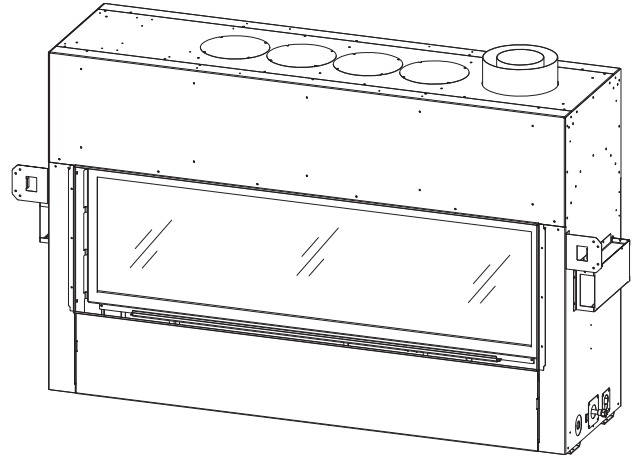


# CALLAWAY ST

Model #CLW-ST  
Direct Vent Gas See-Through Linear Fireplace

English and French installation manuals are available through your local dealer. Visit our website [www.kozyheat.com](http://www.kozyheat.com).

Les manuels d'installation en français et en anglais sont disponibles chez votre détaillant local. Visitez [www.kozyheat.com](http://www.kozyheat.com).



**▲ WARNING:**  
**FIRE OR EXPLOSION HAZARD**  
Failure to follow safety warnings exactly could result in serious injury, death, or property damage.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
  - Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Leave the building immediately.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

This appliance may be installed in an aftermarket, permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

**! DANGER**



**HOT GLASS WILL  
CAUSE BURNS**  
**DO NOT TOUCH GLASS  
UNTIL COOLED**  
**NEVER ALLOW CHILDREN  
TO TOUCH GLASS**

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

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



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

# CONGRATULATIONS!

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

Jim Hussong  
President



Dudley Hussong  
Board Chairman



## Homeowner Reference Information

*We recommend you record the following information:*

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

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

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

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

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

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

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

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



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# 1.0 INTRODUCTION

## 1.1 Appliance Certification

Laboratory: PFS in Cottage Grove, Wisconsin, USA


Standards:

ANSI Z21.88-2017/CSA 2.33-2017, Vented Gas Fireplace Heaters

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

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

## 1.2 California Proposition 65 Warning

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

## 1.3 Requirements for the Commonwealth of Massachusetts

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

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

### 1.3.1 Installation of Carbon Monoxide Detectors

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

In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

### 1.3.2 Approved Carbon Monoxide Detectors

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

### 1.3.3 Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print no less the one-half inch (½) in size, "GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS".

### 1.3.4 Inspection

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

### 1.3.5 Exemptions

The following equipment is exempt from 248 CMR 5.08 (2) (a) 1 through 4: The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

### 1.3.6 Manufacturer Requirements

#### 1.3.6.1 Gas Equipment Venting System Provided

When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

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

#### 1.3.7 Gas Equipment Venting System NOT Provided

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

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

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

## 2.0 SPECIFICATIONS

---

### 2.1 Heating Specifications

	Natural Gas	Propane
Maximum Input Rating	35,500 Btu/h (10.4 kW)	35,000 Btu/h (10.26 kW)
Minimum Input Rating	18,500 Btu/h (5.42 kW)	18,000 Btu/h (5.275 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 (0.72 kPa)
Orifice Size (DMS)	#34	#51

#### 2.1.1 Altitude Adjustment

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

##### 2.1.1.1 US Installations

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

##### 2.1.1.2 Canadian Installations

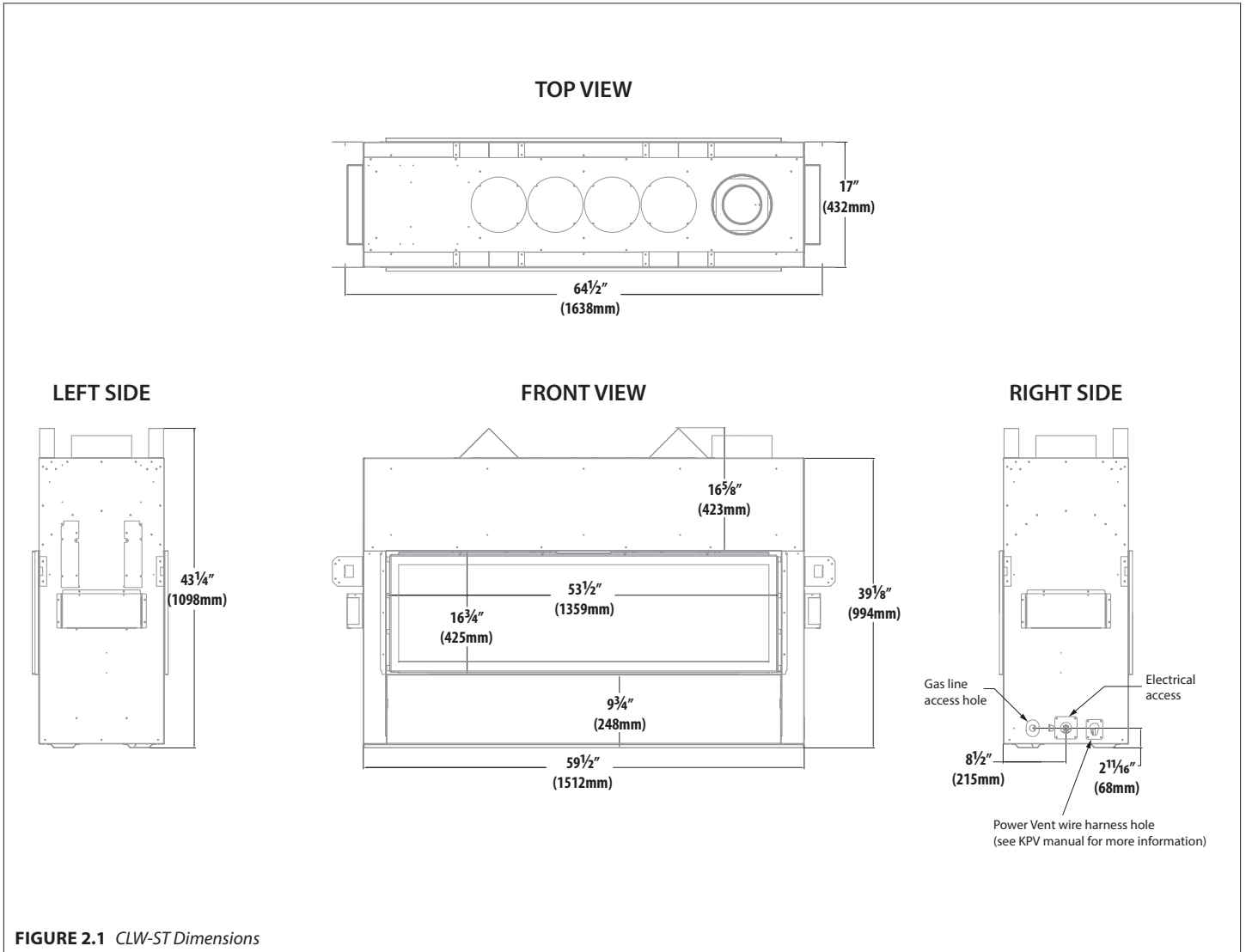
When the appliance is installed at elevations above 4,500' (1,372m), the certified high altitude rating shall be reduced at the rate of 4% for each additional 1,000' (305m).

### 2.2 Electrical Specifications

- The junction box in this appliance requires 120VAC, 60Hz, and 6 Amps.
- Verify the household breaker is shut off prior to working on any electrical lines.
- The AC power supply to this appliance must be hot at all times and shall not have a switch installed in it.



## 2.3 Appliance Dimensions



## 2.4 Barrier Dimensions

### 2.4.1 Safety Barriers

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

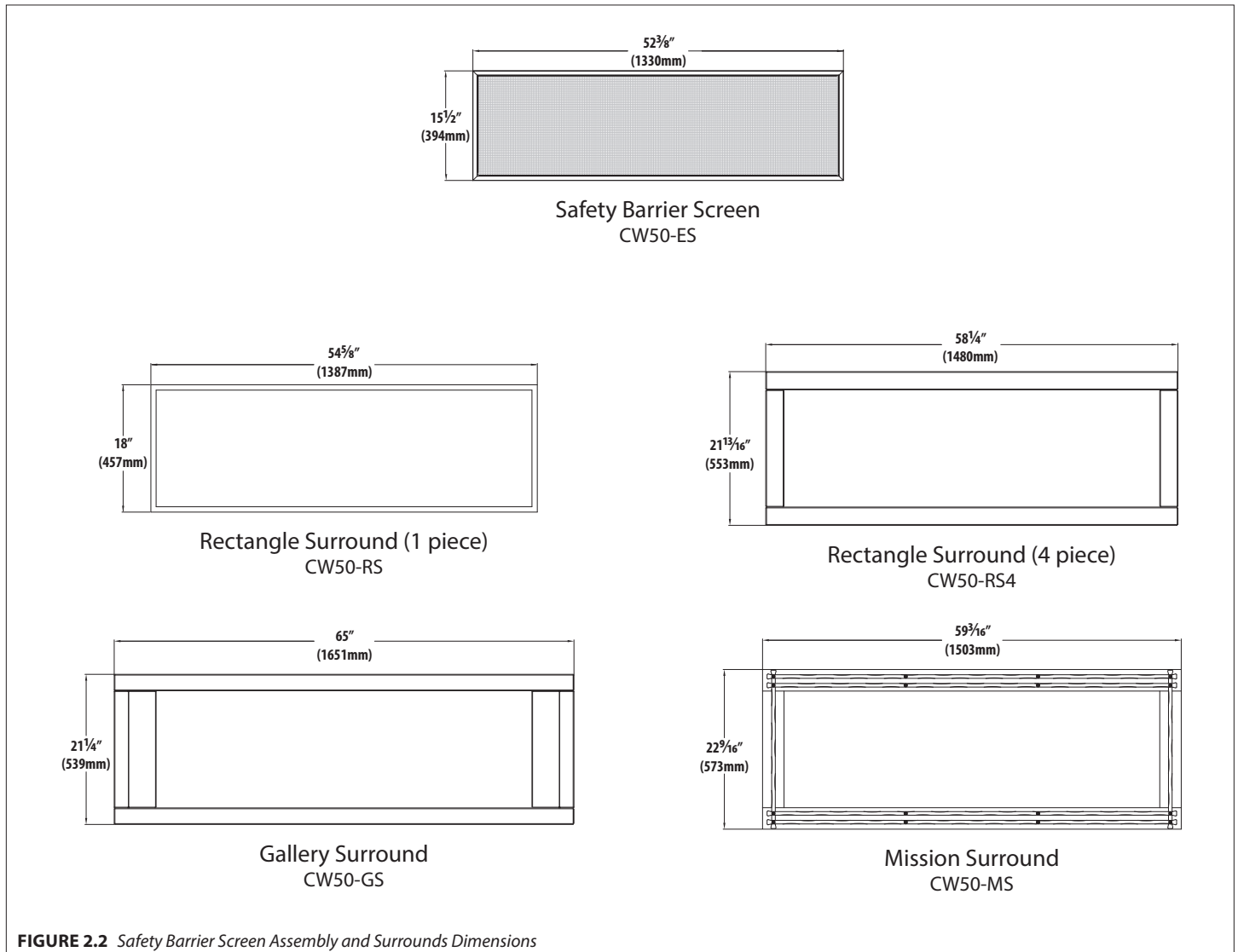
If the barrier becomes damaged, the barrier shall be replaced with Hussong Mfg. Co., Inc.'s barriers for this appliance.

### 2.4.2 Surrounds (optional)

**IMPORTANT:** Consider the height of hearth finish material when building a fireplace platform. If using a safety screen only, the hearth may be flush with the finishing edge. If using a surround, the bottom of the fireplace surround must be level with finished hearth extension for proper fit of the optional surround.

Refer to Section 4.4 Finishing Guidelines for Optional Surrounds on page 42 for proper fitting guidelines for finishing material.

For installation instructions, see Section 4.3 Barrier and Optional Surround Installation on page 41.



## 3.0 FRAMING

### 3.1 Installation Planning

This appliance offers several design options for managing the heat produced by this fireplace.

#### Read all documentation for your specific installation and design options prior to appliance installation.

- **Standard Installation** will be outlined in this manual in sections marked 'standard installation' and must be followed *if no design options (vented cavity and Komfort Zone Kit) are to be used. The fireplace enclosure and ceiling minimum height must be 76" (1930mm) for all design options.* If planning a standard installation with the use of a heat transfer kit (HTK-EXT or HTK-INT), the standard framing dimensions for full enclosure framing will still apply.
- **If planning a standard installation with shelf enclosure framing**, the following standard installation framing dimensions and clearances listed for 'shelf enclosure framing' in this section will apply. **Heat management options (heat transfer kits, vented cavity, Komfort Zone Kit) can not be used with shelf enclosure framing.**
- **Heat Transfer Kit(s)** allows you to transfer heat to a specific area inside your home (interior) or directly outside (exterior). This appliance can have (2) of the same heat transfer kits installed at the same time. It can be one or two of the same heat transfer kits. See the HTK-EXT or HTK-INT manuals for further information. **If you are planning a standard installation with the use of an exterior and/or interior kit**, the minimum dimensions listed in this section for full enclosure framing will apply for your framing installation. You will still need to remove the cover plates as instructed in section 3.8.1 on page 23. If you are installing a heat transfer kit with the use of a KZK, vented cavity option, or the #CWST-ODK, the minimum requirements applicable to those options must be adhered to.
- **Vented Cavity** offers the option to leave a minimum sized opening in the fireplace cavity, allowing for heat reduction above the fireplace. This option allows for combustible facing materials above the fireplace, heat reduction for a TV mounted above the fireplace, and lower mantel clearances. See section 3.8.2, **VENTED CAVITY AND KOMFORT ZONE KIT INSTALLATION** on page 24. **All vented cavity options** have the same minimum chamber and ceiling dimension requirements as the standard installation dimensions for full enclosure framing in this section. **The fireplace chamber and ceiling minimum height must be 76" (1930mm) for all design options.**
- **Komfort Zone Kit** offers the option to redistribute radiant heat through plenum(s). This option allows for combustible facing materials above the fireplace, heat reduction for a TV above the fireplace, and lower mantel clearances. See section 3.8.2, **VENTED CAVITY AND KOMFORT ZONE KIT INSTALLATION** on page 24. **If installing a Komfort Zone Kit (#KZK-054 or #KZK-1510A)**, the framing requirements may be different than the standard dimensions for full enclosure framing listed in this section. Reference the manual included with your kit before completing all fireplace framing and other installation considerations. **If installing the KZK-054, read the manual included with the kit carefully when planning your installation as there are additional framing specifications based on your vent termination.**

- **Callaway See-Through Outdoor Kit** converts the appliance to an indoor-outdoor partition, or window, allowing the fireplace to be viewed from both the indoor and the outdoor of your home. See the #CWST-ODK manual for further information.

If installing the #CWST-ODK, you have the choice of two heat management options to use, the #KZK-054 (see the #KZK-054 manual), or the single opening cavity option (section 3.8.4 on page 26). One of these two options are require for use with the #CWST-ODK. The opening for either option must be in the interior of the house.

Heat transfer kits (HTK-EXT or HTK-INT) may be used in combination with the #KZK-054 or single opening vented cavity for the #CWST-ODK. See the HTK-EXT or HTK-INT for more information.

Refer to your applicable heat management options for framing requirements. Shelf enclosure framing is not allowed for use with the #CWST-ODK.

Kozy Power Vent (#KPV) is allowed for use with the #CWST-ODK.

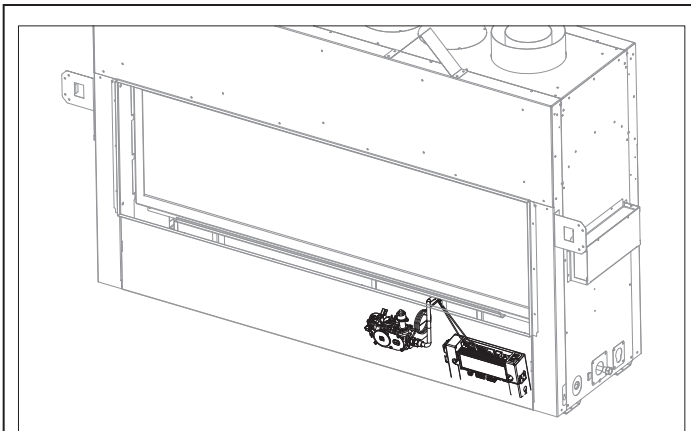
- **Kozy Power Vent** is a fan-powered mechanical draft vent system (horizontal terminations only) for use with any of the design options listed in this section. To convert the fireplace for use with Kozy Power Vent, order the #KPV kit and the #KPV control module #700-759 (sold separately from kit). It is easier to convert the fireplace for use with the #KPV before framing in the fireplace. If you convert the fireplace for use with the #KPV after fireplace installation, you will have to access the control board assembly for the #KPV installation. See section 8.3, **CONTROL BOARD REMOVAL AND INSTALLATION** on page 60 for access to the control board before and after installation. Refer to the #KPV installation manual for more information.
- If planning to convert to propane, it is easier to complete the gas conversion before framing in the fireplace. See the #LCK-CW50-SPB manual for complete conversion instructions. If you convert the fireplace to propane after fireplace installation, you will have to remove the control board. See section 8.3, **CONTROL BOARD REMOVAL AND INSTALLATION** on page 60 for access to the control board before and after installation.
- If planning to install optional fan kit #CWST-028, there is a block-off plate if you wish to divert air into a certain room. See section 9.4.1, **FAN CHANNEL BLOCK-OFF PLATE** on page 64 for more information.

**Please read the instructions in this manual carefully for your specific installation.**

## 3.2 Appliance Placement Considerations

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

- This appliance must be installed on a level surface capable of supporting the fireplace and venting. Determine your vent requirements before framing your appliance. If installing #KPV Kozy Power Vent, please reference the manual included with the kit.
- 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.
- This appliance has a front side and a back side. The front side is the access side of the fireplace, where the glass frame assembly is easily removable and the gas valve and control module are located. The back side is the fixed side of the fireplace where the glass frame assembly is fixed to the fireplace with flange nuts. Make sure to place the access/front side in an accessible location. See FIGURE 3.1.



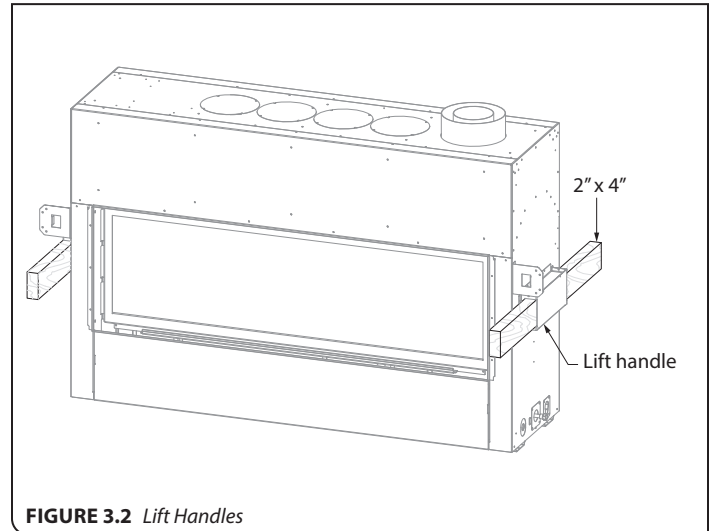
Access/front side of fireplace - gas valve and control module visible in control compartment

**FIGURE 3.1** Access/Front Side of CLW-ST

### 3.2.1 Moving the Appliance

This appliance is heavy. We recommend a team lift when moving, placing, and positioning the appliance.

On both sides of the appliance, there are lift handles that allow a hand lift (no sharp edges), or allow a 2" x 4" piece of lumber to be inserted inside the lift handles, as shown in FIGURE 3.2.



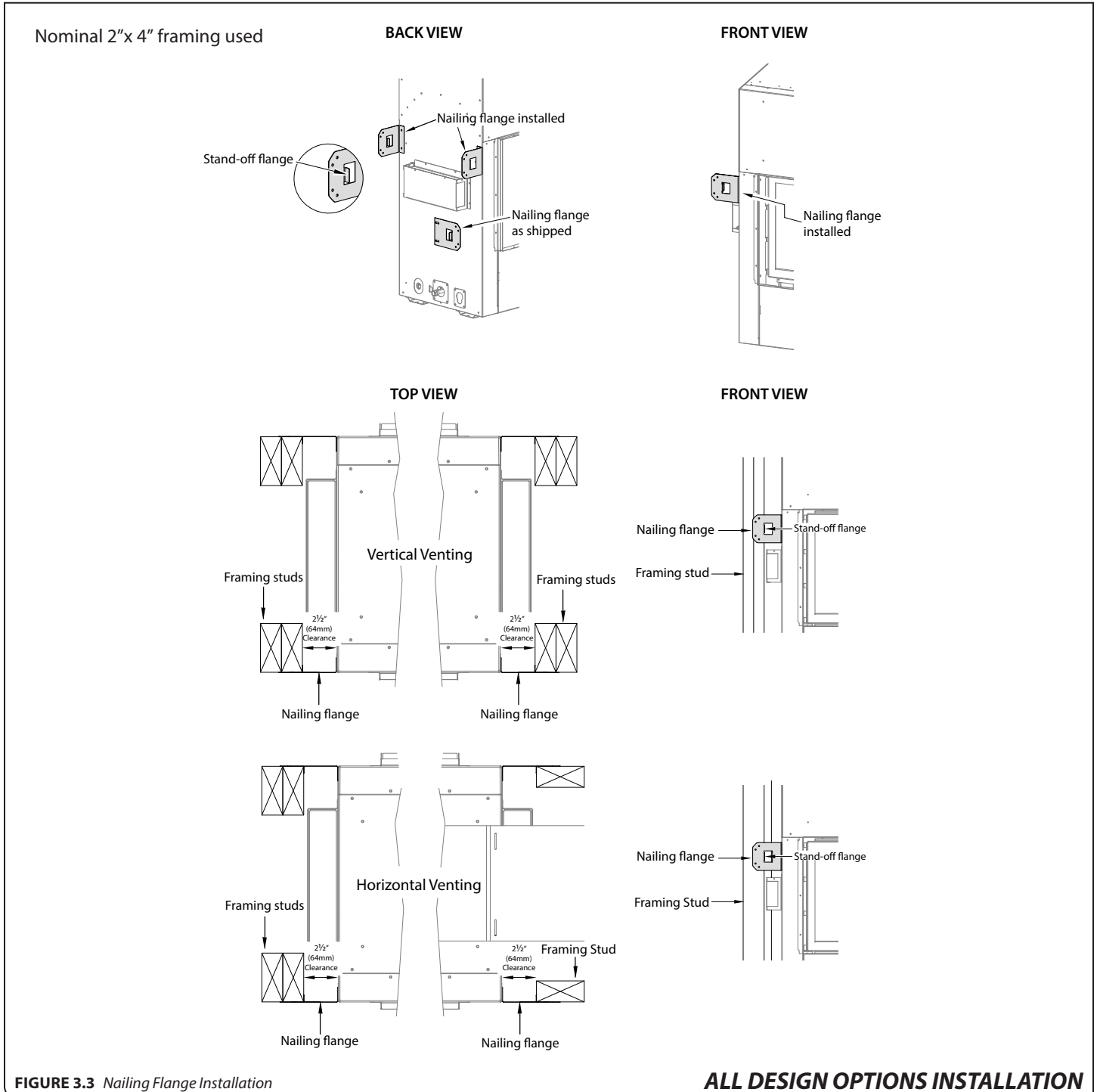
**FIGURE 3.2** Lift Handles

### 3.3 Nailing Flange Assembly and Installation

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

The nailing flanges **MUST BE INSTALLED** for all applications.

1. Remove (4) nailing flanges from the right and left side of the fireplace.
2. Align nailing flanges with holes on the 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. **UNTIL ALL FRAMING REQUIREMENTS ARE COMPLETED:** Position framing stud against the small stand-off (located on backside of nailing flange). Secure with nails or screws. For securing nailing flanges for horizontal terminations at the vent pass-through, refer to **FIGURE 3.4** on page 14.
  - **When installed, the nailing flanges provide the minimum 2½" (64mm) clearance from the sides of the fireplace to framing.**

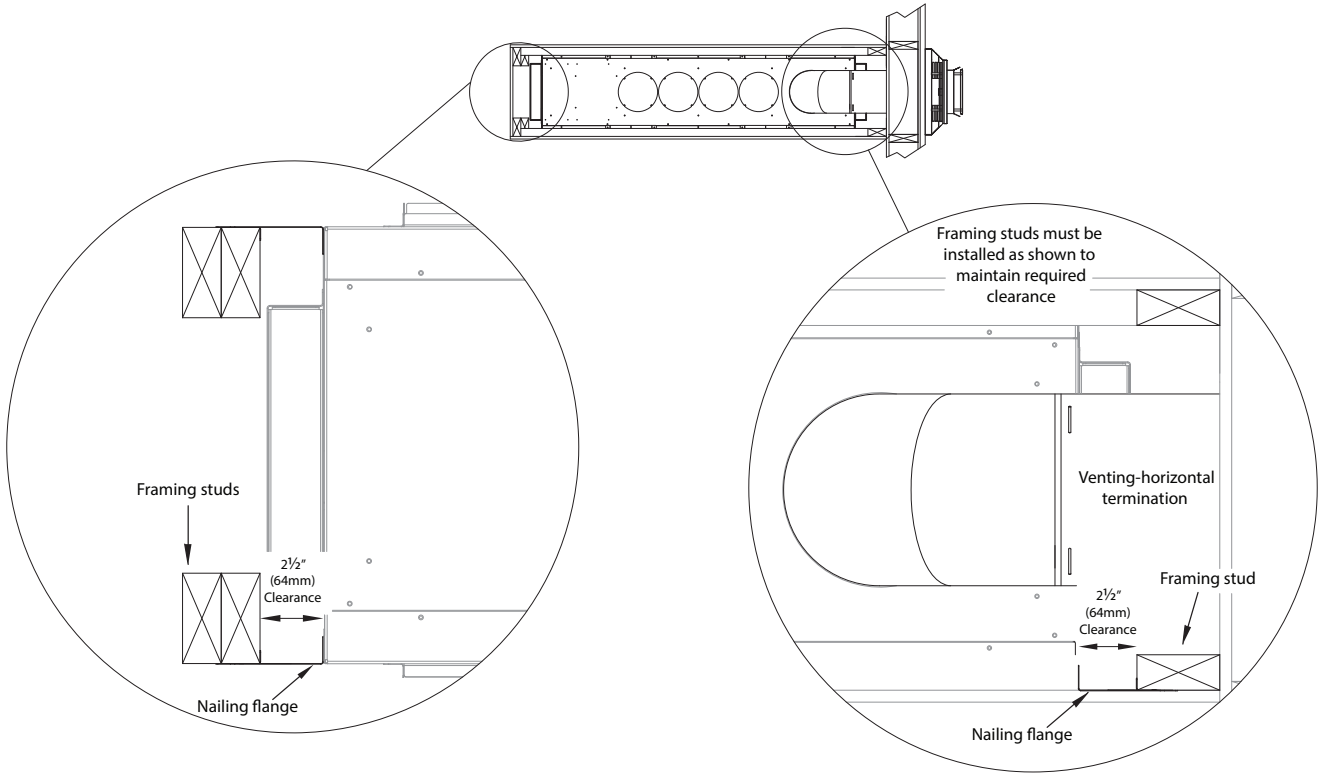


**FIGURE 3.3** Nailing Flange Installation

**ALL DESIGN OPTIONS INSTALLATION**

Nominal 2"x 4" framing used

**TOP VIEW**  
Horizontal Termination



**FIGURE 3.4** Nailing Flange - Horizontal Termination Framing

**ALL DESIGN OPTIONS INSTALLATION**

### 3.4 Stand-off Assembly and Installation

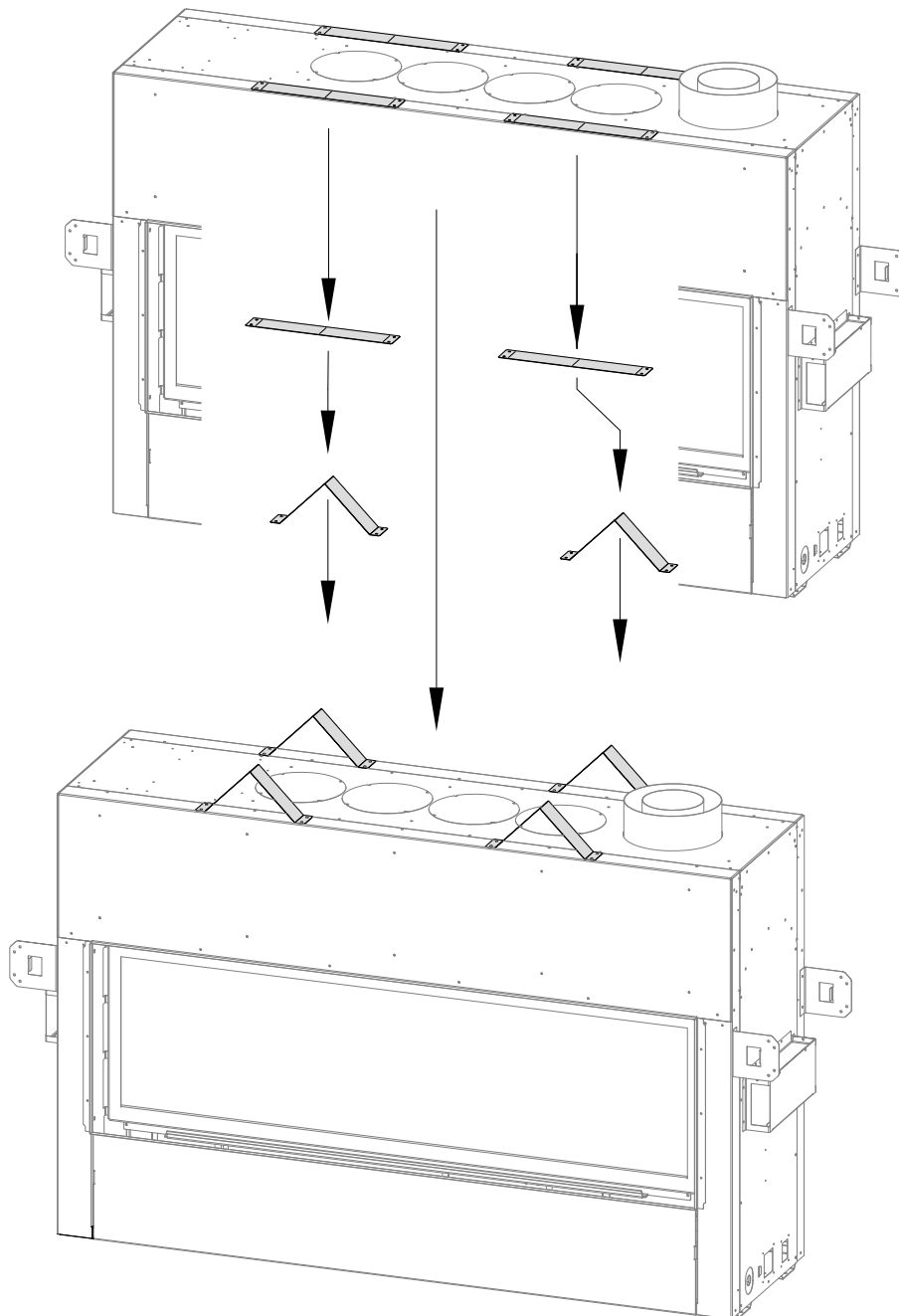
**WARNING:** The top stand-offs **MUST BE INSTALLED** in order to maintain clearance requirements for all design options except for shelf enclosure framing applications. See Section 3.4.1.

**WARNING:** The CWST-SAK stand-offs and heat shield (sold separately) **MUST BE INSTALLED** in order to maintain clearances requirements for shelf enclosure framing applications. See Section 3.4.2 on page 16.

These clearances must be maintained.

#### 3.4.1 Top Stand-off Assembly and Installation

1. Remove and save (4) screws securing top 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 top of the fireplace. Secure with (4) screws previously removed along with (4) located on top of the fireplace and (8) screws in the components packet.



**FIGURE 3.5** Stand-off Assembly Installation

**ALL DESIGN OPTIONS INSTALLATION**

### 3.4.2 #CWST-SAK Shelf Application Kit

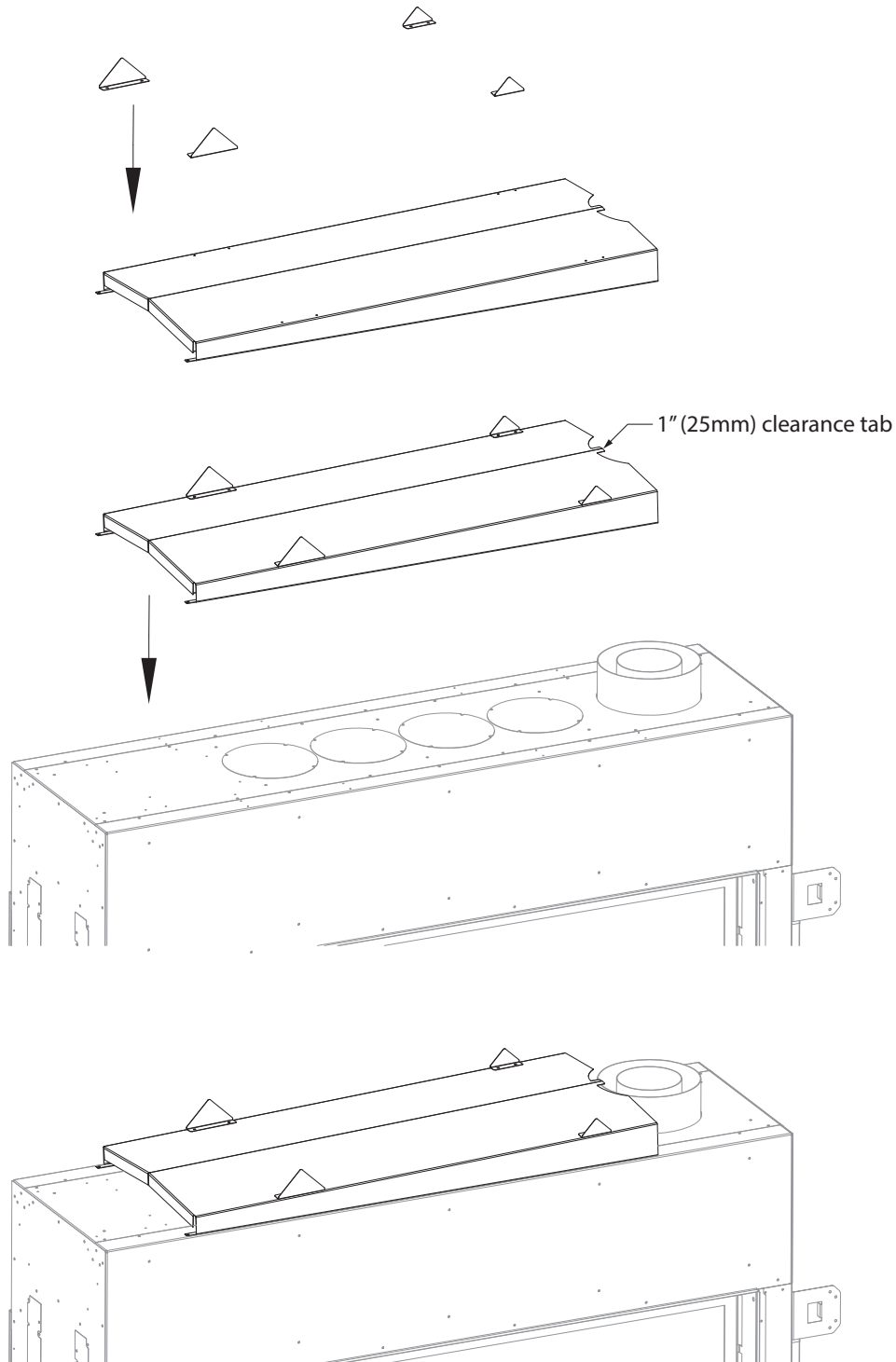
*Sold separately.*

*If you are planning to frame out for a shelf enclosure installation, the stand-offs and heat shield must be installed.*

1. Remove and save (4) screws securing top stand-off brackets on top of the fireplace. Discard top stand-off brackets.
2. Attach the stand-offs to the heat shield with the screws included

with the kit, as shown below. The smaller stand-offs will be installed near the vent cutout.

3. Align the assembled shelf application kit with the holes on top of the fireplace, as shown below. The cutout with the 1" (25mm) clearance tab must be against the flue collar.
4. Secure shelf application kit to the fireplace with screws previously removed.



**FIGURE 3.6** #CWST-SAK Installation

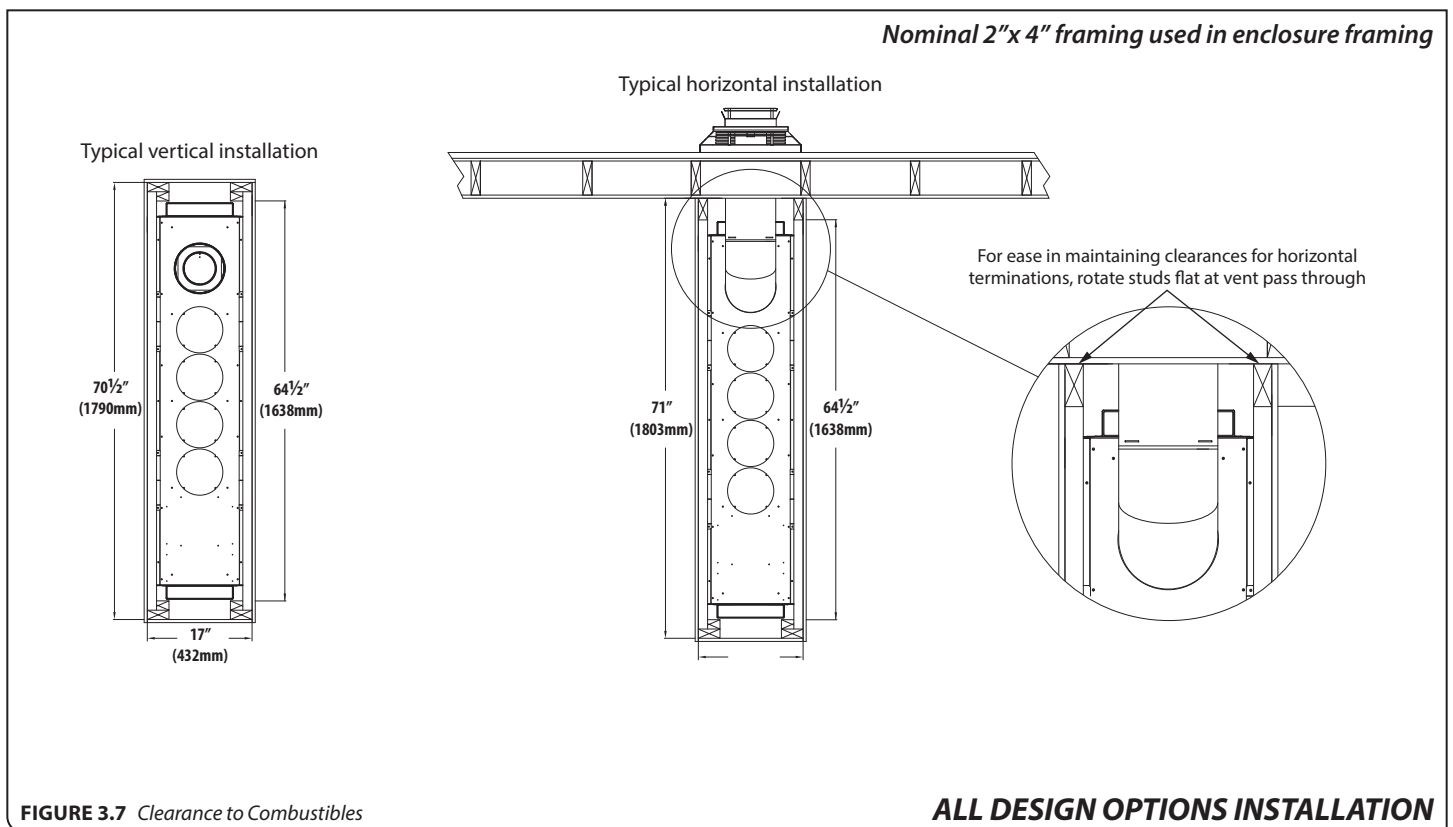


## 3.5 Standard Installation

### 3.5.1 Clearances to Combustibles

**Table 3.1, Minimum Appliance Clearances to Combustible Material for Standard Installations**

From appliance top stand-off brackets	0"	0mm
From appliance left and right stand-off brackets	0"	0mm
From appliance front	36"	914mm
Fireplace side finishing edge to adjacent sidewall	0"	0mm
Fireplace top finishing edge to 3/4" (19mm) mantel trim	8"	203mm
Mantel 6" (152mm) deep from fireplace top finishing edge	11-1/2"	292mm
Base of the fireplace to ceiling	76"	1930mm
Fireplace top finishing edge to ceiling	49-1/2"	1257mm



### 3.5.2 Rough Framing

**WARNING:** Provide adequate clearance in front of the fireplace for barrier removal, component access, gas line installation, service access, etc.

**CAUTION:** Cold air transfer area. The fireplace enclosure 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.

**NOTE:** This fireplace has a front and back side. The front is marked "ACCESS SIDE" where the control module and gas valve are located. Make sure to place the access/front side in an accessible location.

- Floor protection in front of the fireplace is not required. Combustible material may be used if installing a hearth. Consider the thickness of the hearth finishing material if building a fireplace platform. The hearth may be flush with the bottom finishing edge if using a safety screen only. If using a surround, the bottom of the fireplace surround must be level with finished hearth for proper fit of the optional surround. Refer to section 4.4 on page 42 for proper fitting guidelines for finishing material.
- The bottom of the fireplace must be placed directly on a wood or non-combustible surface (not linoleum or carpet). 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.

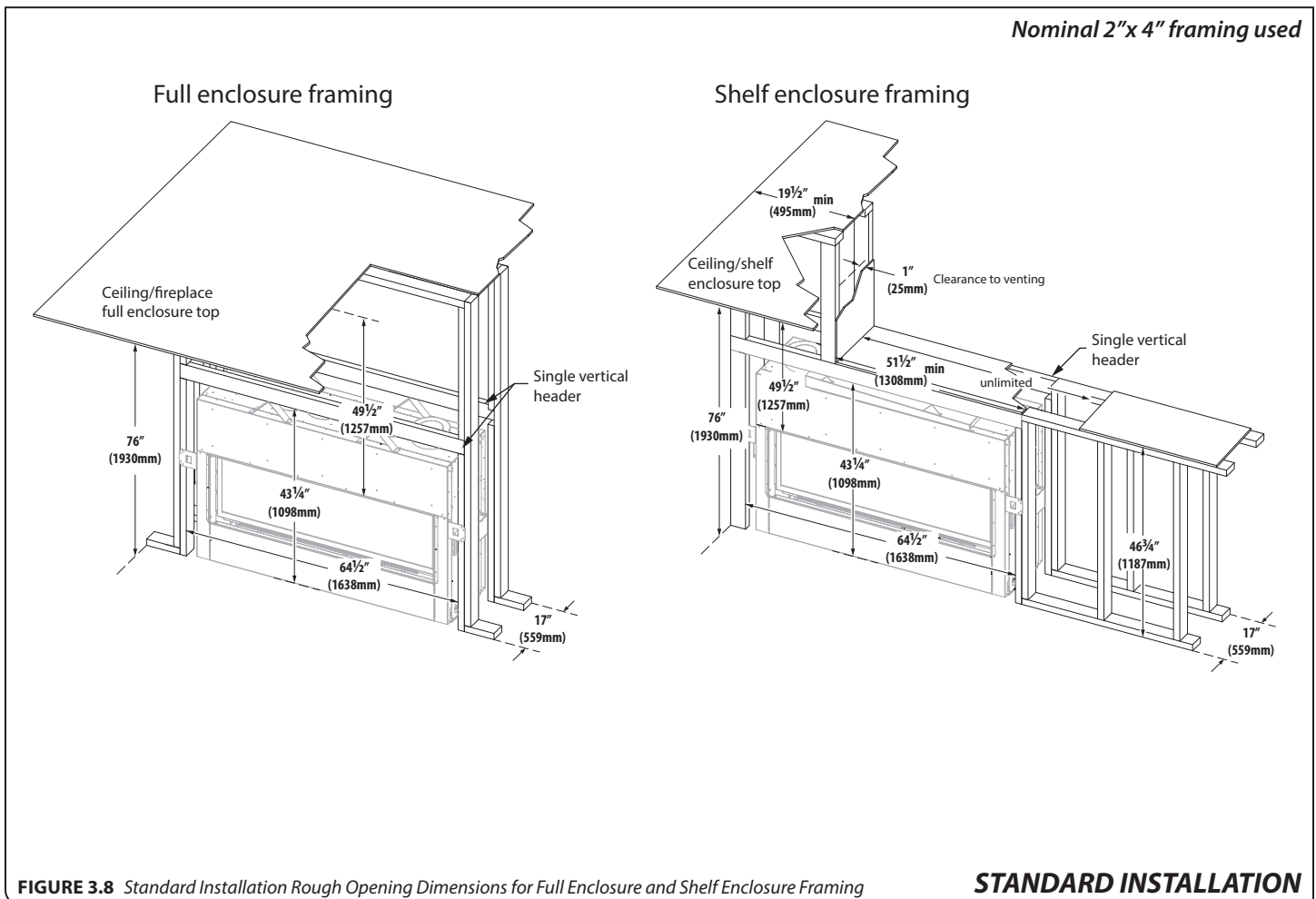
- This fireplace may be elevated off the floor, provided it is properly supported by framing materials and maintains ceiling clearances. If installed above floor level, a solid, continuous platform must be constructed below the fireplace.
- If masonry (optional) is to be used, prepare the foundation necessary for the full masonry load.

#### 3.5.2.1 TV Mounting Considerations

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

Mounting a television above a fireplace is a common practice. Mantel depth, ceiling heights, and wall and mantel construction material all affect television surface temperatures. 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 home owner's responsibility that the preferred TV mounting and mantel design will not exceed the listed maximum operation temperature of their electronic goods.



## 3.6 Natural Draft Vent Termination Rough Framing

The following information applies to all standard, KZK, and vented cavity options when venting with natural draft. If using Kozy Power Vent #KPV, please reference the manual included with the kit.

### 3.6.1 Vent Termination Framing Requirements

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

Exterior vent termination location must be in compliance with section 6.2, **MINIMUM NATURAL DRAFT TERMINATION CLEARANCES** on page 49.

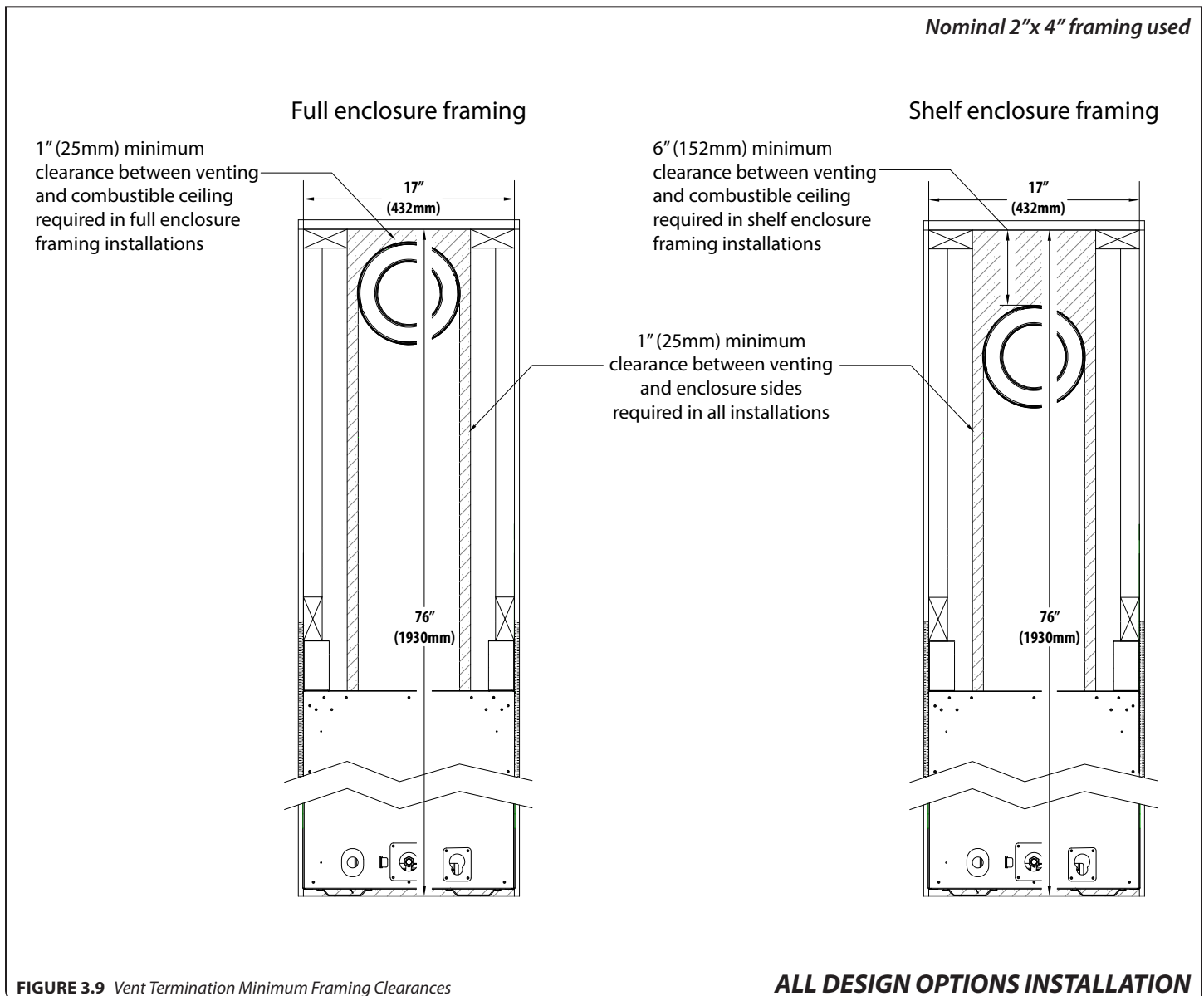
*Instructions for minimum horizontal termination rough framing continue on page 19.*

**IMPORTANT - METAL FAB VENT SYSTEM :** When installing Metal Fab vent pipe, an adapter must be used. This will increase the minimum

height for the center of the vent pipe by 3-1/4" (83mm) when framing the wall pass through for horizontal terminations.

#### 3.6.1.1 Clearances

- A minimum of 1" (25mm) clearance on all sides of the vertical vent pipe must be maintained.
- A minimum of 1" (25mm) clearance from the top surface on the horizontal pipe at the wall pass-through must be maintained.
- A minimum of 1" (25mm) clearance on the sides and bottom surfaces on the horizontal pipe must be maintained.
- A minimum of 1" (25mm) clearance from any venting to the enclosure top is required in horizontal vent termination installations for full enclosure framing. See **FIGURE 3.9**.
- A minimum of 6" (152mm) clearance from any venting to the enclosure top is required in horizontal vent termination installations for shelf enclosure framing. See **FIGURE 3.9**.
- The horizontal pipe after the wall pass-through must maintain a 1" (25mm) clearance to combustibles on all surfaces of the pipe.



### 3.6.2 Vertical Terminations

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

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

### 3.6.3 Horizontal Terminations

**WARNING:** Do not recess the vent cap into wall or siding.

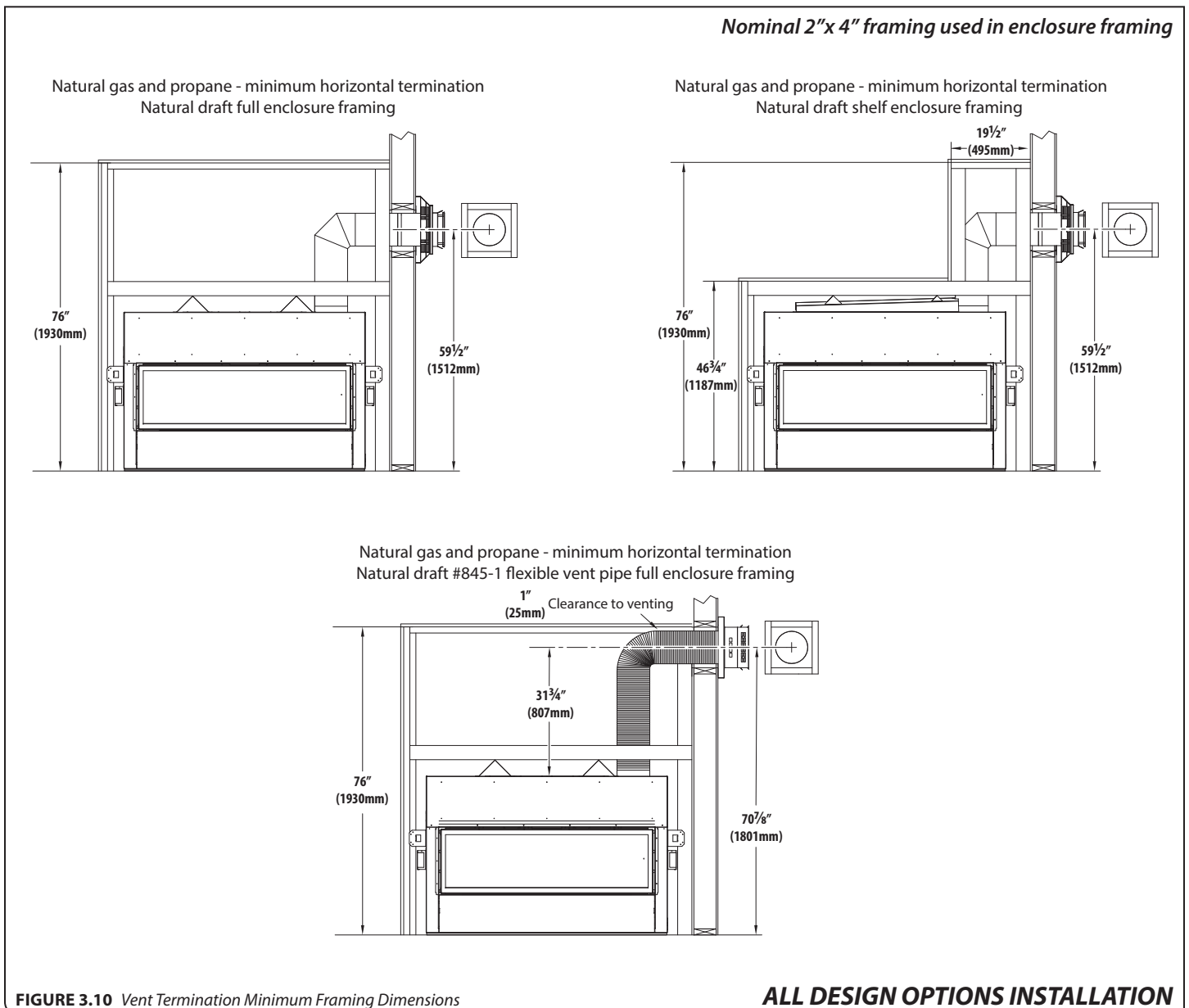
**IMPORTANT:** Horizontal vent sections require 1/4" (6mm) rise for every 12" (305mm) of travel for natural draft applications.

- Wall thimble products that comply with the required 1" (25mm) 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.
- Elbows listed with approved vent systems for this appliance vary in vertical length. Please consult the vent manufacturer's instructions to determine the elbow dimension used for

installation. Adjust the wall pass-through rough opening dimensions to maintain clearance requirements.

### 3.6.4 Wall Pass Through Framing Instructions

- The Kozy Heat #845-1 flexible venting pipe shown in FIGURE 3.10 is 31-3/4" (807mm) from the top of the unit to the center of the vent termination with a minimum bend radius 6" (152mm) to center. Maintain the clearance between venting and combustible ceiling in the fireplace enclosure as shown in FIGURE 3.9.
- Measure from floor level of the fireplace to the center of where the vent pipe will penetrate the wall. The rigid pipe dimensions in FIGURE 3.10 is used with a Simpson DuraVent elbow.
  - Cut and frame an opening in the wall to allow the vent system to run level through the wall pass-through.
  - Follow the vent pipe manufacturer's installation instructions for natural draft vent installation.
- Rigid pipe dimensions are tested with listed Simpson Duravent pipe. Other manufacturers product dimensions may vary.



### 3.7 Outdoor Covered Fireplace Installation

**IMPORTANT:** This fireplace allows for outdoor covered installation and an indoor-outdoor partition (see CWST-ODK manual included with the kit). Outdoor covered installation should be used when you desire the fireplace to be a significant source of heat in an outdoor area. An indoor-outdoor partition will not be a significant source of outdoor heat as the fireplace heat will radiate to the interior of the home.

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

Based on your design options and installation choices (standard installation, vented cavity, or Komfort Zone Kit), follow your specific requirements pertaining to your installation.

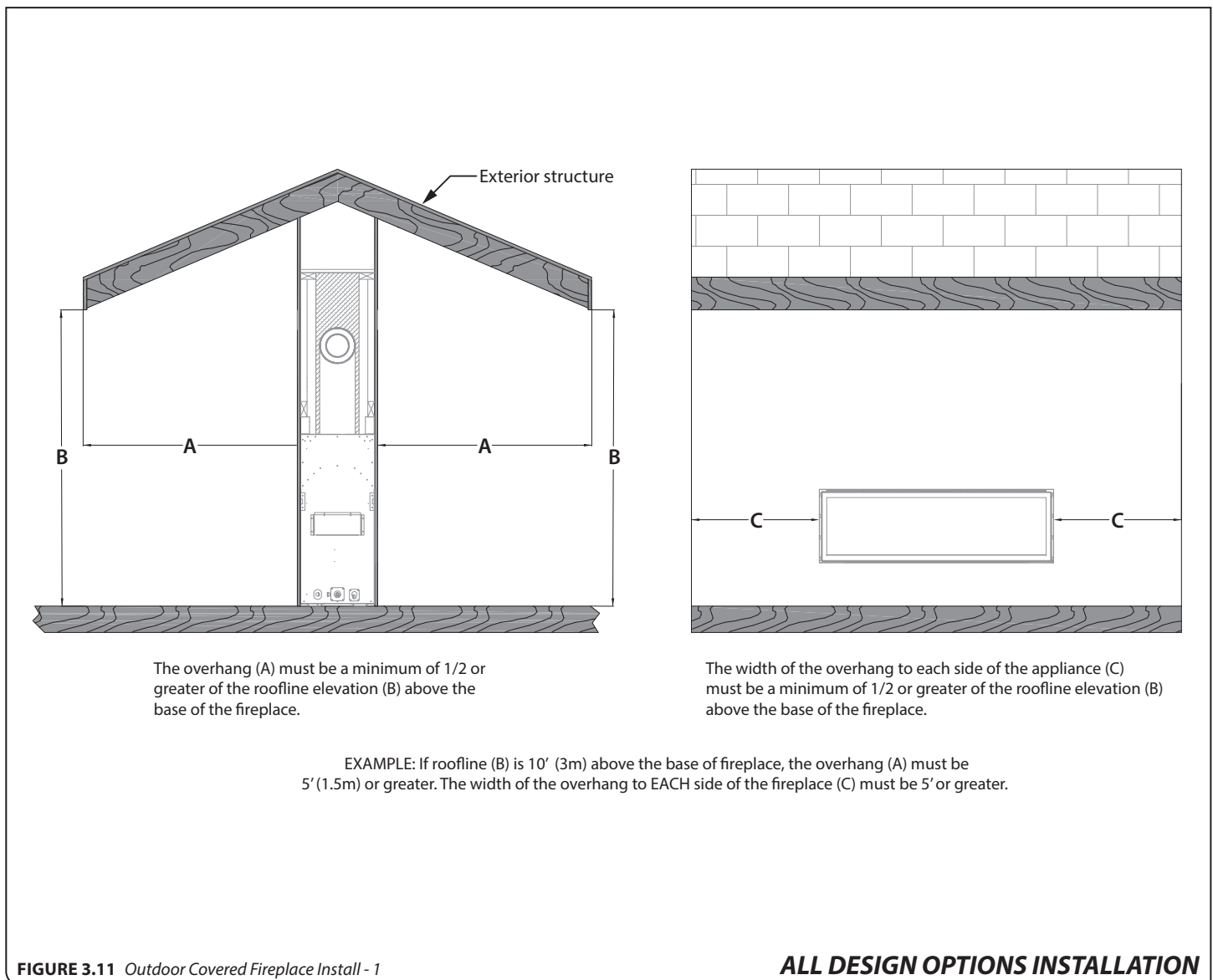
Follow the instructions and illustrations on this page and the following page for installation procedures.

#### 3.7.1 Safety Screen Barriers

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

#### 3.7.2 Requirements

- The continuous insulated building envelope and weatherproof membrane are not to be interrupted by fireplace installation. See **FIGURE 3.12** on the following page.
- Fireplace operation is approved from 40°F to 110°F.
- All wiring connections shall be in accordance with outdoor requirements of NECA NFPA 70.
- All clearances and requirements in your appliance manual must be adhered to.



**FIGURE 3.11** Outdoor Covered Fireplace Install - 1

### 3.7.3 Outdoor Covered Fireplace Installation (continued)

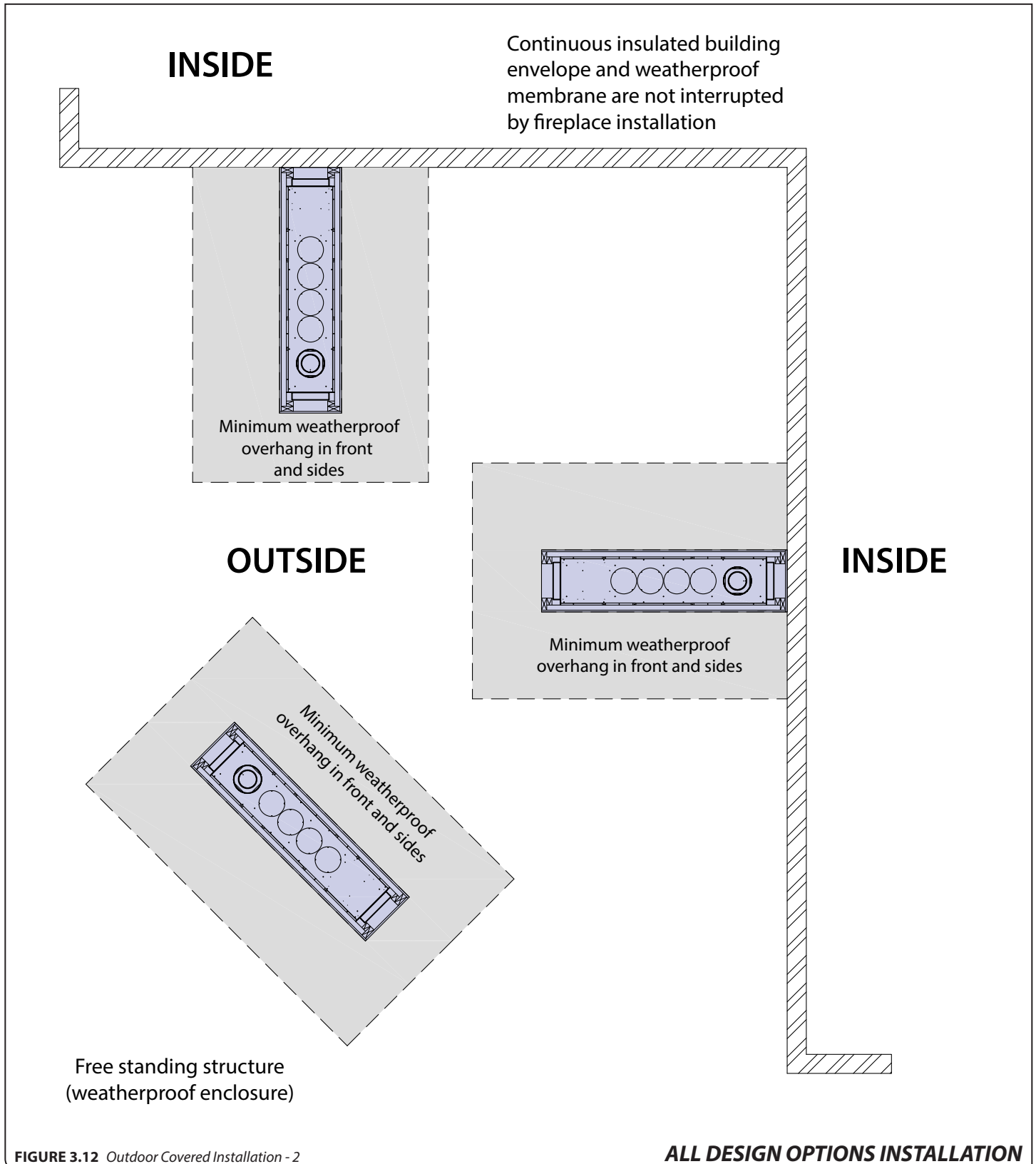


FIGURE 3.12 Outdoor Covered Installation - 2

## 3.8 Heat Management Preparation Overview

The following sections outline the process of preparing the fireplace for heat transfer kits, Komfort Zone Kits, and vented cavity design options. Please reference the manual(s) included with your chosen heat management system.

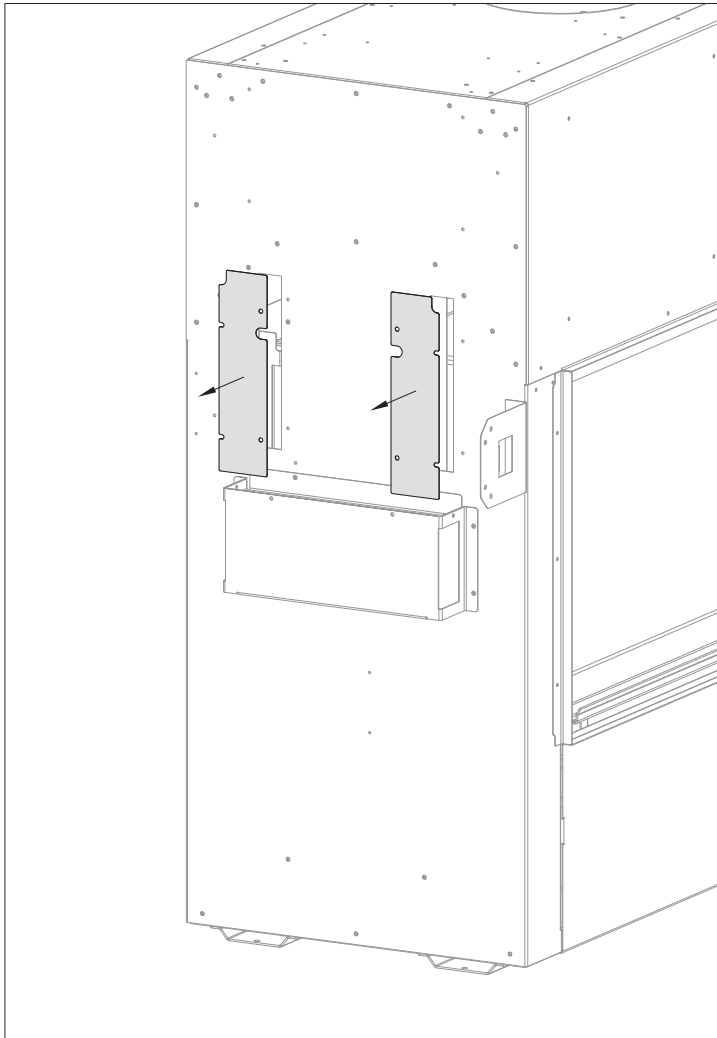
For vented cavity installation instructions, refer to section

### 3.8.1 Exterior and Interior Heat Transfer Kit Cover Plates

FIGURE 3.13 shows removal of the Heat Transfer Kit cover plates. There are (2) rectangular cover plates located on the side opposite of the exhaust on the outer shell of the appliance. Both cover plates must be removed for either kit. See the #HTK-CWST air chute install instruction sheet for more information.

This appliance can have (2) of the same Heat Transfer Kit installed at the same time. It can be one or two of the same (HTK-EXT or HTK-INT) heat transfer kit.

Remove (2) rectangular cover plates for both kits, up to (2) of the same kit may be used.  
See heat transfer kit manuals (HTK-EXT or HTK-INT) for more information.

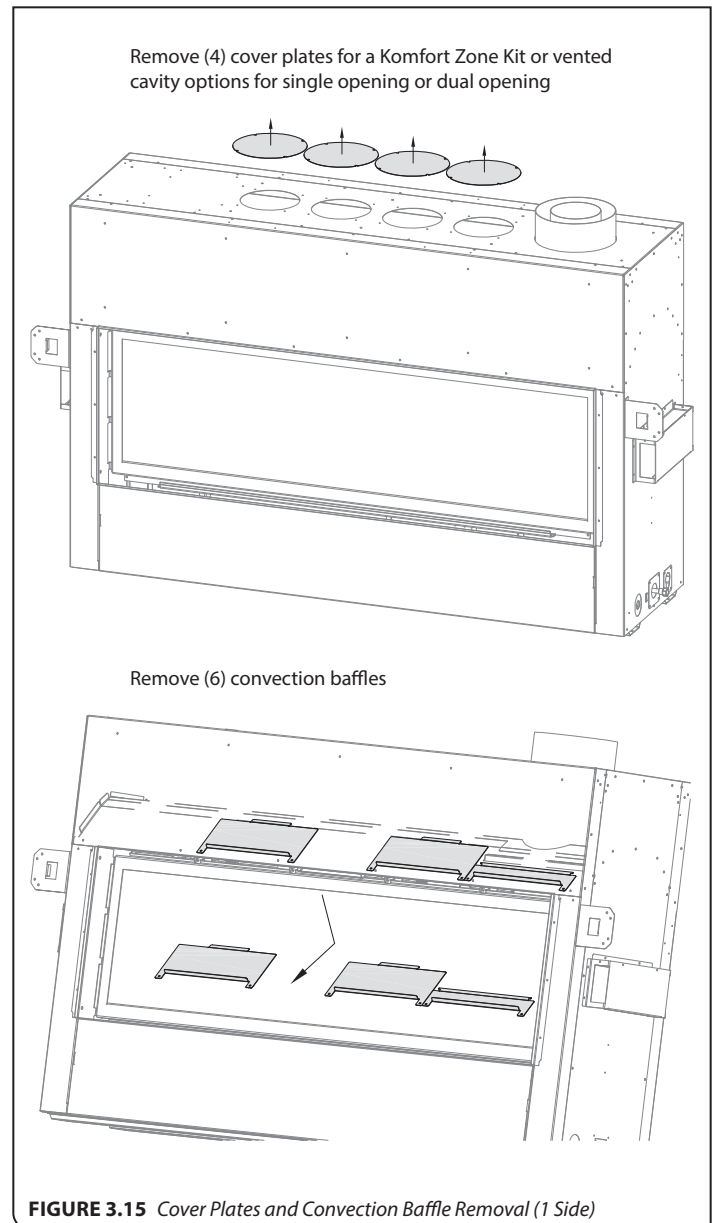
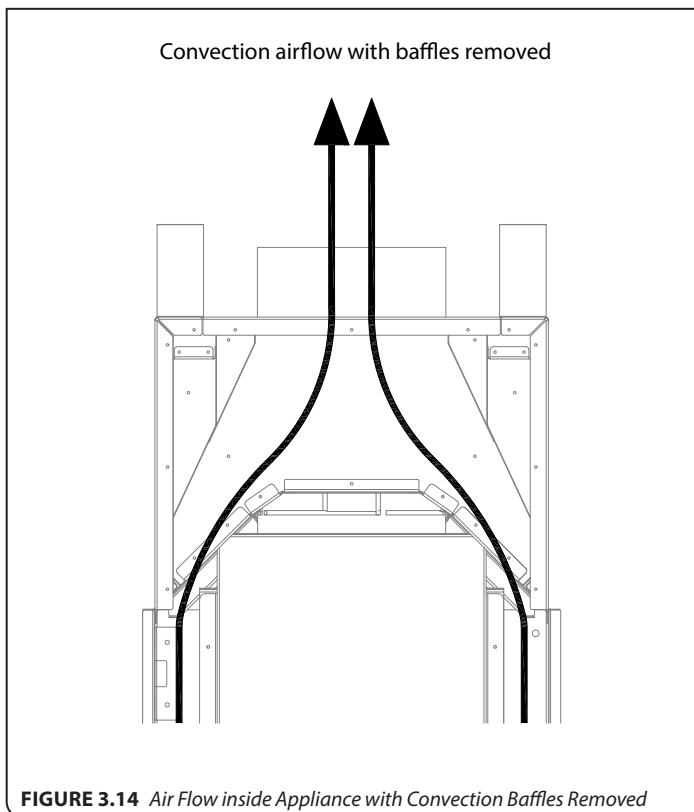


**FIGURE 3.13** Heat Transfer Kit Cover Plate Removal

### 3.8.2 Vented Cavity and Komfort Zone Kit Installation

The Komfort Zone Kit and Vented Cavity design options have specific framing requirements, mantel requirements, and exterior trim dimensions. The appliance convection baffles and outer shell cover plates must be removed for heat distribution required by cavity framing designs.

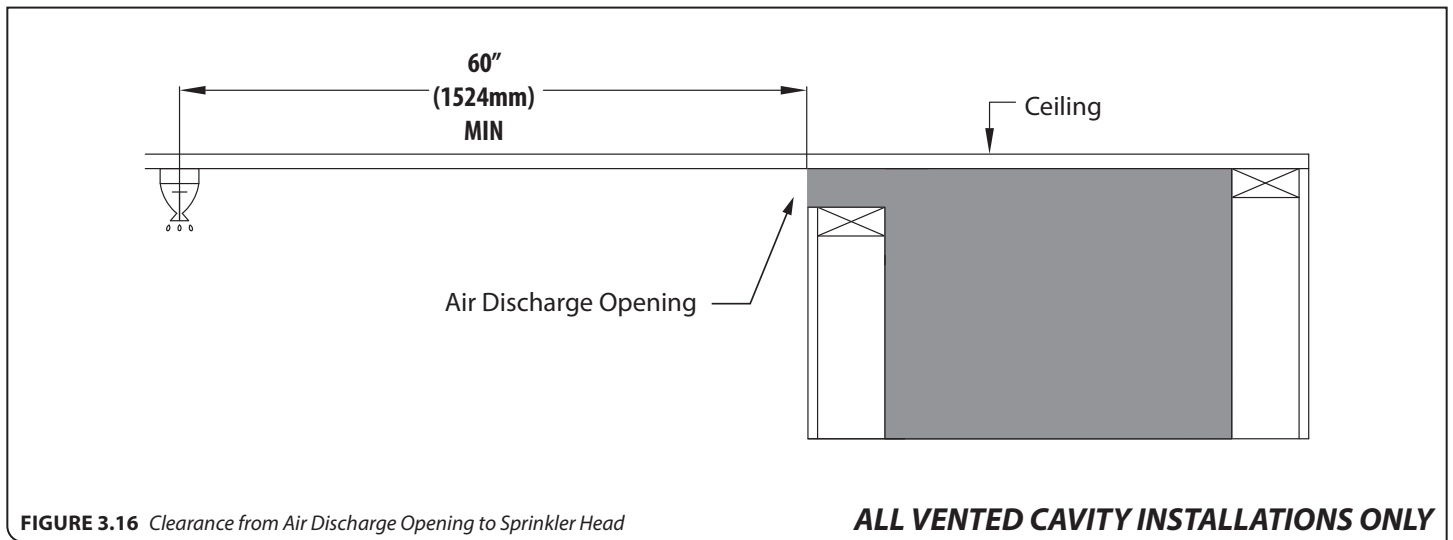
- Full enclosure framing requirements in section 3.5.2, **ROUGH FRAMING** on page 18 will apply to the vented cavity and KZK installation. Shelf enclosure framing is not allowed for these design options.
  - All minimum required dimensions must be maintained after all finishing materials are installed.
1. Remove the (4) top cover plates that correspond to the vented cavity options for the single opening vented cavity, the dual opening vented cavity, or the top vented cavity. See **FIGURE 3.15**. If planning to install a Komfort Zone kit, these (4) cover plates will also have to be removed. See the #KZK-054 or #KZK-1510A manual for further fireplace preparation.
  2. Remove the (6) convection baffles from the appliance. The baffles are secured by (2) screws each behind the upper edge of both fireplace openings. See **FIGURE 3.15**. Recycle these panels as they are no longer needed.





### 3.8.3 Clearance to Sprinkler

- In a situation where a sprinkler head is installed within the proximity of a vented cavity air discharge opening, **FIGURE 3.16** MUST be followed.
- The distance between a sprinkler head and discharge opening cannot be less than 60" (1524mm) in length at every point from the origin of the discharge opening. You must also verify the sprinkler head sensor is set to the proper heat setting so it does not activate when the room heats up from the fireplace being operated normally.
- Please follow local building codes to determine what temperature setting is relevant for your installation.



**FIGURE 3.16** Clearance from Air Discharge Opening to Sprinkler Head

**ALL VENTED CAVITY INSTALLATIONS ONLY**

### 3.8.4 Single Opening Vented Cavity Option

**NOTE:** This vented cavity option allows the use of 19 gauge or less hardware mesh that is 1/2" x 1/2" to prevent any items from entering the vented cavity. This hardware mesh is optional and the only approved item for use within the air discharge opening.

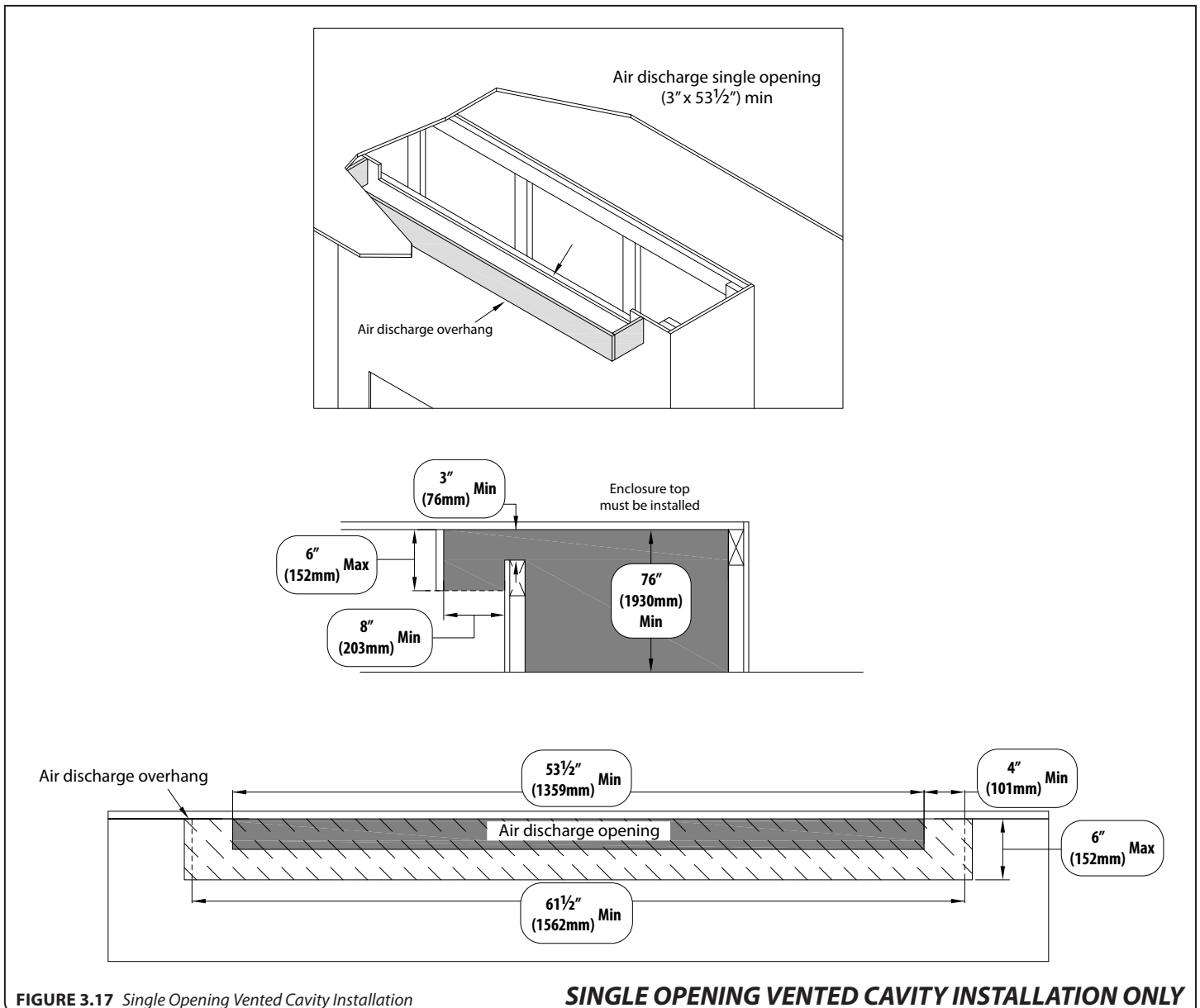
**WARNING:** Do NOT cover or place any items in the area of the air discharge opening. Failure to comply with these instructions could create a fire hazard. Grilles and louvers are not allowed in the discharge opening.

**WARNING:** Ensure air flow within the air discharge opening is not restricted in any way.

**WARNING:** Enclosure measurements must maintain minimum framing specifications for full enclosure framing as outlined in section 3.5.2, ROUGH FRAMING on page 18. Shelf enclosure framing is not allowed for vented cavity installations. Minimum dimensions for the air discharge MUST BE maintained after all finishing materials are installed.

These are minimum dimensions shown for the air discharge opening, and the opening may be increased, if desired, as long as all requirements are followed. It is recommended to limit your opening size for aesthetic purposes and to avoid items falling into the enclosure.

- **FIGURE 3.17** shows the minimum required dimensions for the single opening vented cavity air discharge opening. This single 3" (height) x 53-1/2" (width) air discharge opening can be in either on the front (access side) wall or the back (fixed side) wall of the fireplace. Hot air will exit to the room where the air discharge opening is located.
- **FIGURE 3.17** is shown with an air discharge overhang in front of the air discharge opening. This optional installation method can provide a means to visually hide the air discharge opening.

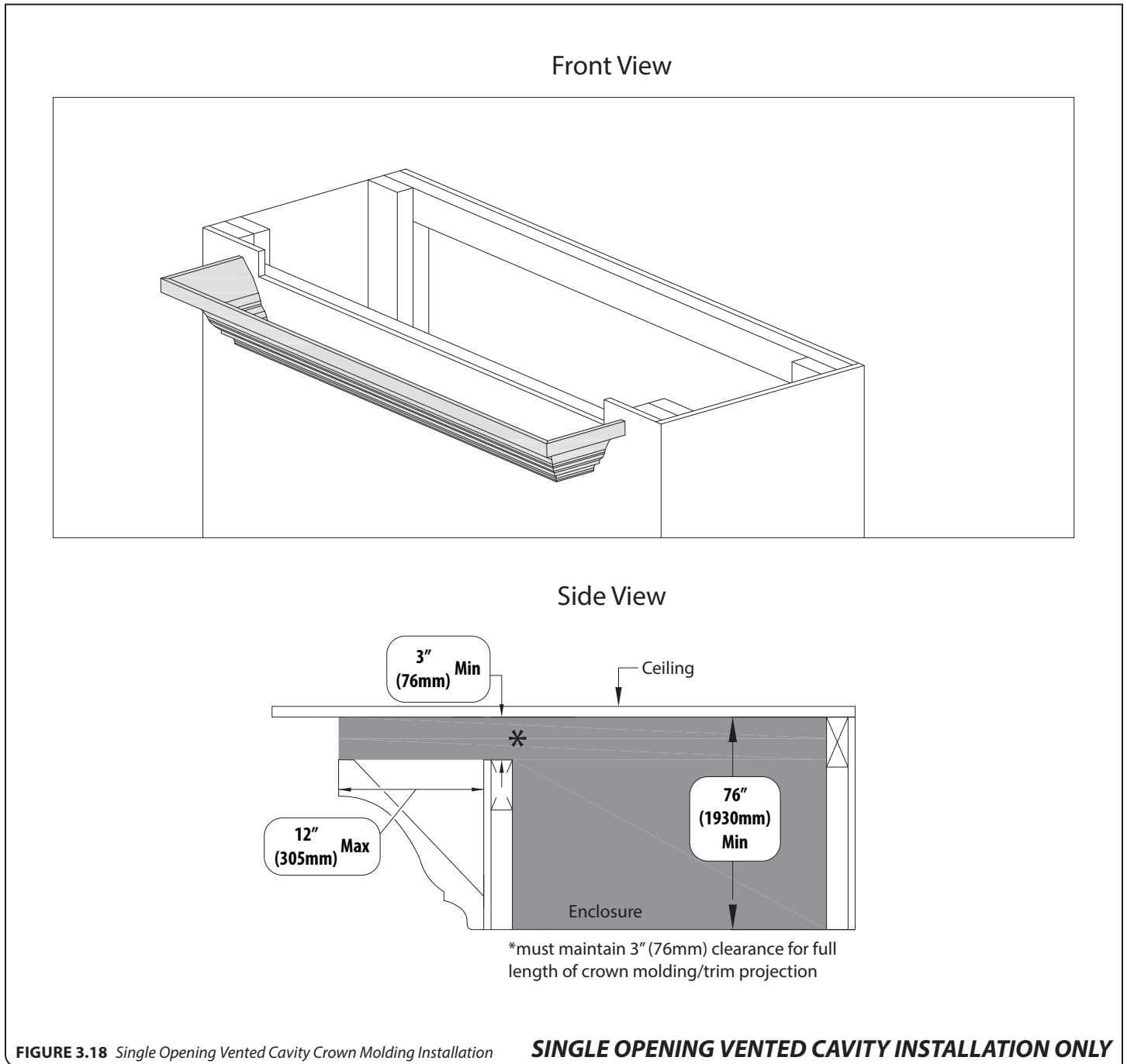


**FIGURE 3.17** Single Opening Vented Cavity Installation

**SINGLE OPENING VENTED CAVITY INSTALLATION ONLY**

### Single Opening Vented Cavity Option (cont.)

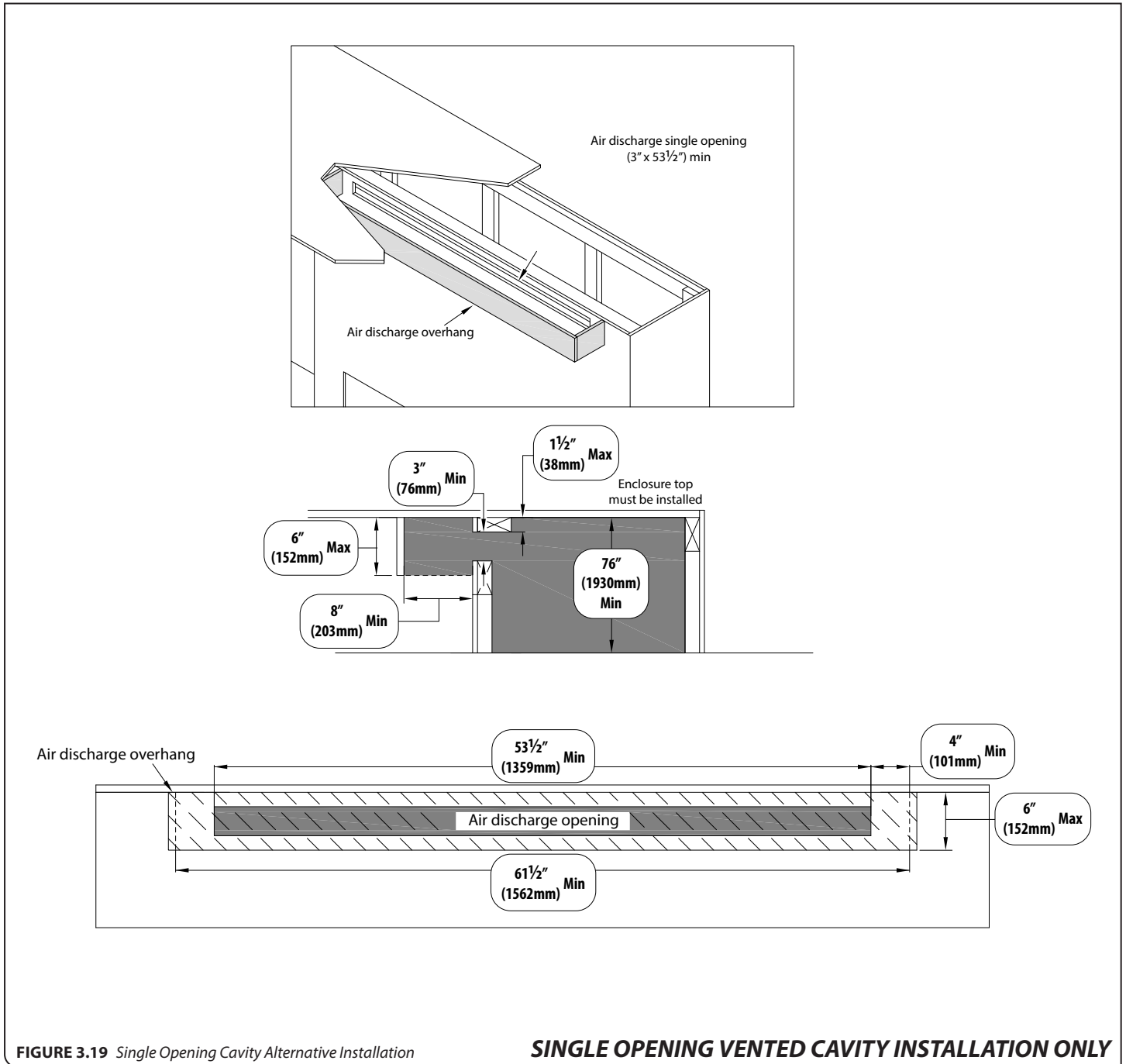
- **FIGURE 3.18** shows the installation of crown molding or similar trim work that goes up to the edge of the air discharge opening. 12" (305mm) is the maximum length of the molding or trim projection and you must maintain 3" (76mm) clearance for the full length of crown molding/trim projection. This molding or trim cannot decrease the minimum opening requirement.



### 3.8.4.1 Single Opening Vented Cavity Option Alternative Installations

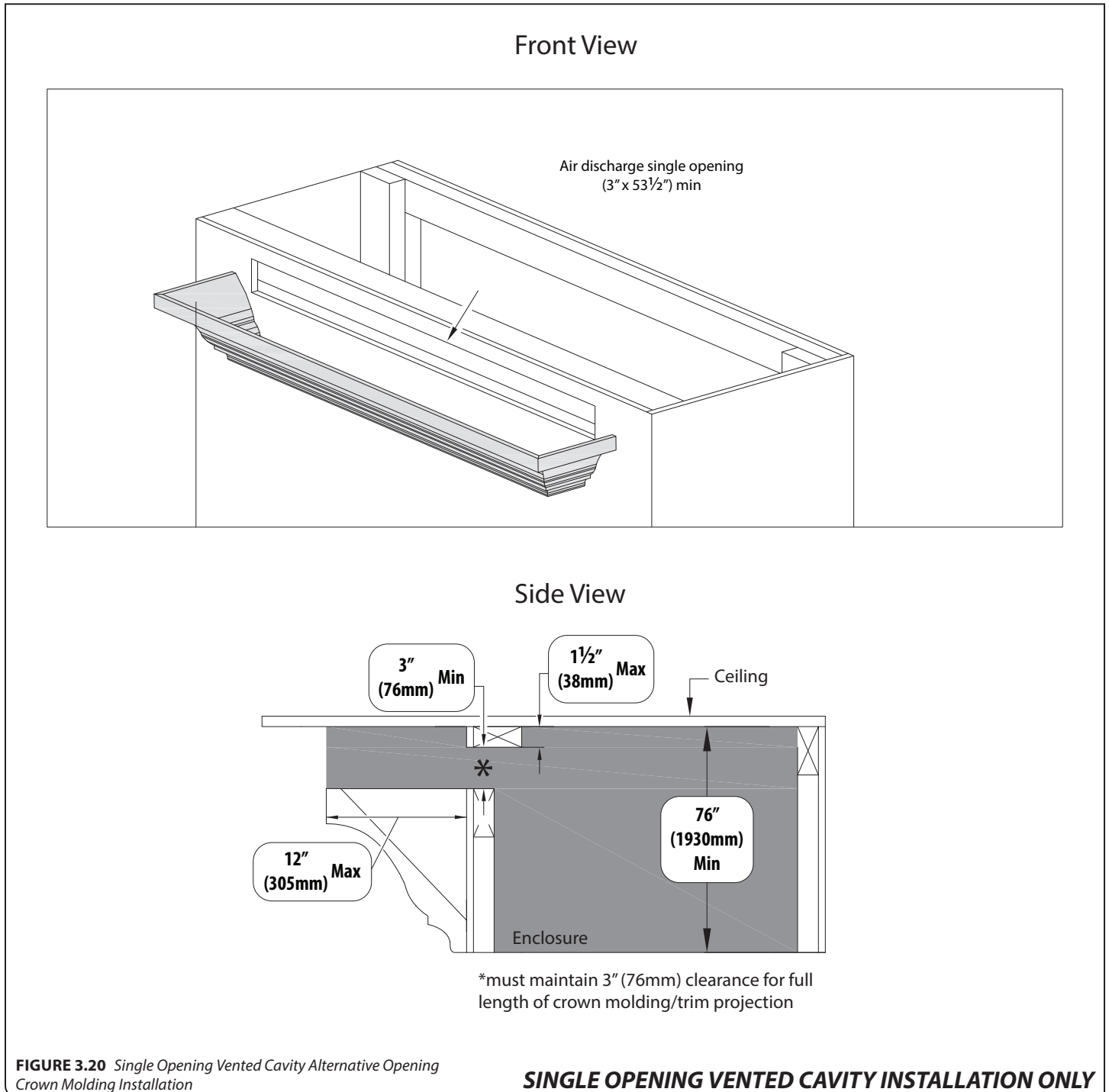
- FIGURE 3.19 shows an alternative installation method where you cap off the fireplace cavity so the air discharge opening can be located further down the fireplace chamber. 1-1/2" (38mm) is the maximum drop for framing the air discharge opening to the fireplace enclosure top. This avoids trapping heat in the upper areas of the vented cavity enclosure. Framing the outlet any lower than 1-1/2" (38mm) will cause over heating and create a fire hazard. If you cap the fireplace cavity off, it cannot have any vent pipe running through the top without a ceiling firestop.

- This installation method can alleviate any possible concerns with paint discoloration from heat or dust.
- FIGURE 3.19 on page 28 is shown with an air discharge overhang in front of the air discharge opening. This optional installation method can provide a means to visually hide the air discharge opening.



**Single Opening Vented Cavity Option  
Alternative Installation (cont.)**

- FIGURE 3.20 shows the installation of crown molding or similar trim work that goes up to the edge of the air discharge opening. 12" (305mm) is the maximum length of the molding or trim projection and you must maintain 3" (76mm) clearance for the full length of crown molding/trim projection. This molding or trim cannot decrease the minimum opening requirement.



### 3.8.5 Dual Opening Vented Cavity Option

**NOTE:** This vented cavity option allows the use of 19 gauge or less hardware mesh that is 1/2" x 1/2" to prevent any items from entering the vented cavity. This hardware mesh is optional and the only approved item for use within the air discharge opening.

**WARNING:** Do NOT cover or place any items in the area of the air discharge opening. Failure to comply with these instructions could create a fire hazard. Grilles and louvers are not allowed in the discharge opening.

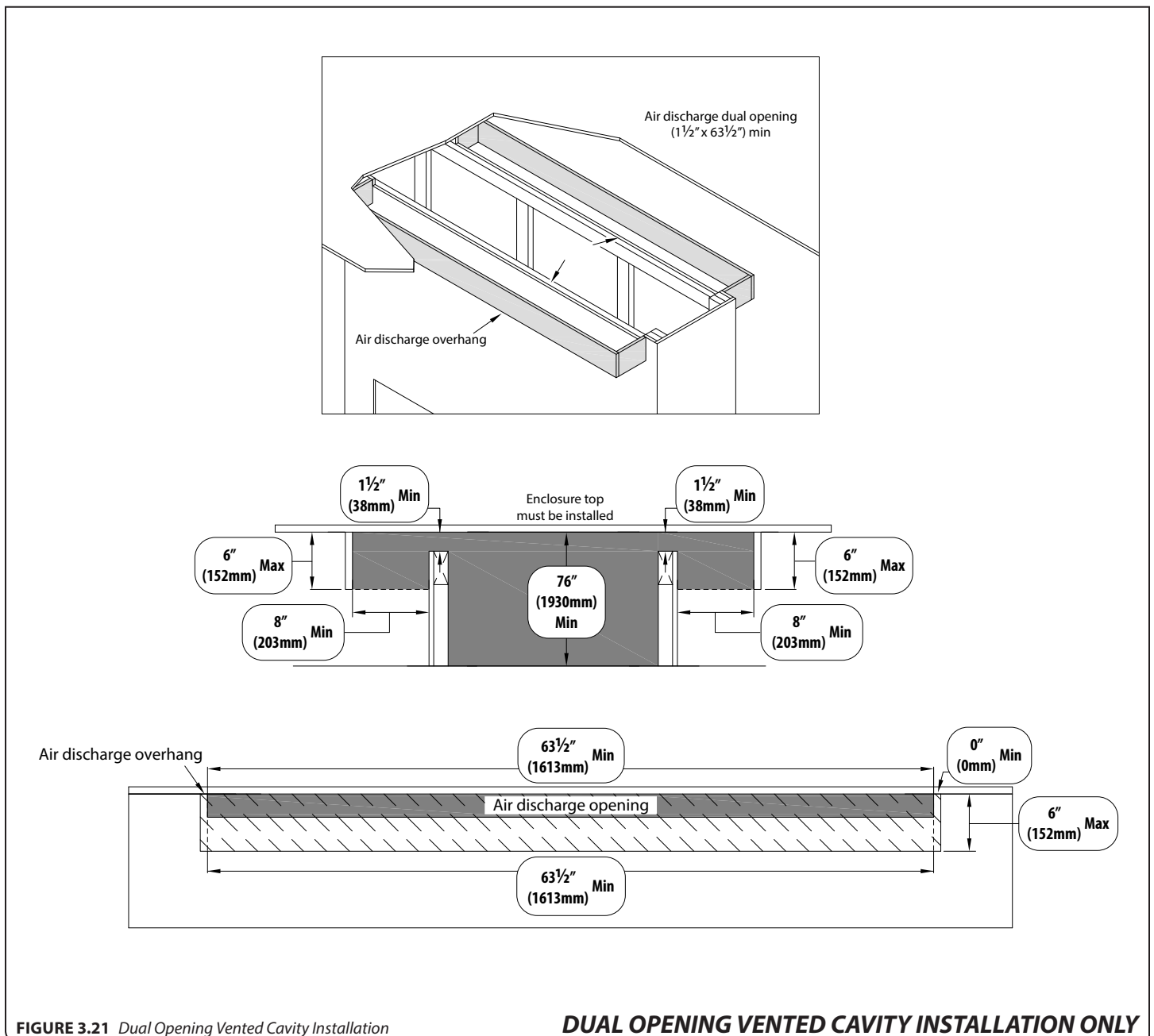
**WARNING:** Ensure air flow within the air discharge openings is not restricted in any way.

**WARNING:** Enclosure measurements must maintain minimum framing specifications for full enclosure framing as outlined in section 3.5.2, ROUGH FRAMING on page 18. Shelf enclosure framing is not allowed for vented cavity installations. Minimum dimensions for the air discharge MUST BE maintained after all finishing materials are

installed.

These are minimum dimensions shown for the dual air discharge openings, and the openings may be increased, if desired, as long as all requirements are followed. It is recommended to limit your opening size for aesthetic purposes and to avoid items falling into the enclosure.

- **FIGURE 3.21** shows the minimum required dimensions for the dual opening vented cavity air discharge openings. The dual 1-1/2" (height) x 63-1/2" (width) air discharge openings are best for installations where the fireplace is dividing two rooms.
- **FIGURE 3.21** is shown with air discharge overhangs in front of the air discharge openings. This optional installation method can provide a means to visually hide the air discharge openings.

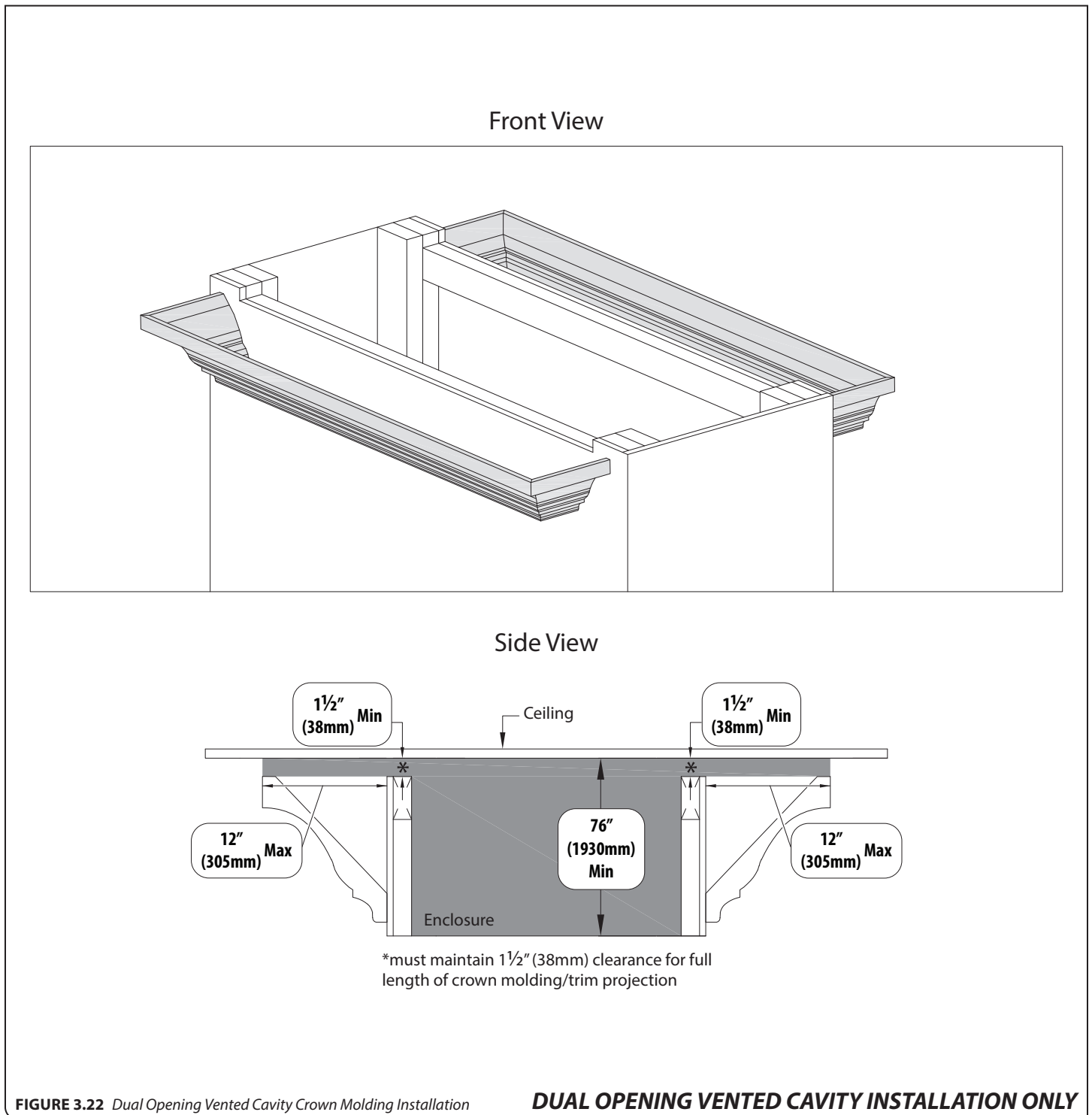


**FIGURE 3.21** Dual Opening Vented Cavity Installation

**DUAL OPENING VENTED CAVITY INSTALLATION ONLY**

### 3.8.5.1 Dual Opening Vented Cavity Option Alternative Installations

- FIGURE 3.22 shows the installation of crown molding or similar trim work that goes up to the edge of the air discharge openings. 12" (305mm) is the maximum length of the molding or trim projection and you must maintain 1-1/2" (38mm) clearance for the full length of crown molding/trim projection. This molding or trim cannot decrease the minimum opening requirements.



### 3.8.6 Top Vented Cavity Framing

**NOTE:** This vented cavity option allows the use of 19 gauge or less hardware mesh that is 1/2" x 1/2" to prevent any items from entering the vented cavity. This hardware mesh is optional and the only approved item for use within the air discharge opening.

**WARNING:** Do NOT cover or place any items in the area of the air discharge opening. Failure to comply with these instructions could create a fire hazard. Grilles and louvers are not allowed in the discharge opening.

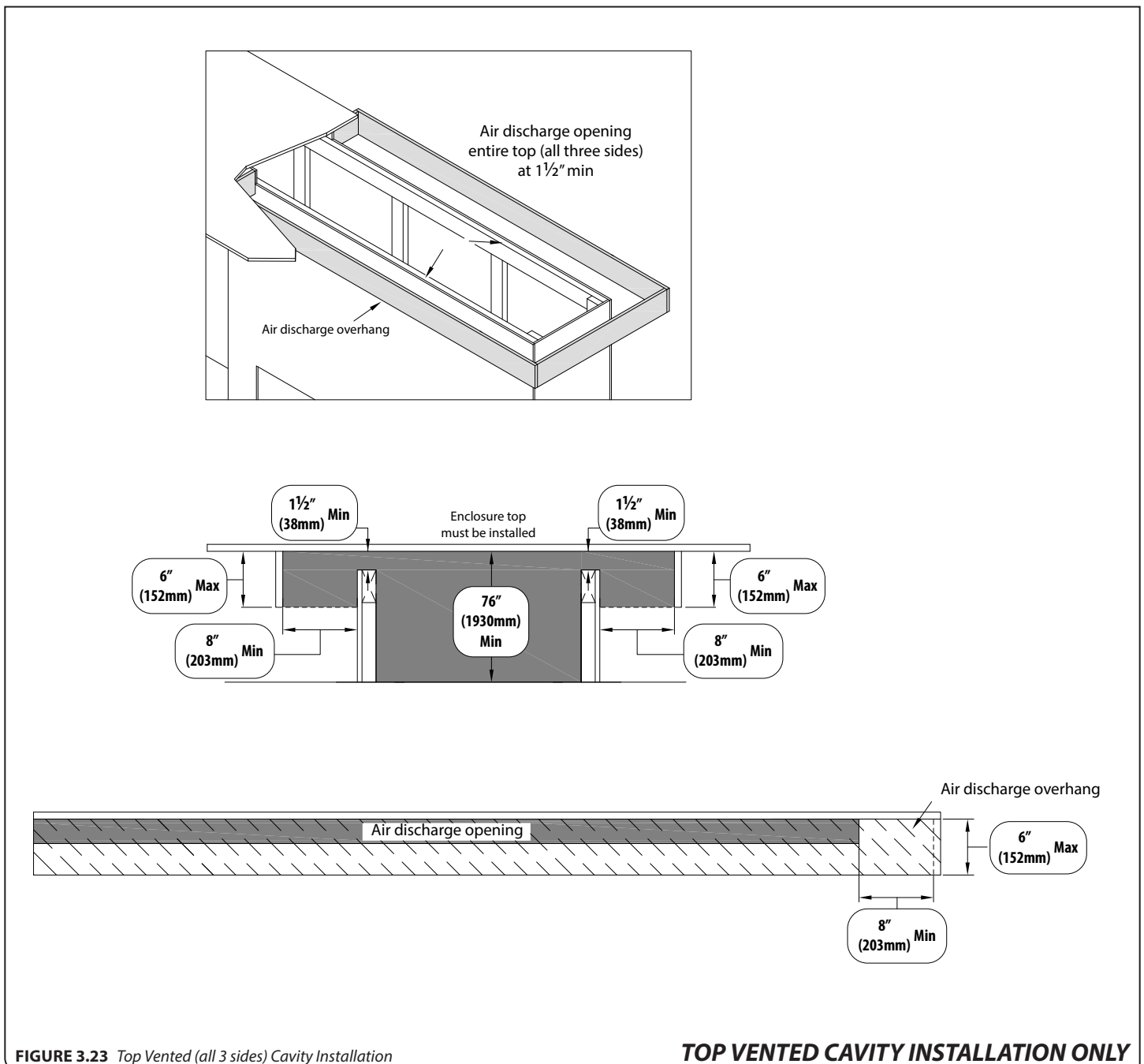
**WARNING:** Ensure air flow within the air discharge opening is not restricted in any way.

**WARNING:** Enclosure measurements must maintain minimum framing specifications for full enclosure framing as outlined in section 3.5.2,

**ROUGH FRAMING** on page 18. Shelf enclosure framing is not allowed for vented cavity installations. Minimum dimensions for the air discharge **MUST BE** maintained after all finishing materials are installed.

These are minimum dimensions shown for the air discharge opening, and the opening may be increased, if desired, as long as all requirements are followed. It is recommended to limit your opening for aesthetic purposes and to avoid items falling into the enclosure.

- **FIGURE 3.23** shows the minimum 1-1/2" (38mm) clearance from the fireplace enclosure top to the ceiling on all three sides of the enclosure.
- **FIGURE 3.23** is shown with an air discharge overhang in front of the air discharge opening. This optional installation method can provide a means to visually hide the air discharge opening.



**FIGURE 3.23** Top Vented (all 3 sides) Cavity Installation

**TOP VENTED CAVITY INSTALLATION ONLY**



### 3.8.6.1 Top Vented Cavity Option Alternative Installations

- FIGURE 3.24 shows the installation of crown molding or similar trim work that goes up to the edge of the air discharge opening. 12" (305mm) is the maximum length of the molding or trim projection and you must maintain 1-1/2" (38mm) clearance for the full length of crown molding/trim projection. This molding or trim cannot decrease the minimum opening requirement.

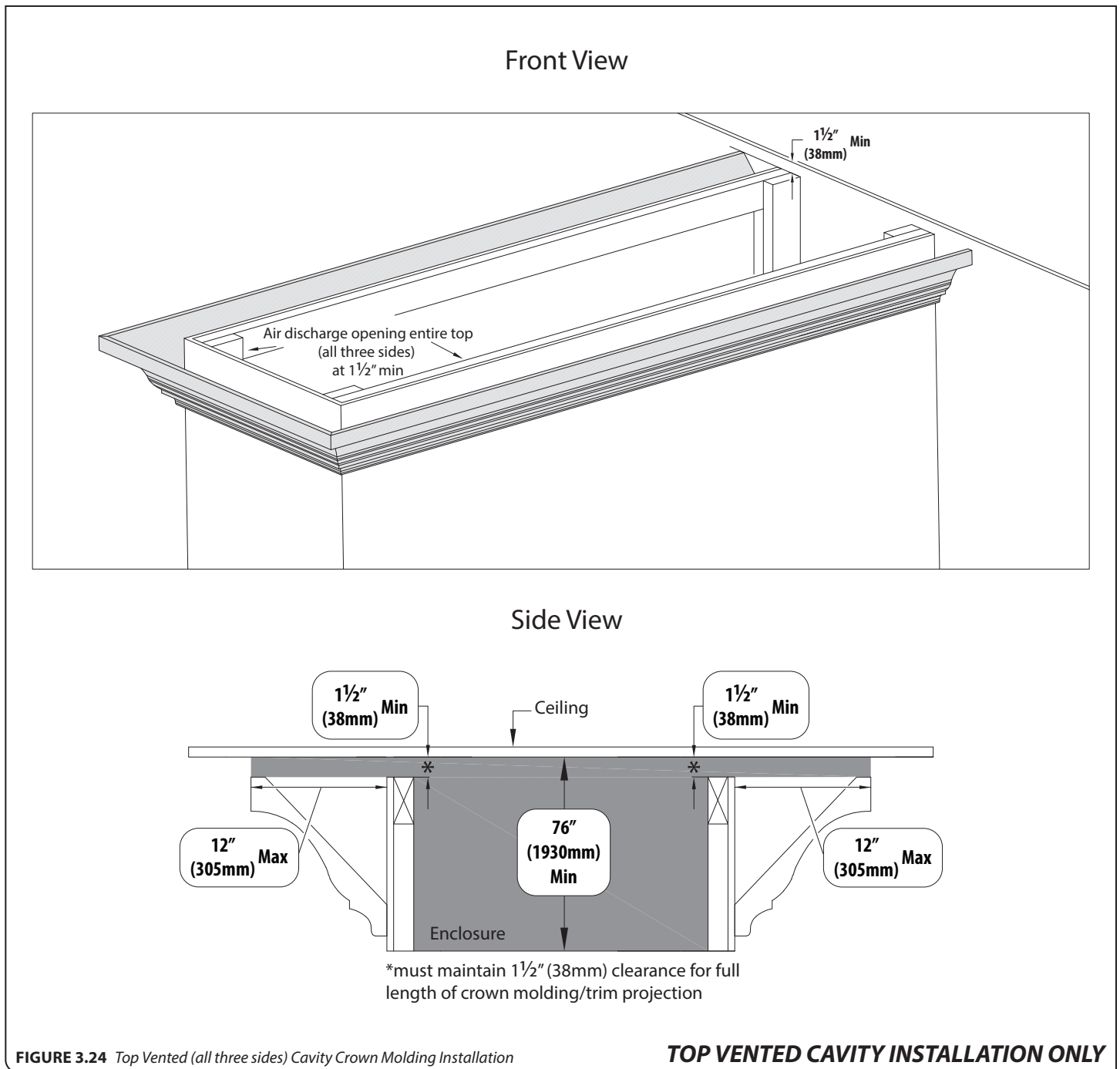


FIGURE 3.24 Top Vented (all three sides) Cavity Crown Molding Installation

## 4.0 FACING AND FINISHING

### 4.1 Standard Installation Facing and Finishing Requirements

**WARNING:** Maintain all minimum clearances to combustibles from the appliance and vent system.

**NOTE:** See Section 4.5 Vented Cavity and KZK Facing and Finishing Requirements on page 43 additional mantel, hearth, and sidewall clearances.

#### 4.1.1 Mantel and Hearth Requirements

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

**IMPORTANT:** If you plan to install a hearth and an optional surround, reference Section 4.4 Finishing Guidelines for Optional Surrounds on page 42 for allowable space for finishing materials to ensure a proper fitting of the surround. Use measurement in 'B' in FIGURE 4.10 on page 42 for the required space necessary from the bottom of the fireplace finishing edge to the hearth.

- **Combustible Mantel Projections:** As referenced in Figure 4.1 (page 35), the 3/4" (19mm) trim can start at 8" (203mm) above the top finishing edge with a 6" (152mm) mantel starting at 11-1/2" (292mm) above the top finishing edge. Mantel projections can increase 1" (25mm) of depth for every 1" (25mm) of height starting at the 6" (152mm) mantel.
- **Combustible Hearth:** As referenced in Figure 4.1 (page 35), the bottom of the bottom finishing edge can be flush with the top of the hearth if not using any optional surround. *If installing an optional surround*, refer to Measurement 'B' in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42.
- **Non-combustible Mantel Projections:** A minimum vertical clearance of 6" (152mm) above the top finishing edge to a maximum 6" (152mm) depth of a non-combustible mantel. Follow projection 1" (25mm) up for every 1" (25mm) deeper. See FIGURE 4.2 on page 36.
- **Mantel Leg:** Follow 'side combustible clearance' below. See FIGURE 4.3 on page 37. *If installing an optional surround*, refer to Measurement 'A', in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42, for the space required from the optional surround sides to finishing material.
- **Side Combustible Clearance:** Unlimited combustible side trim can be flush to the side finishing edge. See FIGURE 4.3 on page 37. *If installing an optional surround*, refer to Measurement 'A', in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42, for the space required from the optional surround sides to finishing material.

#### 4.1.2 Adjacent Sidewall Requirements

- The adjacent sidewall minimum clearance is 0" (0mm) from the side finishing edges of the fireplace. See FIGURE 4.3 on page 37. *If installing an optional surround*, refer to Measurement 'A', in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42, for the space required from the optional surround sides to finishing material.

#### 4.1.3 Facing Requirements

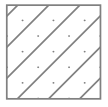
- Non-combustible material is required at the top and sides of the fireplace. This fireplace is designed to accommodate non-combustible facing material up to 1/2" (13mm) thick. See FIGURE 4.5 on page 39 for dimensions.
- An optional finishing trim kit #CWST-FTK provides a 3/4" (19mm) finished edge to hide unfinished edge materials. See Section 4.2 Optional Finishing Trim Kit (FTK): CWST-FTK on page 40.
- Install facing material up to the finishing edge that surrounds the glass frame assembly. Do not apply any material beyond this point. The glass frame assembly must be removable.
- It is acceptable to pre-drill holes and to use self-tapping screws prior to attaching the non-combustible material to the top and sides of the fireplace face. Refer to FIGURE 4.6 on page 39. Screws can only penetrate the fireplace outer shell up to 1/2" (13mm) in the allowed areas.

#### 4.1.4 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. Co., Inc. recommends the following methods:

- Ensure the non-combustible material and sheetrock are dry and dust free.
- For taping and mudding seams, we recommend heat resilient tape, mesh and joint compounds, such as Durabond. Joint compound 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.

No surround



Non-combustible zone

Each square represents 1" (25mm) of projection

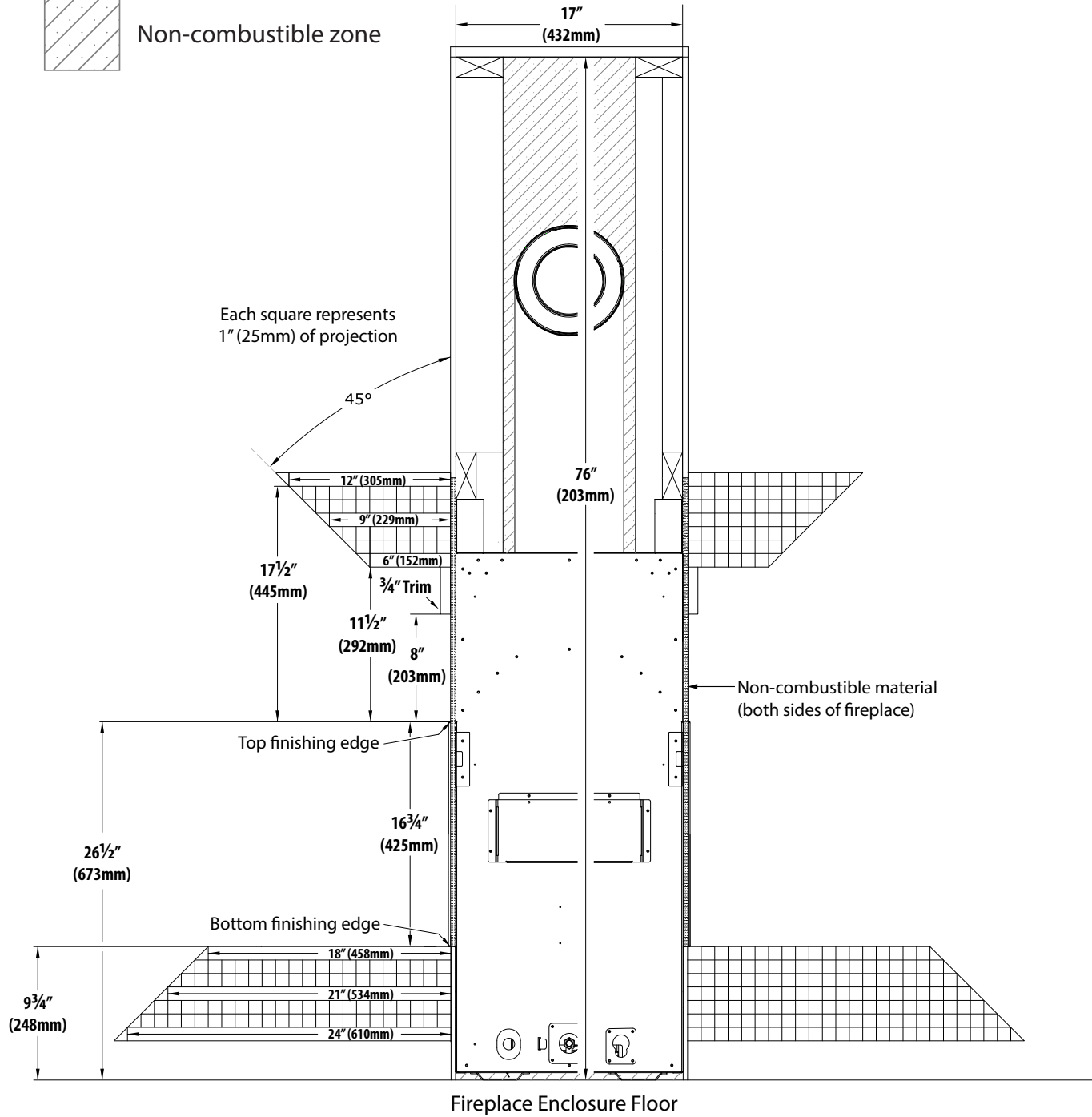


FIGURE 4.1 Standard Installation Combustible Mantel and Hearth - No Surround

STANDARD INSTALLATION

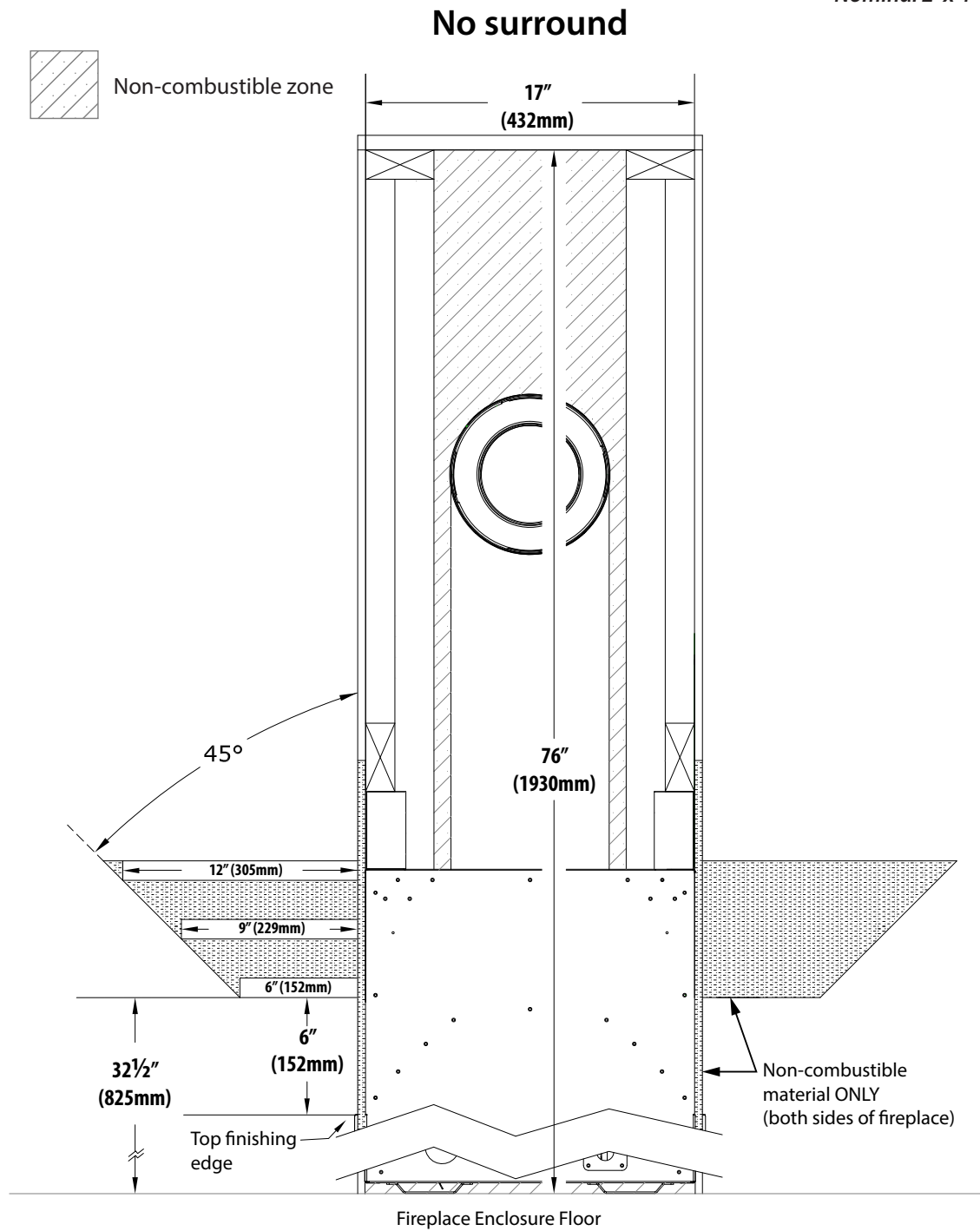
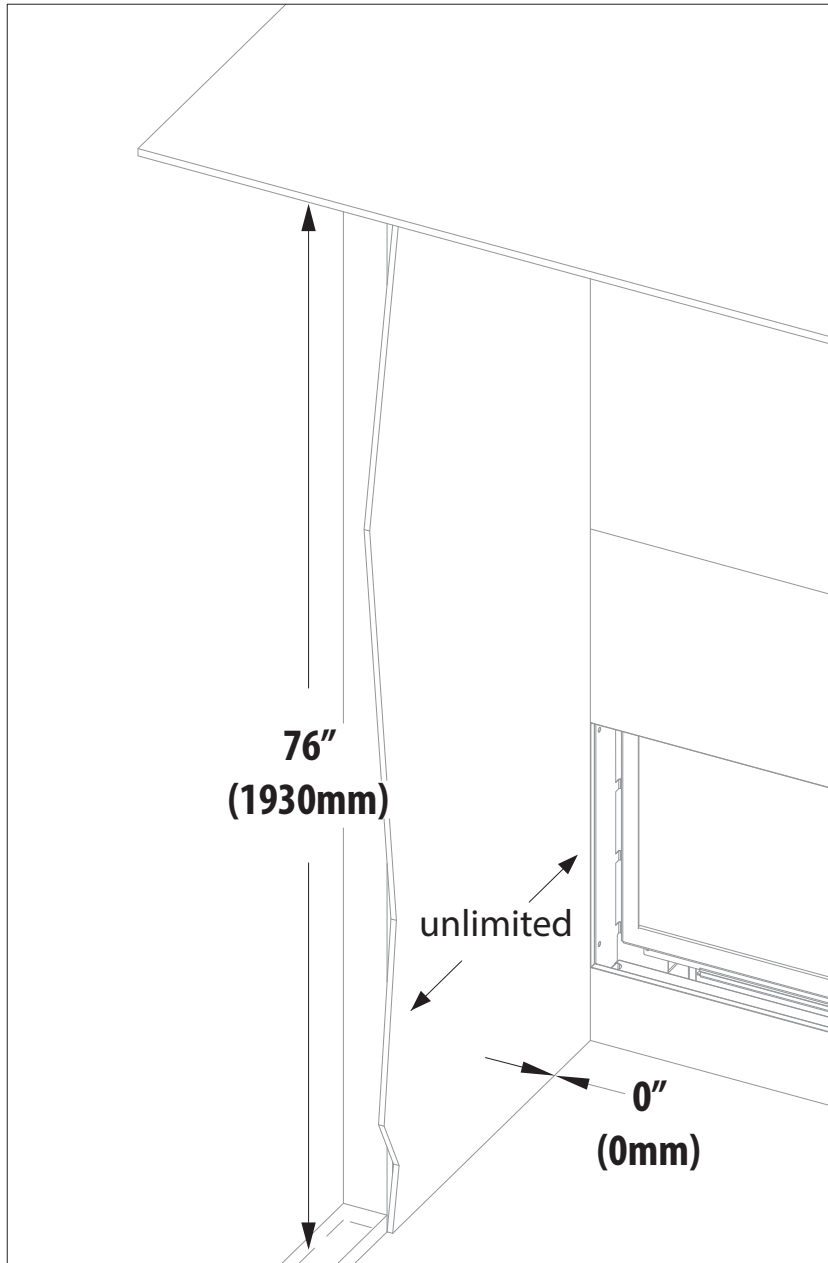


FIGURE 4.2 Standard Installation Non-Combustible Mantel Clearances - No Surround

**STANDARD INSTALLATION**



**FIGURE 4.3** *Standard Installation Adjacent Sidewall Clearances - No Surround*

**STANDARD INSTALLATION**

Nominal 2"x 4" framing used

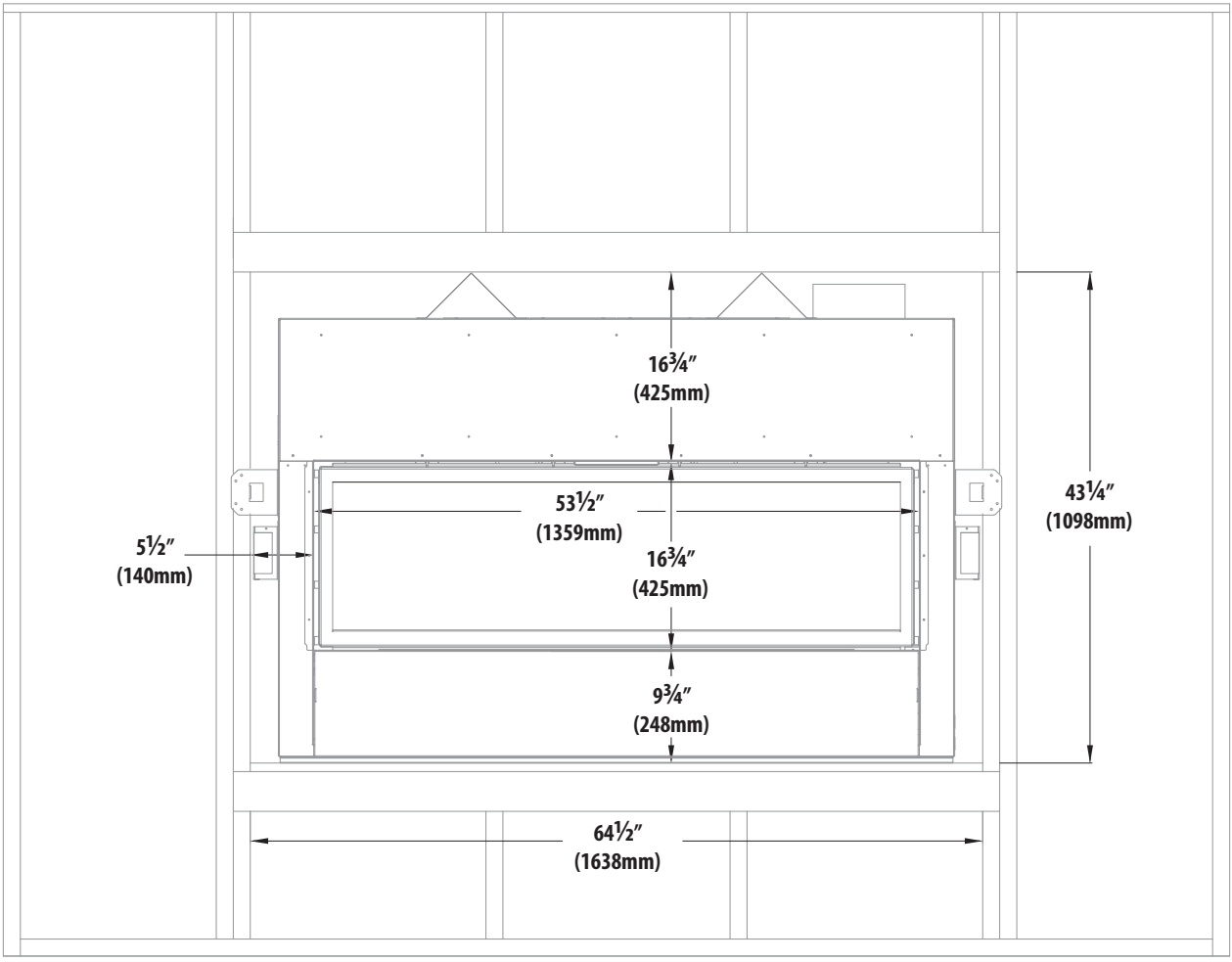


FIGURE 4.4 Framed Opening Clearances

ALL DESIGN OPTIONS INSTALLATION

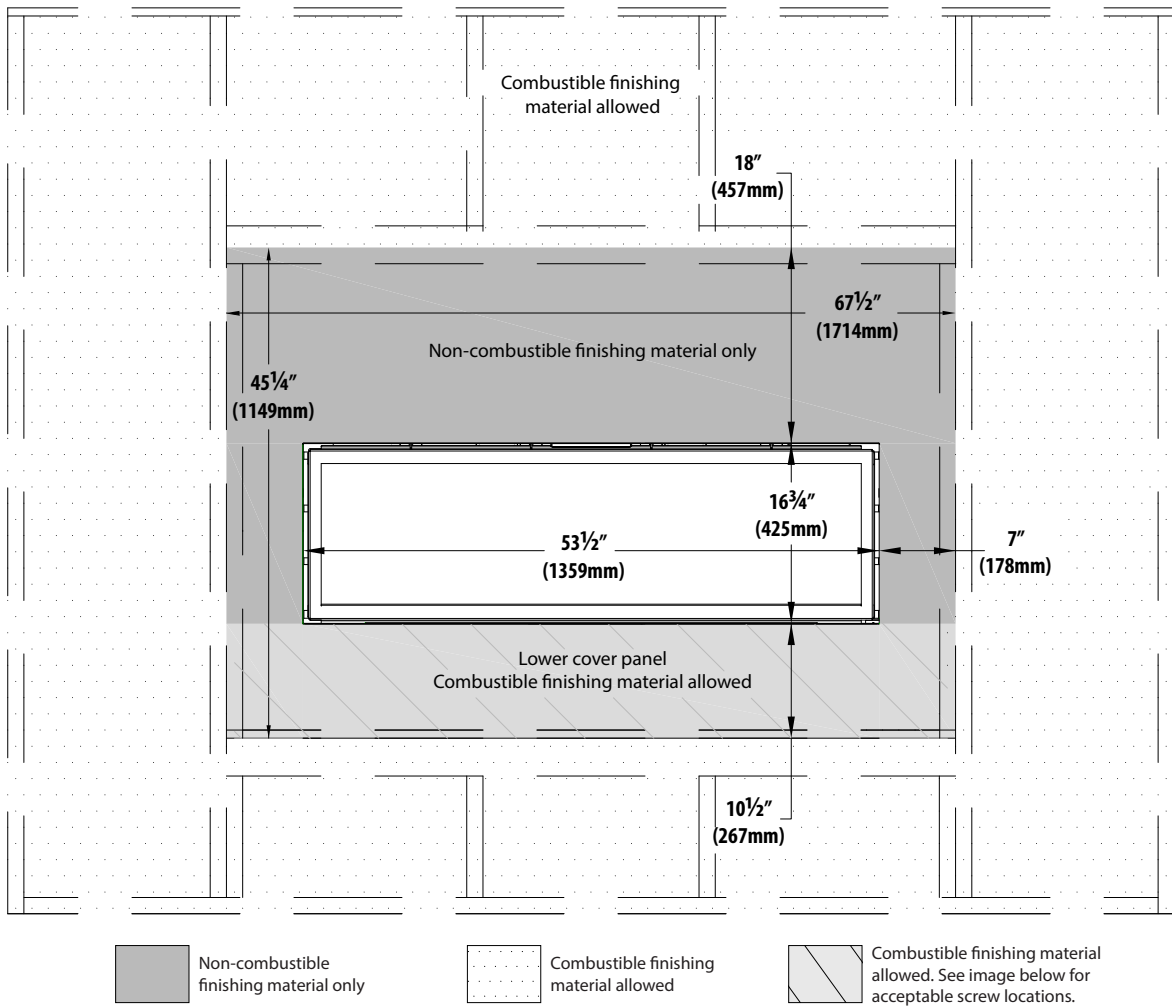


FIGURE 4.5 Minimum Non-Combustible Finishing Dimensions

**ALL DESIGN OPTIONS INSTALLATION**

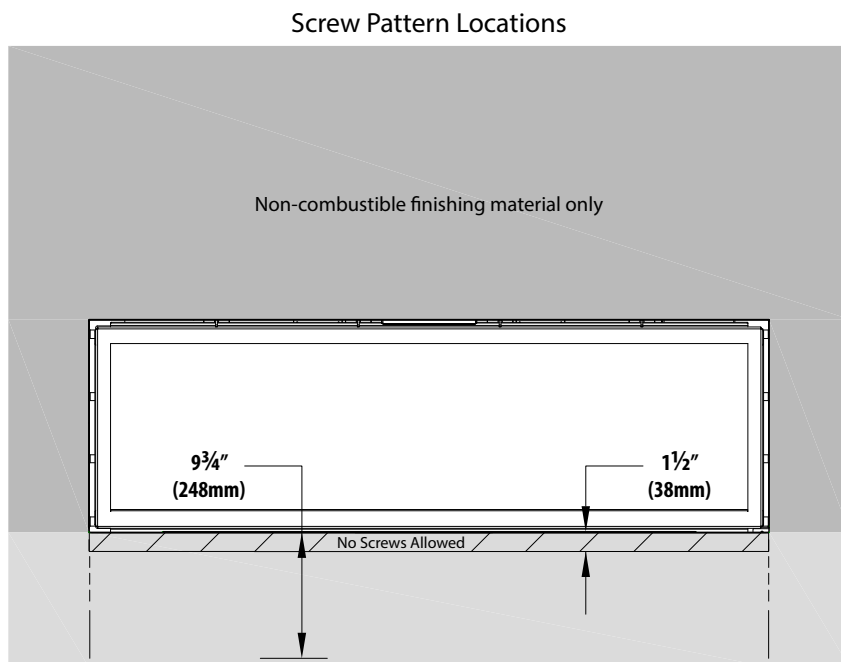


FIGURE 4.6 Minimum Non-Combustible Finishing Dimensions Screw Locations

**ALL DESIGN OPTIONS INSTALLATION**

## 4.2 Optional Finishing Trim Kit (FTK): CWST-FTK

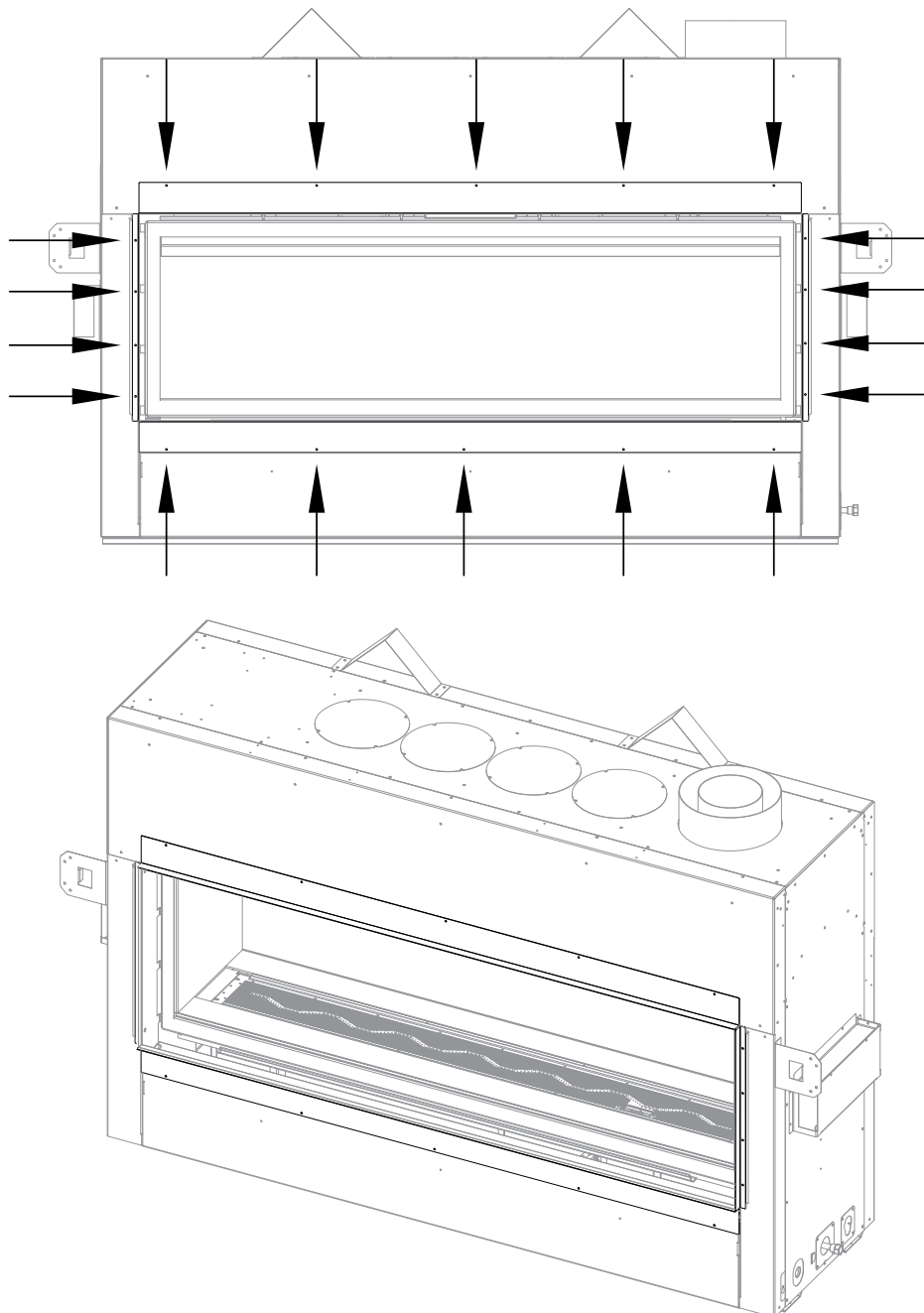
**IMPORTANT:** Finishing trim kit assembly must be attached before fireplace installation.

This finishing trim kit (included with the fireplace) provides a deeper finishing edge for finishing materials such as stone.

You may need to mark and pre-drill holes before fastening trim panels to fireplace.

Kit includes: (8) trim panel pieces; (36) screws

1. Install top trim panel. Fasten to fireplace with screws through the holes in the trim panel.
2. Install side trim panels. Fasten to fireplace with screws through the holes in the trim panels.
3. Install bottom trim panel. Fasten to fireplace with screws through the holes in the trim panel.
4. Repeat for the other side of the fireplace.



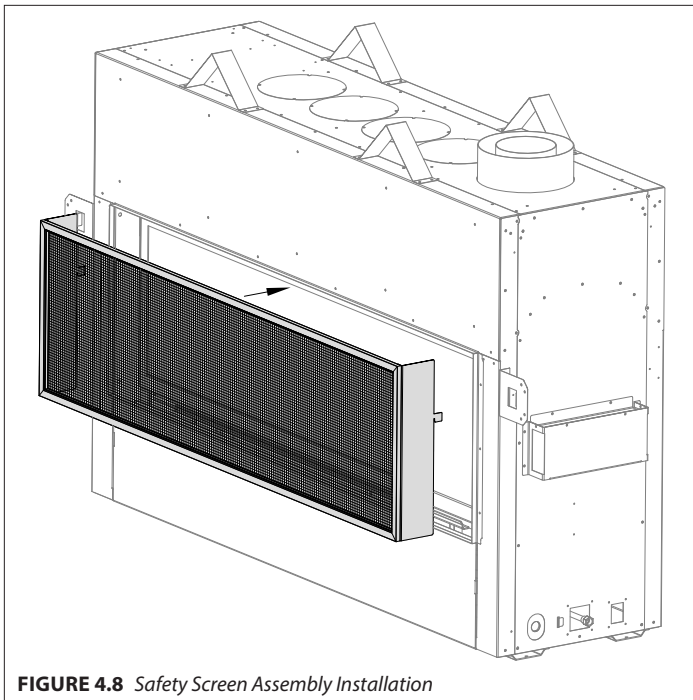
**FIGURE 4.7** Optional Finishing Trim Kit #CWST-FTK



## 4.3 Barrier and Optional Surround Installation

### 4.3.1 Safety Barrier Screen Assembly (#CWST-ES)

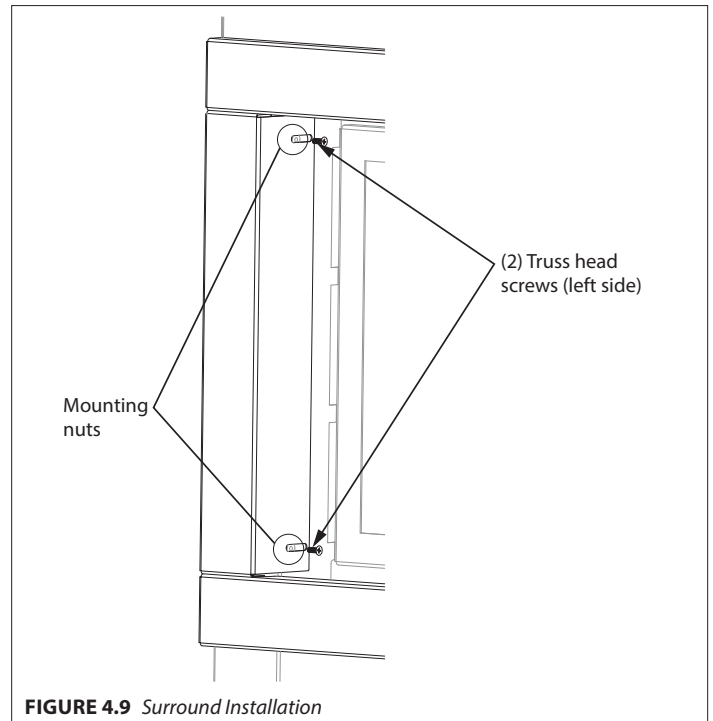
1. Locate the (2) slots located on each side of the fireplace metal cabinet.
  2. Align the notched tabs, located on the back of the safety barrier screen, with the slots on the fireplace frame.
  3. Raise the safety barrier screen front slightly into slots and allow the tabs to lower into position.
- To remove safety barrier screen: lift the screen up and out of slots.



**FIGURE 4.8** Safety Screen Assembly Installation

### 4.3.2 Optional Surrounds

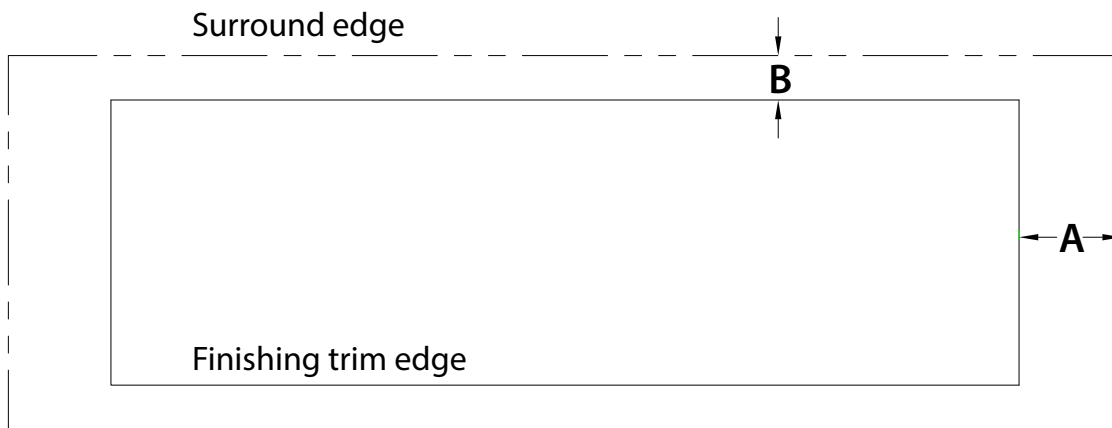
1. Remove the safety barrier screen.
2. Locate the (2) mounting nuts on each side of the fireplace metal cabinet.
3. Align the mounting holes on the shroud to the corresponding mounting nuts.
4. Secure with (4) truss head screws (provided).
5. Reinstall safety barrier screen.



**FIGURE 4.9** Surround Installation

## 4.4 Finishing Guidelines for Optional Surrounds

- Figure 4.10 shows where to end finishing materials, when measuring from the finishing edge, to allow installation of any optional surround. Most finishing material will not fit behind the optional surround(s) when it is installed.
- Measurement 'A' shows the space to leave on each side.
- Measurement 'B' shows the space to leave on the top and the bottom.



Surround	A	B
CW50-RS	3/4" (19mm)	3/4" (19mm)
CW50-RS4	2-5/8" (66mm)	2-5/8" (66mm)
CW50-GS	6" (152mm)	2-1/2" (64mm)
CW50-MS	3-1/8" (79mm)	3-1/8" (79mm)

**FIGURE 4.10** *Finishing Materials Guidelines*

## 4.5 Vented Cavity and KZK Facing and Finishing Requirements

**WARNING:** Maintain all minimum clearances to combustibles from the appliance and vent system.

**WARNING! RISK OF FIRE:** The following facing and finishing options are for use **ONLY** when using an optional vented cavity or Komfort Zone Kit with the convection baffles and cover plates removed. **DO NOT** follow these options unless you are using the vented cavity option or the Komfort Zone Kit.

### 4.5.1 Mantel and Hearth Requirements

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

**IMPORTANT:** If you plan to install a hearth and an optional surround, reference Section 4.4 Finishing Guidelines for Optional Surrounds on page 42 for allowable space for finishing materials to ensure a proper fitting of the surround. Use measurement in 'B' in FIGURE 4.10 on page 42 for the required space necessary from the bottom of the fireplace finishing edge to the hearth.

- **Combustible Hearth and Mantel Projections** - See FIGURE 4.11 on page 44 for facing and finishing clearances. *If installing an optional surround*, Refer to Section 4.4 Finishing Guidelines for Optional Surrounds on page 42.
- **Mantel Leg:** Follow 'side combustible clearance' below. See FIGURE 4.12 on page 45. *If installing an optional surround*, refer to Measurement 'A', in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42, for the space required from the optional surround sides to finishing material.
- **Side Combustible Clearance:** 1" (25mm) combustible side trim can be flush with the side finishing edge. After 5" (127mm), this projection is unlimited. See FIGURE 4.12 on page 45. *If installing an optional surround*, refer to Measurement 'A', in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42, for the space required from the optional surround sides to finishing material.

### 4.5.2 Adjacent Sidewall Requirements

- The adjacent sidewall minimum clearance is 5" (127mm) from the side finishing edges of the fireplace. See FIGURE 4.12 on page 45. *If installing an optional surround*, refer to Measurement 'A', in Section 4.4 Finishing Guidelines for Optional Surrounds on page 42, for the space required from the optional surround sides to finishing material.

### 4.5.3 Facing Requirements

- Non-combustible material is required at the top and sides of the fireplace. This fireplace is designed to accommodate non-combustible facing material up to 1/2" (13mm) thick. See FIGURE 4.5 on page 39.
- An optional finishing trim kit #CWST-FTK provides a 3/4" (19mm) finished edge to hide unfinished edge materials. See Section 4.2 Optional Finishing Trim Kit (FTK): CWST-FTK on page 40.
- Install facing material up to the finishing edge that surrounds the glass frame assembly. Do not apply any material beyond this point. The glass frame assembly must be removable.

- It is acceptable to pre-drill holes and to use self-tapping screws prior to attach the non-combustible material to the top and sides of the fireplace face, screws can only penetrate the fireplace outer shell up to 1/2" (13mm) in the allowed areas. See FIGURE 4.6 on page 39.

### 4.5.4 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. Co., Inc. recommends the following methods:

- Ensure the non-combustible material and sheetrock are dry and dust free.
- For taping and mudding seams, we recommend heat resilient tape, mesh and joint compounds, such as Durabond. Joint compound must be cured as per manufacturer's recommendations.
- For a painted surface, use a high quality acrylic latex primer and finish coat. Avoid flat or light-colored paints to prevent discoloring.

#### 4.5.4.1 Combustible Wall Finish

- FIGURE 4.13 on page 46 shows installation of combustible wall finish up to 1" (25mm) thick for Komfort Zone Kit(s) and Vented Cavity installations. For KZK-054 and KZK-1510A installations, reference the manuals included with the kit.
- Finishing materials cannot block the required vented cavity discharge opening requirements.
- This combustible material goes over any required non-combustible materials as shown in FIGURE 4.6 on page 39.
- This 1" (25mm) combustible material is able to go down to the fireplace finishing edge and up to the air discharge opening.

No surround

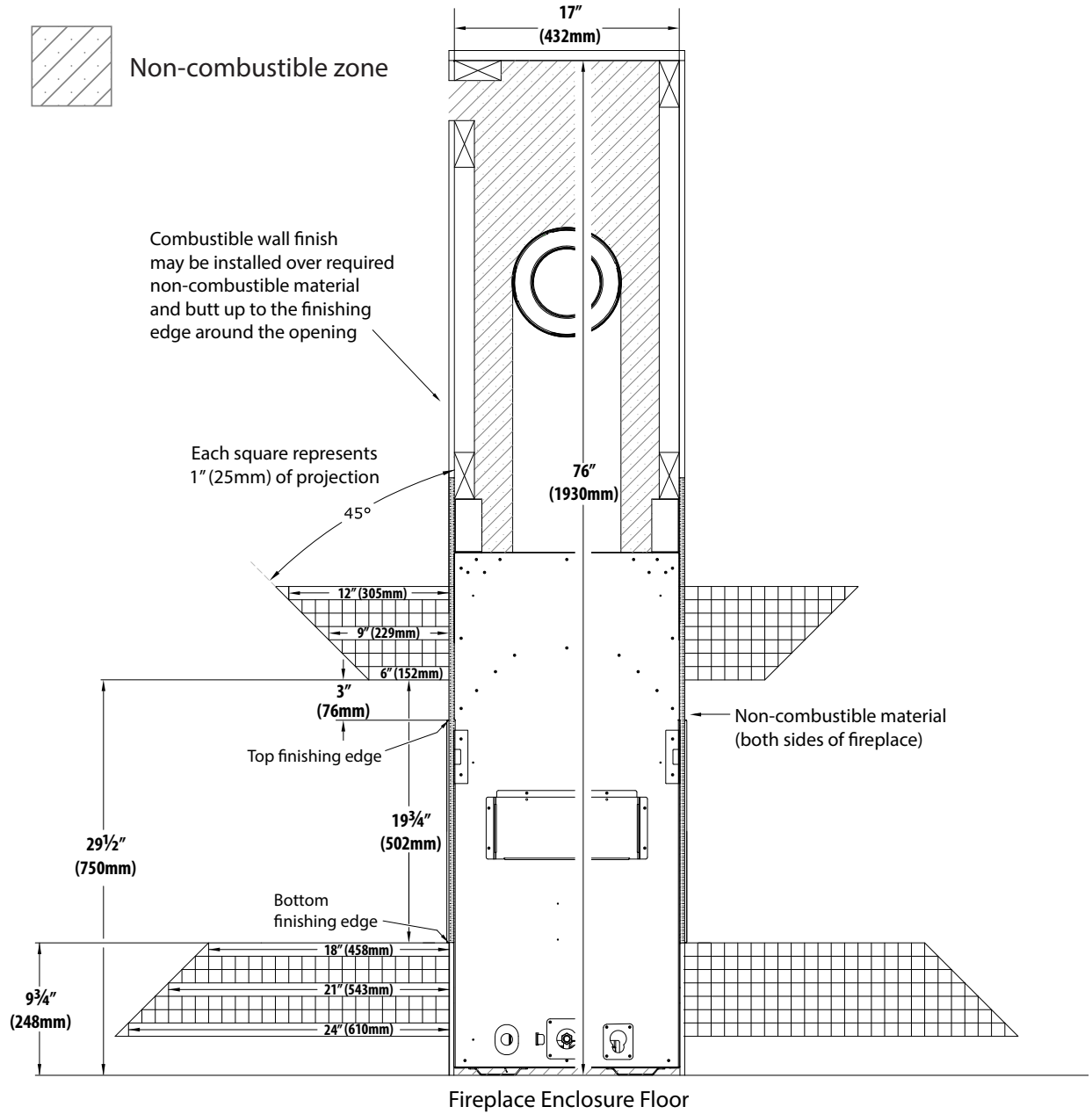
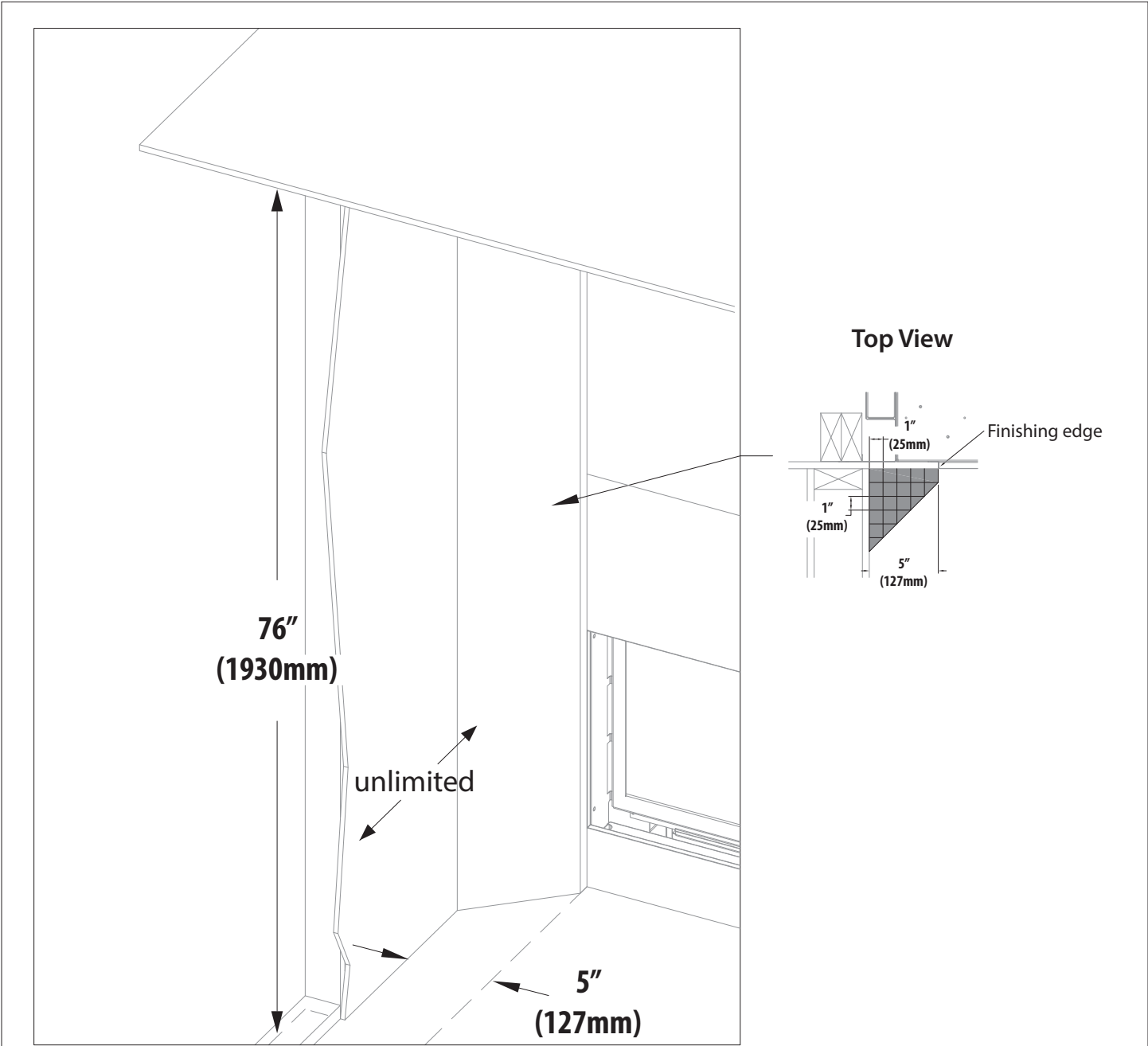


FIGURE 4.11 Vented Cavity & KZK Facing and Finishing Clearances - No Surround (single opening vented cavity installation shown)

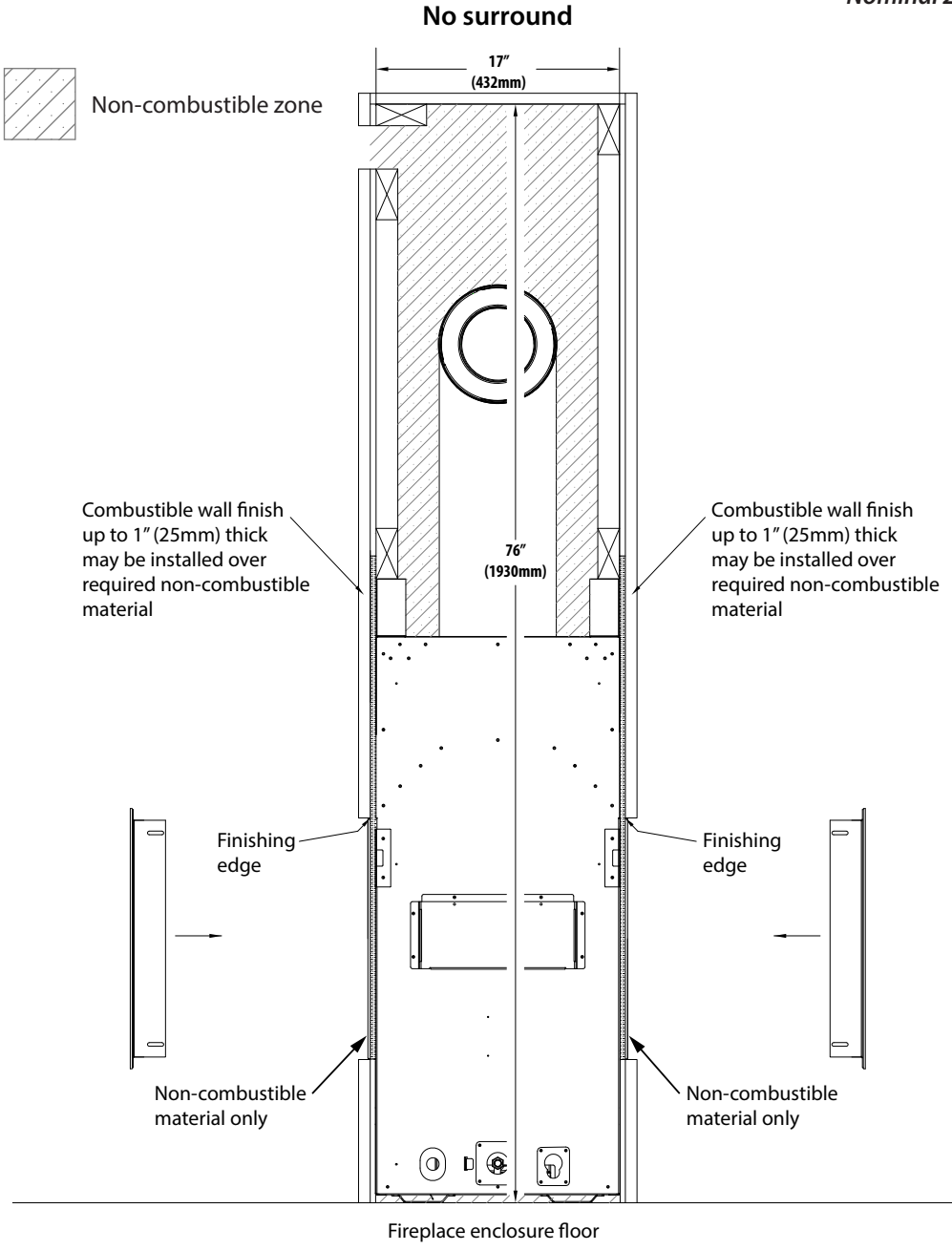
**VENTED CAVITY AND KZK INSTALLATIONS ONLY**



**FIGURE 4.12** Vented Cavity and KZK Adjacent Sidewall Clearances - No Surround

**VENTED CAVITY AND KZK INSTALLATIONS ONLY**

Nominal 2"x 4" framing used



**FIGURE 4.13** Combustible Wall Finish up to 1" (25mm) thick - No Surround (single opening vented cavity installation shown)

**VENTED CAVITY AND KZK INSTALLATIONS ONLY**

## 5.0 GAS LINE CONNECTION

### 5.1 Gas Conversion

**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.

### 5.2 Gas Line Installation

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

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

- A listed (and Commonwealth of Massachusetts approved) ½" (13mm) tee handle manual shut-off valve and flexible gas connector are to be connected to the ½" (13 mm) control valve inlet. If substituting for these components, please consult local codes for compliance.
- This fireplace is equipped with a 3/8" (10mm) x 36" (914mm) long flexible gas connector and manual shut-off valve.
- Run gas line into fireplace through the access hole provided. The gas line should be run to the point of connection where the shut-off valve and flexible gas line will connect. See Section Figure 2.1 CLW-ST Dimensions on page 9.
- Do not run gas line in a manner that would obstruct fan operation.
- For high altitude installations, consult the local gas distributor or the authority having jurisdiction for proper rating methods.

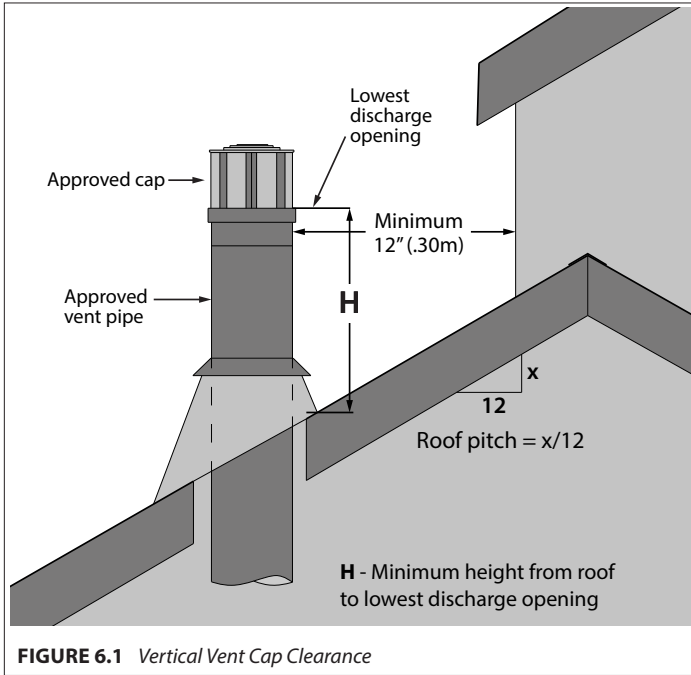
**Table 5.1, Inlet Gas Supply Pressures**

Fuel	Minimum Pressure	Maximum Pressure
Natural Gas	5" WC (1.25 kPa) 7" WC 1.74 kPa recommended	10.5" WC (2.62 kPa)
Propane	12" WC (2.99 kPa) recommended	13" WC (3.24 kPa)

# 6.0 NATURAL DRAFT TERMINATION LOCATIONS

## 6.1 Natural Draft Vertical Termination

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



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



## 6.2 Minimum Natural Draft Termination Clearances

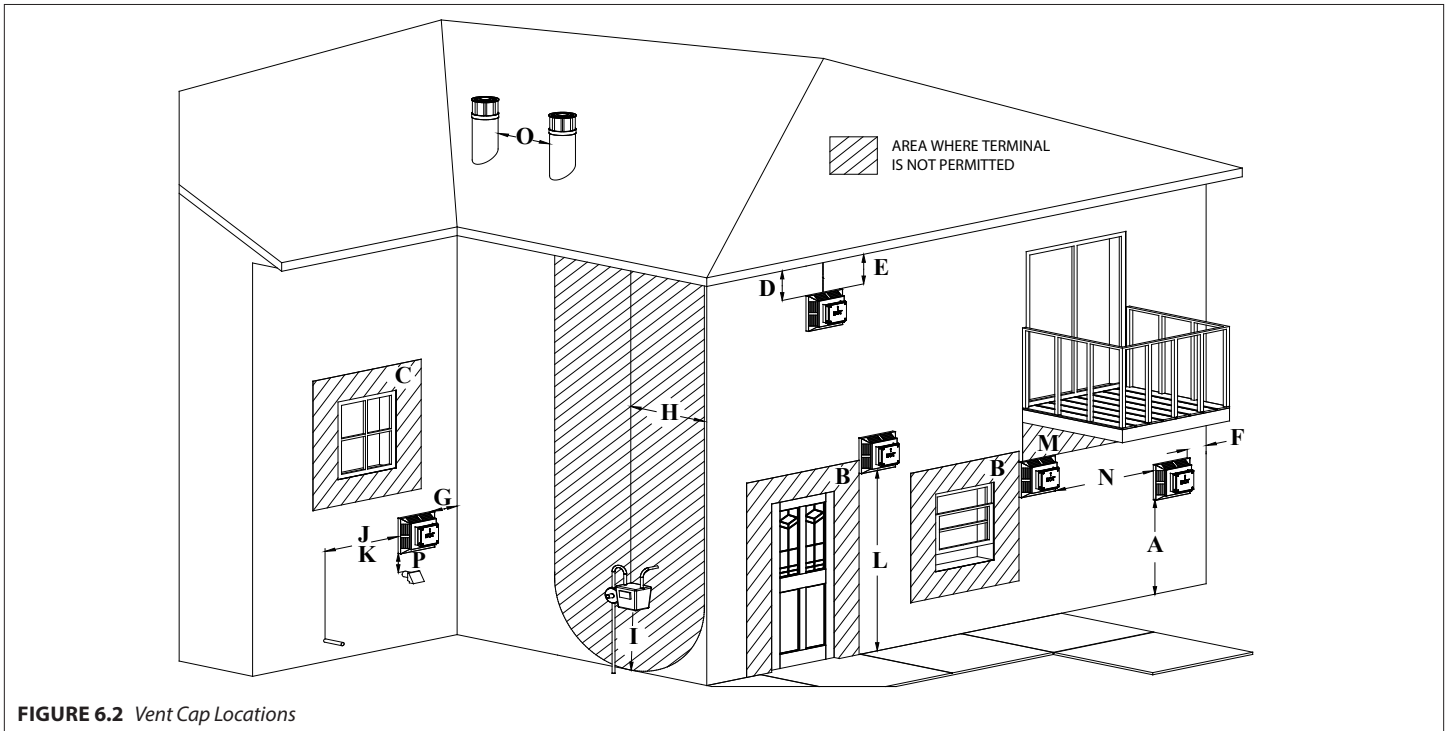


FIGURE 6.2 Vent Cap Locations

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

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

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

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

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

## 7.0 VENTING

### 7.1 Approved Vent Systems

This appliance is equipped for use with a 5" (127mm) exhaust by 8" (203mm) air intake co-axial vent pipe system.

This appliance is approved for use for Kozy Heat Power Venting #KPV (sold separately).

This appliance is approved for use with manufacturers (horizontal and vertical terminations): American Metal Products (Ameri-Vent), BDM, ICC, Metal Fab\*, Olympia Chimney Supply, Inc., Selkirk, and Simpson DuraVent. See Sections 7.1.1 and 7.1.2..

**\*WHEN INSTALLING METAL FAB VENT SYSTEM** with this appliance an adapter must be used. Use adapter part number 5DDA.

This appliance can be adapted to use 4" diameter aluminum flexible pipe when used in combination with an existing minimum 7" ID Class A metal or masonry chimney. See Section 7.5 Class A Chimney / Masonry Chimney Conversion on page 57.

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.

#### 7.1.1 Approved 5" x 8" Vent Systems

<b>Table 7.1, Approved 5" x 8" Vent Systems</b>	
<b>Vent Manufacturer</b>	<b>Vent Cap Part Number</b>
American Metal Products (Ameri-Vent)	5DHC 5DVC 5D14S 5D36S
BDM	DVR8-HCP DVR8-HC DVR8-VCLP DVR8-VCH
Simpson DuraVent	58DVA-HC 58DVA-HRCS 58DVA-VCH 58DVA-VC 58DVA-VCS
ICC	TM-5HT TM-5RHT TM-5SVT
Kozy Heat	#845-1
Metal Fab (Adapter 5DDA must be used)	5DHT 5DST14 5DST36
Olympia Chimney Supply, Inc.	VDV-HC05 VDV-VC05 VDV-SNC0514 VDV-SNC0536
Selkirk	5DT-HC 5DT-HCR 5DT-VT 5DT-VC 5DT-ST14 5DT-ST36

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

<b>Table 7.2, Approved 4" x 6-5/8" Vent Systems</b>	
<b>Vent Manufacturer</b>	<b>Vent Cap Part Number</b>
American Metal Products (Ameri-Vent)	4DHC 4DVC 4D14S 4D36S
BDM	DVR6-VCLP DVR6-VCH
Simpson DuraVent	46DVA-HC 46DVA-HSCH 46DVA-VCH 46DVA-VC 46DVA-VCE
ICC	TM-5HT TM-5RHT TM-5SVT
Kozy Heat	KPV
Metal Fab (Adapter 5DDA must be used)	4DHT 4DST14 4DST36
Olympia Chimney Supply, Inc.	VDV-VC04
Selkirk	4DT-HCR 4DT-VT 4DT-VC 4DT-ST14 4DT-ST36

### 7.2 Venting Requirements

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

Flame height and appearance will vary depending upon venting configuration and the type of fuel used.

Provide a means for visually checking the vent connection to the appliance after the fireplace is installed.

A minimum of 1" (25mm) clearance on all sides of the vertical vent pipe must be maintained. Attic insulation shields may be insulated using unfaced insulation products listed as noncombustible per ASTM E 136.

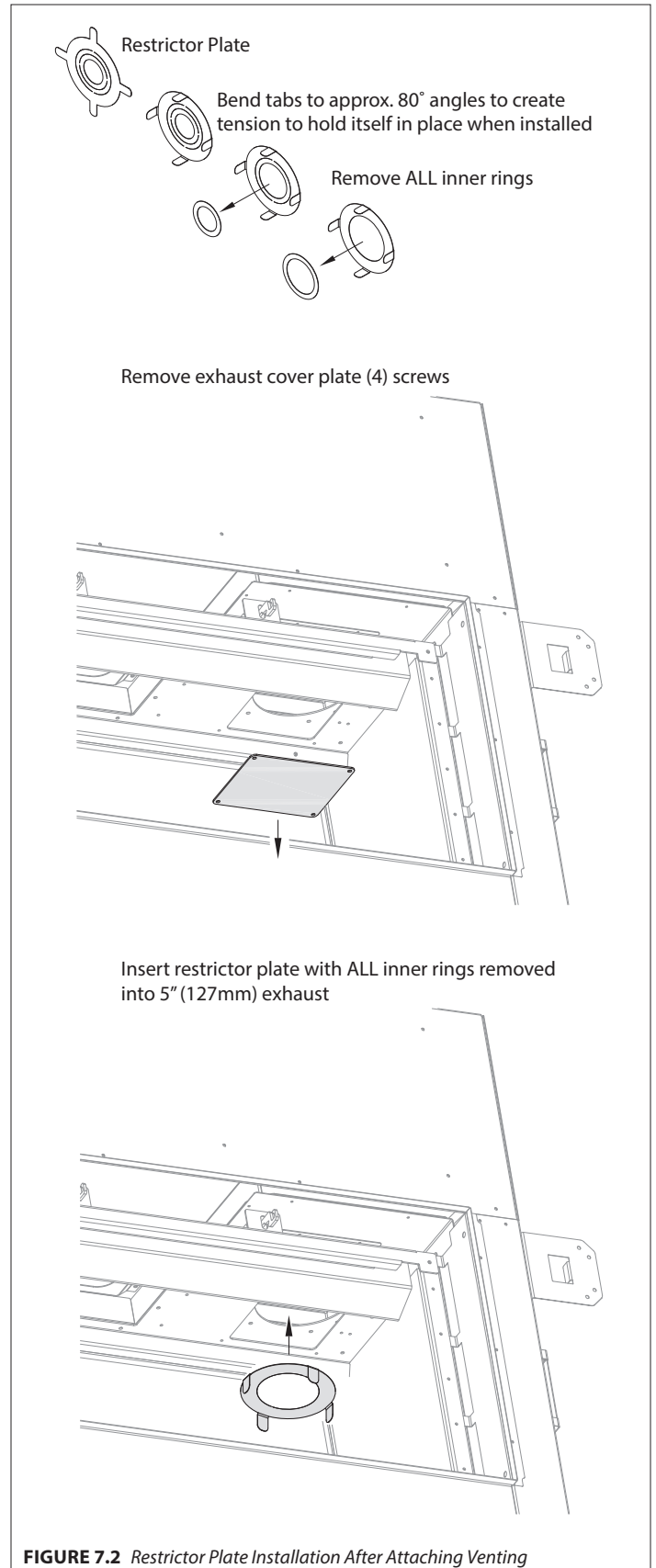
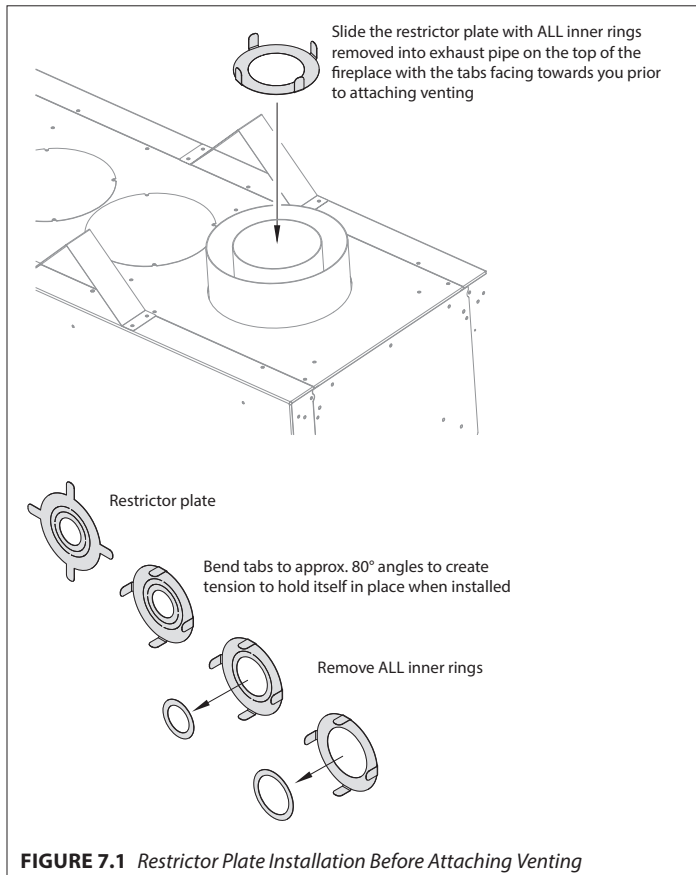
A minimum of 1" (25mm) clearance on the top, sides, and bottom of the horizontal vent pipe at the wall pass-through must be maintained. Wall thimble products that comply with the required clearances to combustibles must be installed for all horizontal vent runs that pass through interior or exterior walls. These wall thimble products may be insulated using unfaced insulation products listed as noncombustible per ASTM E 136.

### 7.3 Vent Restriction

Burner flame appearance and characteristics are affected by altitude, fuel quality, venting configuration, and other factors. To achieve desirable flame appearance, the vent exhaust may be restricted by the restrictor plate (included in components packet).

The restrictor plate is shipped with all inner rings intact. There are (2) inner rings that must be knocked out. Do not install the restrictor plate with the (2) inner rings in place.

Follow Figure 7.1 for restrictor plate installation before attaching venting. See Figure 7.2 for vent access after attaching venting. For vent restriction plate recommendations and adjustments, see Section 11.2.2 Vent Restriction (after installation) on page 74.

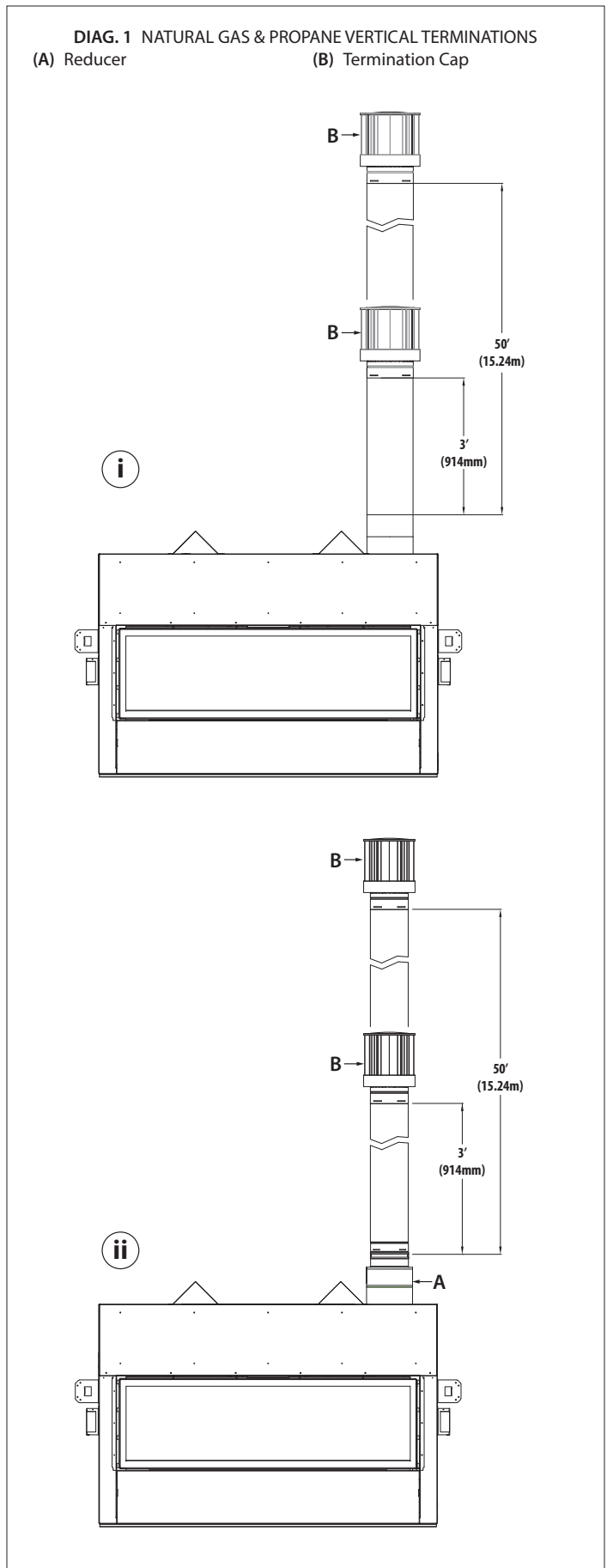


## 7.4 Natural Draft Installation

### 7.4.1 Natural Gas and Propane Vertical Terminations

**NOTE:** For certain installations, it may be necessary to use a 45° elbow off the top in order to maintain venting clearances. See the venting configurations in section 7.4.4 on page 55.

- (i) **Minimum / Maximum Vertical Terminations:**  
3' (914mm) minimum vertical length / 50' (15.24m) maximum vertical length + termination cap
- (ii) **Minimum / Maximum Vertical Terminations with Reducer\*:**  
4" x 6-5/8" reducer + 3' (914mm) minimum vertical length / 50' (15.24m) maximum vertical length + termination cap  
**\*To use any 45° elbow for vertical terminations with a reducer, the total minimum vertical vent run must be 10' (3.05m). A total of (5) 45° elbows may be used. No 90° elbows are allowed. For every 45° elbow used, 18" (457mm) must be subtracted from maximum venting allowed.**



## 7.4.2 Natural Gas and Propane Horizontal Terminations

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

**NOTE:** For certain installations, it may be necessary to use a 45° elbow off the top in order to maintain venting clearances. See the venting configurations in section 7.4.5 on page 56.

(i) **Minimum 12" Vertical Vent Pipe / Minimum / Maximum Horizontal Terminations**

12" (304mm) + 90° horizontal elbow + 6" (152mm) minimum horizontal / 60" (1524mm) maximum horizontal + termination cap

(ii) **Minimum 24" Vertical Vent Pipe / Minimum / Maximum Horizontal Terminations**

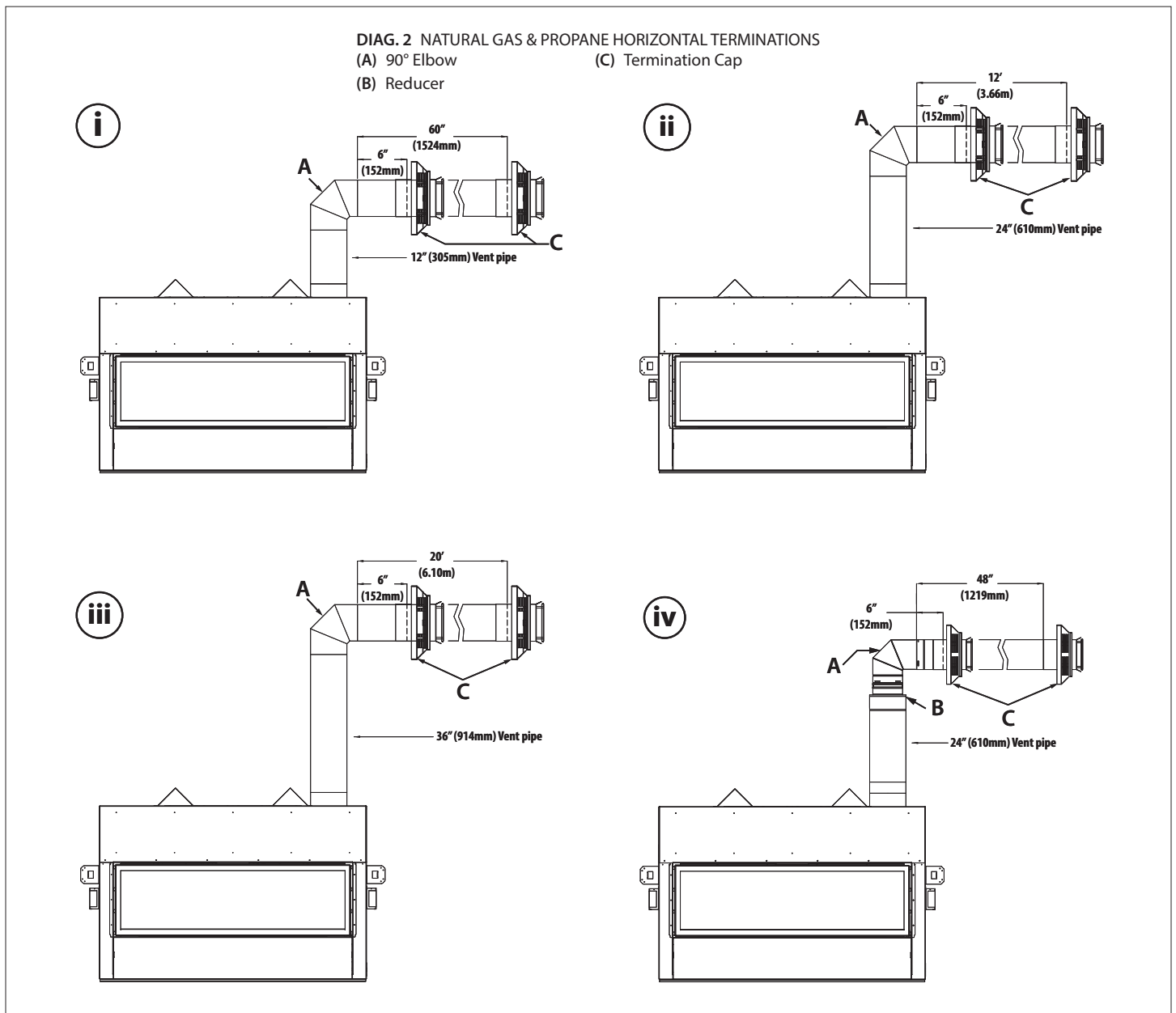
24" (610mm) vertical vent pipe + 90° horizontal elbow + 6" (152mm) minimum horizontal / 12' (3.66m) maximum horizontal + termination cap

(iii) **Minimum 36" Vertical Vent Pipe / Minimum / Maximum Horizontal Terminations**

36" (914mm) vertical vent pipe + 90° horizontal elbow + 6" (152mm) minimum horizontal / 20' (6.1m) maximum horizontal + termination cap

(iv) **Basement Installation - Minimum Vertical Rise / Minimum / Maximum Horizontal Run**

24" (610mm) minimum 5" x 8" vertical length + 4" x 6-5/8" reducer + 90° horizontal 4" x 6-5/8" elbow + 6" (152mm) minimum horizontal / 48" (1219mm) maximum horizontal + termination cap



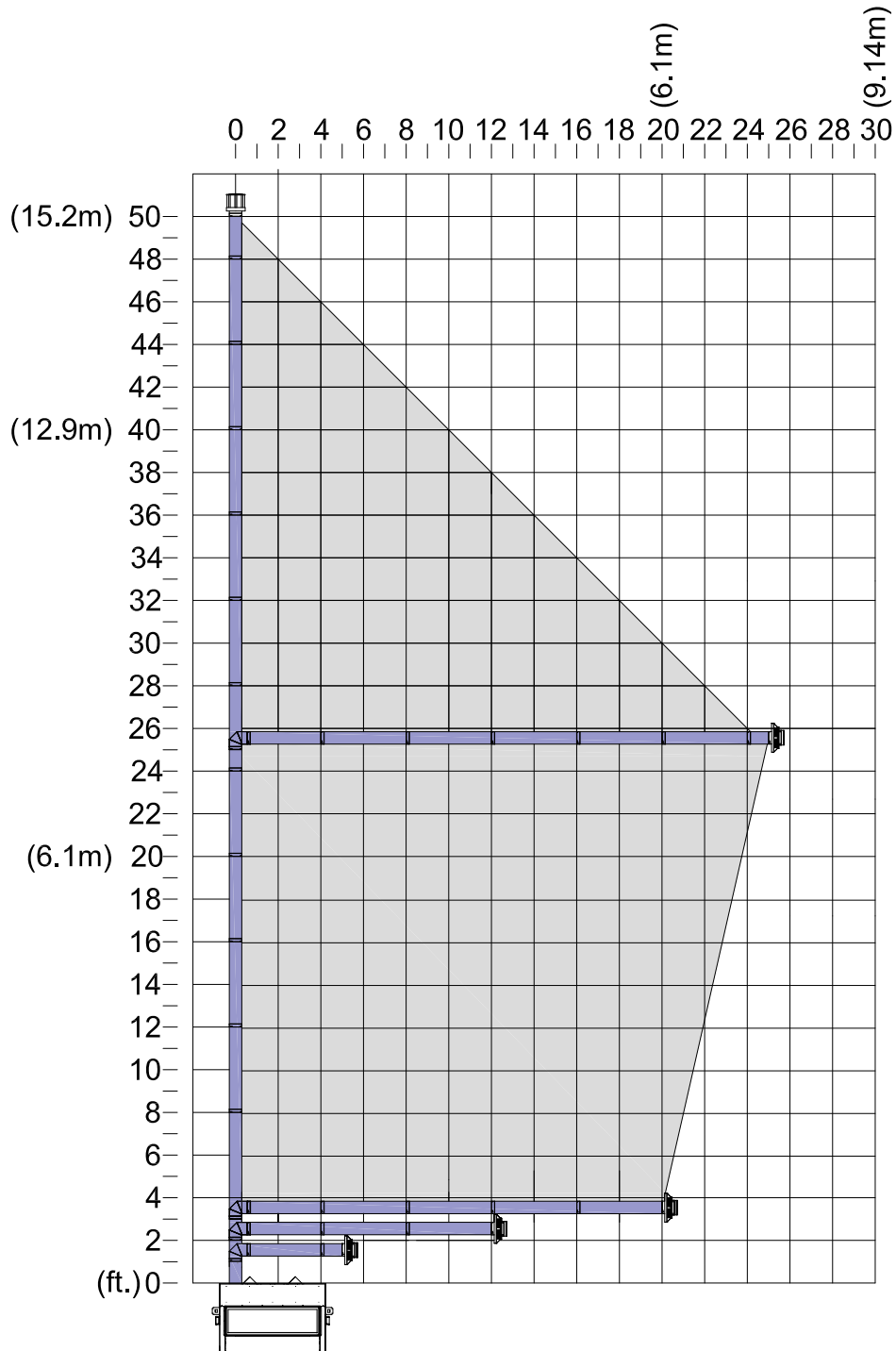
### 7.4.3 Natural Gas and Propane Combination Venting

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

Vent termination must be within the shaded area in Figure 7.3 below.

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

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



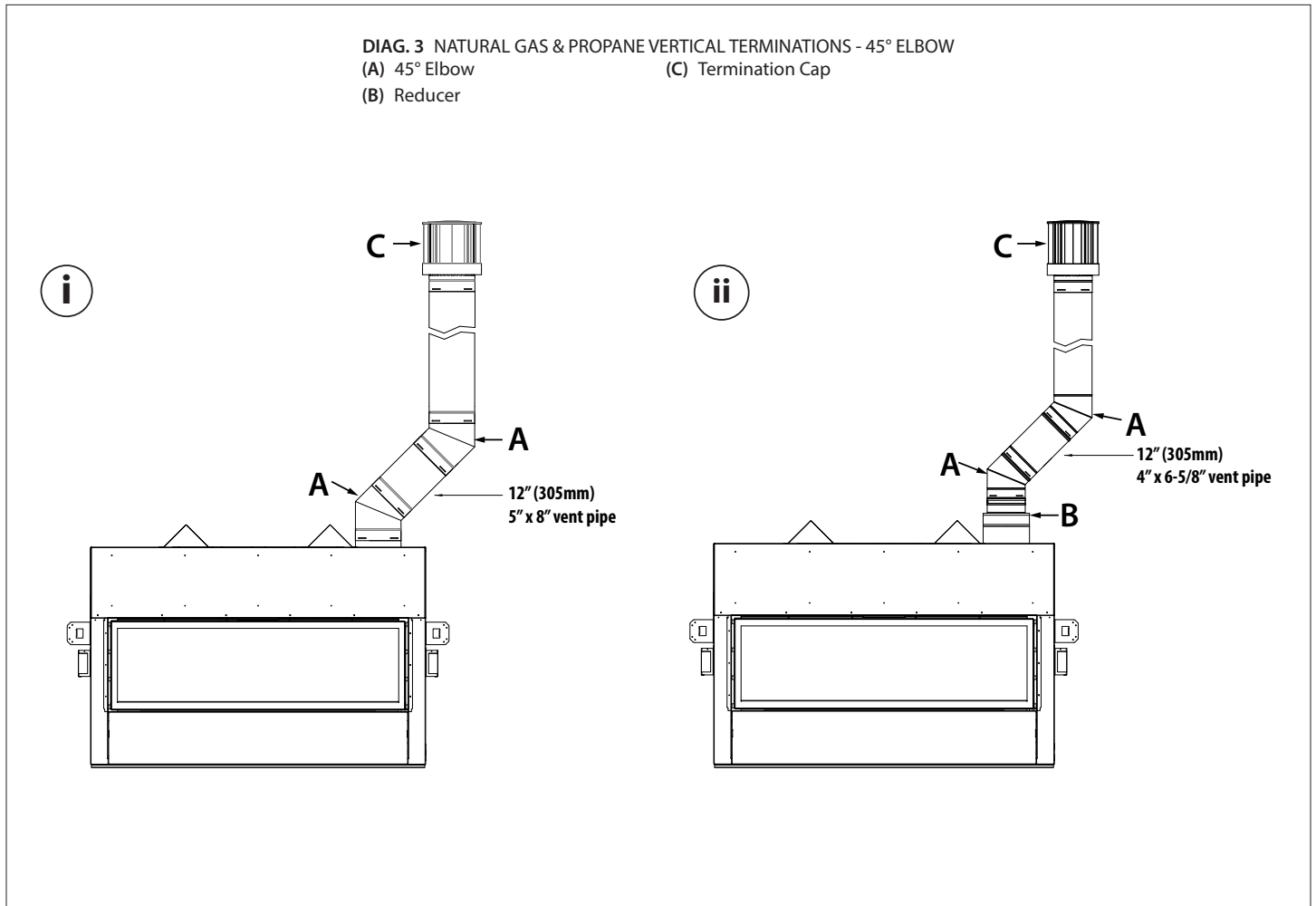
**FIGURE 7.3** Combination Venting Maximum Vertical and Maximum Horizontal - Natural Gas and Propane

### 7.4.4 Vertical Terminations with 45° Elbow - Natural Gas and Propane

**NOTE:** For certain installations, it may be necessary to use a 45° elbow off the top in order to maintain venting clearances. See the venting configurations in DIAG. 3 below.

- (i) 12" Vent Pipe Vertical Terminations - 5" x 8"  
45° elbow + 12" (305mm) vent pipe + 45° elbow + vertical length + termination cap

- (ii) 12" Vent Pipe Vertical Terminations with Reducer - 4" x 6-5/8"  
Reducer + 45° elbow + 12" (305mm) vent pipe + 45° elbow + vertical length + termination cap



## 7.4.5 Horizontal Terminations with 45° Elbow - Natural Gas and Propane

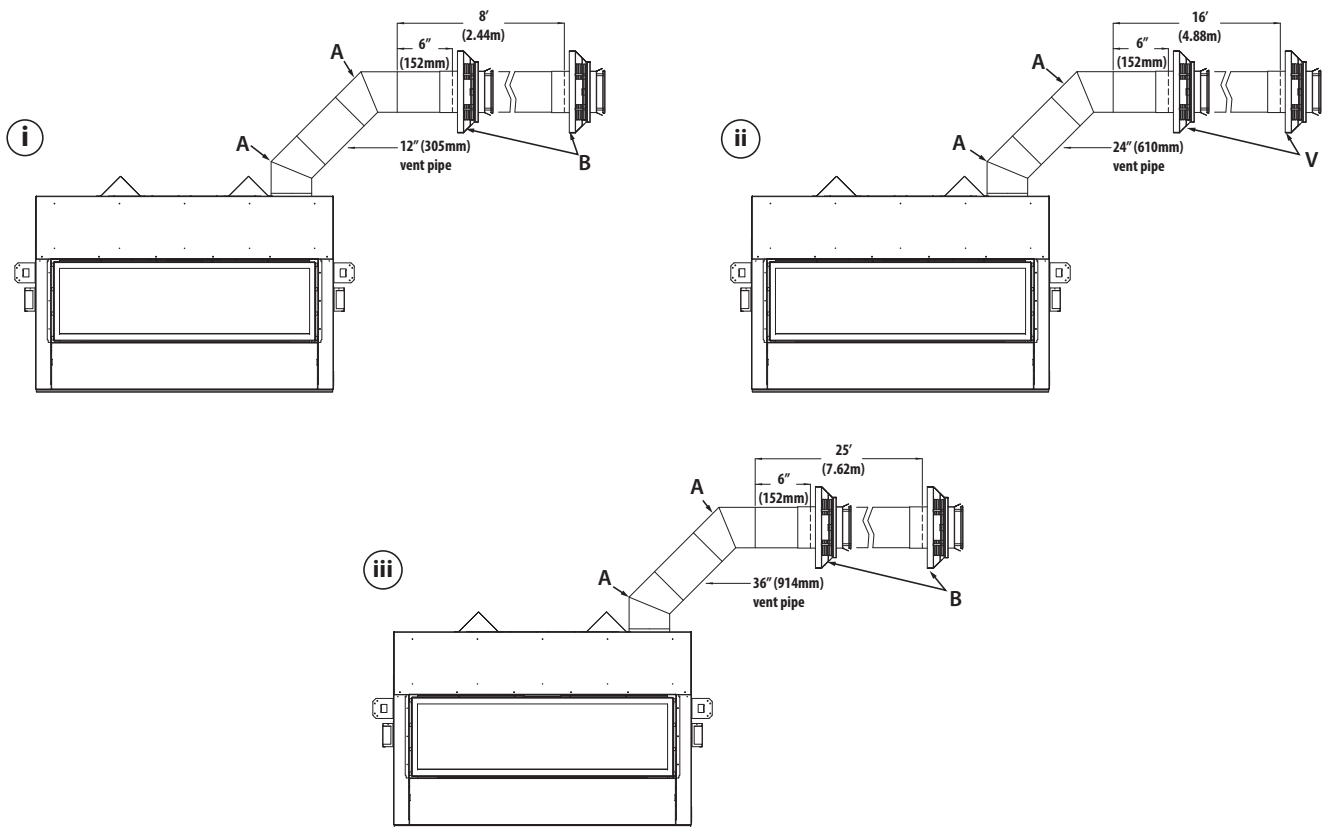
**IMPORTANT:** Horizontal vent sections require 1/4" (6mm) of rise for every 12" (305mm) of travel.

**NOTE:** For certain installations, it may be necessary to use a 45° elbow off the top in order to maintain venting clearances. See the venting configurations in DIAG. 4 below.

- (i) **12" Vent Pipe / Minimum / Maximum Horizontal Termination**  
45° elbow + 12" (305mm) vent pipe + 45° elbow + 6" (152mm) minimum horizontal run / 8' (2.44m) maximum horizontal run + termination cap

- (ii) **24" Vent Pipe / Minimum / Maximum Horizontal Termination**  
45° elbow + 24" (610mm) vent pipe + 45° elbow + 6" (152mm) minimum horizontal run / 16' (4.88m) maximum horizontal run + termination cap
- (iii) **36" Vent Pipe / Minimum / Maximum Horizontal Termination**  
45° elbow + 12" (305mm) vent pipe + 45° elbow + 6" (152mm) minimum horizontal run / 25' (7.62m) maximum horizontal run + termination cap

**DIAG. 4 NATURAL GAS & PROPANE HORIZONTAL TERMINATIONS - 45° ELBOW**  
(A) 45° Elbow (B) Termination Cap





## 7.5 Class A Chimney / Masonry Chimney Conversion

This appliance is approved to be adapted for Class A/Masonry Chimney conversion with kits utilizing a 4" (102mm) flexible exhaust by any vent manufacturers listed in Section 7.1 Approved Vent Systems on page 50.

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

Follow DIAG. 5 for allowable venting configurations for installation in existing through-the-ceiling, Class A/Masonry chimney. Route the exhaust gases and intake air through the existing Class A/Masonry chimney.

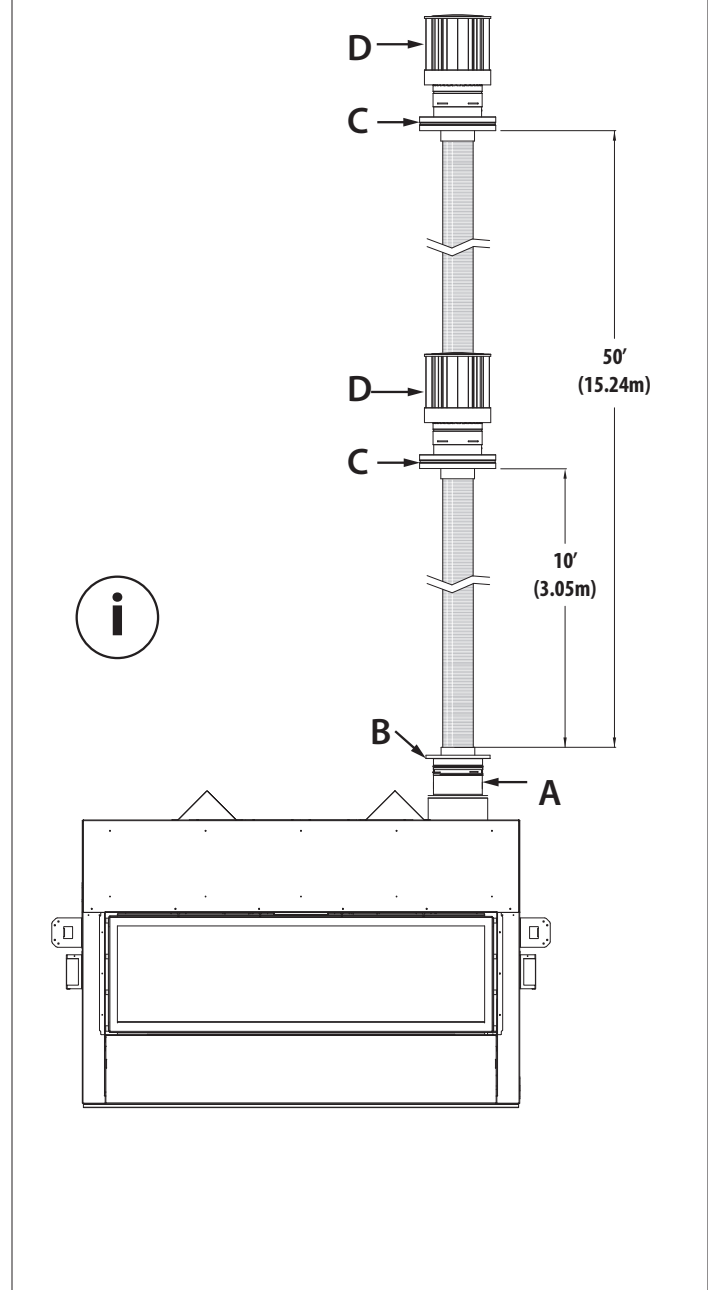
### 7.5.1 4" Flex Pipe Venting

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

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

DIAG. 5 NATURAL GAS & PROPANE HORIZONTAL TERMINATIONS

- (A) Reducer
- (B) Retro Connector
- (C) Top Adapter
- (D) Termination Cap



# 8.0 FIREPLACE SETUP

## 8.1 Glass Frame Assembly

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

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

This fireplace has a front and back side. The front is marked "ACCESS SIDE" with a glass frame assembly with spring loaded latches. The back glass frame assembly is fixed by flange nuts.

### 8.1.1 Front/Access Side Glass Frame Assembly

#### 8.1.1.1 Remove Front Glass Frame Assembly

1. Remove the safety barrier screen.
2. Locate (4) spring-loaded latches securing the front glass assembly at the top of the firebox. Use the provided tool to unlatch the latch assemblies from the flange on top of the front glass valance. See Figure 8.1.
3. Tilt the top of the front glass valance forward and lift up to remove the front valance resting on the bottom frame rail.

#### 8.1.1.2 Install Front Glass Frame Assembly

1. Tilt the top of the front glass valance forward and align the glass valance with the bottom frame rail
2. Use the provided tool to pull the (4) latch assemblies to latch with the flange on top of the front glass valance. See Figure 8.1.
3. Reinstall safety barrier screen.

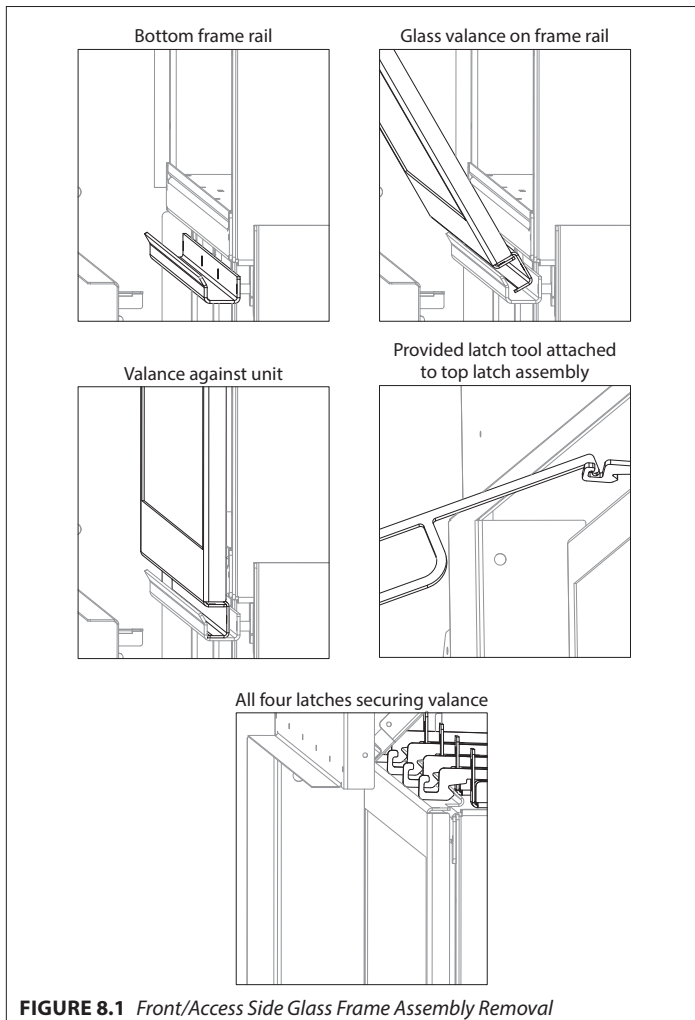


FIGURE 8.1 Front/Access Side Glass Frame Assembly Removal

### 8.1.2 Back/Fixed Side Glass Frame Assembly

#### 8.1.2.1 Remove Back/Fixed Glass Frame Assembly

1. Remove the safety barrier screen.
2. Locate the (3) 7/16" flange nuts below the fireplace opening securing the back/fix glass frame assembly. See Figure 8.2. Remove and save flange nuts.
3. Lift the back/fix glass assembly up and off of the (3) tabs located at the top of the firebox. See Figure 8.2.

#### 8.1.2.2 Install Back/Fixed Glass Frame Assembly

1. Align the slots on top of the back/fix glass assembly over the tabs at the top of the firebox while lowering the bottom of the back/fix glass assembly into position.
2. Secure back/fix glass assembly. Align the holes in the valance with the studs below the fireplace opening. Secure with (3) 7/16" flange nuts previously removed.
3. Reinstall safety barrier screen.

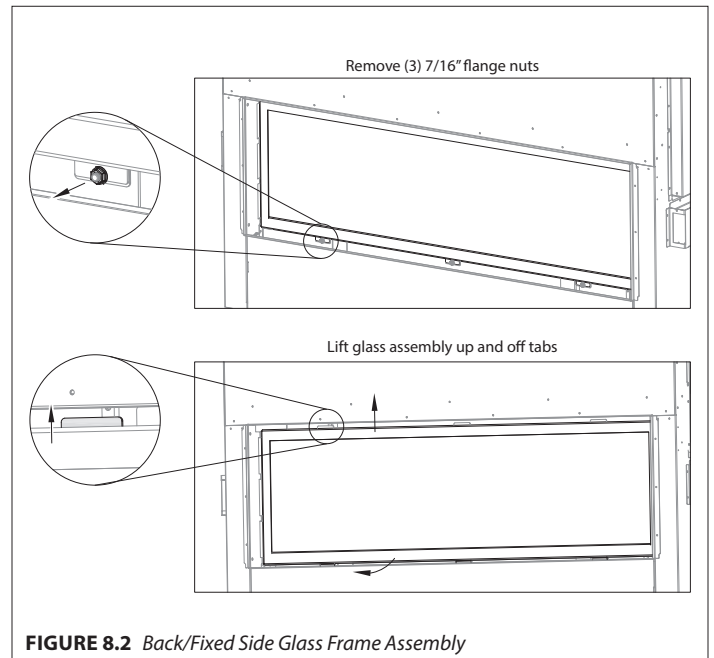


FIGURE 8.2 Back/Fixed Side Glass Frame Assembly

## 8.2 Burner/Perimeter Media Installation

**WARNING: DO NOT BLOCK PILOT WITH MEDIA. A BLOCKED PILOT MAY CAUSE DELAYED IGNITION.**

### 8.2.1 Burner Media Kits

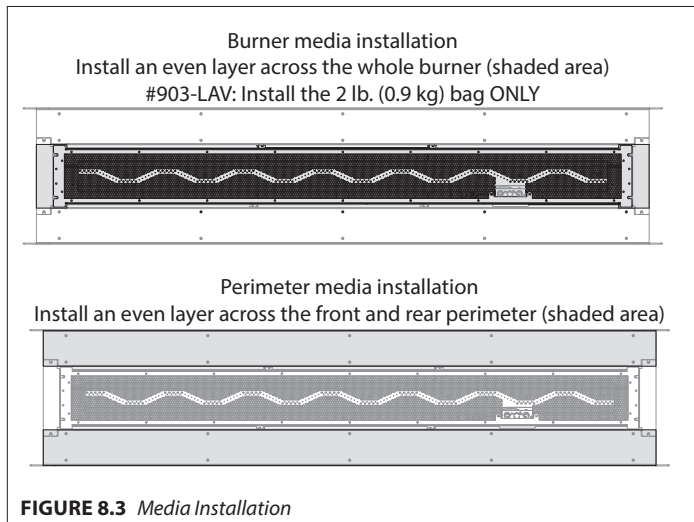
(#903-LAV, #304-COP, #304-BLK)

1. Install an even layer of your chosen media across the whole burner. See Figure 8.3 below.  
**#903-LAV: Install the 2 lb. (0.9 kg) bag ONLY included with the kit.**
2. Save any unused media for later use.

### 8.2.2 Perimeter Media Kits

(#904-LAV, #306-COP, #306-BLK, #105-VERM, #104-SAND-B)

1. Install an even layer of media across the front and rear perimeter. See Figure 8.3 below.
2. Save any unused media for later use.



**FIGURE 8.3** Media Installation

## 8.3 Control Board Removal and Installation

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

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

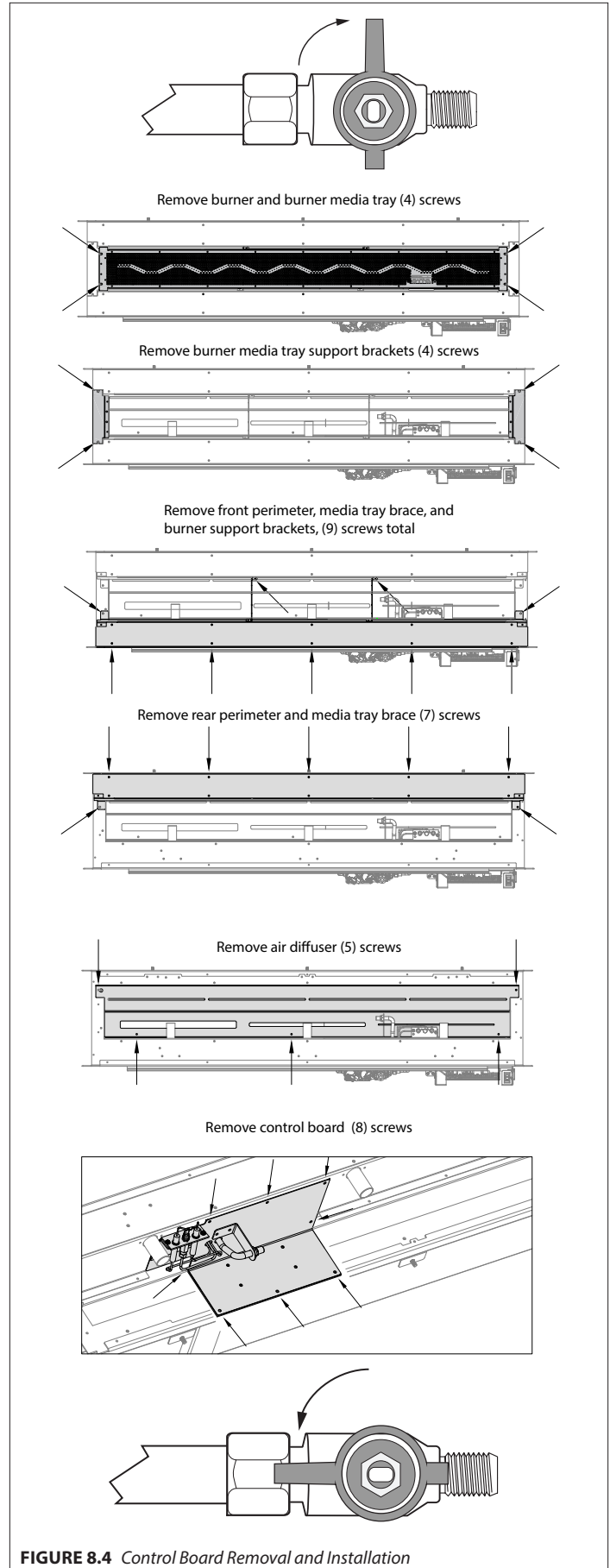
**CAUTION:** Check all connections for leaks with soapy water, whether field or factory made.

### 8.3.1 Control Board Removal

1. Disconnect electrical power.
2. Locate the manual valve installed by your qualified service technician. Turn the manual valve clockwise to the OFF position.
3. Remove the safety barrier, access cover, and glass frame assembly.
4. Remove perimeter media and burner media.
5. Remove burner media tray and burner (4) screws. Release the burner tube venturi off of the burner orifice and remove from firebox.
6. Remove burner media tray support brackets (4) screws.
7. Remove the front perimeter and media tray brace, and burner support brackets (9) screws total.
8. Remove rear perimeter and media tray brace (7) screws.
9. Remove bottom air diffuser (5) screws.
10. Remove and save (8) screws securing the control board.
11. Lift the control board out of the firebox, being careful not to damage the sealing gasket underneath.

### 8.3.2 Control Board Installation

1. Place the control board in the firebox, aligning the holes in control board with the holes and alignment screws in firebox bottom. **VERIFY SEALING GASKET IS IN PLACE.**
2. Secure the control board with screws previously removed.
3. Align the holes on the air diffuser with the holes in the bottom of the firebox. Secure with (4) screws previously removed.
4. Reinstall rear perimeter and media tray brace (7) screws previously removed.
5. Reinstall burner support brackets, front perimeter, and media tray brace (9) screws previously removed.
6. Reinstall burner media tray support brackets (4) screws.
7. Reinstall the burner and burner media tray. Position the burner venturi over the burner orifice. Secure with (4) screws previously removed.
8. Reinstall burner and perimeter media.
9. Reinstall the glass frame assembly, access cover, and safety barrier.
10. Turn the manual valve counterclockwise to the ON position.
11. Reconnect electrical power.
12. Verify proper media placement, operation of fireplace, and any electrical components.



# 9.0 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.

## 9.1 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.

## 9.2 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.
- Optional fan component and top light kit will not function on battery back up power.

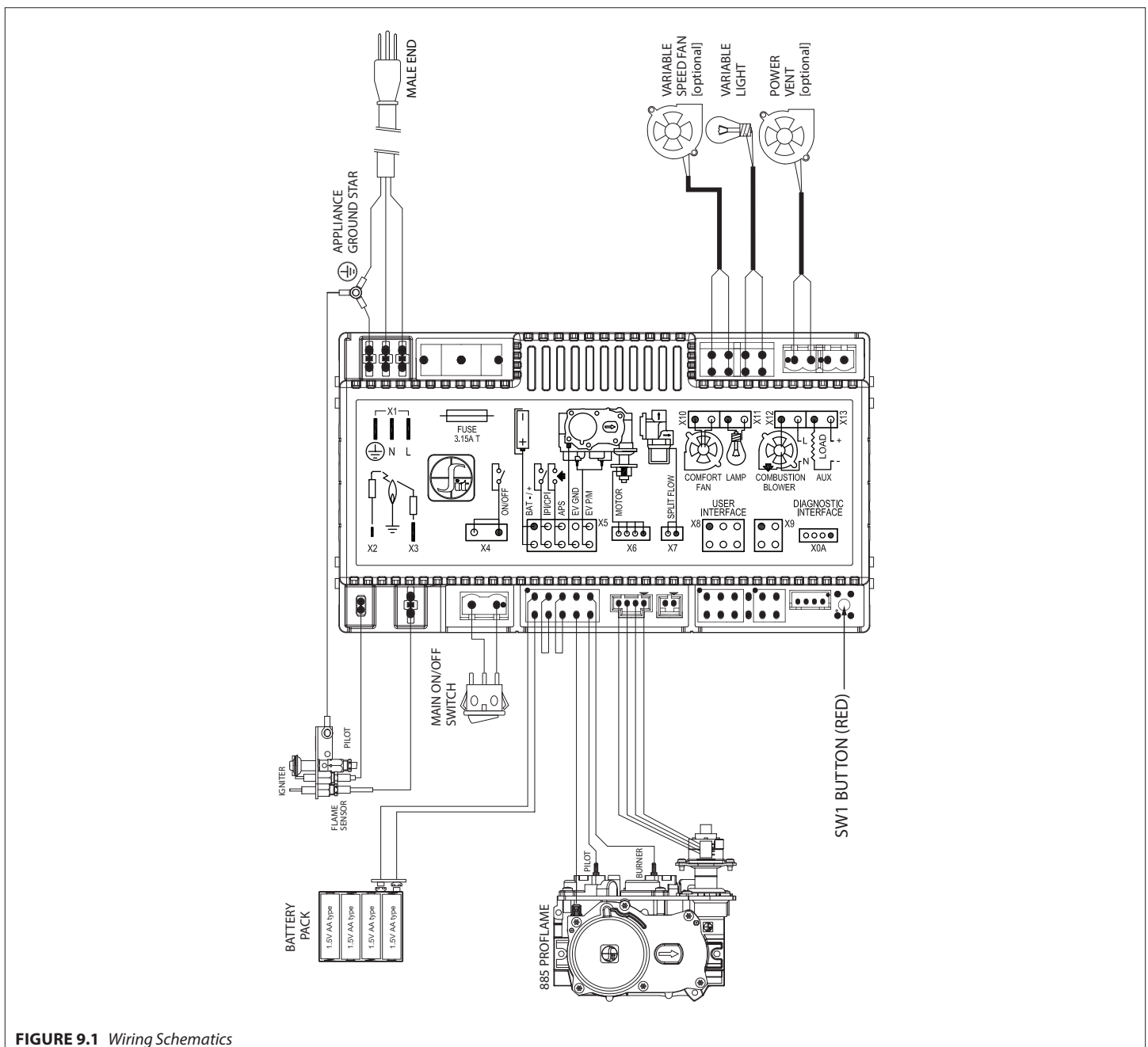


FIGURE 9.1 Wiring Schematics

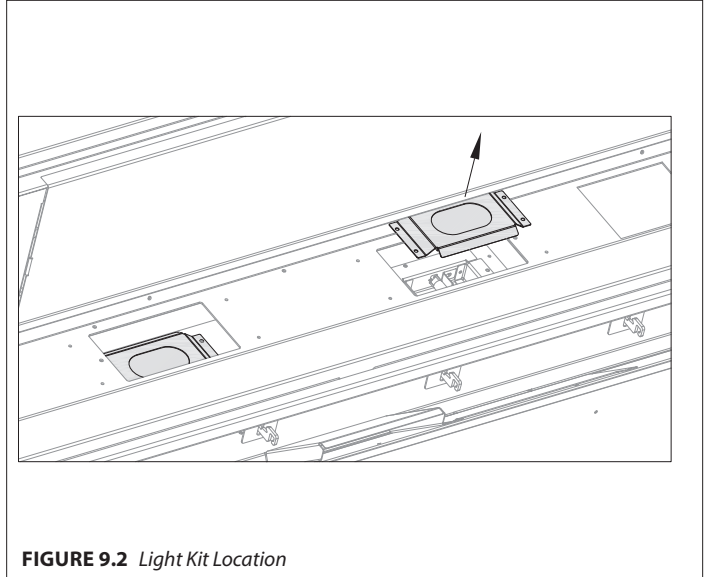
## 9.3 #600-TLK Top Light Kit

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

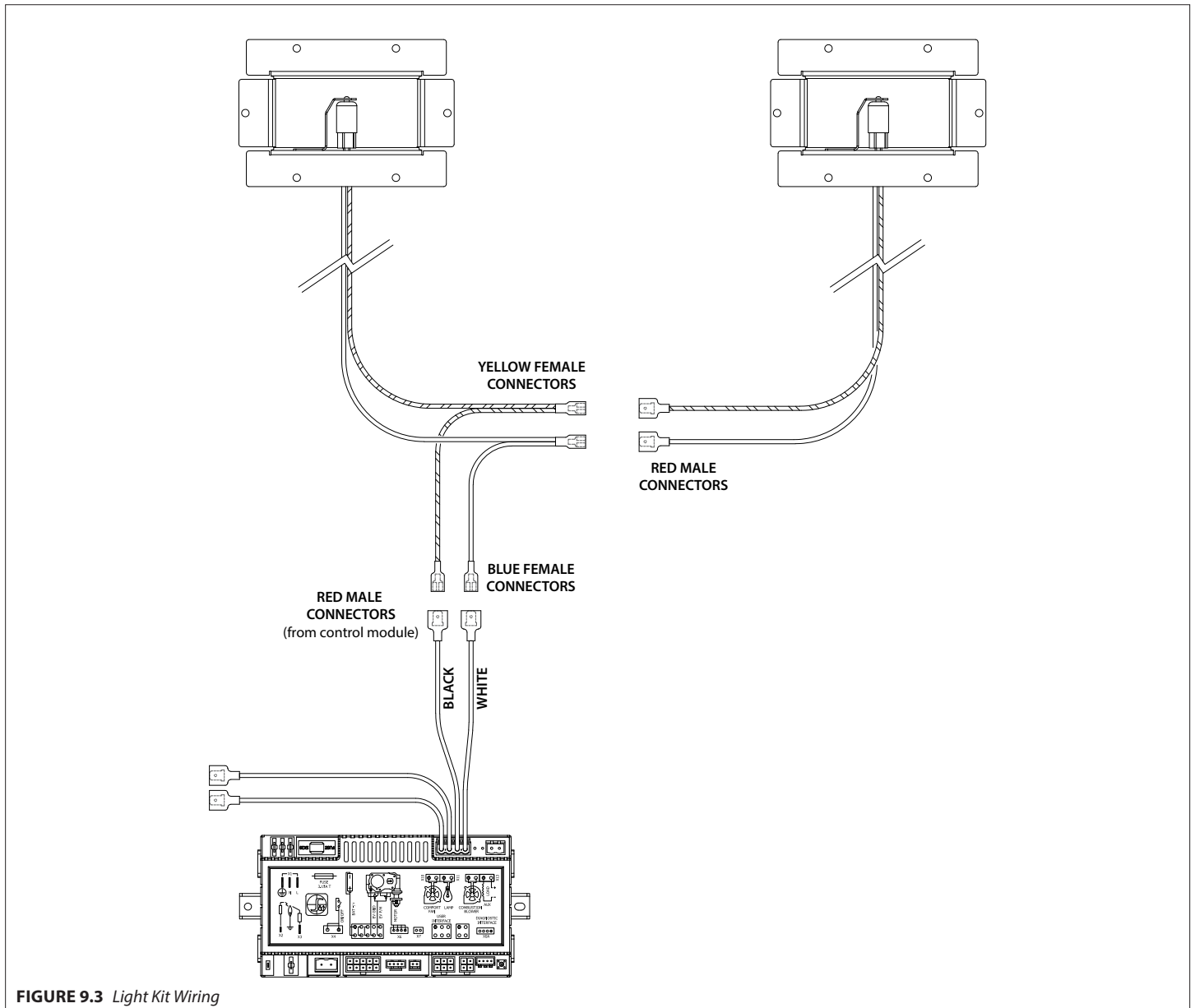
**NOTE:** To avoid damage and prolong the life of the halogen bulbs, never touch with bare hands. Always use a soft cloth when handling.

### 9.3.1 Install Light Kit

1. Remove the safety barrier screen, access cover, and front glass frame assembly (if installed).
2. Remove the light kit cover and roped glass (4) screws. Save screws.
3. Install or replace (2) halogen bulbs (included with this kit) into lamp bases.
4. Reinstall light kit cover and roped glass with (4) screws previously removed.
5. Reinstall glass frame assembly, access panel, and safety barrier screen.



**FIGURE 9.2** Light Kit Location



**FIGURE 9.3** Light Kit Wiring

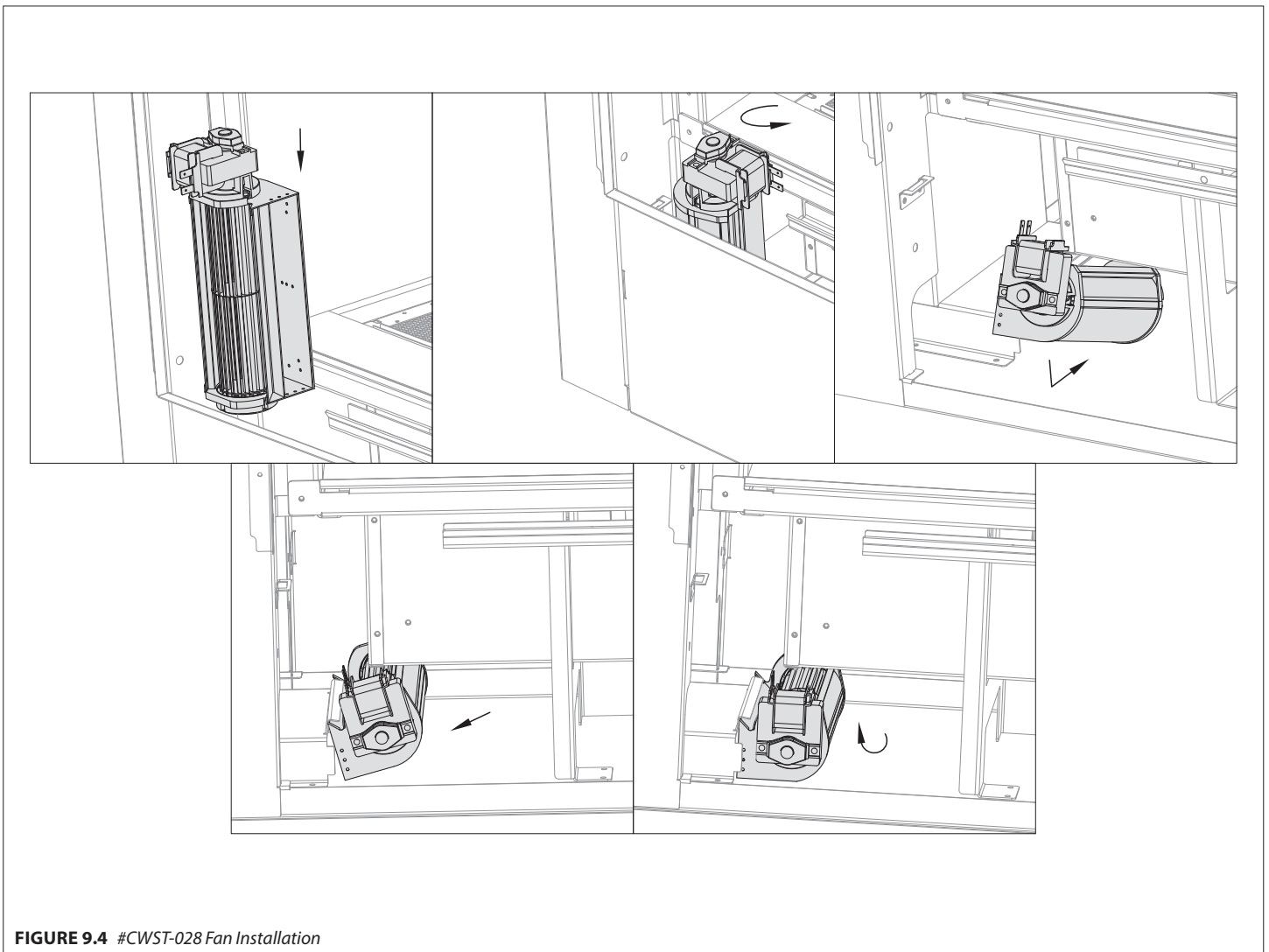
## 9.4 #CWST-028 Optional Fan Kit

**ATTENTION:** Installation of this fan kit should be done only by a qualified installer.

**WARNING:** Verify household breaker is shut off prior to working on any electrical lines. Disconnect all electric power from fireplace before performing any of these tasks.

If you wish to install a block-off plate to divert air into a certain room, see Section 9.4.1 Fan Channel Block-off Plate on page 64 for more information.

1. Remove safety barrier screen, access cover, and front glass frame assembly.
2. Disconnect wiring terminals from fan motors.
3. The fan will be installed on the side opposite of the exhaust.
4. With the terminal end of the fan facing you and the fan terminals on the left, insert fan into chamber. See Figure 9.4.
5. When the terminal end clears the fireplace face, rotate the fan counter-clockwise.
6. Insert the fan down and forward into control compartment, as shown below.
7. Place the upper edge of the fan discharge under the edge of fireplace air channel opening. Rotate the fan up towards the edge to secure fan into place. See Figure 9.4. **DO NOT LET THE FAN REST ON ANY ELECTRICAL CORDS.**
8. Reattach wiring terminals to fan motors.
9. Plug the fan cord into the receptacle on the IFC control module. See **FIGURE 9.1** on page 61.
10. Reinstall the front glass frame assembly, access cover and safety barrier screen.



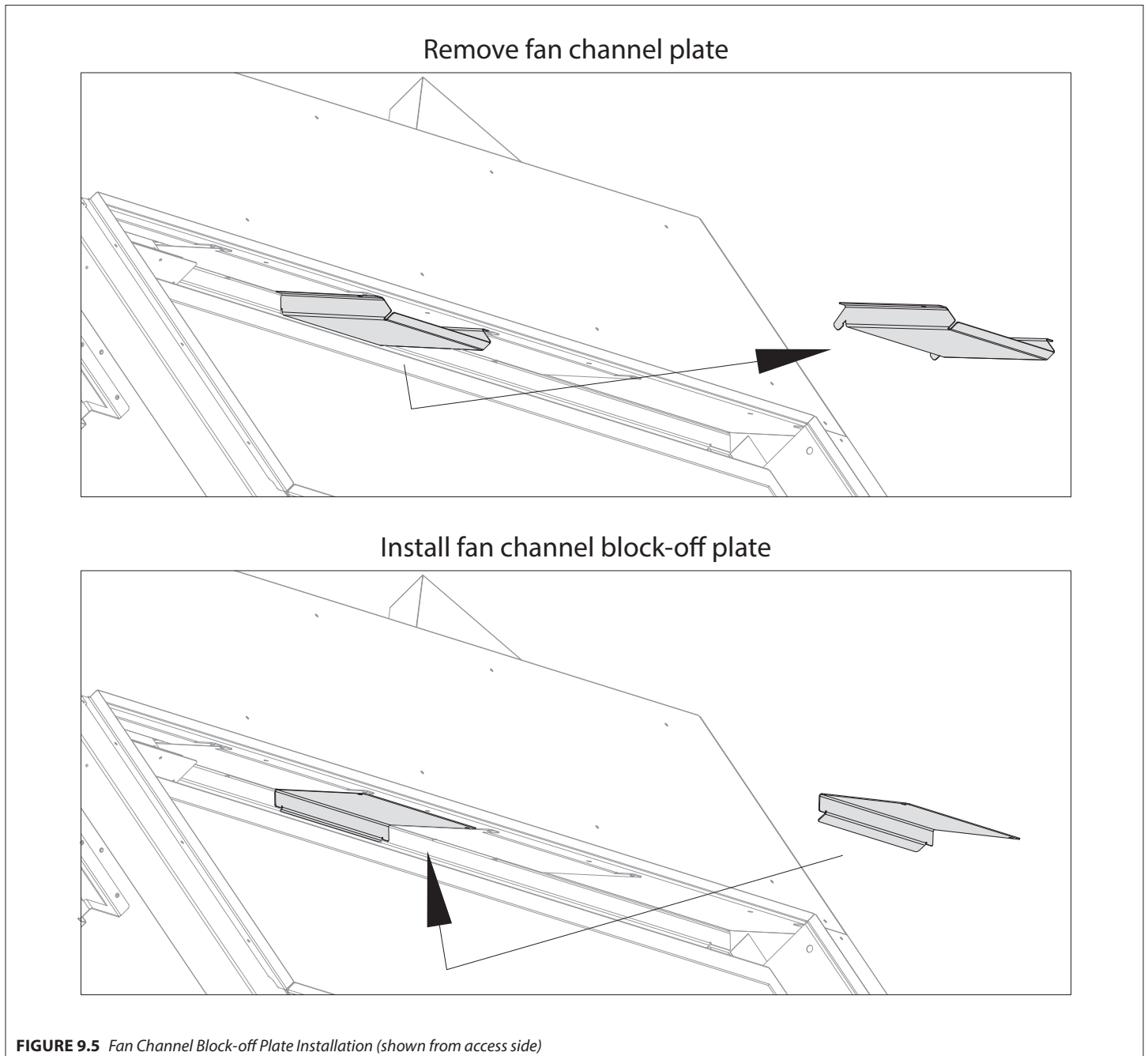
**FIGURE 9.4** #CWST-028 Fan Installation

### 9.4.1 Fan Channel Block-off Plate

If you wish to divert air from the fan so heated air exits to a certain room, a block-off plate is included with the #CWST-028 fan kit for this purpose. The block-off plate will be installed on the side you wish to block air from exiting.

This is applicable to all design options. If using #CWST-ODK outdoor kit, install the fan channel block off plate **BEFORE** installing the #CWST-ODK. The block off plate cannot be placed on the interior side so that hot air only exits to the exterior side.

1. Remove safety barrier screen, access cover, and front glass frame assembly.
2. Locate the fan channel plates on the upper heat shield inside the firebox. See Figure 9.5.
3. Remove fan channel plate you wish to block-off (2) screws.
4. Note the flange orientation on the block off plate, as shown below. Install block-off plate with (2) screws previously removed.
5. Reinstall all components previously removed.



**FIGURE 9.5** Fan Channel Block-off Plate Installation (shown from access side)



# 10.0 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.
- C. 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.

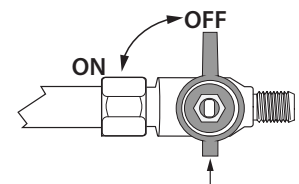
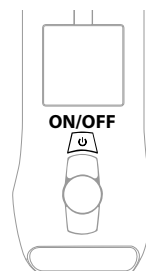
### CAUTION

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 toddlers, young children and other at risk individuals out of the room and away from hot surfaces.

## OPERATING INSTRUCTIONS

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



## TO TURN OFF GAS TO APPLIANCE

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

### NOTE

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

## 10.1 Setup Proflame 2 IFC Module

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

## 10.2 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 SW1 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.

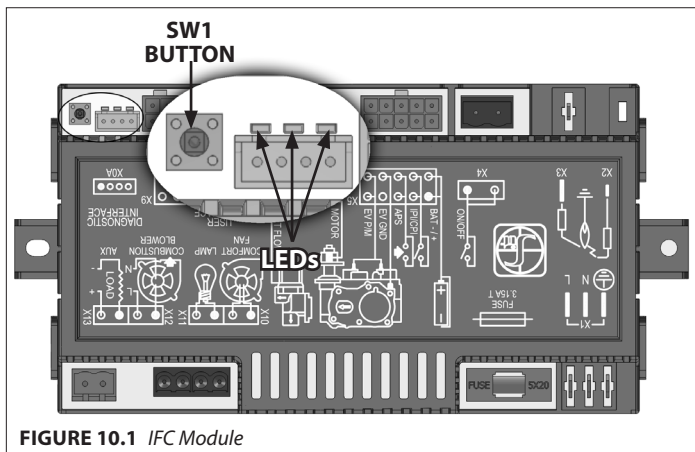


FIGURE 10.1 IFC Module

## 10.3 Reset the System for Manual Operation

1. Set the ON/OFF rocker switch to OFF position.
  2. Press the red SW1 button on the IFC module until it emits (3) beeps and an amber LED is illuminated.
  3. Within (5) seconds, press the red SW1 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.

## 10.4 Automatic Safety Restart

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

## 10.5 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.

## 10.6 Control System 7 Day Timeout

- If you have your Proflame 2 system set to CPI (continuous pilot ignition) with **7 consecutive days** without ignition of the main burner, the pilot will turn off. This a standard safety feature of the SIT Proflame 2 system.
- Once you turn CPI on, the **7** day timer will start. If at any time during the following **7** days your main burner ignites, it will reset the timer back to **7** days.
- See Section 10.9.3 Pilot Ignition Selection (IPI/CPI) on page 68 for more information.

**How to check if your system is set to CPI:**

The LCD screen will display the snowflake icon.

**To select the preferred pilot ignition feature,**

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

**To Turn ON the appliance:**

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

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

## 10.7 IFC Module Ignition Sequence

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

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

### 10.7.1 Reset IFC Module after Lockout

#### 10.7.1.1 ON/OFF Rocker Switch

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

#### 10.7.1.2 Remote Control ON/OFF Key

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

#### 10.7.1.3 Cycling Flame

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

## 10.8 Additional Diagnostic Information

Low Battery Condition (<4V) Remote Control:

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

Low Battery Condition (<4V) Battery Backup:

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

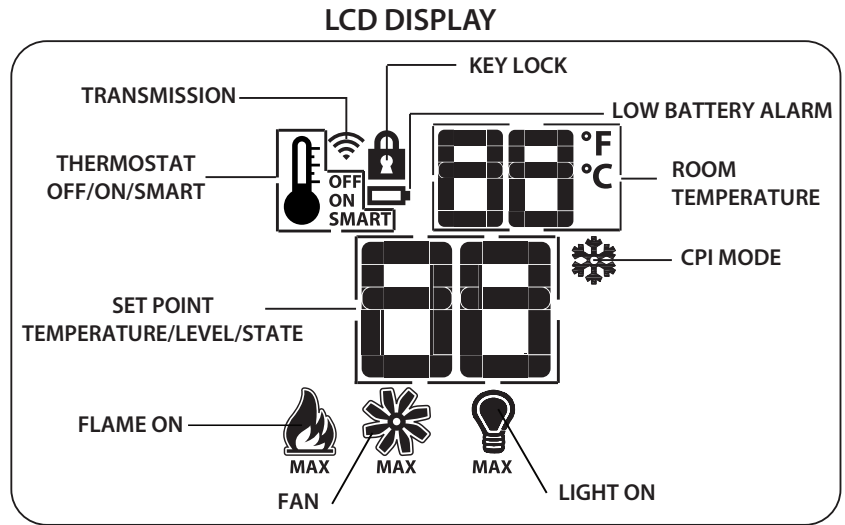
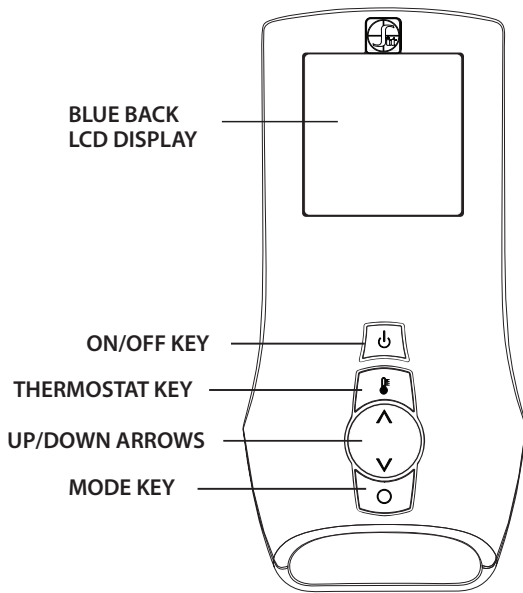
Pilot Flame Error Condition:

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

System Lock Out Condition:

- Red LED Indicator will blink (3) times in intervals.
- Verify gas is turned on.
- Verify sensor is not shorted.
- Follow Section 10.2 Initialize the Control System.

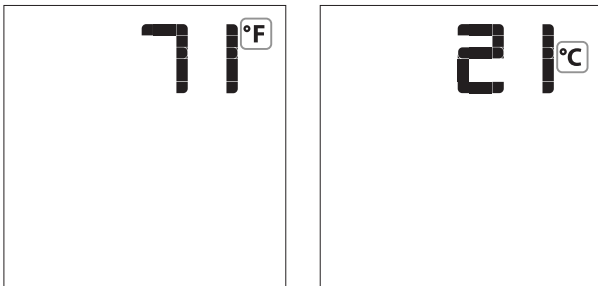
## PROFLAME 2 TRANSMITTER



## 10.9 Remote Control Operation

### 10.9.1 Temperature Display

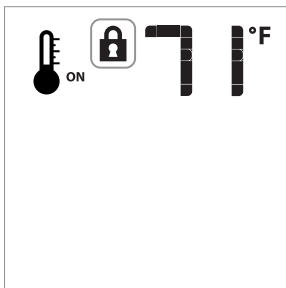
1. With the system in the OFF position, simultaneously press the thermostat key and the mode key to change degrees from °F to °C.
2. Visually check the LCD screen to verify either °F or °C is displayed on the right side of the room temperature display.



### 10.9.2 Key Lock

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

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



### 10.9.3 Pilot Ignition Selection (IPI/CPI)

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

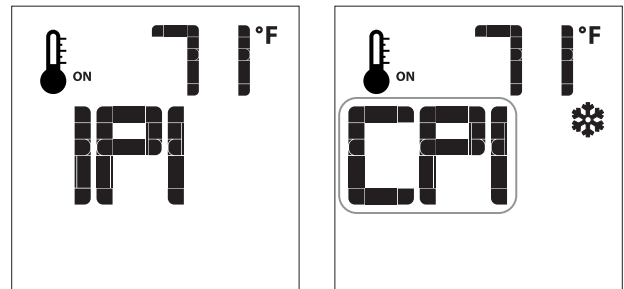
When the system is OFF, the LCD screen will display the snowflake icon during the setup of either IPI or CPI mode. To select the preferred pilot ignition feature,

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

When the system is ON,

IPI mode: LCD screen will not display the snowflake icon

CPI mode: LCD screen will display the snowflake icon



### 10.9.4 Turn ON the Appliance

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

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

### 10.9.5 Turn OFF the appliance

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

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

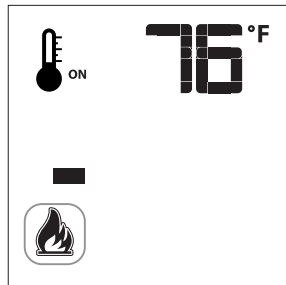
### 10.9.6 Remote Control Flame Adjustment

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

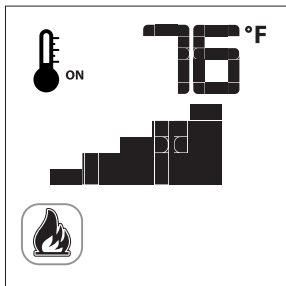
1. Verify the system is in the ON position and the flame level is set at maximum.
2. Press the down arrow key once to reduce flame height by one level until the flame is turned off.
3. Press the up arrow key once to increase flame height by one step. If the up arrow key is pressed while the system is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



Flame off



Flame Level 1



Flame Level 5



Flame Level Maximum

### 10.9.6.1 Deactivate Flame Modulation

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

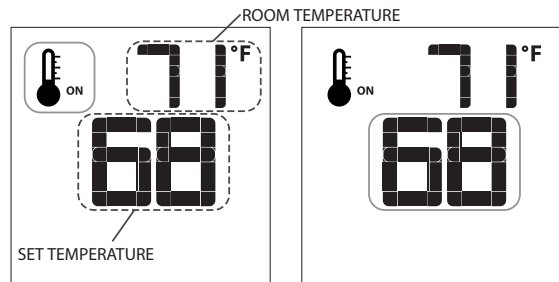


### 10.9.7 Remote Control Thermostat Operation

#### 10.9.7.1 Room Thermostat

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

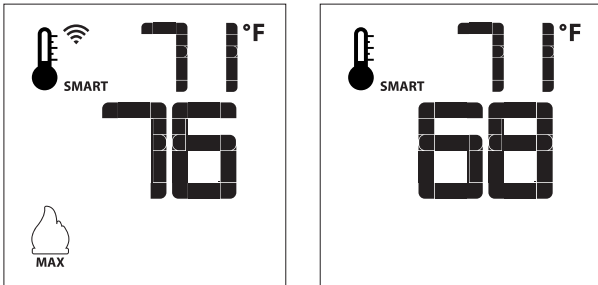
1. Press the thermostat key. The LCD screen will display a temperature bulb graphic, the room temperature and set temperature.
2. To adjust the set temperature, press the up or down arrow keys until the desired temperature is displayed on the LCD screen.



### 10.9.7.2 Smart Thermostat

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

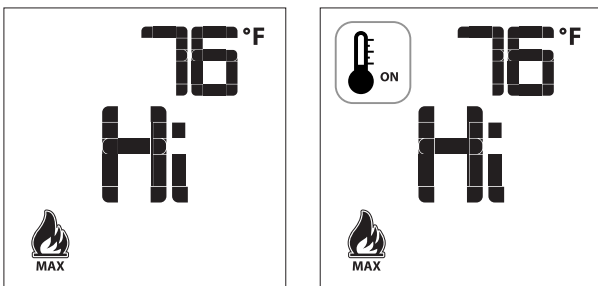
1. Press the thermostat key until the 'SMART' appears on LCD screen on the right side of the temperature bulb graphic.
2. To adjust the set temperature, press the up or down arrow keys until the desired temperature is displayed on the LCD screen.



### 10.9.7.3 Deactivate Remote Control Thermostat Operation

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

1. Verify all (3) AAA batteries are installed in the remote control.
2. Remove (1) AAA battery.
3. While reinserting the battery, push and hold the thermostat key. 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.



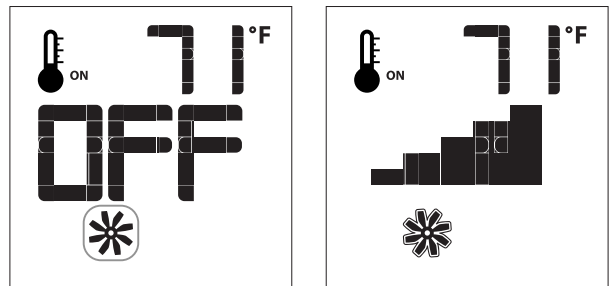
### 10.9.8 Fan Speed Control (optional)

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.

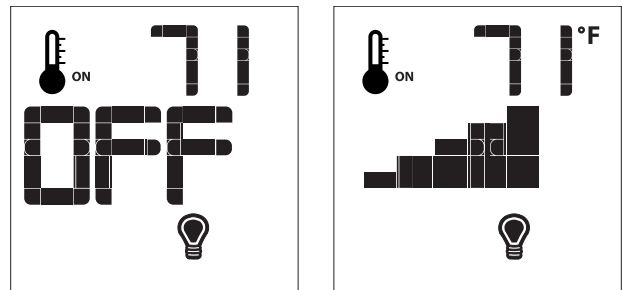
Manual mode: Fan(s) will operate at previous setting. There is no delay in start up or stop time.



### 10.9.9 Accent Light Kit

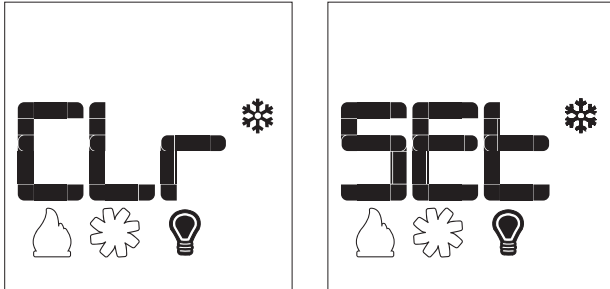
The light intensity can be adjusted through (6) levels.

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.



### 10.9.9.1 Deactivate Light Kit Modulation

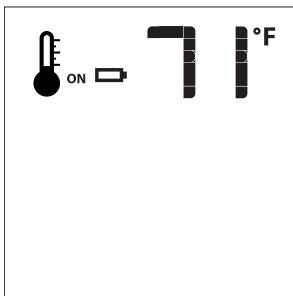
1. Verify all (3) AAA batteries are installed in the remote control battery bay.
2. Remove (1) AAA battery.
3. Press and hold the on/off key and the mode key at the same time.
4. Reinsert (1) AAA battery.
5. While still holding the on/off key, let go of **ONLY** the mode key.
6. Index over to the bulb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



### 10.9.10 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.





# 11.0 ADJUSTMENT

## 11.1 Pressure Testing

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

### 11.1.1 Inlet Pressure Test

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

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

1. Loosen the inlet (IN) pressure tap by turning screw counter-clockwise. See (A) in Figure 11.1.
2. Attach manometer using a ¼" (6mm) 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.

### 11.1.2 Manifold Pressure Test

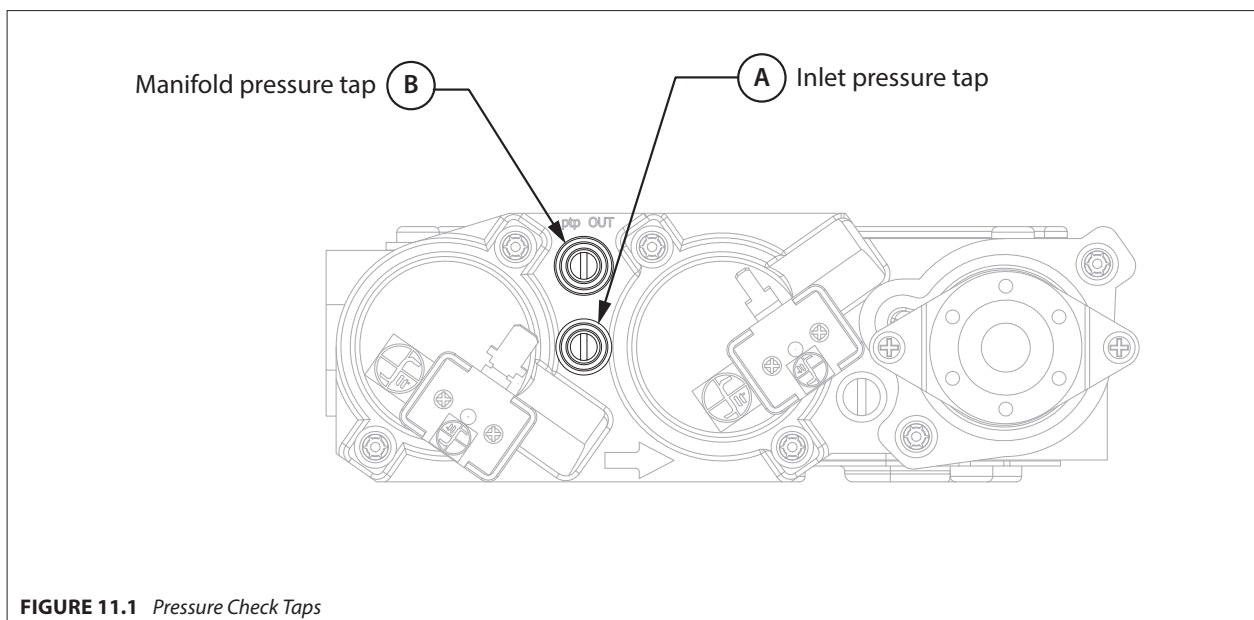
1. Light pilot.
2. Loosen manifold (OUT) pressure tap by turning screw counter-clockwise. See (B) in Figure 11.1.
3. Attach manometer to pressure tap using a ¼" (6mm) I.D. hose.
4. Light burner. Check manometer reading.
5. Turn burner and pilot off.
6. Disconnect manometer hose and tighten the manifold (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 11.1, 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 11.2, 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 11.1** Pressure Check Taps



## 11.2 Burner Flame Adjustments

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

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

### 11.2.1 Burner Venturi

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

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

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

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

Fuel	Air Shutter Opening
Natural Gas	1/8" (3.2mm) OPEN
Propane	1/4" (6.35mm) OPEN

#### 11.2.1.1 Venturi Adjustment

**NOTE:** If soot is present on the glass, check glass media placement before adjusting the venturi.

1. Remove the safety barrier, access cover, and front glass frame assembly.
2. Remove perimeter media and burner media.
3. Remove the burner media tray and burner (4) screws. Release the burner tube venturi off the burner orifice.
4. Loosen screw on venturi and adjust as necessary. Re-tighten screw.
5. Reinstall all components previously removed.

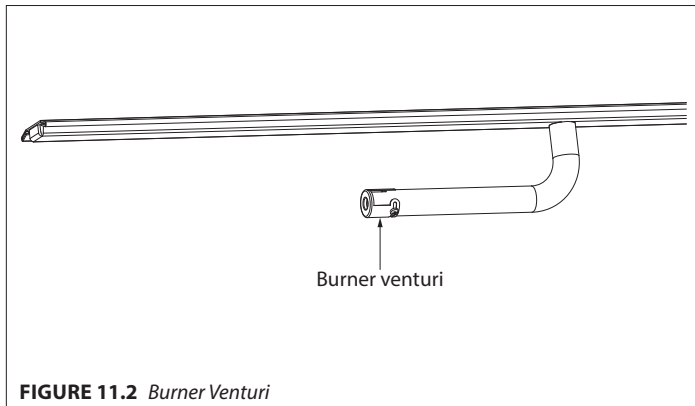


FIGURE 11.2 Burner Venturi

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

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

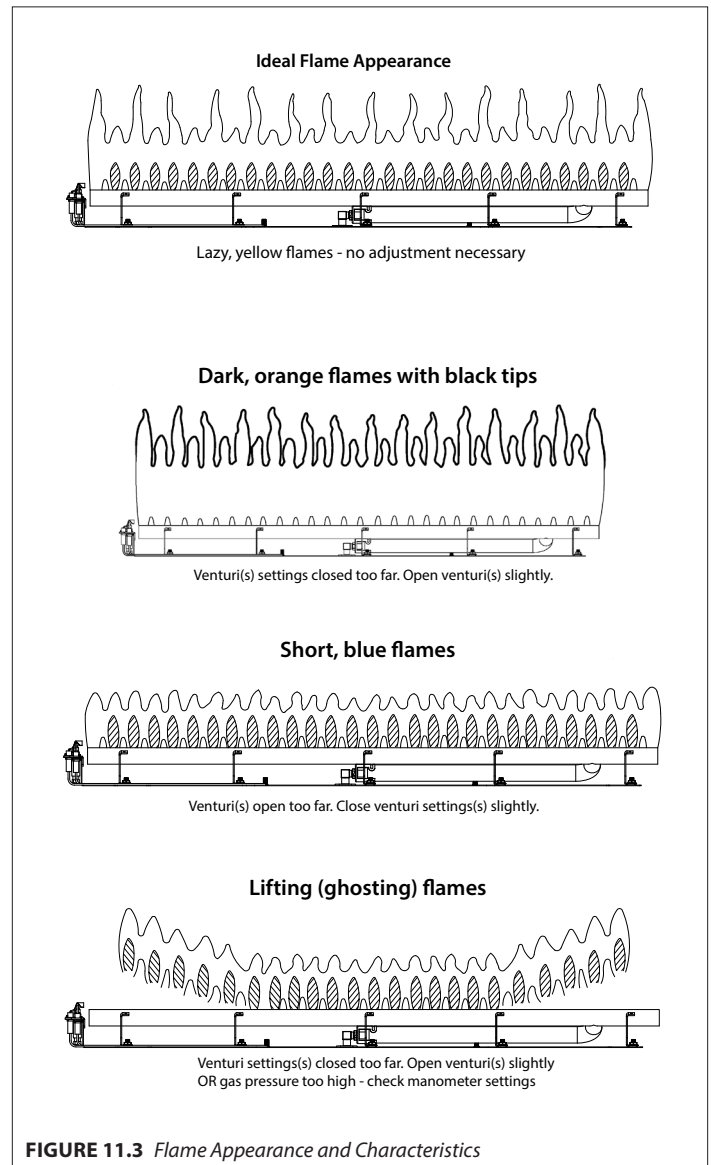


FIGURE 11.3 Flame Appearance and Characteristics

## 11.2.2 Vent Restriction (after installation)

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

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

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

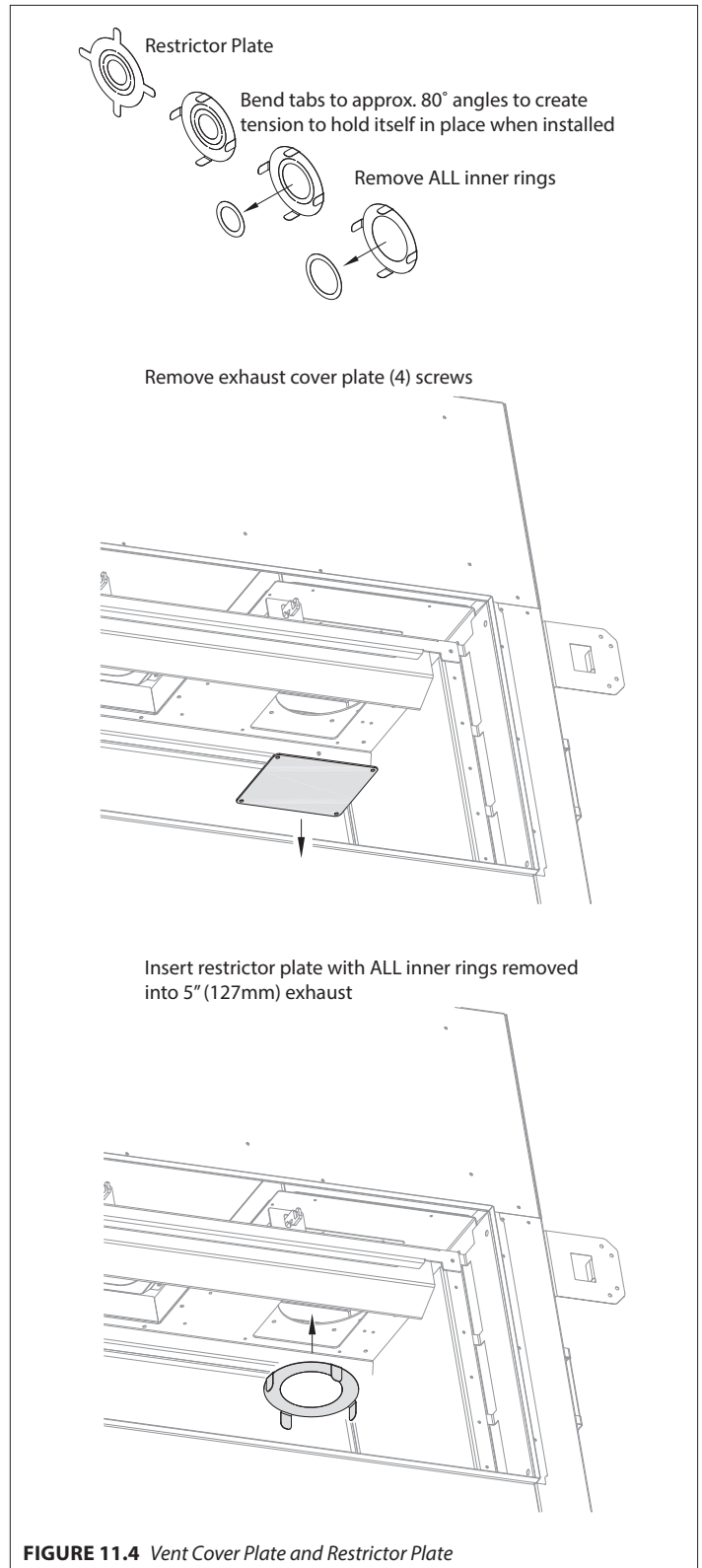
The restrictor plate is shipped with all inner rings intact. There are (2) inner rings that must be knocked out. Do not install the restrictor plate with the (2) inner rings in place.

**Table 11.5, Restrictor Plate Adjustment Guidelines**

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

### 11.2.2.1 Restrictor Plate Installation

1. Remove the safety barrier, access cover, and the front glass frame assembly.
2. Locate the vent cover plate. Remove cover plate (4) screws.
3. Bend the tabs on the restrictor plate (included in components packet) to approximately 80° angles. This will create tension when the restrictor plate is inserted into the exhaust pipe.
4. Remove all inner rings in restrictor plate.
5. Insert restrictor plate into the 5" (127mm) exhaust pipe with the tabs pointing down.
6. Reinstall front glass frame assembly, access cover, and safety barrier.



**FIGURE 11.4** Vent Cover Plate and Restrictor Plate

## 12.0 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
<b>Pilot will not light</b>	Electrical power interrupted or disconnected	Restore electrical power to appliance or use battery back-up.
	Wiring disconnection	Ensure batteries are fully charged if using battery back-up as power source. Use wiring schematic in this manual to determine that all wiring connections are secure and correct.
	Gas supply turned off	Check remote shut-off valves from the appliance. Usually there is a valve near the main gas line. There may be more than (1) valve between the appliance and main gas line.
<b>Pilot will not stay lit</b>	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.
<b>Pilot flame always on, or will not extinguish</b>	Control system set to CPI mode	Set control system to IPI mode.
<b>Main burner flame will not light</b>	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
<b>Pilot and burner extinguish while in operation</b>	No propane in tank	Check propane tank. Refill if necessary.
	Incorrect glass assembly installation	See Section 8.1 Glass Frame Assembly on page 58.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
	Improper pitch on horizontal venting	¼" (6mm) rise per foot (30cm) is required on horizontal venting.
	Exhaust vent pipe leaking exhaust gases back into firebox	Check for leaks and repair if necessary.
	Excessive draft	A restrictor plate may need to be installed. See Section 11.2.2 Vent Restriction (after installation) on page 74.
<b>Soot appears on glass</b>	Improper media placement	See Section 8.2 Burner/Perimeter Media Installation on page 59.
	Improper venturi setting	Venturi air shutter may need to be opened slightly to allow more air into the gas mix. See Section 11.2.1 Burner Venturi on page 73.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
<b>Flame burns blue and lifts off burner</b>	Improper venturi setting	Venturi air shutter may need to be closed slightly to allow more air into the gas mix. See Section 11.2.1 Burner Venturi on page 73.
	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.
<b>No reaction to command</b>	Battery back batteries or remote control batteries low	Replace batteries.
	No communication between remote control and IFC module	Reprogram remote control to IFC module.
	A maximum number of failed ignitions or flame restorations has been reached	Reset IFC module.

## 13.0 MAINTENANCE

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

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

### 13.1 Firebox

Performed by: Qualified Service Person

Frequency: Annually

Action:

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

### 13.2 Fan (optional)

**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.

### 13.3 Vent System

**NOTE:** If the vent-air intake system is disassembled for any reason, reinstall per instructions provided with installation. If installing Kozy Power Vent (#KPV), please reference the manual included with the kit. For natural draft vent installation, refer to Section 7.0 Venting on page 50.

Performed by: Qualified Service Person

Frequency: Annually

Action:

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

### 13.4 Glass Assembly

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

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

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

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

Performed by: Homeowner

Frequency: Annually

Action:

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

Performed by: Qualified Service Person

Frequency: Annually

Action:

- Clean glass window with a suitable fireplace glass cleaner using a soft cloth. Abrasive cleaners must not be used. Be careful not to scratch the glass when cleaning.
- Inspect the glass for cracks, scratches, and nicks.
- Verify the glass assembly is properly intact and not damaged.
- Replace the glass and the assembly #701-019T as necessary.
- Only Hussong Mfg. Co., Inc. will supply the replacement of glass assembly as a complete unit.

## 13.5 Burner and Pilot System

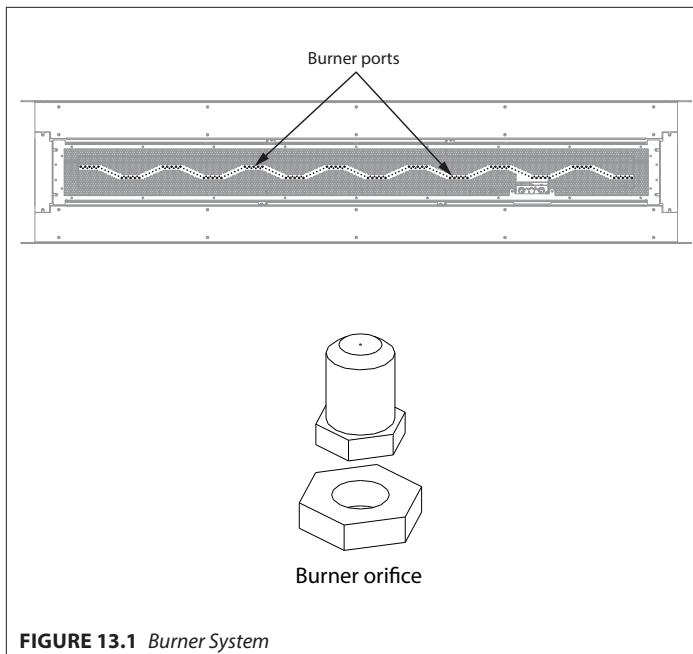
The burner assembly may be removed for easier access to the control compartment. Refer to Section 8.3 Control Board Removal and Installation on page 60 for instructions. Verify gas supply is turned on and filled. Consult with plumber or gas supplier as necessary.

Performed by: Qualified Service Person

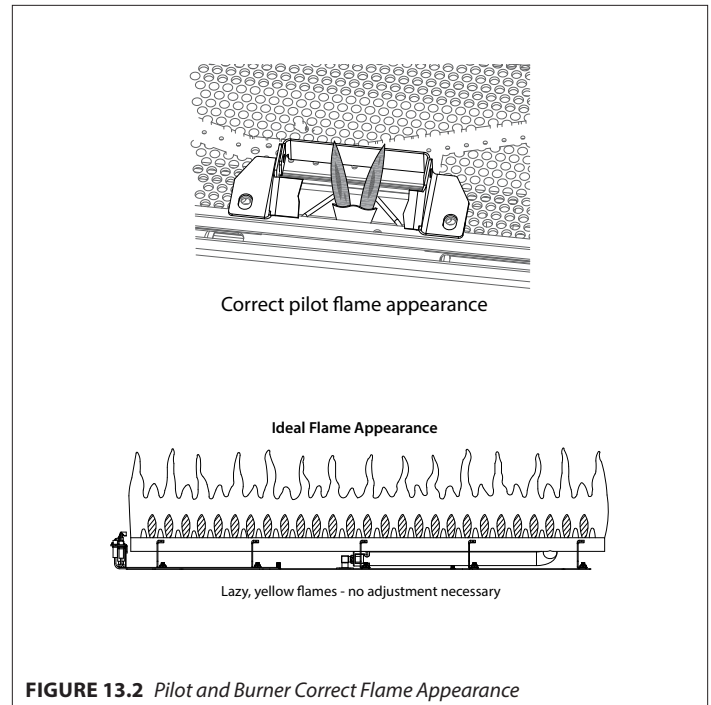
Frequency: Annually

Action:

- Vacuum all components of the burner system.
- Check all accessible gas-carrying tubes, connections, pipes and other components for leaks.
- Inspect the operation of the flame safety system Pilot or Flame rectification device. Visually check pilot light when in operation.
- Inspect and ensure the lighting of the main burner occurs within (4) seconds of the main gas valve opening. Check for faulty or incorrect wiring and correct or replace as necessary. Inspect primary air openings (burner ports) for blockage, especially near the pilot.
- Visually check burner flame pattern when in operation. Flames should be steady, not lifting or floating.
- Test and measure the flame failure response time of the flame safety system. It must de-energize the safety shutoff in no more than (30) seconds.



**FIGURE 13.1** Burner System



**FIGURE 13.2** Pilot and Burner Correct Flame Appearance

# 14.0 REPLACEMENT PARTS LIST

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

The following warning is for replacement parts for this appliance.

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

CLW-ST CONTROL BOARD AND PARTS			
Control Board - Natural Gas	CWST-150*	Pilot Orifice - Propane #.014 LP	700-114
Control Board - Propane	CWST-151*	Valve Step Motor - Natural Gas	700-504
SIT IPI Gas Valve - Natural Gas	700-567	Valve Step Motor - Propane	700-504-1
SIT IPI Gas Valve - Propane	700-567-1	36" Flexible Gas Line - Black	700-236B
Proflame 2 IFC Board	700-652*	Flexible Gas Line - Valve to Burner Connection	700-226F
Proflame 2 IFC Board - Power Vent	700-759	Natural Gas Burner Orifice #34	700-234
IFC Wire Harness Assembly	700-653	Propane Burner Orifice #51	700-251
Proflame 2 IFC External Antenna	700-ANT	Conversion Kit - Natural Gas	NCK-CW50-SPB
Pilot Assembly - Natural Gas	900-064A	Conversion Kit - Propane	LCK-CW50-SPB
Pilot Assembly - Propane	900-064A-1	Burner Tube	CWST-035
Transmitter (Remote Control)	700-408	Burner Media Tray	CWST-350
Pilot Orifice - Natural Gas #.023 NG	700-123		

\*Control module is not capable for conversion to KPV power vent.

GLASS AND GLASS PARTS	
51-3/4" x 15-3/20"- Glass with Gasket	701-019T
1-1/8" Glass Gasket	900-006
Replacement Valance - Front Side	CWST-005F
Replacement Valance - Back Side	CWST-005B

SAFETY BARRIER	
Safety Barrier Screen Assembly	CWST-ES

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

FAN KIT	
Fan Assembly	CWST-028

LIGHT KIT	
Light Kit	600-TLK
20W 120V Halogen Bulb	600-676

ADDITIONAL COMPONENTS	
5" (127mm) Restrictor Plate	900-086
Manual Gas Shut-off Valve	700-203
Shelf Application Kit (shelf enclosure framing applications only)	CWST-SAK



# LIMITED LIFETIME WARRANTY

## Warranty Coverage

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

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

## 30 Days: Parts & Labor\*

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

## Year 1: Parts & Labor\*

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

## Years 2 through Lifetime: Parts Only

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

## EXCLUSIONS AND LIMITATIONS

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



