

Installation Manual

Installation and Appliance Setup

INSTALLER: Leave this manual with party responsible for use and operation.

OWNER: Retain this manual for future reference.

NOTICE: DO NOT discard this manual!

HEAT & GLO™

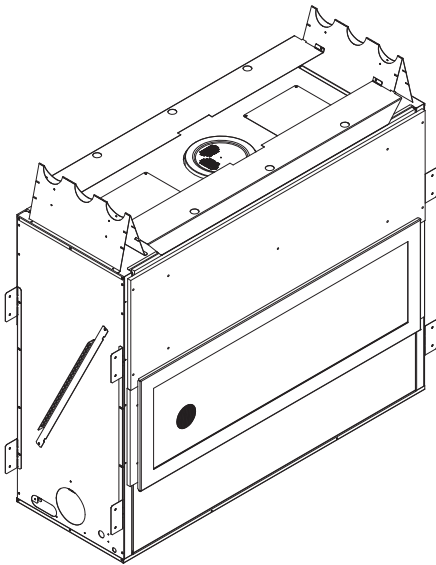
No one builds a better fire

Model(s):

RED40

RED40ST

GAS-FIRED



⚠ WARNING: If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury, or death.

- **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **What to do if you smell gas**
 - **DO NOT** try to light any appliance.
 - **DO NOT** touch any electrical switch. **DO NOT** use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

This appliance may be installed as an OEM installation in manufactured home (USA only) or mobile home and must be installed in accordance with the manufacturer's instructions and the *Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280* in the United States, or the *Standard for Installation in Mobile Homes, CAN/CSA Z240 MH Series*, in Canada.

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

⚠ WARNING



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.

In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter. See Table of Contents for location of additional Commonwealth of Massachusetts requirements.

▲ Safety Alert Key:

- **DANGER!** Indicates a hazardous situation which, if not avoided will result in death or serious injury.
- **WARNING!** Indicates a hazardous situation which, if not avoided could result in death or serious injury.
- **CAUTION!** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
- **NOTICE:** Used to address practices not related to personal injury.

Table of Contents

→ Installation Standard Work Checklist	3
--	---

1 Product Specific and Important Safety Information

→ A. Appliance Certification	4
B. Glass Specifications	4
C. BTU Specifications	4
D. High Altitude Installations	4
E. Non-Combustible Materials Specification	4
F. Combustible Materials Specification	4
G. Electrical Codes	4
H. Requirements for the Commonwealth of Massachusetts	5

2 Getting Started

A. Design and Installation Considerations	6
B. Tools and Supplies Needed	6
C. Inspect Appliance and Components	6

3 Framing and Clearances

A. Appliance Dimension Diagram	7
B. Clearances to Combustibles	9
C. Constructing the Appliance Chase	10
D. Floor Protection	10

4 Termination Location and Vent Information

→ A. Vent Termination Minimum Clearances	12
B. Chimney Diagram	13
C. Approved Pipe	14
D. Use of Elbows	14
E. Measuring Standards	14
F. Vent Diagrams	14

5 Vent Clearances and Framing

A. Pipe Clearances to Combustibles	21
B. Wall Penetration Framing/Firestops	21
C. Install the Ceiling Firestop	22
D. Install Attic Insulation Shield	23

6 Appliance Preparation

A. Vent Collar Preparation	24
B. Securing and Leveling the Appliance	25
C. Active Convection Technology	26

7 Venting and Chimneys

A. Assemble Vent Sections	27
B. Assemble Slip Sections	28
C. Secure The Vent Sections	28
D. Disassemble Vent Sections	29
E. Vertical Termination Requirements	30 ←
F. Horizontal Termination Requirements	31

8 Electrical Information

A. General Information	33
B. Wiring Requirements	34
C. Optional LED Lighting Circuit	36
D. Active Convection Blower Replacement	37 ←

9 Gas Information

A. Fuel Conversion	40
B. Gas Pressure	40
C. Gas Connection	41
D. High Altitude Installations	41
E. Air Shutter Setting	42

10 Finishing

A. Facing and Finishing Instructions	43
B. Mantel and Wall Projections	47
C. Mesh Fronts	48

11 Appliance Setup

A. Fixed Glass Assembly	49
B. Remove the Shipping Materials	49
C. Clean the Appliance	49
D. Rock Media	49
E. Porcelain	49
F. Granite	49
G. Sheet Metal Refractory	49
H. Install the Mesh	49

12 Reference Materials

A. Vent Components Diagrams	50 ←
B. Accessories	55

→ = Contains updated information.

→ Installation Standard Work Checklist


ATTENTION INSTALLER:
Follow this Standard Work Checklist

This standard work checklist is to be used by the installer in conjunction with, not instead of, the instructions contained in this installation manual.

Customer: _____
Lot/Address: _____

Date Installed: _____
Location of Fireplace: _____
Installer: _____
Dealer/Distributor Phone # _____
Serial #: _____

Model (circle one): RED40 RED40ST

 **WARNING! Risk of Fire or Explosion!** Failure to install appliance according to these instructions can lead to a fire or explosion.

Appliance Install Sections 3 and 6	YES	IF NO, WHY?
Verified that the chase is insulated and sealed. (Pg. 10)	<input type="checkbox"/>	_____
Required factory-installed non-combustible board is in place.	<input type="checkbox"/>	_____
Verified clearances to combustibles. (Pg. 10-11)	<input type="checkbox"/>	_____
Fireplace is leveled and secured. (Pg. 25)	<input type="checkbox"/>	_____
 Venting/Chimney Sections 4,5 and 7		
Venting configuration complies to vent diagrams. (Pg 15-21)	<input type="checkbox"/>	_____
Venting installed, locked, and secured in place with proper clearance.	<input type="checkbox"/>	_____
Firestops installed. (Section 5)	<input type="checkbox"/>	_____
Attic insulation shield installed. (Pg 23)	<input type="checkbox"/>	_____
Exterior wall/Roof flashing installed and sealed. (Section 7)	<input type="checkbox"/>	_____
Terminations installed and sealed. (Section 7)	<input type="checkbox"/>	_____
 Electrical Section 8 (Pg 33-39)		
Unswitched power (110-120 VAC) provided to the appliance.	<input type="checkbox"/>	_____
Switch wires properly installed.	<input type="checkbox"/>	_____
 Gas Section 9 (Pg 40-42)		
Proper appliance for fuel type.	<input type="checkbox"/>	_____
Was a conversion performed?	<input type="checkbox"/>	_____
Leak check performed and inlet pressure verified.	<input type="checkbox"/>	_____
Verified proper air shutter setting for installation type.	<input type="checkbox"/>	_____
 Finishing Section 10 (Pg 43-48)		
Combustible materials not installed in non-combustible areas.	<input type="checkbox"/>	_____
Verified all clearances meet installation manual requirements.	<input type="checkbox"/>	_____
Mantels and wall projections comply with installation manual requirements.	<input type="checkbox"/>	_____
 Appliance Setup Section 11 (Pg 49)		
All packaging and protective materials removed (inside & outside of appliance).	<input type="checkbox"/>	_____
Refractories and media installed correctly.	<input type="checkbox"/>	_____
Glass assembly installed and secured.	<input type="checkbox"/>	_____
Accessories installed properly.	<input type="checkbox"/>	_____
Mesh, doors, or decorative front properly installed.	<input type="checkbox"/>	_____
Manual bag and all of its contents are removed from inside/under the appliance and given to party responsible for use and operation.	<input type="checkbox"/>	_____
Started appliance and verified no gas leaks exist.	<input type="checkbox"/>	_____
Lights work in all switched positions (if so equipped).	<input type="checkbox"/>	_____

Hearth & Home Technologies recommends the following:

- Photographing the installation and copying this checklist for your file.
- That this checklist remain visible at all times on the appliance until the installation is complete.

Comments: Further description of the issues, who is responsible (Installer/ Builder/ Other Trades, etc) and corrective action needed _____

Comments Communicated to party responsible _____ by _____ on _____
(Builder / Gen. Contractor/) (Installer) (Date)

→ = Contains updated information.

2155-982B 11/13

1 Product Specific and Important Safety Information

A. Appliance Certification

MODEL: RED40, RED40ST
LABORATORY: Underwriters Laboratories, Inc. (UL)
TYPE: Direct Vent Heater
STANDARD: ANSI Z21.88b-2008 CSA 2.33a-2008
Vented Gas Fireplace Heaters

- This product is listed to ANSI standards for “Vented Gas Fireplace Heaters” and applicable sections of “Gas Burning Heating Appliances for Manufactured Homes and Recreational Vehicles”, and “Gas Fired Appliances for Use at High Altitudes”.

NOTICE: This installation must conform with local codes. In the absence of local codes you must comply with the National Fuel Gas Code, ANSI Z223.1-latest edition in the U.S.A. and the CAN/CGA B149 Installation Codes in Canada.

NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.
 This appliance is tested and approved as either supplemental room heat or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

B. Glass Specifications

This appliance is equipped with 5 mm ceramic glass. Replace glass only with 5 mm ceramic glass. Please contact your dealer for replacement glass.

C. BTU Specifications

Models (U.S. or Canada)		Maximum Input BTU/h	Minimum Input BTU/h	Orifice Size (DMS)
RED40 RED40ST (NG)	US (0-2000 FT)	34,000	24,000	#34
	CANADA (2000-4500 FT)	29,500	22,000	#36
RED40 RED40ST (LP)	US (0-2000 FT)	34,000	25,000	#50
	CANADA (2000-4500 FT)	31,500	23,000	#51

D. High Altitude Installations

NOTICE: If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation:

- In the USA: Reduce input rate 4% for each 1000 feet above 2000 feet.
- In CANADA: Reduce input rate 10% for elevations between 2000 feet and 4500 feet. Above 4500 feet, consult local gas utility.

Check with your local gas utility to determine proper orifice size.

E. Non-Combustible Materials Specification

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

Materials that are reported as passing **ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 °C** shall be considered non-combustible materials.

F. Combustible Materials Specification

Materials made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that can ignite and burn, whether flame proofed or not, or plastered or unplastered shall be considered combustible materials.

G. Electrical Codes

NOTICE: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with **National Electric Code ANSI/NFPA 70-latest edition** or the **Canadian Electric Code CSA C22.1**.

- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.

Note: The following requirements reference various Massachusetts and national codes not contained in this document.

H. Requirements for the Commonwealth of Massachusetts

For all side wall 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 seven (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:

Installation of Carbon Monoxide Detectors

At the time of installation of the side wall horizontal 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 with an alarm 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 an 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.

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.

Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height 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 size no less than one-half (1/2) in. in size, "**GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS**".

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.

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.

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 a Product Approved side wall horizontally vented gas fueled 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 system" 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.

See Gas Connection section for additional Commonwealth of Massachusetts requirements.

2 Getting Started

A. Design and Installation Considerations

Heat & Glo direct vent gas appliances are designed to operate with all combustion air siphoned from outside of the building and all exhaust gases expelled to the outside. No additional outside air source is required.

Installation MUST comply with local, regional, state and national codes and regulations. Consult insurance carrier, local building inspector, fire officials or authorities having jurisdiction over restrictions, installation inspection and permits.

NOTICE: *The blower motor present in this appliance will generate sound during operation. The effects of the increased sound level can be minimized with careful planning during installation of the system. Locating the convection intake grill in an area remote of immediate living space will reduce the effects of the added sound generated during operation.*

Before installing, determine the following:

- Where the appliance is to be installed.
- The vent system configuration to be used.
- Gas supply piping.
- Electrical wiring requirements.
- Framing and finishing details.
- Whether optional accessories—devices such as a wall switch or remote control—are desired.



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies suggests NFI certified or factory trained professionals, or technicians supervised by an NFI certified professional (www.nficertified.org).

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. For assistance or additional information, consult a qualified service technician, service agency or your dealer.

B. Tools and Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

- | | |
|--|--|
| Tape measure | Framing material |
| Pliers | Non-corrosive leak check solution |
| Hammer | Phillips screwdriver (magnetic) |
| Gloves | Framing square |
| Voltmeter | Electric drill and bits (1/4 in. magnetic) |
| Plumb line | Safety glasses |
| Level | Reciprocating saw |
| Manometer | Flat blade screwdriver |
| 1/2 - 3/4 in. length, #6 or #8 Self-drilling screws | |
| Caulking material (300°F minimum continuous exposure rating) | |
| One 1/4 in. female connection (for optional fan). | |

C. Inspect Appliance and Components

- Carefully remove the appliance and components from the packaging.
- The vent system components and decorative doors and fronts may be shipped in separate packages.
- If packaged separately, the media and/or refractory kits must be installed.
- Report to your dealer any parts damaged in shipment, particularly the condition of the glass.
- **Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**

WARNING! Risk of Fire or Explosion! Damaged parts could impair safe operation. DO NOT install damaged, incomplete or substitute components. Keep appliance dry.

Hearth & Home Technologies disclaims any responsibility for, and the warranty will be voided by, the following actions:

- Installation and use of any damaged appliance or vent system component.
- Modification of the appliance or vent system.
- Installation other than as instructed by Hearth & Home Technologies.
- Improper positioning of the gas logs or the glass door.
- Installation and/or use of any component part not approved by Hearth & Home Technologies.

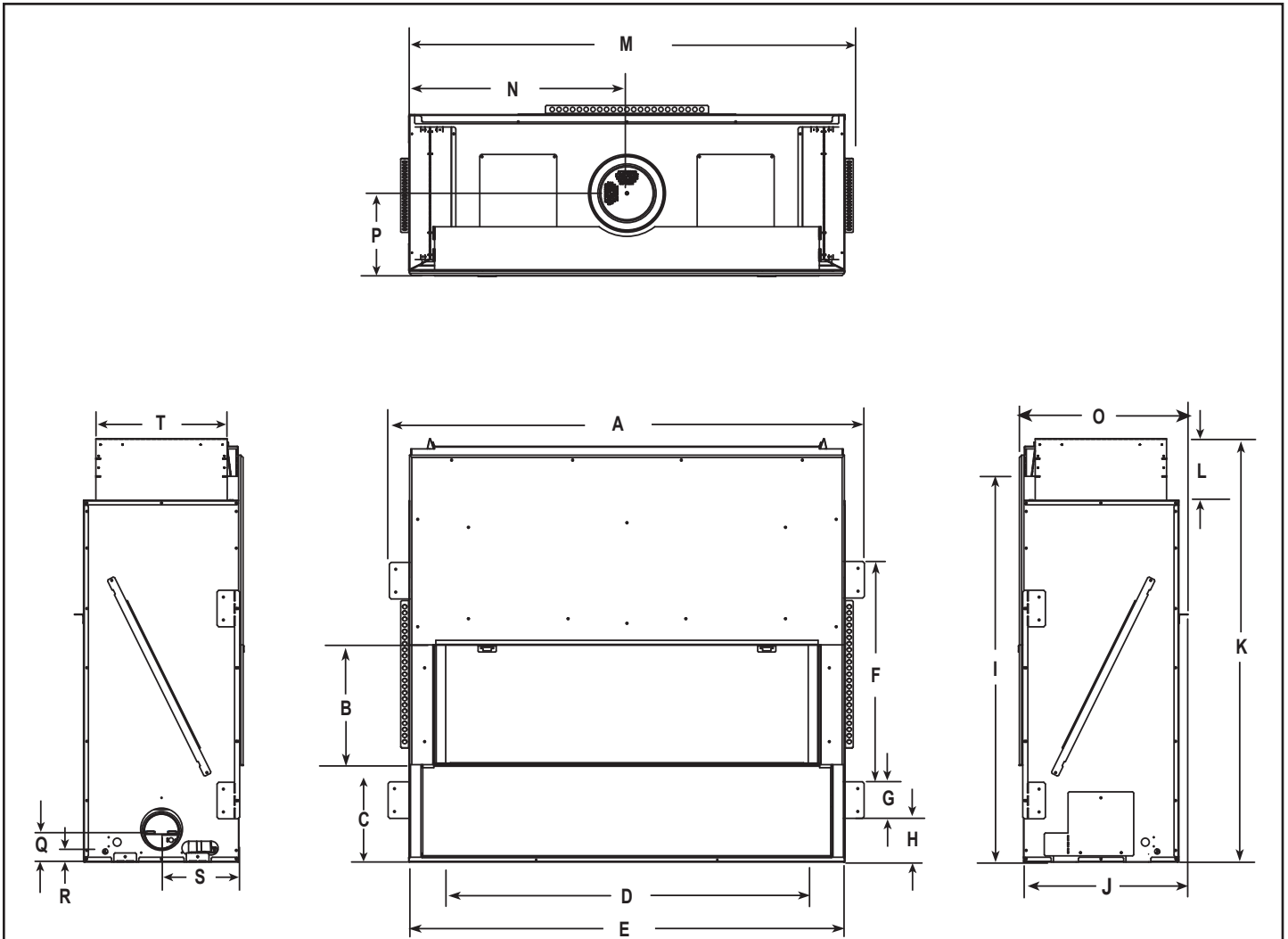
Any such action may cause a fire hazard.

WARNING! Risk of Fire, Explosion or Electric Shock! DO NOT use this appliance if any part has been under water. Call a qualified service technician to inspect the appliance and to replace any part of the control system and/or gas control which has been under water.

3 Framing and Clearances

A. Appliance Dimension Diagram

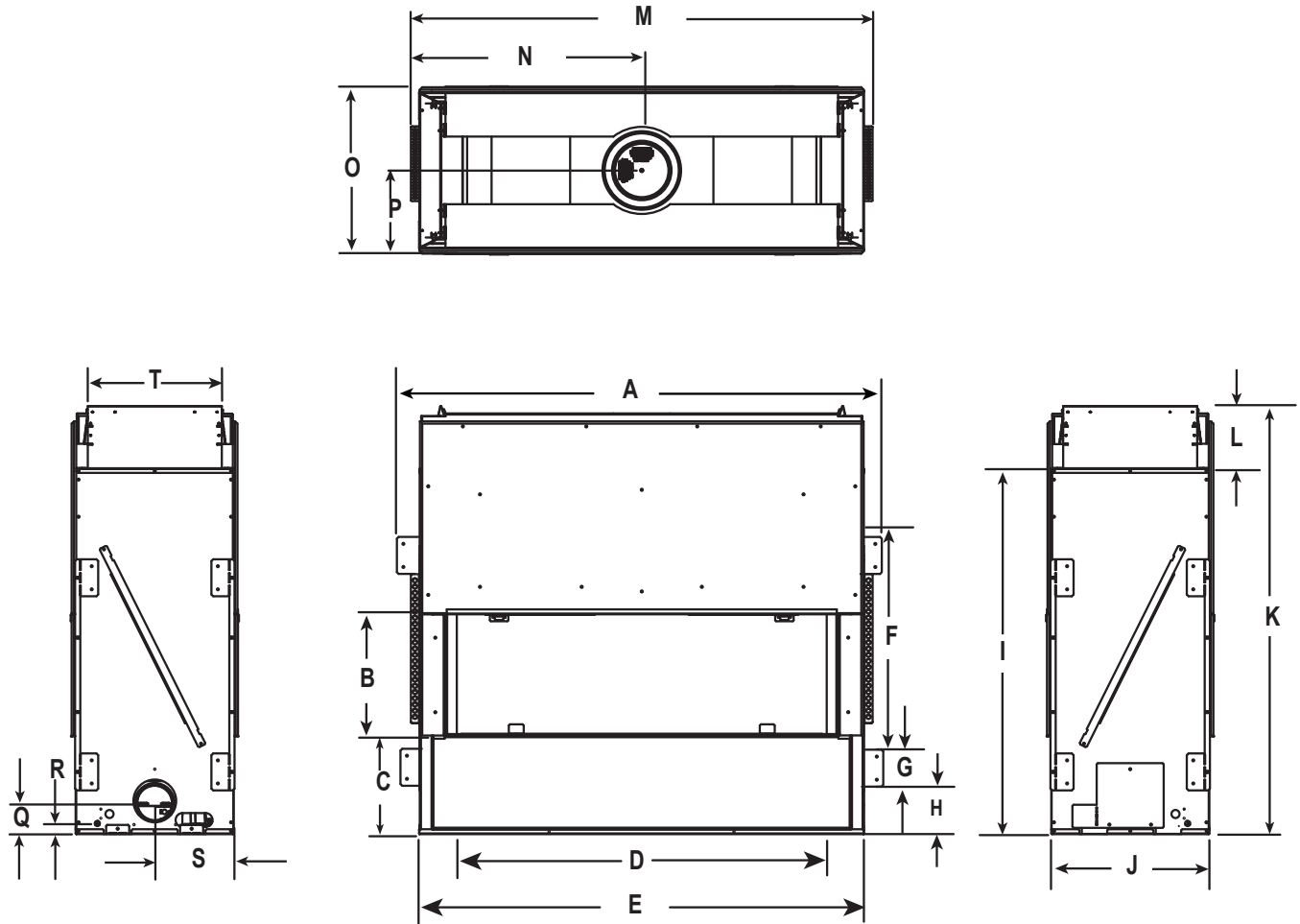
Dimensions are actual appliance dimensions. Use for reference only. For framing dimensions and clearances refer to Section 5.



Location	Inches	Millimeters
A	52	1321
B	13-3/16	335
C	10-3/4	273
D	42-3/4	1086
E	48-1/8	1222
F	21	533
G	4	102
H	4-3/4	121
I	42-15/16	1090
J	18-1/8	460

Location	Inches	Millimeters
K	46-3/4	1187
L	7	178
M	50-1/8	1273
N	25-1/16	637
O	18-5/8	473
P	9-1/16	230
Q	3-3/4	95
R	1-1/2	38
S	8-1/2	216
T	14-1/2	368

Figure 3.1 Appliance Dimensions - RED40



Location	Inches	Millimeters
A	52	1321
B	13-3/16	335
C	10-3/4	273
D	42-3/4	1086
E	48-1/8	1222
F	21	533
G	4	102
H	4-3/4	121
I	42-15/16	1090
J	17-1/8	435

Location	Inches	Millimeters
K	46-3/4	1187
L	7	178
M	50-1/8	1273
N	25-1/16	637
O	18-1/8	460
P	9-1/16	230
Q	3-3/4	95
R	1-1/2	38
S	8-1/2	216
T	14-1/2	368

Figure 3.2 Appliance Dimensions - RED40ST

B. Clearances to Combustibles

When selecting a location for the appliance it is important to consider the required clearances to walls. See Figure 3.3 and Figure 3.4.

WARNING! Risk of Fire or Burns! Provide adequate clearance around air openings and for service access. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.

NOTICE: Illustrations reflect typical installations and are FOR DESIGN PURPOSES ONLY. Illustrations/diagrams are not drawn to scale. Actual installation may vary due to individual design preference.

It is important to follow the framing and finishing instructions step by step to ensure proper placement of fireplace in the surrounding framing/finishing materials. For additional information and considerations for the active convection technology in regards to appliance location and framing, see Section 6.

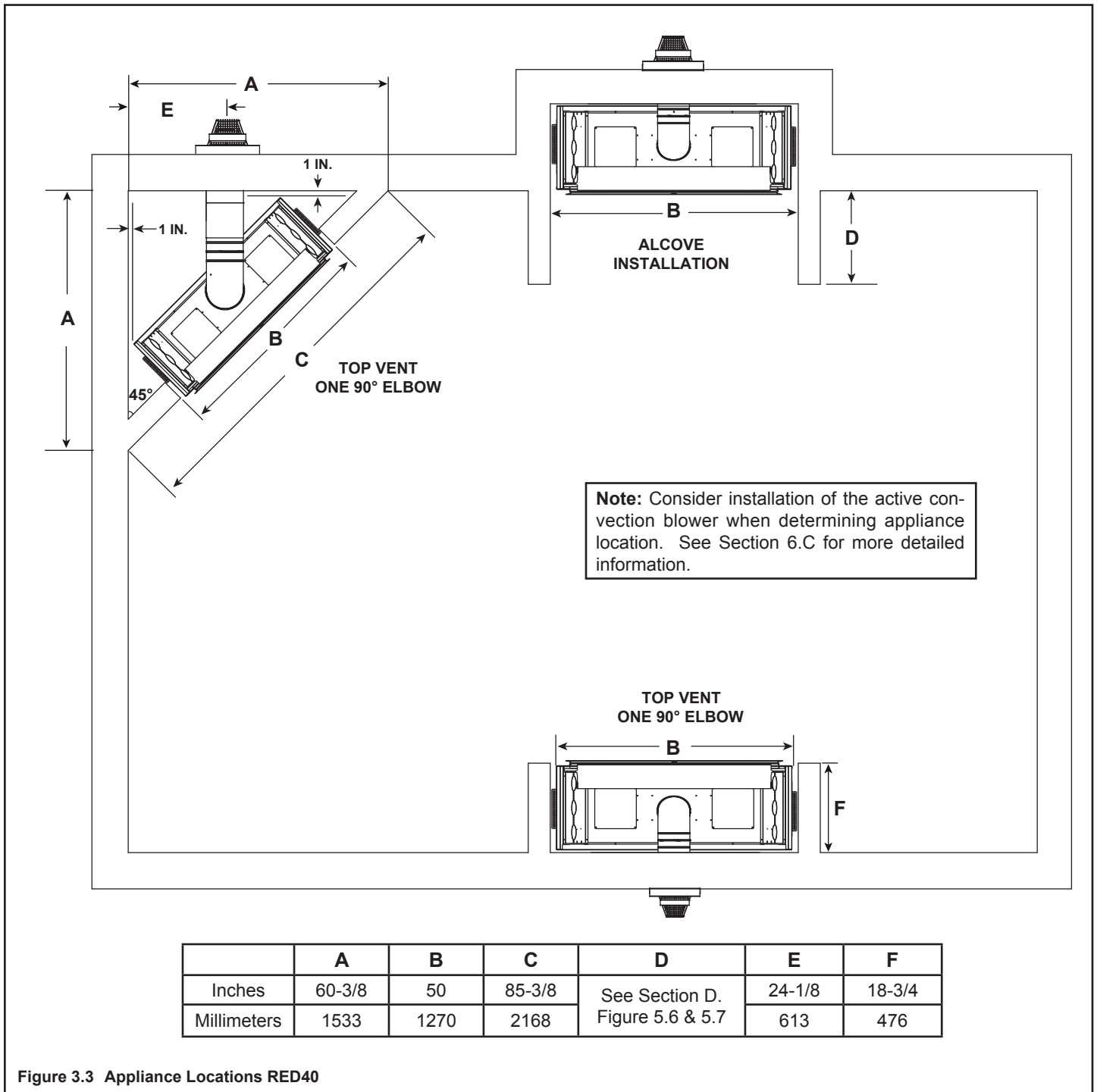


Figure 3.3 Appliance Locations RED40

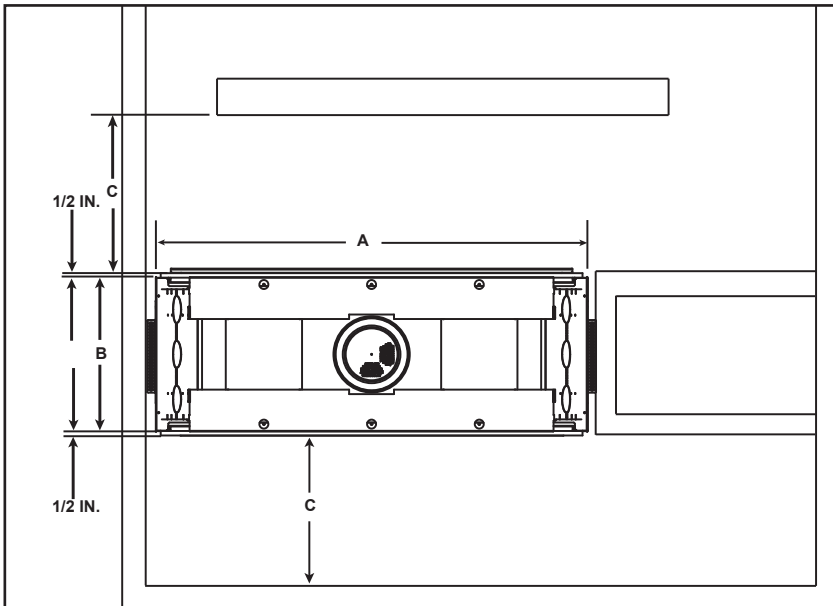


Figure 3.4 Appliance Locations RED40ST

Note: Consider installation of the active convection blower when determining appliance location. See Section 9.C for more detailed information.

	A	B	C
Inches	48	17-1/4	36
Millimeters	1218	438	914

NOTICE: This See-Through appliance is NOT designed or approved for an indoor/outdoor application.

C. Constructing the Appliance Chase

A chase is a vertical box-like structure built to enclose the gas appliance and/or its vent system. In cooler climates the vent should be enclosed inside the chase.

NOTICE: Treatment of ceiling firestops and wall shield firestops and construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Therefore, you **MUST** check local building codes to determine the requirements to these steps.

Chases should be constructed in the manner of all outside walls of the home to prevent cold air drafting problems. The chase should not break the outside building envelope in any manner.

Walls, ceiling, base plate and cantilever floor of the chase should be insulated. Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, in regions where cold air infiltration may be an issue, the inside surfaces may be sheetrocked and taped for maximum air tightness.

To further prevent drafts, the wall shield and ceiling firestops should be caulked with caulk with a minimum of 300°F continuous exposure rating to seal gaps. Gas line holes and other openings should be caulked with caulk with a minimum of 300°F continuous exposure rating or stuffed with unfaced insulation. If the appliance is being installed on a cement surface, a layer of plywood may be placed underneath to prevent conducting cold up into the room.

D. Floor Protection

NOTICE: Install appliance on hard metal or wood surfaces extending full width and depth. **DO NOT** install directly on carpeting, vinyl, tile or any combustible material other than wood.

WARNING! Risk of Fire! Maintain specified air space clearances to appliance and vent pipe:

- Insulation and other materials must be secured to prevent accidental contact.
- The chase must be properly blocked to prevent blown insulation or other combustibles from entering and making contact with fireplace or chimney.
- Failure to maintain airspace may cause overheating and fire.

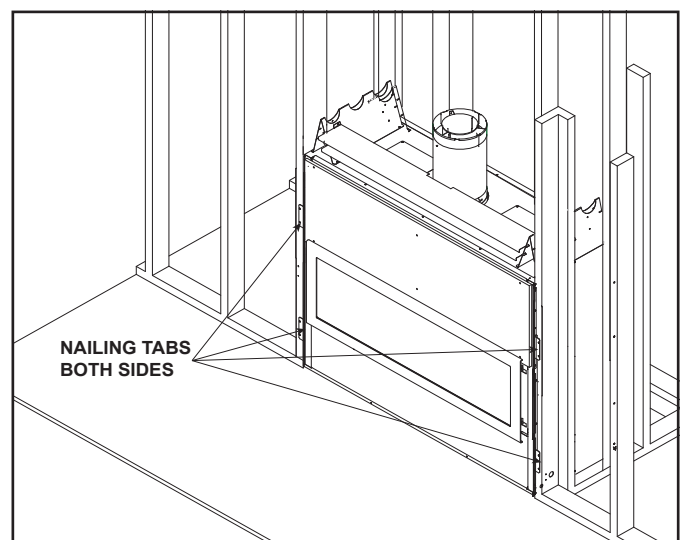
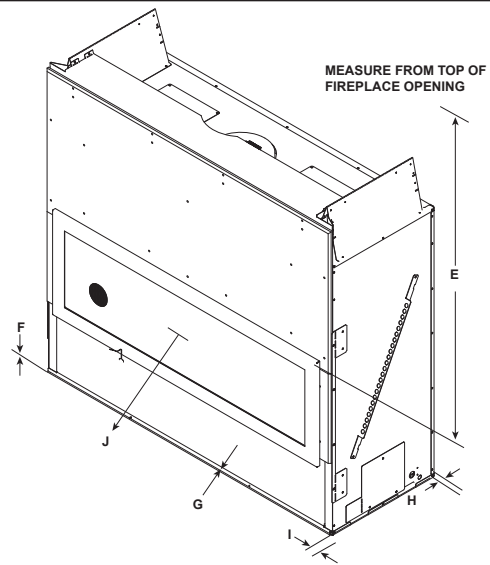
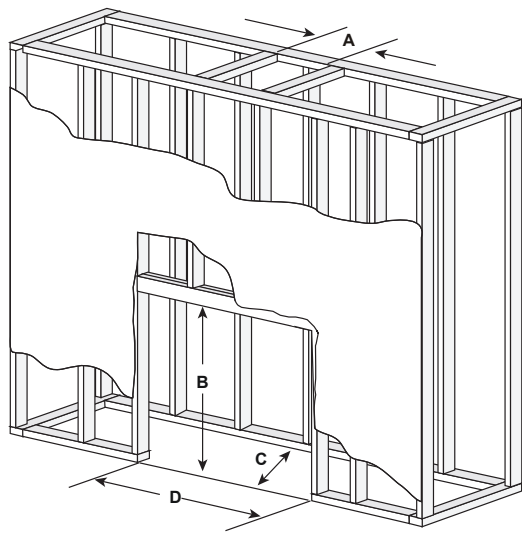


Figure 3.5 Nailing Tab Locations

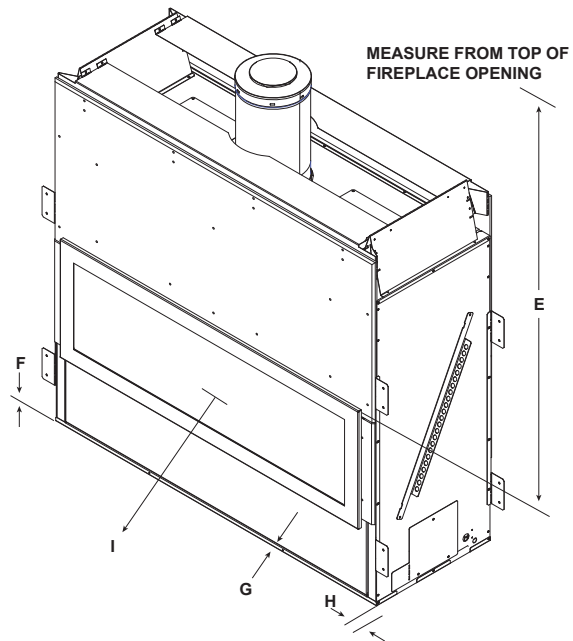
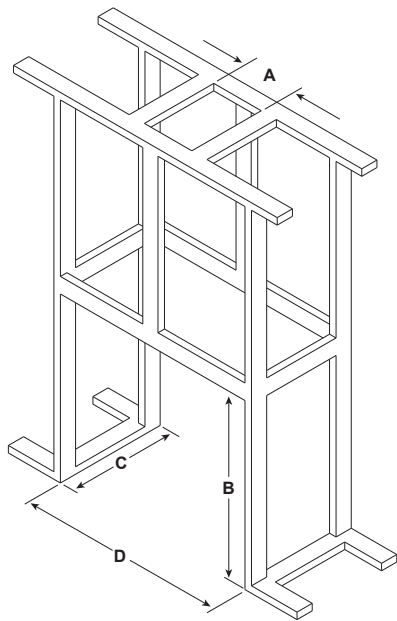
Note: Figure 3.5, Figure 3.6, and Figure 3.7 show the fireplace installed on the floor. However, this fireplace can be elevated off the floor provided that the fireplace is properly supported by framing materials and the ceiling clearances are maintained.



MINIMUM FRAMING DIMENSIONS*

	A	B	C	D	E	F	G	H	I	J
	Rough Opening (Vent Pipe)	Rough Opening (Height)	Rough Opening (Depth)	Rough Opening (Width)	Clearance to Ceiling	Combustible Floor	Combustible Flooring	Behind Appliance	Sides of Appliance	Front of Appliance
Inches	10	46-3/4	18-1/4	50-1/4	31	0	0	1	1	36
Millimeters	254	1187	464	1276	787	0	0	25	25	914

Figure 3.6. Clearances to Combustibles-RED40



MINIMUM FRAMING DIMENSIONS*

	A	B	C	D	E	F	G	H	I
	Rough Opening (Vent Pipe)	Rough Opening (Height)	Rough Opening (Depth)	Rough Opening (Width)	Clearance to Ceiling	Combustible Floor	Combustible Flooring	Sides of Appliance	Front or Rear of Appliance
Inches	10	46-3/4	17-1/4	50-1/4	31	0	0	1	36
Millimeters	254	1187	438	1276	787	0	0	25	914

Figure 3.7. Clearances to Combustibles-RED40ST

4 Termination Location and Vent Information

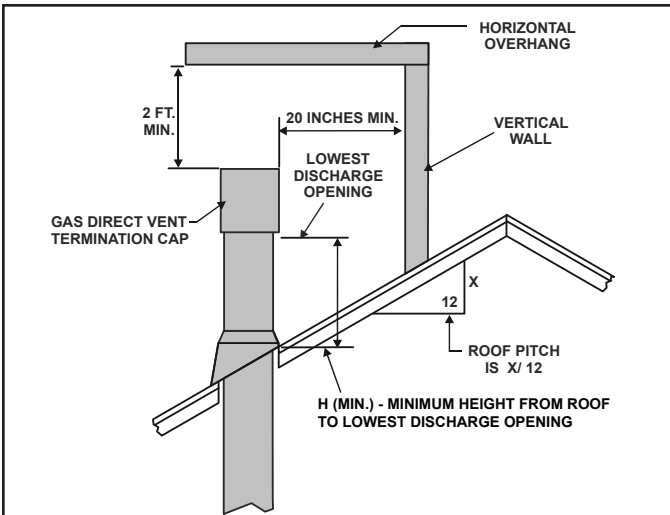
A. Vent Termination Minimum Clearances

⚠ WARNING

Fire Risk.
Maintain vent clearance to combustibles as specified.

- **DO NOT** pack air space with insulation or other materials.

Failure to keep insulation or other materials away from vent pipe may cause overheating and fire.



Roof Pitch	H (Min.) Ft.
Flat to 6/12.....	1.0*
Over 6/12 to 7/12.....	1.25*
Over 7/12 to 8/12.....	1.5*
Over 8/12 to 9/12.....	2.0*
Over 9/12 to 10/12.....	2.5*
Over 10/12 to 11/12.....	3.25
Over 11/12 to 12/12.....	4.0
Over 12/12 to 14/12.....	5.0
Over 14/12 to 16/12.....	6.0
Over 16/12 to 18/12.....	7.0
Over 18/12 to 20/12.....	7.5
Over 20/12 to 21/12.....	8.0

* 3 foot minimum in snow regions

Figure 4.1 Minimum Height From Roof To Lowest Discharge Opening

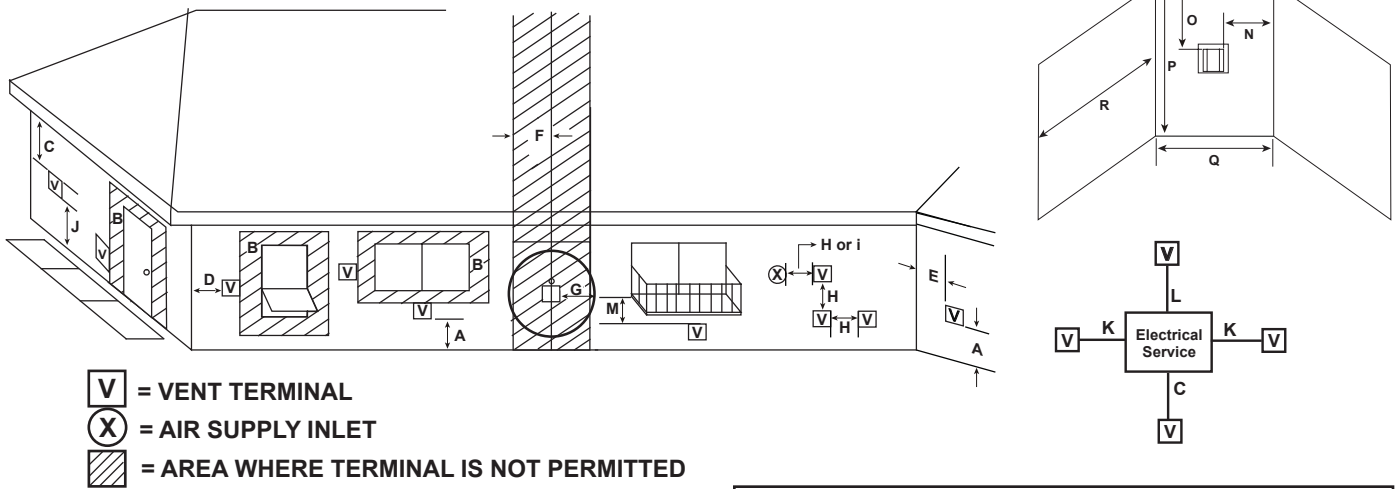
A	B
6 in. (minimum) up to 20 in. 152 mm/508 mm	18 in. minimum 457 mm
20 in. and over	0 in. minimum

* If using decorative cap cover(s), this distance may need to be increased. Refer to the installation instructions supplied with the decorative cap cover.

** In a staggered installation with both gas and wood or fuel oil terminations, the wood or fuel oil termination cap must be higher than the gas termination cap.

Figure 4.2 Staggered Termination Caps

B. Chimney Diagram



- V** = VENT TERMINAL
- X** = AIR SUPPLY INLET
- [Hatched Box]** = AREA WHERE TERMINAL IS NOT PERMITTED

- A = 12 inches.....clearances above grade, veranda, porch, deck or balcony
- B = 12 inches.....clearance to window or door that may be opened, or to permanently closed window
- C = 18 inches.....clearance below unventilated soffit
18 inches.....clearance below ventilated soffit
30 inches.....clearance below vinyl soffits and electrical service
- D = 6 inches.....clearance to outside corner
- E = 6 inches.....clearance to inside corner
- F = 3 ft. (Canada).....not to be installed above a gas meter/regulator assembly within 3 feet horizontally from the center-line of the regulator
- G = 3 ft.....clearance to gas service regulator vent outlet
- H = 9 inches (U.S.A)
12 inches (Canada).....clearance to non-mechanical (unpowered) air supply inlet, combustion air inlet or direct-vent termination
- i = 3 ft. (U.S.A.)
6 ft. (Canada).....clearance to a mechanical (powered) air supply inlet

All mechanical air intakes within 10 feet of a termination cap must be a minimum of 3 feet below termination.

J = 7 ft..... On **public** property: clearance above paved sidewalk or a paved driveway.

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

- K = 6 inches.....clearance from sides of electrical service
- L = 12 inches.....clearance above electrical service
Location of the vent termination must not interfere with access to the electrical service.

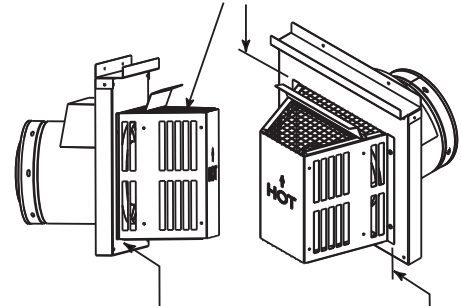
- M = 18 inches clearance under veranda, porch, deck, balcony or overhang
42 inchesvinyl or composite overhang
Permitted when veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor.

Covered Alcove Applications

- (Spaces open only on one side and with an overhang)
- N = 6 inches non-vinyl sidewalls
12 inches vinyl sidewalls
 - O = 18 inches non-vinyl soffit and overhang
42 inches vinyl soffit and overhang
 - P = 8 ft.

	Q_{MIN}	R_{MAX}
1 cap	3 feet	2 x Q_{ACTUAL}
2 caps	6 feet	1 x Q_{ACTUAL}
3 caps	9 feet	2/3 x Q_{ACTUAL}
4 caps	12 feet	1/2 x Q_{ACTUAL}
$Q_{MIN} = \# \text{ termination caps} \times 3$ $R_{MAX} = (2 / \# \text{ termination caps}) \times Q_{ACTUAL}$		

Measure vertical clearances from this surface.



Measure horizontal clearances from this surface.

CAUTION! Risk of Burns! Termination caps are HOT, consider proximity to doors, traffic areas or where people may pass or gather (sidewalk, deck, patio, etc.). Listed cap shields available. Contact your dealer.

- Local codes or regulations may require different clearances.
- Vent system termination is **NOT** permitted in screened porches.
- Vent system termination is permitted in porch areas with two or more sides open.
- Hearth & Home Technologies assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.
- Vinyl protection kits are suggested for use with vinyl siding.

Figure 4.3 Minimum Clearances for Termination

C. Approved Pipe

This appliance is approved for use with Hearth & Home Technologies DVP venting systems. Refer to Section 12.A for vent component information and dimensions.

DO NOT mix pipe, fittings or joining methods from different manufacturers.

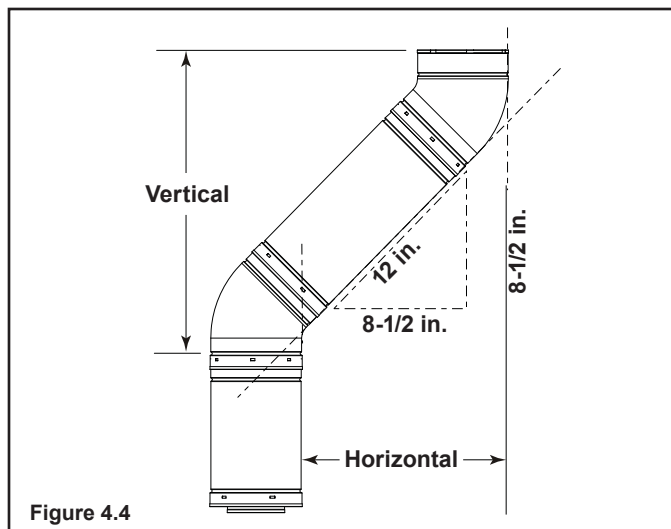
The pipe is tested to be run inside an enclosed wall. There is no requirement for inspection openings at each joint within the wall.

WARNING! Risk of Fire or Asphyxiation. This appliance requires a separate vent. **DO NOT** vent to a pipe serving a separate solid fuel burning appliance.

D. Use of Elbows

Diagonal runs have both vertical and horizontal vent aspects when calculating the effects. Use the rise for the vertical aspect and the run for the horizontal aspect (see Figure 4.4).

Two 45° elbows may be used in place of one 90° elbow. On 45° runs, one foot of diagonal is equal to 8-1/2 in. (216 mm) horizontal run and 8-1/2 in. (216 mm) vertical run. A length of straight pipe is allowed between two 45° elbows. See Figure 4.4.



E. Measuring Standards

Vertical and horizontal measurements listed in the vent diagrams were made using the following standards.

- Pipe measurements are shown using the effective length of pipe. See Section 12.A for information on effective length of pipe components.
- Measurements are made from the appliance outer wrap, not from the standoffs.
- Horizontal terminations are measured to the outside mounting surface (flange of termination cap). See Figure 4.3.
- Vertical terminations are measured to bottom of termination cap.
- Horizontal pipe installed level with no rise.

F. Vent Diagrams

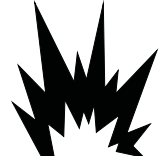
General Rules:

- When penetrating a combustible wall, a wall shield firestop must be installed.
- When penetrating a combustible ceiling, a ceiling firestop must be installed.
- Horizontal runs of vent do not require vertical rise; horizontal runs may be level.

⚠ WARNING



Fire Risk. Explosion Risk.
 Do NOT pack insulation or other combustibles between ceiling firestops.
 • ALWAYS maintain specified clearances around venting and firestop systems.
 • Install wall shield and ceiling firestops as specified.
 Failure to keep insulation or other material away from vent pipe may cause fire.



Top Vent - Horizontal Termination Venting with 1 elbow

V ₁ Minimum		H ₁ Maximum	
1 ft.	305 mm	2 ft.	610 mm
2 ft.	610 mm	6 ft.	1829
3 ft.	914 mm	9 ft.	2743
4 ft.	1219 mm	12 ft.	3658
5 ft.	1524 mm	15 ft.	4572
6 ft.	1829 mm	18 ft.	5486
7 ft.	2134 mm	21 ft.	6401
8 ft.	2438 mm	24 ft.	7315
V ₁ + H ₁ = 63 ft. (19.2 m) Maximum			

Note: 12 inches minimum vertical is required prior to attaching any elbow to the appliance.

Note: Use DVP Series components only.

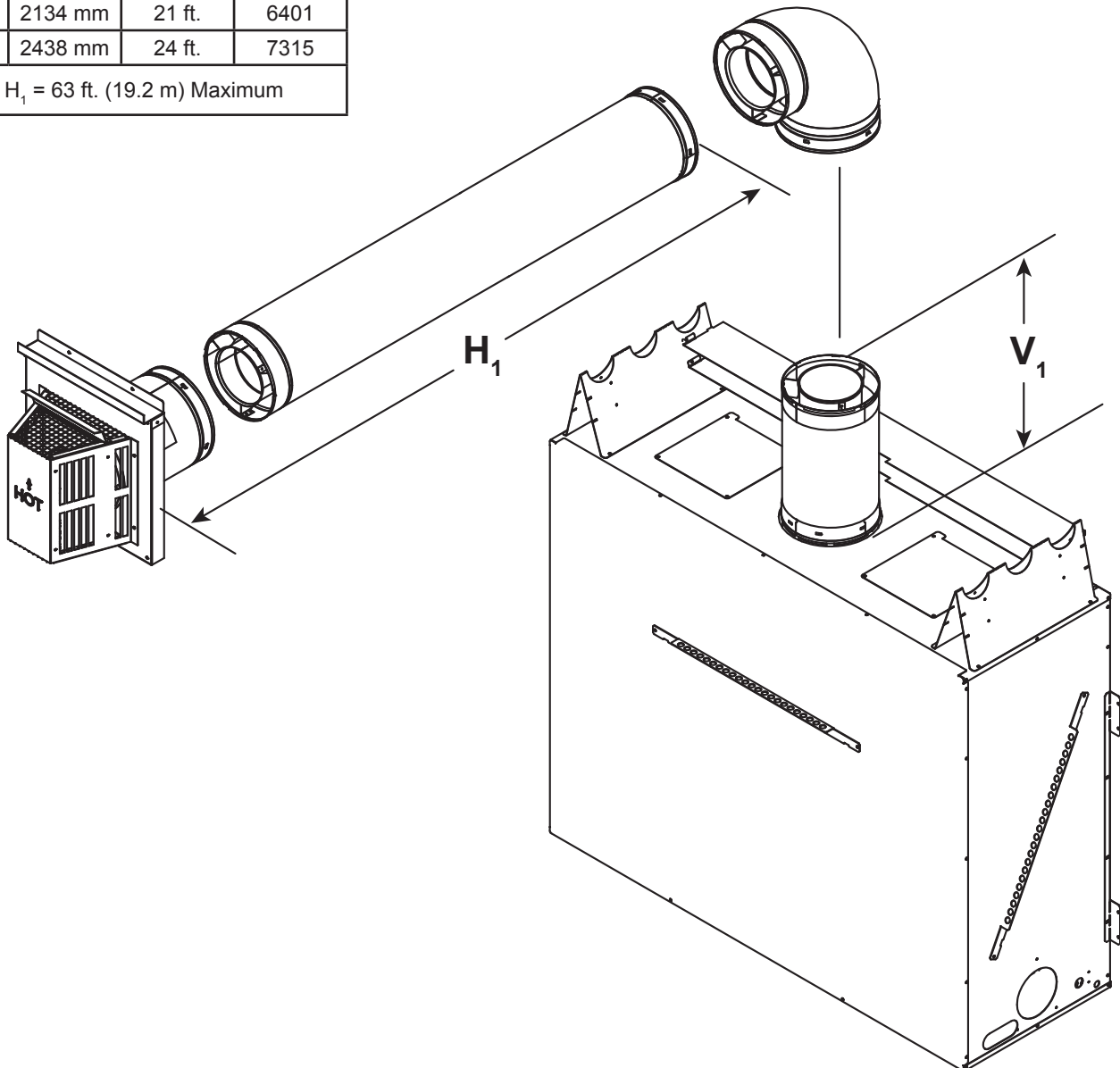


Figure 4.5

1. Top Vent - Horizontal Termination - (continued)

Top Vent - Horizontal Termination Venting with 2 elbows

V ₁ Minimum		H ₁ + H ₂ Maximum	
1 ft.	305 mm	2 ft.	610 mm
2 ft.	610 mm	6 ft.	1829 mm
3 ft.	914 mm	9 ft.	2743 mm
4 ft.	1219 mm	12 ft.	3658 mm

V₁ + H₁ + H₂ = 63 ft. (19.2 m) Maximum
H₁ + H₂ = 23 ft. (7.1 m) Maximum

Note: 12 inches minimum vertical is required prior to attaching any elbow to the appliance.

Note: Use DVP Series components only.

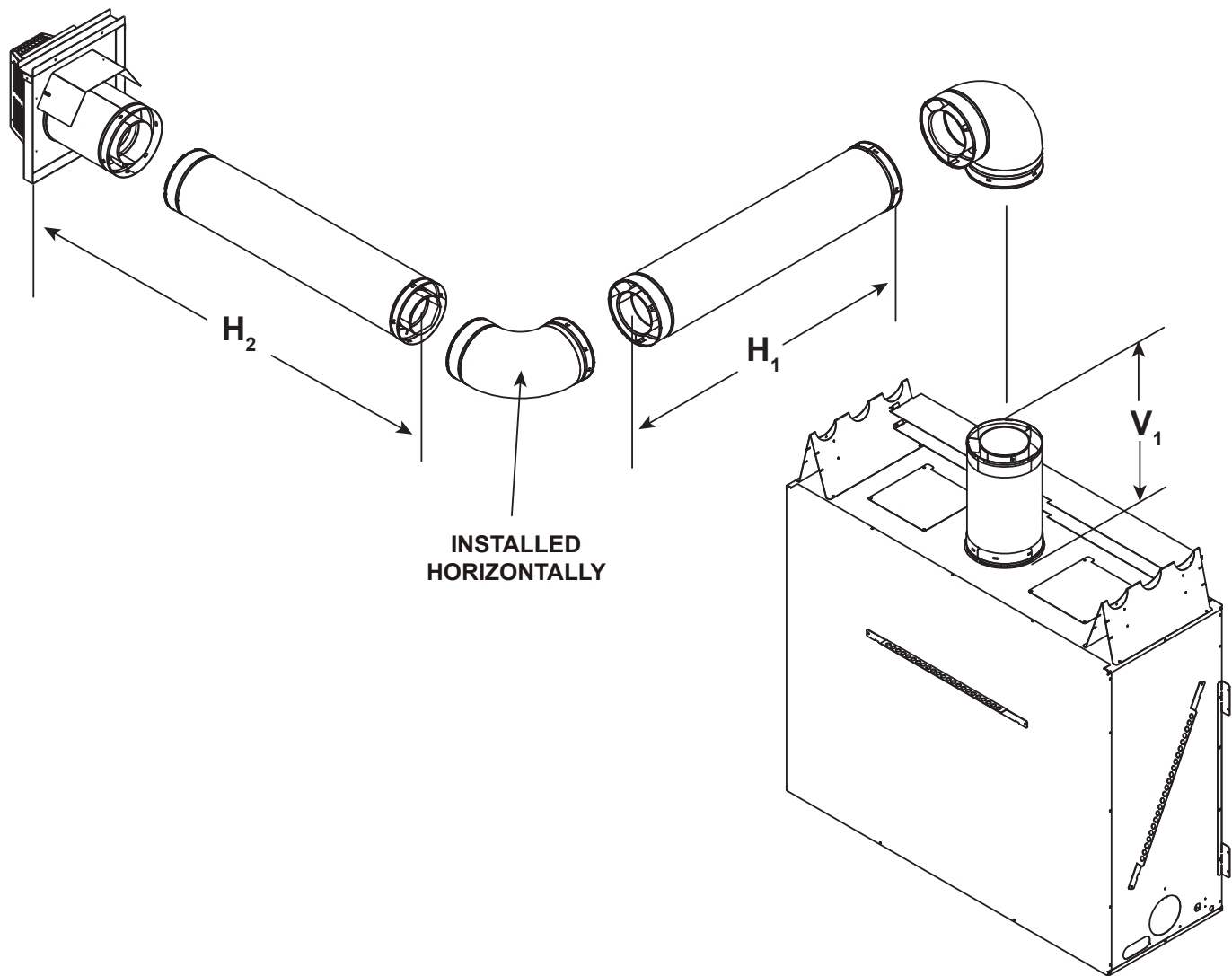


Figure 4.6

1. Top Vent - Horizontal Termination - (continued)

Top Vent - Horizontal Termination Venting with 3 elbows

V ₁ + V ₂ Minimum		H Maximum	
1 ft.	305 mm	2 ft.	610 mm
2 ft.	610 mm	6 ft.	1829 mm
3 ft.	914 mm	9 ft.	2743 mm
4 ft.	1219 mm	12 ft.	3658 mm
5 ft.	1524 mm	15 ft.	4572 mm
V ₁ + V ₂ + H ₁ + H ₂ = 63 ft. (19.2 m) Maximum H ₁ + H ₂ = 23 ft. (7.1 m) Maximum			

Note: 12 inches minimum vertical is required prior to attaching any elbow to the appliance.

Note: Use DVP Series components only.

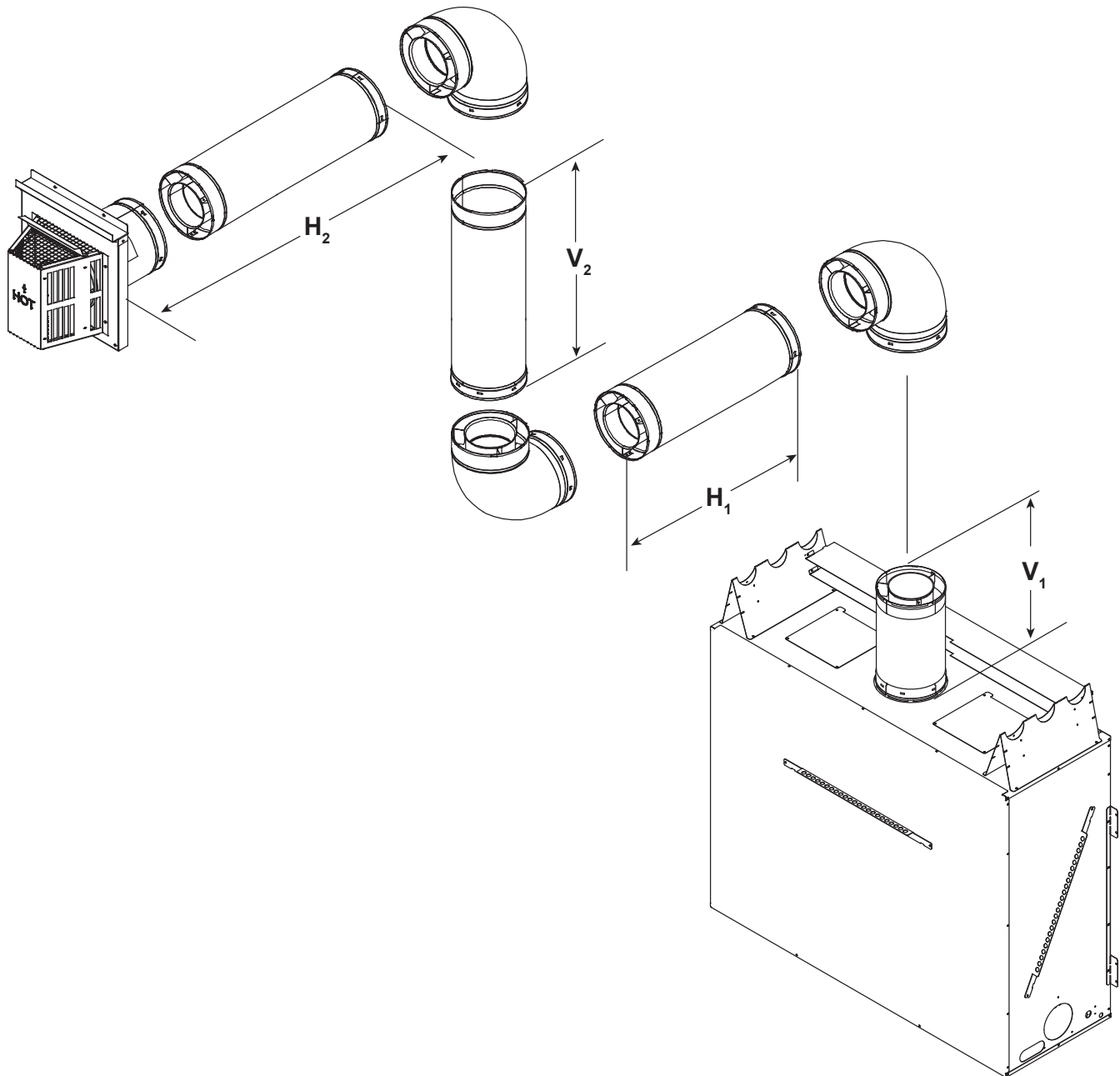
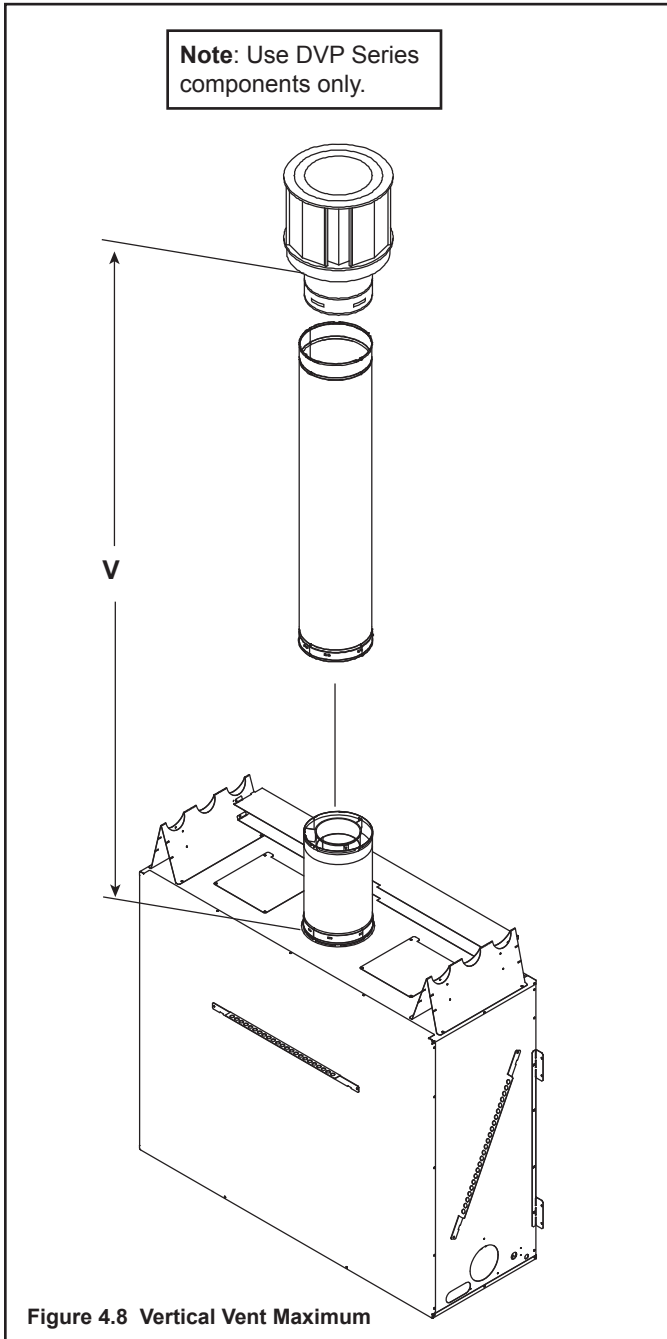


Figure 4.7

Top Vent - Vertical Termination No Elbows

V = 3 ft Min. (1m), 50 ft. Max. (15.2 m)

Note: If installing a vertical vent/termination off the top of the appliance, the optional exhaust restrictor may be needed.



Exhaust restrictors are recommended for these vertically terminated products which have excessive draft. Exhaust restrictors will compensate for high draft, and restore visual flame height. If the vent configuration has a total vertical of 20-50 feet, an exhaust restrictor may be needed. The exhaust restrictor can be located in the appliance manual bag.

Exhaust restrictor Instructions

1. Locate the two pilot holes in the inside firebox chamber as shown in Figure 4.9.
2. Center the exhaust restrictor such that the thru holes in the vent restrictor align with the pilot holes in the inner firebox chamber.
3. Use two 1/2 inch self-piercing screws to secure vent restrictor to firebox heat shield. See Figure 4.9.

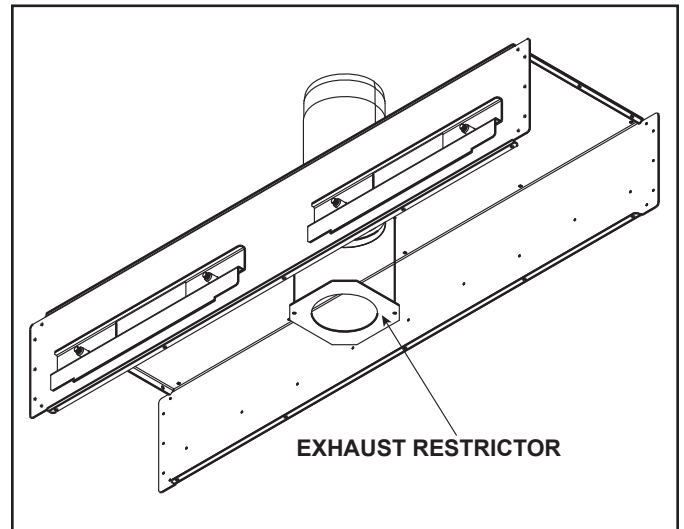


Figure 4.9 Exhaust Restrictor

4. In some applications, such as those where the fireplace is elevated off the floor, the vent restrictor may be painted, but painting is not required.
5. Recommended restrictor usage:
20 to 30 ft. = 4 inch restrictor
30 ft. and up = 3 inch restrictor

NOTICE: Before painting, contact your dealer for information on the appropriate high temperature paint.

Top Vent - Vertical Termination Venting with 2 elbows

$V_1 + V_2$ Minimum		H Maximum	
1 ft.	305 mm	2 ft.	610 mm
2 ft.	610 mm	4 ft.	1219 mm
3 ft.	914 mm	9 ft.	2743 mm
4 ft.	1219 mm	12 ft.	3658 mm
5 ft.	1524 mm	15 ft.	4572 mm
$V_1 + H_1 + V_2 = 63 \text{ ft. (19.2 m) Maximum}$ $H_1 + H_2 = 23 \text{ ft. (7.1 m) Maximum}$			

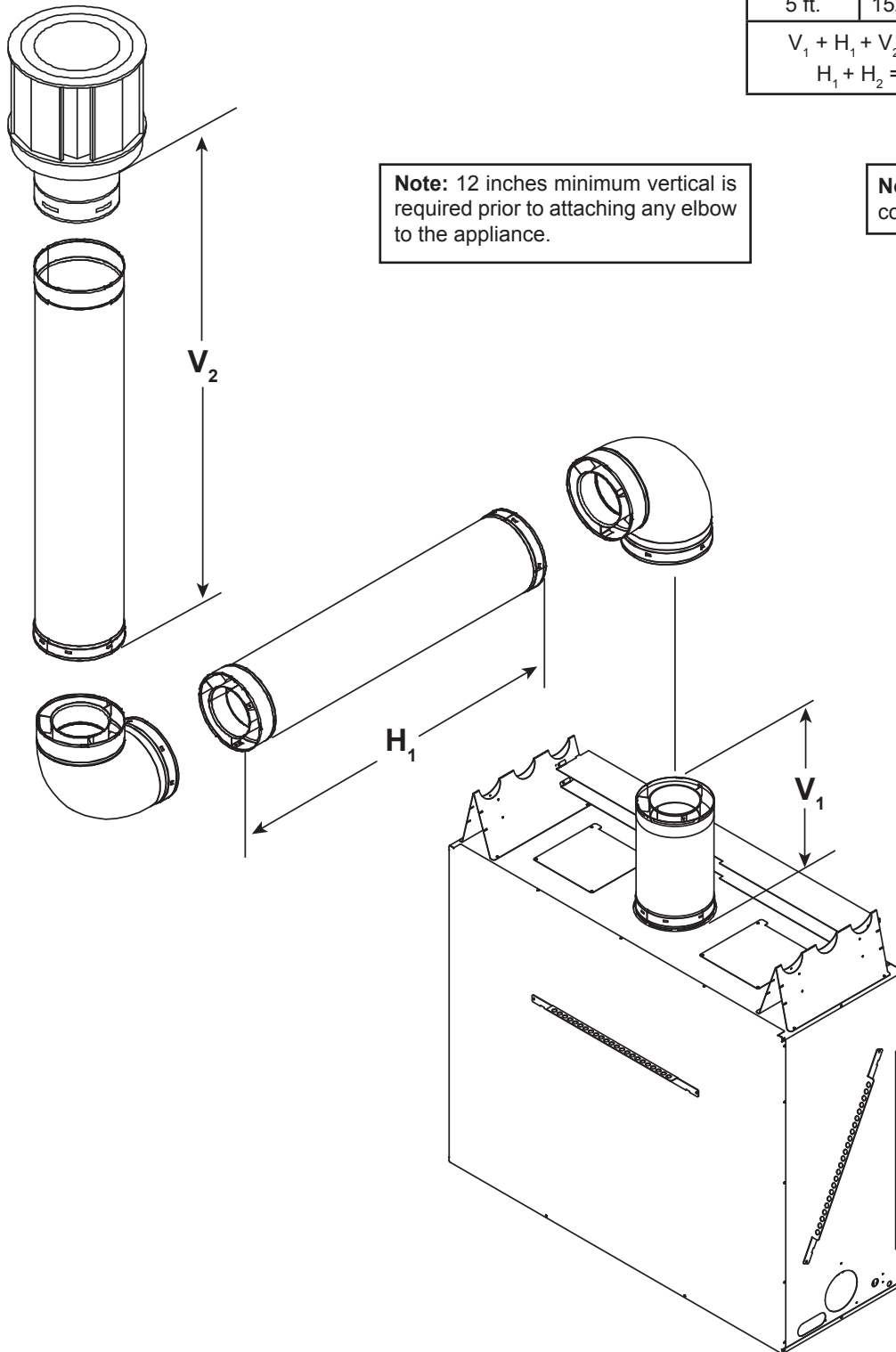
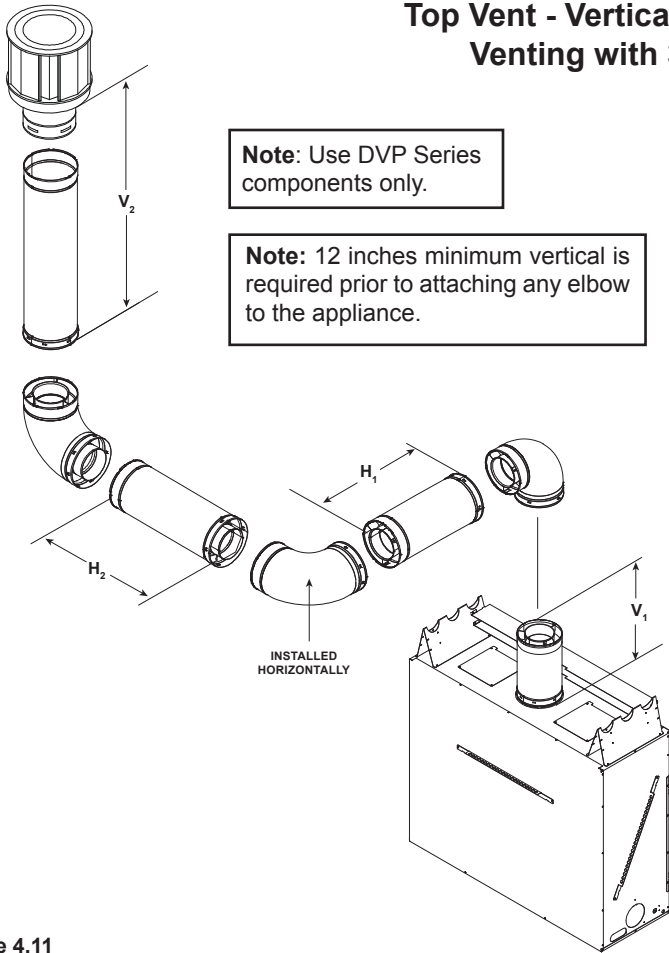


Figure 4.10

Top Vent - Vertical Termination Venting with 3 elbows



Note: Use DVP Series components only.

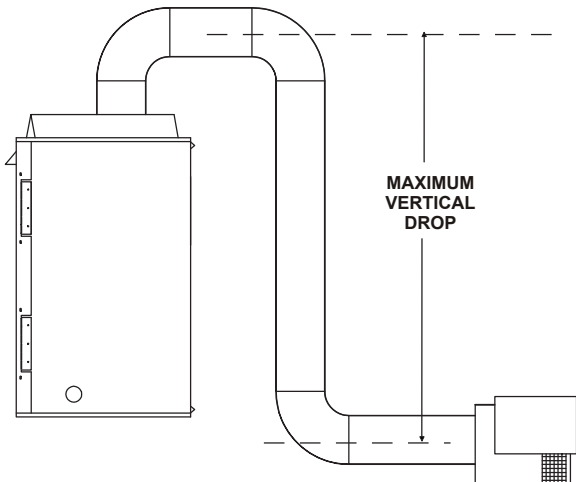
Note: 12 inches minimum vertical is required prior to attaching any elbow to the appliance.

$V_1 + V_2$ Minimum		$H_1 + H_2$ Maximum	
1 ft.	305 mm	2 ft.	610 mm
2 ft.	610 mm	4 ft.	1219 mm
3 ft.	914 mm	9 ft.	2743 mm
4 ft.	1219 mm	12 ft.	3658 mm
5 ft.	1524 mm	15 ft.	4572 mm
$V_1 + V_2 + H_1 + H_2 = 63$ ft. (19.2 m) Maximum $H_1 + H_2 = 23$ ft. (7.1 m) Maximum			

Figure 4.11

Note: The RED40 has been approved for use with the PVK-80 power vent system.

DIRECT VENT WITH 5 in. / 8 in. DIAMETER DVP PIPE		
MAX. ELBOWS (45° & 90°)	MAX. TOTAL VENT RUN (FT.)	MAX. VERT. DROP (FT.)
8	80 ft.	12 ft.



NOTICE: If a pipe configuration includes a vertical component that goes downward, a vertical component going back upward is not allowed.

NOTE: Maximum total vent run = Total vertical vent run + Total horizontal vent run

Figure 4.12 Power Vent

5 Vent Clearances and Framing

A. Pipe Clearances to Combustibles

WARNING! Risk of Fire! Maintain air space clearance to vent. DO NOT pack insulation or other combustibles:

- Between ceiling firestops
- Between wall shield firestops
- Around vent system

Failure to keep insulation or other material away from vent pipe may cause overheating and fire.

Note: Heat shields MUST overlap by a minimum of 1-1/2 in. (38 mm).
 • DVP heat shield - designed to be used on a wall 4 in. to 7-1/4 in. (102 mm to 184 mm) thick.
 • If wall thickness is less than 4 in. the existing heat shields must be field trimmed. If wall thickness is greater than 7-1/4 in. a DVP-HSM-B will be required.

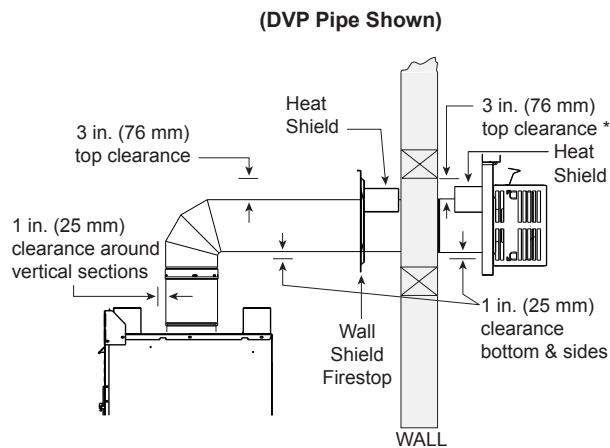


Figure 5.1 Horizontal Venting Clearances To Combustible Materials

B. Wall Penetration Framing/Firestops

Combustible Wall Penetration

Whenever a combustible wall is penetrated, you must frame a hole for the wall shield firestop(s). The wall shield firestop maintains minimum clearances and prevents cold air infiltration.

- The opening must be framed on all four sides using the same size framing materials as those used in the wall construction.
- DVP pipe - A wall shield firestop must be placed on each side of an interior wall. A minimum 1-1/2 in. (38 mm) overlap of attached heat shields must be maintained.
- See Section 7.F. for information for regarding the installation of a horizontal termination cap.

Non-Combustible Wall Penetration

If the hole being penetrated is surrounded by non-combustible materials such as concrete, a hole with diameter one inch greater than the pipe is acceptable.

Whenever a non-combustible wall is penetrated, the wall shield firestop is only required on one side and no heat shield is necessary.

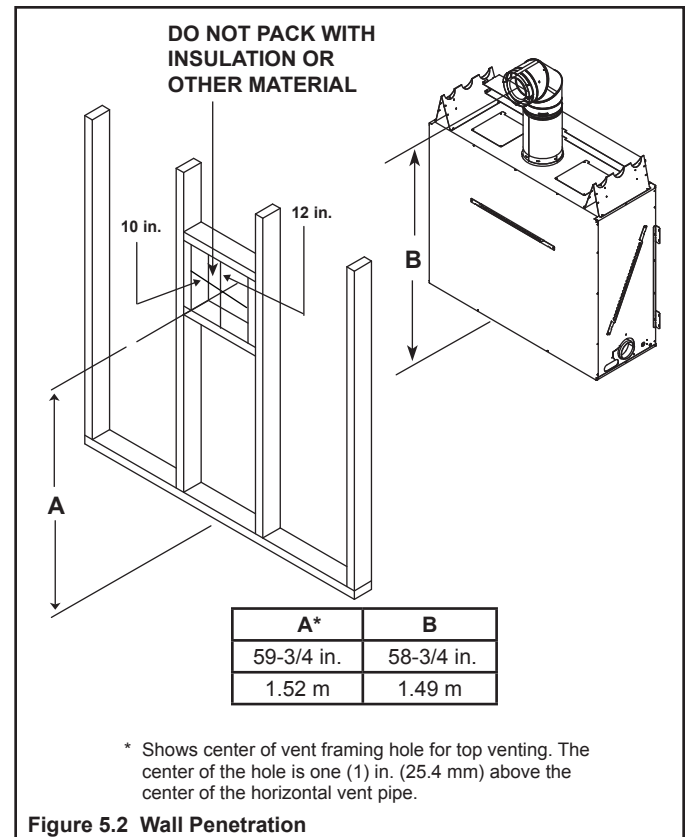


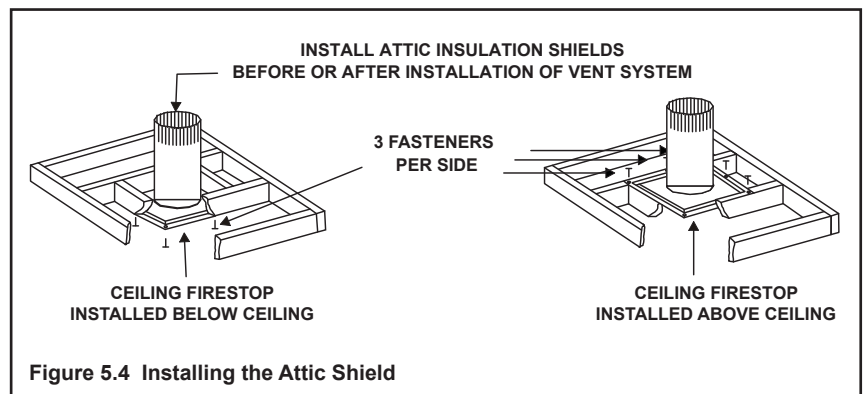
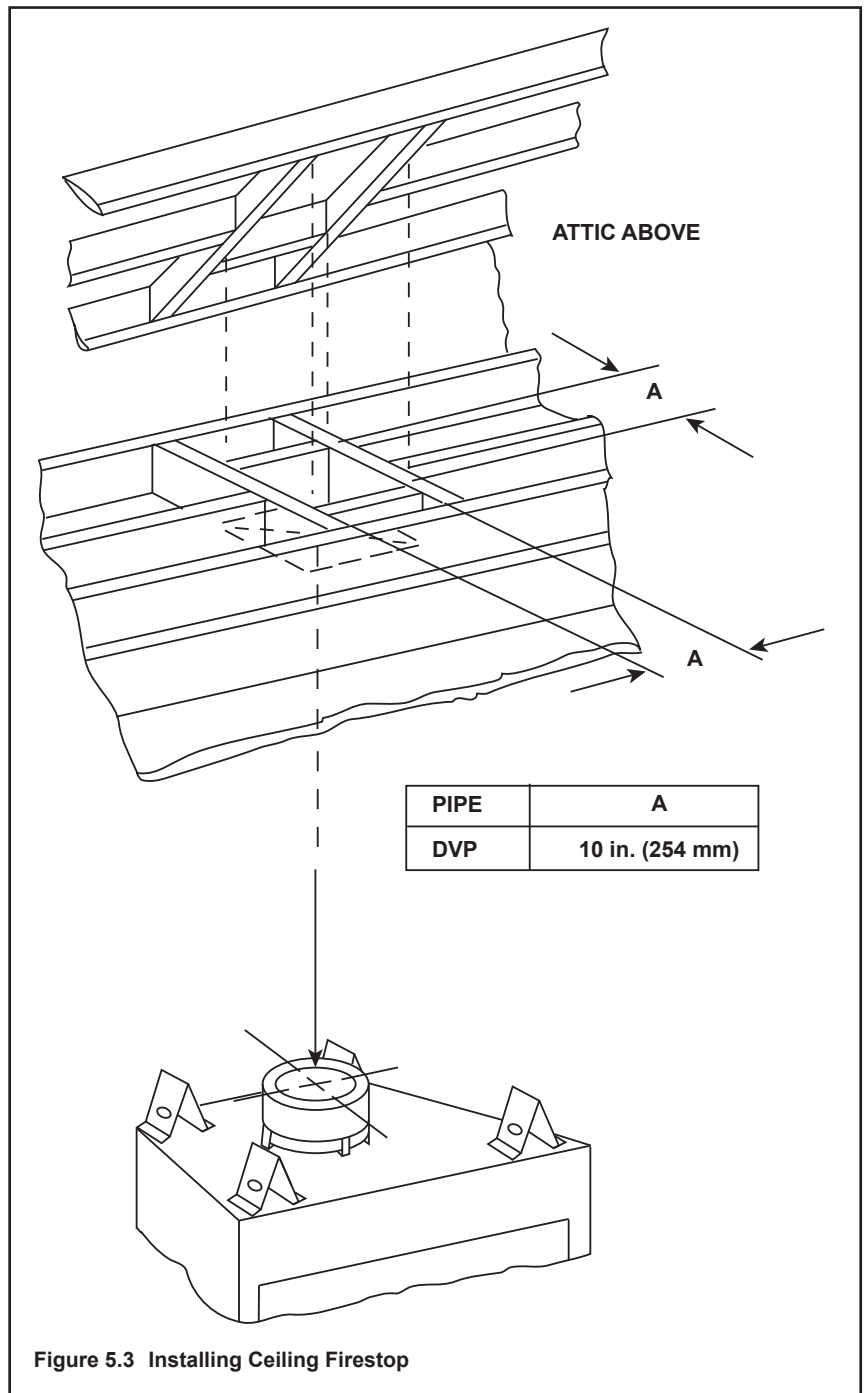
Figure 5.2 Wall Penetration

C. Install the Ceiling Firestop

A ceiling firestop **MUST** be used between floors and attics.

- **DVP pipe only** - Frame an opening 10 in. by 10 in. (254 mm by 254 mm) whenever the vent penetrates a ceiling/floor. See Figure 5.3.
- Frame the area with the same sized lumber as used in ceiling/floor joist.
- The ceiling firestop may be installed above or below the ceiling joists when installed with an attic insulation shield. It must be under joists between floors that are not insulated. Refer to Figure 5.4.
- Secure with three fasteners on each side.

WARNING! Risk of Fire! DO NOT pack insulation around the vent. Insulation must be kept back from the pipe to prevent overheating.



D. Install Attic Insulation Shield

WARNING! Fire Risk. DO NOT allow loose materials or insulation to touch vent. Hearth & Home Technologies requires the use of an attic shield.

The National Fuel Gas Code ANSI Z223.1 and NFPA 54 requires an attic shield constructed of 26 gauge minimum metal that extends at least 2 in. (51 mm) above insulation.

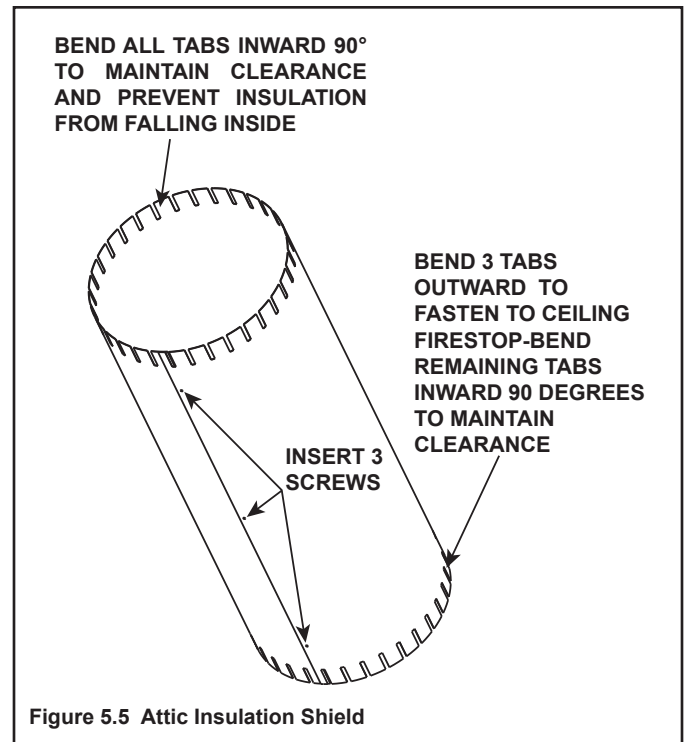
Attic shields must meet specified clearance and be secured in place.

Flat Ceiling Installation

- Remove one shield from box.

NOTICE: Cut previously installed batt insulation to make room for the attic insulation shield.

- Wrap shield around pipe if pipe is already installed in area to be insulated.
- Match the three holes in each side and fasten with three screws to form a tube.
- Bend three tabs on the bottom of the shield outward to allow attachment to the ceiling firestop.
- Bend the remaining bottom tabs inward 90° to maintain the air space between the pipe and the shield. Set the shield on the ceiling firestop and attach to the firestop.
- Bend all tabs inward 90° around the top of the shield. These tabs must be used to prevent blown insulation from getting between the shield and vent pipe, and to maintain air space clearance.



Vaulted Ceiling Installation

- Remove one shield from box.

NOTICE: Cut previously installed batt insulation to make room for the attic insulation shield.

- Cut the attic insulation shield (if application is for vaulted ceiling) to fit your ceiling pitch. Snip cut edge to recreate 1 in. bend tabs all the way around the bottom.
- Wrap shield around pipe if pipe is already installed in area to be insulated.
- Match the three holes in each side and fasten with three screws to form a tube.
- Bend three tabs on the bottom of the shield outward to allow attachment to the ceiling firestop.
- Bend the remaining bottom tabs inward 90° to maintain the air space between the pipe and the shield. Set the shield on the ceiling firestop and attach to the firestop.
- Bend all tabs inward 90° around the top of the shield. These tabs must be used to prevent blown insulation from getting between the shield and vent pipe, and to maintain air space clearance.

6 Appliance Preparation

A. Vent Collar Preparation

CAUTION! Risk of Cuts, Abrasions or Flying Debris. Wear protective gloves and safety glasses during installation. Sheet metal edges are sharp.

1. Remove seal cap by lifting up and off of the starting collar.
2. Place first twelve inch vent section on the starting collar.

WARNING! Risk of Fire! A MINIMUM of twelve inches vertical pipe is required prior to attaching any elbow to the appliance.

3. Place fiberglass rope ring over initial twelve inch vent section and position tightly to top of appliance.
4. Remove bottom metal panel by removing four screws. Screw locations are shown in Figure 6.1. The two screws on the bottom side are located behind the panel. Remove all four screws and gently lift the panel off the appliance avoiding contact with the non-combustible board if possible.

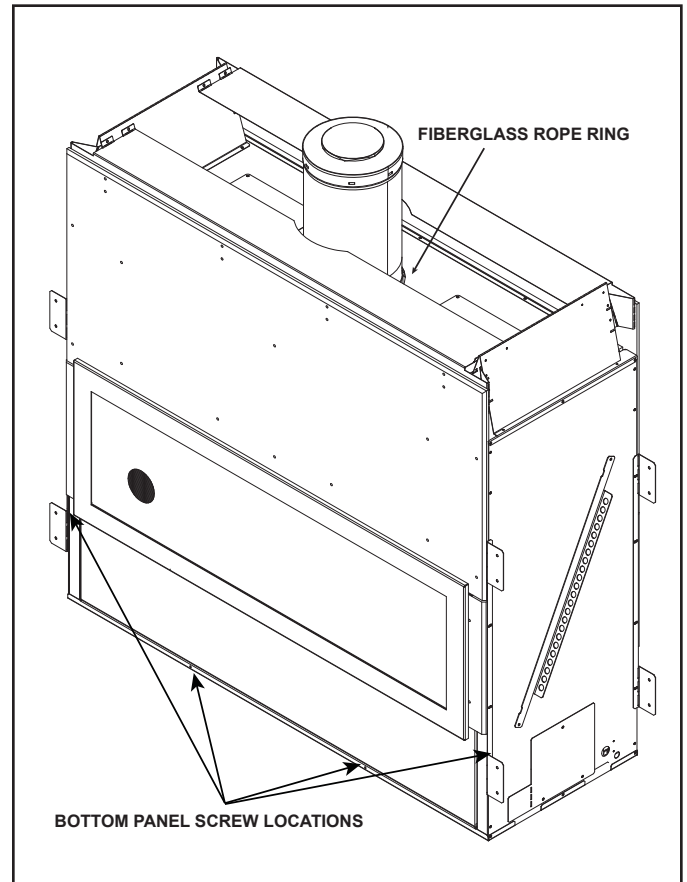


Figure 6.1 Location of Fiberglass Rope Ring

B. Securing and Leveling the Appliance

WARNING! Risk of Fire! Prevent contact with:

- Sagging or loose insulation
- Insulation backing or plastic
- Framing and other combustible materials

Block openings into the chase to prevent entry of blown-in insulation. Make sure insulation and other materials are secured.

DO NOT notch the framing around the appliance standoffs. Failure to maintain air space clearance may cause overheating and fire.

Figure 6.1 shows how to properly position, level, and secure the appliance. Nailing tabs are provided to secure the appliance to the framing members.

- Bend out the two nailing tabs on each side.
- Place the appliance into position.
- Keep nailing tabs flush with the framing. See Figure 3.5.
- Level the appliance from side to side and front to back.
- Shim the appliance as necessary. It is acceptable to use wood shims underneath the appliance.
- Secure the appliance to the framing by using nails or screws through the nailing tabs.

Figure 6.2 shows the fireplace installed on the floor. However, this fireplace can be elevated off the floor provided that the fireplace is properly supported by framing materials and the ceiling clearances are maintained.

Setting the Fireplace into the Framing

The left and right nailing tabs were designed as a means to ensure the fireplace is mounted flush with the framing materials.

1. Bend out all four nailing tabs.
2. Screw each nailing tab to the adjoining framing material. Ensure that the one inch air space clearance is maintained on the sides and back of the fireplace. See Figure 3.6 and Figure 3.7.



Figure 6.3 Nailing Tabs Shipping Position



Figure 6.4 Nailing Tabs Installation Position

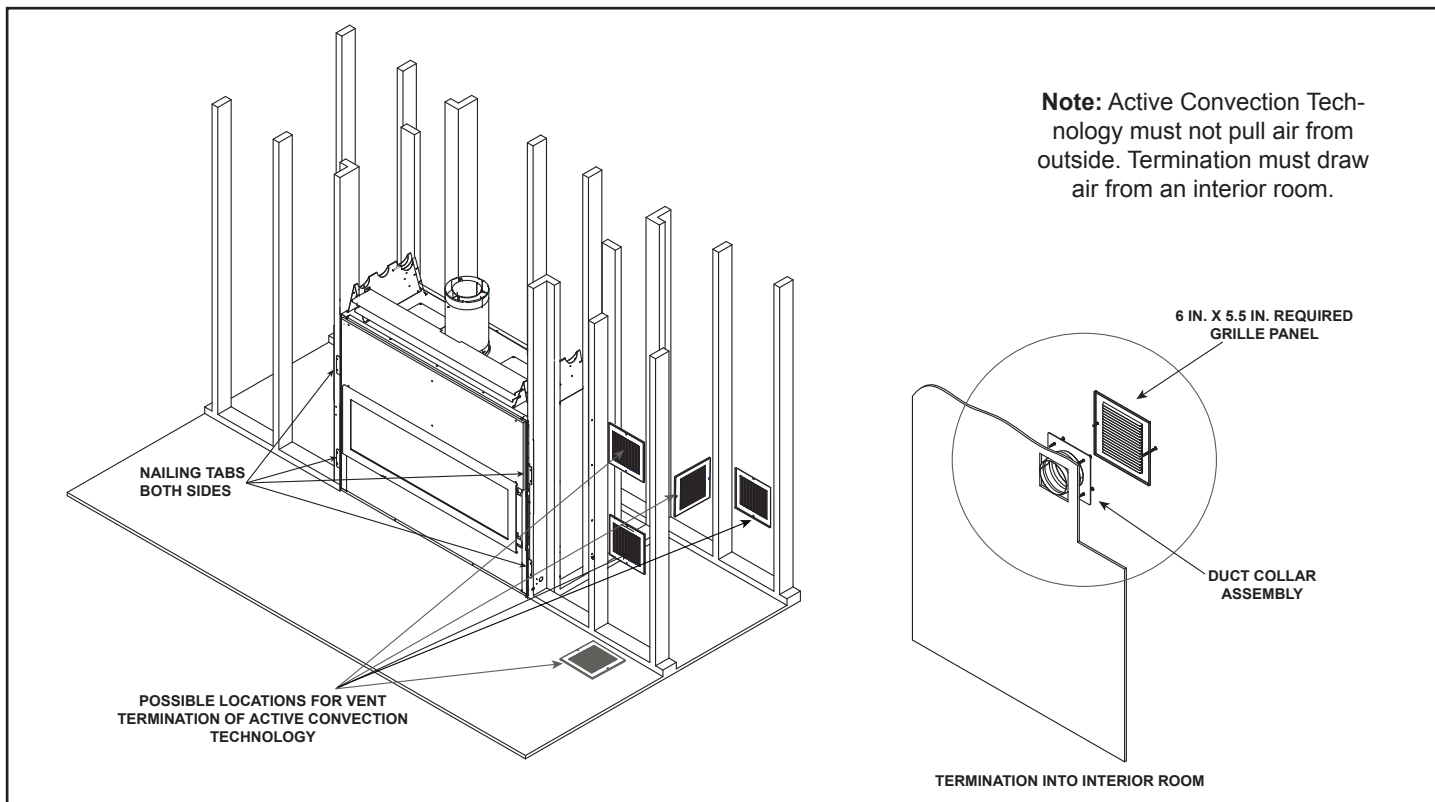


Figure 6.2 Proper Positioning, Leveling And Securing Of An Appliance

C. Active Convection Technology

The fireplace appliance has been provided with an active convection blower. The blower is required to keep lower control chamber component temperatures at an ideal operating temperature. The blower also provides for more efficient use of appliance heat by assisting the convection air around the firebox and back into the room. A four inch flexible duct kit has been provided with the appliance. One end of the flex duct will connect to the fan bracket assembly located in the lower control chamber. See Figure 9.5, Detail A. The other end will terminate to an interior wall of the house. The intake grille panel provided with the appliance must be used. See Figure 6.2 and Figure 6.6.

Note: The blower is essential for keeping components and the appliance environment in safe operating temperatures.

Note: Refer to Section 8.B if the active convection blower is to be moved to the right side.

WARNING! Risk of Fire! DO NOT terminate blower vent into an attic, crawl space, or the appliance chase. Vent must terminate on an adjacent, interior wall.

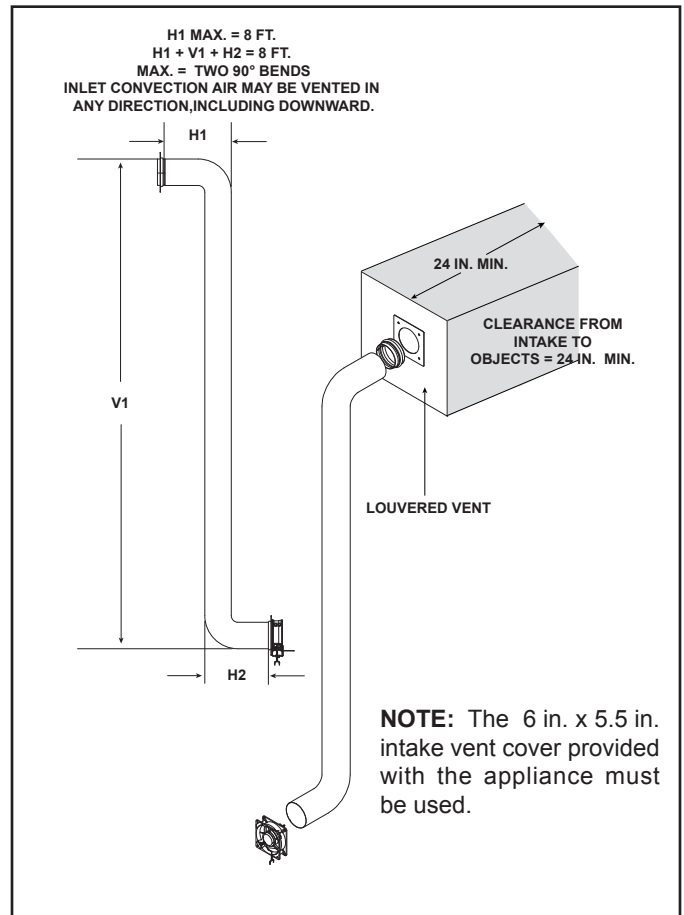


Figure 6.6. Active Convection Technology Duct and Termination.

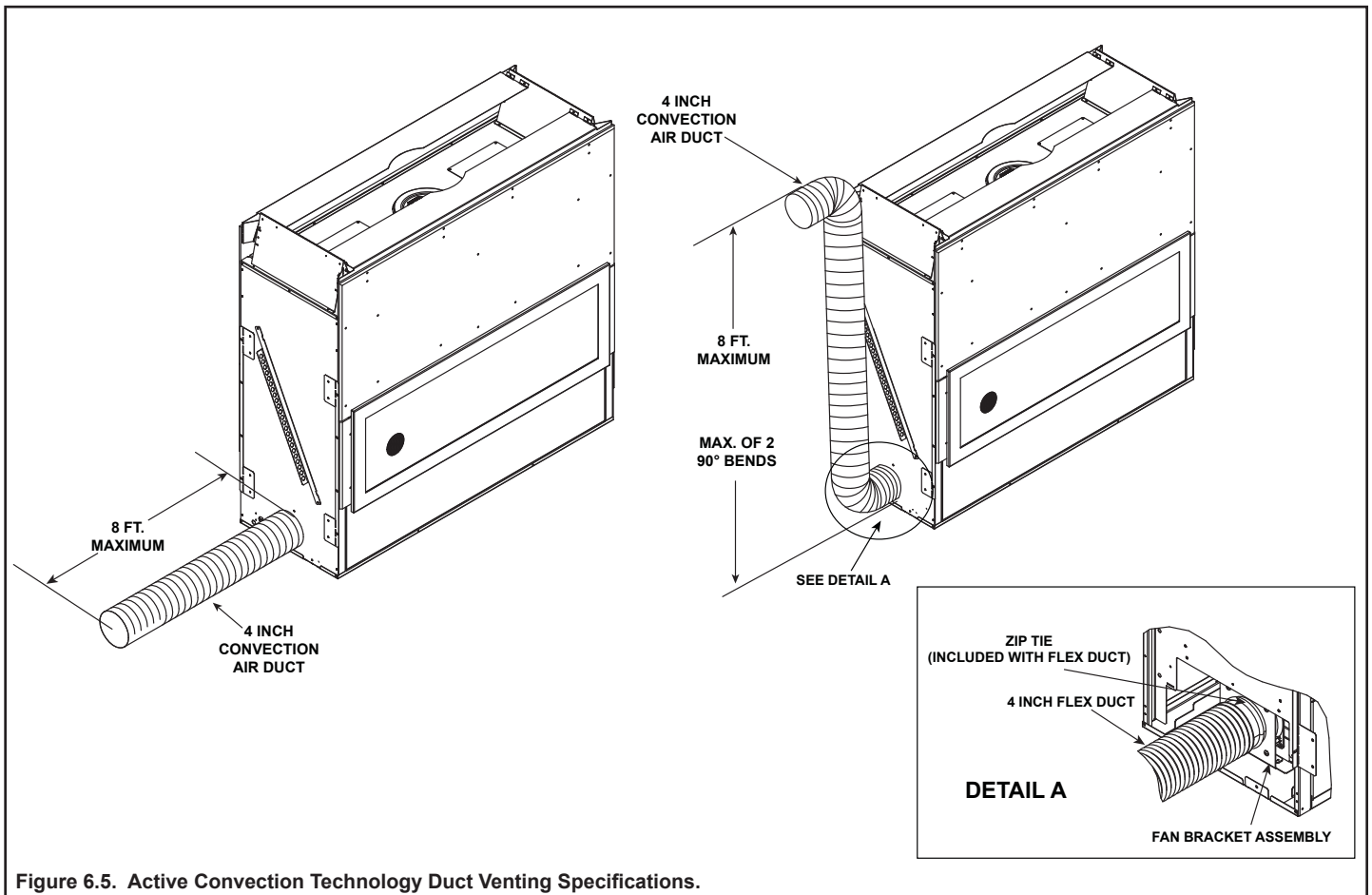


Figure 6.5. Active Convection Technology Duct Venting Specifications.

7 Venting and Chimneys

A. Assemble Vent Sections

Attach Vent to the Firebox Assembly

Note: The end of the pipe sections with the lanced tabs will face toward the appliance.

Attach the first pipe section to the starting collar:

- Lanced pipe end of the starting collar.
- Inner pipe over inner collar.
- Push the pipe section until all lanced tabs snap in place.
- Lightly tug on pipe to confirm it has locked.

Required Commercial, Multi-family (Multi-level exceeding two stories), or High-Rise Applications

All outer pipe joints must be sealed with 100% silicone (300° F minimum continuous exposure rating), including the slip section that connects directly to the horizontal termination cap.

- Apply a bead of silicone sealant (300° F minimum continuous exposure rating) inside the female outer pipe joint prior to joining sections. See Figure 7.1.
- Only outer pipes need to be sealed. All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed in this manner, unless otherwise stated.

WARNING! Risk of Fire or Explosion! DO NOT break silicone seals on slip sections. Use care when removing termination cap from slip pipe. If slip section seals are broken during removal of the termination cap, vent may leak.

Assemble Pipe Sections

Per Figure 7.2:

- Start the inner pipe on the lanced end of section A into the flared end of section B.
- Start the outer pipe of section A over the outer pipe of section B.
- Once both vents sections are started, push firmly until all lanced tabs lock into place.
- Lightly tug on the pipe to confirm the tabs have locked.

It is acceptable to use screws no longer than 1/2 in. (13 mm) to hold outer pipe sections together. If predrilling holes, **DO NOT** penetrate inner pipe.

For 90° and 45° elbows that are changing the vent direction from horizontal to vertical, one screw minimum should be put in the outer flue at the horizontal elbow joint to prevent the elbow from rotating. Use screws no longer than 1/2 in. (13 mm). If predrilling screw holes, **DO NOT** penetrate inner pipe.



Figure 7.1 High Temperature Silicone Sealant

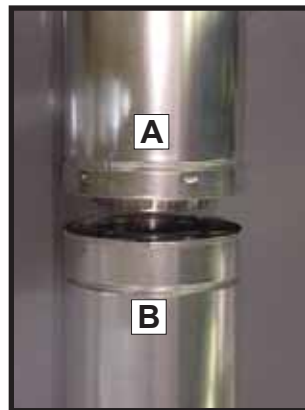


Figure 7.2

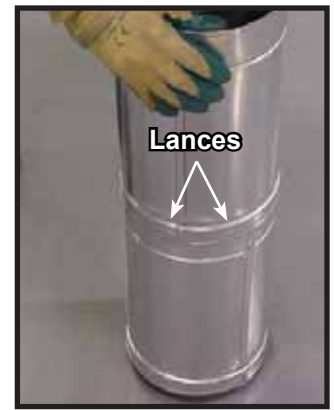


Figure 7.3

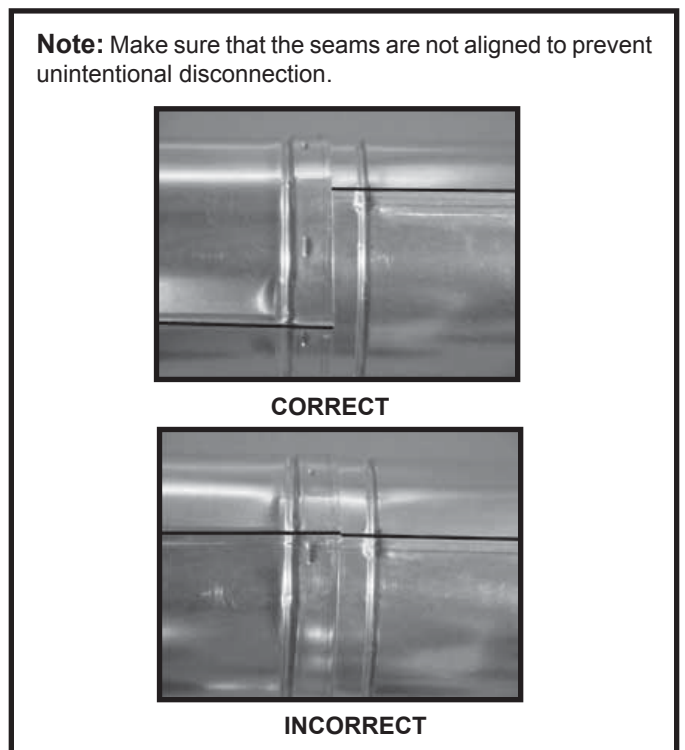


Figure 7.4 Seams

Note: Make sure that the seams are not aligned to prevent unintentional disconnection.

B. Assemble Slip Sections

- Slide the inner flue of the slip section into the inner flue of the pipe section and the outer flue of the slip section over the outer flue of the pipe section. See Figure 7.5.
- Slide together to the desired length.

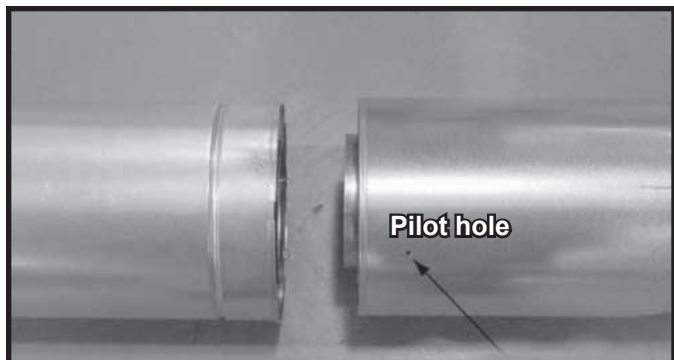


Figure 7.5 Slip Section Pilot Holes

- Maintain a 1-1/2 in. (38 mm) overlap between the slip section and the pipe section.
- Secure the pipe and slip section with two screws no longer than 1/2 in. (13 mm), using the pilot holes in the slip section. See Figure 7.6.

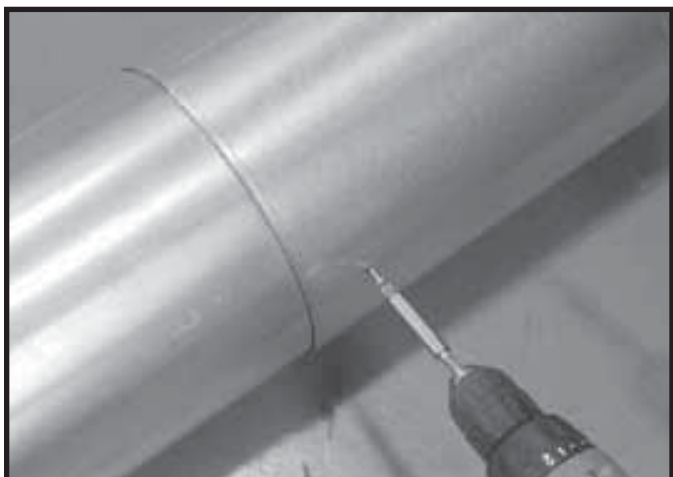


Figure 7.6 Screws into Slip Section

- Continue adding pipe as necessary following instructions in “Assembling Pipe Sections.”

NOTICE: If slip section is too long, the inner and outer flues of the slip section can be cut to the desired length.

NOTICE: When installing a vent system with an HRC termination cap, all pipe system joints shall be sealed using a silicone sealant with a minimum of 300°F continuous exposure rating.

- Apply a bead of silicone sealant inside the female outer pipe joint prior to joining sections.
- Only outer pipes are sealed, sealing the inner flue is not required.
- All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed.

C. Secure The Vent Sections

- Vertical runs originating off the top of the appliance, with no offsets, must be supported every 8 ft. (2.44 m) after the maximum allowed 25 ft. (7.62 m) of unsupported rise.
- Vertical runs, after any elbow, must be supported every 5 ft. (1.52 m).
- Horizontal runs must be supported every 5 feet (1.52 m).
- Vent supports or plumbers strap (spaced 120° apart) may be used to support. See figures 7.7 and 7.8.
- Wall shield firestops may be used to provide horizontal support.
- Ceiling firestops have tabs that may be used to provide vertical support.

WARNING! Risk of Fire, Explosion or Asphyxiation! Improper support may allow vent to sag and separate. Use vent run supports and connect vent sections per installation instructions. **DO NOT** allow vent to sag below connection point to appliance.

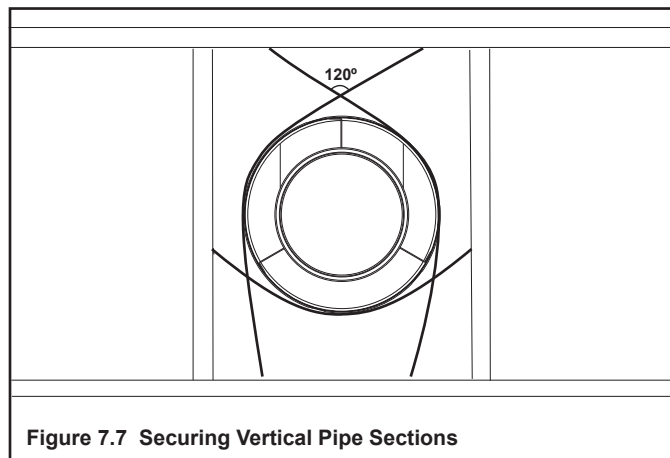


Figure 7.7 Securing Vertical Pipe Sections

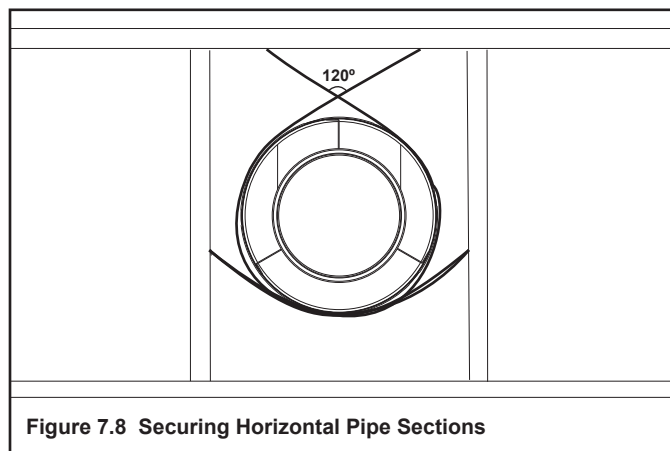


Figure 7.8 Securing Horizontal Pipe Sections

D. Disassemble Vent Sections

- Rotate either section (see Figure 7.9) so the seams on both pipe sections are aligned as shown in Figure 7.10
- Pull carefully to separate the pieces of pipe.

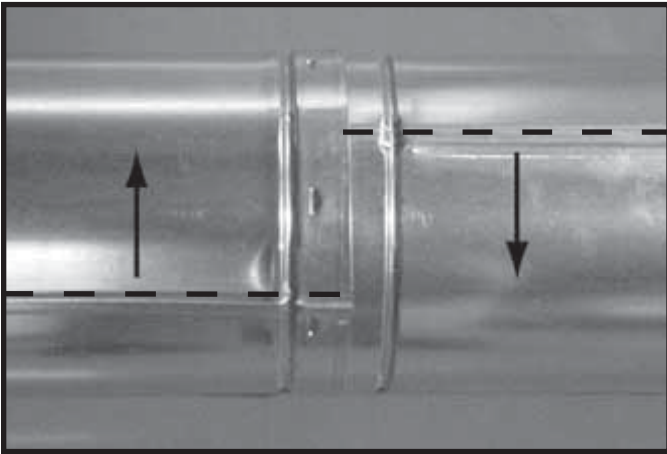


Figure 7.9 Rotate Seams for Disassembly

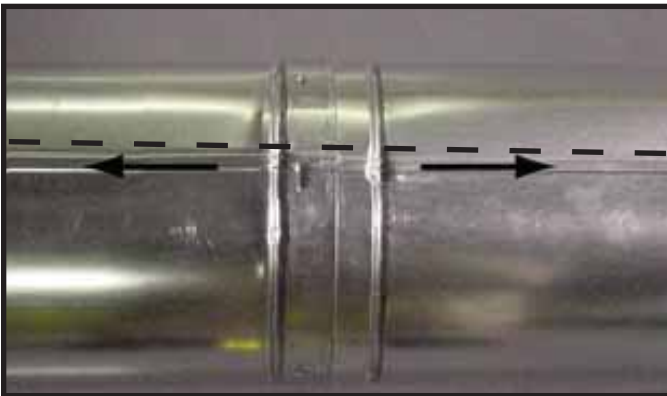
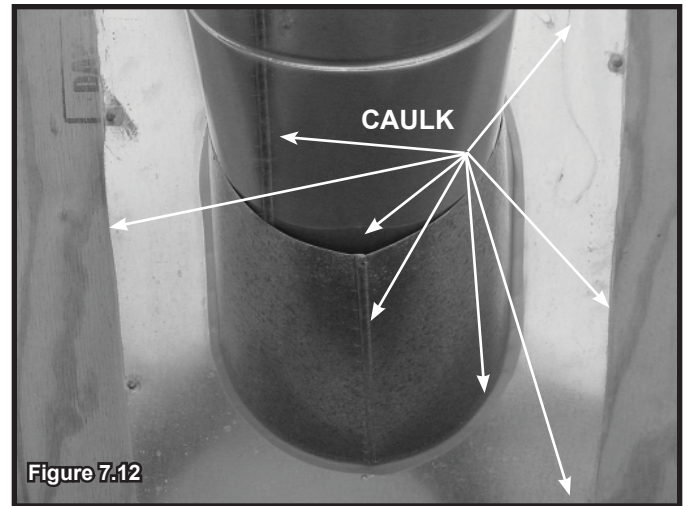
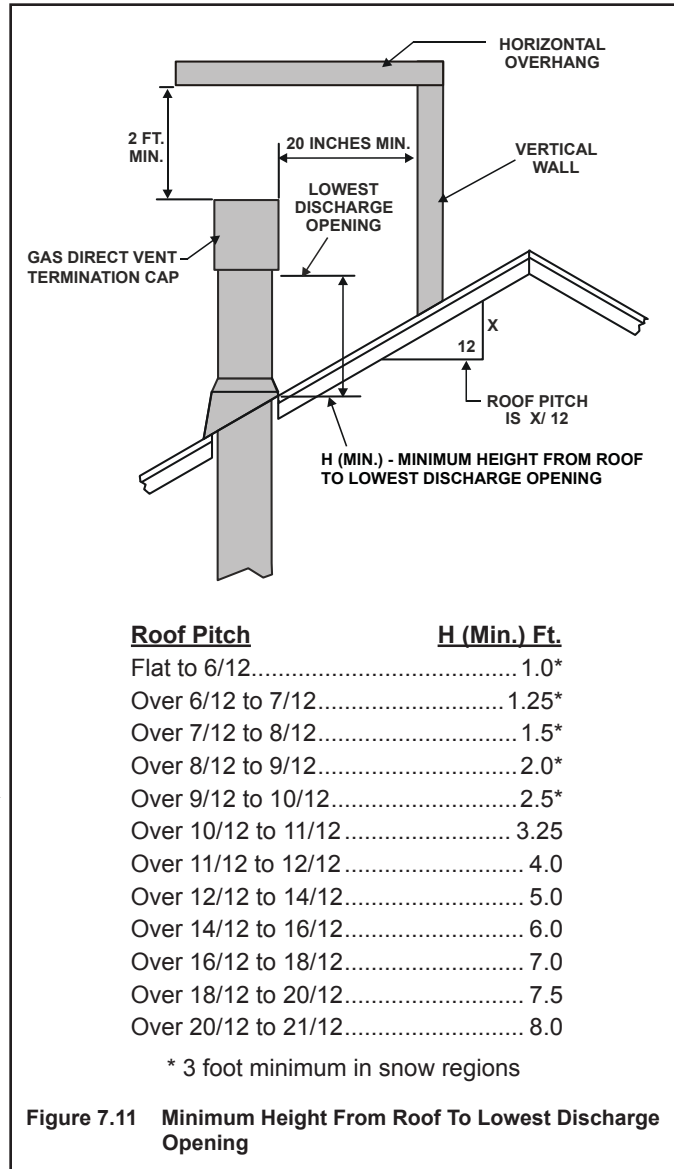


Figure 7.10 Align and Disassemble Vent Sections

E. Vertical Termination Requirements

Install Metal Roof Flashing

- See minimum vent heights for various pitched roofs (Figure 7.11) to determine the length of pipe to extend through the roof.
- Slide the roof flashing over the pipe sections extending through the roof as shown in Figure 7.12.



Assemble and Install Storm Collar

CAUTION! Risk of Cuts, Abrasions or Flying Debris. Wear protective gloves and safety glasses during installation. Sheet metal edges are sharp.

- Slide the storm collar onto the exposed pipe section and align brackets.
- Insert a bolt (provided) through the brackets and install nut. Do not completely tighten.



- Slide the assembled storm collar down the pipe section until it rests on the roof flashing (see Figure 7.13).
- Tighten nut and make sure the collar is tight against the pipe section.
- Caulk around the top of the storm collar. See Figure 7.14.

NOTICE: Failure to properly caulk the roof flashing and pipe seams may permit entry of water.

- Caulk the gap between the roof flashing and the outside diameter of the pipe.
- Caulk the perimeter of the flashing where it contacts the roof surface. See Figure 7.12.
- Caulk the overlap seam of any exposed pipe sections that are located above the roof line.

Install Vertical Termination Cap

- Attach the vertical termination cap by sliding the inner collar of the cap into the inner flue of the pipe section while placing the outer collar of the cap over the outer flue of the pipe section.
- Secure the cap by driving three self-tapping screws (supplied) through the pilot holes in the outer collar of the cap into the outer flue of the pipe (see Figure 7.14).



Figure 7.14

F. Horizontal Termination Requirements

Heat Shield Requirements for Horizontal Termination

WARNING! Risk of Fire! To prevent overheating and fire, heat shields must extend through the entire wall thickness.

- **DO NOT** remove the heat shields attached to the wall shield firestop and the horizontal termination cap (shown in Figure 7.15).
- Heat shields must overlap 1-1/2 in. (38 mm) minimum.

There are two sections of the heat shield. One section is factory-attached to the wall shield firestop. The other section is factory-attached to the cap. See Figure 7.15.

If the wall thickness does not allow the required 1-1/2 in. (38 mm) heat shield overlap when installed, an extended heat shield must be used.

- If the wall thickness is less than 4 in./102 mm, the heat shields on the cap and wall shield firestop must be trimmed. A minimum 1-1/2 in. (38 mm) overlap **MUST** be maintained.
- Use an extended heat shield if the finished wall thickness is greater than 7-1/4 in. (184 mm).
- The extended heat shield may need to be cut to length maintaining sufficient length for a 1-1/2 in. (38 mm) overlap between heat shields.
- Attach the extended heat shield to either of the existing heat shields using the screws supplied with the extended heat shield. Refer to vent components diagrams in the back of this manual.
- Rest the small leg on the extended heat shield on top of the pipe section to properly space it from the pipe section.

Important Notice: Heat shields may not be field constructed.

Install Horizontal Termination Cap

WARNING! Risk of Fire! The telescoping flue section of the termination cap **MUST** be used when connecting vent.

- 1-1/2 (38 mm) minimum overlap of flue telescoping section is required.

Failure to maintain overlap may cause overheating and fire.

- Vent termination must not be recessed in the wall. Siding may be brought to the edge of the cap base.
- Flash and seal as appropriate for siding material at outside edges of cap.
- When installing a horizontal termination cap, follow the cap location guidelines as prescribed by current **ANSI Z223.1** and **CAN/CGA-B149** installation codes and refer to Section 6 of this manual.

CAUTION! Risk of Burns! Local codes may require installation of a cap shield to prevent anything or anyone from touching the hot cap.

NOTICE: For certain exposures which require superior resistance to wind-driven rain penetration, a flashing kit and HRC caps are available. When penetrating a brick wall, a brick extension kit is available for framing the brick.

Note: When using termination caps with factory-supplied heat shield attached, no additional wall shield firestop is required on the exterior side of a combustible wall.

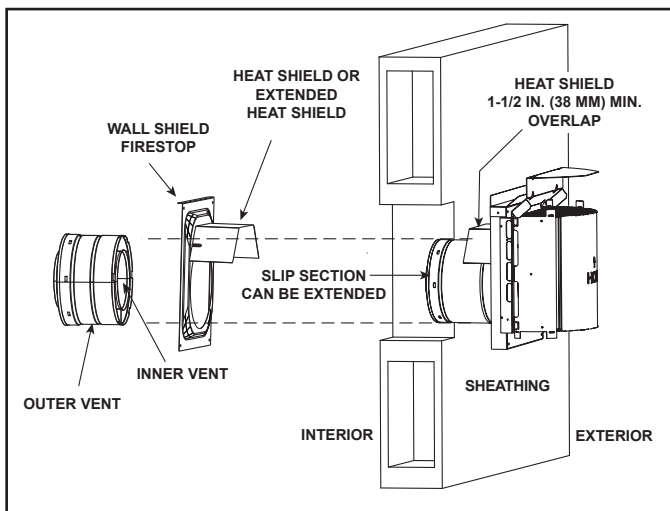


Figure 7.15 Venting Through the Wall

8 Electrical Information

A. General Information

WARNING! Risk of Shock or Explosion! DO NOT wire 110/120 VAC to the valve or to the appliance wall switch. Incorrect wiring will damage controls.

NOTICE: This appliance must be electrically wired and grounded in accordance with local codes or, in the absence of local codes, with **National Electric Code ANSI/NFPA 70-latest edition** or the **Canadian Electric Code CSA C22.1**.

- Wire the appliance junction box to unswitched 110-120 VAC. This is required for proper operation of the appliance.
- A 110-120 VAC circuit for this product must be protected with ground-fault circuit-interrupter protection, in compliance with the applicable electrical codes, when it is installed in locations such as in bathrooms or near sinks.
- Low voltage and 110/120 VAC voltage cannot be shared within the same wall box.

Electrical Service and Repair

WARNING! Risk of Shock! Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

WARNING! Risk of Shock! Replace damaged wire with type 105° C rated wire. Wire must have high temperature insulation.

Junction Box Installation

WARNING! Risk of Shock! Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

WARNING! Risk of Shock! Replace damaged wire with type 105° C rated wire. Wire must have high temperature insulation.

1. Remove the one screw that secures the junction box to the control tray panel.
2. Route the wire through the strain relief in the outer wrap and down through the knockout located on top side of the junction box. See Figure 8.1.
3. Make the connection inside the junction box to the 110-120V wire. Connect green to the ground nut, black to black, and white to white.
4. To reattach the junction box, insert one end of the junction box in the slot provided and securely screw the other end of the junction box to the control tray panel.

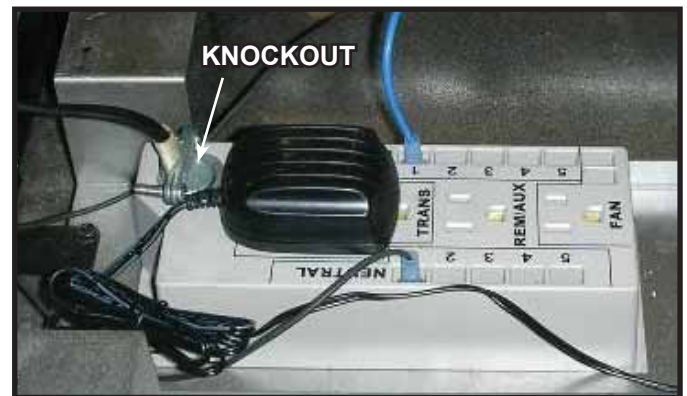


Figure 8.1 Junction Box Detail

In the event that the junction box may need to be accessed or installed after finish methods have been applied, access is possible by removing the valve assembly. See Figure 9.2.

B. Wiring Requirements

Intellifire Ignition System Wiring

- Wire the appliance junction box to 110/120 VAC for proper operation of the appliance.

WARNING! Risk of Shock or Explosion! DO NOT wire IPI controlled appliance junction box to a switched circuit. Incorrect wiring will override IPI safety lockout.

- Refer to Figure 8.5, Intellifire Pilot Ignition (IPI) Wiring Diagram.
- This appliance is equipped with an Intellifire control valve which operates on a 3 volt system.
- Plug the 3-volt AC transformer into the appliance junction box to supply power to the appliance.

Optional Accessories Requirements

- This appliance ships standard with a wall switch and may use a remote control.

Wiring for optional Hearth & Home Technologies approved accessories should be done now to avoid reconstruction. Follow instructions that come with those accessories.

Optional Remote Control Receiver

The junction box, control module, light controller and wall switch receiver can be accessed thru the air space between the firebox front and the lower-front finishing cover panel. The decorative front and glass assembly must be removed to access these components. See Figure 8.2.

Note: If the fan is moved from one side to the other, the junction box must also move. See appropriate configuration in relation to the valve in Figure 8.4. The valve does not move.

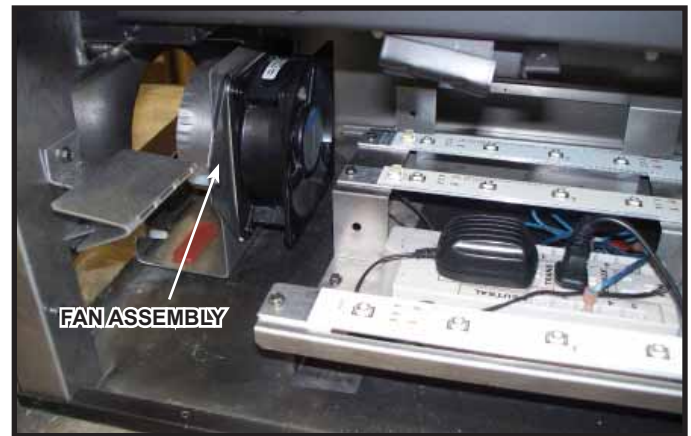


Figure 8.2. Valve Cavity (Lower Access Panel Removed)

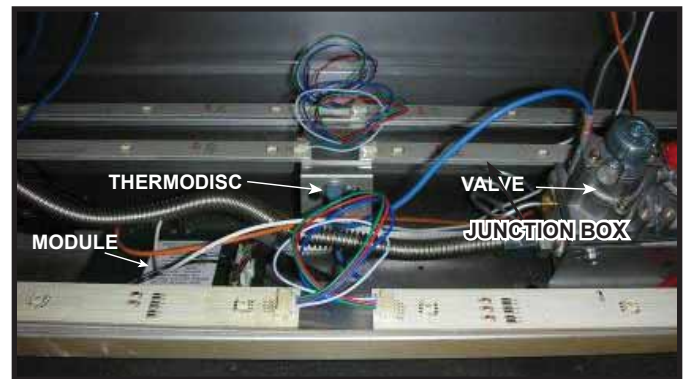


Figure 8.3. Valve Cavity

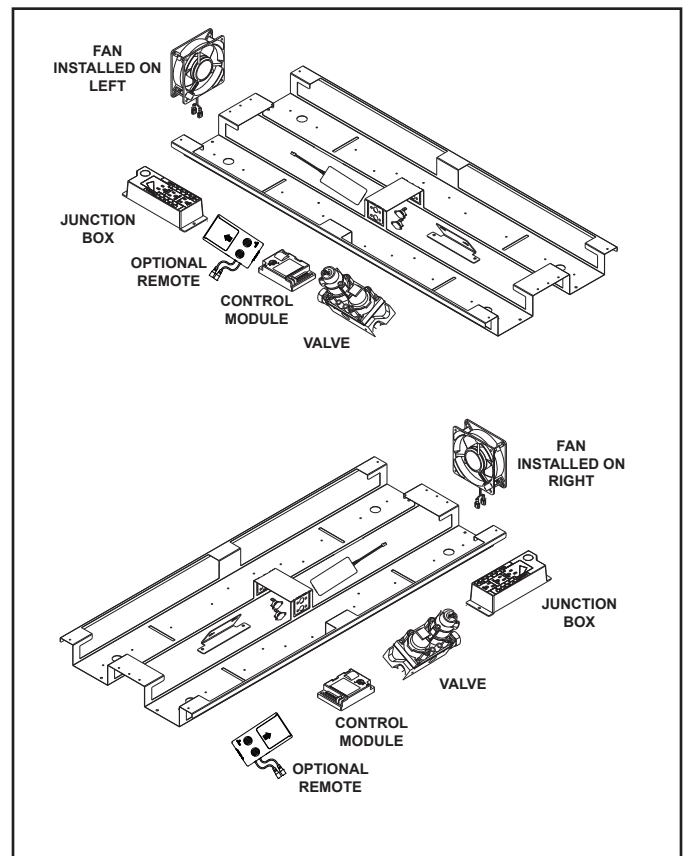


Figure 8.4. Controls Location Diagram

Optional Remote Control Receiver Location

A battery back up is not compatible with the RED40 or RED40ST and may not be installed.

CAUTION! DO NOT install battery back up. Battery back up is not compatible with this appliance. Battery pack and batteries will not withstand appliance temperatures.

An optional remote control receiver is available. The optional remote control receiver must be installed in the specific location under the heat shield as shown in Figure 8.6.



Figure 8.6. Required Location of Optional Remote Control Receiver. (Heat shield removed)

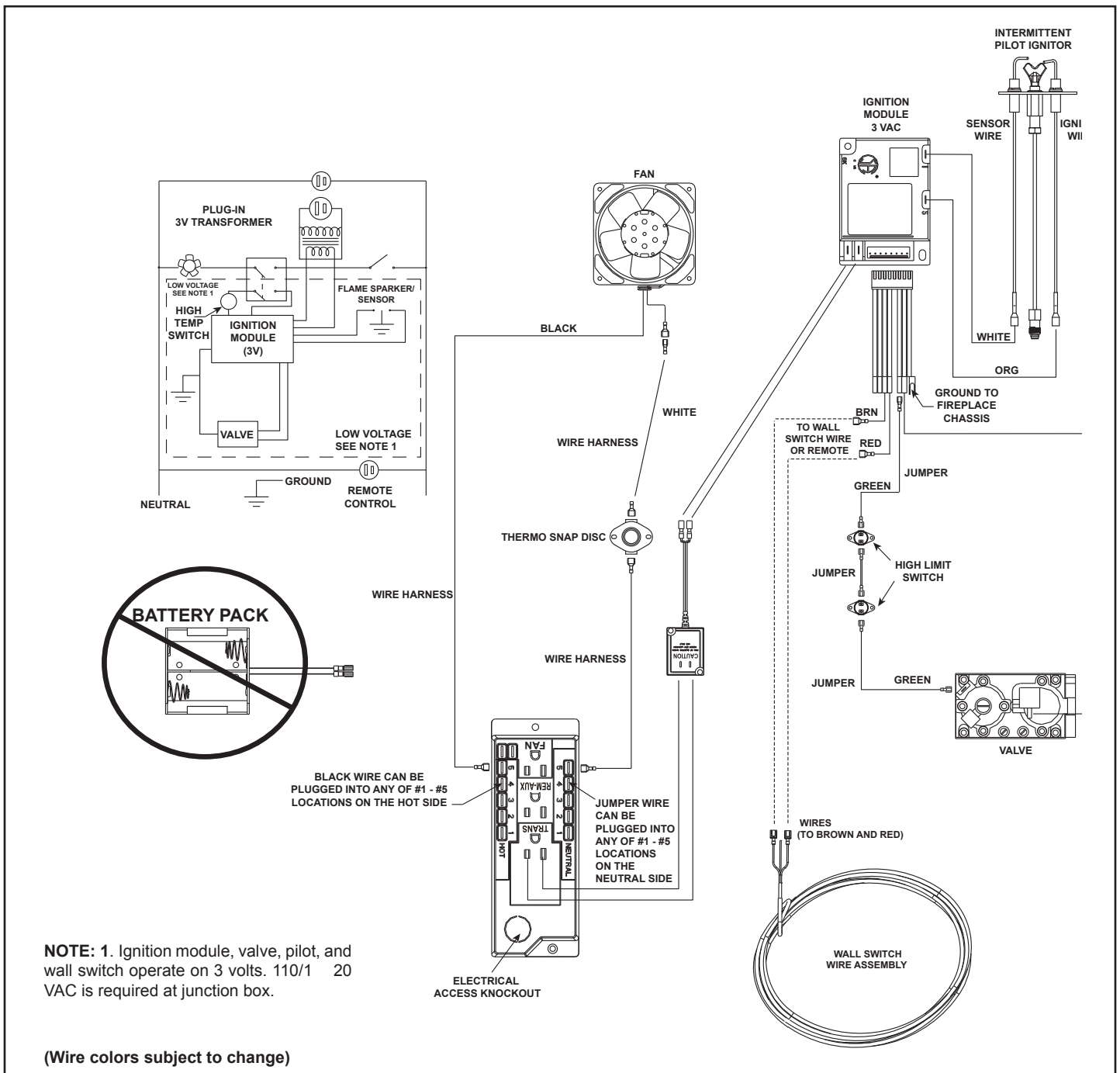
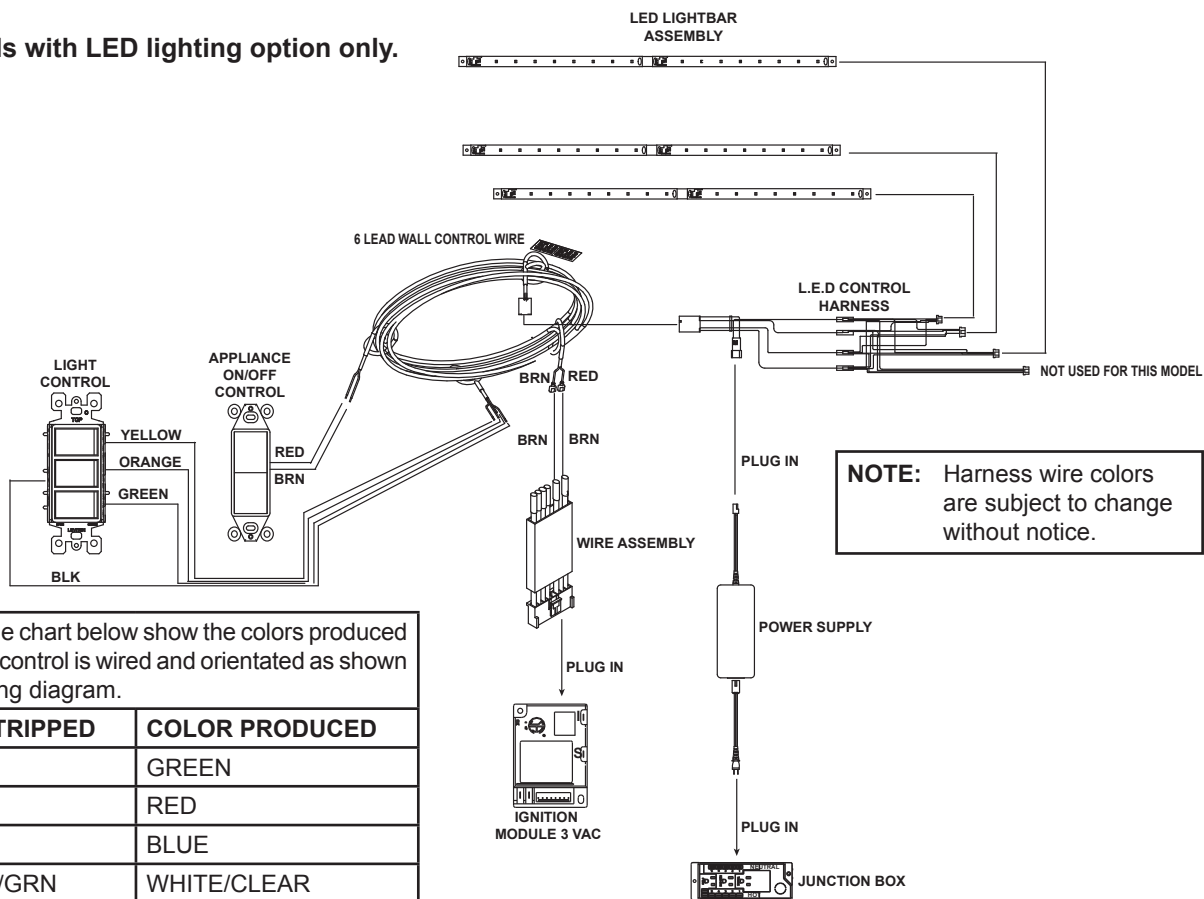


Figure 8.5 IntelliFire Pilot Ignition (IPI) Wiring Diagram with Wall Switch or Remote

C. Optional LED Lighting Circuit

For models with LED lighting option only.



NOTE: The chart below show the colors produced when light control is wired and orientated as shown in this wiring diagram.

SWITCH TRIPPED	COLOR PRODUCED
YELLOW	GREEN
ORANGE	RED
GREEN	BLUE
YEL/ORG/GRN	WHITE/CLEAR
YEL/ORG	YELLOW
ORG/GRN	PURPLE
YEL/GRN	LIGHT BLUE

Figure 8.7 LED Wiring Diagram

→ D. Active Convection Blower Replacement

WARNING! Risk of Shock! Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

WARNING! Risk of Shock! Replace damaged wire with type 105° C rated wire. Wire must have high temperature insulation.

1. Remove any interior enhancement kit(s), such as glass rock media, granite or porcelain, that have been already installed in the appliance.
2. Remove pilot shield as shown in Figure 8.8.



Figure 8.8 Removing Pilot Shield

3. Remove screws from base pan and lift base pan up and out of appliance. Set aside. See Figure 8.9 and Figure 8.10.



Figure 8.9 Removing Screws from Base Pan.



Figure 8.10 Lifting Base Pan Up and Out.

4. Remove screws from each end of burner assembly. Pull burner out of appliance. Set aside.

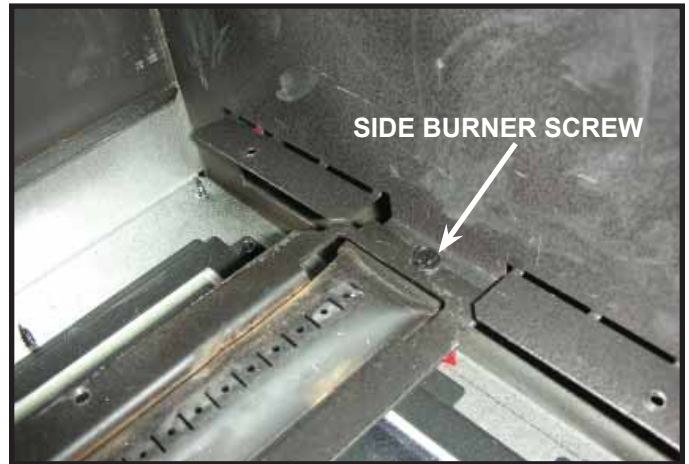


Figure 8.11. Side Burner Screw.

5. Remove left and right side glass pane frames from bottom of firebox. Remove glass pane and gaskets. Gaskets may have become fragile from heat exposure. Handle with care. At this point, blower and other components located under the firebox are accessible.

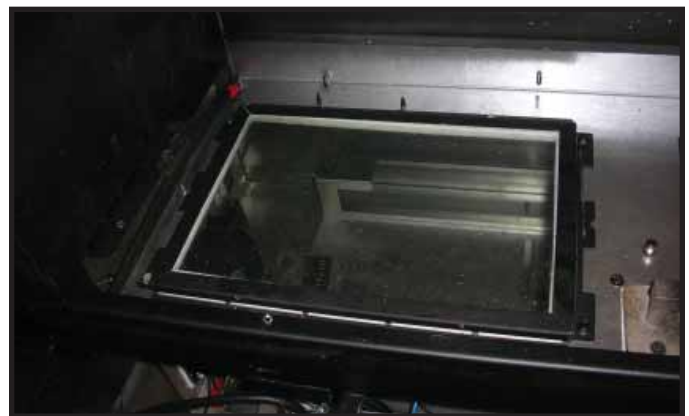


Figure 8.12. Glass Pane Frame.

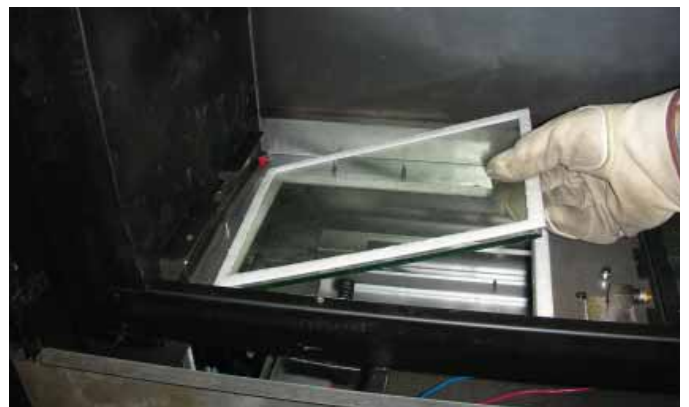


Figure 8.13. Removing Glass Pane Frame.

6. Remove four screws from valve and component tray that is attached to the very bottom of the fireplace. This entire tray can be slid to the side to provide easier access to the blower. Removing these screws will require a longer bit shaft in a cordless drill to reach down through the firebox opening. See Figure 8.14.

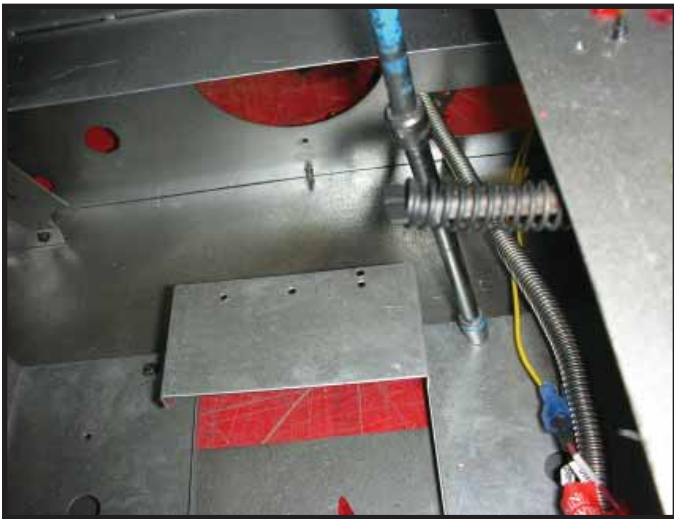


Figure 8.14 Component Tray



Figure 8.15 Blower Mounting Bracket

7. Unplug blower power wires. Pull blower mounting bracket toward you and remove hose clamp and air duct. Remove blower and attached mounting bracket from the appliance. See Figure 8.16.



Figure 8.16 Blower Removal Through Hole in Firebox

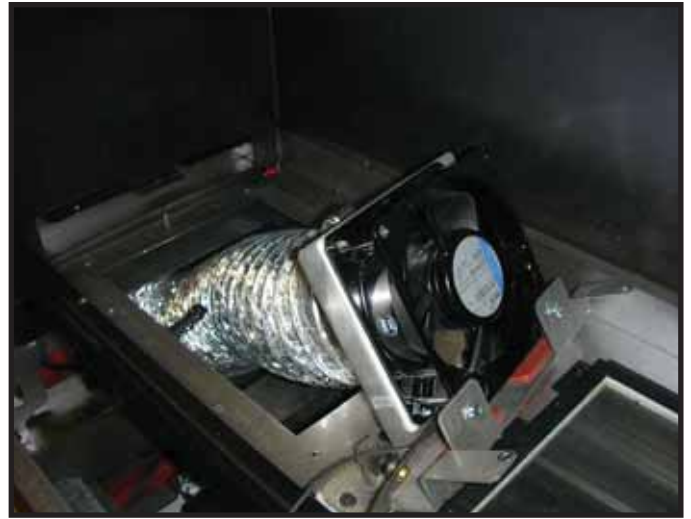


Figure 8.17 Fan Removal Through Firebox Bottom

8. Remove mounting bracket from blower by removing the four screws that hold the blower to the bracket. They are located on one side of the bracket. Save the gasket for use with the new blower. See Figure 8.18 and Figure 8.19.

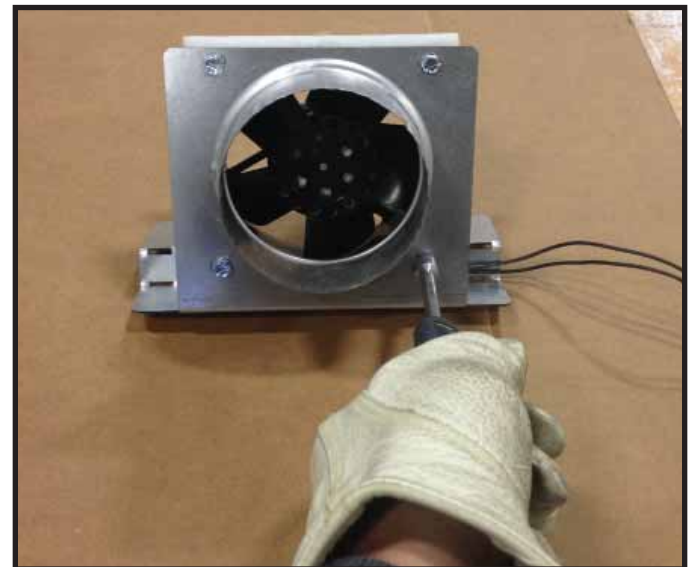


Figure 8.18 Removal of Mounting Bracket from Blower

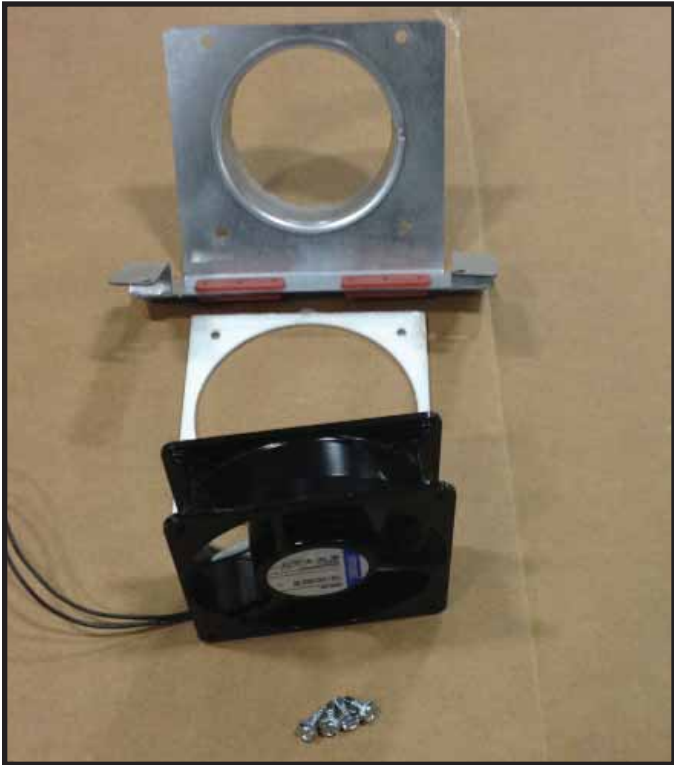


Figure 8.19 Blower, Gasket Mounting Bracket, and Hardware

9. Position the fan so that the arrow on the side of the fan points toward the interior of the appliance. Arrows are highlighted by white boxes in Figure 8.20.



Figure 8.20. Arrow Indicates Direction of Air Flow

10. Attach new blower to mounting bracket by fastening the four screws in the appropriate locations. See Figure 8.21.



Figure 8.21. Proper Blower Mounting.

11. Connect electrical cord to the junction box.

9 Gas Information

A. Fuel Conversion

- Make sure the appliance is compatible with available gas types.
- Conversions must be made by a qualified service technician using Hearth & Home Technologies specified and approved parts.

B. Gas Pressure

- Optimum appliance performance requires proper input pressures.
- Gas line sizing requirements will be determined in ANSI Z223.1 National Fuel Gas Code in the USA and CAN/CGA B149 in Canada.
- Pressure requirements are:

Gas Pressure	Natural Gas	Propane
Minimum inlet pressure	5.0 in. w.c.	11.0 in. w.c.
Maximum inlet pressure	10.0 in. w.c.	13.0 in. w.c.
Manifold pressure	3.5 in. w.c.	10.0 in. w.c.

WARNING! Risk of Fire or Explosion! High pressure will damage valve. Low pressure may cause explosion.

- Verify inlet pressures. Verify minimum pressures when other household gas appliances are operating.
- Install regulator upstream of valve if line pressure is greater than 1/2 psig.
- Valve pressure taps are accessible by removing the outer panel tray and glass assembly.

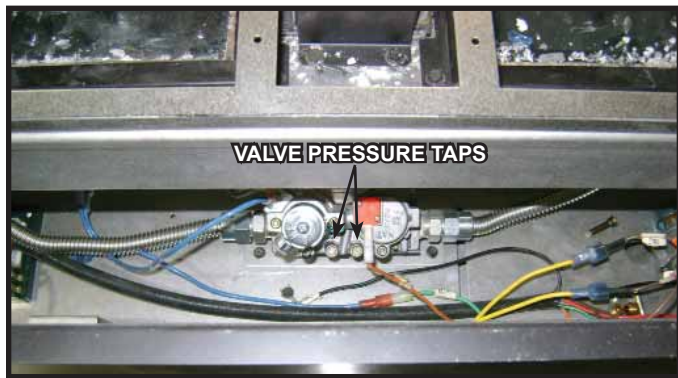


Figure 9.1. Valve Pressure Taps.

⚠ WARNING

Fire Risk.
Explosion Hazard.
High pressure will damage valve.

- Disconnect gas supply piping BEFORE pressure testing gas line at test pressures above 1/2 psig.
- Close the manual shutoff valve BEFORE pressure testing gas line at test pressures equal to or less than 1/2 psig.

Note: Have the gas supply line installed in accordance with local codes, if any. If not, follow ANSI 223.1. Installation should be done by a qualified installer approved and/or licensed as required by the locality. (In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter).

Note: A listed (and Commonwealth of Massachusetts approved) 1/2 in. (13 mm) T-handle manual shut-off valve and flexible gas connector are connected to the 1/2 in. (13 mm) control valve inlet.

- **If substituting for these components, please consult local codes for compliance.**

Note: This appliance does include a manual gas shutoff valve that is located in the valve compartment. This manual gas shutoff valve is accessible for service by removing the outer access panel tray or the base pan and burner assembly and inner access windows. Depending upon local code, an additional manual gas shutoff, in a readily accessible area may be required and located upstream from the appliance.

The lower access cover panel is removable if finishing material is not installed. See Figure 9.2.

If the finishing materials have been installed around the appliance opening, proceed as follows:

1. If already installed, carefully remove the front media and tray or granite or porcelain from the appliance and set aside.
2. Unplug the 3V transformer from the junction box. This will turn the power off to the appliance.
3. Turn the gas shutoff handle to the "OFF" position to shut off the gas supply.
4. Remove the glass assembly from the appliance by unlatching the two bottom spring latches and then pulling the bottom of the glass assembly toward you until it clears the glass latch tabs. Hold the top of the glass frame and gently lower the glass assembly down until it rests on the side glass supports. Tilt the top of the glass out toward you and remove. See Section 11.A.
5. Remove any interior media, granite or porcelain from the unit if already installed.
6. There are three access windows located on the interior of the firebox bottom. See Figure 9.1. Remove screws and plate to access the manual shutoff valve included with this fireplace.

To access unit through the lower bottom windows:

1. Remove the glass rock media or the porcelain from the interior firebox.

2. Remove the base pan. It is attached with 10 screws to the interior firebox bottom and with 12 screws to the burner assembly. If your appliance is a model that has the glass rock media, you must also remove the pilot shield cover at this time. See Figure 9.2 and Figure 9.3.
3. Remove the two screws securing the burner to the firebox sides and disengage burner from over orifice. Remove burner. See Figure 9.3.
4. Remove access panel covers or glass windows, along with gaskets. Gaskets may be fragile. Handle with care. See Figure 9.2.

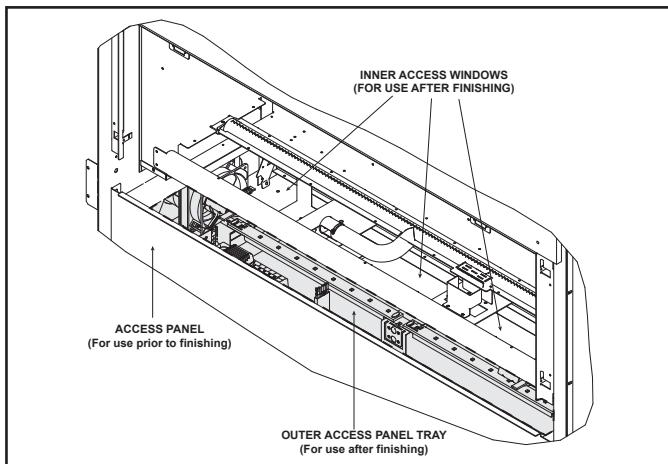


Figure 9.2 Gas and Electrical Access

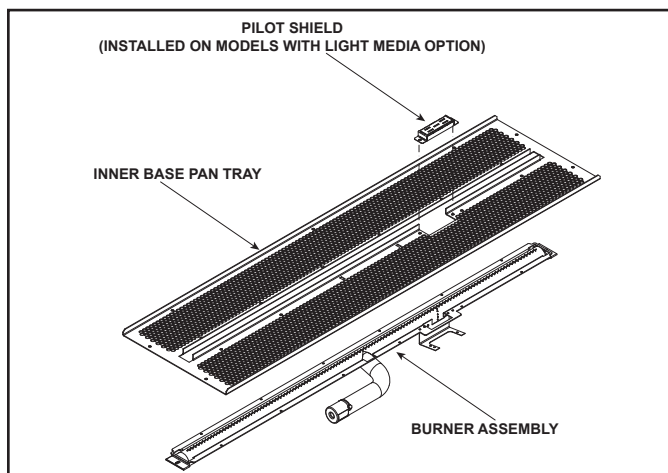


Figure 9.3. Base Pan with Burner and Pilot Cover

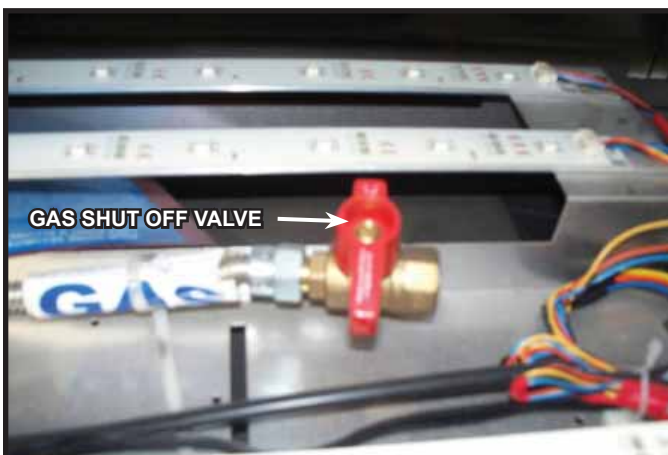


Figure 9.4 Gas Fitting Access

C. Gas Connection

- Refer to Reference Section 3.A for location of gas line access in appliance.
- Gas line may be run through either side of appliance.
- The gap between supply piping and gas access hole may be caulked with caulk with a minimum of 300°F continuous exposure rating or stuffed with non-combustible, unfaced insulation to prevent cold air infiltration.
- Ensure that gas line does not come in contact with outer wrap of the appliance. Follow local codes.
- Pipe incoming gas line into valve compartment.
- Connect incoming gas line to the 1/2 in. (13 mm) connection on manual shutoff valve.

WARNING! Risk of Fire or Explosion! Support control when attaching pipe to prevent bending gas line.

- A small amount of air will be in the gas supply lines.

WARNING! Risk of Fire or Explosion! Gas build-up during line purge could ignite.

- Purge should be performed by qualified service technician.
- Ensure adequate ventilation.
- Ensure there are no ignition sources such as sparks or open flames.

Light the appliance. It will take a short time for air to purge from lines. When purging is complete the appliance will light and operate normally.

WARNING! Risk of Fire, Explosion or Asphyxiation! Check all fittings and connections with a non-corrosive commercially available leak-check solution. **DO NOT** use open flame. Fittings and connections could have loosened during shipping and handling.

WARNING! Risk of Fire! DO NOT change valve settings. This valve has been preset at the factory.

D. High Altitude Installations

NOTICE: If the heating value of the gas has been reduced, these rules do not apply. Check with your local gas utility or authorities having jurisdiction.

When installing above 2000 feet elevation:

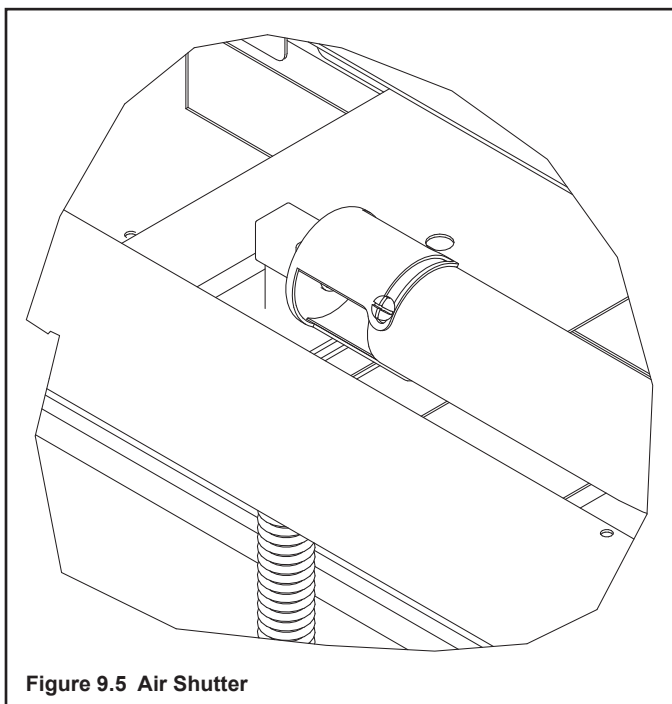
- In the USA: Reduce burner orifice 4% for each 1000 feet above 2000 feet.
- In CANADA: Reduce burner orifice 10% for elevations between 2000 feet and 4500 feet. Above 4500 feet, consult local gas utility.

E. Air Shutter Setting

Air shutter settings may be adjusted by a qualified installer at the time of installation. The air shutter is set at the factory for minimum vertical vent run. Adjust air shutter for longer vertical runs. See Figure 9.5.

- Loosen the 1/4 in. screw.
- Twist shutter to adjust.
- Shutter may be open for longer horizontal vent runs.
- Do not close the air shutter more than 1/16 in. for NG or 1/4 in. for LP.
- Tighten the screw.

NOTICE: If sooting occurs, provide more air by opening the air shutter.



Air Shutter Settings

RED40/RED40ST	NG	LP
GRANITE KIT	1/16 in.	1/4 in.
LIGHT KIT	1/16 in.	1/4 in.
PORCELAIN KIT	1/16 in.	1/4 in.

10 Finishing

A. Facing and Finishing Instructions

WARNING! Risk of Fire! *Comply with all minimum clearances to combustibles as specified. Framing closer than the minimums listed must be constructed entirely of noncombustible materials (i.e., steel studs, concrete board, etc.).*

The splatter guard is a piece of corrugated material used to protect the appliance during the installation process before finishing work on the whole hearth is complete. A splatter guard is factory installed on RED40 and RED40ST models. Splatter guards must be removed before appliance is fired.

WARNING! Risk of Fire! *Remove the splatter guard before lighting the appliance. Shut off gas to the appliance when the splatter guard is in place to prevent accidental operation.*

Finishing Instructions

It is important to follow the framing and finishing instructions to ensure proper placement of fireplace into the surrounding framing/finishing materials.

Wall sheathing materials 1/2 in. thick are specified in this installation manual to properly align with the factory-installed non-combustible material.

WARNING! Risk of Fire! DO NOT remove the factory-installed non-combustible board or cover it with combustible material, such as:

- Drywall (gypsum board)
- Plywood
- Materials that do not meet the ASTM E 136 Non-combustibility standard (below).

Removal of factory-installed, non-combustible board and/or use of materials not meeting the ASTM E 136 standard may cause fire.

Non-Combustible Materials Specification

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

Materials that are reported as passing **ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 °C.**

WARNING! Risk of Fire! *Maintain specified air space clearances to combustibles.*

Inadequate air space may cause overheating and fire.

Ensure that the one inch back clearance and one inch side clearances are maintained.

WARNING! Risk of Fire! DO NOT use screws longer than two inches when attaching finishing materials to non-combustible material. Screws longer than two inches will compromise clearance and may cause overheating and fire.

CAUTION! Risk of Glass Damage and Cuts! DO NOT drill or install any type of screw or fastener into the lower cover panel. Sharp screw or fastener tips may penetrate and break the glass or cause cuts.

The RED40 comes standard with a mesh front. The final fireplace installation can be accomplished by either the “overlap” or “inside-fit” method. This section discusses installation details associated with the Inside and Overlap Fit methods.

If the final fireplace installation uses the Overlap Method, wall sheathing material 1/2 in thick is specified and can be installed tight to the side finishing flanges and factory-supplied non-combustible board. If the final fireplace installation uses the Inside-Fit Method, additional clearance must be maintained between combustible 1/2 in. thick wall sheathing material and the side finishing flanges. This section discusses installation details associated with the Inside and Overlap Fit methods and specifies additional non-combustible materials required.

When finishing the wall around the fireplace, it is critical that wall sheathing be fastened properly. Wall sheathing fasteners, such as screws or nails, are not permitted in some locations. See Figure 10.1. It is acceptable to pre-drill holes and use self-tapped screws in the factory-installed non-combustible board which may be used to lathe (a backer for tile, marble, etc.) Screws being installed through the factory-installed non-combustible board should be self-tapping type with a maximum length of 2 inches. See Figure 10.1. Do not drill or install screws which may penetrate the lower cover panel as this will restrict required access to the glass and lower control chamber. See Figure 10.1.

The appliance is designed to mate with 1/2 in. wall sheathing materials such as drywall, plywood, wood composites, or non-combustible materials. The type of material used depends whether the installation is an Inside or Overlap Fit method. This section discusses installation details associated with the Inside an Overlap Fit methods.

Verify that the lower cover panel is installed correctly, and that there are no screws used to attach drywall to the panel.

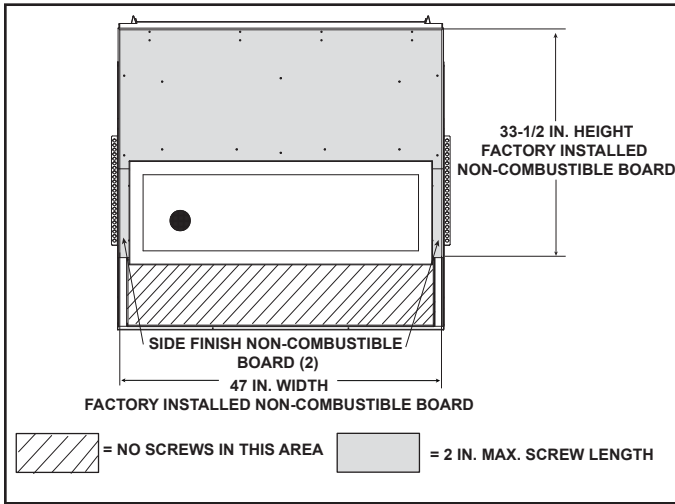


Figure 10.1 Finishing Details

Note: It is acceptable to use a high temperature silicone sealant to adhere drywall to lower cover panel.

Finish and Sealing Joints

All joints between the finished wall sheathing and the appliance must be sealed with non-combustible materials. Sealants, such as caulk or mastic used to seal the gap between the wall and the fireplace, should be rated at a minimum continuous exposure to 300°F.

Finishing Around Opening with Gypsum Wallboard

Gypsum wallboard (drywall) joints adjacent to the fireplace opening, including the non-combustible board on the appliance, require special attention to minimize cracking. When installing gypsum wallboard around the fireplace, install the hole for the fireplace opening in a single wallboard sheet, if possible. This will minimize the joints adjacent to the fireplace opening.

Tape wall board joints around the fireplace opening with fiberglass-mesh tape. It will provide a more crack-resistant joint than paper tape. Fill, smooth and finish wall joints with chemically setting-type joint compound. It will provide a more crack-resistant joint than air-drying light-weight compound.

Painting

If desired finishing includes a painted wall, 100% acrylic latex with compatible primer is recommended around this appliance. Oil-based or standard acrylic paints may discolor due to heat exposure.

Facing Material

- Facing and/or finishing materials must not interfere with air flow through louvers, operation of louvers or doors, or access for service.
- Facing and/or finishing materials must never overhang into the glass opening.
- Observe all clearances when applying combustible materials.

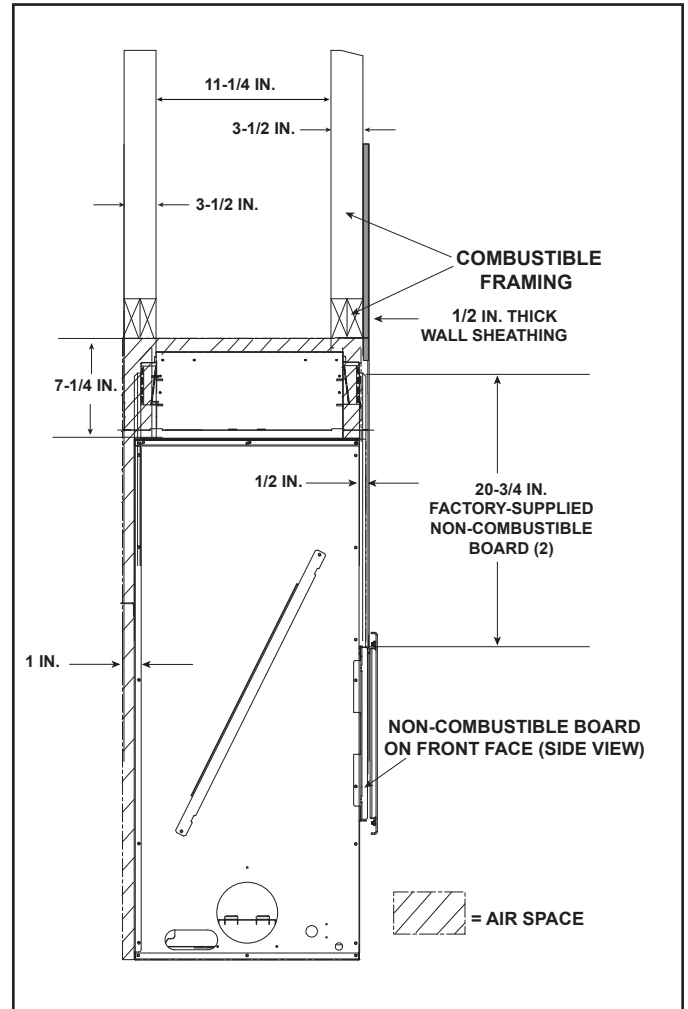


Figure 10.2 Framing and Framing Materials-RED40

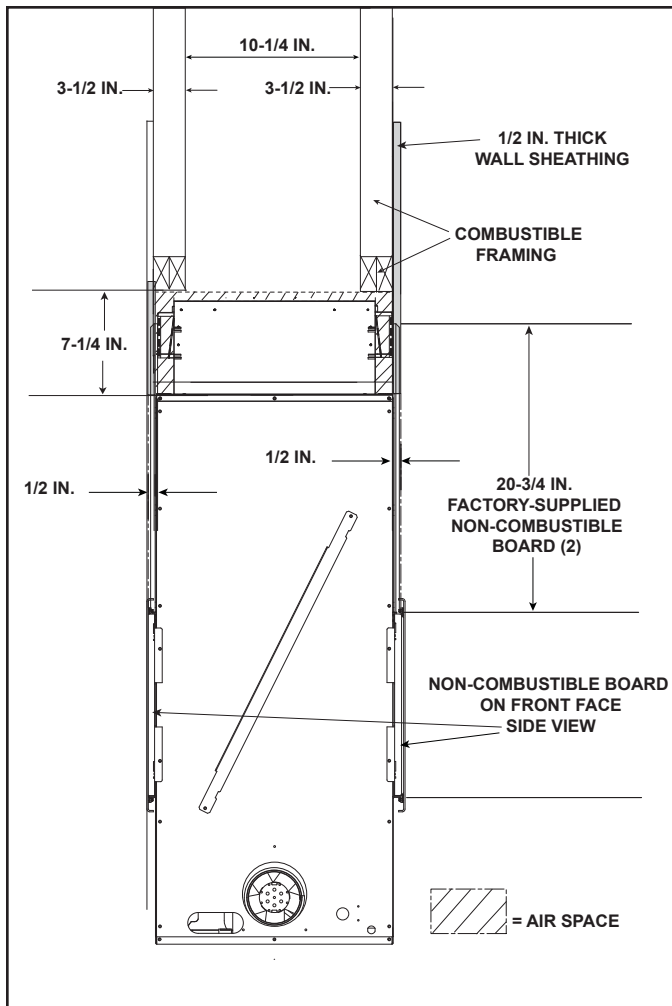


Figure 10.3 Framing and Framing Materials-RED40ST

WARNING! Risk of Fire! DO NOT apply combustible materials beyond the minimum clearances. Comply with all minimum clearances to combustibles as specified in this manual. Overlapping materials could ignite and will interfere with proper operation of doors and louvers.

WARNING! Risk of Fire! DO NOT install drywall or other combustible materials directly onto the factory-installed non-combustible board. Overlapping materials could ignite.

Decorative facing material thickness is measured from the face of the factory-installed non-combustible board. See Figure 10.2 and Figure 10.3.

The mesh front can be installed such that it overlaps non-combustible materials up to 1 in. thick. See Figure 10.4 and Figure 10.5.

Refer to Section 1.E and 1.F of this manual for definition and qualifications and definition of non-combustible and combustible materials.

Specific requirements for each method if installation are described below and on the following pages of this section.

Non-Combustible Finish Materials

0 - 1 inch thickness-Overlap Fit Method

The mesh front is designed to overlap finish materials 0 inches to 1 inch thick. See Figure 10.4.

NOTICE: This one inch maximum not only includes the decorative finish materials (marble, tile, slate, etc) but also the thin set, lath and adhesive used to attach the decorative finish material.

The non-combustible finish material can be installed up to the 16 inch (height) by 43 inch (width) fireplace opening.

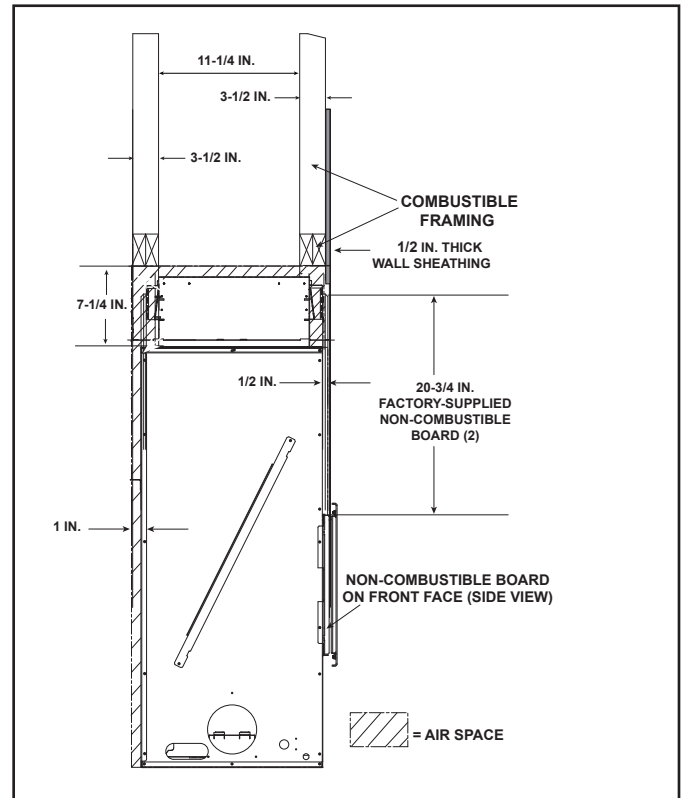


Figure 10.4 Overlap Fit Method

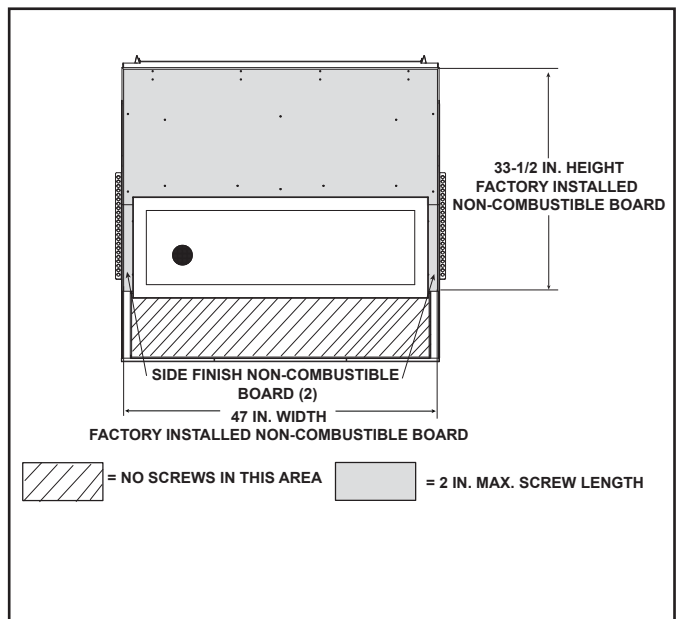


Figure 10.5 Non-Combustible Finish Material Diagram for 0-1 Inch Thick Overlap Fit Method

Non-Combustible Finish Materials
0 Inches to 4 Inches Thick Inside Fit Method

The mesh decorative front is approved for inside fit applications. Non-combustible finishing materials up to 4 inches thick can be installed around the Mesh front (left, right, top, and bottom). The inside fit method requires an additional 2 in. of 1/2 in. thick non-combustible building material (not supplied with fireplace) to be installed on the left and right sides flush with the factory installed non-combustible board.

Ensure that no non-combustible finish materials are installed within 1-1/2 inches of top and bottom and 1-3/16 inches from right and left sides of fireplace opening. This will ensure adequate clearance for required mesh front. See Figure 10.11.

Refer to Section 1.E and 1.F of this manual for definition and qualifications and definition of non-combustible and combustible materials.

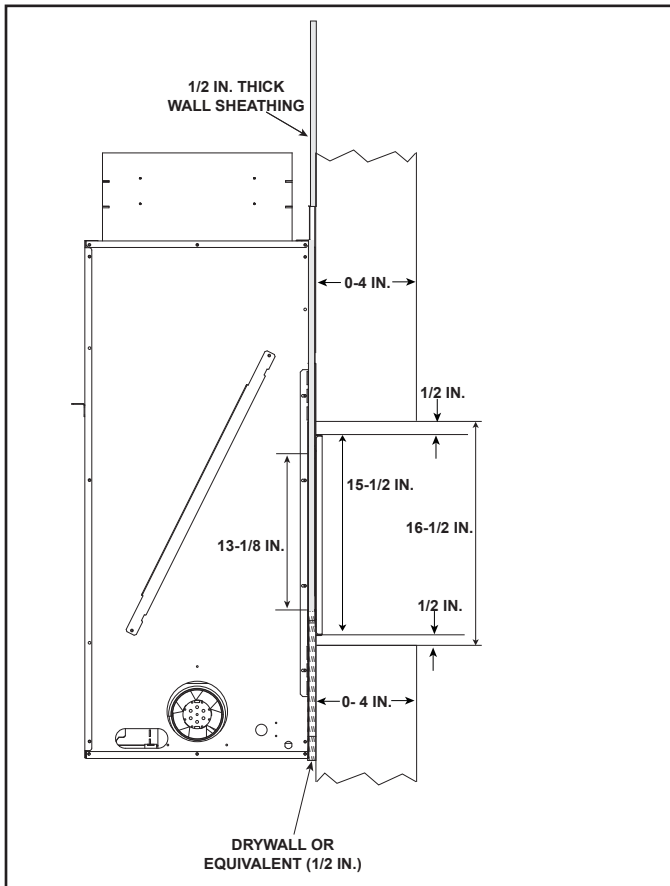


Figure 10.6 Inside Fit Method

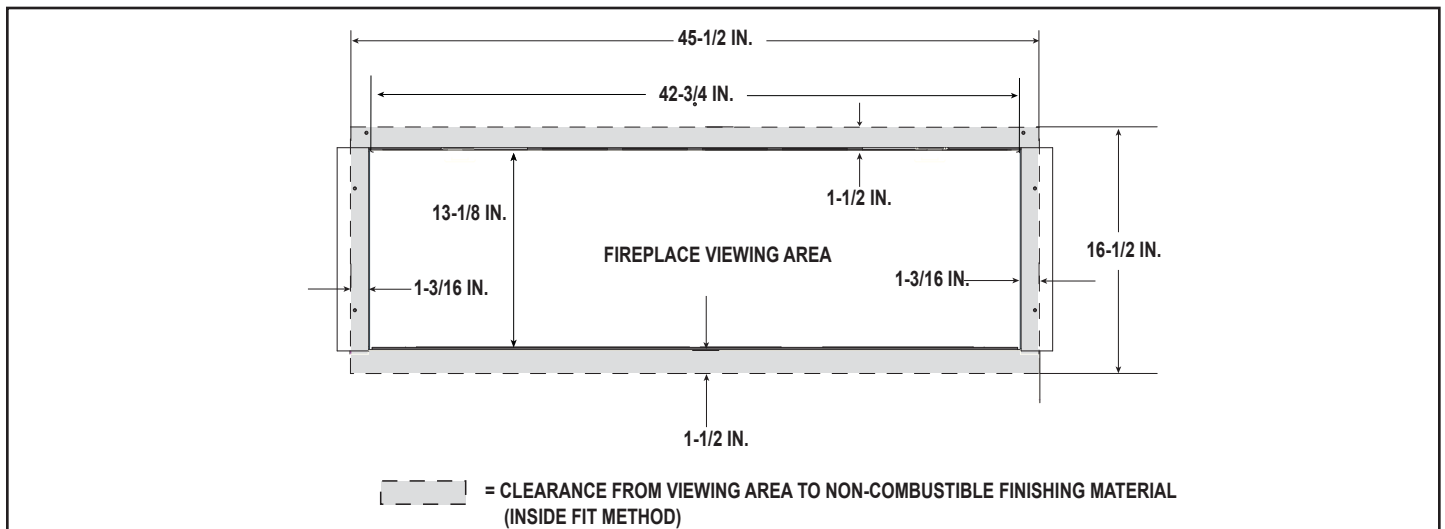


Figure 10.7 Noncombustible Surface Finishing Material 0-4 Inches Thick-Inside Fit Method

B. Mantel and Wall Projections

WARNING! Risk of Fire! Comply with all minimum clearances to combustibles as specified. Framing closer than the minimums listed must be constructed entirely of noncombustible materials (i.e., steel studs, concrete board, etc.)

Note: For non-combustible fireplace finish material (marble, stone, etc) specifications refer to Figure 10.6 and Figure 10.7.

Combustible Mantels

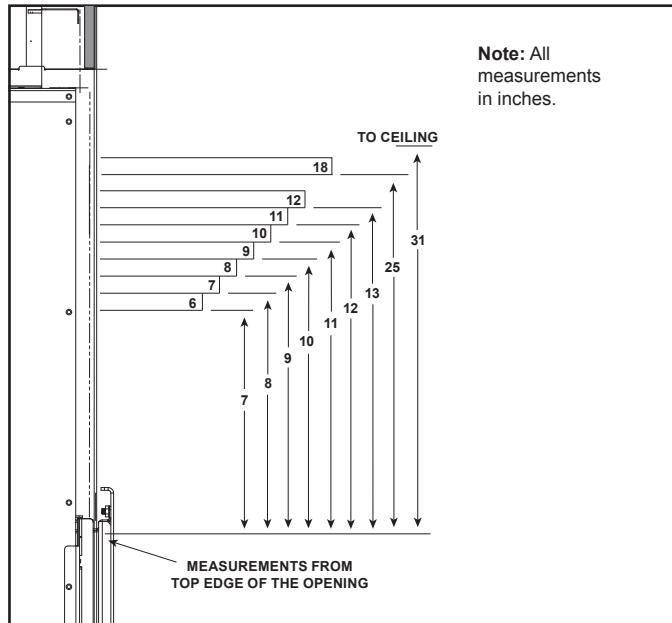


Figure 10.8 Minimum Vertical and Maximum Horizontal Dimensions of Combustibles

Note: For non-combustible fireplace finish material (marble, stone, etc) specifications refer to Section 13.

Non-Combustible Mantels

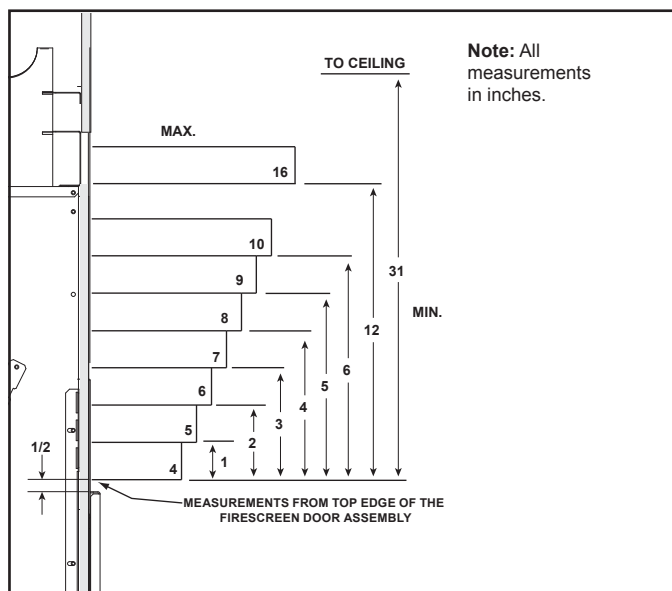


Figure 10.9 Minimum Vertical and Maximum Horizontal Dimensions of Non-Combustibles

Combustible Mantel Legs Or Wall Projections Extending Past The Face Of The Fireplace

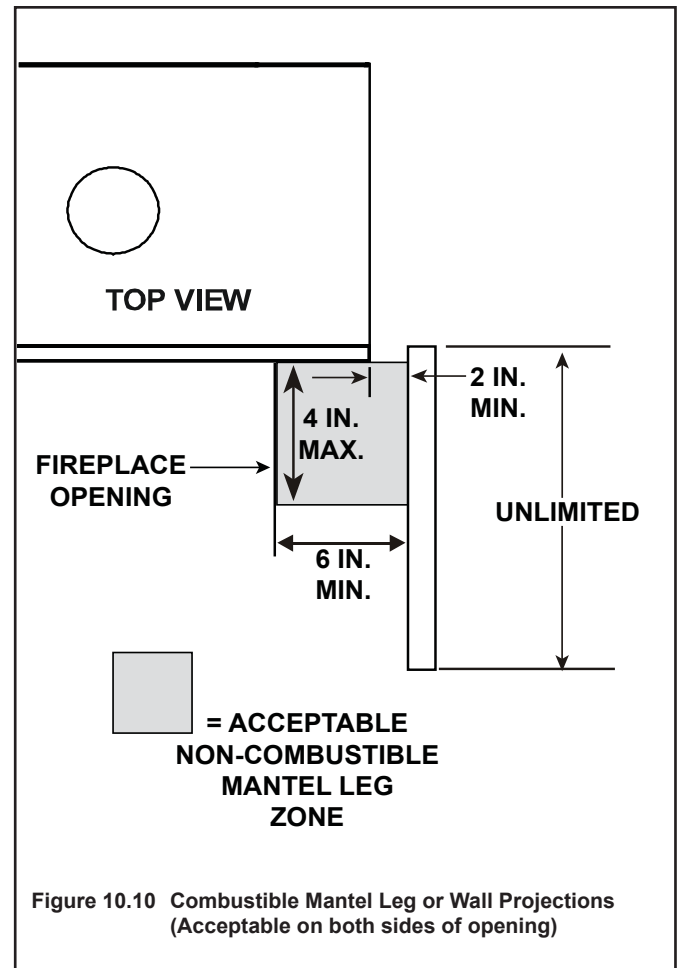


Figure 10.10 Combustible Mantel Leg or Wall Projections (Acceptable on both sides of opening)

C. Mesh Fronts

WARNING! Risk of Burns! A decorative front is required for this model. DO NOT operate this appliance without a decorative front in place.

Only doors certified for use with this appliance model may be used. Contact your dealer for a list of doors that may be used.

A mesh front is included with the RED40 and RED40ST.

To attach the mesh front to the appliance, use the two mesh brackets. These brackets are mounted to the underside of the top of the appliance viewing area and are fastened to the appliance by two screws on each bracket. See Figure 10.11. There are two hanging tabs on the back of the mesh front assembly that are bent upward. Engage these tabs in the slot of the brackets.

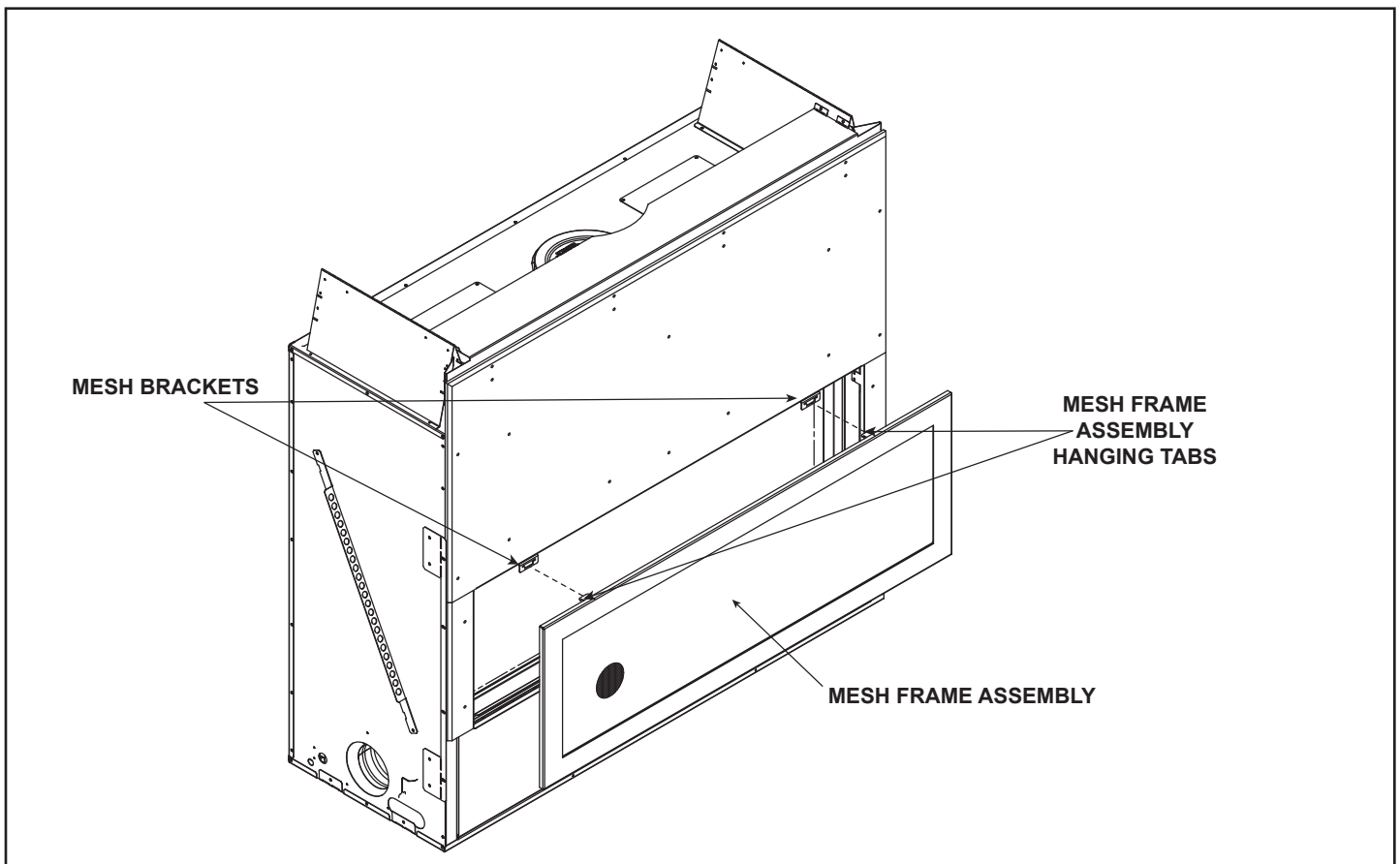


Figure 10.11. Mesh Front Installation.

11 Appliance Setup

A. Fixed Glass Assembly

WARNING! Risk of Asphyxiation! Handle fixed glass assembly with care. Inspect the gasket to ensure it is undamaged and inspect the glass for cracks, chips or scratches.

- **DO NOT** strike, slam or scratch glass.
- **DO NOT** operate fireplace with glass removed, cracked, broken or scratched.
- Replace as a complete assembly.

Removing Fixed Glass Assembly

1. Remove the decorative front.
2. Locate the two spring latches that are on the lower left and right of the fireplace.
3. Use both index fingers to release spring latches. See Figure 11.1.
4. Allow glass to tilt forward. Grasp glass on the upper return lip of glass frame and tilt glass “out” and “down”. Lower gently to rest on side supports. See Figure 11.1. Allow top of glass assembly to tilt forward. Lift glass assembly “up” and “out”.

Replacing Fixed Glass Assembly

1. Locate glide tabs on lower left and right corners.
2. Place glass bottom resting on right and left support. Tilt top of glass assembly toward fireplace.
3. Allow of the gasketing of the glass assembly to touch the face of the fireplace. Lift the glass “up” and “in” to upper glass clip flanges.
4. Hold bottom of the glass as you allow the glass assembly to seat over the two lower glass clips. See Figure 11.1.
5. Assure proper left and right placement of glass and engage both lower spring latches.

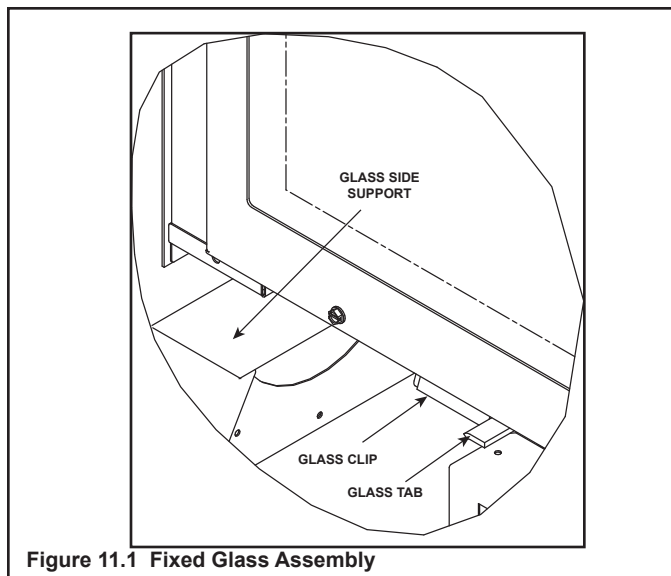


Figure 11.1 Fixed Glass Assembly

B. Remove the Shipping Materials

Remove shipping materials from inside or underneath the firebox. Verify all components are with the fireplace.

C. Clean the Appliance

Clean/vacuum any sawdust that may have accumulated inside the firebox or underneath in the control cavity.

D. Rock Media

A rock media kit is available for use with the RED40 and RED40ST models. Install rock media according per additional instructions included with appliance.

E. Porcelain

A porcelain kit is available for use with the RED40 and RED40ST models. Install Porcelain per additional instructions included with appliance.

F. Granite

A granite kit is available for use with the RED40 and RED40ST models. Install Granite per additional instructions included with appliance.

G. Sheet Metal Refractory

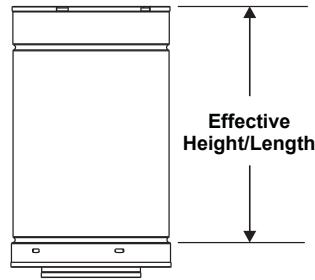
A sheet metal refractory kit is available for use with the RED40 and RED40ST models. Install Sheet Metal Refractory per additional instructions included with appliance.

H. Install the Mesh

A mesh front is included with the RED40 and RED40ST. For installation instructions, see section 10.C.

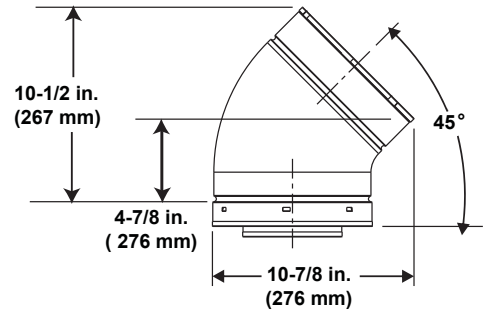
12 Reference Materials

A. Vent Components Diagrams

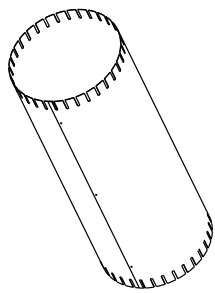


DVP Pipe (see chart)

Pipe	Effective Length	
	Inches	Millimeters
DVP4	4	102
DVP6	6	152
DVP12	12	305
DVP24	24	610
DVP36	36	914
DVP48	48	1219
DVP6A	3 to 6	76 to 152
DVP12A	3 to 12	76 to 305

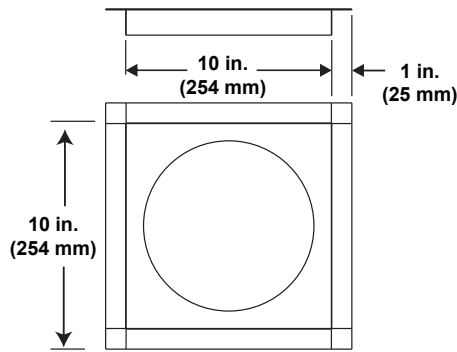


DVP45 (45° Elbow)

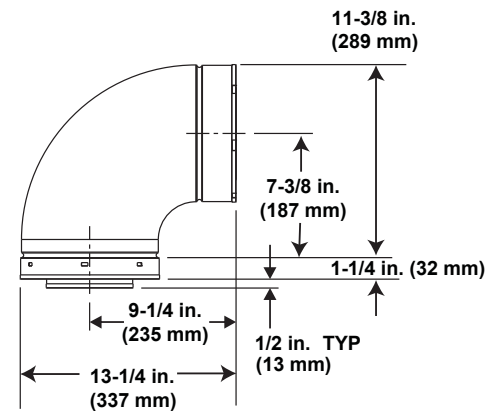


Assembled
Height: 24 in./610 mm
Diameter: 10 in./254 mm

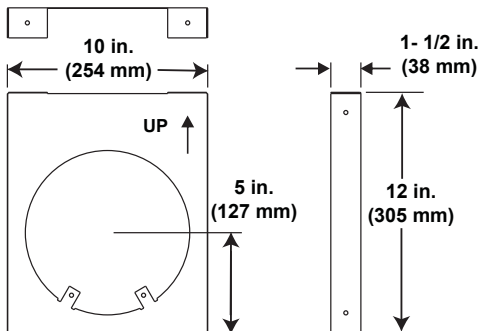
DVP-AS2



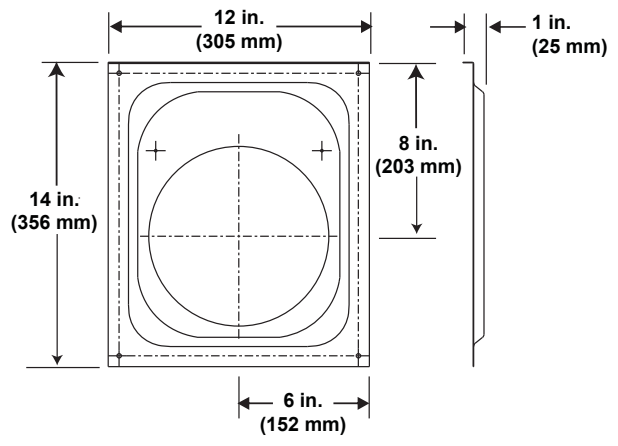
DVP-FS (Ceiling Firestop)



DVP90ST (90° Elbow)



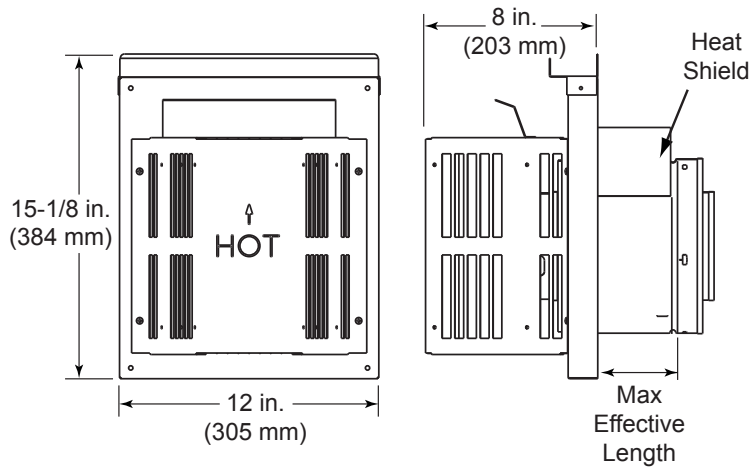
DVP-HVS (Vent Support)



DVP-WS (Wall Shield Firestop)

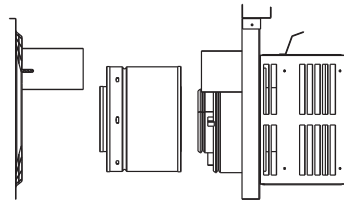
A. Vent Components Diagrams (continued)

Note: Heat shields MUST overlap by a minimum of 1-1/2 in. (38 mm). **The heat shield is designed to be used on a wall 4 in. to 7-1/4 in. (102 mm to 184 mm) thick.** If wall thickness is less than 4 in. (102 mm) the existing heat shields must be field trimmed. If wall thickness is greater than 7-1/4 in. (184 mm) a DVP-HSM-B will be required.

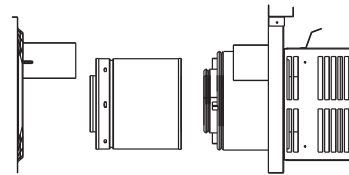


DVP-TRAP
Horizontal Termination Cap

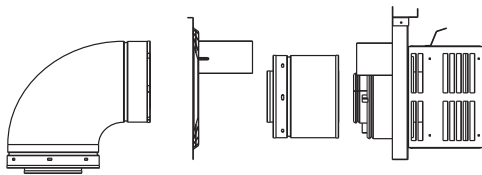
Term Cap	Minimum Effective Length	Maximum Effective Length
Trap1	3-1/8 in.	4-5/8 in.
	79 mm	117 mm
Trap2	5-3/8 in.	9-3/8 in.
	137 mm	238 mm



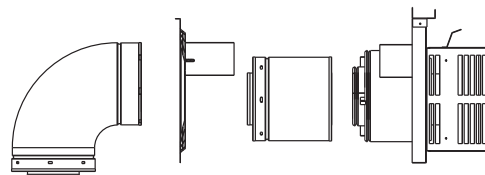
DVP-TRAP1



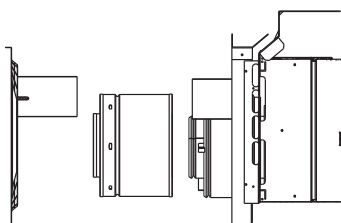
DVP-TRAP2



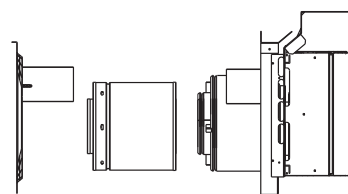
DVP-TRAPK1



DVP-TRAPK2



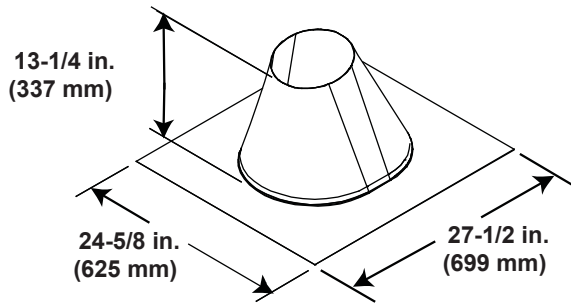
DVP-HPC1



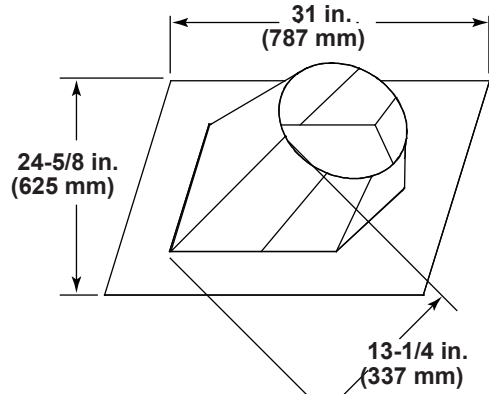
DVP-HPC2

Figure 12.2 DVP vent components

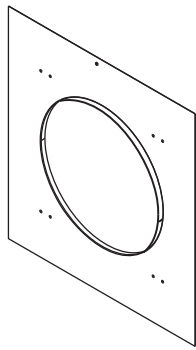
A. Vent Components Diagrams (continued)



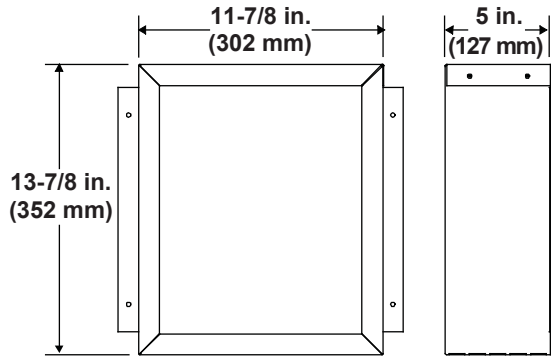
RF6M
Roof Flashing Multi-pak



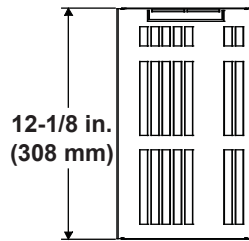
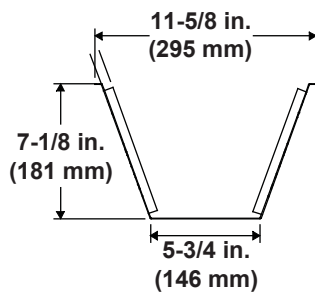
RF12M
Roof Flashing Multi-pak



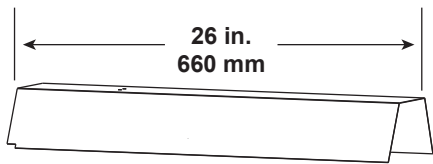
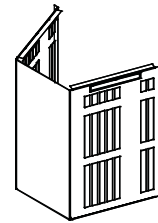
DVP-TRAPFL
Flashing



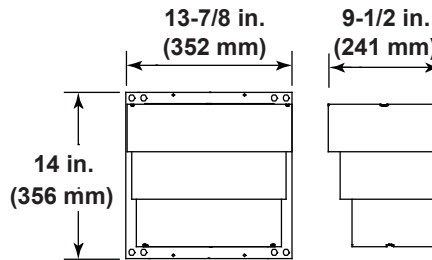
DVP-BEK2
DVP-HPC Cap Brick Extension



COOL-ADDM
Cap Shield



DVP-HSM-B
Extended Heat Shield



DRC-RADIUS
Cap Shield

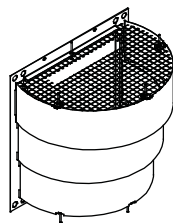


Figure 12.3 DVP vent components

A. Vent Components Diagrams (continued)

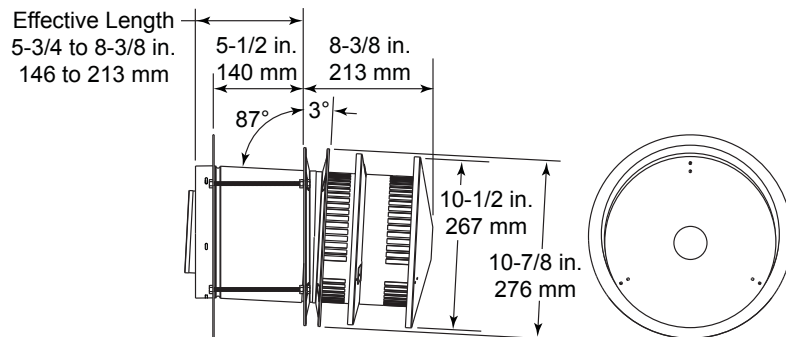
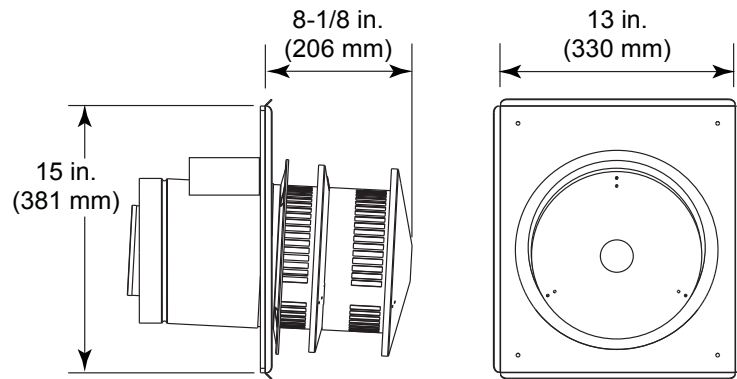
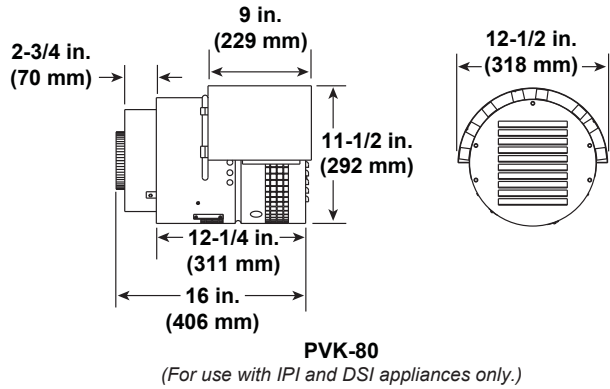
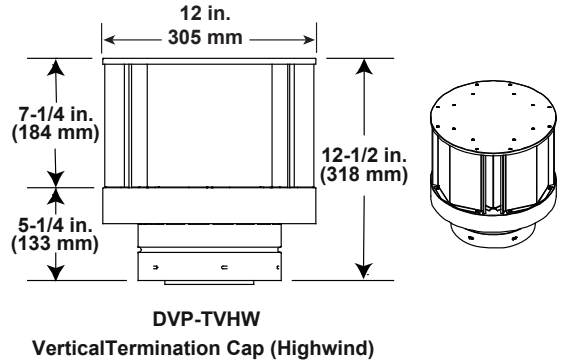
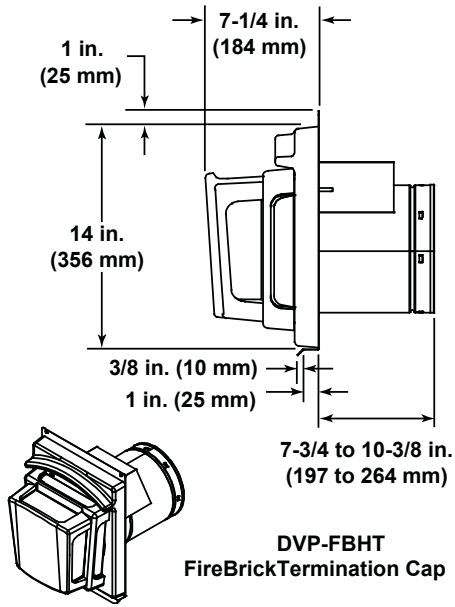
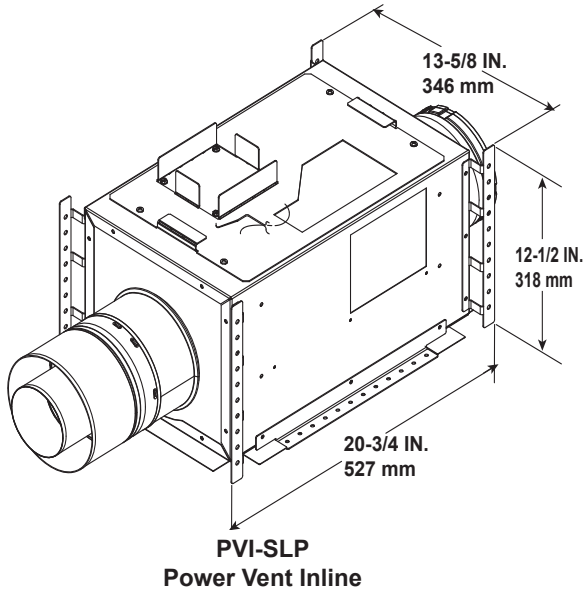


Figure 12.4 DVP vent components

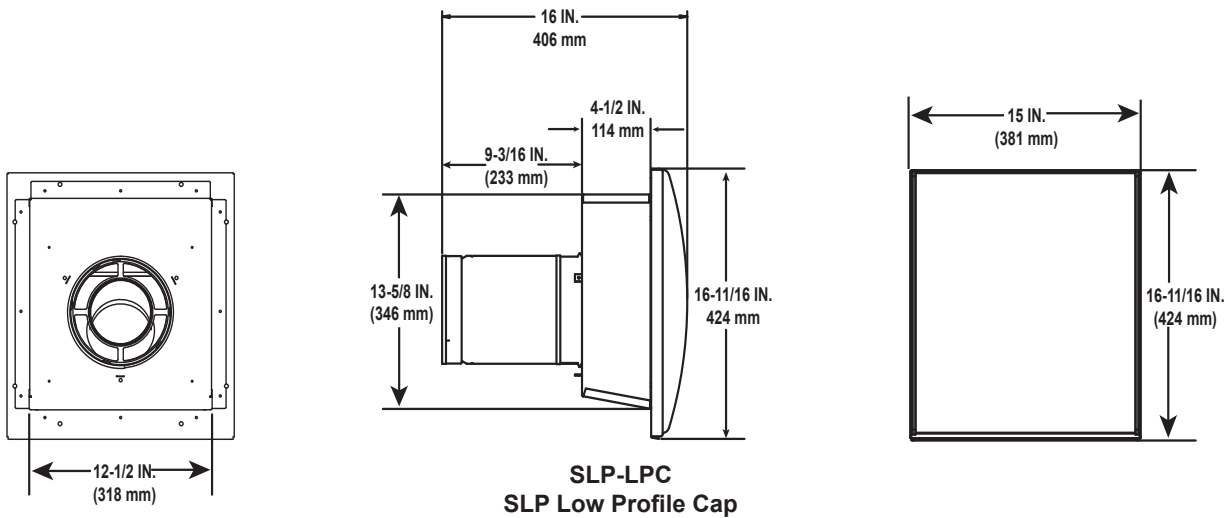
A. Vent Components Diagrams (continued)



Optional Wire Harness	
DESCRIPTION	PART NUMBER
10 FT PV Wire Harness	PVI-WH10
20 FT PV Wire Harness	PVI-WH20
40 FT PV Wire Harness	PVI-WH40
60 FT PV Wire Harness	PVI-WH60
80 FT PV Wire Harness	PVI-WH80
100 FT PV Wire Harness	PVI-WH100

Note: Wire harnesses required to power the PVI-SLP connect to the appliance and are ordered separately from PVI-SLP. Contact your dealer to order.

Note: Use only approved termination caps with the PVI-SLP. See instructions included with PVI-SLP kit. ←



B. Accessories

Remote Controls, Wall Controls and Wall

Switches

Follow the instructions supplied with the control installed to operate your fireplace:

For safety:

- Install a switch lock or a wall/remote control with child protection lockout feature.
- Keep remote controls out of reach of children.

See your dealer if you have questions.

Heat & Glo, a brand of Hearth & Home Technologies
7571 215th Street West, Lakeville, MN 55044
www.heatnglo.com

Please contact your Heat & Glo dealer with any questions or concerns.
For the location of your nearest Heat & Glo dealer,
please visit www.heatnglo.com.

Printed in U.S.A. - Copyright 2013