KOZY HEAT
FIREPLACES

HUSSONG MANUFACTURING CO., INC.
P.O. Box 557, 204 Industrial Park Road
Lakefield, Minnesota USA 56150-0577

INSTALLATION AND OPERATION MANUAL

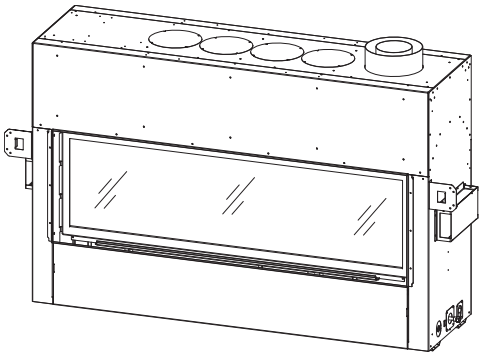
Callaway ST

Model # CLW-ST

Direct Vent Gas Fireplace

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

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



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

PFS® C US

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. A conversion kit is supplied with the appliance.

⚠ 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.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.
- **CAUTION**: Before fireplace start-up, check all connections for leaks with soapy water, whether field or factory made.

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.

⚠ 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.

Hussong Mfg. Co., Inc.

Rev. 4 - April 2026

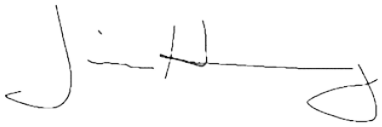
CLW-ST - PFS Report No. 20-648

Starting Serial Number: 21 200000 14

CONGRATULATIONS!

Hussong Manufacturing welcomes you as a new owner of a Kozy Heat gas fireplace. Kozy Heat products are designed with superior components and materials, assembled with care by trained craftsmen who take pride in their work. To ensure you receive a quality product, the burner and valve assembly are 100 percent test-fired, and the complete fireplace is thoroughly inspected before packaging. Our commitment to quality and customer satisfaction has remained the same for over 50 years. We offer a complete line of gas, and electric fireplaces, along with stylish accessories to complement any decor. Adding a fireplace is one of the best ways to increase the value of your home, and we are proud to offer a network of dealers throughout the country to help make your experience everything you imagine. We pride ourselves in being dedicated not only to functionality and reliability, but also customer safety. We offer our continual support and guidance to help you achieve the maximum benefit and enjoyment from your Kozy Heat gas fireplace.

Jim Hussong
President



Dudley Hussong
Board Chairman

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

Homeowner Reference Information

Model name: _____

Serial Number: _____

Date Purchase / Installed: _____

Location of fireplace: _____

Dealership purchased from: _____

_____

_____

Dealership Phone Number: _____

_____

Notes:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Table of Contents

1.0 Introduction

1.1 Appliance Certification

Laboratory: PFS in Cottage Grove, Wisconsin

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 birth defects or other reproductive harm. For more information, visit www.P65Warnings.ca.gov.

1.3 Requirements for the Commonwealth of Massachusetts

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

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

1.3.1 Installation of Carbon Monoxide Detectors

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

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

1.3.2 Approved Carbon Monoxide Detectors

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

1.3.3 Signage

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

1.3.4 Inspection

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

1.3.5 Exemptions

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

1.3.6 Manufacturer Requirements

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.

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)
Orifice Size (DMS)	#34	#51
Minimum Input Rating	18,500 Btu/h (5.42 kW)	18,000 Btu/h (5.275 kW)
Minimum Inlet Pressure	5” WC (1.25 kPa) 7” WC (1.74 kPa)** **Recommended	12” WC (2.99 kPa)
Maximum Inlet Pressure	10” WC (2.49 kPa)	13” WC (3.24 kPa)
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)
Venturi Opening Settings	1/8” (3mm) Open	1/4” (6mm) Open

2.1.1 Altitude Adjustment

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

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.

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

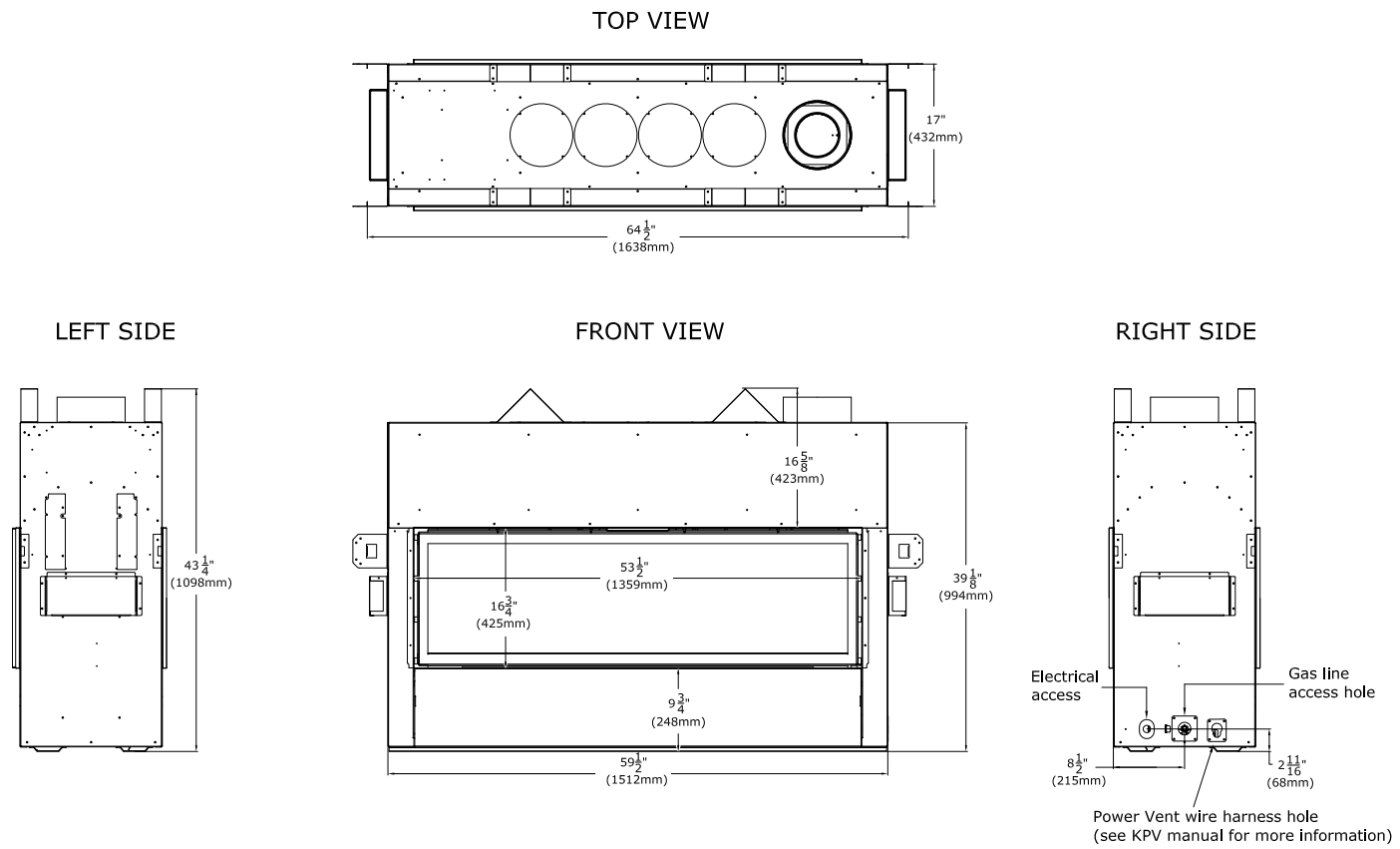


Figure 2.1 - Appliance Dimensions

2.4 Safety Screen 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.'s barriers for this appliance.

Please refer to Section 8.3 for Safety Screen Barriers Installation.

Any glass, guard, or screen barrier removed for servicing an appliance must be replaced prior to operating the appliance

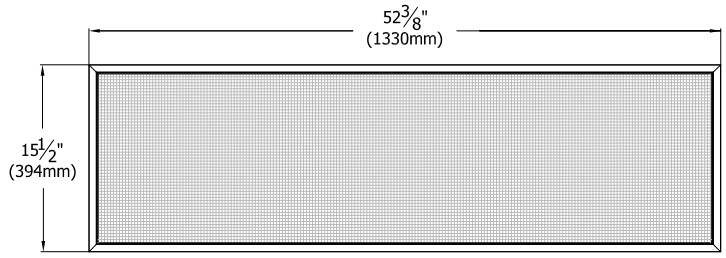


Figure 2.2 - Safety Screen Barrier Dimensions

2.5 Surrounds (optional)

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

Refer to Section 5.8 Finishing Guidelines for Optional Surrounds for proper fitting guidelines for finishing material.

For installation instructions, see Section 8.3 Safety Barrier Installation and Section 8.4 Surround Installation (Optional).

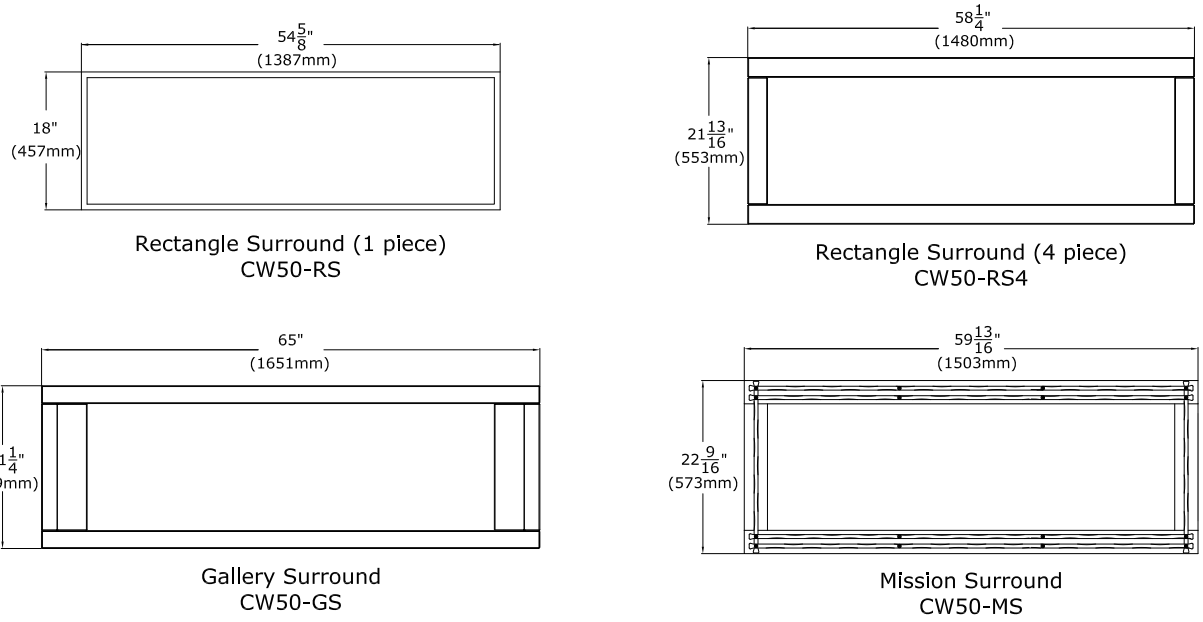


Figure 2.3 - Optional Surround Dimensions

3.0 Framing & Installation Information

3.1 Appliance Placement Considerations

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

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

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

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

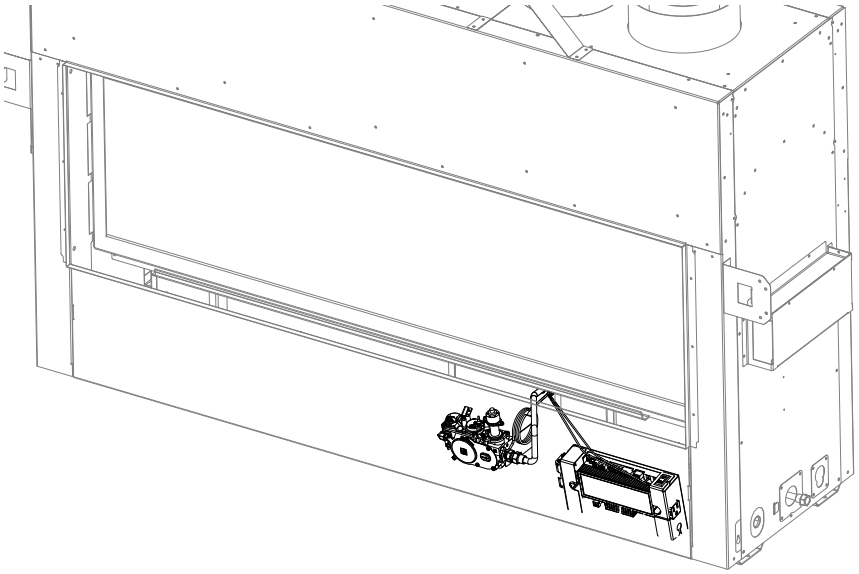
Clothing or other flammable material should not be placed on or near the appliance.

Note: Unless otherwise noted all clearances / images in this manual are based off of nominal 2" x 4" framing being used.

- This appliance must be installed on a level surface capable of supporting the fireplace and venting. If possible, place the fireplace in a position where the vent terminates between two studs, eliminating the need for any additional framing. All framing, facing material, and finishing material must be self-supported. The fireplace is not load-bearing.
- 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.
- If planning to convert to Propane, it is easier to complete the gas conversion before installing the fireplace in the framed opening. If installing #KPV Kozy Power Vent, please reference the manual included with the kit.
- 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.

3.2 Floor Support and Protection

- Floor protection in front of the fireplace is not required. Combustible material may be used if installing a hearth extension. Consider the thickness of the hearth extension finishing material if building a fireplace platform.
- If this appliance is to be installed directly on carpeting, tile, or other combustible material other than wood flooring, this appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.
- If the appliance is to be installed above floor level, a solid, continuous platform must be constructed below the appliance.



Note: The Access / Front side of the fireplace has the gas valve and control module visible in the control compartment. A component access cover will cover these but ensure these are accessible

Figure 3.1 - Access Side of Fireplace

3.3 Appliance Installation Options

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

Note: When deciding on which design option suits your application please review all sections throughout this manual as different design options have different framing, facing, and finishing options and requirements.

- **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 4.1. 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 finishing materials on top of any required non-combustible facing material above the fireplace, heat reduction for a TV mounted above the fireplace, and lower mantel clearances. See Section 4.2 and 4.3.
    - 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 Ki**t offers the option to redistribute radiant heat through plenum(s). This option allows for combustible finishing materials on top of any required non-combustible facing material above the fireplace, heat reduction for a TV mounted above the fireplace, and lower mantel clearances. See Section 4.2 and the KZK manual
    - 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 KZK 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. 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.

3.3 Appliance Installation Options (continued)

- **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 8.9 for access to the control board before and after installation.
    - Refer to the #KPV installation manual for more information.
- **Additional Information to know.**
    - 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 8.9, CONTROL BOARD REMOVAL AND INSTALLATION 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 8.11.1 for more information.

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

3.4 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.

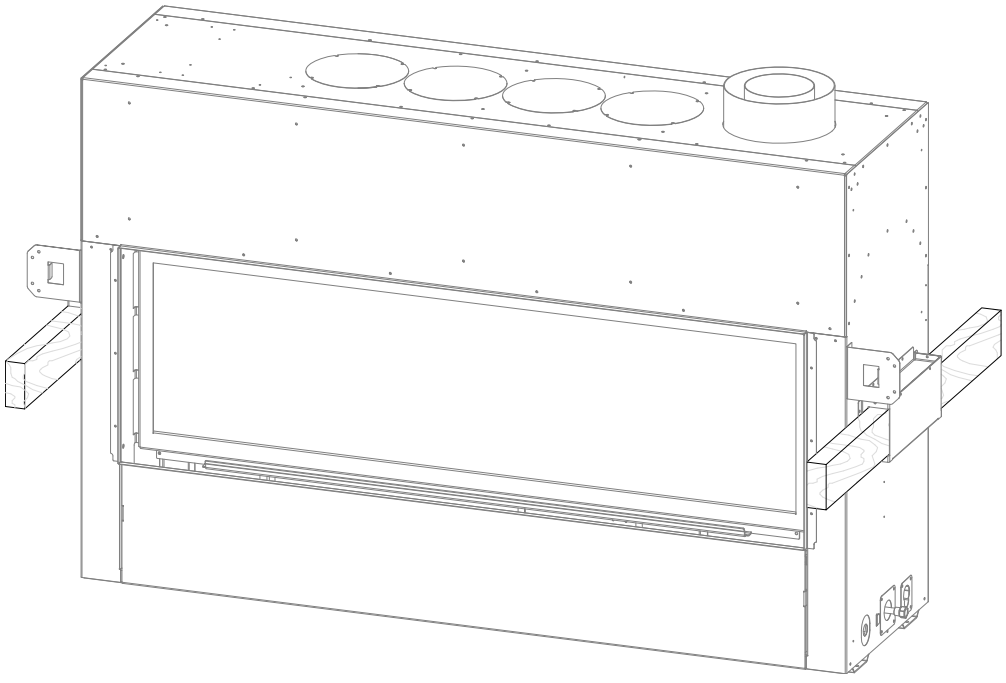


Figure 3.2 - Lifting Handles

3.5 Nailing Flange Assembly and Installation

Caution: Never permanently remove these assemblies from the fireplace. They must be secured regardless of finish material used.

When installed, the nailing flanges provide the minimum 2-1/2" (64mm) clearance from the sides of the fireplace to framing.

Instructions:

1. Remove (4) nailing flanges from the right and left side of the fireplace.
2. Align nailing flange with holes on outside corners of fireplace, with the stand-off flanges on the nailing flanges facing away from the fireplace
3. Secure the nailing flanges to the fireplace with screws (provided) through the slots in nailing flanges. There are through holes in the side heat shields to allow installation.
4. Bend perforation on nailing flange until parallel with fireplace face. Do not bend toward fireplace face.
5. Position framing stud against the small stand-off (located on backside of nailing flange). Secure with nails or screws. Figure 3.3. There are slight differences in the framing and securing nailing flanges when you have horizontal vent termination. For securing nailing flanges with horizontal terminations at the vent pass-through, refer to Figure 3.4 & 3.5.

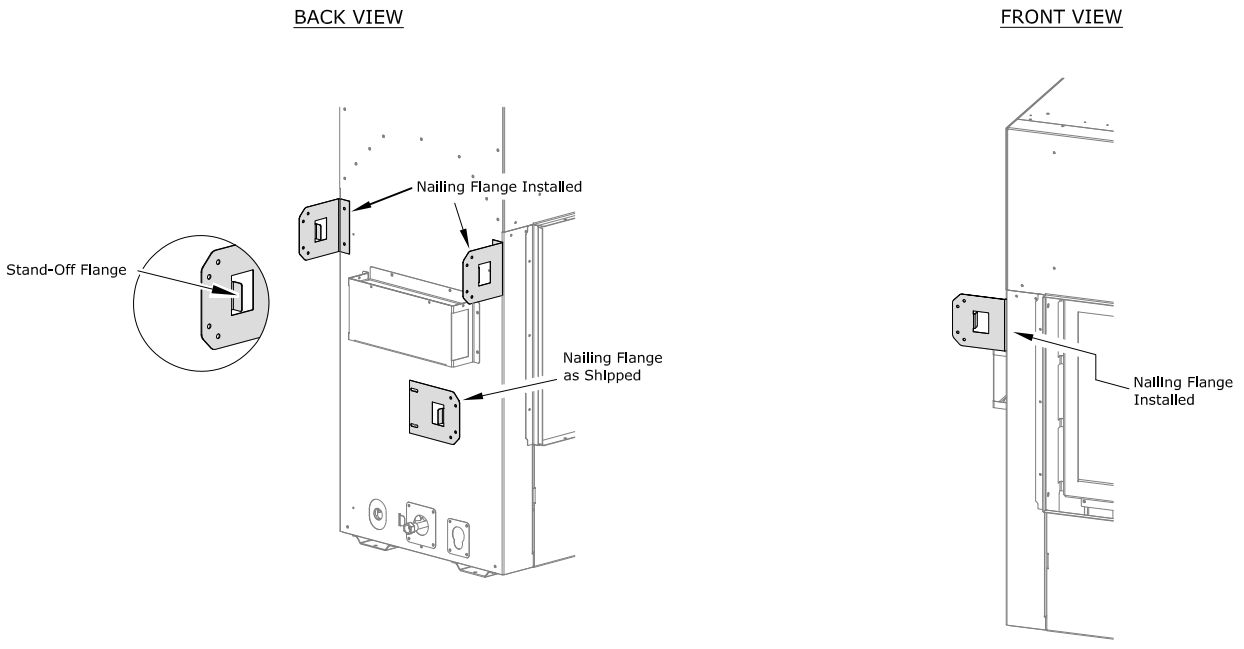


Figure 3.3 - Nailing Flange Installation

3.5 Nailing Flange Assembly and Installation (continued)

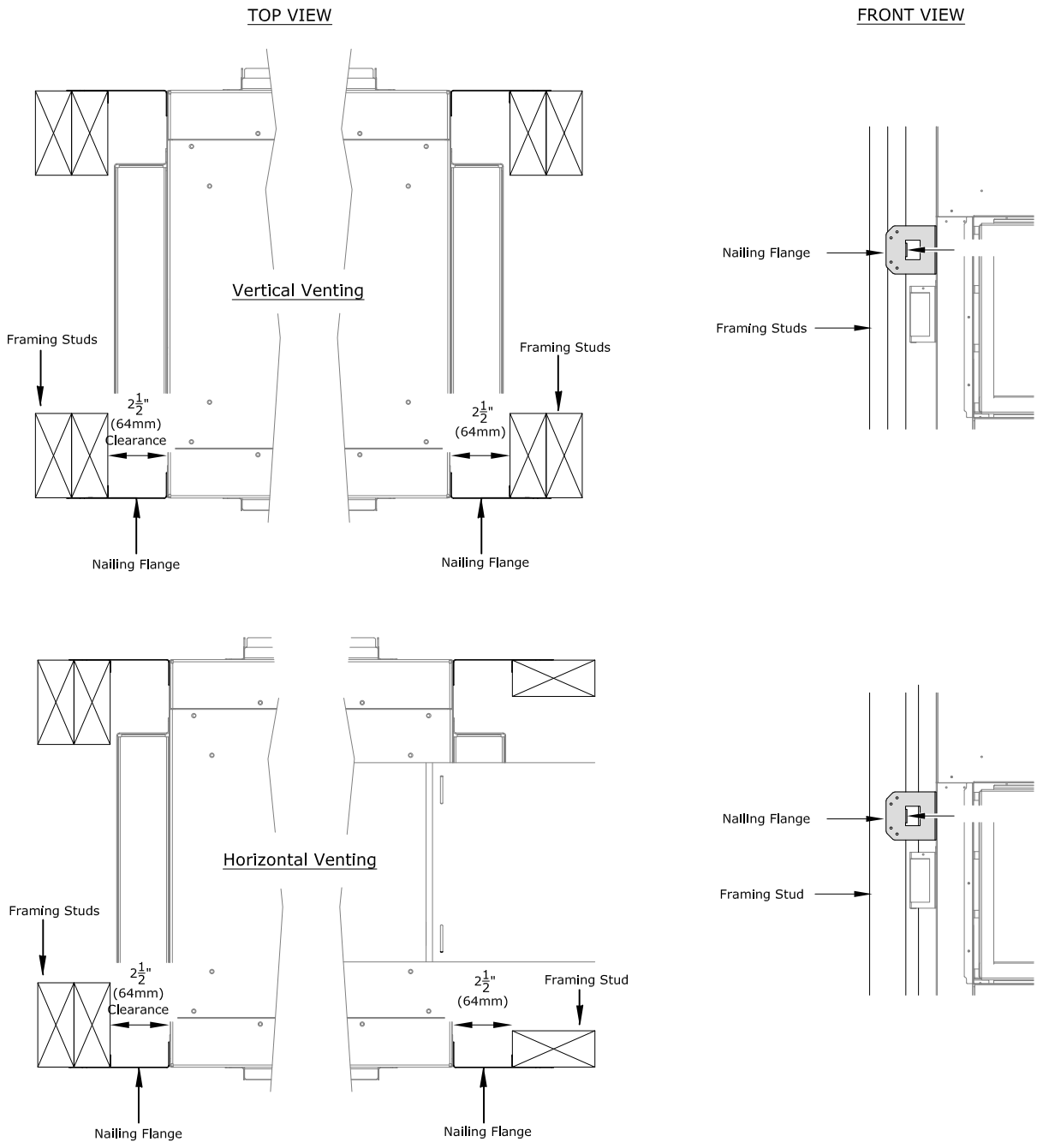


Figure 3.4 - Nailing Flange Information - Vent Termination Difference

3.5 Nailing Flange Assembly and Installation (continued)

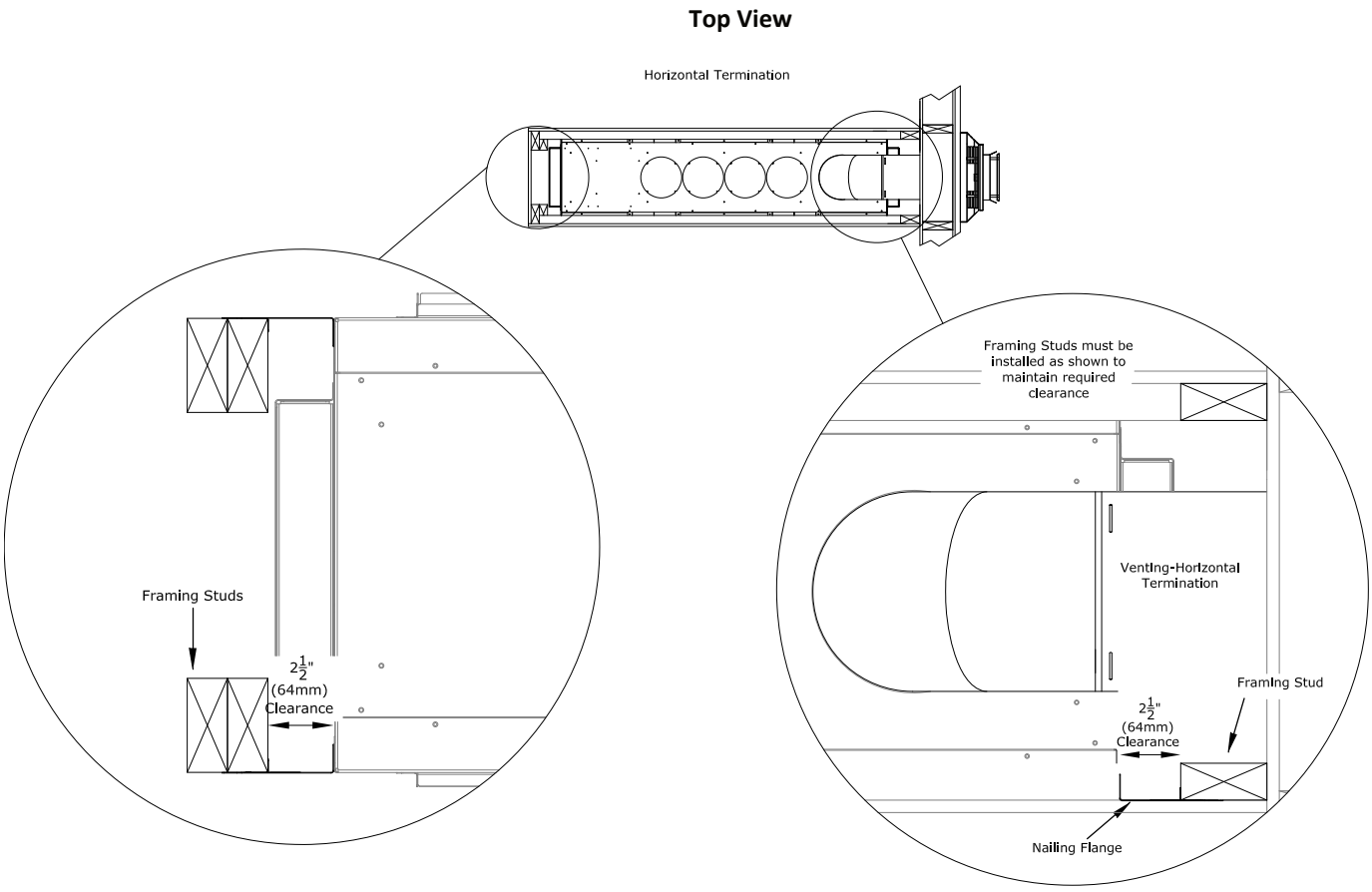


Figure 3.5 - Nailing Flange Information - Horizontal Termination Framing

3.6 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 3.7.

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 3.7.

These clearances must be maintained.

Instructions:

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) screws located on top of the fireplace and (8) screws in the components packet.

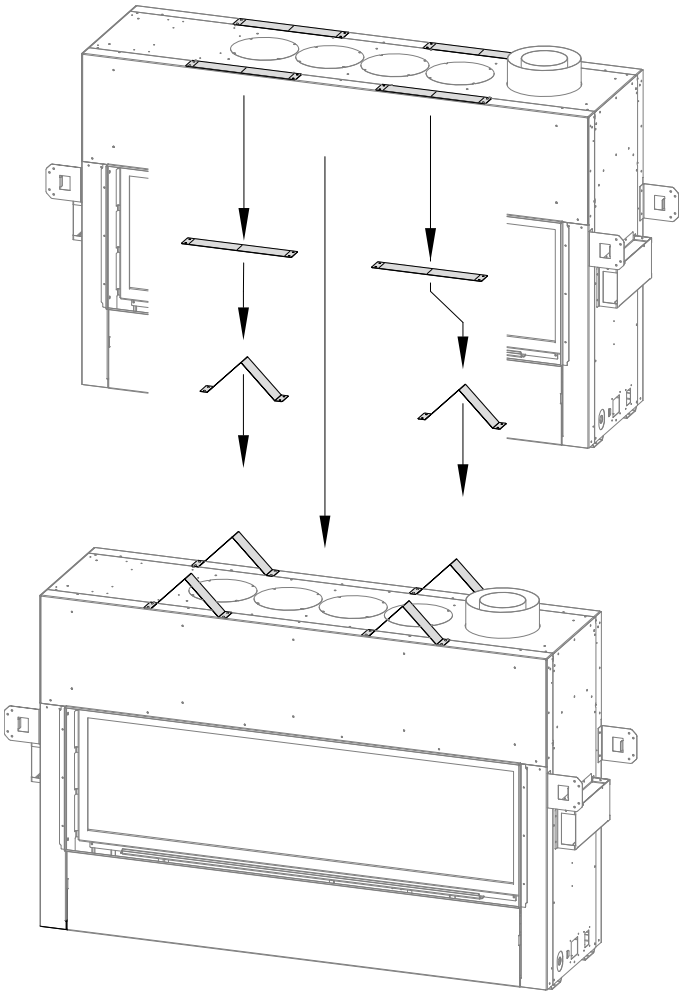


Figure 3.6 - Stand-Off Assembly and Installation

3.7 #CWST-SAK Shelf Kit - Assembly and Installation

Optional Accessory - Sold separately.

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

Instructions:

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.

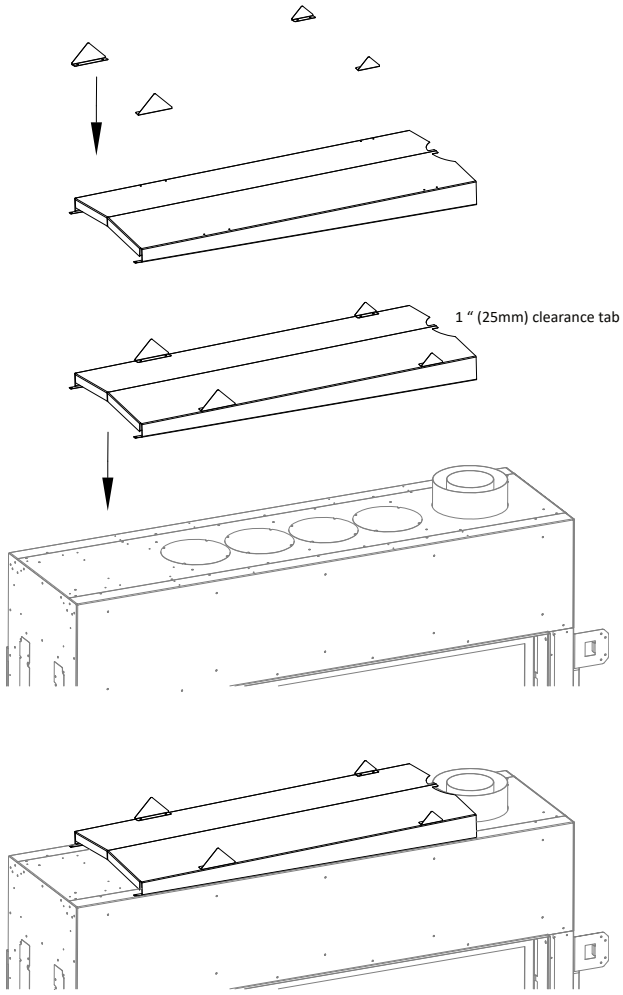


Figure 3.7 - #CWST-SAK Assembly and Installation

3.8 Clearances to Combustibles

- See Table 3.1 below for minimum clearances for standard installation.
- Unless otherwise noted all clearances / images in this manual are based off of nominal 2” x 4” framing being used.

Table 3.1 - Minimum Fireplace Clearances to Combustible Material		
Minimum height of fireplace enclosure	76”	1930mm
Base of fireplace to ceiling	76”	1930mm
From fireplace top stand-off brackets	0”	0mm
From fireplace back stand-off brackets	0”	0mm
From fireplace left and right stand-off brackets (nailing flanges)	0”	0mm
From fireplace front	36”	914mm
Fireplace side finishing edge to adjacent sidewall	0”	0mm
6” (152mm) mantel projection from the top finishing edge of the fireplace	11-1/2”	292mm
18” (458) hearth projection from the bottom finishing edge of the fireplace	0”	0mm
Minimum Vent System Clearances to Combustible Material Inside Fireplace Enclosure		
Horizontal venting within fireplace enclosure - Top surface of vent pipe - Full Enclosure Framing	1”	25mm
Horizontal venting within fireplace enclosure - Top surface of vent pipe - Shelf Enclosure Framing	6”	152mm
Horizontal venting within fireplace enclosure - Left, right, and bottom surfaces of vent pipe	1”	25mm
Vertical venting within fireplace enclosure - All surfaces	1”	25mm

3.9 Wall Enclosure Rough Framing

- Unless otherwise noted all clearances / images in this manual are based off of nominal 2” x 4” framing being used.

3.9.1 Rough Framing

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

CAUTION: Cold air transfer area. The surround fireplace chase must comply with all clearances as outlined in this manual, and be constructed in compliance with local building codes. Outside walls should be insulated to prevent cold air from entering room.

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 fireplace bottom finishing edge if using a safety screen only. If using a surround, the bottom of the fireplace surround must be level or higher than the finished hearth for proper fit of the optional surround. Refer to Section 5.0 (specifically Section 5.8) 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.
- Figure 3.8 shows the framing opening.

3.9.2 Rough Framing with Shelf Framing Kit

- This kit cannot be used with a heat transfer kit, KZK, or Vented Cavity.
- This kit can be used with Kozy Power Vent.
- Figure 3.9 shows the framed opening.

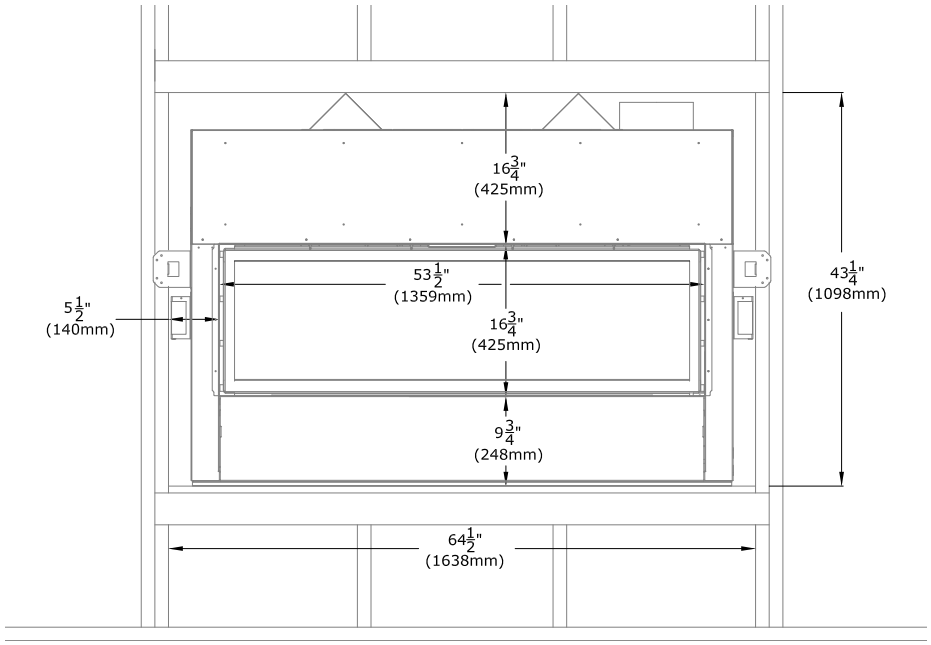
3.9.3 TV Mounting Considerations

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.

3.9.1 Rough Framing (continued)



Full Enclosure Framing

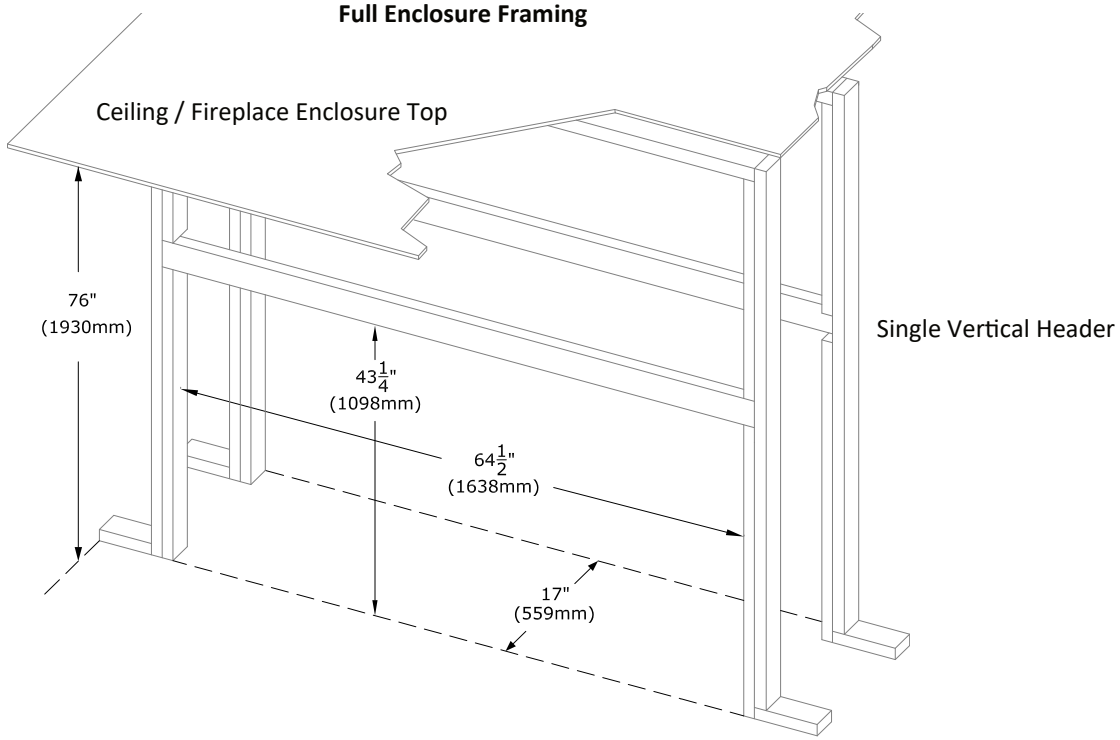


Figure 3.8 - Minimum Appliance Framing Dimensions - Standard Installation

3.9.2 Rough Framing with Shelf Framing Kit (continued)

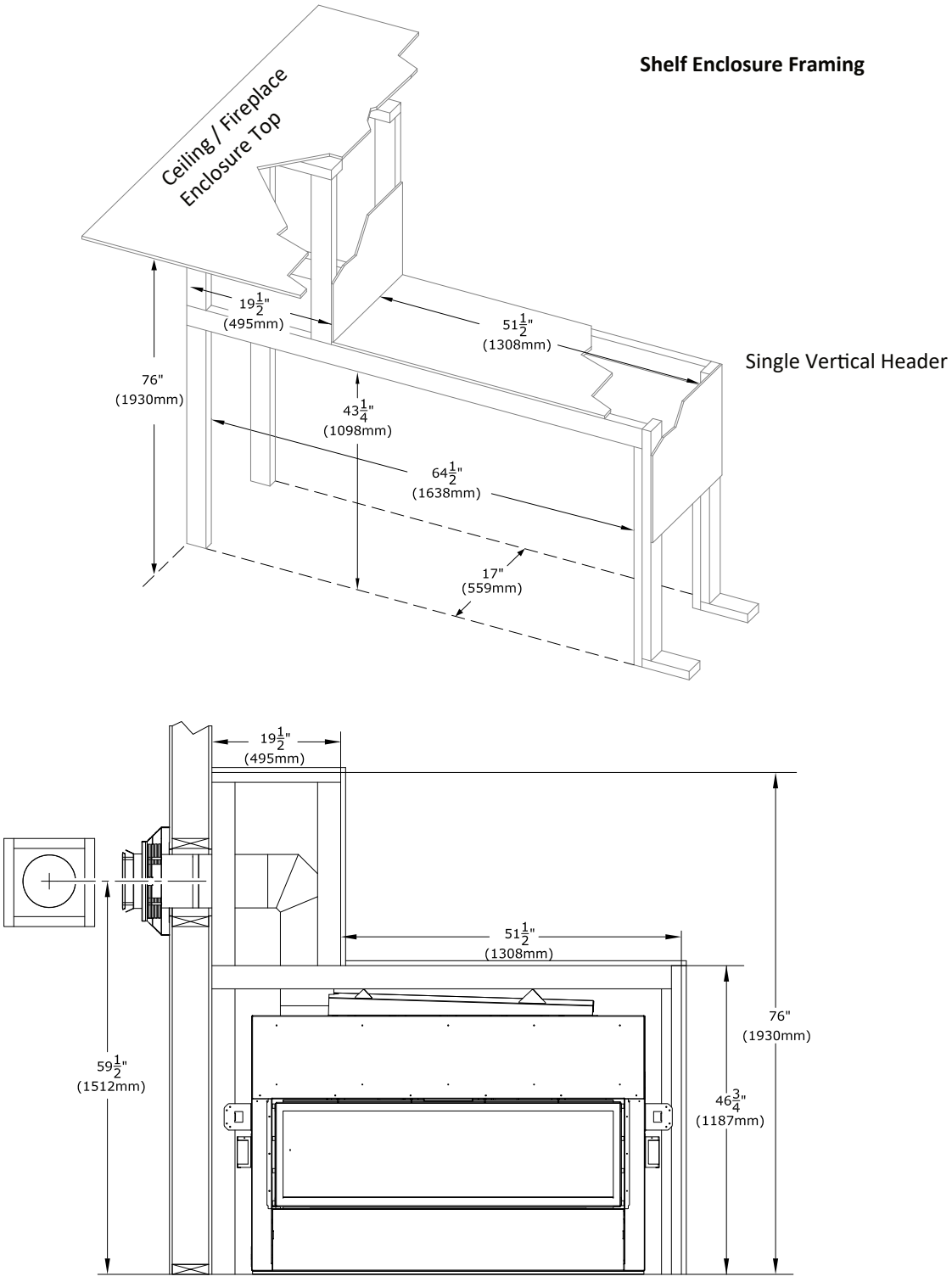


Figure 3.9 - Minimum Appliance Framing with #CWST-SAK Shelf Kit

3.10 Vent Termination Framing

- Unless otherwise noted all clearances / images in this manual are based off of nominal 2” x 4” framing being used.
- The following guide applies to natural draft co-axial venting. This guide applies to all standard, KZK, and Vented Cavity options when venting with natural draft.
- If using the Kozy Power Vent, please reference the manual included with that kit.

3.10.1 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 7.2.

3.10.2 Clearances

- A minimum of 1” (25mm) clearance on all sides of the vertical vent pipe must be maintained.
- A minimum of 1” (25mm) clearance on the top, sides, and bottom surfaces on the horizontal vent 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 3.10 and 3.11.
- IMPORTANT: 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 3.10 and 3.11.
- A minimum of 1” (25mm) clearance from the top, sides, and bottom surface on the horizontal vent pipe at the wall thimble must be maintained.
- The horizontal vent pipe after the wall thimble must maintain a 1” (25mm) clearance to combustibles on all surfaces of the pipe.

3.10.3 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.

3.10.4 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.

3.10.5 Wall Pass Through Framing Instructions

- The Kozy Heat #845-1 flexible venting pipe shown in the bottom image of Figure 3.11 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 3.11.

General Instructions

1. 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 3.11 is used with a Simpson DuraVent vent pipe.
2. Cut and frame an opening in the wall to allow the vent system at least ¼” (6mm) rise for every 12” (305mm) of travel, up to and through the wall thimble.
3. 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.

3.10 Vent Termination Framing (continued)

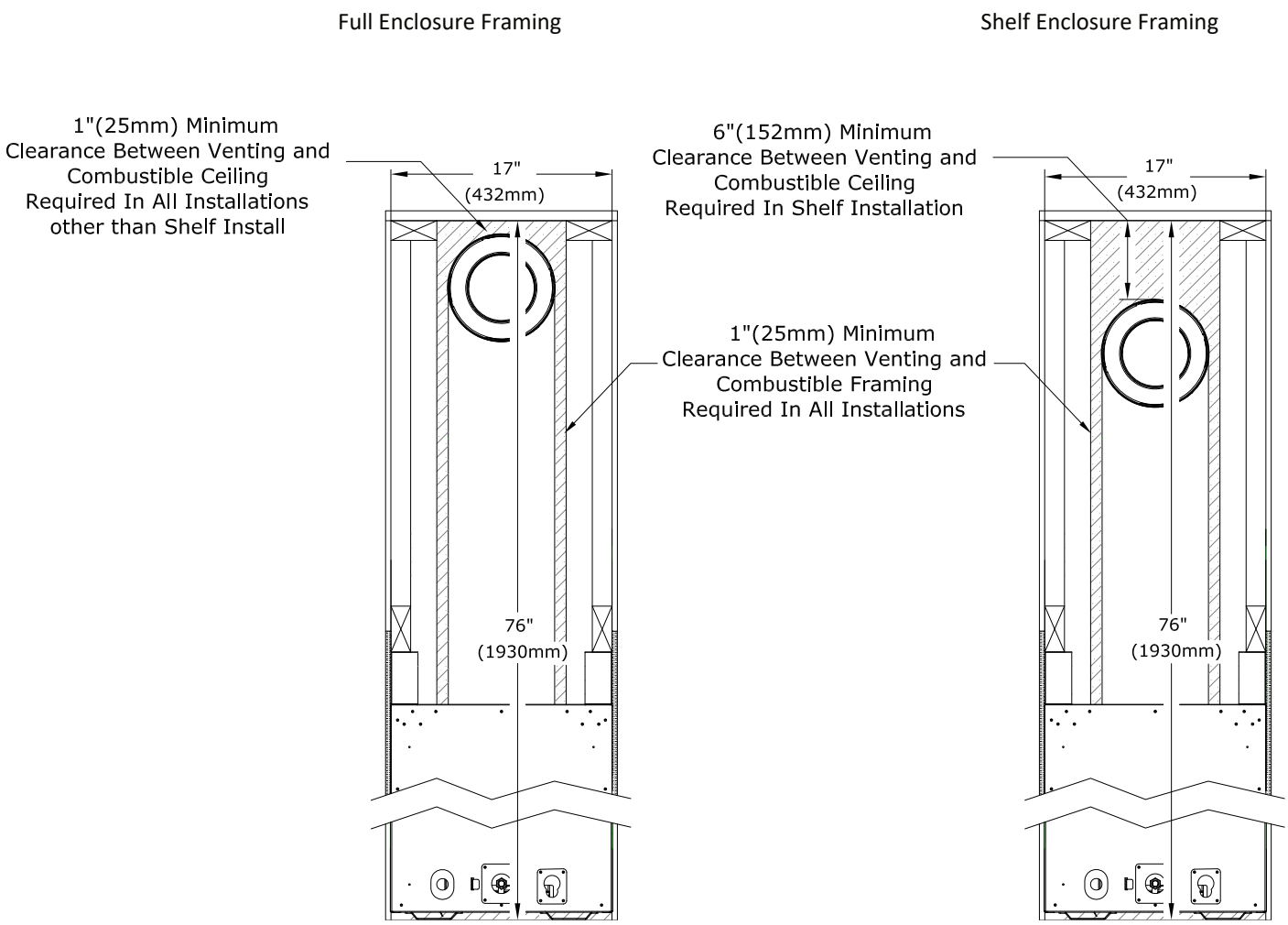
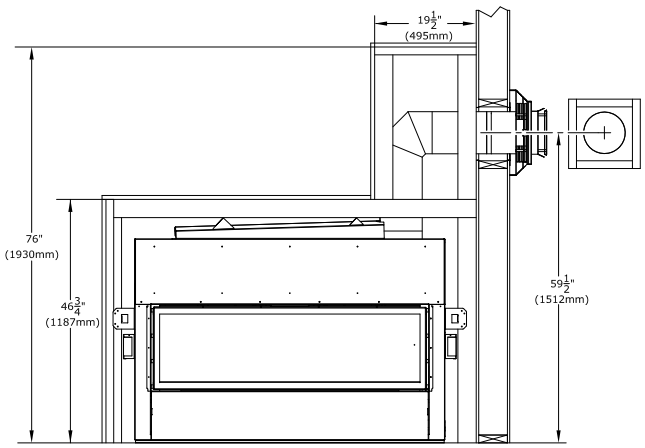


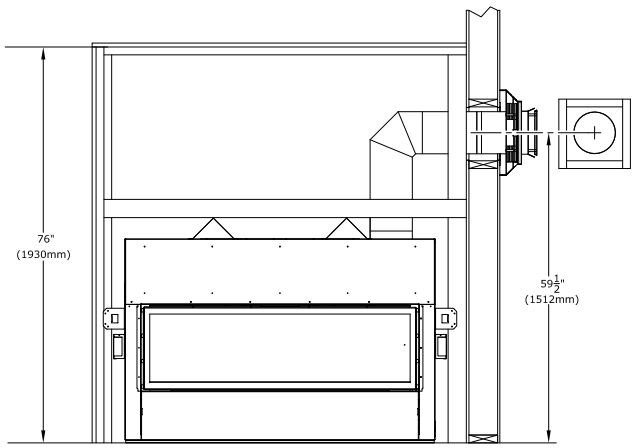
Figure 3.10 - Vent Clearances Inside Chamber

3.10 Vent Termination Framing (continued)

Natural gas and propane - natural draft with rigid vent pipe - minimum horizontal termination framing inside shelf enclosure



Natural gas and propane - natural draft with rigid vent pipe - minimum horizontal termination framing inside full enclosure



Natural gas and propane - natural draft with Kozy Heat #845-1 flexible vent pipe - minimum horizontal termination framing inside full enclosure

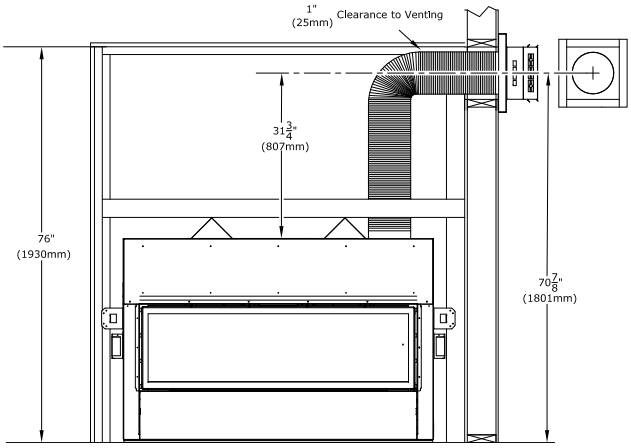


Figure 3.11 - Wall Thimble Framing

3.11 Outdoor Covered Fireplace Installation

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

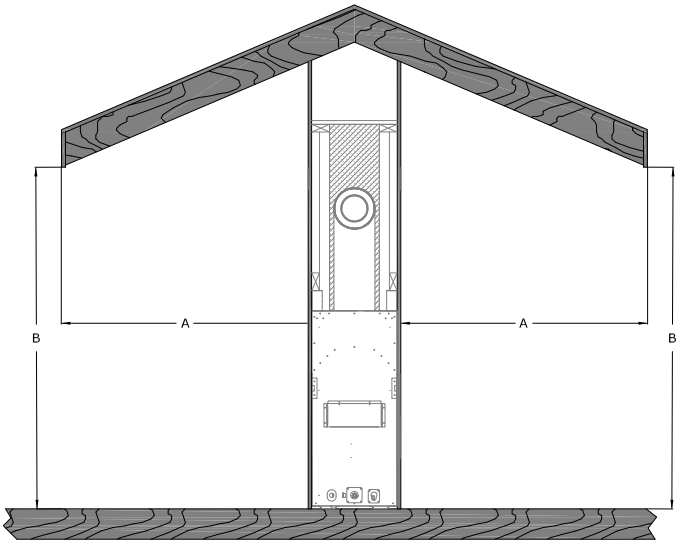
Follow the instructions and illustrations in this section for installation procedures.

3.11.1 Safety Screen Barriers

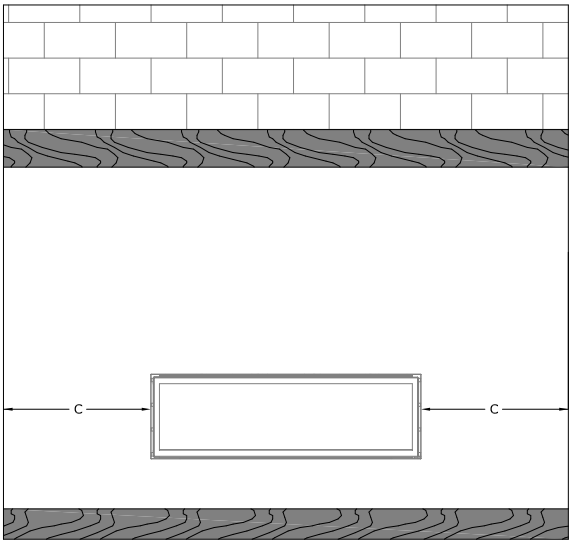
Hussong Mfg. highly recommends to use black painted safety barriers in outdoor installations. Other screen barriers that incorporate a plated or patina finish are highly susceptible to oxidation and discoloration.

3.11.2 Requirements

- The continuous insulated building envelope and weatherproof membrane are not to be interrupted by fireplace installation.
- 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.



The overhang (A) must be a minimum of ½ or greater of the roofline elevation (B) above the base of the fireplace.



The width of the overhang to each side of the appliance (C) must be a minimum of ½ or greater of the roofline elevation (B) above the base of the fireplace.

Example: If the roofline (B) is10' above the base of the fireplace, the overhang (A) must be 5' or greater and the width of the overhang to each side of the fireplace (C) must be 5' or greater.

Figure 3.12 - Outdoor Covered Fireplace Installation

3.11 Outdoor Covered Fireplace Installation (continued)

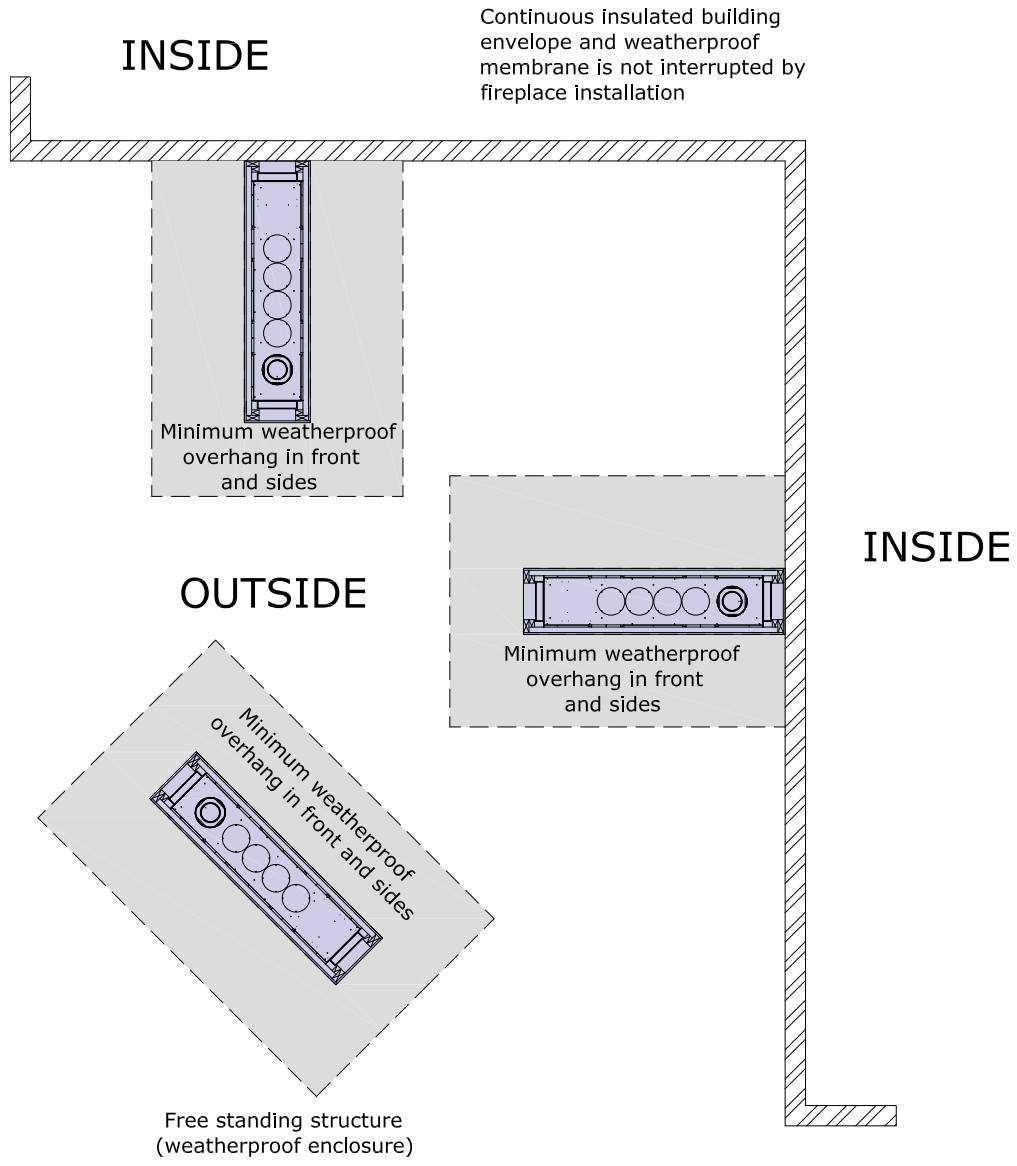


Figure 3.13 - Outdoor Covered Fireplace Installation

4.0 Heat Management

The Komfort Zone Kit (KZK) or Vented Cavity options offer the option to redistribute radiant heat away from the fireplace. These options allow for combustible finishing materials on top of non-combustible facing materials above the fireplace, heat reduction for a TV above the fireplace, and lower mantel clearances.

The Komfort Zone Kits approved with this fireplace are KZK-054 or KZK-1510A.

- The Komfort Zone Kits have specific framing requirements, mantel requirements, and exterior trim dimensions. Please see the manuals included with the KZK for specific installation information.

This fireplace is approved for use with HTK-INT or HTK-EXT. This appliance can have one or two of the same (HTK-EXT or HTK-INT) heat transfer kit installed but you cannot mix a HTK-INT with a HTK-EXT.

- Refer to the instructions include with the heat transfer kit you have choose.

4.1 Appliance Preparation for Heat Transfer Kits

- Figure 4.1 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.

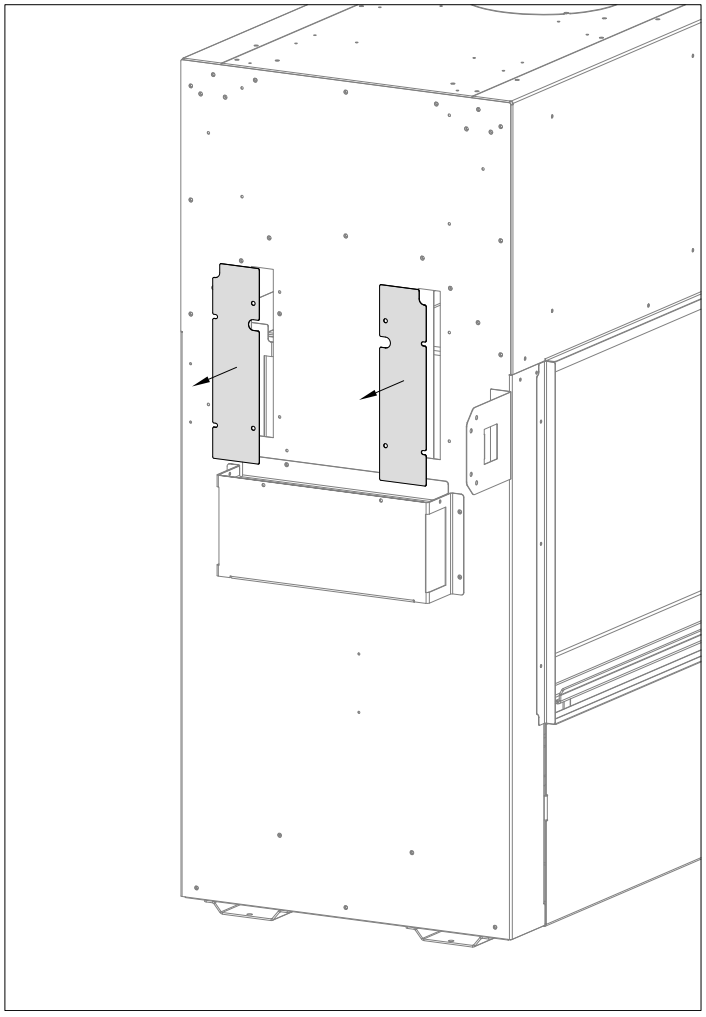


Figure 4.1 - HTK Cover Plate Removal

4.1 Appliance Preparation for Heat Transfer Kits (continued)

- See the image below for air chute installation. The image below shows (2) collars installed which would allow the connection of (2) heat transfer kits.
- You may find it easier to install the air chute on the fireplace before installation. The collars cannot be installed when sliding into the minimum framed opening.

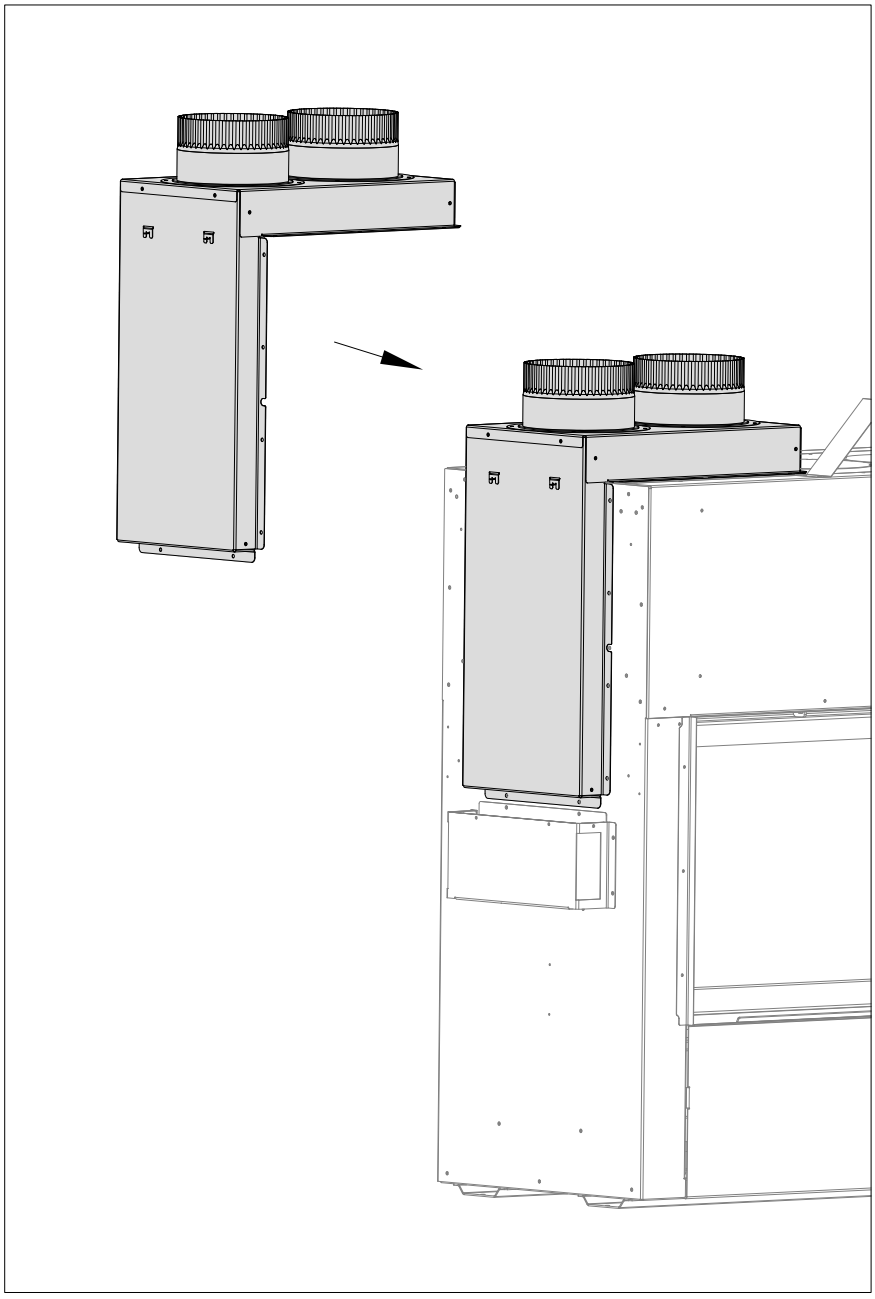


Figure 4.2 - HTK Air Chute Installation

4.1 Appliance Preparation for Heat Transfer Kits (continued)

- **Note**: If you are using a HTK-EXT the damper stays in place. Make sure the damper rests on the unit and can move freely when airflow would be applied. The damper should lay flat on the fireplace as shown in Figure 4.3.
- Note: If you are using the HTK-INT the damper must be removed. See Figure 4.4.

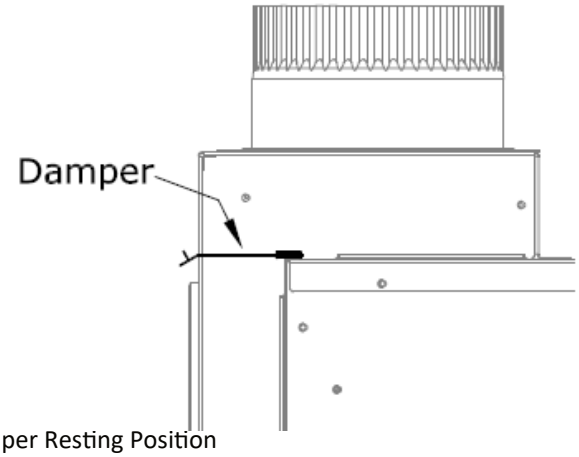


Figure 4.3 - HTK Air Chute Damper Resting Position

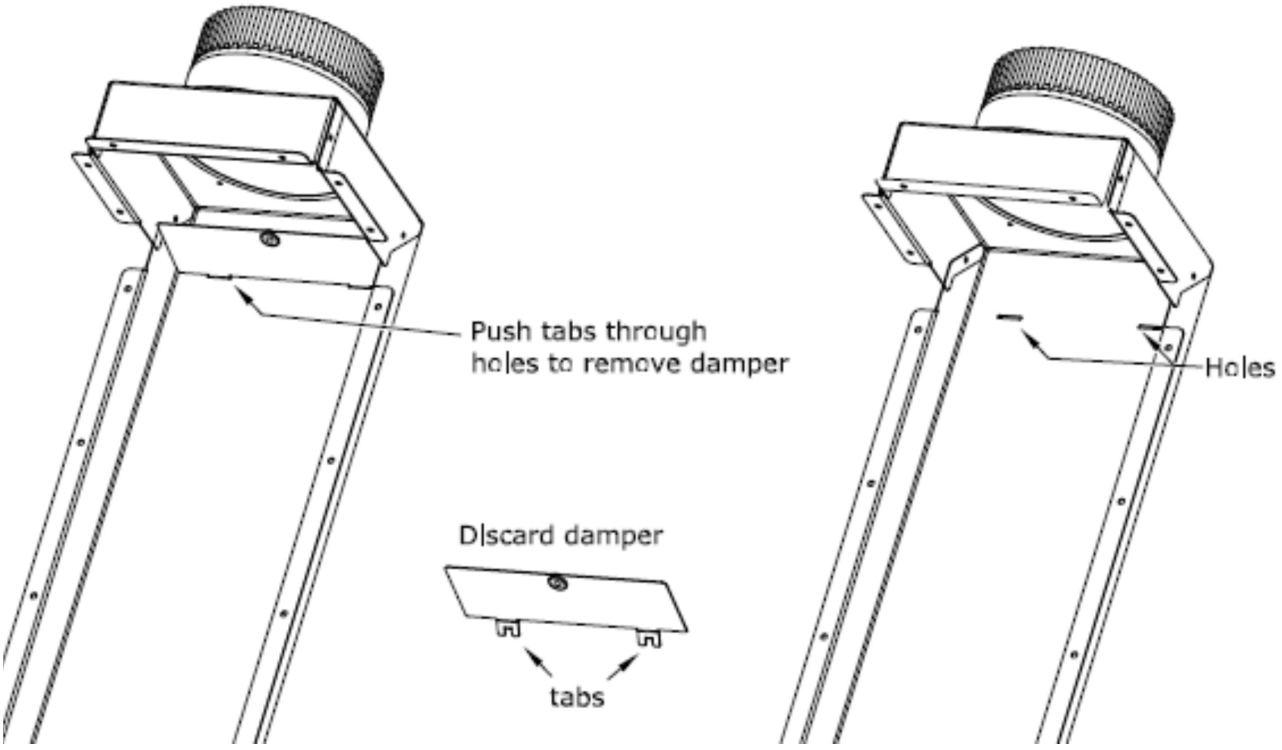


Figure 4.4 - HTK Air Chute Damper Removal for HTK-INT Installations

4.2 Appliance Preparation for Komfort Zone Kit or Vented Cavity 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. If you are using a KZK please see the manual included with that kit for additional installation information. If you are using a Vented Cavity design option follow all instructions in this manual.
- Full enclosure framing requirements in Section 3.9 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.

Instructions

1. Remove the (4) top cover plates on top of the fireplace. See Figure 4.5. 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 4.6. Recycle these panels as they are no longer needed.

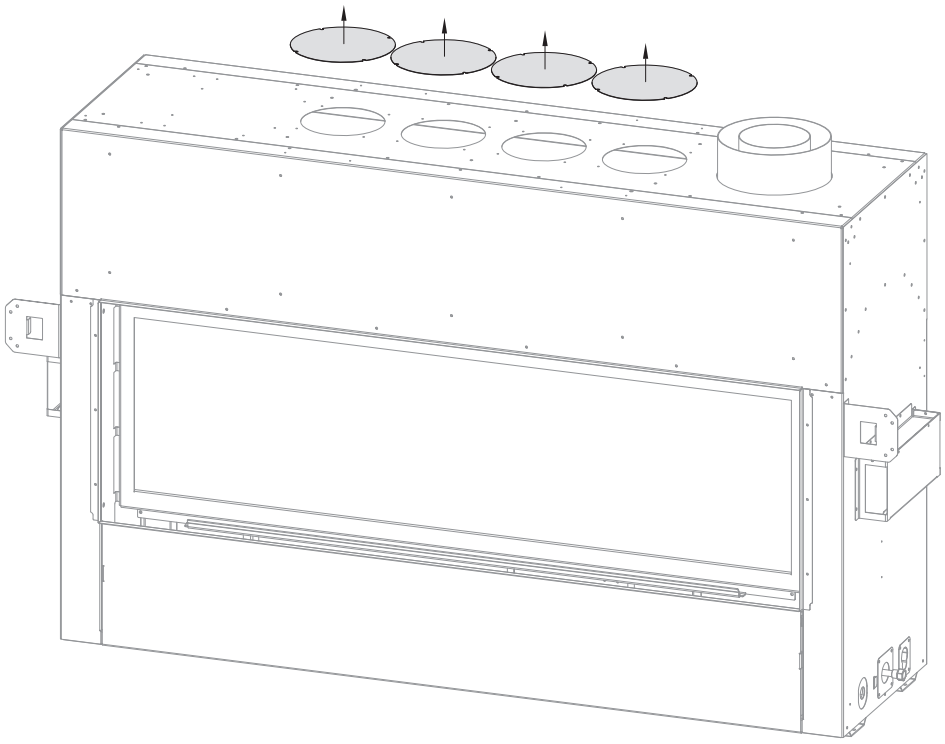


Figure 4.5 - Cover Plate Removal

4.2 Appliance Preparation for Komfort Zone Kit or Vented Cavity Installation (continue)

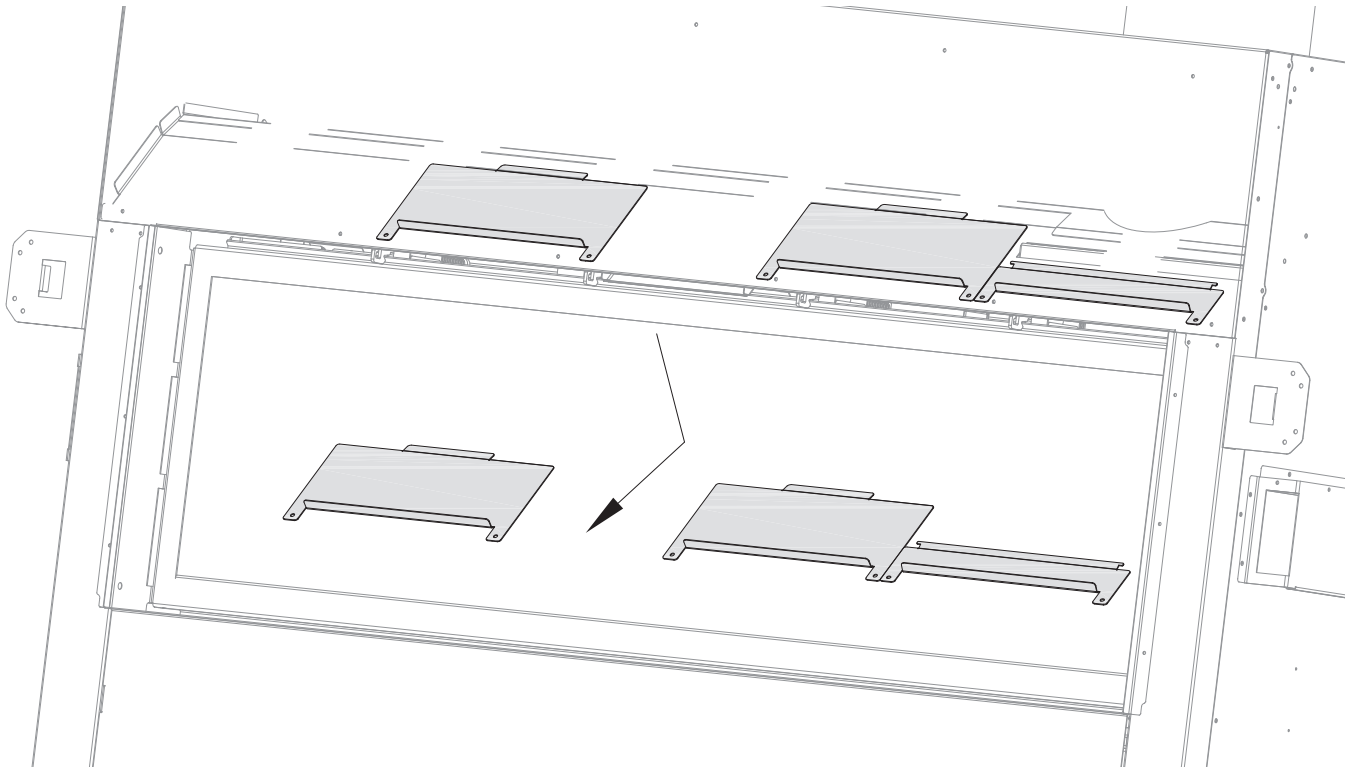


Figure 4.6 - Convection Baffles Removal - Complete on Each Side of the Fireplace

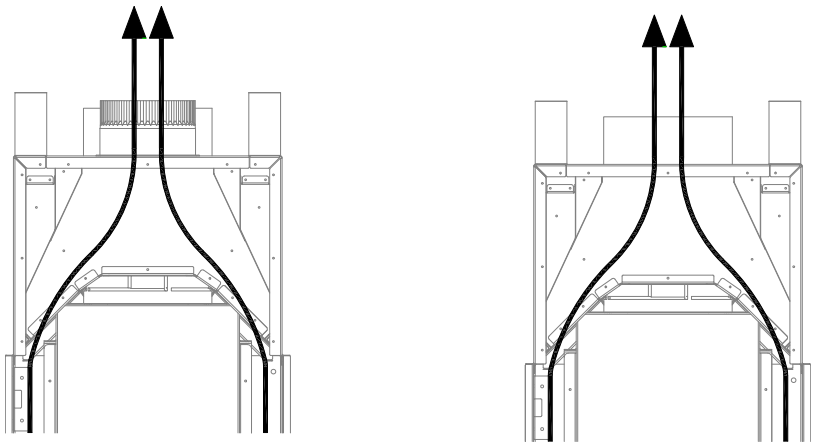


Figure 4.7 - Airflow with Convection Baffle Removed

4.3 Vented Cavity Installation Options

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 3.9. 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.

4.3.1 - Single Vented Cavity Opening

Figure 4.8 shows what an installation would look like where you have a vented cavity air discharge on one side of the fireplace chamber. The minimum air discharge opening is 3” x 53-1/2” (76mm x 1359mm). This air discharge can be flush with the ceiling.

It is also acceptable to have the air discharge opening recessed down 1-1/2” (38mm) from the ceiling to accommodate 2x4 framing. Framing the outlet any lower than 1-1/2” (38mm) will cause over heating and create a fire hazard.

If you want to place the air discharge opening in a specific location on the fireplace chamber you must frame out a false ceiling inside the chamber. The false ceiling cannot be lower than the minimum chamber height.

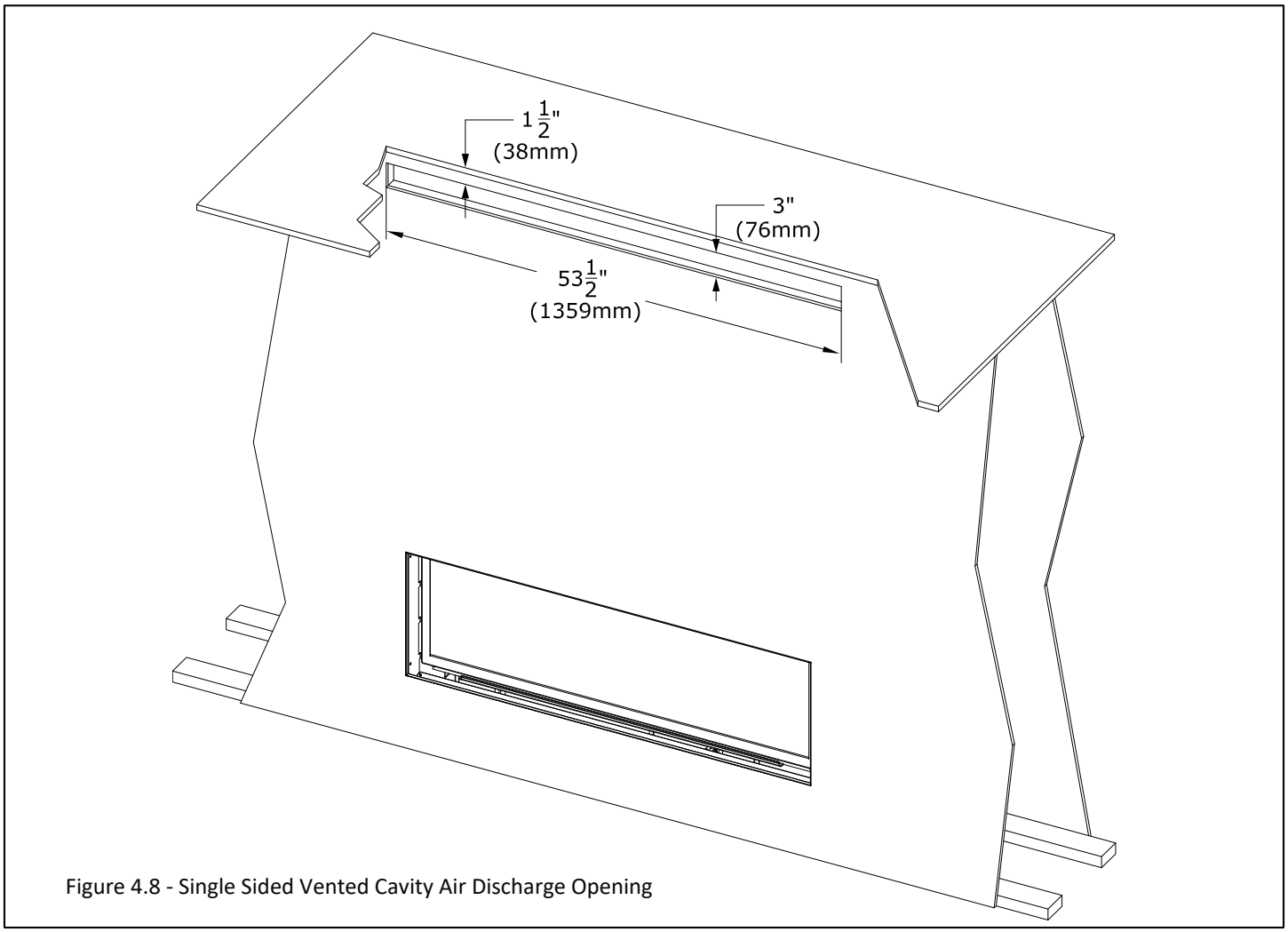
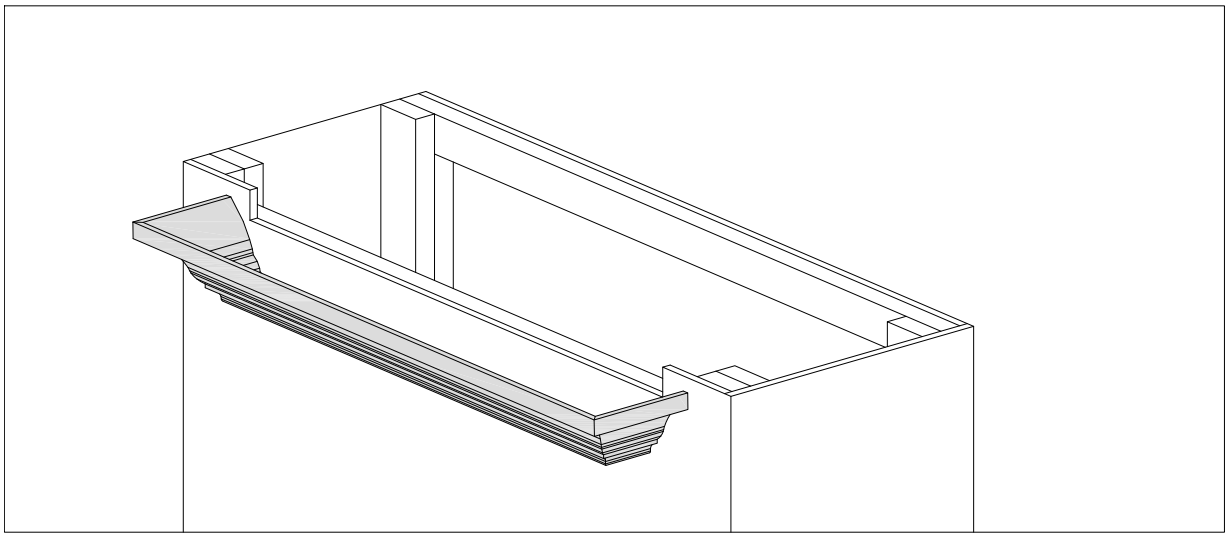


Figure 4.8 - Single Sided Vented Cavity Air Discharge Opening

4.3.1 - Single Vented Cavity Opening (continued)

Figure 4.9 shows the single opening with an optional crown molding. This optional trim can help hide the air discharge opening.

Front View



Side View

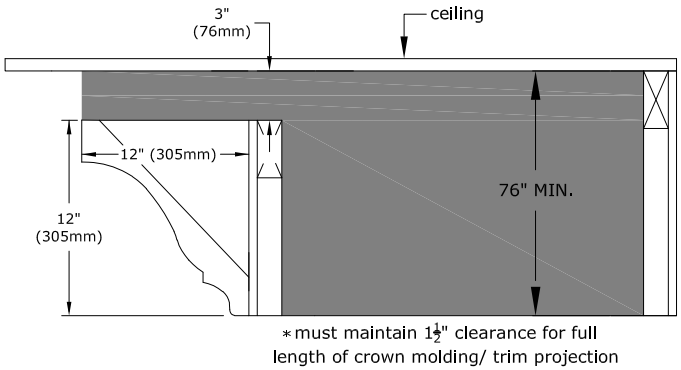
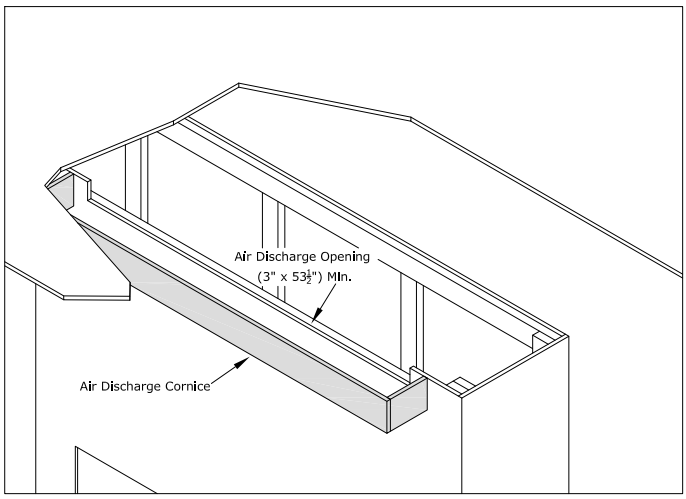


Figure 4.9 - Single Opening - Crown Molding

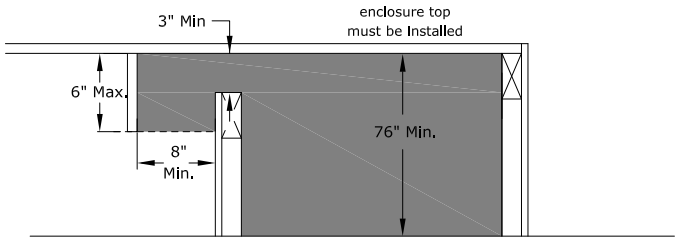
4.3.1 - Single Vented Cavity Opening (continued)

Figure 4.10 shows the single opening with an optional overhang. This optional trim can help hide the air discharge opening.

Front View



Side View



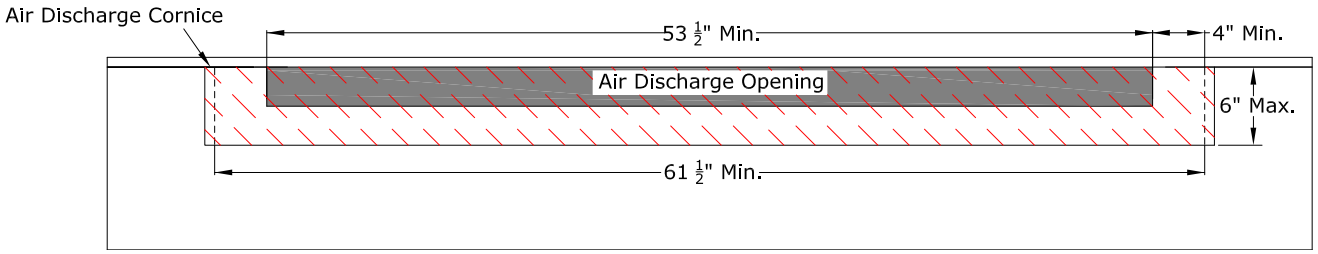


Figure 4.10 - Single Opening - Overhang

4.3.2 - Double Sided Vented Cavity Openings

Figure 4.11 shows what an installation would look like where you have a vented cavity air discharge on both sides of the fireplace chamber. The minimum air discharge opening is 1-1/2” x 63-1/2” (38mm x 1613mm). This air discharge can be flush with the ceiling.

It is also acceptable to have the air discharge opening recessed down 1-1/2” (38mm) from the ceiling to accommodate 2x4 framing. Framing the outlet any lower than 1-1/2” (38mm) will cause over heating and create a fire hazard.

If you want to place the air discharge opening in a specific location on the fireplace chamber you must frame out a false ceiling inside the chamber. The false ceiling cannot be lower than the minimum chamber height.

Note: This can only be performed when the fireplace has both sides installed on the interior of the house. Not approved for use with the Outdoor Kit.

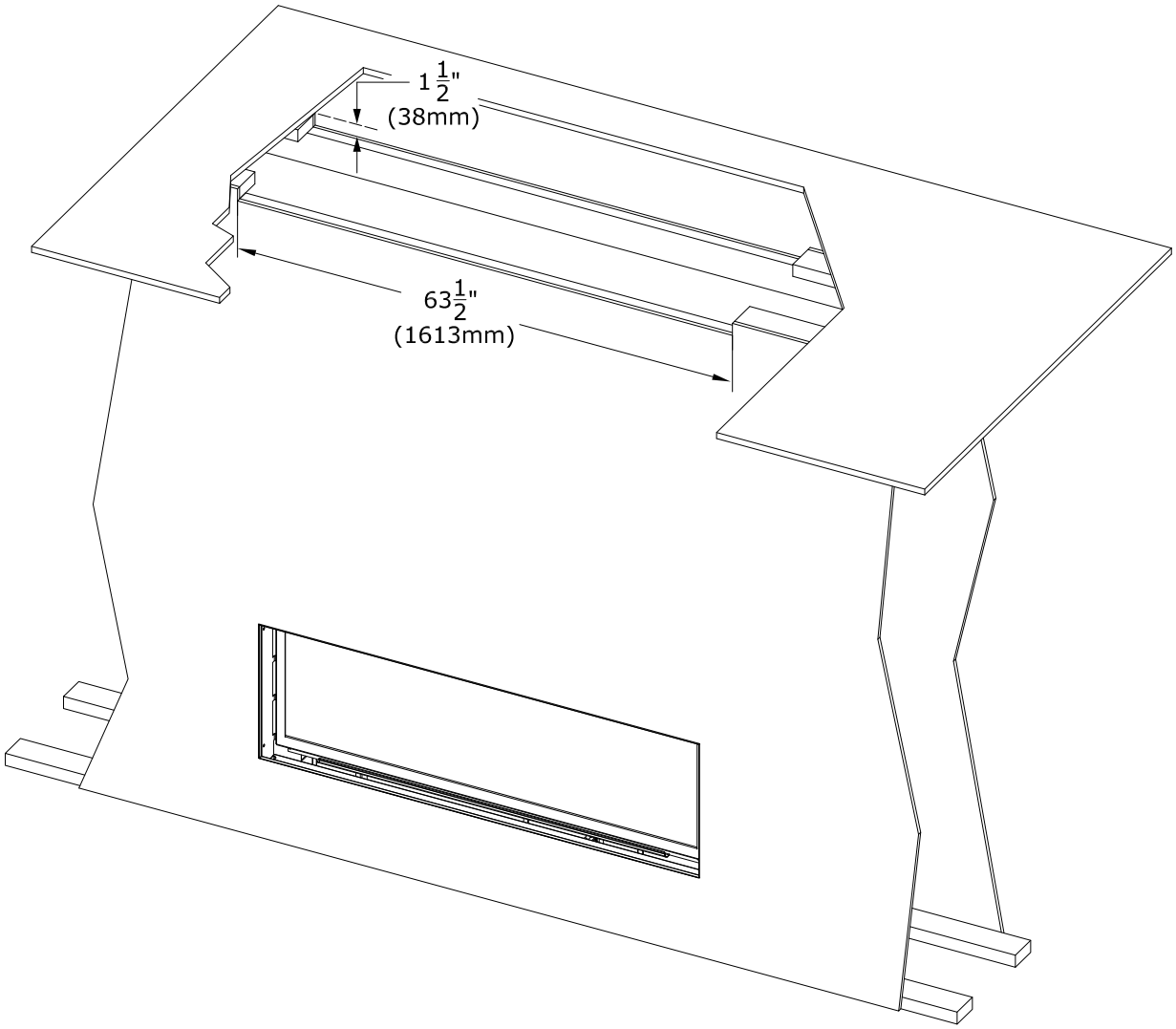
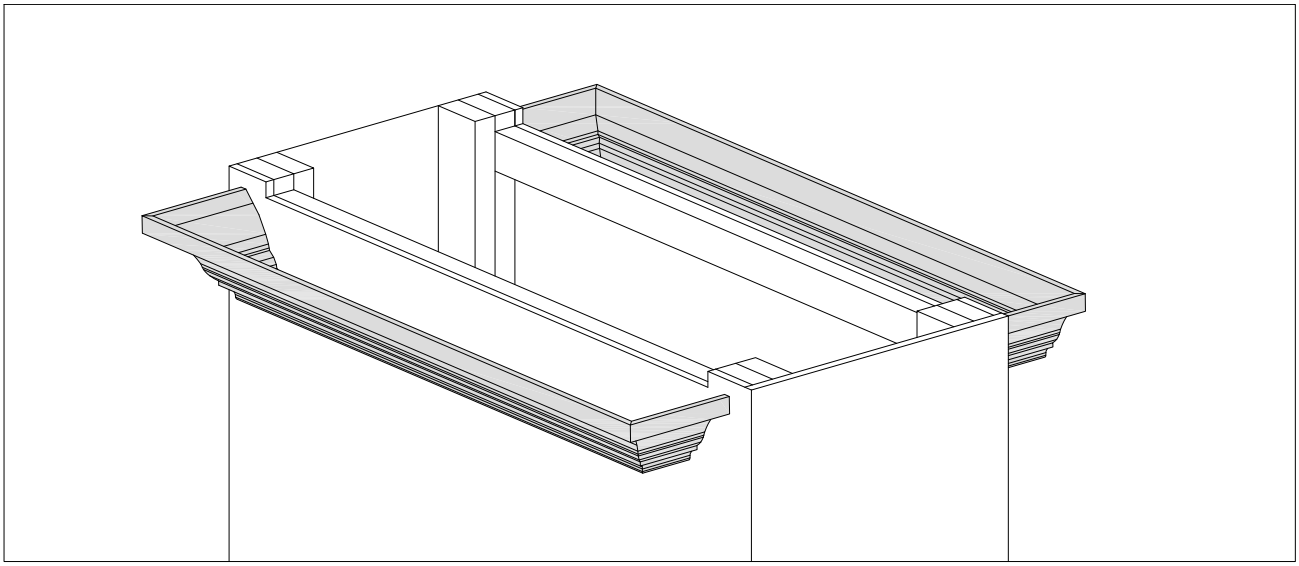


Figure 4.11 - Double Sided Vented Cavity Air Discharge Openings

4.3.2 - Double Sided Vented Cavity Openings (continued)

Figure 4.12 shows the dual openings with an optional crown molding. This optional trim can help hide the air discharge opening.

Front View



Side View

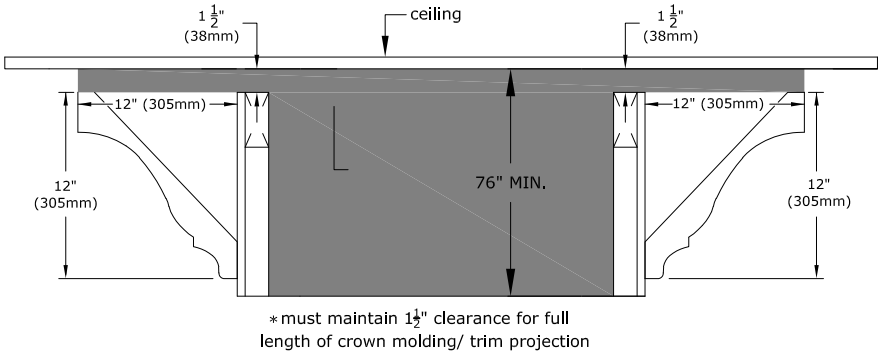
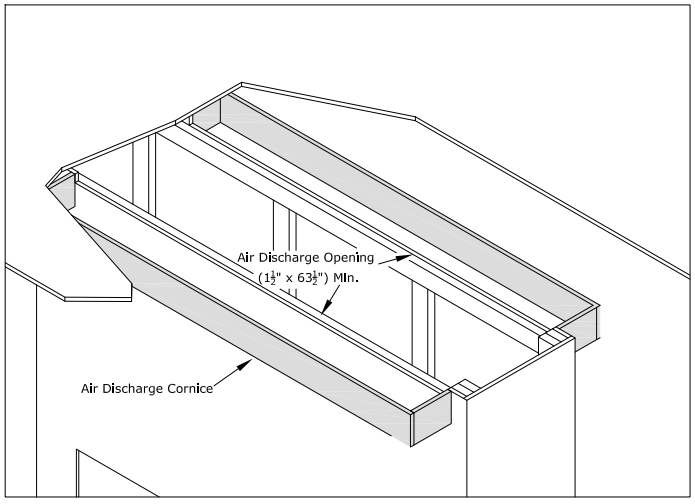


Figure 4.12 - Dual Opening - Crown Molding

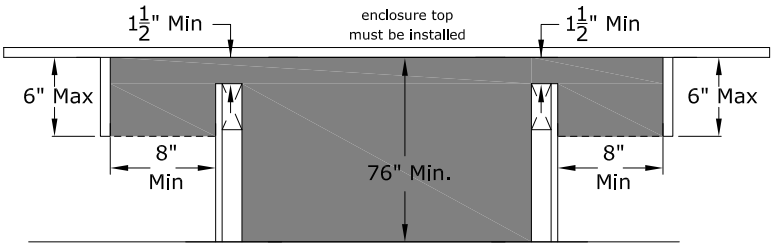
4.3.2 - Double Sided Vented Cavity Openings (continued)

Figure 4.13 shows the dual openings with an optional overhang. This optional trim can help hide the air discharge opening.

Front View



Side View



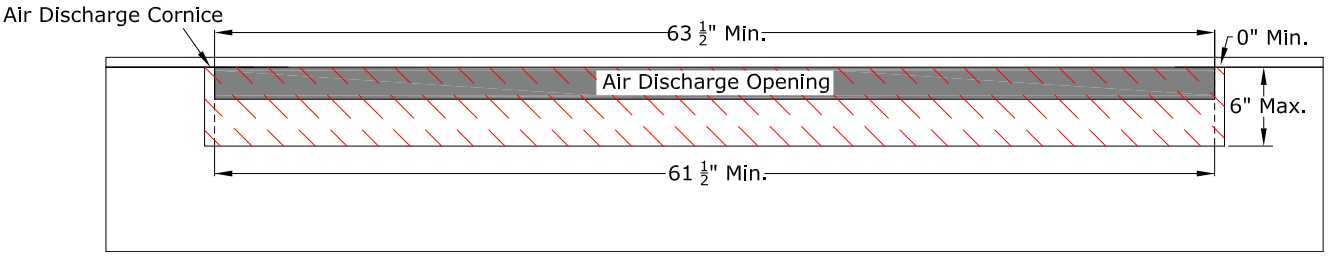


Figure 4.13 - Dual Opening - Overhang

4.3.3 - Entire Chamber Vented Cavity Opening

Figure 4.14 shows what an installation would look like where you have a vented cavity air discharge opening across the entire fireplace chamber.

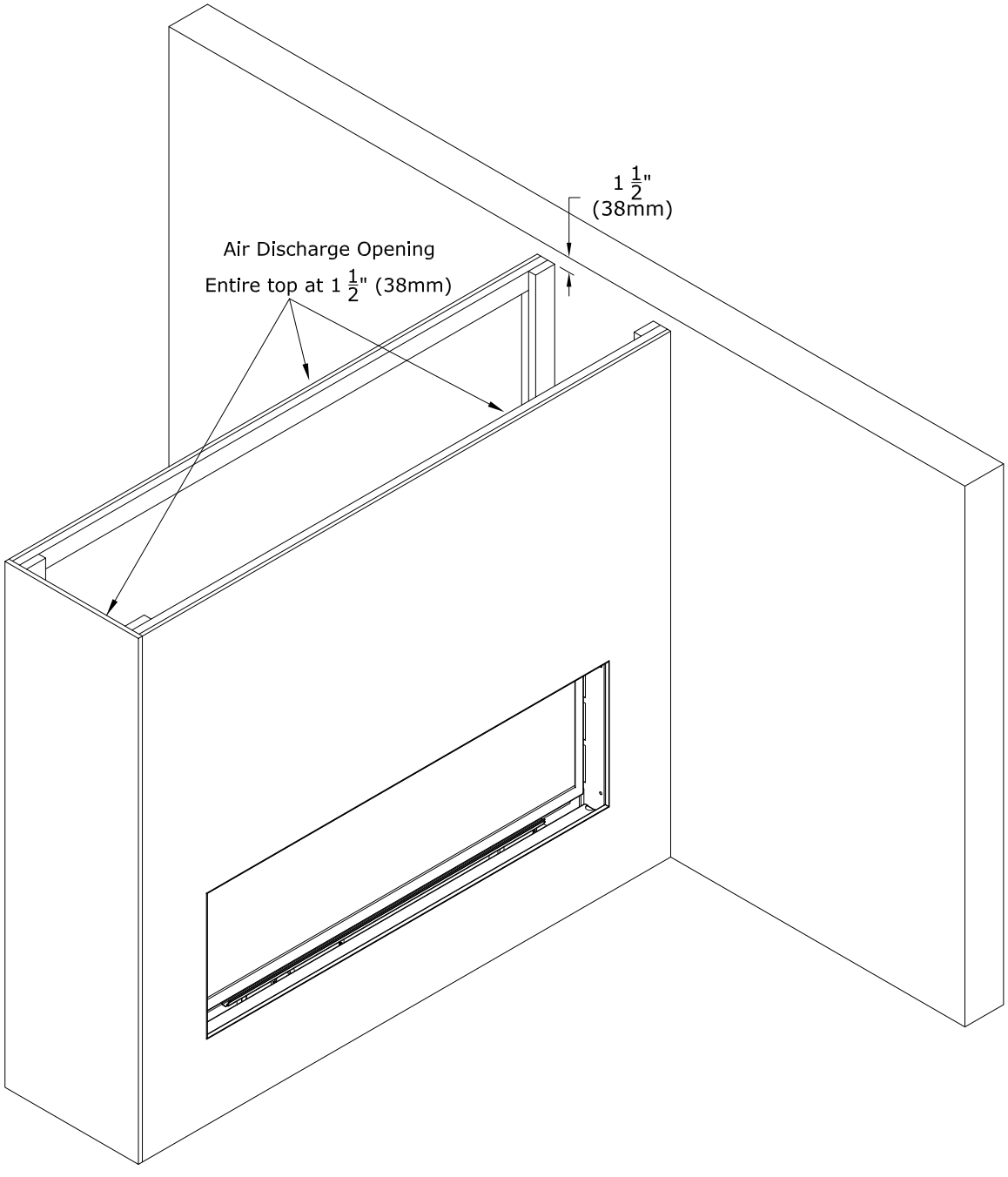
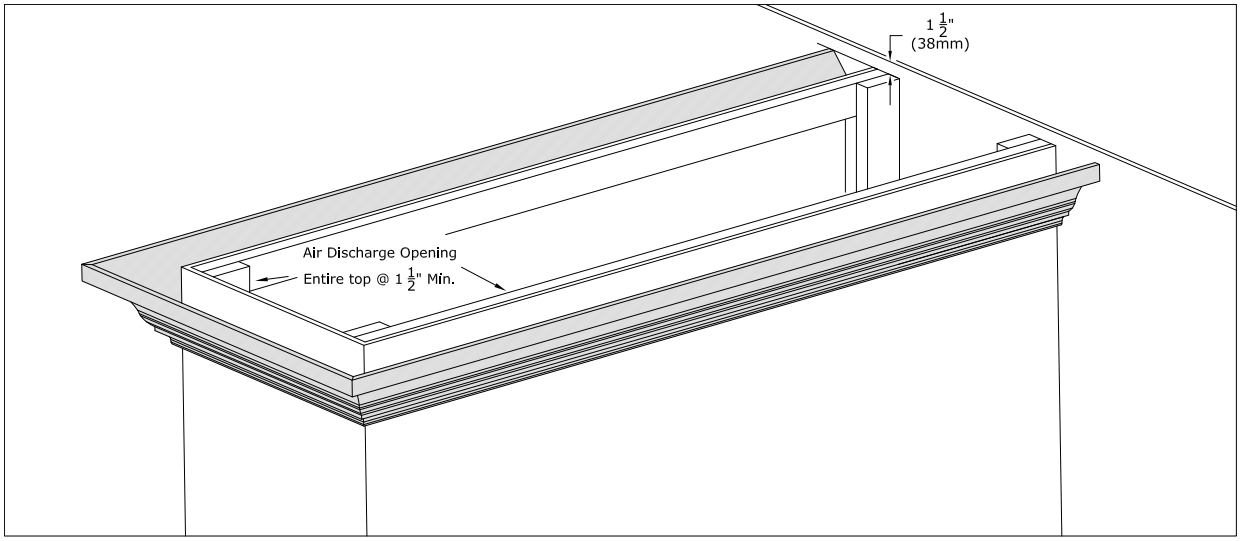


Figure 4.14 - Entire Chamber Vented Cavity Opening

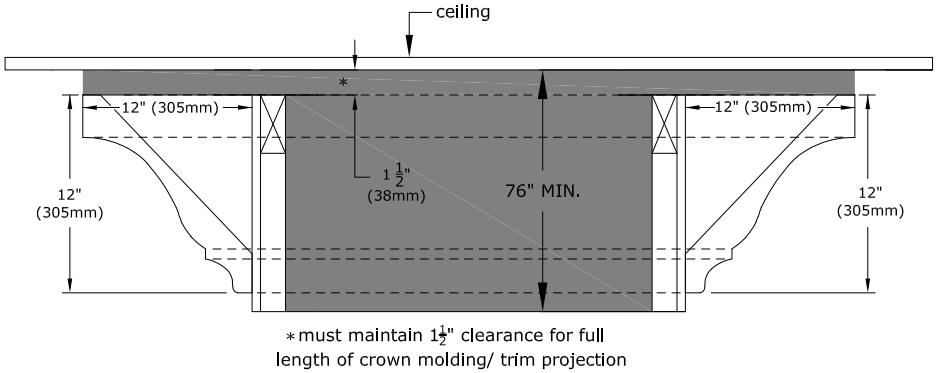
4.3.3 - Entire Chamber Vented Cavity Opening (continued)

Figure 4.15 shows what an installation would look like where you have a vented cavity air discharge opening across the entire fireplace chamber with an optional crown molding.

Front View



Side View



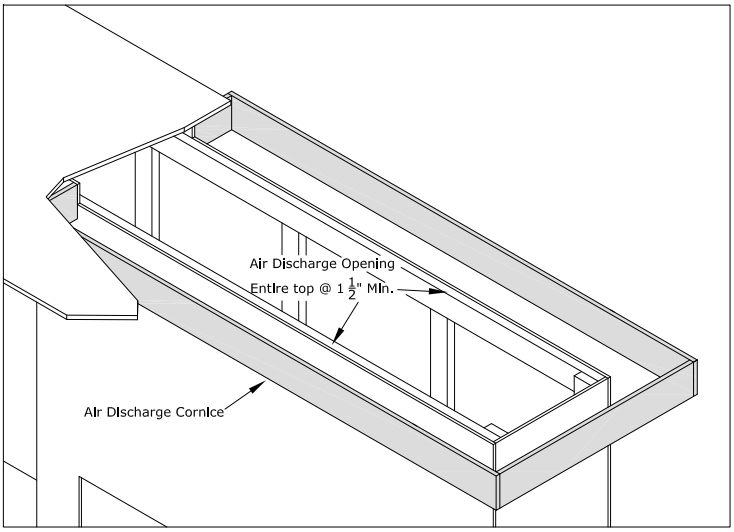
*must maintain 1 1/2" clearance for full length of crown molding/ trim projection

Figure 4.15 - Entire Chamber - Crown Molding

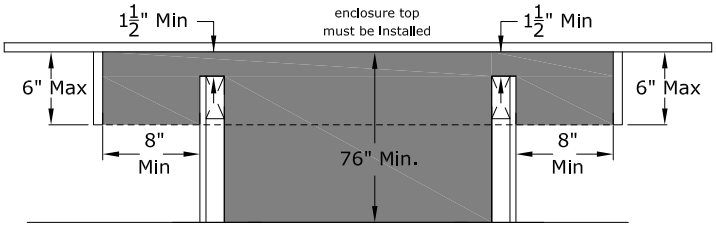
4.3.3 - Entire Chamber Vented Cavity Opening (continued)

Figure 4.16 shows what an installation would look like where you have a vented cavity air discharge opening across the entire fireplace chamber with an optional overhang.

Front View



Side View



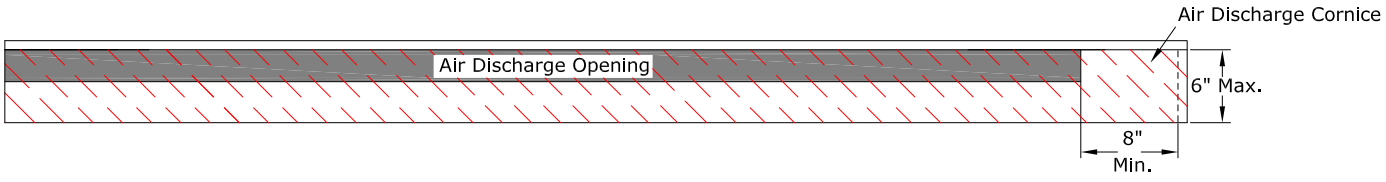


Figure 4.16 - Entire Chamber - Overhang

4.3.4 Clearance to Sprinkler

- In a situation where a sprinkler head is installed within the proximity to a #KZK discharge opening or the vented cavity opening for the fireplace chamber, the diagram below 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 4.17 shows a side KZK whereas your installation may look different.

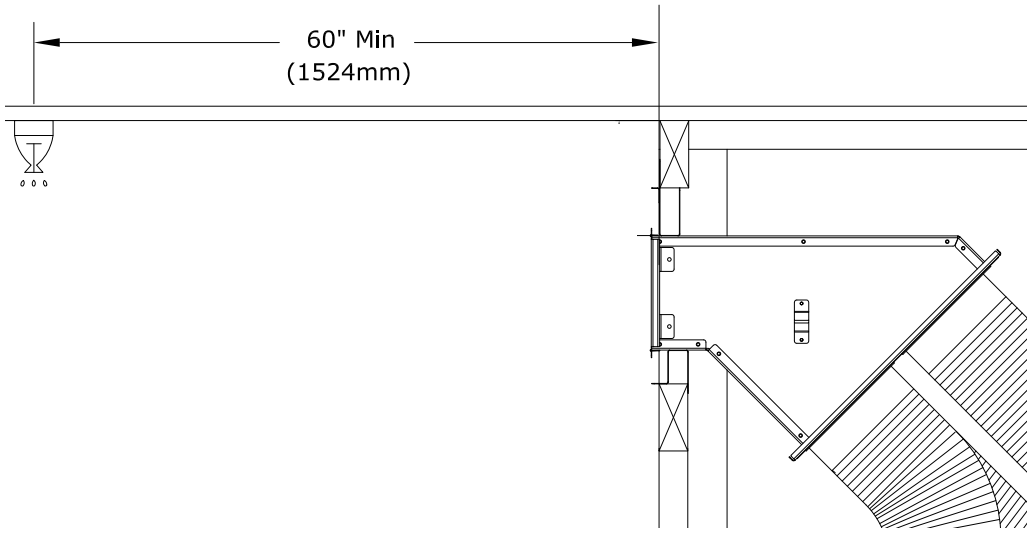


Figure 4.17 - Clearance to Sprinkler

5.0 Facing and Finishing

5.1 Facing and Finishing Requirements

- Non-combustible material is required at the top and sides of the fireplace for all installation scenarios. This fireplace is designed to accommodate non-combustible facing material up to 1/2" (13mm) thick. See Figure 5.1 for dimensions. Follow Figure 5.1 for finishing material requirements for standard installations.
- An optional finishing trim kit #CWST-FTK provides a 3/4" (19mm) finished edge to hide unfinished edge materials. See Section 5.7 Optional Finishing Trim Kit (FTK): CWST-FTK.
- 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 5.1. Screws can only penetrate the fireplace outer shell up to 1/2" (13mm) in the allowed areas.
- Utilizing the Kozy Power Vent system will not change mantel, hearth, sidewall, facing and finishing requirements from the standard design option.

5.2 Finishing Recommendations

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

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

Disclaimer: Kozy Heat does not guarantee any materials used around the fireplace. Kozy Heat disclaims any and all liability for any damage to finishing materials including warping, discoloring, cracking, peeling or flaking. This also includes any off-gassing or unpleasant smells from materials when they are heated.

5.3 Non-Combustible Zone

- See Figure 5.1, Facing and Finishing Requirements for the minimum requirements of non-combustible facing finishing materials.
- Paper faced gypsum board, commonly known as drywall; including Type X Fire Rated board is not a non-combustible material. This material is not approved for use as a non-combustible material around the fireplace.
- WonderBoard brand boards are commonly used as a backerboard for tile. WonderBoard backerboard is not a non-combustible material and is not approved for use in the non-combustible material is required around the fireplace.
- Non-combustible facing and finishing materials must meet ASTM E 136.

5.4 Standard Installation - Facing and Finishing Requirements

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

5.4.1 Combustible Hearth and Mantel Requirements

- Combustible Mantel Projections: As referenced in Figure 5.2, the 3/4" (19mm) combustible mantel trim can start at 8" (203mm) above the fireplace top finishing edge with a 6" (152mm) combustible 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 (no surround): As referenced in Figure 5.2, a 18” (458mm) combustible hearth can be installed at 0” (0mm) with the fireplace bottom finishing edge. Hearth projections can increase 1” (25mm) for every 1” (25mm) further away from the fireplace bottom finishing edge. If installing an optional surround, refer to Measurement 'B' in Section 5.8 Finishing Guidelines for Optional Surrounds.
- Mantel Leg: Follow 'Combustible Sidewall Clearance' below. See Figure 5.4. If installing an optional surround, refer to Measurement 'A', in Section 5.8 Finishing Guidelines for Optional Surrounds, for the space required from the optional surround sides to finishing material.
- Combustible Sidewall Clearance: Unlimited combustible sidewall trim can be at 0” (0mm) to the fireplace side finishing edge. See Figure 5.4. If installing an optional surround, refer to Measurement 'A', in Section 5.8 Finishing Guidelines for Optional Surrounds, for the space required from the optional surround sides to finishing material.

5.4.2 Non-Combustible Mantel Requirements

- Noncombustible Mantel Projections: A 6” (152mm) mantel can start at 6” (152mm) above the top finishing edge. Follow projection 1" (25mm) up for every 1" (25mm) deeper. See Figure 5.3.

5.4 Standard Installation - Facing and Finishing Requirements (continued)

Figure 5.1 shows the minimum non-combustible facing and finishing material requirements when performing a standard installation.

There are two no-screw zones on this fireplace. One location is a 2-1/2” (64mm) tall zone located above the top fireplace finishing edge. The second location is a 1-1/2” (38mm) tall zone located below the bottom fireplace finishing edge.

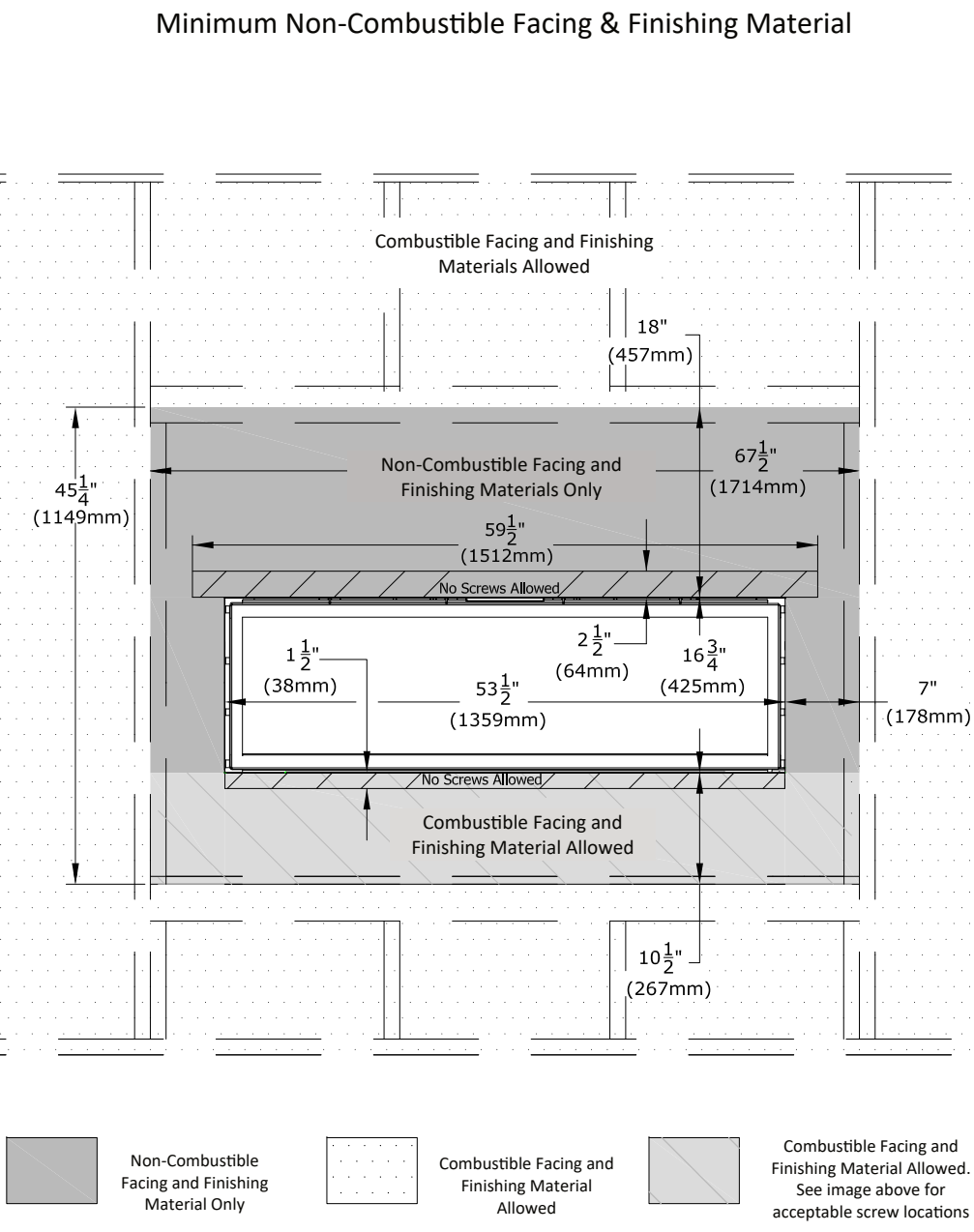


Figure 5.1 - Minimum Non-Combustible Facing & Finishing Dimensions - Standard Installation

5.4 Standard Installation - Facing and Finishing Requirements (continued)

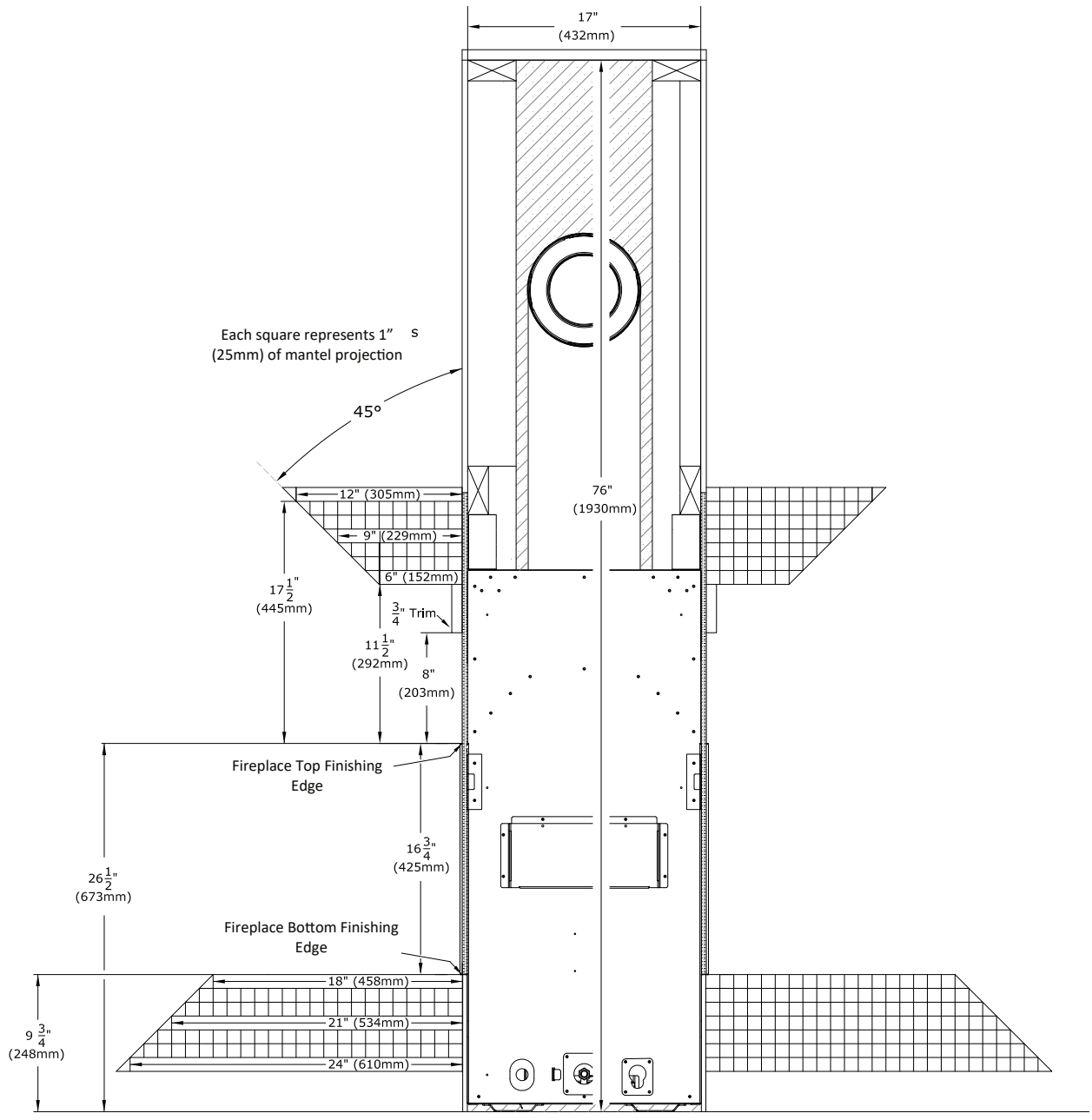


Figure 5.2 - Combustible Mantel and Hearth Projection - Standard Installation

5.4 Standard Installation - Facing and Finishing Requirements (continued)

Non-Combustible Mantel Projection

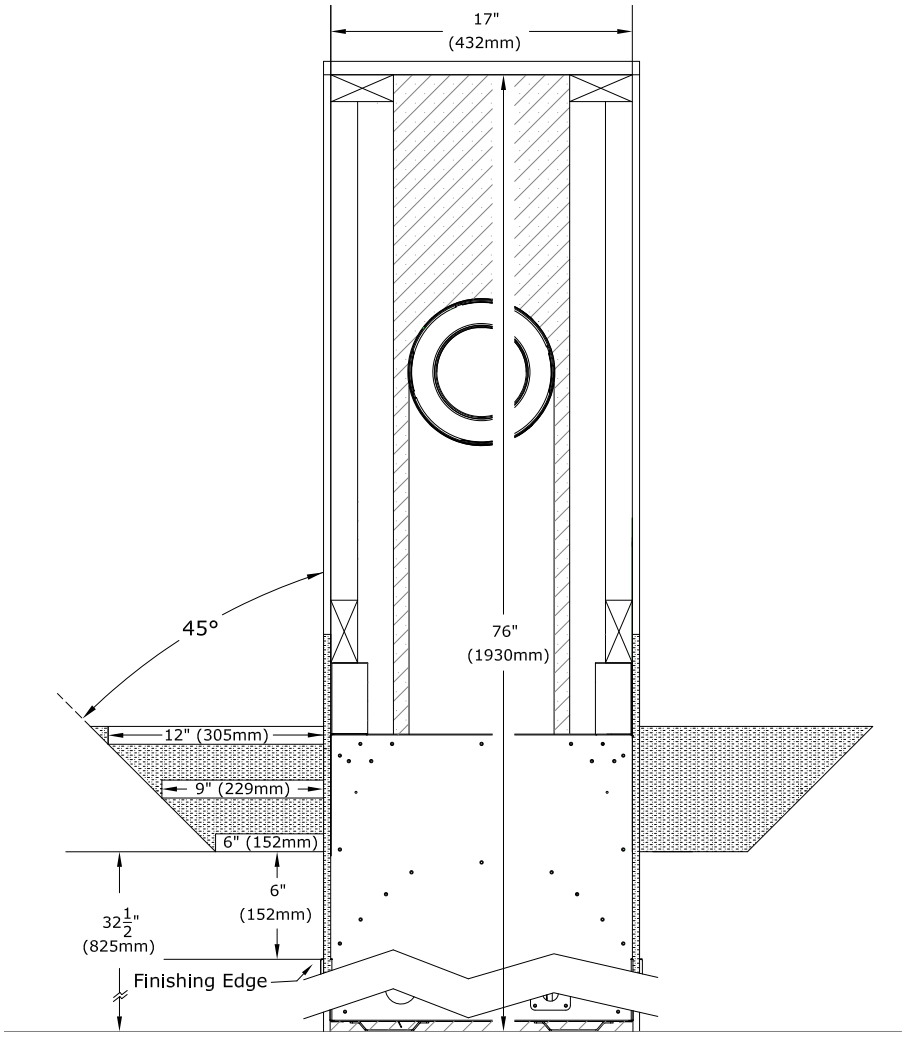


Figure 5.3 - Non-Combustible Mantel Projection - Standard Installation

5.4 Standard Installation - Facing and Finishing Requirements (continued)

Sidewall Projection

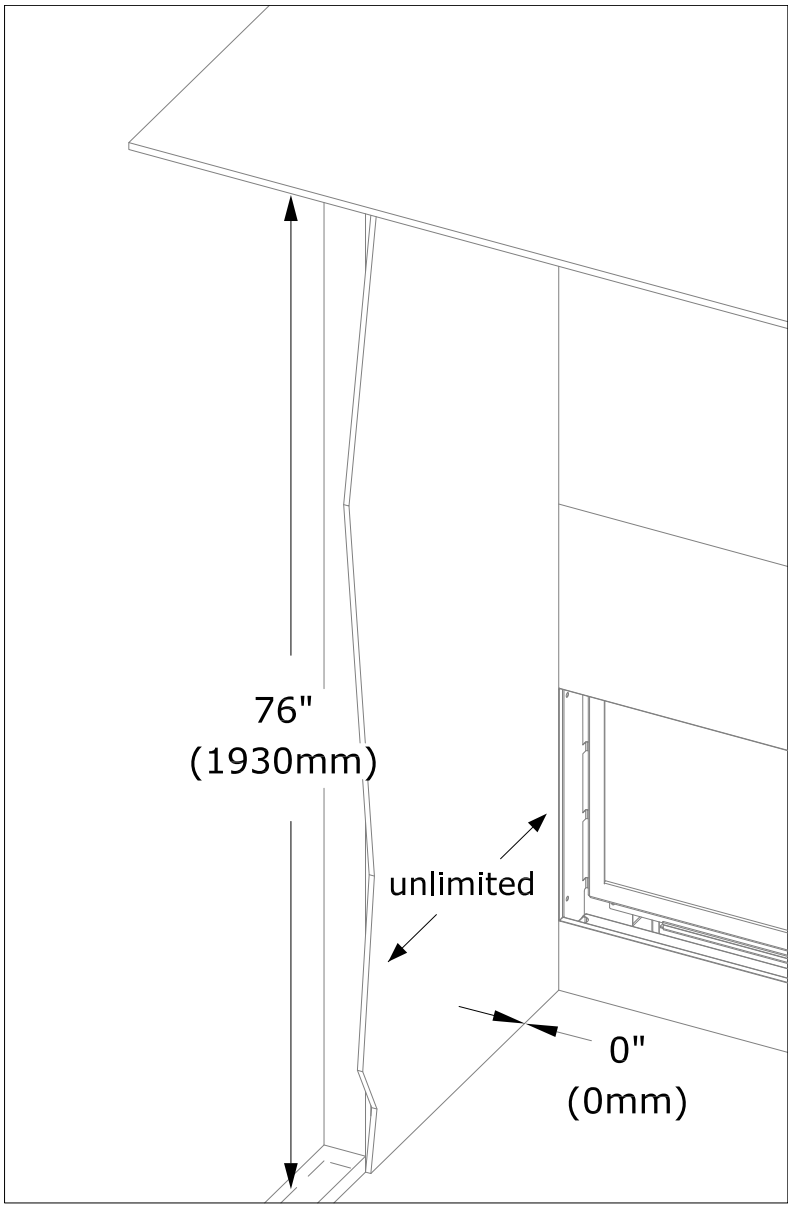


Figure 5.4 - Sidewall Projection - Standard Installation

5.5 Vented Cavity and KZK Installation - Facing and Finishing Requirements

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

Note: Please refer to the KZK manual for additional information regarding the KZK clearances and installation.

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.

5.5.1 Combustible Hearth and Mantel Requirements

- Combustible Mantel Projections: As referenced in Figure 5.6, a 6" (152mm) combustible mantel can be installed 3” (76mm) above the top fireplace top finishing edge. Combustible mantel projections can increase 1" (25mm) of depth for every 1" (25mm) of height starting at the 6" (152mm) mantel.
- Combustible Hearth (no surround): As referenced in Figure 5.6, an 18” (458mm) combustible hearth projection can be installed at 0” (0mm) with the fireplace bottom finishing edge. Hearth projections can increase 1” (25mm) for every 1” (25mm) further away from the fireplace bottom finishing edge. If installing an optional surround, refer to Measurement 'B' in Section 5.8 Finishing Guidelines for Optional Surrounds.
- Mantel Leg: Follow 'Combustible Sidewall Clearance' below. See Figure 5.7. If installing an optional surround, refer to Measurement 'A', in Section 5.8 Finishing Guidelines for Optional Surrounds, for the space required from the optional surround sides to finishing material.
- Combustible Sidewall Clearance: A 1” (25mm) combustible sidewall trim can start at 0” (0mm) with the fireplace side finishing edge. The combustible sidewall trim can increase 1” (25mm) of height for every 1” (25mm) further away from the fireplace side finishing edge. An unlimited combustible sidewall can start at 5” (127mm) away from the side finishing edge of the fireplace. See Figure 5.7. If installing an optional surround, refer to Measurement 'A', in Section 5.8 Finishing Guidelines for Optional Surrounds, for the space required from the optional surround sides to finishing material.

5.5 Vented Cavity and KZK Installation - Facing and Finishing Requirements (continued)

Figure 5.5 shows the minimum non-combustible facing material requirements when performing a KZK or Vented Cavity installation. Figure 5.8 shows the allowed combustible finishing material on top of the required non-combustible facing material.

There are two no-screw zones on this fireplace. One location is a 2-1/2” (64mm) tall zone located above the top fireplace finishing edge. The second location is a 1-1/2” (38mm) tall zone located below the bottom fireplace finishing edge.

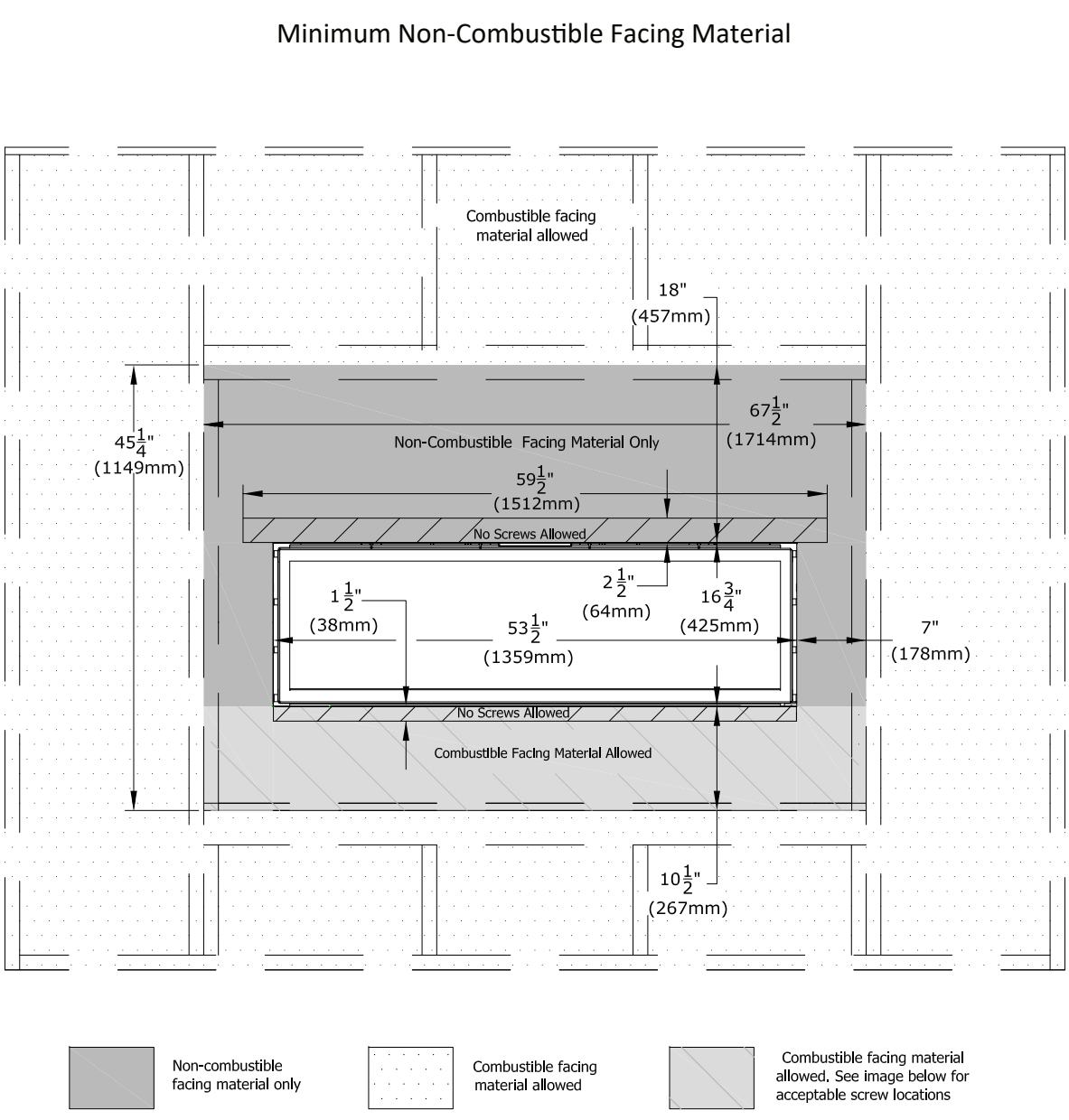


Figure 5.5 - Minimum Non-Combustible Facing Dimensions - KZK or Vented Cavity Installation

5.5 Vented Cavity and KZK Installation - Facing and Finishing Requirements (continued)

Combustible Mantel and Hearth Projections - KZK or Vented Cavity Installation

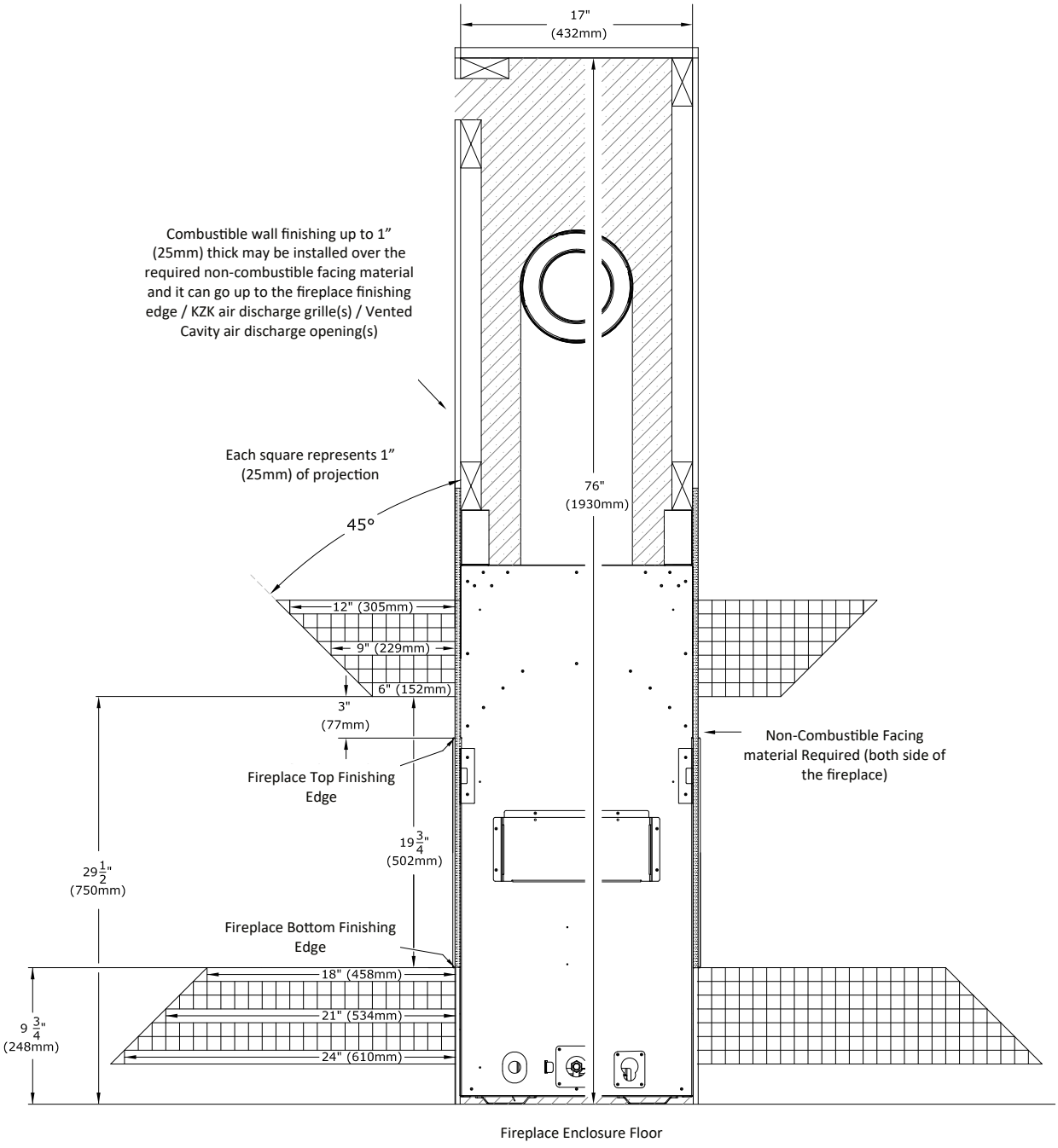


Figure 5.6 - Combustible Mantel and Hearth Projection - KZK or Vented Cavity Installation - No Surround

5.5 Vented Cavity and KZK Installation - Facing and Finishing Requirements (continued)

Sidewall Projections - KZK or Vented Cavity Installation

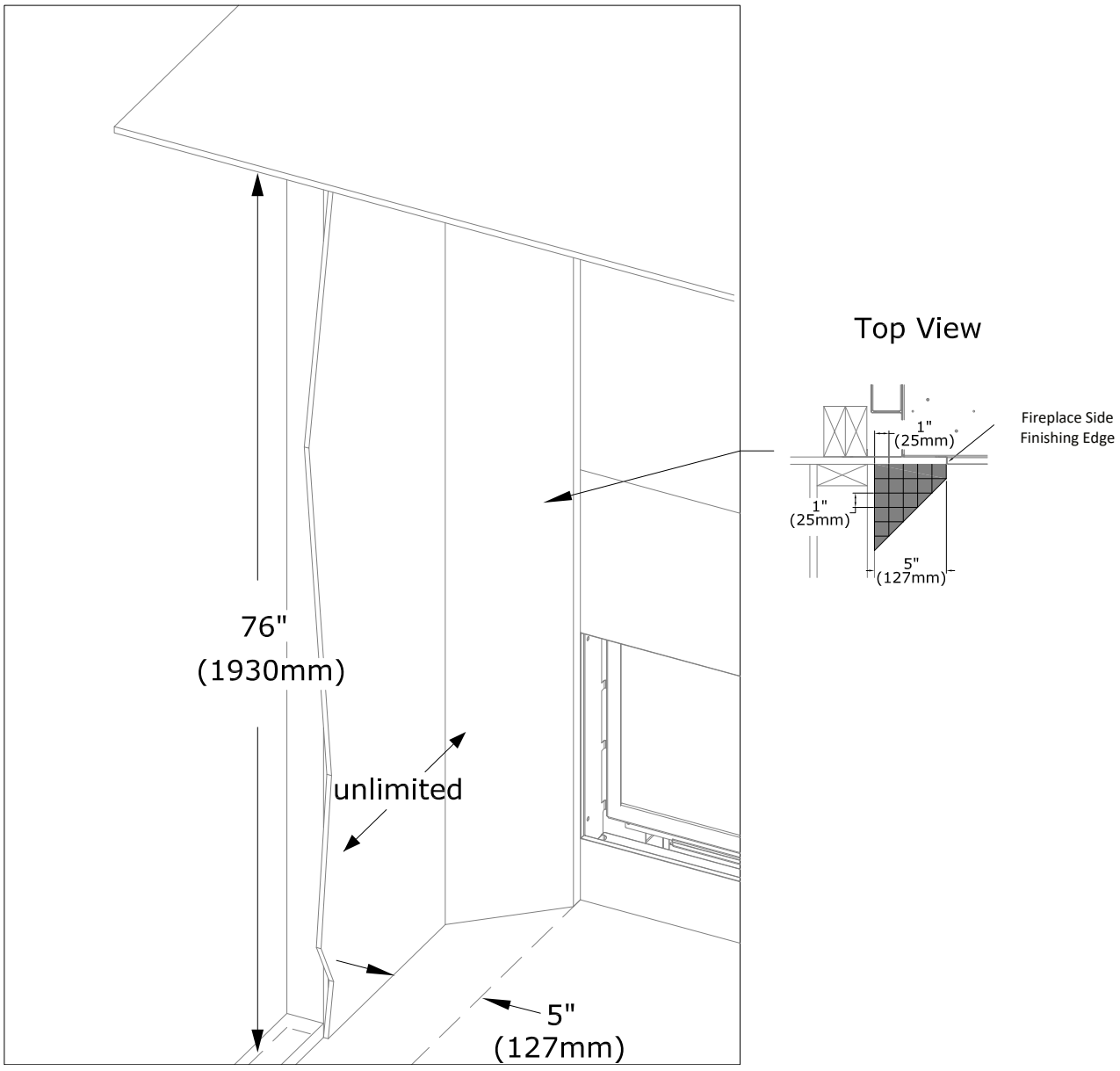


Figure 5.7 - Combustible Sidewall Projection - KZK or Vented Cavity Installation

5.5 Vented Cavity and KZK Installation - Facing and Finishing Requirements (continued)

This fireplace allows the installation of up to 1” (25mm) thick combustible finishing material on top of the required non-combustible facing material. An example of this would be shiplap. This combustible wall finish can be installed across the entire wall going around the fireplace finishing edges as well as the KZK or Vented Cavity air discharge opening. It is important that this combustible wall does not decrease or cover the required air openings.

Combustible Wall Finish - KZK or Vented Cavity Installation

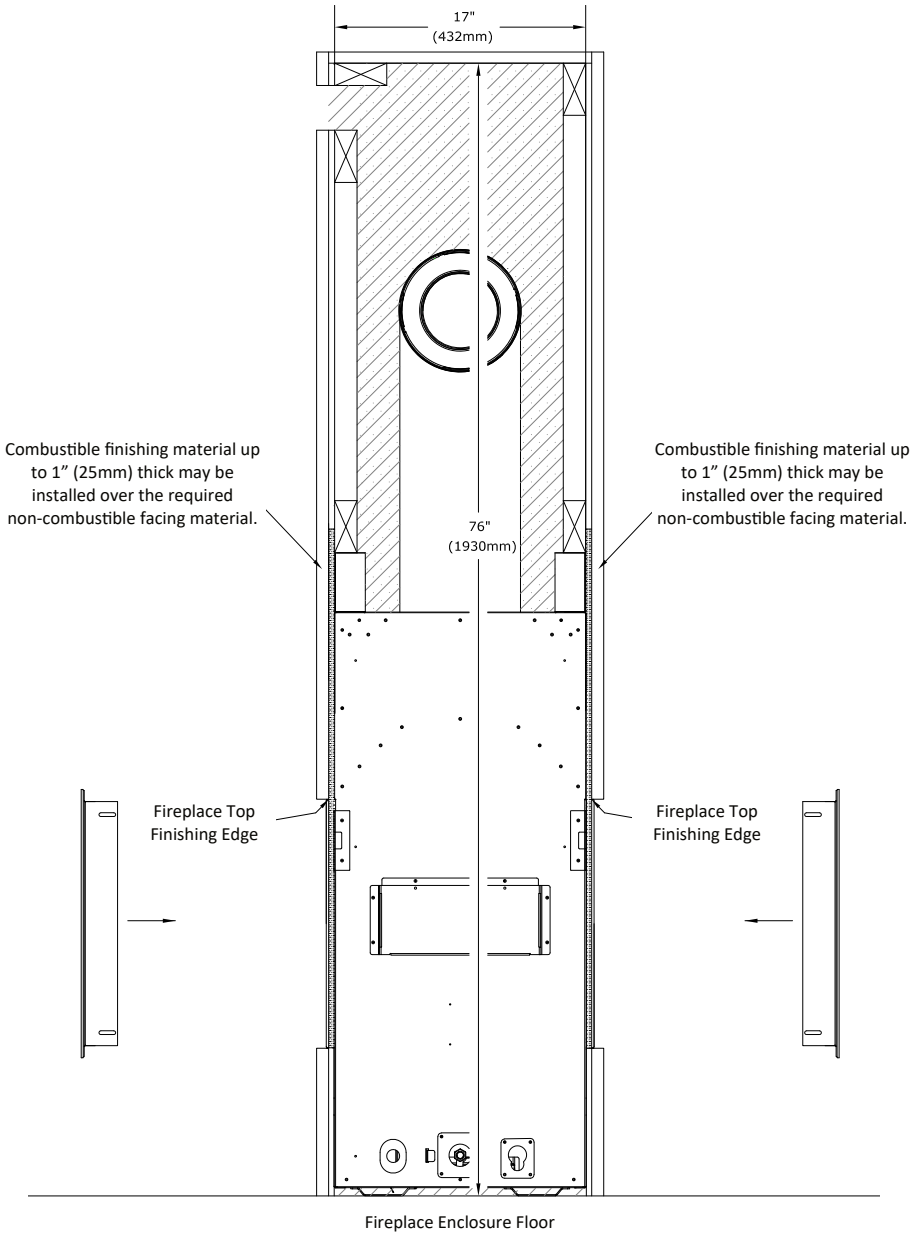


Figure 5.8 - Combustible Wall Finish - KZK or Vented Cavity Installation (Vented Cavity Shown)

5.6 Recommended Installation of Marble and other stone materials

Kozy Heat recommends the following statements when using marble, granite, or other stone finishing materials

- Never use a one-piece marble, granite or natural stone that is cut in a U-shape for finishing material to cover the sides and top areas around the fireplace opening.
- If you use a one piece U-shaped piece of marble, or stone finishing material the material is susceptible to cracking due to thermal expansion
- Refer to the manufacturer and supplier of your finishing material for use in high heat applications like around a fireplace. Ensure the material can be exposed to temperatures greater than 160°F. Kozy Heat does not assume any liability for discoloring, cracking, or other heat related damage.

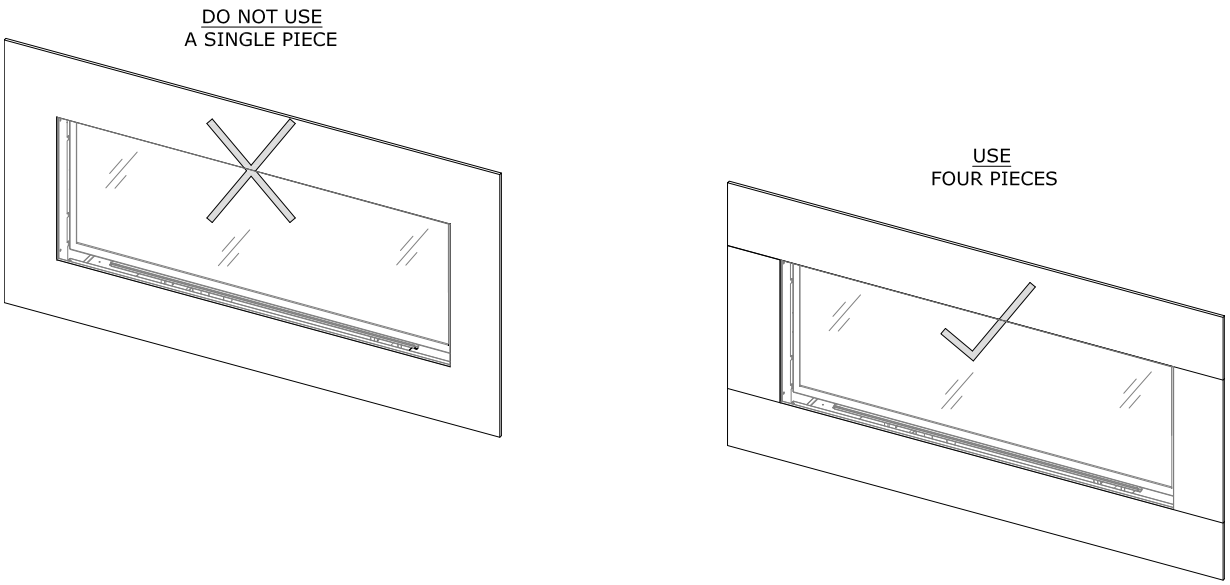


Figure 5.9 - Marble Installation Example

5.7 Optional Finishing Trim Kit (#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

Installation

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.

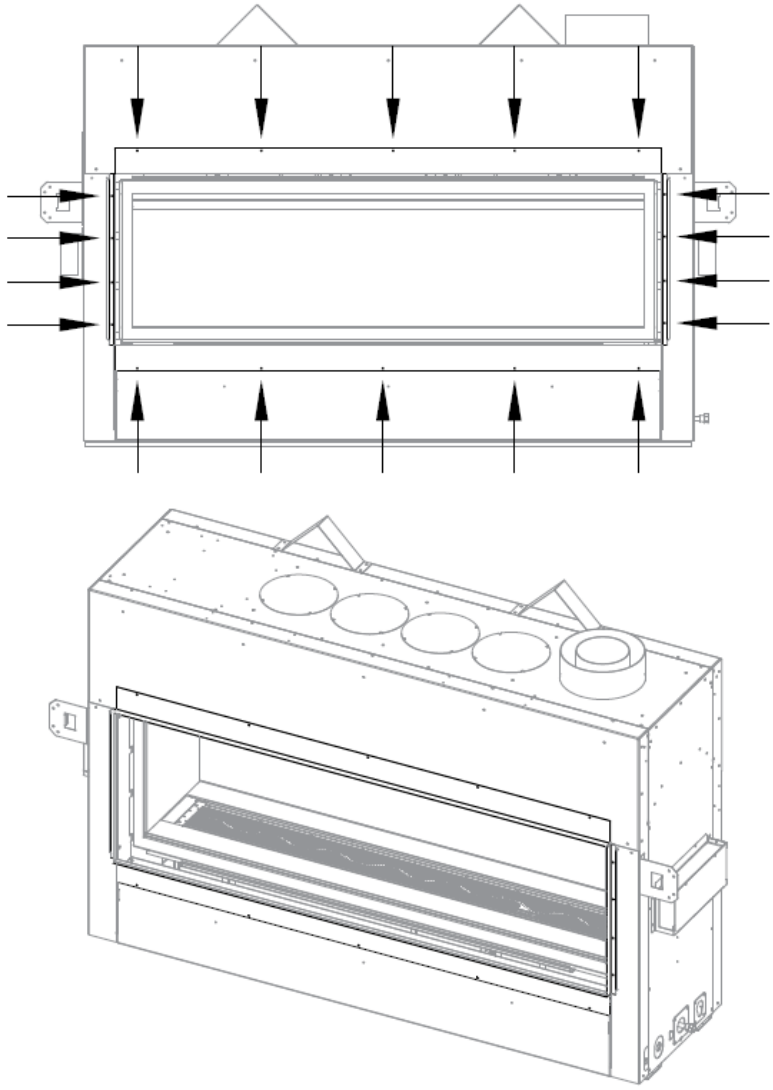
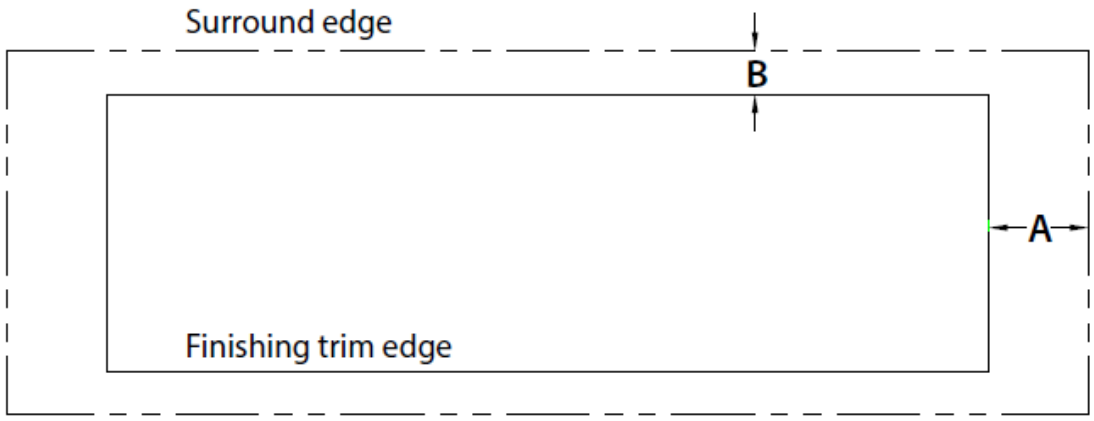


Figure 5.10 - Optional Finishing Trim Kit #CWST-FTK

5.8 Finishing Guidelines for Optional Surrounds

- Figure 5.11 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” (67mm)	2-5/8” (67mm)
CW50-GS	6” (152mm)	2-1/2” (64mm)
CW50-MS	3-1/8” (79mm)	3-1/8” (79mm)

Figure 5.11 - Optional Surround Finishing Material Guidelines

6.0 Gas Line Connection

6.1 Gas Conversion

Note: Stepper Motor sold separately to complete 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.

6.2 Gas Line Installation

CAUTION: Installation of the gas line must only be done by a qualified person in accordance with local building codes, if any. If not, follow ANSI 223.1. Commonwealth of Massachusetts installations must be done by a licensed plumber or gas fitter.

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

- A listed (and Commonwealth of Massachusetts approved) ½" (13mm) tee handle manual shut-off valve and flexible gas connector are to be connected to the ½"(13mm) 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.
- 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.
- Run gas line into fireplace through gas line hole provided. See Figure 2.1, Appliance Dimensions for gas line access..

Table 6.1 - Inlet Gas Supply Pressures

	Natural Gas	Propane
Minimum Pressure	5" WC (1.25 kPa) 7" WC (1.74 kPa)** Recommended	12" WC (2.99 kPa)
Maximum Pressure	10" WC (2.49 kPa)	13" WC (3.24 kPa)

7.0 Vent System Requirements and Information

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.

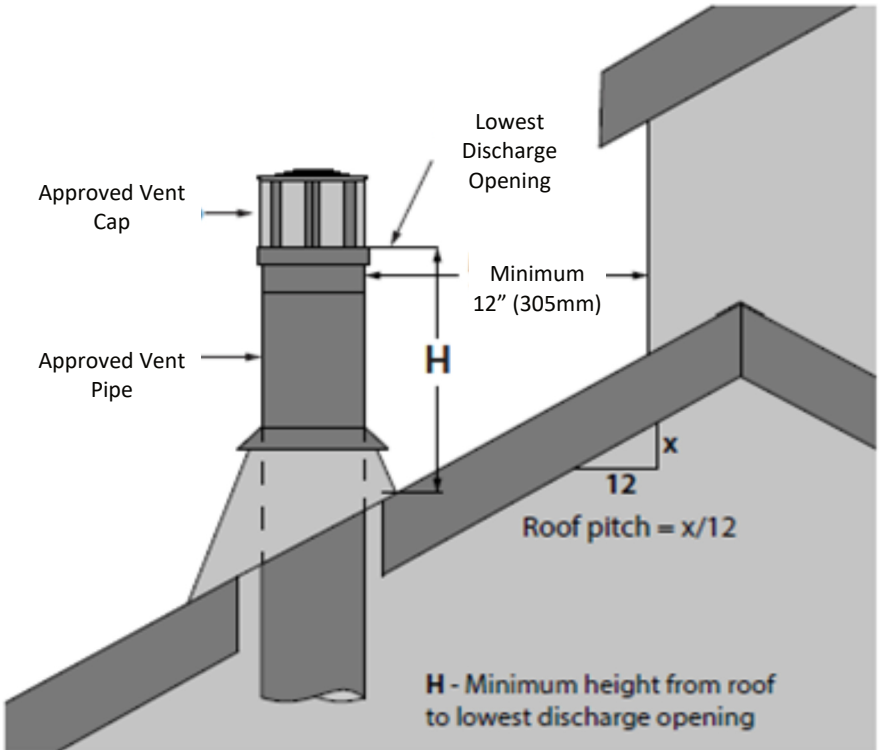
Flame height and appearance will vary depending upon venting configuration and the type of fuel used.

7.1 Vertical Vent Cap Termination

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

Note: Natural Draft Applications only.

- Refer to Figure 7.1 below for vertical vent terminations clearances.



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

Figure 7.1 - Vertical Vent Clearances

7.2 Minimum Vent Termination Clearances

- Refer to Figure 7.2 and the Table 7.1 below for natural draft vent termination clearance locations.
- If you are installing a power vent system on this fireplace refer to the #KPV manual for vent information.

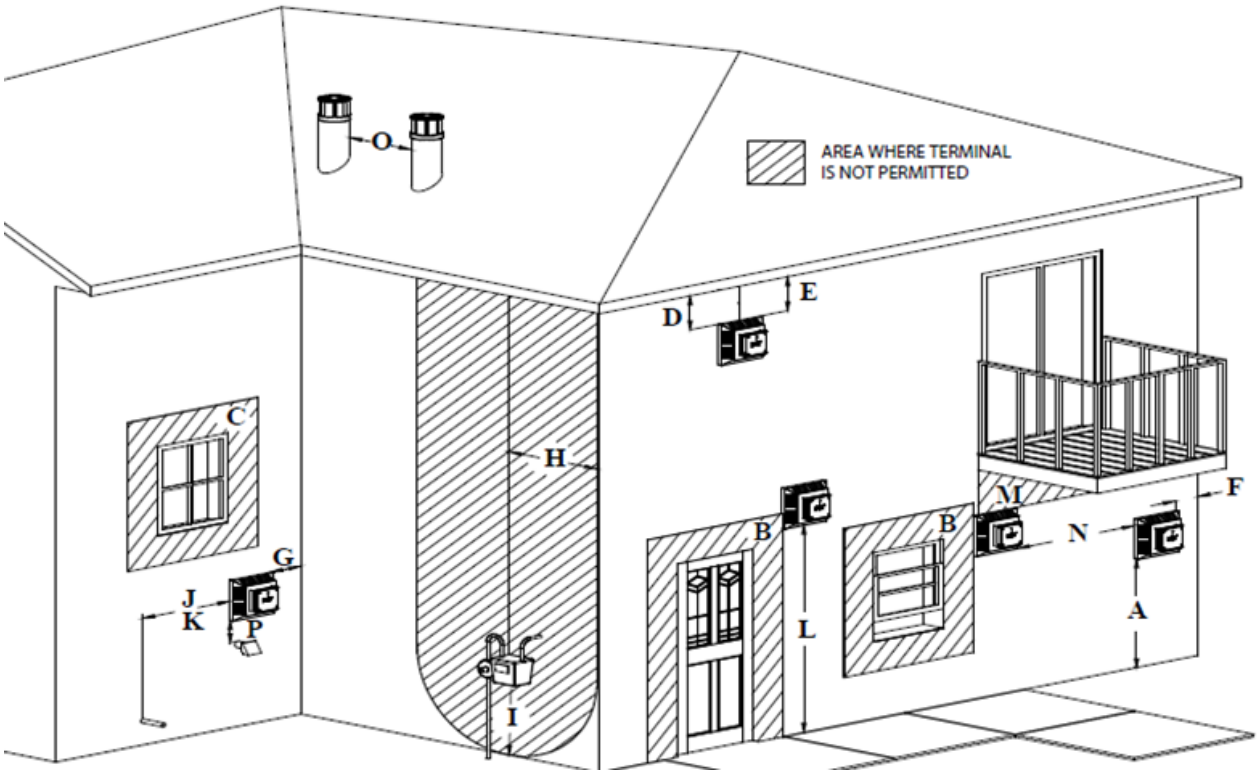


Figure 7.2 - Termination Clearances

Vinyl & PVC Siding Recommendation

- Vinyl and PVC siding is likely to bend, buckle, and deform due to heat reflecting from a fireplace horizontal termination cap.
- Please refer to vent manufacturer for information regarding vinyl siding protectors.
- Kozy Heat assumes no responsibility or liability for damages caused to vinyl or PVC siding in this type of installation.

	Table 7.1	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 feet (61cm) from the edge of the terminal.	24” (61cm)*	24” (61cm)*
E	Clearance to unventilated soffit.	12” (30cm)*	12” (30cm)*
F	Clearance to outside corner.	0” (0cm)*	0” (0cm)*
G	Clearance to inside corner.	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**
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 the 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.

**Massachusetts: 10’ (3m) above] if within 10’ (3m) horizontally

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

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

VINYL SOFFIT, VINYL CEILING, AND VINYL OVERHANG DISCLAIMER: Clearances to heat resistant materials (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.

7.3 Vent Pipe Termination Location Information

- NOTE: Elbows listed with approved vent systems for this appliance vary in vertical length. Please consult the vent manufacturer's instructions to determine the elbow dimension used for installation. Adjust the wall pass-through rough opening dimensions as necessary to maintain clearance requirements.
- Provide a means for visually checking the vent connection to the appliance after the fireplace is installed.
- Attic insulation shields may be insulated using unfaced insulation products listed as non-combustible per ASTM E 136.
- 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 non-combustible per ASTM E 136.
- Vertical Terminations - Follow vent pipe manufacturer's installation instructions for vertical terminations.
- Horizontal Terminations - WARNING: Do not recess the vent cap into wall or siding.

7.4 Vent Pipe Restriction (Before Vent System Installation)

- 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, and when installed, provides the most vent restriction. There are (2) inner rings that can be knocked out. As you knock out and remove an inner ring you have less vent restriction whereas removing both inner rings you will have the least amount of vent restriction.
- Follow Figure 7.3 for restrictor plate installation before attaching venting. For vent restriction plate recommendations and adjustments, see section 11.2.3, Vent Restriction (after installation).

7.5 Use of Flexible Venting Outside the Appliance Enclosure

- If an approved venting manufacturer offers flexible venting options that can replace rigid vent pipe follow the vent manufacturer's instructions.
- Flexible vent pipe cannot be used to terminate the vent system vertically. Only the Kozy Heat #845-1 Flexible Vent Kit can be used for flexible venting horizontal termination.

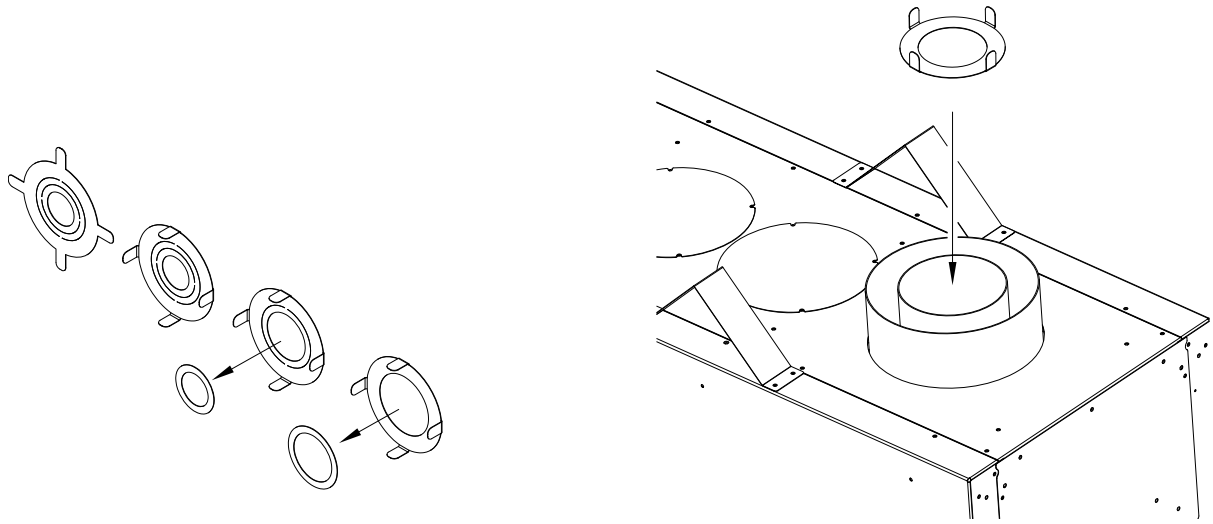


Figure 7.3 - Vent Restrictor Plate Installation

7.6 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 with Kozy Heat Power Vent System #KPV (sold separately). Power Vent configurations and requirements are located in the #KPV manual.

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 7.6.1 and 7.6.2.

This appliance can be adapted to use 4” diameter aluminum flexible pipe by any listed vent manufacturer when used in combination with an existing minimum 7” ID Class A metal/ masonry chimney. Refer to section 7.8 for more information.

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

7.6.1 Approved 5” x 8” Vent Systems

Table 7.2 - Approved 5”x8” Vent Systems

Vent Manufacturer	Vent Cap Part Number
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 MT-5RHT TM-5SVT
Kozy Heat	#845-1
Metal Fab	5DHT 5DST14 5DST36

Table 7.2 - Approved 5”x8” Vent Systems (continued)

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

7.6.2 Approved 4” x 6 - 5/8” Vent Systems

This appliance may be reduced from a 5” x 8” to a 4” x 6-5/8” vent system. Refer to the vent pipe manufacturer’s installation manual for more information.

Table 7.3 - Approved 4”x6-5/8” Vent Systems

Vent Manufacturer	Vent Cap Part Number
American Metal Products (Ameri-Vent)	4DHC 4DVC 4D14S 4D36S
BDM	DVR6-VCLP DVR6-VCH
ICC	TM-4HT TM-4RHT TM-4SVT
Kozy Heat	KPV (Kozy Power Vent)
Simpson Duravent	46DVA-HC 46DVA-HSCH 46DVA-VCH 46DVA-VC 46DVA-VCE
Olympia Chimney Supply, Inc.	VDV-VC04
Selkirk	4DT-VT 4DT-VC

7.7 Natural Draft Co-Axial Pipe Installations

7.7.1 Vertical Terminations

Note: Natural Gas and Propane Installations

(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 (4) 45° elbows may be used. No 90° elbows are allowed. For every 45° elbow used, 18” (457mm) must be subtracted from maximum venting allowed.

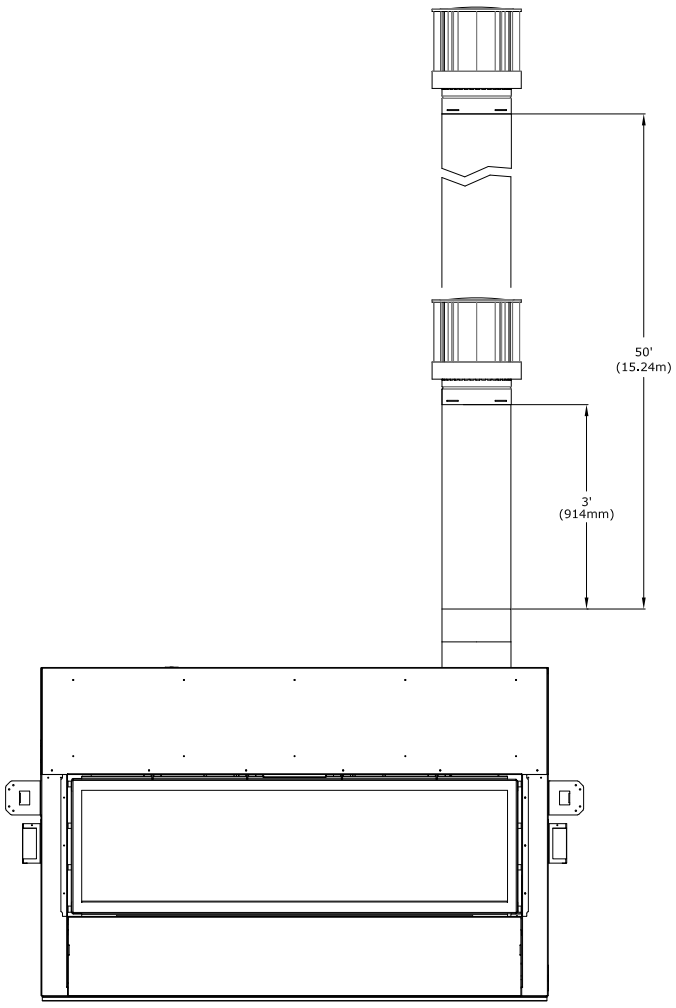


Figure 7.4 - 5”x8” Vertical Vent Pipe

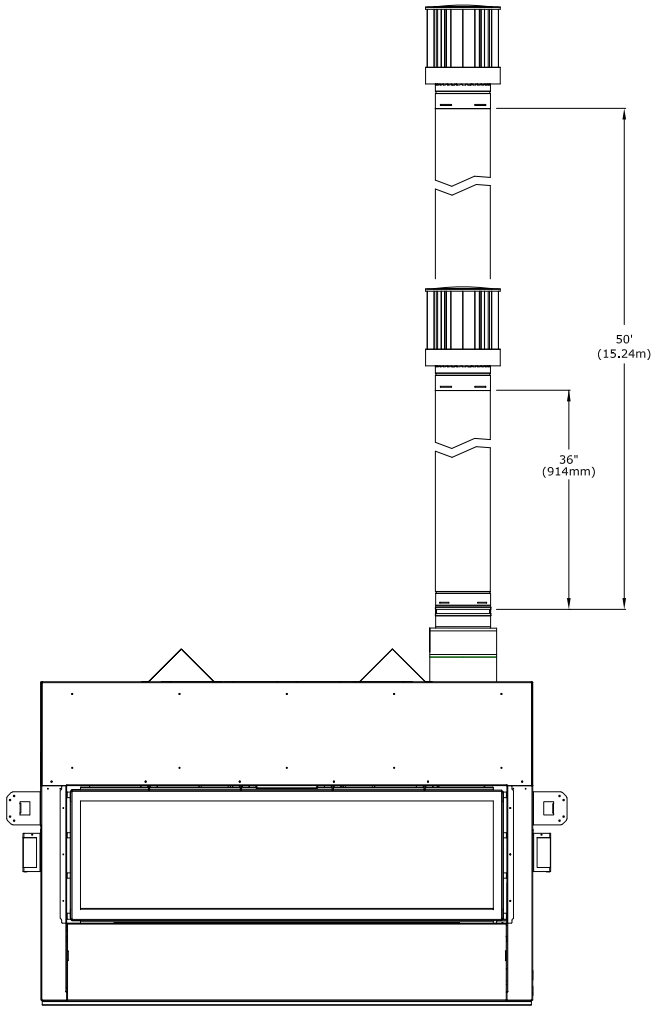


Figure 7.5 - 4”x6-5/8” Vertical Vent Pipe

7.7.2 Horizontal Terminations

Note: Natural Gas and Propane Installations

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 of the fireplace to maintain venting clearances.

(i) Minimum 12" Vertical Vent Pipe/ Minimum Horizontal:

12" (305mm) vertical vent pipe + 90° horizontal elbow + 6" (152mm) horizontal vent pipe + termination cap

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

12" (305mm) vertical vent pipe + 90° horizontal elbow + 5' (1.52m) horizontal vent pipe + termination cap

(ii) Minimum 24" Vertical Vent Pipe / Minimum Horizontal:

24" (610mm) vertical vent pipe + 90° horizontal elbow + 6" (152mm) horizontal vent pipe + termination cap

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

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

(iii) Minimum 36" Vertical Vent Pipe / Minimum Horizontal:

36" (914mm) vertical vent pipe + 90° horizontal elbow + 6" (152mm) horizontal vent pipe + termination cap

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

36" (914mm) vertical vent pipe + 90° horizontal elbow + 20' (6.10m) horizontal vent pipe + termination cap

(iv) Basement Installation - Minimum Vertical Vent Pipe / Minimum Horizontal:

24" (610mm) 5"x8" vertical vent length + 4"x6-5/8" reducer + 90° horizontal elbow + 6" (152mm) horizontal vent pipe + termination cap

(iv) Basement Installation - Minimum Vertical Vent Pipe / Maximum Horizontal:

24" (610mm) 5"x8" vertical vent length + 4"x6-5/8" reducer + 90° horizontal elbow + 48" (1219mm) horizontal vent pipe + termination cap

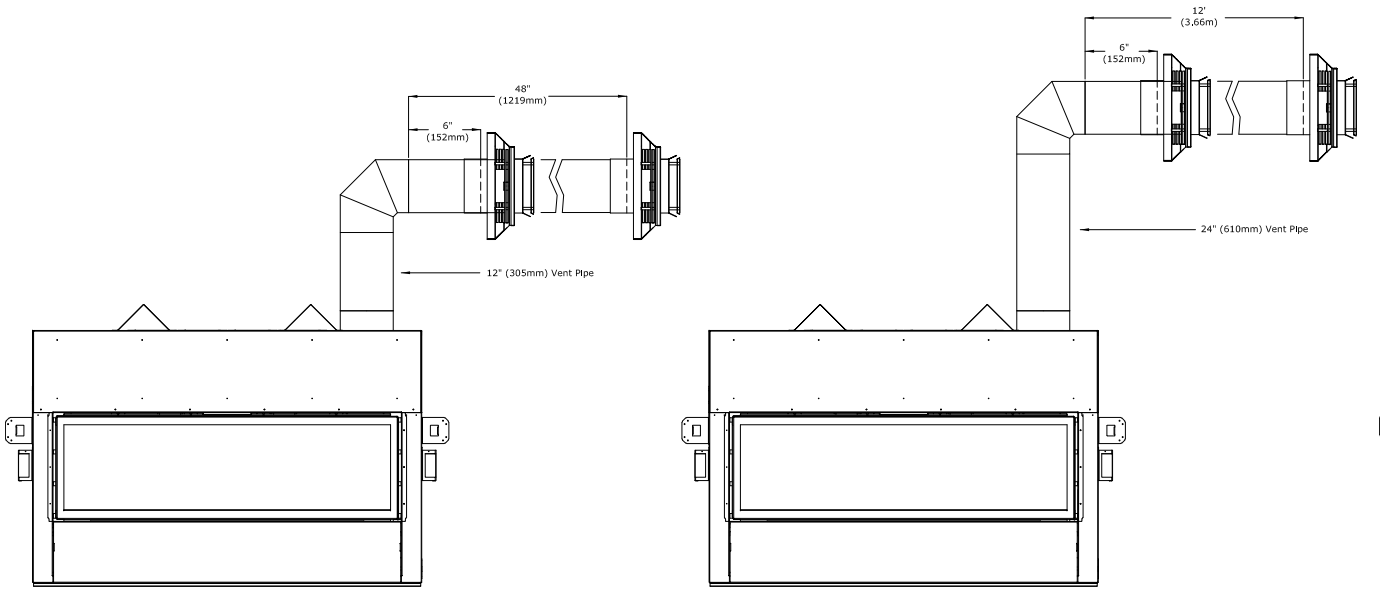


Figure 7.6 - Horizontal Terminations

7.7.2 Horizontal Terminations (continued)

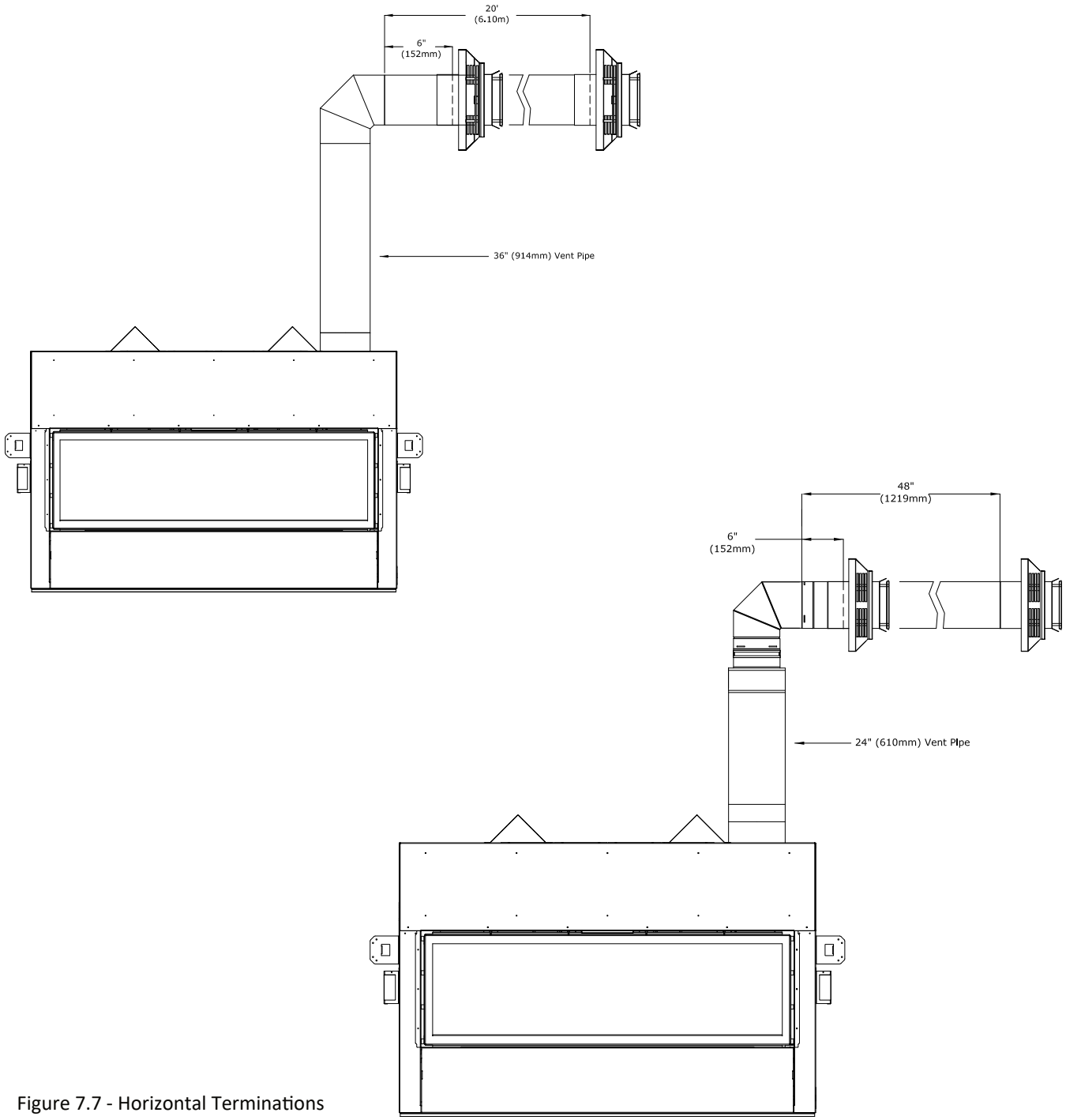


Figure 7.7 - Horizontal Terminations

7.7.3 Combination Venting

Note: Natural Gas and Propane Installations

Vent termination must be within the shaded area in Figure 7.8. Applies to 5” x 8” venting only.

- 25’ (7.62m) maximum vertical rise + 25’ (7.62m) 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.

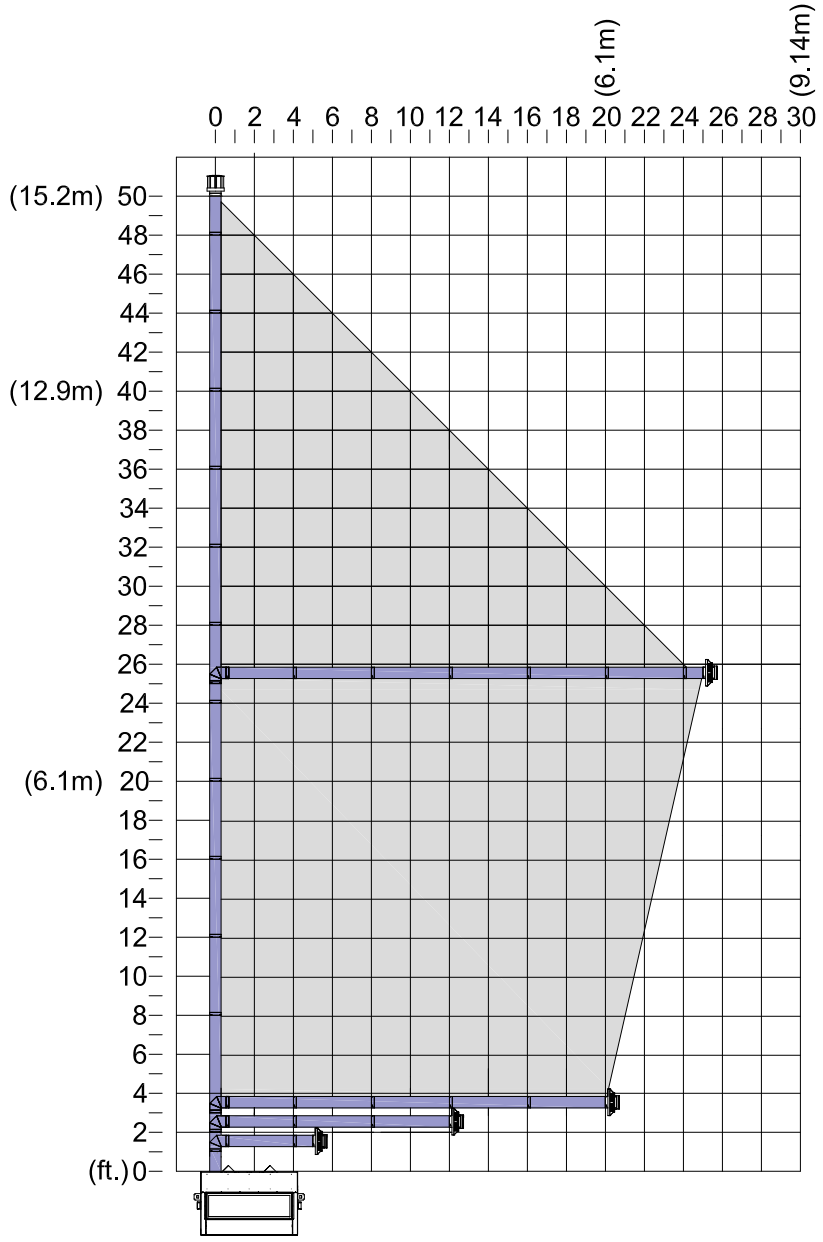


Figure 7.8 - Combination Venting

7.7.4 Vertical Terminations with 45° Elbows

Note: Natural Gas and Propane Installations

Note: For certain installations, it may be necessary to use a 45° elbow off the top of the fireplace to maintain venting clearances.

When Installing the KZK-054 at minimum chamber height you will need to offset the vent pipe with 45° elbows to keep the KZK plenum centered on the fireplace.

(i) 12” Vent Pipe Vertical Terminations - 5”x8”

45° elbow + 12” (305mm) vent pipe + 45° elbow + vertical length pipe + termination cap

(ii) 12” Vent Pipe Vertical Terminations with Reducer - 4”x6-5/8”

Reducer + 45° elbow + 12” (305mm) vent pipe + 45° elbow + vertical length pipe + termination cap

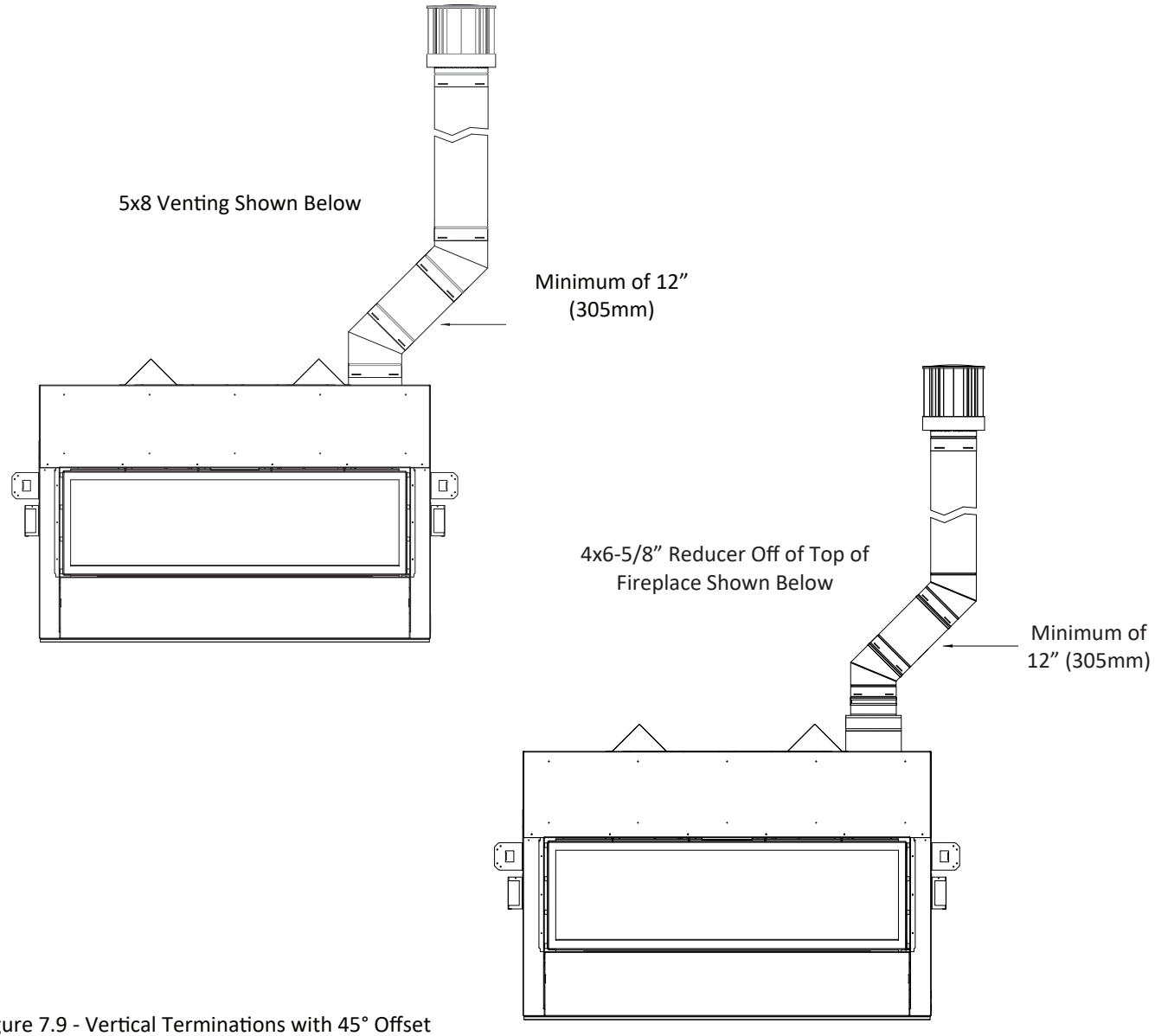


Figure 7.9 - Vertical Terminations with 45° Offset

7.7.5 Horizontal Terminations with 45° Elbow

Note: Natural Gas and Propane Installations

Note: For certain installations, it may be necessary to use a 45° elbow off the top of the fireplace to maintain venting clearances.

When Installing the KZK-054 at minimum chamber height you will need to offset the vent pipe with 45° elbows to keep the KZK centered on the fireplace.

(i) Minimum 12" Vertical Vent Pipe/ Minimum Horizontal - 5"x8":

45° elbow + 12" (305mm) vent pipe + 45° elbow + 6" (152mm) minimum horizontal run + termination cap

(i) Minimum 12" Vertical Vent Pipe / Maximum Horizontal - 5"x8":

45° elbow + 12" (305mm) vent pipe + 45° elbow + 8' (2.44m) maximum horizontal run + termination cap

(ii) Minimum 24" Vertical Vent Pipe/ Minimum Horizontal - 5"x8":

45° elbow + 24" (610mm) vent pipe + 45° elbow + 6" (152mm) minimum horizontal run + termination cap

(ii) Minimum 24" Vertical Vent Pipe / Maximum Horizontal - 5"x8":

45° elbow + 24" (610mm) vent pipe + 45° elbow + 16' (4.88m) maximum horizontal run + termination cap

(iii) Minimum 36" Vertical Vent Pipe/ Minimum Horizontal - 5"x8":

45° elbow + 36" (914mm) vent pipe + 45° elbow + 6" (152mm) minimum horizontal run + termination cap

(iii) Minimum 36" Vertical Vent Pipe / Maximum Horizontal - 5"x8":

45° elbow + 36" (914mm) vent pipe + 45° elbow + 25' (7.62m) maximum horizontal run + termination cap

4x6-5/8" Reducer Off of Top of Fireplace Shown Below

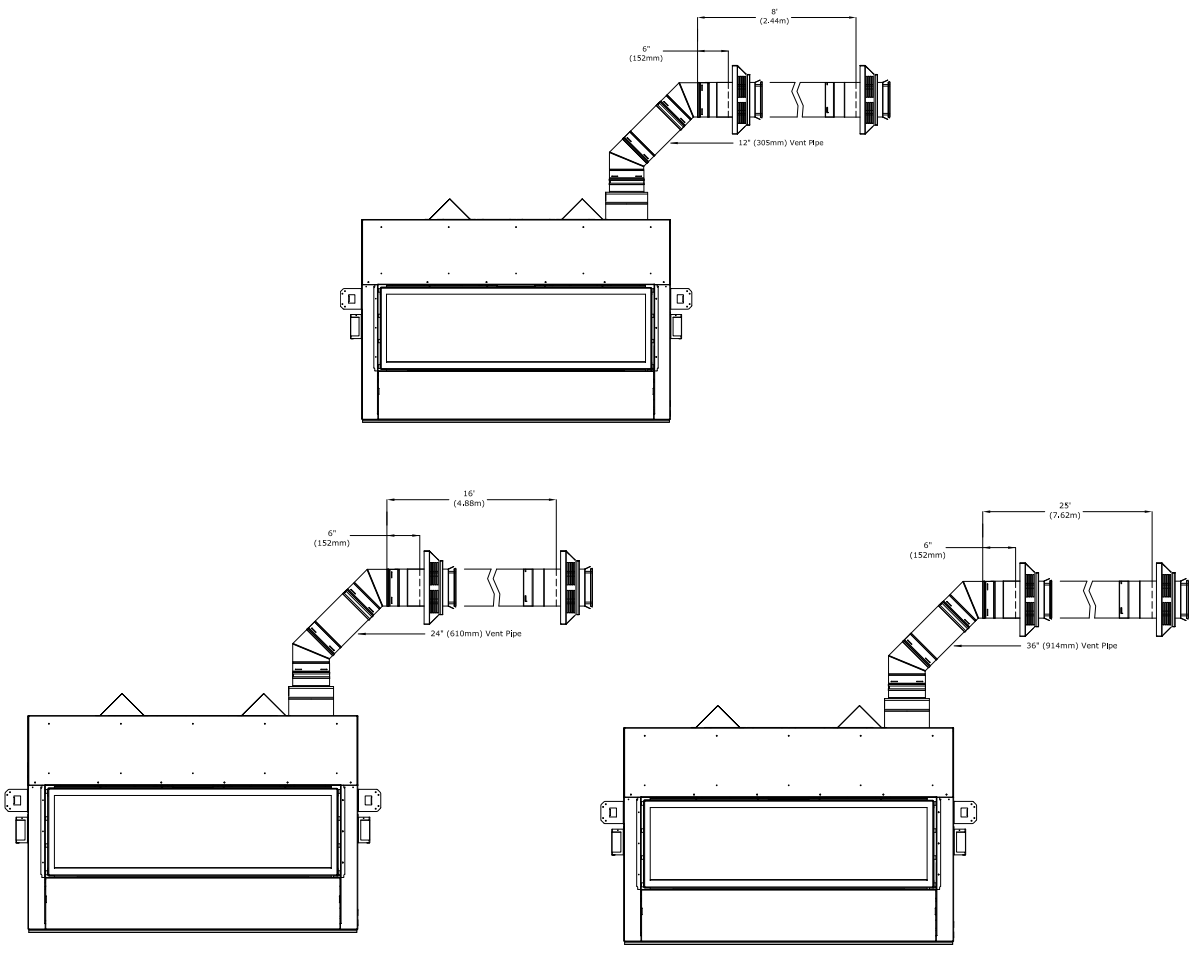


Figure 7.10 - 45° Elbow Horizontal Terminations with Reducer

7.8 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 7.6, APPROVED VENT SYSTEMS.

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

Follow Figure 7.11 for allowable venting configurations for installation in existing through-the-ceiling, Class A/Masonry chimney. Install the 4” Flex Pipe Chimney to route the exhaust gases and intake air through the existing Class A/Masonry chimney.

The gas appliance cannot be connected to a chimney flue that is serving a separate solid-fuel burning appliance.

7.8.1 4” Flex Pipe Venting Configurations

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

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

1. Minimum / Maximum Vertical Terminations

4” x 6-5/8” 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

4” Flex Pipe Chimney Conversion	
A - Reducer	C - Top Adapter
B - Retro Connector	D - Termination Cap

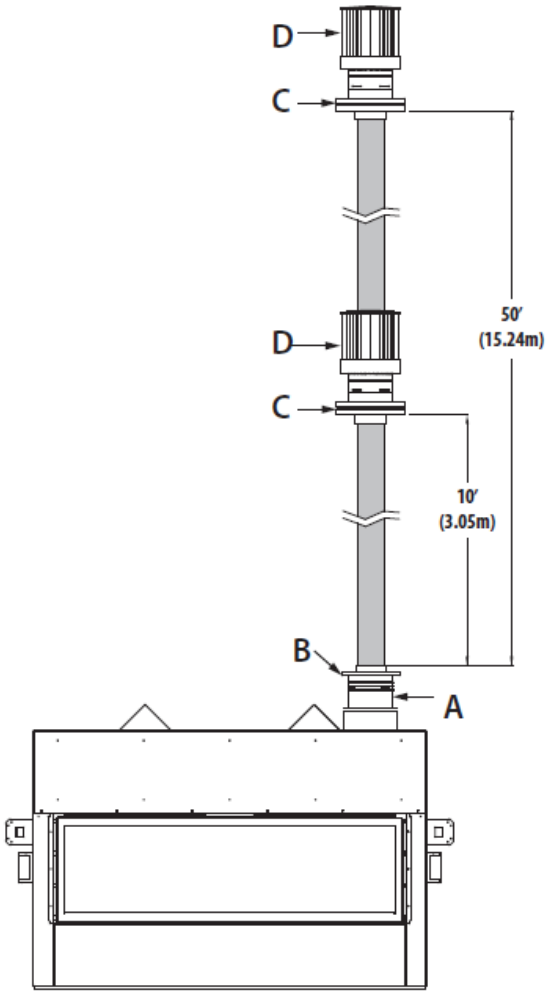


Figure 7.11 - Class A / Masonry Chimney Conversion

8.0 Fireplace Setup

8.1 Glass Frame Assemblies (Firebox Glass)

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.

The fireplace has a front and back side. The front is marked “ACCESS SIDE” which has the glass frame assembly with spring loaded latches. The back side of the fireplace has a glass frame assembly that is fixed by flange nuts.

8.1.1 Front / Access Side Glass Frame Assembly

Removal of the Front Glass Frame Assembly

1. Remove the front (access side) safety screen barrier.
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 the 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.

When installing the Front Glass Frame Assembly proceed in reverse steps.

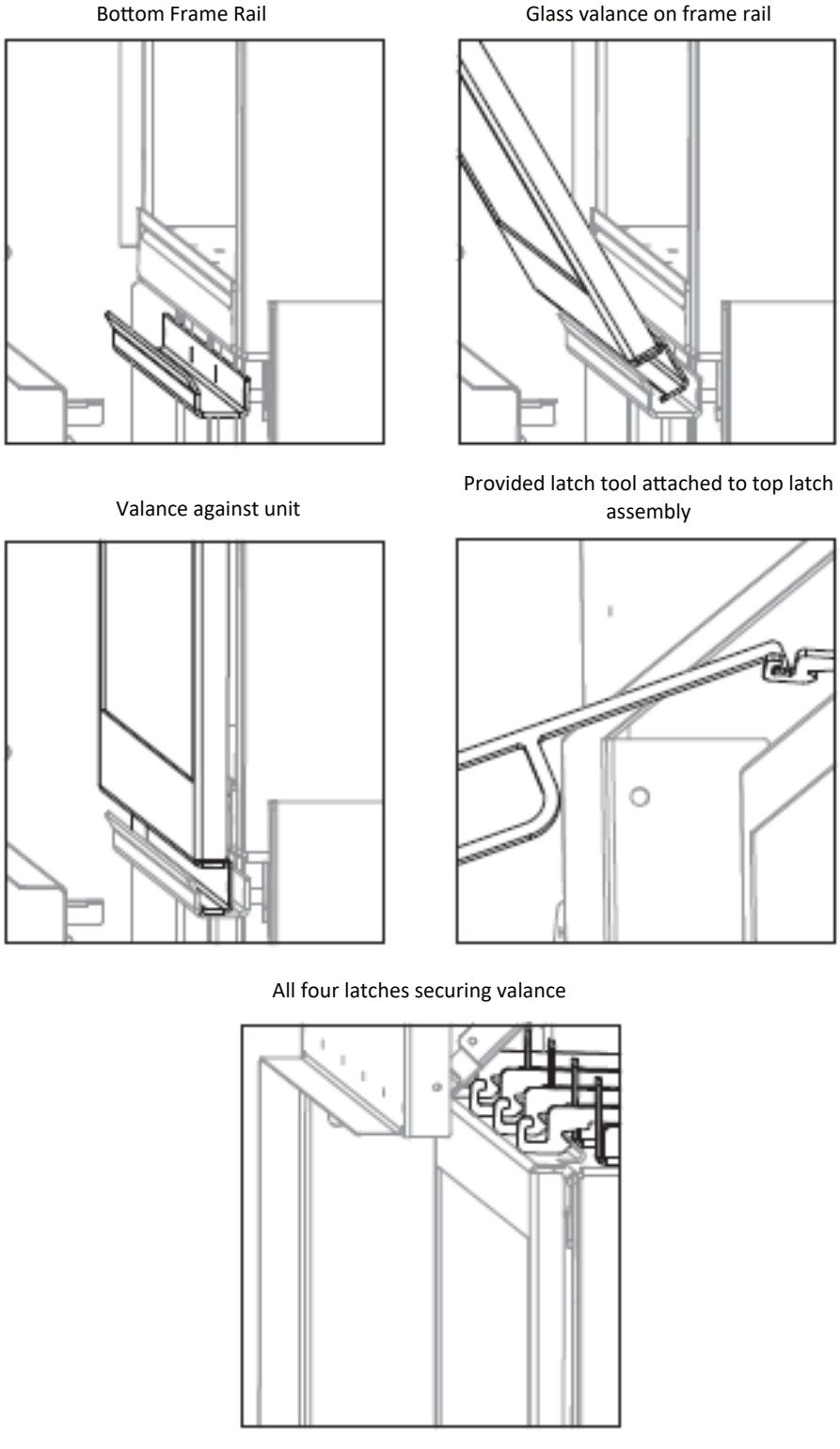


Figure 8.1 - Front / Access Side Glass Frame Assembly Removal

8.1.2 Back / Fixed Side Glass Frame Assembly

Removal of the Back Glass Frame Assembly

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

When installing the Back Glass Frame Assembly proceed in reverse steps.

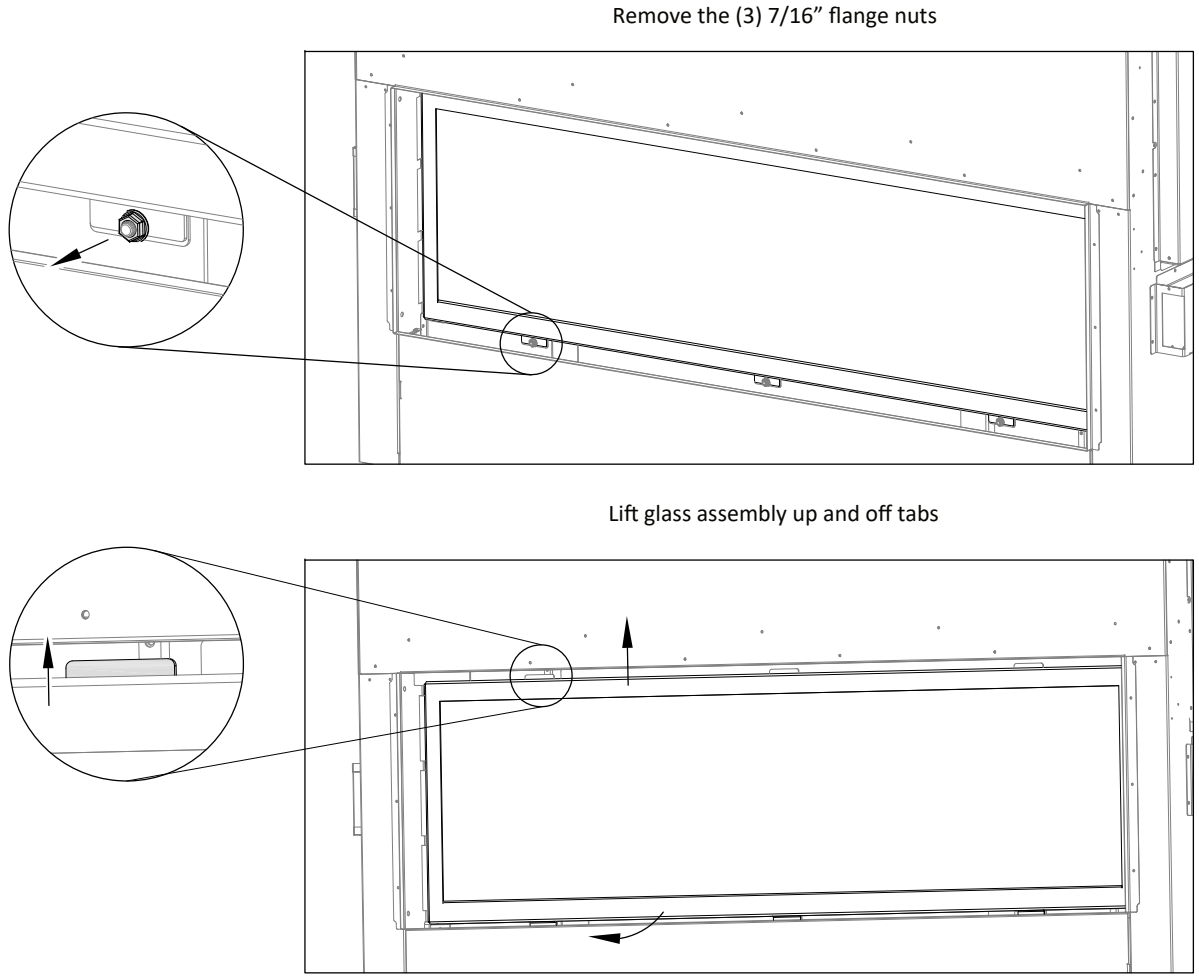


Figure 8.2 - Back / Fixed Side Glass Frame Assembly Removal

8.2 Component Access Cover

To access the gas control valve, control module housing, On/Off toggle switch, and remote learn button (SW1) red button, the component Access cover will need to be removed. It must be reinstalled after servicing.

1. Remove front (access) safety screen barrier.
2. Lift up and remove the component Access cover to gain access below the fireplace. See Figure 8.3.

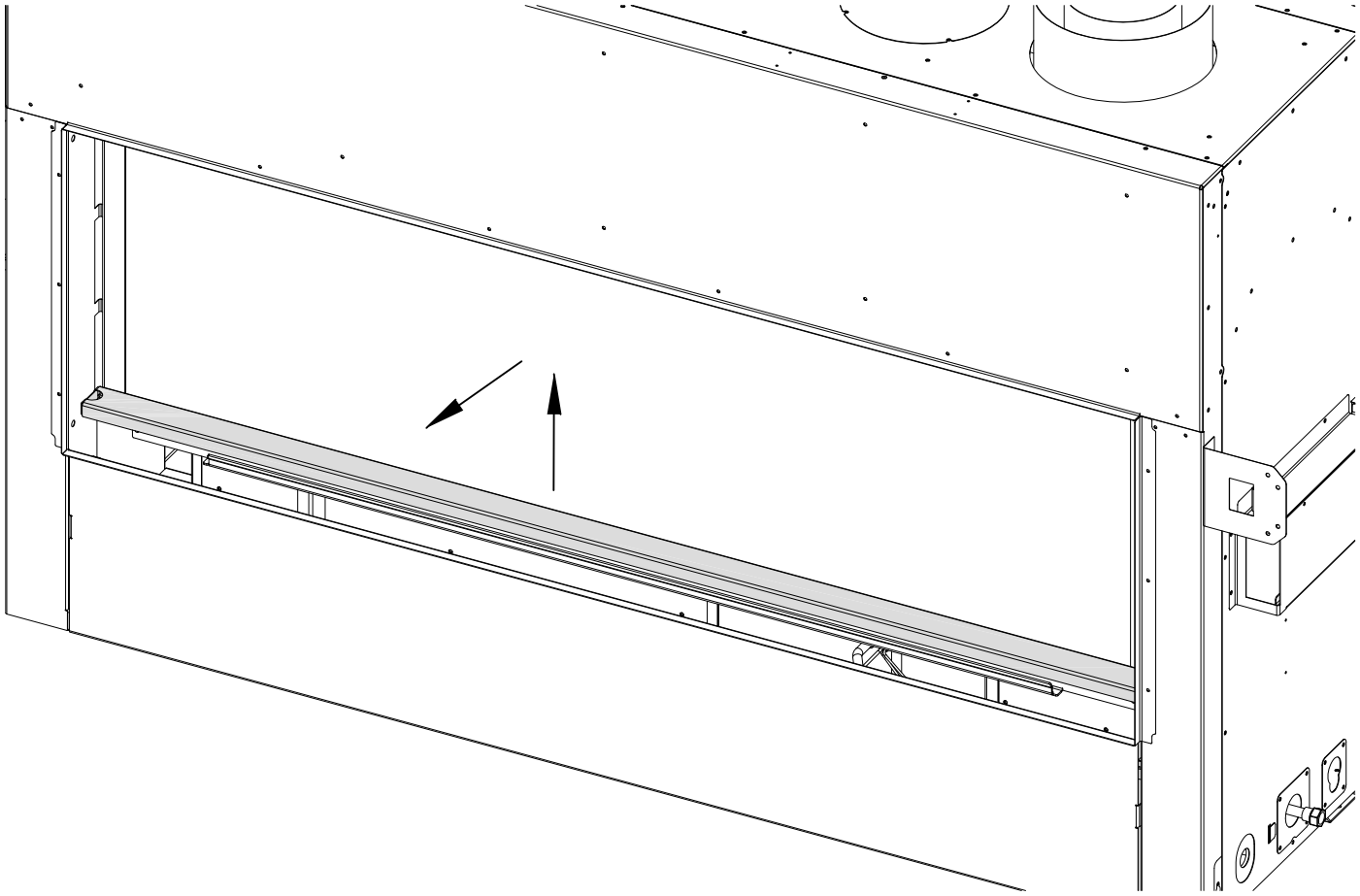


Figure 8.3 - Component Access Cover Removal

8.3 Safety Screen Barriers Installation

Note: 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 the manufacturer's barrier for this appliance.**
- **Clothing or other flammable material should not be placed on or near the appliance.**
- **Any safety screen, guard, or barrier removed for servicing an appliance must be replaced prior to operating the appliance.**

Installation:

The safety screen barriers have two mounting hooks on each side. There are slots on each side of the fireplace located between the glass frame and the fireplace side finishing edge. Align the mounting hook to the slot on each side of the fireplace and lift up the safety screen barrier and push towards the fireplace so the mounting hooks latch around the glass frame. You can tell that each safety barrier is correctly seated if there is even spacing between the safety screen barrier and fireplace finishing edge on all four sides.

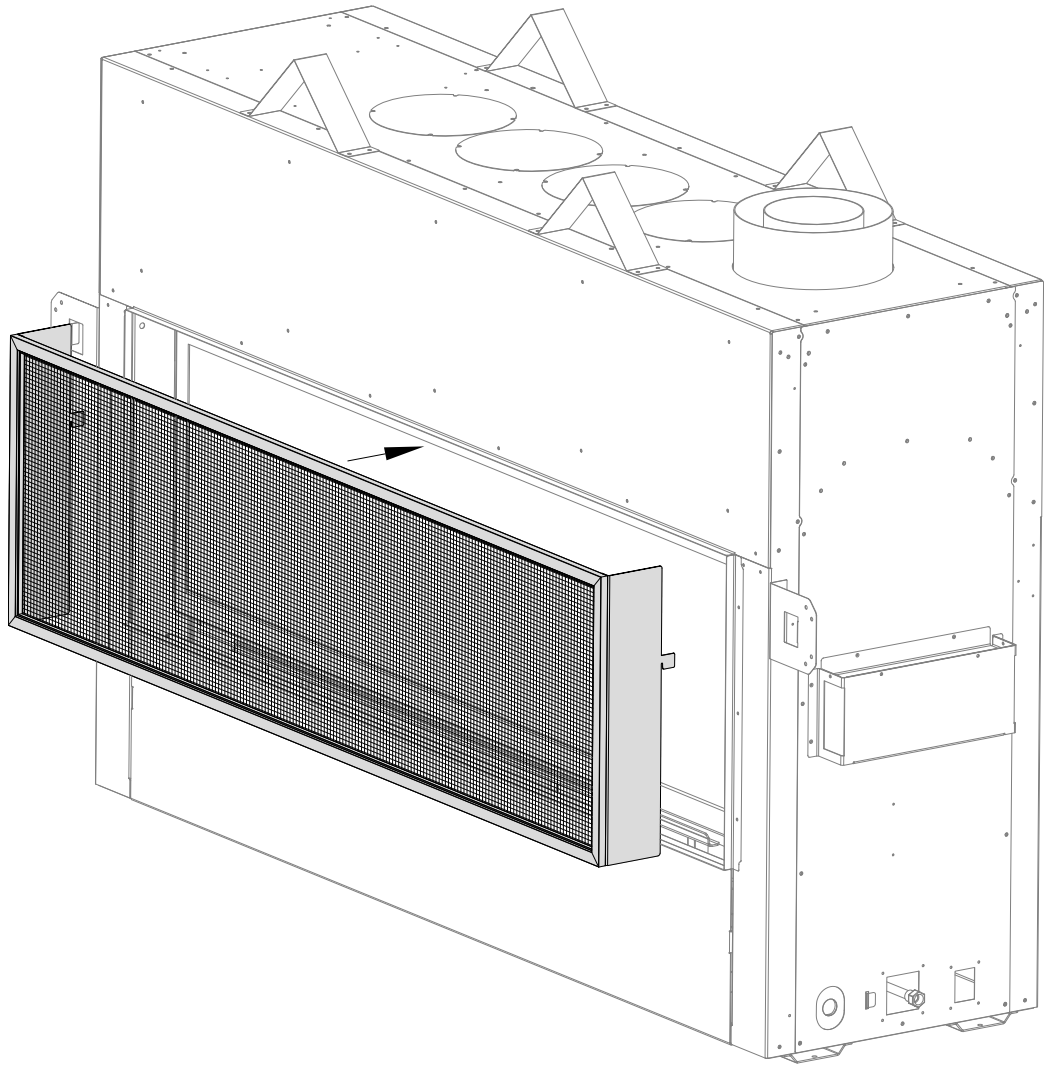


Figure 8.4 - Safety Screen Barrier Installation

8.4 Surround Installation (Optional)

Installation:

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

See Section 5.8 for optional surround finishing guidelines.

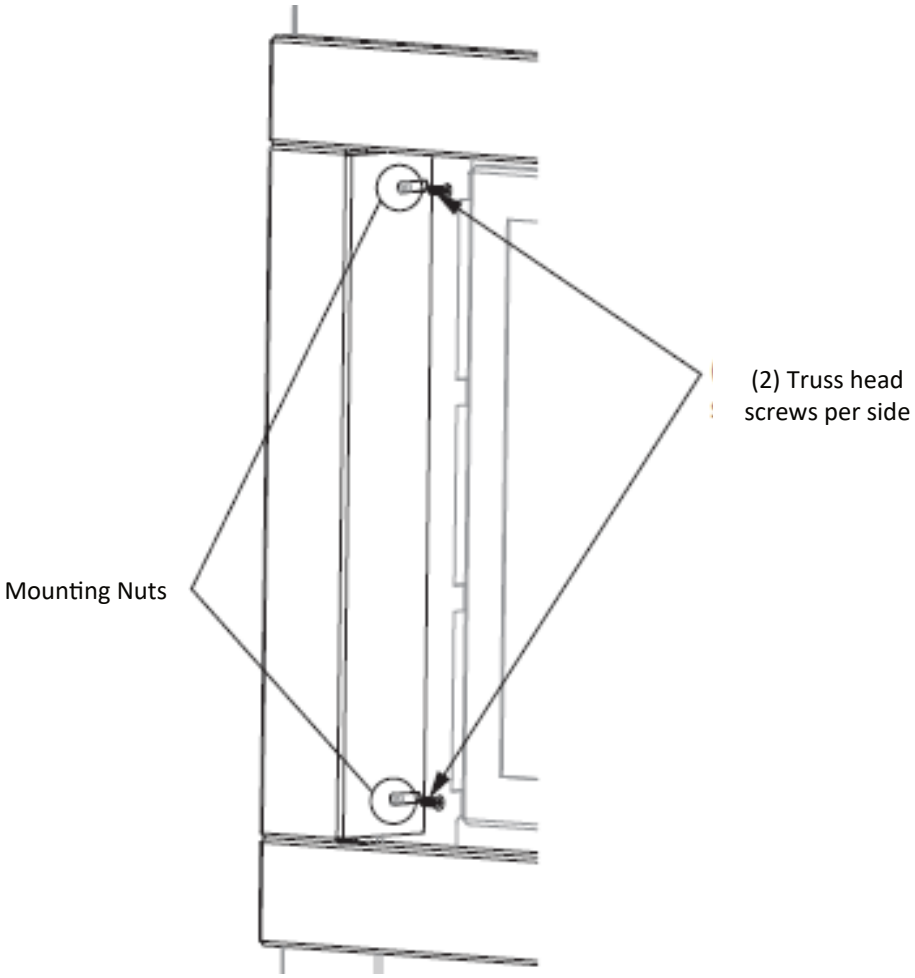


Figure 8.5 - Optional Surround Installation

8.5 Burner Tube Removal

1. Remove the fireplace front (access) safety screen barrier, component access cover, front (access) glass frame assembly, and firebox media.
2. Unscrew the media tray on top of the burner tube. Remove media tray and burner tube.
3. Reinstall in reverse steps. See Figure 8.6.

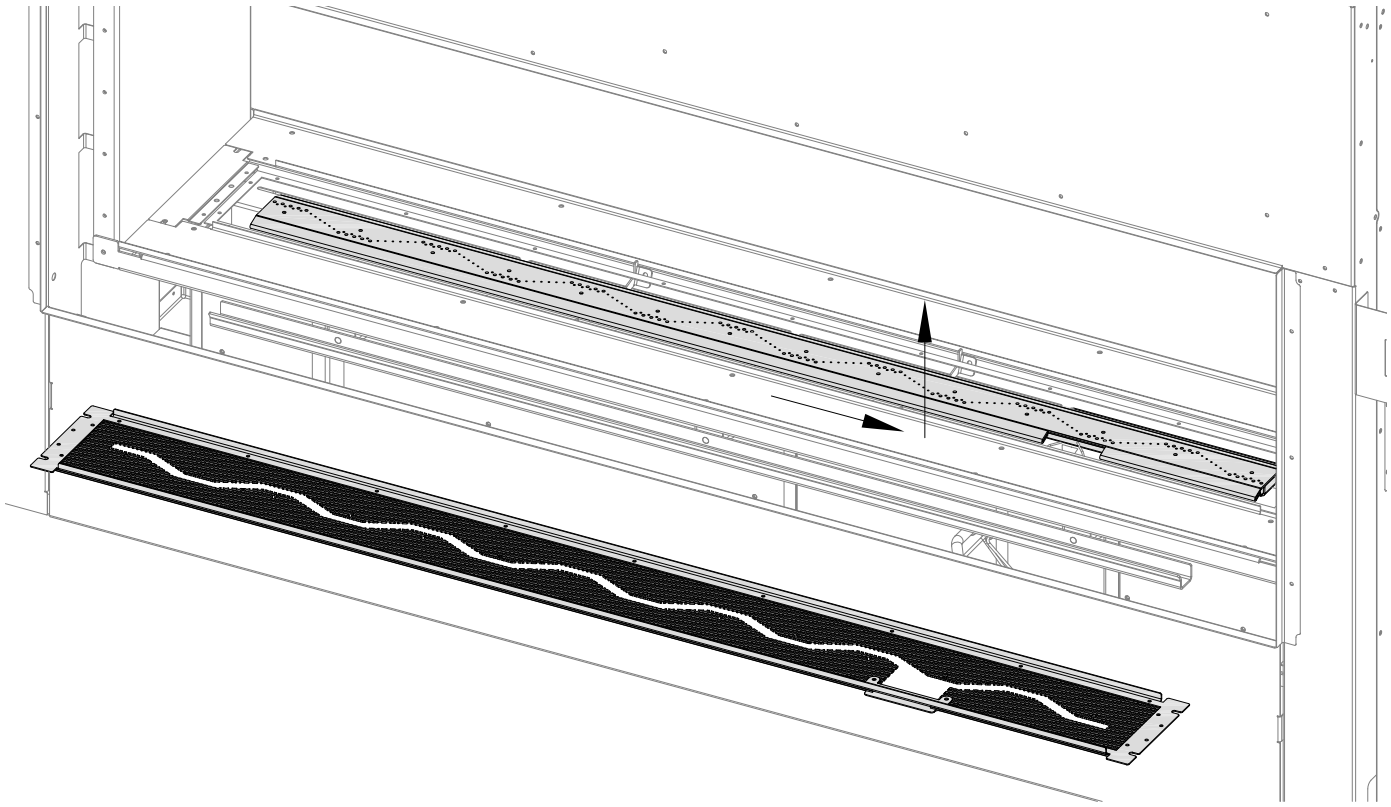


Figure 8.6 - Media Tray and Burner Removal

8.6 Panel Installation

Refer to the instructions that are included with the optional panel set.

- If converting to propane, complete the conversion before installing the panel set. Follow the conversion instructions included with the fireplace.

8.7 Log Set or Accent Media Installation

Refer to the instructions that are included with the optional accessory you have chosen. The four optional accessories are a Traditional Log Set (CWST-501), Birch Log Set (CWST-B501), Beach Accent Kit (CWST-BAK), or Rock Accent Media (500-RAM).

- If converting to propane, complete the conversion before installing the log set (or accent media). Follow the conversion instructions included with the kit.
- If installing an optional glass panel set, complete installation of panel set before log set (or accent media) installation. See Section 8.6

8.8 Burner / Perimeter Media Installation

IMPORTANT: It is required that no crushed media blocks the pilot flame from igniting the burner. A blocked pilot may cause a delayed ignition. Figure 8.7 shows an arrow that is pointing to the pilot shield around the pilot. Do not place media inside the media guard to cover or block the pilot.

IMPORTANT: Inspect and ensure the lighting of the main burner occurs within (4) seconds of the main gas valve opening.

Note: If you are installing one of the optional log sets ensure that it is placed down first on the media trays.

Burner Media Kits

- Part #903-LAV, #304-COP, or #304-BLK.
- Installation

1. Install an even layer of your chosen media across the whole burner. See Figure 8.7 below.
2. Note: #903-LAV - Install 2lbs. (0.9kg) bag only included with the kit.
3. Save any unused media for later use.

Perimeter Media Kits

- Part # 904-LAV, #306-COP, #306-BLK, #105-VERM, or #104-SAND-B.
- Installation

1. Install an even layer of media across the front and rear perimeter. See Figure 8.7 below.
2. Save any unused for later use.

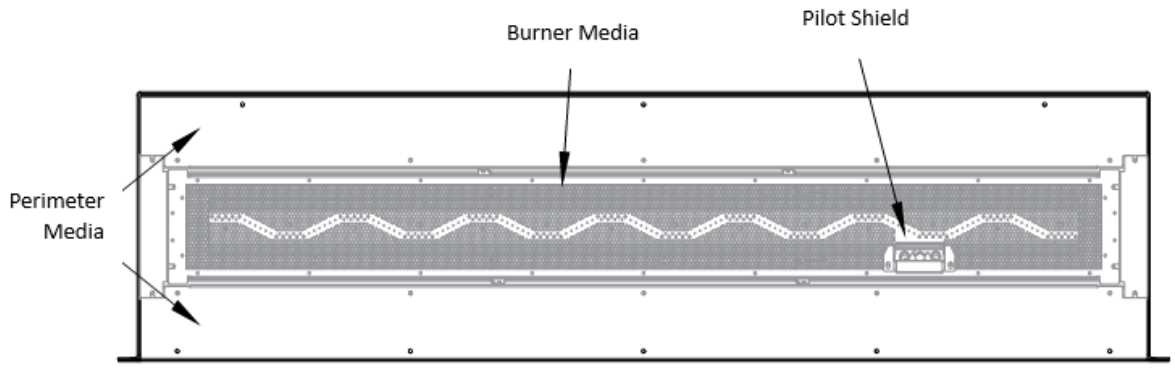


Figure 8.7 - Media Installation

8.9 Control Board Removal and Installation

WARNING: If burner and/or pilot have been burning, use appropriate protection to avoid burns or damage to personal property before removing any components.

DO NOT OPERATE THIS APPLIANCE WITHOUT THE SEALING GASKET (LOCATED UNDER THE CONTROL BOARD) IN PLACE. IF GASKETING IS DAMAGED, IT MUST BE REPLACED.

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

8.9.1 Control Board Removal

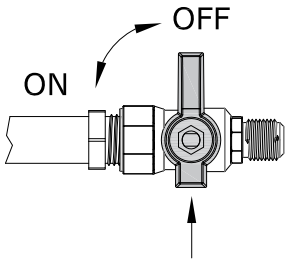
1. Locate the main gas shut-off valve upstream of the appliance connector and close valve. Next, disconnect electrical power of the fireplace. See Figure 8.8.
2. Remove the front safety screen barrier, component access cover, and front glass frame assembly. See Sections 8.1, 8.2, and 8.3.
3. Remove perimeter media and burner media. See Figure 8.8.
4. Remove burner media tray and burner (4) screws. Release the burner tube venturi off of the burner orifice and remove from firebox. See Figure 8.8.
5. Remove burner media tray support brackets (4) screws. See Figure 8.8.
6. Remove the front perimeter and media tray brace, and burner support brackets (9) screws total. See Figure 8.8.
7. Remove rear perimeter and media tray brace (7) screws. See Figure 8.9.
8. Remove bottom air diffuser (5) screws. See Figure 8.9.
9. Remove and save (8) screws securing the control board. See Figure 8.9.
10. Lift the control board out of the firebox, being careful not to damage the sealing gasket underneath. See Figure 8.9.

8.9.2 Control Board Installation

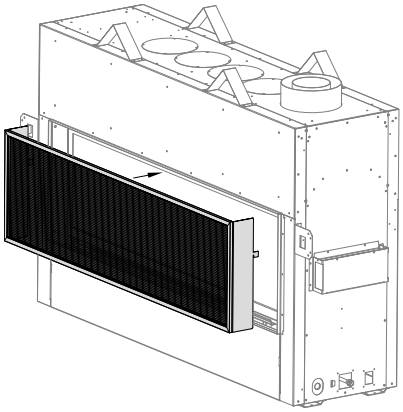
1. Place the control board in the firebox, aligning the holes in control board with the holes and alignment screws in firebox bottom. VERIFY SEALING GASKET IS IN PLACE.
2. Secure the control board with screws previously removed.
3. Align the holes on the air diffuser with the holes in the bottom of the 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 screen 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.

8.9 Control Board Removal and Installation (continued)

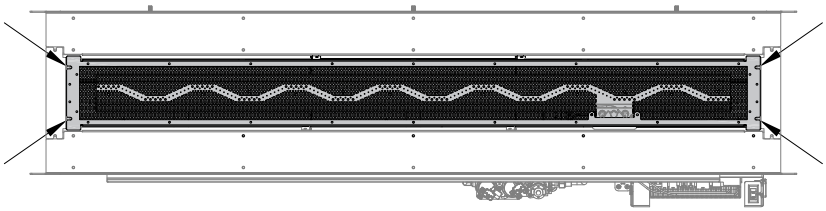
Turn Off Gas Valve.



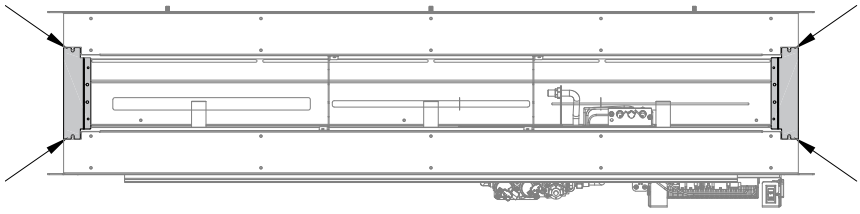
Safety Screen Removal.



Remove the burner and media tray.



Remove the burner media tray support brackets.



Remove the front perimeter, media tray brace, and burner support bracket.

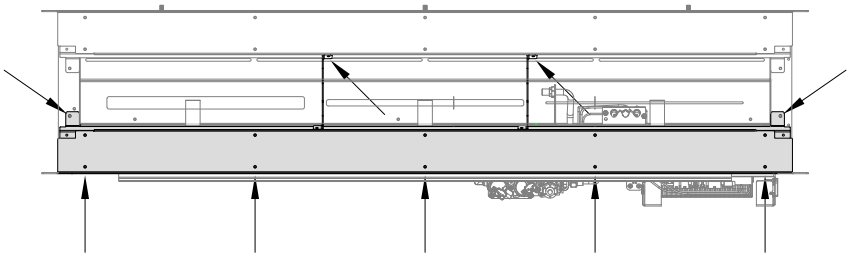
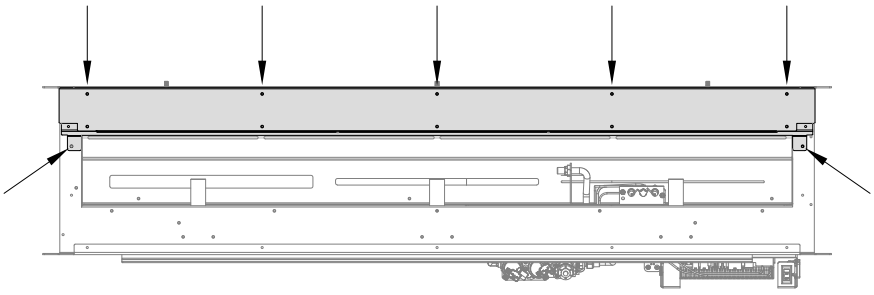


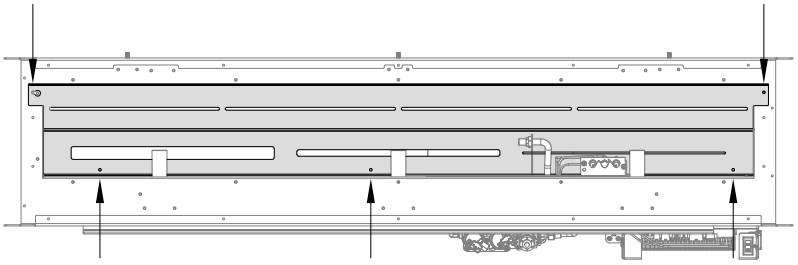
Figure 8.8 - Control Board Removal

8.9 Control Board Removal and Installation (continued)

Remove rear perimeter and media tray brace.



Remove air diffuser.



Control Board Removal.

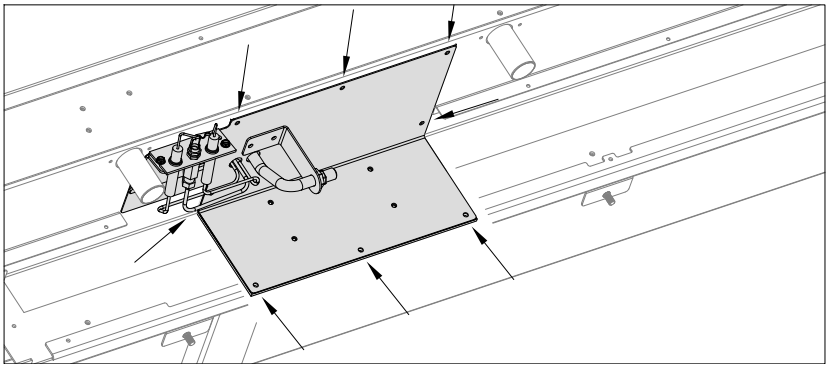


Figure 8.9 - Control Board Removal

8.10 #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.

Installation

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

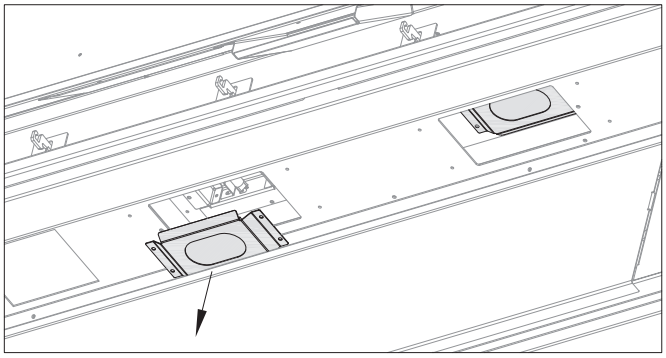


Figure 8.10 - Light Kit Location

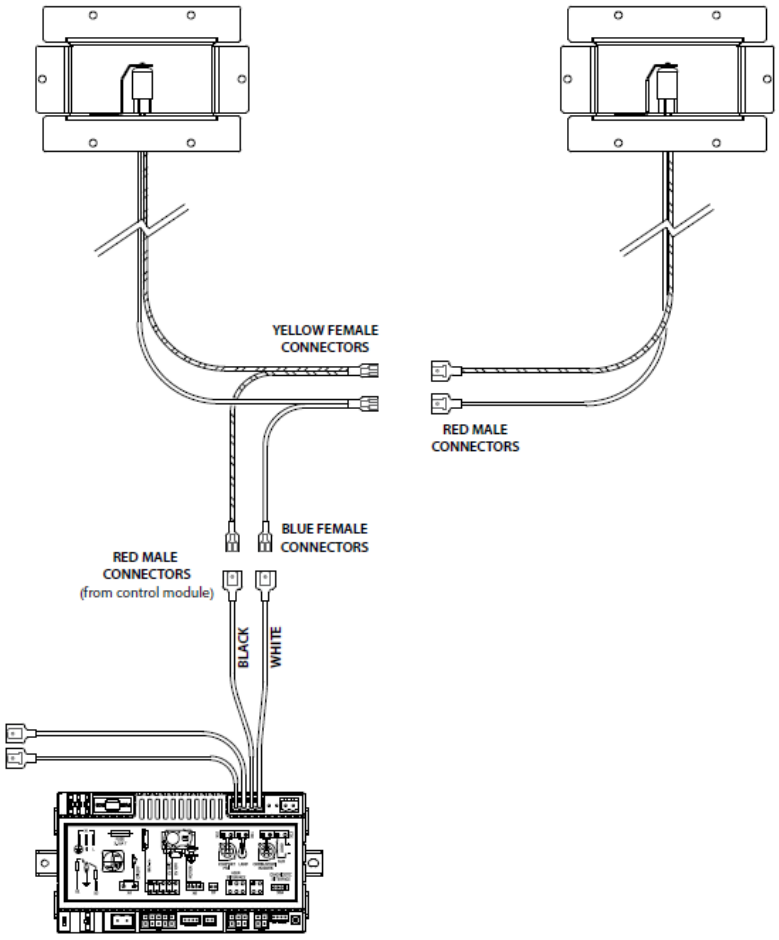


Figure 8.11 - Light Kit Wiring

8.11 #CWST-028 Fan Kit (Optional)

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 8.11.1 Fan Channel Block-off Plate for more information.

Installation

1. Remove the front safety screen barrier, component 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 8.12.
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 8.12. 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
10. Reinstall the front glass frame assembly, component access cover and front safety screen barrier.

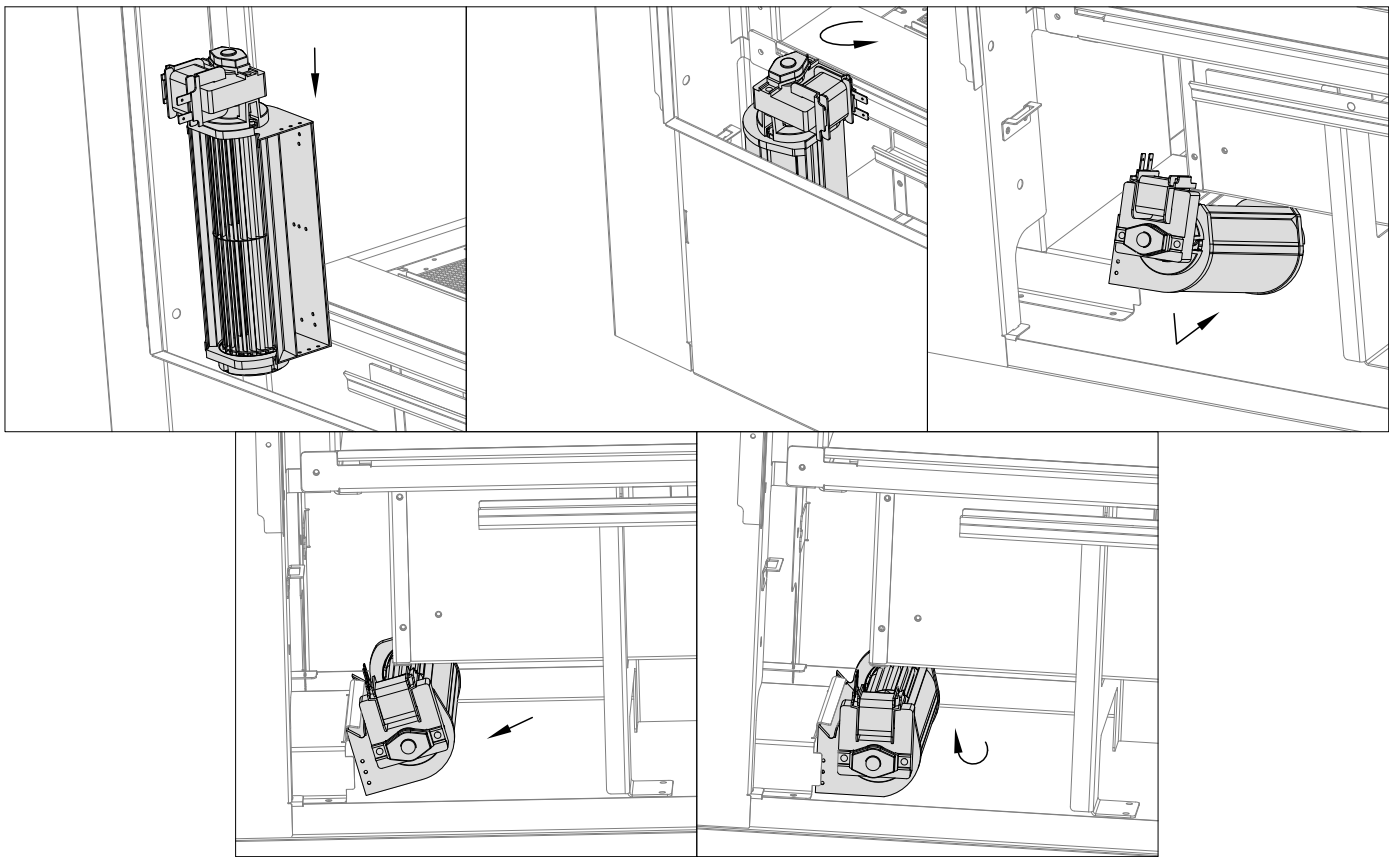


Figure 8.12 - #CWST-028 Fan Kit Installation

8.11.1 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 the front safety screen barrier, component access cover, and front glass frame assembly.
2. Locate the fan channel plates on the upper heat shield inside the firebox. See Figure 8.13.
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.

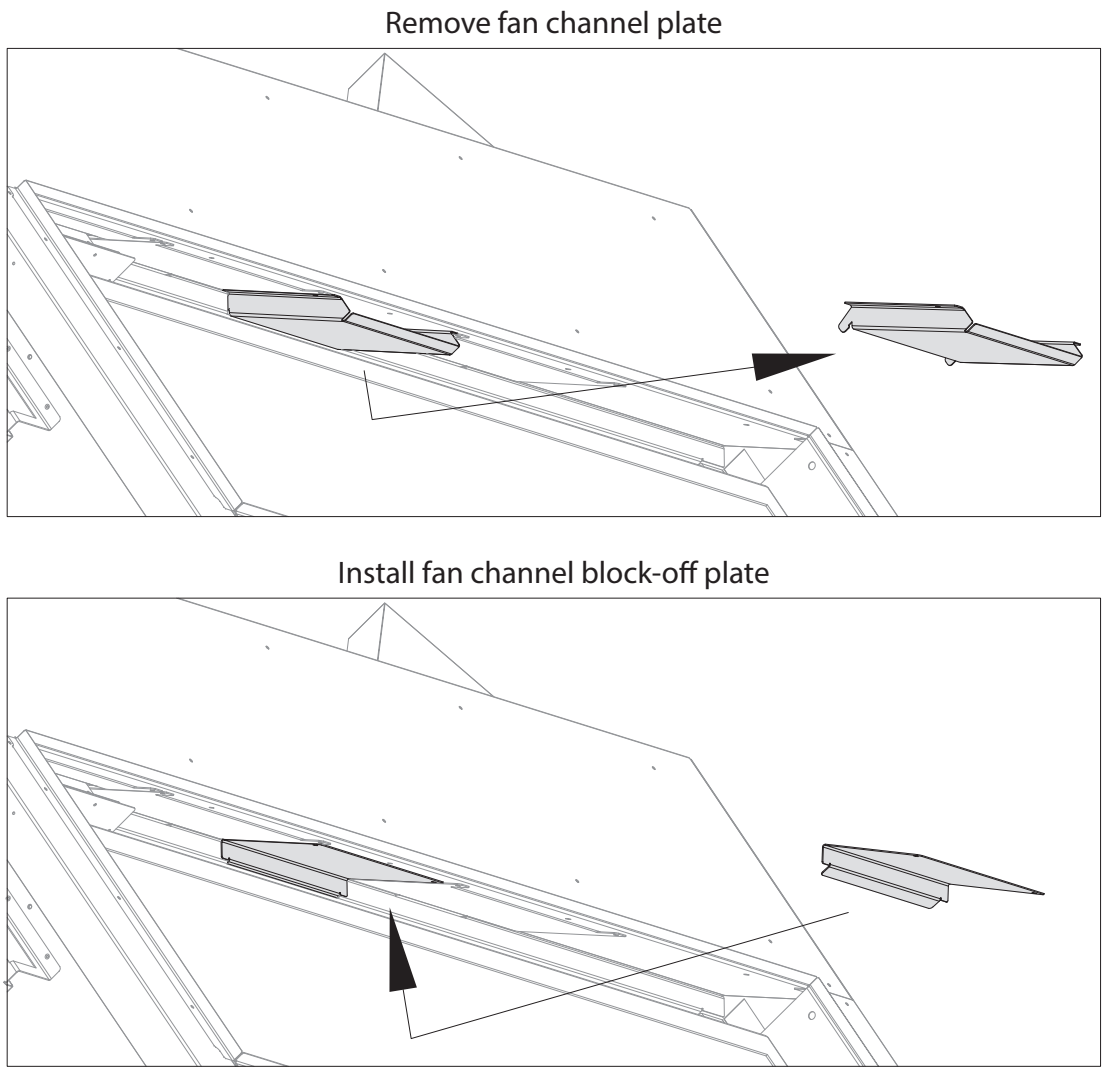


Figure 8.13 - Fan Channel Block-Off Plate Installation (shown from access side)

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 system requires 120 VAC of electricity and/or batteries to operate.
- Using the battery backup will operate flame modulation of the burner.
- Fan and light components will not function on battery back up power

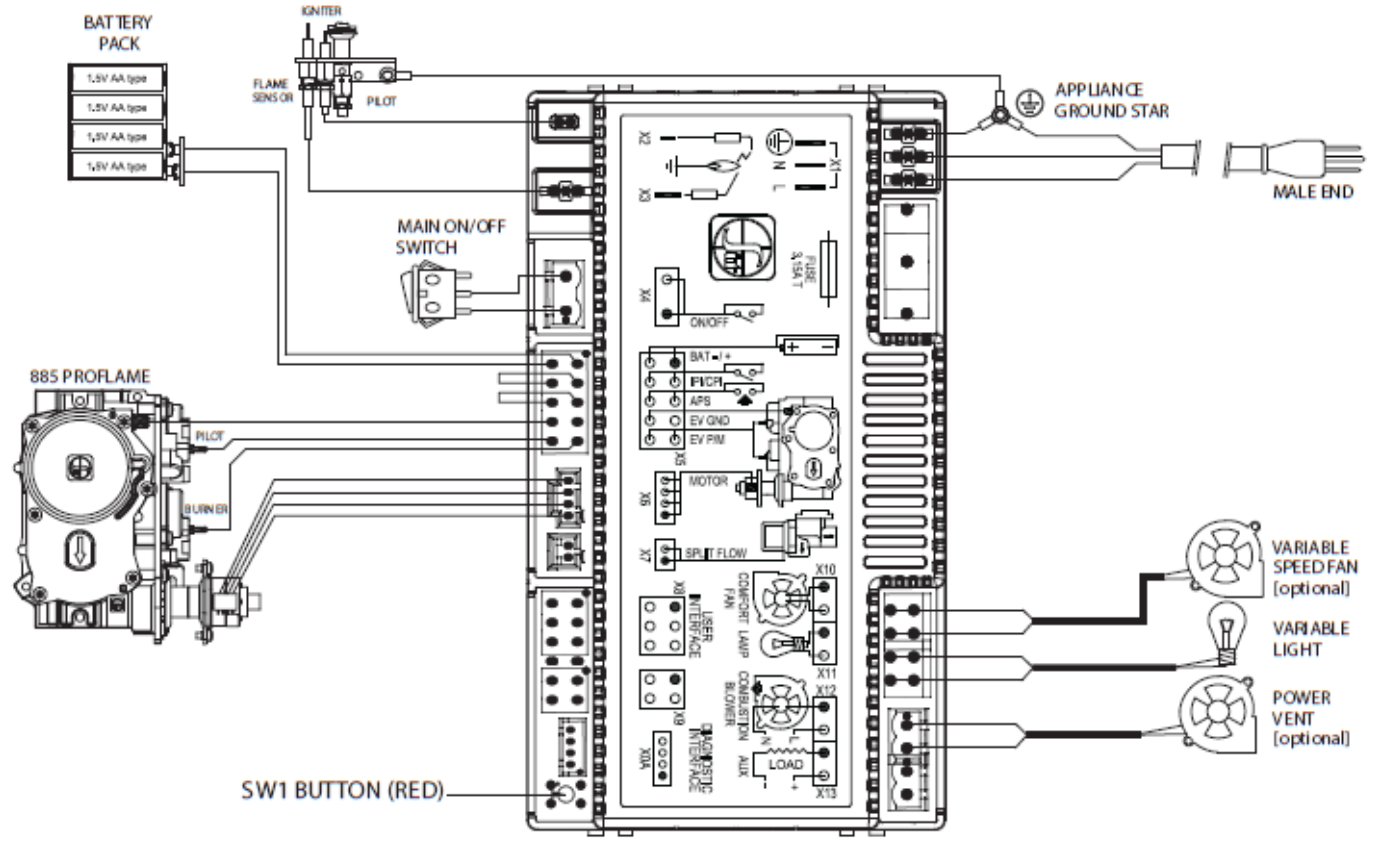


Figure 9.1 - Electrical Diagram

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 that automatically lights the pilot. Do not try to light the pilot by hand.

B. BEFORE OPERATING, smell around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

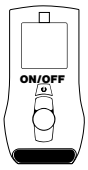
- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

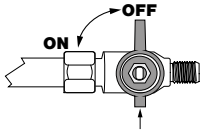
C. Use only your hand to turn the gas control manual valve. Never use tools. If the valve will not turn by hand, do not try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.

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

OPERATING INSTRUCTIONS

1. STOP! Read the safety information above on this label. This appliance is equipped with an on-demand pilot that shuts off after 7 days of time.
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.

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.

10.1 Setup Proflame 2 IFC Module

1. Set the main ON/OFF rocker switch in the OFF position.
2. Install (3) AAA batteries (included in the components packet) in the remote control battery bay, located at the base of the remote.
3. 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. To access the ON/OFF toggle switch and remote learn button, remove the front safety screen and front component access cover (See Section 8.3 and 8.2).
2. Press the remote sync button. The IFC module will BEEP (3) times and illuminate an amber LED. This indicates the receiver is ready to synchronize with the transmitter.
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. Reinstall the previously removed components.

10.3 Reset the System for Manual Operation

1. To access the ON/OFF toggle switch and remote learn button, remove the front safety screen and front component access cover (See Section 8.3 and 8.2).
2. Locate the remote sync button by sliding out the control module.
3. Set the ON/OFF rocker switch to OFF position.
4. Press and hold the remote sync button until it emits (3) beeps and an amber LED is illuminated.
5. Within (5) seconds, press the remote sync button again. This will close synchronization with the remote control. The pilot will automatically light.

- Turn the main burner ON by setting the ON/OFF switch in ON position. The main burner will only operate on HI.
- Turn the main burner OFF by setting the ON/OFF switch in the OFF position. The pilot will remain lit even if burner is turned off, provided CPI mode is turned on.

10.4 Automatic Safety Turn-off

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

10.5 Backup Battery Operation

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

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

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 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

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.

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.

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 .

10.9 Remote Control Operation

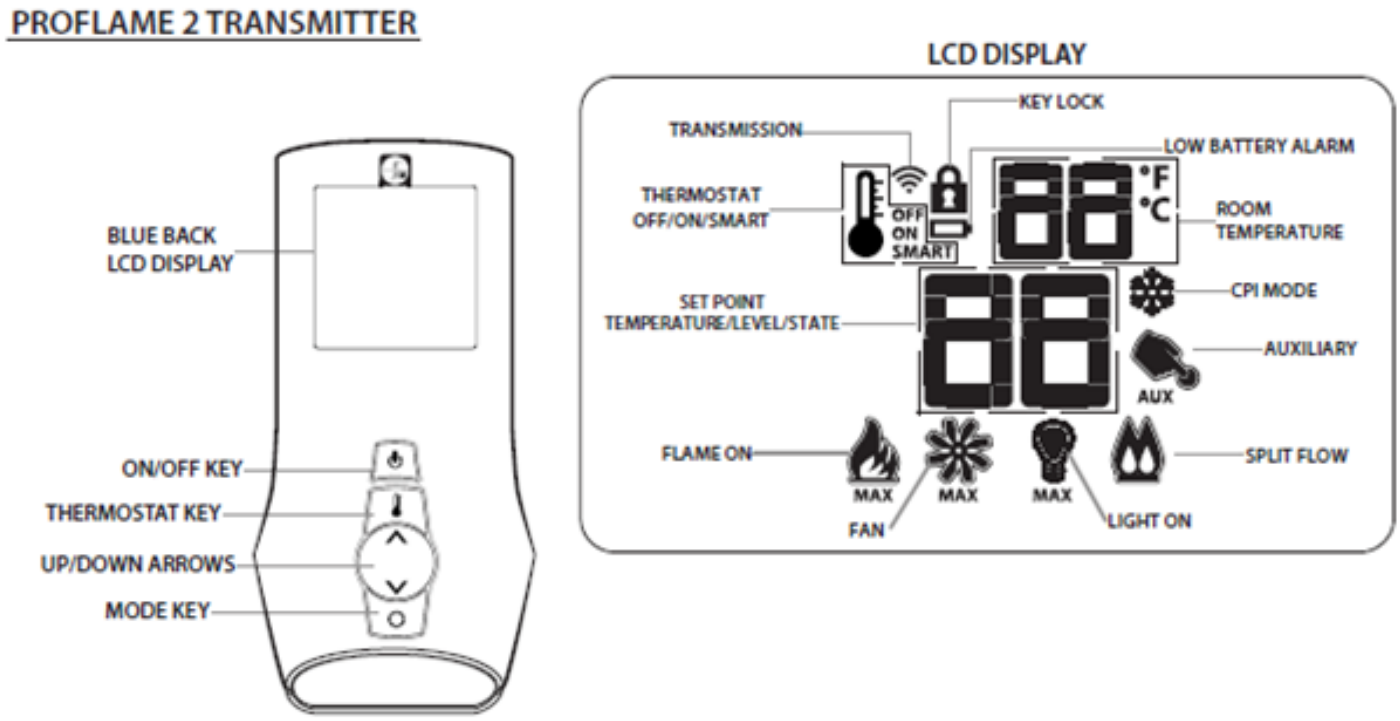


Figure 10.1 - Remote Control Overview

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.

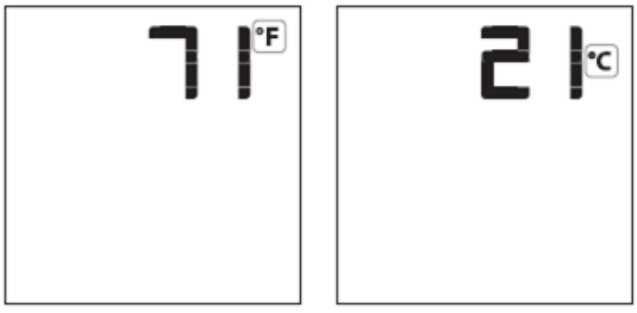


Figure 10.2 - Temperature Display

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.

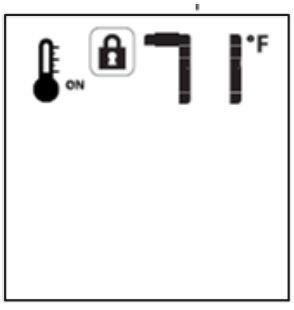


Figure 10.3 - Key Lock

10.9.3 Pilot Ignition Selection (IPI/CPI)

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

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

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

When the system is ON,

IPI mode: LCD screen will not display the snowflake icon

CPI mode: LCD screen will display the snowflake icon

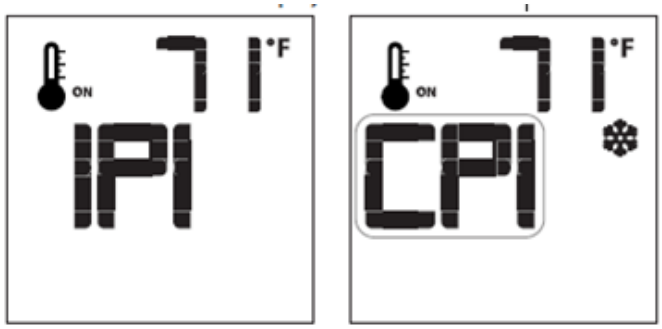


Figure 10.4 - Pilot Selection

10.9.4 Turn ON/OFF the Appliance

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.

Turn OFF the appliance

1. With the system in the ON position, press the remote control ON/OFF key to turn OFF 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.

10.9.5 Remote Control Flame Adjustment

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

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

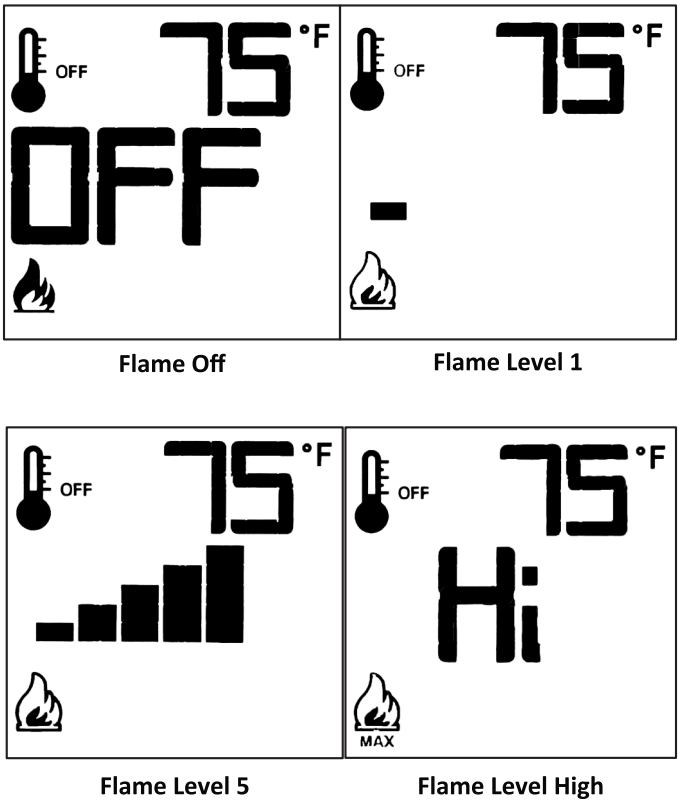


Figure 10.5 - Flame Adjustment

10.9.6 Deactivate of Flame Modulation

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

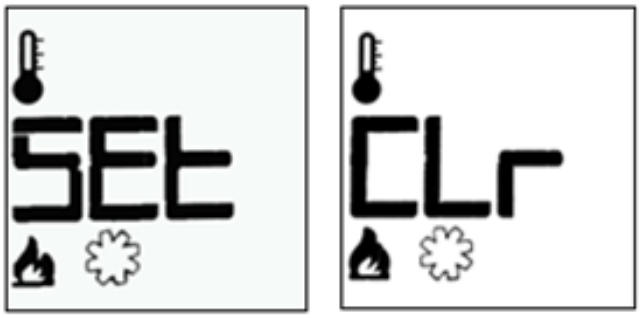


Figure 10.6 - Deactivate Flame Modulation

10.9.7 Thermostat Operation

Room Thermostat

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

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

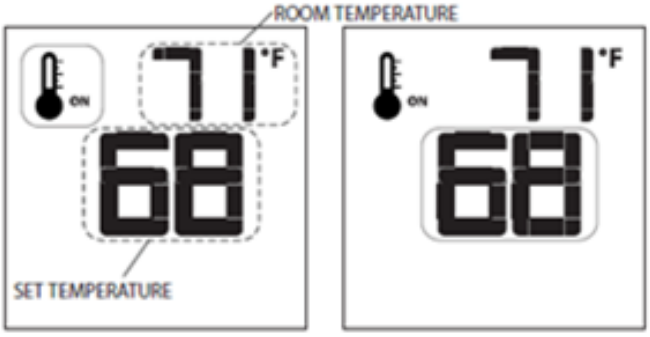


Figure 10.7 - Thermostat Operation

Smart Thermostat

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

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

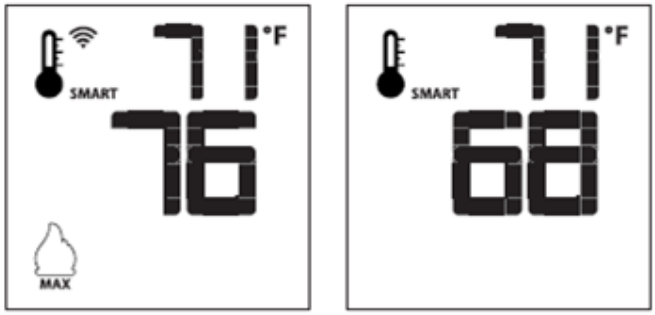


Figure 10.8 - Smart Thermostat Operation

10.9.8 Deactivate of 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. Remove (1) AAA battery.
2. While reinserting the battery, push and hold the thermostat key. You will see "CLR" across the screen. This means the thermostat function is turned off. The temperature bulb graphic will not be displayed on the LCD screen the next time you operate the remote.

- To reactivate remote thermostat operation, follow the same key sequence procedure above. The screen will then say "SEL" which means the thermostat function is turned on. The temperature bulb graphic will reappear on the LCD screen.

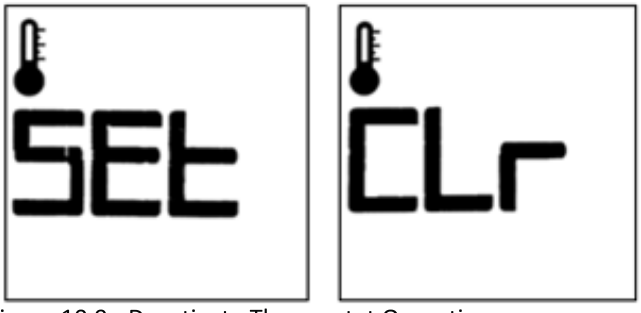


Figure 10.9 - Deactivate Thermostat Operation

10.9.9 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.

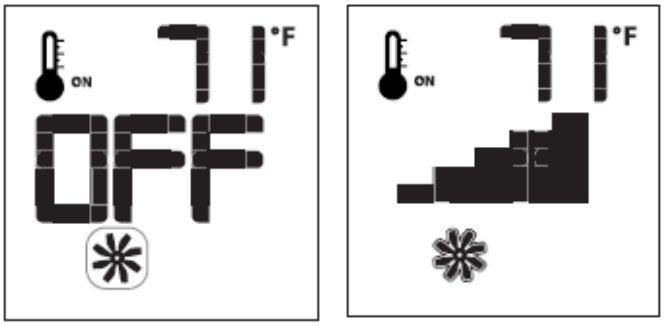


Figure 10.10 - Fan Speed Control

10.9.10 Top Accent Light Kit Operation

The top 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.

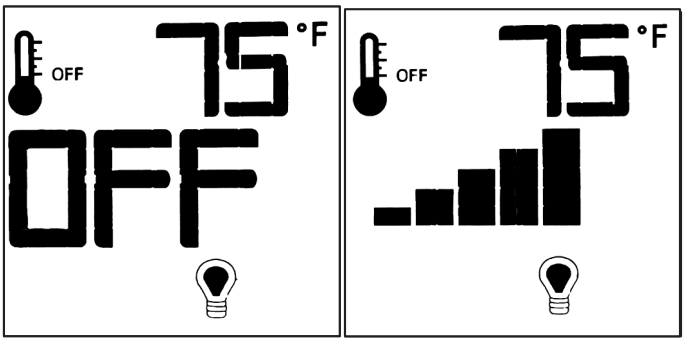


Figure 10.11 - Top Light Kit Operation

10.9.11 Deactivation of Top Light Kit

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 ‘SEL’ or ‘CLR’.

Figure 10.12 - Top Light Kit Deactivation

10.9.12 Remote Control Low Battery Detection

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

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

Figure 10.13 - Low Battery

11.0 Pressure Testing and Burner Adjustments

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 1/2 psi (3.5 kPa).

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

11.1.1 Inlet Pressure Test

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

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

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

11.1.2 Manifold Pressure Test

1. Light pilot. Loosen manifold (OUT) pressure tap by turning screw counter-clockwise. See (B) in Figure 11.1.
2. Attach manometer to pressure tap using a 1/4” (6mm) I.D. hose.
3. Light burner. Set burner to low and high settings. Check manometer reading. Refer to Table 11.2.
4. Turn burner and pilot off.
5. Disconnect manometer hose and tighten the manifold (OUT) pressure tap by turning screw clockwise. Screw should be snug. Do not over tighten.
6. 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” - 10.0” WC (1.25 - 2.49 kPa) 7” WC (1.74 kPa) Recommended	12”-13” WC (2.99 - 3.24 kPa)

Table 11.2 - Manifold Pressures

Fuel	Natural Gas	Propane
Gas Supply	Low - High	Low - High
Manifold Pressure Tap (B)	1.1” - 3.8” WC (0.27 - 0.95 kPa)	2.9”-11” WC (0.72 - 2.74 kPa)

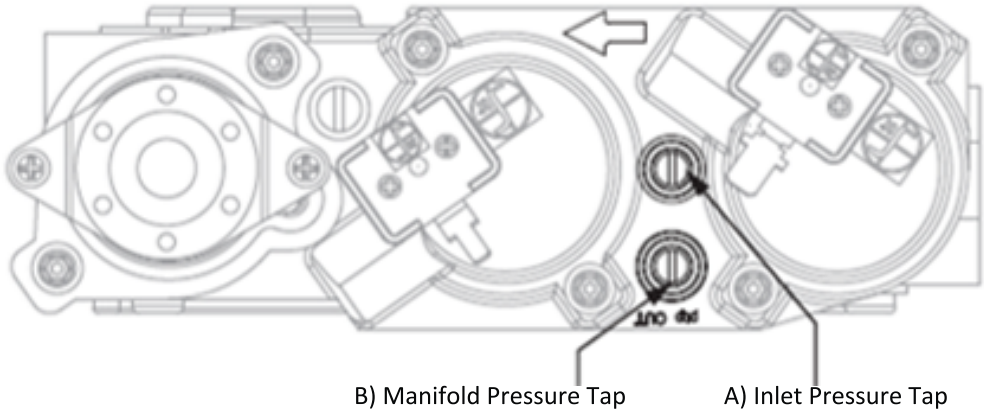


Figure 11.1 - Pressure Check Taps

11.2 Flame Appearance Adjustment

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

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

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.

11.2.2 Venturi Opening Adjustments

IMPORTANT: Slight adjustments to the venturi opening will create significant changes. Adjust at slight increments until desired look is achieved. Refer to Table 11.4 and Figure 11.3. Always burn the fireplace for at least 15 minutes, and allow the appliance ample time to cool before making any further adjustments.

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

1. Remove the front (access side) safety screen barrier, component 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.

Table 11.3 - Factory Set Venturi Openings

Fuel	Natural Gas	Propane
Venturi Opening	1/8” (3mm)	1/4” (6mm)

Table 11.4 - Flame Appearance Venturi Adjustment

Flame Characteristics	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
Lighting (ghosting) flames	Gas pressure too high and/or venturi closed too far	Check manometer settings and/or open venturi setting slightly

11.2 Flame Appearance Adjustment (continued)

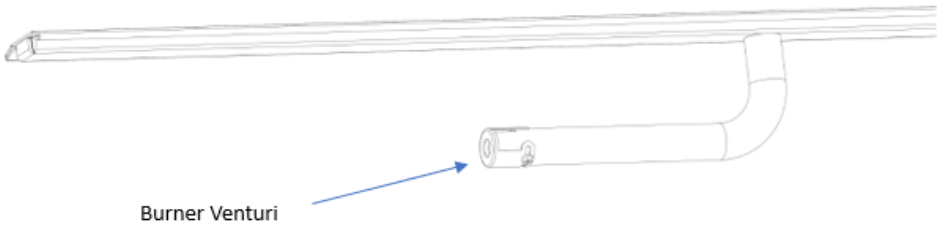
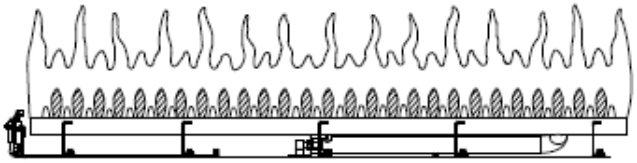


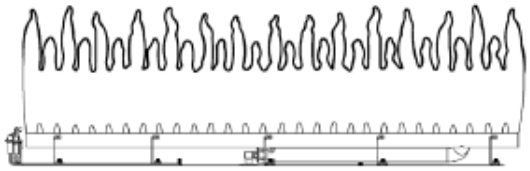
Figure 11.2 - Burner Venturi Location

Ideal Flame Appearance



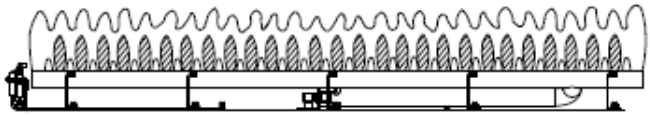
Lazy, yellow flames - no adjustment necessary

Dark, orange flames with black tips



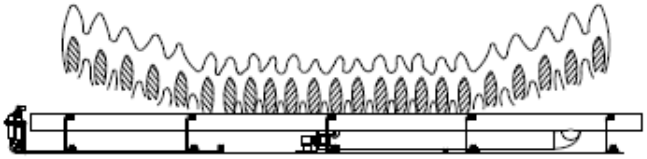
Venturi setting closed too far. Open venturi slightly

Short, blue flames



Venturi open too far. Close venturi setting slightly

Lifting (ghosting) flames



Venturi setting closed too far. Open venturi slightly or
Gas pressure is too high - check manometer settings

Figure 11.3 - Flame Appearance

11.2.3 Vent Restriction (after installation)

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

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

Vertical terminations may display an active, compact flame. If this appearance is not desirable, a restrictor plate may need to be installed or modified after vent termination installation. Access to the vent exit for restriction can be reached through the fireplace baffle (remove and reinstall cover plate). See Figure 11.4

Refer to Table 11.5 and Figure 11.3 for flame appearance adjustments. Allow the fireplace to burn for 15 minutes before making any adjustments.

Restrictor Plate Installation

1. Remove the front safety screen barrier and front glass frame assembly.
2. Locate the baffle cover plate (left side of Figure 11.4). Remove the baffle cover plate via (4) screws. Save screws.
3. Bend the tabs on the restrictor plate (included in fireplace components packet) to approximately 80° angles. This will create tension when the restrictor plate is inserted into the exhaust pipe.
4. Insert restrictor plate into the 5" (127mm) exhaust pipe with the tabs pointing down.
5. Reinstall the baffle cover plate with (4) screws previously removed.
6. Reinstall all components previously removed.

Restrictor Plate Modification

1. Remove the front safety screen barrier and front glass frame assembly.
2. Locate the baffle cover plate (left side of Figure 11.4). Remove the baffle cover plate via (4) screws. Save screws.
3. Remove the restrictor plate from the 5" (127mm) exhaust pipe by pulling the restrictor plate down and out.
4. Make necessary modifications to achieve desired flame appearance. See Table 11.5.
5. Insert restrictor plate into the 5" (127mm) exhaust pipe with the tabs pointing down.
6. Reinstall the baffle cover plate with (4) screws previously removed.
7. Reinstall all components previously removed.

Table 11.5 - Restrictor Plate Adjustment Guidelines

Flame Appearance	Draft Problem	Solution
Short, Flickering	Excessive draft and/or not enough restriction	Add restrictor plate
Lifting, ghosting*	Insufficient draft	Remove inner ring(s) on restrictor plate or remove restrictor plate

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

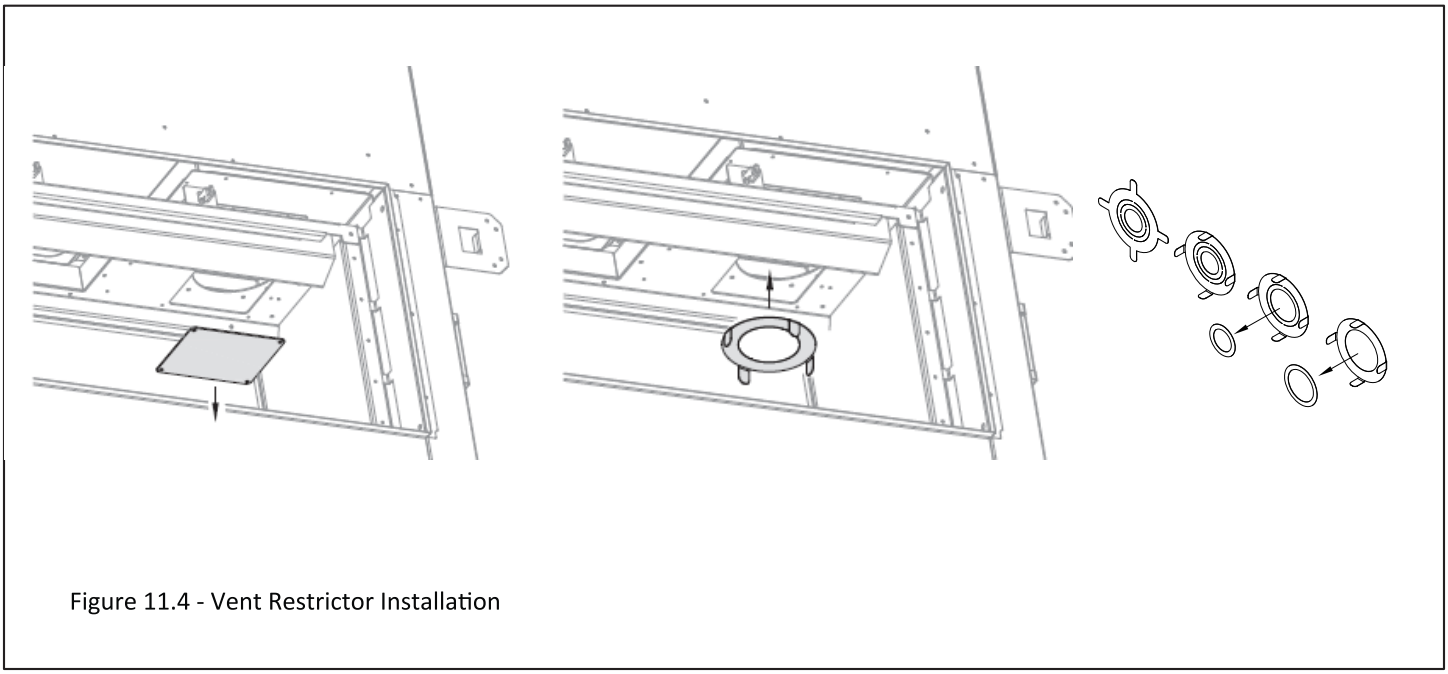


Figure 11.4 - Vent Restrictor Installation

12.0 Maintenance

ATTENTION: Installation and repair should only done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning might be required due to excessive lint from carpeting, bedding material, pets, etc. 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.

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

12.1 Firebox

Performed by: Qualified Service Person

Frequency: Annually
Action:

- Vacuum and clean any debris in the firebox that is not supposed to be there.
- Inspect and operate the bottom latch assembly 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.

12.2 Fan

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

Performed by: Qualified Service Person
Frequency: Annually
Action:

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

12.2.1 Fan Kit Removal

1. Disconnect electrical power.
2. Remove the safety screen barrier and component access cover.
3. Disconnect the fan kit wiring from the control module.
4. Rotate and tilt the fan kit up to remove the fan from the air channel.
5. Remove the fan kit and service.
6. Reinstall in reverse order. Reinstall all previously removed components

12.3 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, Vent System Requirements and Information.

Performed by: Qualified Service Person
Frequency: Annually
Action:

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

12.4 Glass Frame Assemblies

CAUTION: Do not operate appliance with any glass frame 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 assemblies. Avoid abrasive cleaner. DO NOT clean glass while it is hot.

IMPORTANT: Any safety screen barrier, guard, or glass frame assembly 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 frame assemblies on a flat, stable surface.
- Remove safety screens and glass frame assemblies.
- Clean glass windows 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 frame assemblies and safety screens. Do not operate fireplace without the glass frame assemblies and the safety screens.

Performed by: Qualified Service Person

Frequency: Annually
Action:

- Clean glass windows 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 frame assemblies are properly intact and not damaged.
- Replace the glass and the assemblies with #701-019T as necessary.
- Only Hussong Mfg. Co., Inc. will supply the replacement of glass assembly as a complete unit.

The front glass frame assembly and the spring loaded latches act as the pressure relief mechanism.

Performed by: Qualified Service Person

Frequency: Annually
Action:

- Follow the steps above to verify the front glass frame assembly.
- Verify that the spring loaded latches move freely as outlined in 12.1.

12.5 Burner and Pilot System

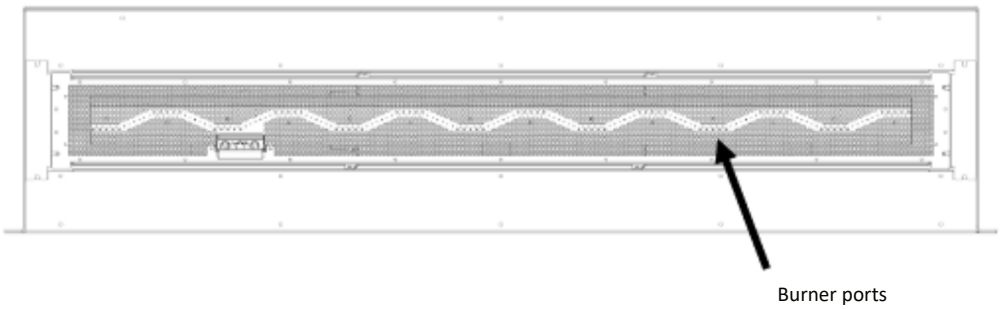
The burner assembly may be removed for easier access to the control compartment. **See Section 8.9 Control Board Removal and Installation** for instructions. **See Section 11.2 Flame Appearance Adjustment** for information on adjusting burner appearance.

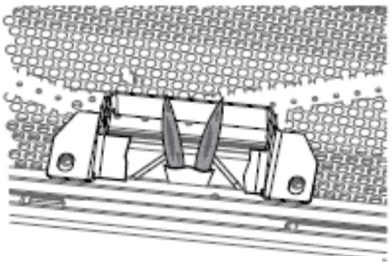
Verify gas supply is turned on and filled. Consult with plumber or gas supplier as necessary.

Performed by: Qualified Service Person

Frequency: Annually
Action:

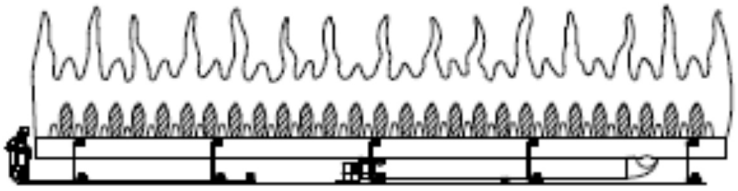
- Vacuum all components of the burner system.
- Check all accessible gas-carrying tubes, connections, pipes and other components for leaks.
- Inspect the operation of the flame safety system Pilot or Flame rectification device. Visually check pilot light when in operation.
- Inspect and ensure the lighting 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. Burner ports in burner tube are shown in Figure 12.1.
- 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.





Correct Pilot Flame Appearance

Ideal Burner Flame Appearance



Lazy, yellow flames - no adjustment necessary

Figure 12.1 - Correct Burner and Pilot Flames Appearance

12.6 Top Halogen Light Kit

Note: The top light kit will have the halogen bulbs installed from the factory. Follow the instruction below for bulb replacement. See Section 8.10 for more information.

Performed by: Qualified Service Person

Frequency: Replace as needed.
Action:

1. Remove the front safety screen barrier, component access cover, and front glass frame assembly.
2. Remove the light kit cover, glass, and glass gasket via (4) screws. Save screws.
3. Install (1) halogen bulb into each lamp base. There are (2) locations in the top of the firebox for halogen bulbs for the top light kit.
4. Reinstall all components previously removed. Ensure the glass gasketing is correctly installed.

13.0 Troubleshooting

ATTENTION: Troubleshooting must be performed by a qualified technician.

Before proceeding with the steps in the following troubleshooting guide,

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

Issue	Cause	Solution
Pilot will not light	Electrical power interrupted or disconnected	Restore electrical power to appliance or use battery back-up. Ensure batteries are fully charged if using battery back-up as a power source.
		Ensure batteries are fully charged if using battery back-up as power source.
	Wiring disconnection	Use wiring schematic in this manual to determine that all wiring connections are secure and correct. Refer to Section 9.0, Electrical Information.
	Gas supply turned off	Check remote shut-off valves from the appliance. Usually there is a valve near the main gas line. There may be more than (1) valve between the appliance and main gas line.
Pilot will not stay lit	No propane in tank	Check propane tank. Refill if necessary.
	Low gas pressure	Consult a plumber or gas supplier Can be caused by situation such as a bent line, too narrow diameter or pipe, or a low line pressure
	Pilot adjustment screw not sealed	Seal pilot adjustment screw. Do not over-tighten.
	Pilot flame not making contact with the flame rectification sensor on the pilot assembly	Verify the pilot envelopes the top of the flame sensor and extends far enough onto the burner for ignition
Pilot flame always on, or will not extinguish	Control system set to CPI mode.	Set control system to IPI mode.
Flame burns blue and lifts off burner	Improper venturi setting	The venturi air shutter may need to be closed slightly to allow less air into the gas mix. Refer to section 11.2.1, Burner Venturi.
	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.

Issue	Cause	Solution
Burner flame will not light	ON/OFF rocker switch in OFF position	Switch rocker switch to ON position.
	Gas supply turned off	Check for multiple shut-offs in the supply line. Verify gas supply is turned on.
	Low gas supply	Consult with plumber or gas supplier. Check propane tank. Refill if necessary.
	Wiring disconnection or improper wiring	Check for faulty or incorrect wiring. Refer to Section 9.0 Electrical Information.
	Plugged burner orifice	Remove blockage.
	Pilot flame	Verify the pilot flame is properly directed to ignite burner. See pilot flame troubleshooting in this sections above.
	Remote control not working	Replace Batteries.
	No call for heat / Burner will not ignite	Verify remote control is powered ON and thermostat operation is turned OFF.
Pilot and burner extinguish while in operation	No propane in tank	Check propane tank, Refill if necessary.
	Incorrect glass assembly installation	Refer to Section 8.1 Glass Frame Assemblies.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
	Improper pitch on horizontal venting	1/4” (6mm) rise for ever 12” (305mm) of travel is required on horizontal venting.
	Exhaust vent pipe leaking exhaust gases back into firebox	Check for leaks and repair if necessary.
	Excessive draft	A restrictor may need to be installed or modified. Refer to section 11.2.3 Vent Restriction (after installation).

Issue	Cause	Solution
Soot appears on glass	Improper log placement (if installed)	Refer to log set instructions.
	Improper media placement	Ensure burner / perimeter media is installed per instructions.
	Improper venturi setting	Venturi air shutter may need to be opened slightly to allow more air into the gas mix. Refer to section 11.2.1, Burner Venturi.
	Incorrect vent cap installation	Adjust if necessary.
	Vent cap blockage	Remove debris if necessary.
No reaction to command on SIT fireplace remote	Remote control batteries low	Replace the batteries.
	No communication between remote control and control module.	Reprogram remote control to IFC module.
	A maximum number of failed ignitions or flame restorations has been reached.	Reset IFC module.
	Battery Backup Batteries Low (if applicable)	Replace the batteries.

14.0 Replacement Parts List

KOZY HEAT FIREPLACES

HUSSONG MANUFACTURING CO., INC.
P.O. Box 557, 204 Industrial Park Road
Lakefield, Minnesota USA 56150-0577

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.

Control Board and Parts				
S.I.T. Complete Board Assembly - Natural Gas	CWST-150		IPI Pilot Assembly - Natural Gas	900-064A
S.I.T. Complete Board Assembly - Propane	CWST-151		IPI Pilot Assembly - Propane	900-064-1
S.I.T. IPI Gas Valve - Natural Gas	700-567		Pilot Orifice - Natural Gas - #.023NG	700-123
S.I.T. IPI Gas Valve - Propane	700-567-1		Pilot Orifice - Propane - #.014LP	700-114
Main Power Wire Harness	700-350A		PSE Conversion Kit - Natural Gas	NCK-CW50-SPB
Proflame 2 IFC Module	700-652		PSE Conversion Kit - Propane	LCK-CW50-SPB
SIT Wire Harness Assembly	700-653		Natural Gas - Valve Stepper Motor	700-504
Fan / Light Kit Wire Harness	700-657		Propane - Valve Stepper Motor	700-504-1
ON/OFF Wire Harness	700-656		Burner Orifice - #34 - Natural Gas	700-234
36” Black 3/8” Gas Line (into gas valve)	700-383B		Burner Orifice - #51 - Propane	700-251
32” Flare x Brazed Fitting	700-232F		Burner Tube	CWST-035
S.I.T. Transmitter (Remote Control)	700-408		Burner Media Tray	CWST-350

Glass and Glass Parts	
51-3/4” x 15-5/32” - Glass with Gasket	701-019T
1-1/8” Glass Gasket	900-006
Replacement Valance - Front Side	CWST-005F
Replacement Valance - Back Side	CWST-005B
Glass Latch Tool	JOR-GLT

Safety Screen	
Safety Screen Barrier	CWST-ES

Optional Surrounds	
Mission Surround	CW50-MS
Gallery Surround	CW50-GS
4-Piece Rectangle Surround	CW50-RS4
1-Piece Rectangle Surround	CW50-RS

Top Light Kit	
20W Halogen Bulb	600-676
Light Kit - Top	600-TLK

Fan Kit	
Fan Kit	CWST-028

Additional Components	
Shelf Application Kit (Shelf enclosure framing applications only)	CWST-SAK
5” (127mm) Restrictor Plate	900-086
Manual 3/8” Gas Shut-off Valve	700-380
Component Access Cover	CWST-027AC

Limited Lifetime Warranty

Warranty Coverage

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

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

30 Days: Parts & Labor*

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

Year 1: Parts & Labor*

All parts and material except the items listed in the 30 day warranty and any exclusions or limitations that may apply

Hussong Mfg. will issue labor reimbursement to an authorized dealer only. Hussong Mfg. will not be liable for charges occurred as a result of any service performed by a non-authorized service provider, without pre-authorization.

Years 2 through Lifetime: Parts Only

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

EXCLUSIONS AND LIMITATIONS

1. **This appliance must be installed by a licensed, authorized service technician or contractor. It must be installed, operated and maintained at all times in accordance with the instructions in the owner's manual or the warranty is void.**
2. **This warranty is nontransferable and is made to the original purchaser only.**
3. **This warranty excludes standard wear and tear of the appliance which is considered normal usage over time.**
4. **Discoloration and some minor expansion, contraction or movement of certain parts, resulting in noise, is normal and not a defect.**
5. **Warranty is automatically voided if the appliance's serial number and/or testing label is removed or if the appliance is altered or tampered with in any way.**
6. **Warranty is void if the appliance is subject to submersion in water or prolonged periods of dampness or condensation. Any damage to any part of the appliance due to water or weather damage which is the result of, but not limited to, improper chimney/venting installation will also render this warranty void.**
7. **This warranty does not cover installation and operational related problems such as environmental conditions, nearby trees, buildings, hilltops, mountains, inadequate venting or ventilation, excessive offsets, negative air pressures caused by any mechanical systems.**
8. **Chimney components and other Non-Hussong Mfg. accessories used in conjunction with the installation of this appliance are not covered under this warranty.**
9. **Damage to plated surfaces or accessories, if applicable, caused by scratches, fingerprints, melted items or other external sources left on the surfaces from the use of cleaners is not covered under this warranty.**

Limited Lifetime Warranty

EXCLUSIONS AND LIMITATIONS (continued)

10. **It is expressly agreed and understood that this warranty is Hussong Mfg.'s sole obligation and purchaser's exclusive remedy for defective fireplace equipment. Hussong Mfg. is free of liability for any damages caused by this appliance, as well as inconvenience expenses and materials. Incidental or consequential damages are not covered by this warranty. In some states, the exclusion of incidental or consequential damage may not apply. Hussong Mfg. shall not be held to implied warranties and this warranty shall replace all previous warranties.**
11. **This limited lifetime warranty is the only warranty supplied by Hussong Mfg. Any warranties extended to the purchaser by the dealer/distributor, whether expressed or implied, are hereby disclaimed and the purchaser's recourse is expressly limited to the warranties set forth herein.**
12. **Any part repaired or replaced during the limited warranty period will be warranted under the terms of the limited warranty for a period not to exceed the remaining term of the original limited warranty.**
13. **Any replacement part repaired after the warranty period will include a 90 day parts coverage.**
14. **Hussong Mfg. may require the defective part to be returned using a pre-authorized RGA number or a photo of the defective component. Failure to provide either can result in a denied claim.**
15. **This warranty does not cover the appliances ability to heat a desired space, as there are many factors that can impact the heating performance in each home. Consideration should be implied to the appliance's location, room size, home design, environmental conditions, insulation, and tightness of the home.**
16. **Hussong Mfg. reserves the right to make changes at any time, without notice, in design, material, specifications, and prices. Hussong Mfg. reserves the right to discontinue models and products.**

July 2025