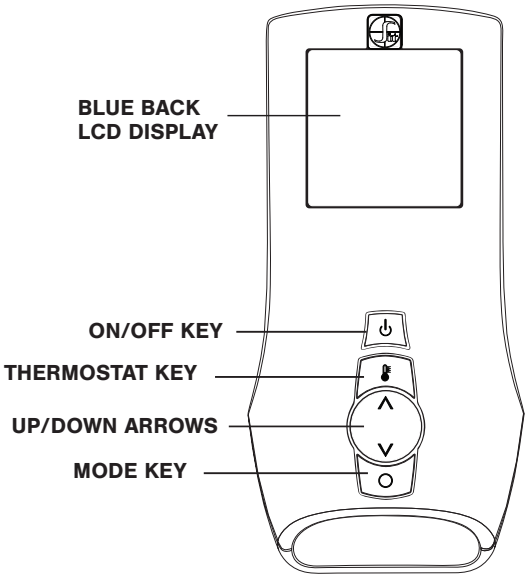
Pilot Flame Error Condition:

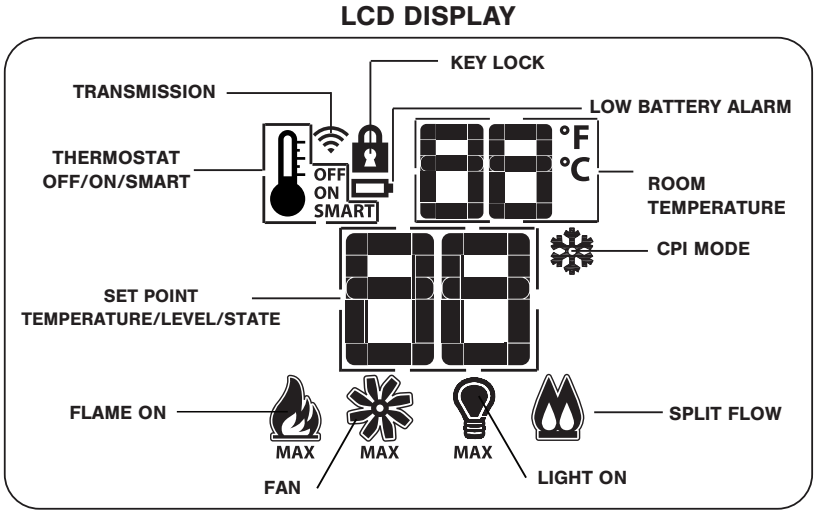
- Red LED Indicator will blink (2) times in intervals. Contact your dealer if this occurs.

System Lock Out Condition:

- Red LED Indicator will blink (3) times in intervals.
- Verify gas is turned on.
- Verify sensor is not shorted.
- Follow 11.2 Initialize the Control System on page 38.

PROFLAME 2 TRANSMITTER

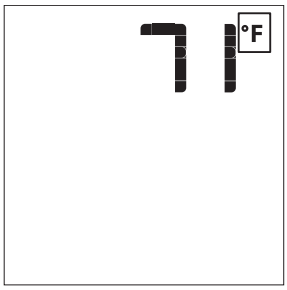


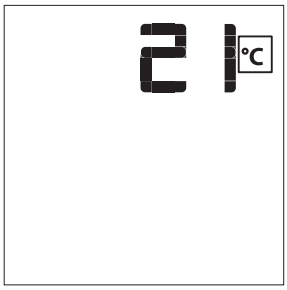


11.8 Remote Control Operation

11.8.1 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.

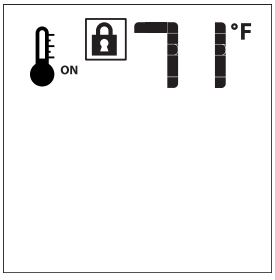




11.8.2 Key Lock

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.



11.8.3 Pilot Ignition Selection (IPI/CPI)

This system has the option of a continuous (standing) pilot. This features 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.

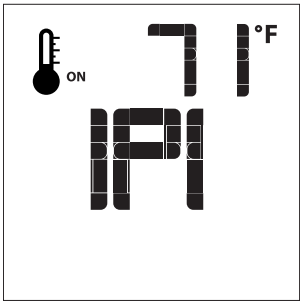
When the system is OFF, the LCD screen will display the snowflake icon during the setup of either IPI or CPI mode. To select the preferred pilot ignition feature,

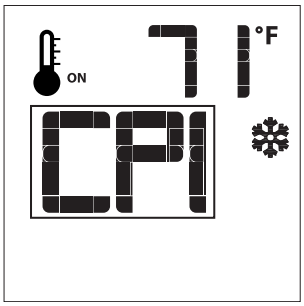
1. With the system in the OFF position, press the mode key to index the CPI mode icon.
2. Press the up arrow key to activate CPI.
3. Press the down arrow key to return to IPI. A single ‘beep’ will confirm reception of the command.

When the system is ON,

IPI mode: LCD screen will not display the snowflake icon

CPI mode: LCD screen will display the snowflake icon





11.8.4 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.

11.8.5 Turn OFF the appliance

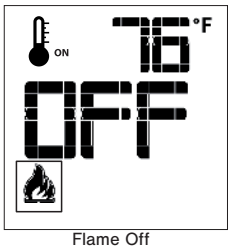
1. With the system in the OFF position, press the remote control ON/OFF key to turn ON the appliance.
   A single 'beep' will emit from the IFC module to confirm reception of the command.

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

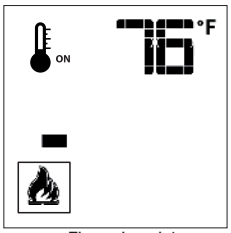
11.8.6 Remote Control Flame Adjustment

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.

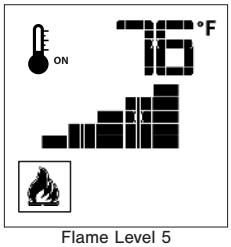
1. Verify the system is in the ON position and the flame level is set at maximum.
2. Press the down arrow key once to reduce flame height by one level until the flame is turned off.
3. Press the up arrow key once to increase flame height by one step. If the up arrow key is pressed while the system is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



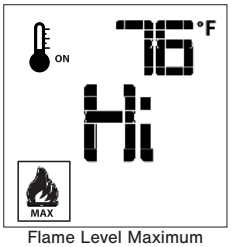
Flame Off



Flame Level 1



Flame Level 5



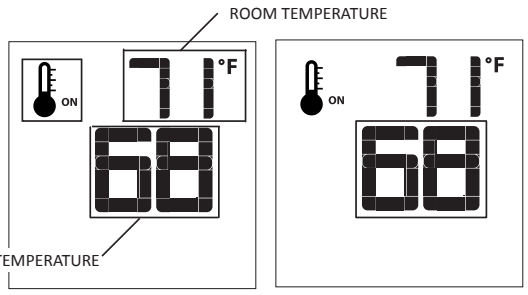
Flame Level Maximum

11.8.7 Remote Control Thermostat Operation

11.8.7.1 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,

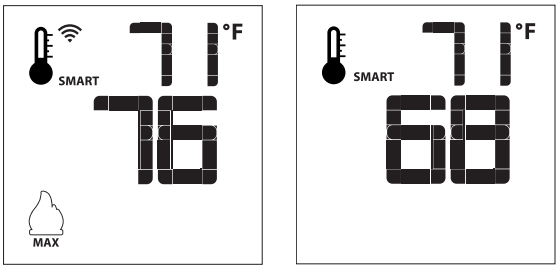
1. Press the thermostat key. The LCD screen will display a temperature bulb graphic, the room temperature and set temperature.
2. To adjust the set temperature, press the up or down arrow keys until the desired temperature is displayed on the LCD screen.



11.8.7.2 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,

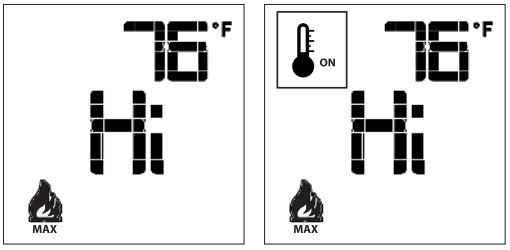
1. Press the thermostat key until the 'SMART' appears on LCD screen on the right side of the temperature bulb graphic.
2. To adjust the set temperature, press the up or down arrow keys until the desired temperature is displayed on the LCD screen.



11.8.7.3 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,

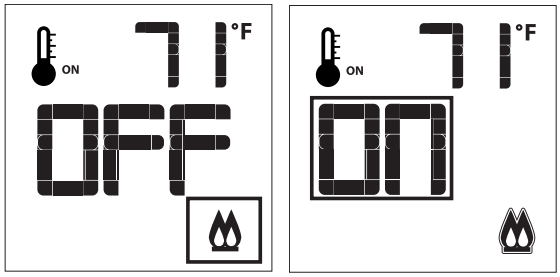
1. Verify all (3) AAA batteries are installed in the remote control.
2. Remove (1) AAA battery.
3. While reinserting the battery, push and hold the thermostat key. The temperature bulb graphic will not be displayed on the LCD screen.
4. To reactivate remote thermostat operation, follow the same key sequence procedure above. The temperature bulb graphic will reappear on the LCD screen.



11.8.8 Split Flow Control

The secondary burner is controlled by the split flow. To activate this function,

1. Press the mode key to index to the split flow mode icon.
2. Press the up arrow key to activate the secondary burner.
3. Press the down arrow key to turn the secondary burner off. A single ‘beep’ will confirm the reception of the command.



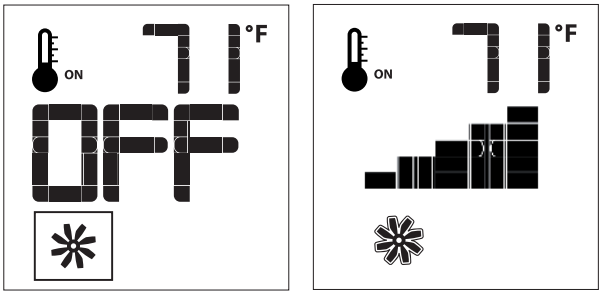
11.8.9 Fan Speed Control

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 let. 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.

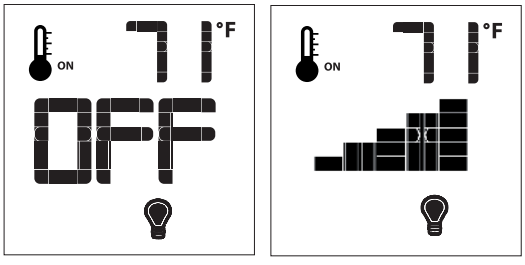
Manual mode: Fan(s) will operate at previous setting. There is no delay in start up or stop time.



11.8.10 Accent Light Kit

The light intensity can be adjusted through (6) levels.

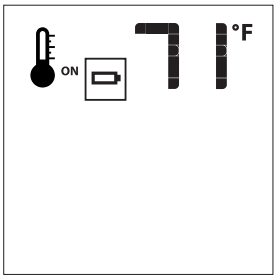
1. Press the mode key to index to the light icon.
2. Press the up or down arrow keys to adjust the intensity level.
3. A single ‘beep’ will confirm reception of the command.



11.8.11 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, etcetera.

- When the remote control battery 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.



12.0 ADJUSTMENT

12.1 Pressure Testing

NOTE: The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of the system at test pressures in excess of ½ 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.

12.1.1 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 12.1.
2. Attach manometer using a ¼ in (6 mm) I.D. hose.
3. Light pilot and burner. Check pressure to ensure it is between the minimum and maximum recommended pressure settings.
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.

12.1.2 Manifold Pressure Test

1. Light pilot.
2. Loosen manifold (OUT) pressure tap by turning screw counter-clockwise. See (B) in Figure 12.1.
3. Attach manometer to pressure tap using a ¼ in (6 mm) I.D. hose.
4. Light burner. Check manometer reading.
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 12.1, Inlet Pressures

Fuel	Natural Gas	Propane
Gas Supply	**Min - Max**	**Min - Max**
Inlet Pressure Tap (A)	5” - 10.5” WC (1.25 - 2.62 kPa)	12” - 13” WC (2.99 - 3.24 kPa)

Table 12.2, Manifold Pressure

Fuel	Natural Gas	Propane
Gas Supply	**Low - High**	**Low - High**
Manifold Pressure Tap (B)	1.1” - 3.8” WC (.27 - .95 kPa)	2.9” - 11” WC (.72 - 2.74 kPa)

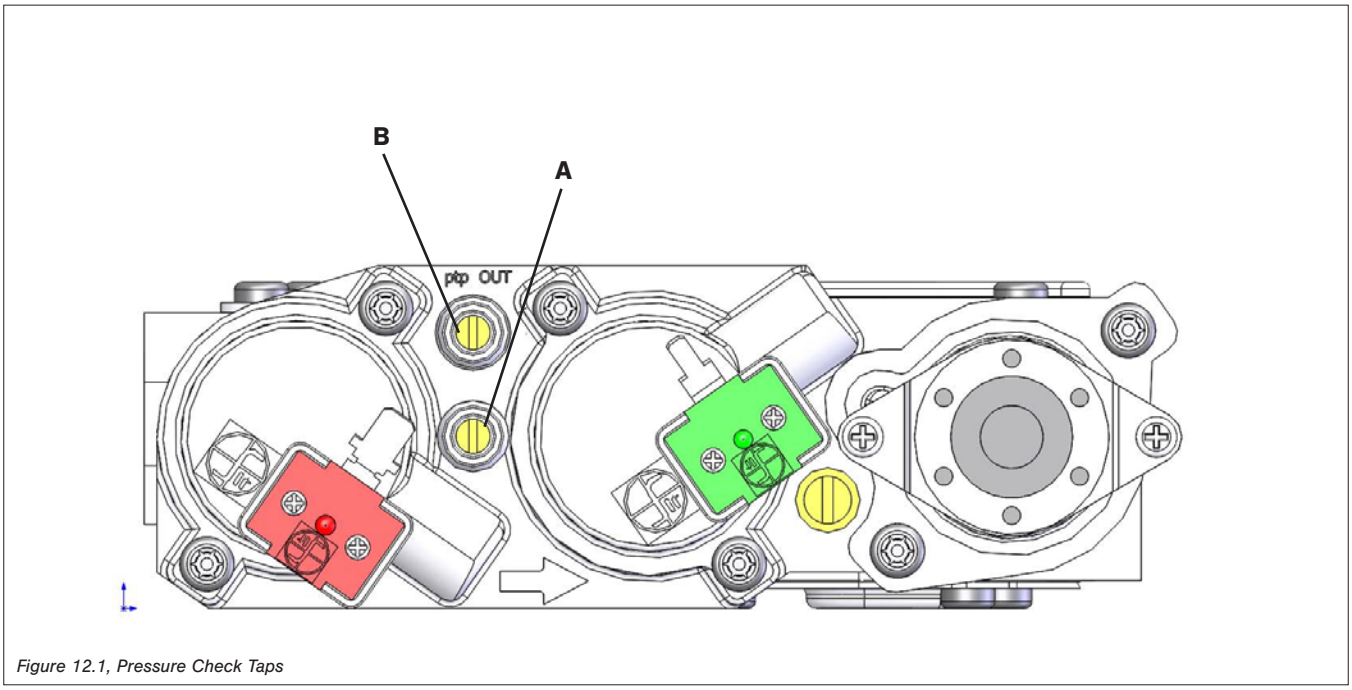


Figure 12.1, Pressure Check Taps

12.2 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.

12.2.1 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 12.3.

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.

The air shutter on this appliance is factory set for horizontal terminations, and may need adjustment for natural gas installations, depending on venting length and configuration. Hussong Manufacturing recommends natural gas venting installation with at least 4 ft (1219 mm) of vertical height to adjust the air shutter openings as outlined in Table 12.4.

12.2.1.1 Venturi Opening Adjustment

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

IMPORTANT: Slight adjustments to the venturi opening will create dramatic results. Adjust at slight increments until desired look is achieved. Follow Table 12.5 and Figure 12.3.

1. Remove the safety barrier, glass frame assembly, and log set.
2. Remove the front burner from the firebox (2) screws.
3. Remove the back burner tube.
4. Loosen screw on venturis and adjust as necessary. Tighten screw.
5. Reinstall all components previously removed.

Table 12.3, Factory Set Venturi Openings

Fuel	Front	Rear
Natural Gas	1/8” (3 mm)	1/8” (3 mm)
Propane	7/16” (11 mm)	5/16” (8 mm)

Table 12.4, Recommended Venturi Opening for Vertical Venting

Fuel	Front	Rear
NATURAL GAS ONLY	1/8” (3 mm)	CLOSED

Table 12.5, Flame Appearance Venturi Adjustment

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

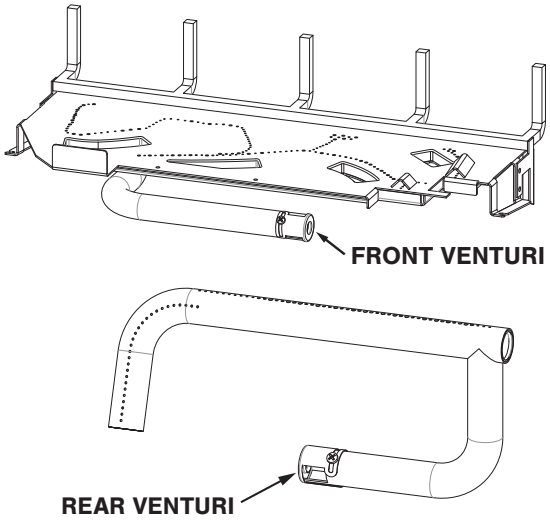


Figure 12.2, Front and Rear Burner Venturis

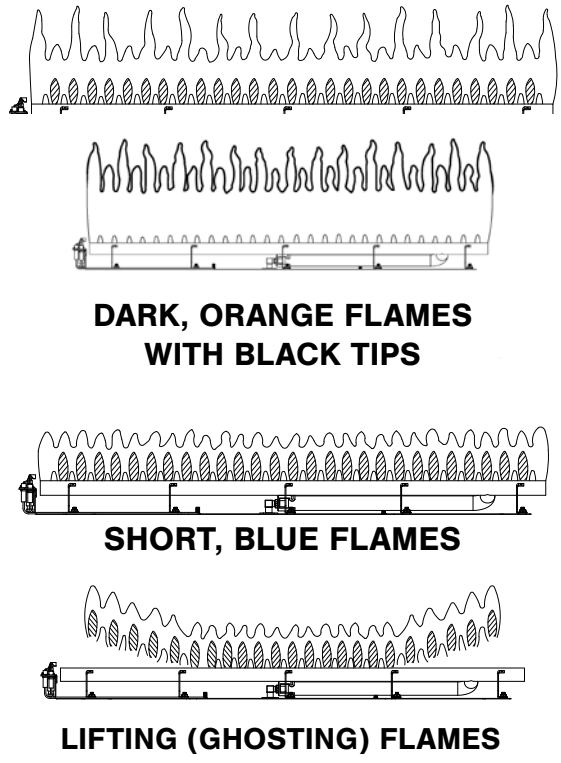


Figure 12.3, Flame Appearance and Characteristics

12.2.2 Vent Restriction

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. To achieve desirable flame appearance, the vent exit may be restricted by the restrictor plate (included in components packet) and/or by adjusting the built-in restrictor located in the fireplace baffle.

This fireplace is shipped with the restrictor located in the fireplace baffle set in the open position. Follow the tables below to adjust the restrictor to desired flame appearance. Allow the fireplace to burn for 15 minutes before making any adjustments to the restrictor setting.

Table 12.6, Restrictor Adjustment for Flame Appearance

Flame Appearance	Draft Problem	Vent Restriction
Short, flickering	Excessive draft Not enough restriction	Close baffle restrictor
		Install restrictor plate
Lifting or ghosting*	Insufficient draft Too much restriction	Open baffle restrictor
		Remove inner ring(s) on restrictor plate, or remove restrictor plate

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

12.2.2.1 Baffle Restrictor Adjustment

NOTE: Verify the baffle door restrictor is set into 'down' position and not flipped 'up.'

1. Remove the safety barrier and glass frame assembly to access the baffle restrictor adjustment handle.
2. Loosen (2) thumb screws to adjust the setting to achieve desired flame appearance.
3. Tighten screws after adjustment.
4. Reinstall the glass frame assembly and safety barrier.

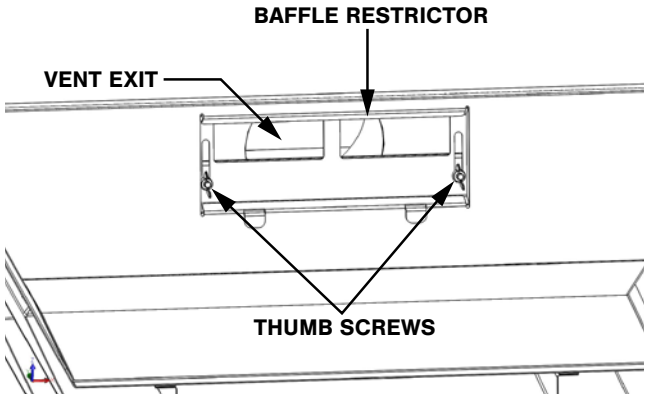


Figure 12.4, Cross-Section View of Restrictor

12.2.2.2 Restrictor Plate Installation

1. Remove the safety barrier and the glass frame assembly.
2. To access the vent exit through the fireplace baffle, push baffle restrictor back.
3. Bend the tabs on the restrictor plate (included in components packet) to approximately 80° angles. This will create tension when the restrictor is inserted into the exhaust pipe.
4. Insert restrictor into the 5 in (127 mm) exhaust pipe with the tabs pointing towards you.
5. Set the baffle restrictor back into position.
6. Reinstall all components previously removed.

12.2.2.3 Restrictor Plate Modification

1. Remove the safety barrier and the glass frame assembly.
2. To access the vent exit through the fireplace baffle, push baffle restrictor back.
3. Remove the restrictor by pulling it down and out of the 5 in (127 mm) exhaust pipe.
4. Make necessary modifications to achieve desired flame appearance.
5. Insert restrictor into the 5 in (127 mm) exhaust pipe with the tabs pointing towards you.
6. Set the baffle restrictor back into position.
7. Reinstall all components previously removed.

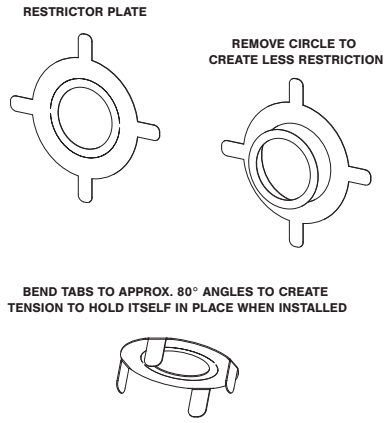


Figure 12.5, Restrictor Plate

13.0 TROUBLESHOOTING

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 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 the communication link is established between the remote control and the IFC module.
- Verify inlet pressure meets the recommended inlet pressure. If necessary, adjust line pressure regulator.

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 *(see Figure 10.1, on page 36)* 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 a gas supplier. Can be caused by situations such as a bent line, too narrow diameter or pipe, or a low line pressure.
	Pilot flame not making contact with the flame rectification sensor on the pilot assembly	Verify the pilot flame envelopes the top of the flame sensor and extends far enough onto burner for ignition. To adjust pilot flame, turn pilot adjustment screw on the gas valve clockwise to decrease flame, and counterclockwise to increase flame.
	Pilot adjustment screw not sealed	Seal pilot adjustment screw. Do not over-tighten.
Pilot flame always on, or will not extinguish	Control system set to CPI mode	Set control system to IPI mode *(see Section 11.8.3, on page 40)*
Main 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.
	Plugged main burner orifice	Remove blockage.
	Pilot flame	Verify the pilot flame is properly directed to ignite burner. See pilot flame troubleshooting above.
	Remote control not working properly	Replace batteries.
	No call for heat	Verify remote control is powered ON and thermostat operation is turned OFF.

Issue	Cause	Solution
Pilot and burner extinguish while in operation	No propane in tank	Check propane tank. Refill if necessary.
	Incorrect glass assembly installation	Refer to Section 9.1 Glass Frame Assembly on page 33.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
	Improper pitch on horizontal venting	¼ in. (6 mm) rise per foot (30 cm) is required on horizontal venting
	Inner vent pipe leaking exhaust gases back into firebox	Check for leaks and repair if necessary.
	Excessive draft	Restrictor setting may need to be adjusted. Refer to Section 12.2.2 Vent Restriction on page 45.
Soot appears on glass	Improper log placement	Refer to Section 9.3 #C39-50B Log Set Installation on page 34.
	Improper venturi setting	Venturi air shutter may need to be opened slightly to allow more air into the gas mix. Refer to Section 12.2.1.1 Venturi Opening Adjustment on page 44.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
	Improper pitch on horizontal venting	¼ in. (6 mm) rise per foot (30 cm) is required on horizontal venting
Flame burns blue and lifts off burner	Improper venturi setting	Venturi air shutter may need to be opened slightly to allow more air into the gas mix. Refer to Section 12.2.1.1 Venturi Opening Adjustment on page 44.
	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 back batteries or remote control batteries low	Replace batteries.
	No communication between remote control and IFC module	Reprogram remote control to IFC module *(see Section 11.2, on page 38).*
	A maximum number of failed ignitions or flame restorations has been reached	Reset IFC module *(see Section 11.6, on page 39).*

14.0 MAINTENANCE

ATTENTION: Installation and repair should only 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.

14.1 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.

14.2 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: Every 6 months

Action:

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

14.3 Vent System

NOTE: If the vent-air intake system is disassembled for any reason, reinstall per instructions provided with installation. Refer to 8.0 Venting on page 27.

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.

14.4 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 #C39-057T as necessary.
- Only Hussong Mfg. Co., Inc. will supply the replacement of glass assembly as a complete unit.

14.5 Burner and Pilot System

The burner assembly may be removed for easier access to the control compartment. Refer to Section 9.4 Control Board Removal and Installation on page 35. 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.

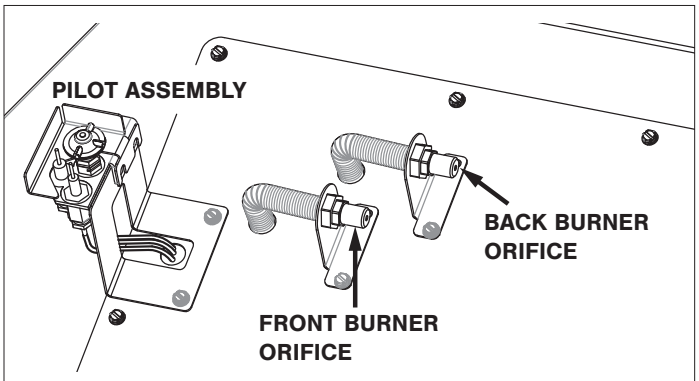


Figure 14.1, Burner Orifices Location

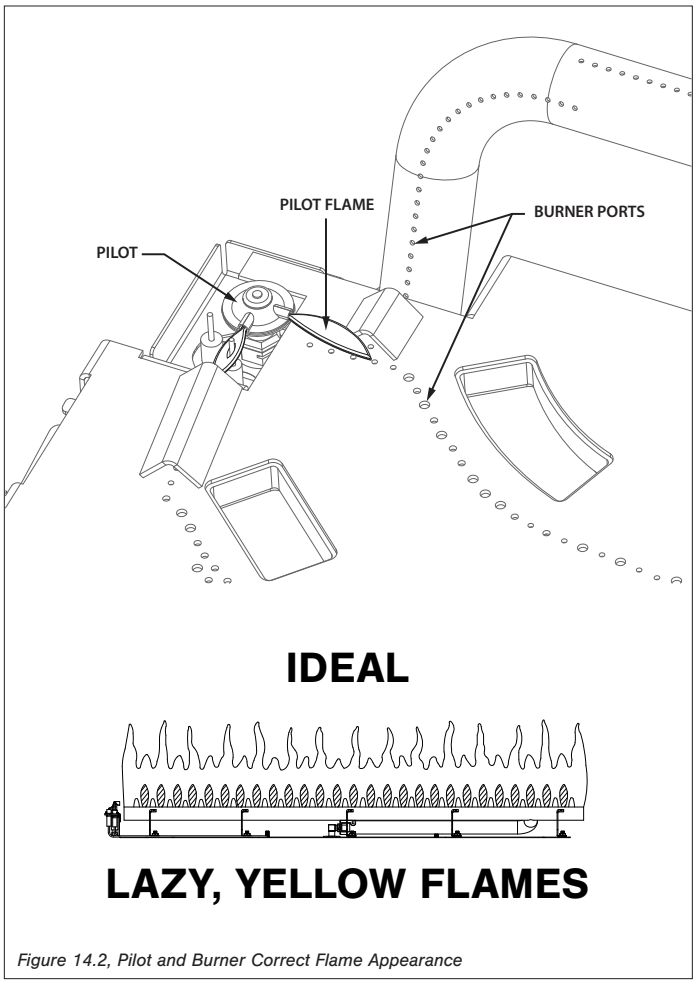


Figure 14.2, Pilot and Burner Correct Flame Appearance

15.0 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	C39-160A	Valve Step Motor - Propane	700-504-1
Control Board - Propane	C39-161A	18 in. Flexible Gas Line - Black	700-213B
S.I.T. IPI Gas Valve - NG	700-567	Flexible Gas Line - Valve to Burner Connection	700-226
S.I.T. IPI Gas Valve - Propane	700-567-1	NG Burner Orifice #44 FRONT	700-244
Proflame 2 IFC Board	700-652	NG Burner Orifice #47 BACK	700-247
IFC Wire Harness Assembly	700-653	Propane Burner Orifice #55 FRONT	700-255
Pilot Assembly - NG	700-551	Propane Burner Orifice #56 BACK	700-256
Pilot Assembly - Propane	700-551-1	Conversion Kit - NG	NCK-C39-SB
540 Split Flow	700-595	Conversion Kit - Propane	LCK-C39-SB
Transmitter (Remote Control) with Split flow	700-508	Burner Tube	C39-035A
Pilot Orifice - NG #62	700-166	Burner Plate (Front)	C39-350A
Pilot Orifice - Propane #35	700-168	Log Plate with Burner Bracket (Rear)	C39-351A
Valve Step Motor - NG	700-504		

GLASS AND GLASS PARTS	
28-5/8" x 34½" Glass with Gasket	701-007T
1-1/8" Glass Gasket	900-006
Replacement Valance	C39-005

LIGHT KIT	
Light Kit	C39-LKT
20W 130V Halogen Bulb	600-676A
Klinkers	900-KLK

SAFETY BARRIERS	
Full Rectangular Screen Front	C39-FRSF
Prairie Screen Front	C39-PSF
Rectangle Screen Front	C39-RSF
Arched Mission Screen Front	C39A-MSF
Arched Full Prairie Door Screen Front	C39A-FPDSF
Rectangular Mission Screen Front	C39R-MSF

FAN KIT	
Fan Assembly	IPI-075

LOG SET	
13 Piece Log Set	C39-50B
Ember Panel	C39-900E
#C39 1B Log	C39-1B
#C39 2B Log	C39-2B
#C39 3B Log	C39-3B
#C39 4B Log	C39-4B
#C39 5B Log	C39-5B
#C39 6B Log	C39-6B
#C39 7B Log	C39-7B
#C39 8B Log	C39-8B
#C39 9B Log	C39-9B
#C39 10B Log	C39-10B
#C39 11B Log	C39-11B
#C39 12B Log	C39-12B
#C39 13B Log	C39-13B
Rock Wool Embers	900-REMB

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

CAR-39

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. warranties 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. warranties 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.