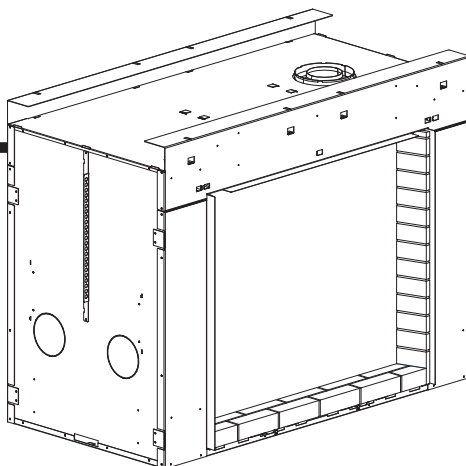


Model:  
ESC-42ST



GAS-FIRED



### NOTICE



#### DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

DO NOT  
DISCARD

**⚠ 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.

### ⚠ WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

#### Hot glass will cause burns.

- **DO NOT** touch glass until it is cooled
  - NEVER allow children to touch glass
  - Keep children away
  - CAREFULLY SUPERVISE children in same room as fireplace.
  - Alert children and adults to hazards of high temperatures.
- High temperatures may ignite clothing or other flammable materials.**
- Keep clothing, furniture, draperies and other flammable materials away.

***This appliance has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the appliance with the barrier removed.***

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

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.

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* or *Standard for Installation in Mobile Homes, CAN/CSA Z240MH*, in Canada.

*This appliance is only for use with the type(s) of gas indicated on the rating plate.*



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.

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

## A. Congratulations

Congratulations on selecting a Heat & Glo gas fireplace, an elegant and clean alternative to wood burning fireplaces. The Heat & Glo gas fireplace you have selected is designed to provide the utmost in safety, reliability, and efficiency.

As the owner of a new fireplace, you'll want to read and carefully follow all of the instructions contained in this owner's manual. Pay special attention to all cautions and warnings.

This owner's manual should be retained for future reference. We suggest that you keep it with your other important documents and product manuals.

The information contained in this owner's manual, unless noted otherwise, applies to all models and gas control systems.

Your new Heat & Glo gas fireplace will give you years of durable use and trouble-free enjoyment. Welcome to the Heat & Glo family of fireplace products!

<b>Homeowner Reference Information</b>	<i>We recommend that you record the following pertinent information about your fireplace.</i>
Model Name: _____	Date purchased/installed: _____
Serial Number: _____	Location on fireplace: _____
Dealership purchased from: _____	Dealer Phone: _____
Notes: _____	
_____	

## Listing Label Information/Location

The model information regarding your specific fireplace can be found on the rating plate usually located in the control area of the fireplace.

Type of Gas →

Gas and Electric Information →

**HEAT & GLO**  
No one builds a better fire

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

Not for use with solid fuel.  
*(Ne doit pas être utilisé avec un combustible solide).*

Type of Gas (Sorte De Gaz): **NATURAL GAS**


This appliance must be installed in accordance with local codes, if any; if not, follow ANSI Z223.1 in the USA or CAN/CGA B149 installation codes. *(Installer l'appareil selon les codes ou règlements locaux ou, en l'absence de tels règlements, selon les codes d'installation CAN/CGA-B149.)*

**ANSI Z21XX-XXXX · CSA 2.XX-MXX · UL307B**

Minimum Permissible Gas Supply for Purposes of Input Adjustment.	
Approved Minimum (De Gaz) Acceptable	0.0 in w.c. (Po. Col. d'eau)
Maximum Pressure (Pression)	0.0 in w.c. (Po. Col. d'eau)
Maximum Manifold Pressure (Pression)	0.0 in w.c. (Po. Col. d'eau)
Minimum Manifold Pressure (Pression)	0.0 in w.c. (Po. Col. d'eau)
Total Electrical Requirements: 000Vac, 00Hz., less than 00 Amperes	

MADE IN USA

**GAS-FIRED**



ALTITUDE:	0-0000 FT.	IN CANADA	0000-0000FT.
MAX. INPUT BTUH:	00,000		00,000
MIN. INPUT BTUH:	00,000		00,000
ORIFICE SIZE:	#XXXXXX		#XXXXXX

<b>Model:</b> <i>(Modele):</i>	<b>XXXXXXXXXX</b>
<b>Serial</b> <i>(Serie):</i>	<b>XXXXXXXXXX</b>

Model Number →

Serial Number →

## ▲ 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.

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→ = Contains updated information.

**B. Limited Lifetime Warranty** **Hearth & Home Technologies Inc.**  
**LIMITED LIFETIME WARRANTY**

Hearth & Home Technologies Inc., on behalf of its hearth brands ("HHT"), extends the following warranty for HHT gas, wood, pellet, coal and electric hearth appliances that are purchased from an HHT authorized dealer.

**WARRANTY COVERAGE:**

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

**WARRANTY PERIOD:**

Warranty coverage begins on the date of original purchase. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/ distributor, whichever occurs earlier. The warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term "Limited Lifetime" in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood, pellet, and coal appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting							Components Covered
Parts	Labor	Gas	Wood	Pellet	EPA Wood	Coal	Electric	Venting	
1 Year		X	X	X	X	X	X	X	All parts and material except as covered by Conditions, Exclusions, and Limitations listed
2 years				X	X	X			Igniters, electronic components, and glass
		X	X	X	X	X			Factory-installed blowers
			X						Molded refractory panels
3 years				X					Firepots and burnpots
5 years	1 year			X	X				Castings and baffles
7 years	3 years		X	X	X				Manifold tubes, HHT chimney and termination
10 years	1 year	X							Burners, logs and refractory
Limited Lifetime	3 years	X	X	X	X	X			Firebox and heat exchanger
90 Days		X	X	X	X	X	X	X	All replacement parts beyond warranty period

See conditions, exclusions, and limitations on next page.

## B. Limited Lifetime Warranty (*continued*)

### **WARRANTY CONDITIONS:**

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- Contact your installing dealer for warranty service. If the installing dealer is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.

### **WARRANTY EXCLUSIONS:**

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period. These parts include: paint, wood, pellet and coal gaskets, firebricks, grates, flame guides, light bulbs, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operating instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth components or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

### **This warranty is void if:**

- The appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

### **LIMITATIONS OF LIABILITY:**

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.**



# 1 Listing and Code Approvals

## A. Appliance Certification

**MODELS:** ESC-42ST, ESC-42STLP

**LABORATORY:** Underwriters Laboratories, Inc. (UL)

**TYPE:** Vented Gas Fireplace Heater

**STANDARD:** ANSI-Z21.88a-2007 • CSA 2.33a-2007

This product is listed to ANSI standards for “Vented Gas Appliance 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)
ESC-42ST (NG)	US (0-2000 FT) (0-610 m)	57,500	43,500	#24
	CANADA (2000-4500 FT) (610-1372 m)	52,800	38,350	#25
ESC-42ST (LP)	US (0-2000 FT) (0-610 m)	56,500	41,000	#44
	CANADA (2000-4500 FT) (610-1372 m)	50,000	37,800	#45

## 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 (610 m) elevation:

- In the USA: Reduce input rate 4% for each 1000 feet (305 m) above 2000 feet (610 m).
- In CANADA: Reduce input rate 10% for elevations between 2000 feet (610 m) and 4500 feet (1372 m). Above 4500 feet (1372 m), 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** and **UL763** 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.**



## A. Gas Fireplace Safety

### ⚠ WARNING



#### HOT SURFACES!

Glass and other surfaces are hot during operation AND cool down.

#### Hot glass will cause burns.

- DO NOT touch glass until it is cooled
- NEVER allow children to touch glass
- Keep children away

- CAREFULLY SUPERVISE children in same room as fireplace.
- Alert children and adults to hazards of high temperatures.

#### High temperatures may ignite clothing or other flammable materials.

- Keep clothing, furniture, draperies and other flammable materials away.

***This appliance has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the appliance with the barrier removed.***

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

If you expect that small children or vulnerable adults may come into contact with this fireplace, the following precautions are recommended:

- Install a physical barrier such as:
  - A decorative firescreen.
  - Adjustable safety gate.
- Install a switch lock or a wall/remote control with child protection lockout feature.

- Never leave children alone near a hot fireplace, whether operating or cooling down.
- Teach children to NEVER touch the fireplace.
- Consider not using the fireplace when children will be present.

Contact your dealer for more information, or visit: [www.hpba.org/safety-information](http://www.hpba.org/safety-information).

To prevent unintended operation when not using your fireplace for an extended period of time (summer months, vacations, trips, etc):

- Unplug 6 volt adapter plug and remove batteries on IPI models.

When lighting the pilot light on fireplaces with a standing pilot, remove the fixed glass assembly so you can detect presence of residual gas build-up. See Standing Pilot Lighting instructions and Maintenance Tasks.

## B. Your Fireplace

***WARNING! DO NOT operate fireplace before reading and understanding operating instructions. Failure to operate fireplace according to operating instructions could cause fire or injury.***

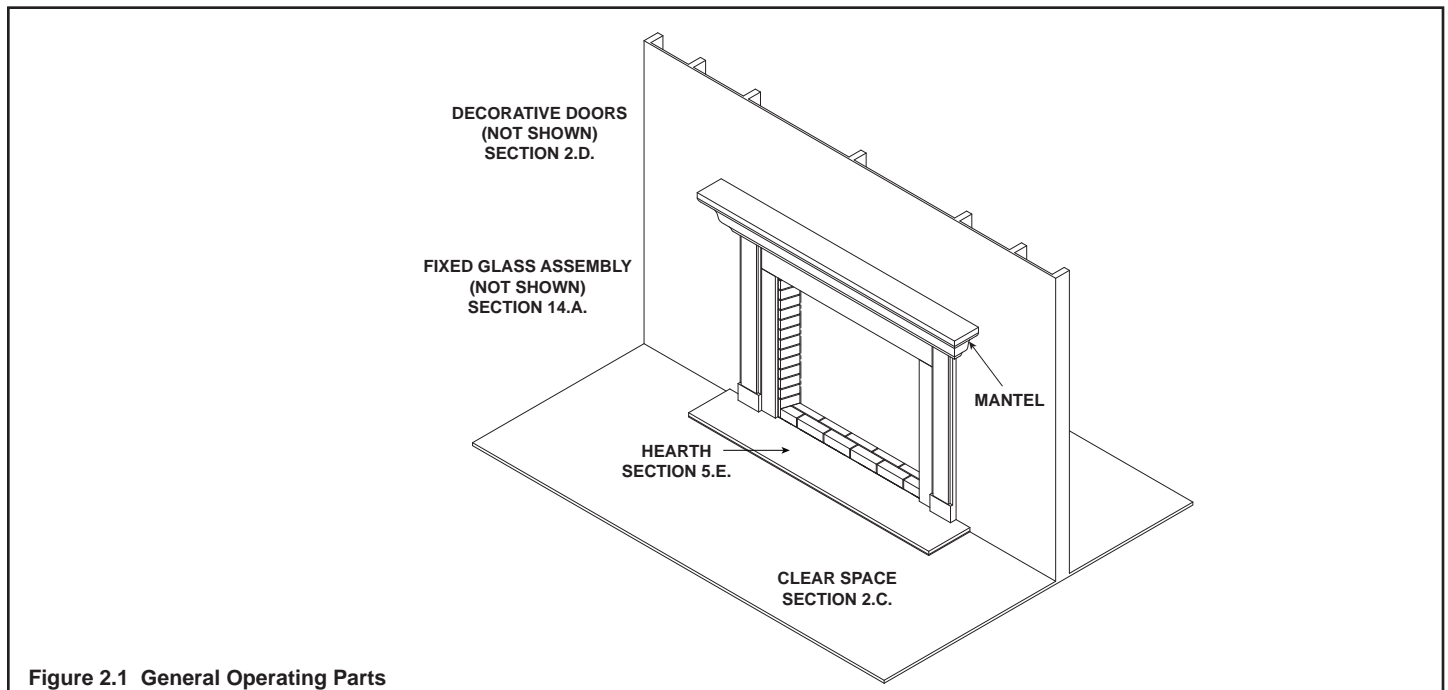


Figure 2.1 General Operating Parts

### C. Clear Space

**WARNING! DO NOT** place combustible objects in front of the fireplace or block louvers. High temperatures may start a fire. See Figure 2.2.

Avoid placing candles and other heat-sensitive objects on mantel or hearth. Heat may damage these objects.

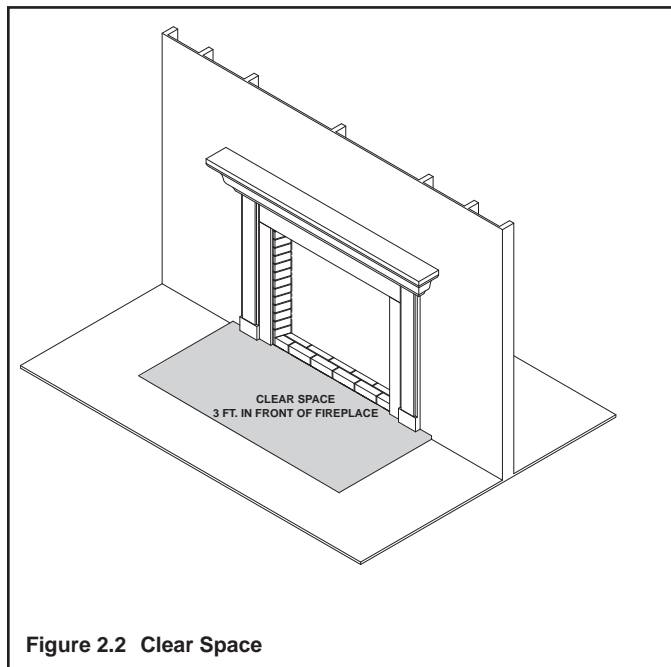


Figure 2.2 Clear Space

### E. Fixed Glass Assembly

See Section 14.A.

### F. Remote Control

Follow the instructions supplied with the control installed to operate your fireplace. See your dealer if you have questions.

### D. Decorative Doors and Fronts

**WARNING! Risk of Fire!** Install **ONLY** doors or fronts approved by Hearth & Home Technologies. Unapproved doors or fronts may cause fireplace to overheat.

**This fireplace has been supplied with an integral barrier to prevent direct contact with the fixed glass panel. DO NOT operate the fireplace with the barrier removed.**

Contact your dealer or Hearth & Home Technologies if the barrier is not present or help is needed to properly install one.

For more information, refer to the instructions supplied with your decorative door or front.

## G. IPI Battery Tray/Battery Installation

The IntelliFire Plus™ system has a battery backup option. Battery longevity and performance will be affected by the service temperatures of this appliance.

**NOTICE:** Batteries should only be used as a power source in the event of an emergency such as an outage.

## H. Control Module Operation

1. The control module has an ON/OFF/REMOTE selector switch that must be set. See Figure 2.3.

**OFF Position:** Appliance will ignore all power inputs and will not respond to any commands from a wall switch or remote. The unit should be in the OFF position during installation, service, battery installation, fuel conversion, and in the event that the control goes into LOCK-OUT mode as a result of an error code.

**ON Position:** Appliance will ignite and run continuously in the HI flame setting, with no adjustment in flame output. This mode of operation is primarily used for initial installation or power outage operation with battery backup.

**REMOTE Position:** Appliance will initiate commands from an optional wired wall switch and/or the wireless remote (RC300).

2. If using a wired wall switch with the module in REMOTE mode, the flame output can be adjusted with the HI/LO selector switch on the module. See Figure 2.3. Note that the flame HI/LO selector switch will become inactive once an optional remote control (RC200/RC300) is programmed to the control module. Note that the control module will always ignite the fireplace on HI and remain so for the initial 10 seconds of operation. If the HI/LO is switched to the LO position, the flame output will automatically drop to the lowest setting after the flame has been established for 10 sec. After this 10 second period, the flame can be adjusted from HI to LO with the switch.
3. The control module has safety feature that automatically shuts down the fireplace after 9 hours of continuous operation without receiving a command from the RC300 remote.
4. If you intend to use both an optional wired wall switch and the RC300 remote control to operate your fireplace, the wall switch will override any commands given by the remote.
5. **Module Reset**

This module may lock-out under certain conditions. When this occurs, the appliance will not ignite or respond to commands. The module will go into lock-out mode by emitting three audible beeps, then continuously displaying an error code at its status indicator LED.

  - Check battery tray. Remove batteries if installed. Batteries should only be installed for use during power outages. See Section G.

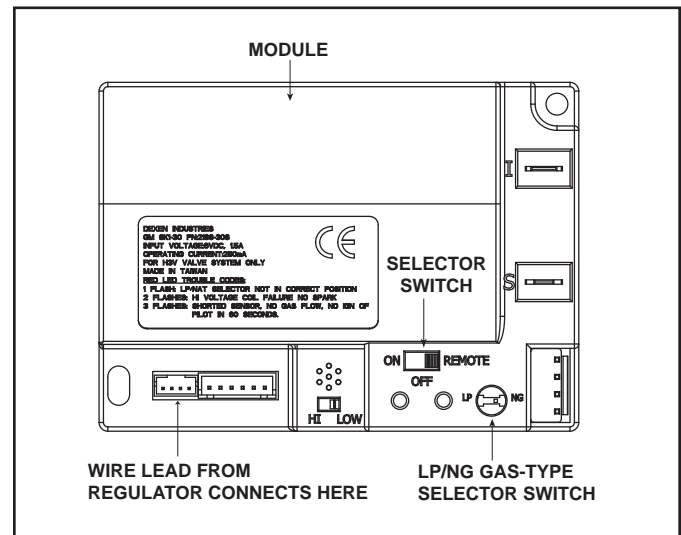


Figure 2.3 Control Module

- Locate the module selector switch. (See Figure 2.3).
- Set the module selector switch to the OFF position.
- Wait five (5) minutes to allow possible accumulated gas to clear.
- Set the module selector switch to ON or REMOTE position.
- Start the appliance.

**WARNING! Risk of Explosion! DO NOT** press the module reset switch more than one time within a five minute time period. Gas may accumulate in firebox. Call a qualified service technician.

### Nine Hour Safety Shutdown Feature

The appliance has a safety feature that automatically shuts down the fireplace after nine hours of continuous operation without receiving a command from the RC300 remote.

## I. Before Lighting Fireplace

Before operating this fireplace for the first time, **have a qualified service technician:**

- Verify all shipping materials have been removed from inside and/or underneath the firebox.
- Review proper placement of logs, ember material and/or other decorative materials.
- Check the wiring.
- Check the air shutter adjustment.
- Ensure that there are no gas leaks.
- Ensure that the glass is sealed and in the proper position and that the integral barrier is in place.

**WARNING! Risk of Fire or Asphyxiation! DO NOT** operate fireplace with fixed glass assembly removed.

## J. Lighting Instructions (IPI)

### FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A.** This appliance is equipped with an intermittent pilot ignition (IPI) device which automatically lights the burner. **DO NOT** try to light the burner by hand.
- 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.

- B. BEFORE LIGHTING,** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- C. DO NOT** use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

#### WHAT TO DO IF YOU SMELL GAS

- **DO NOT** try to light any appliance.
- **DO NOT** touch any electric switch; do not use any phone in your building.

### WARNING:

**DO NOT CONNECT LINE VOLTAGE (110/120 VAC OR 220/240 VAC) TO THE CONTROL VALVE.**

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance.

This appliance needs fresh air for safe operation and must be installed so there are provisions for adequate combustion and ventilation air.

If not installed, operated, and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or fuel combustion which are known to the State of California to cause cancer, birth defects, or other reproductive harm.

Keep burner and control compartment clean. See installation and operating instructions accompanying appliance.

For additional information on operating your  
Hearth & Home Technologies fireplace, please refer to [www.fireplaces.com](http://www.fireplaces.com).

### CAUTION:

Hot while in operation. **DO NOT** touch. Keep children, clothing, furniture, gasoline and other liquids having flammable vapors away.

**DO NOT** operate the appliance with fixed glass assembly removed, cracked or broken. Replacement of the fixed glass assembly should be done by a licensed or qualified service person.

### NOT FOR USE WITH SOLID FUEL

For use with natural gas and propane. A conversion kit, as supplied by the manufacturer, shall be used to convert this appliance to the alternate fuel.

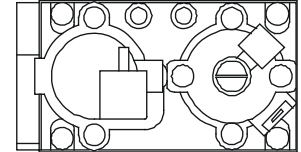
**Also Certified for Installation in a Bedroom or a Bedsitting Room.**

For assistance or additional information, consult a qualified installer, service agency or the gas supplier.

### LIGHTING INSTRUCTIONS (IPI)

1. This appliance is equipped with an ignition device which automatically lights the burner. **DO NOT** try to light the burner by hand.

**GAS  
VALVE**



2. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the Safety Information located on the left side of this label. If you do not smell gas, go to next step.
3. To light the burner:  
Equipped with wall switch: Turn ON/OFF switch to ON.  
Equipped with remote or wall control: Press ON or FLAME button.  
Equipped with thermostat: Set temperature to desired setting.
4. If the appliance does not light after three tries, call your service technician or gas supplier.

### TO TURN OFF GAS TO APPLIANCE

1. Equipped with wall switch: Turn ON/OFF switch to OFF.  
Equipped with remote or wall control: Press OFF button.  
Equipped with thermostat: Set temperature to lowest setting.
2. Service technician should turn off electric power to the control when performing service.

593-913G

Final inspection by \_\_\_\_\_

## K. After Fireplace is Lit

### Initial Break-in Procedure

- The fireplace should be run three to four hours continuously on high.
- Turn the fireplace off and allow it to completely cool.
- Remove fixed glass assembly. See Section 14.A.
- Clean fixed glass assembly. See Section 3.
- Replace the fixed glass assembly and run continuously on high an additional 12 hours.

This cures the materials used to manufacture the fireplace.

### **NOTICE! Open windows for air circulation during fireplace break-in.**

- *Some people may be sensitive to smoke and odors.*
- *Smoke detectors may activate.*

## L. Frequently Asked Questions

ISSUE	SOLUTIONS
Condensation on the glass	This is a result of gas combustion and temperature variations. As the fireplace warms, this condensation will disappear.
Blue flames	This is a result of normal operation and the flames will begin to yellow as the fireplace is allowed to burn for 20 to 40 minutes.
Odor from fireplace	When first operated, this fireplace may release an odor for the first several hours. This is caused by the curing of materials from manufacturing. Odor may also be released from finishing materials and adhesives used near the fireplace. These circumstances may require additional curing related to the installation environment.
Film on the glass	This is a normal result of the curing process of the paint and logs. Glass should be cleaned within 3 to 4 hours of initial burning. A non-abrasive cleaner such as gas appliance glass cleaner may be necessary. See your dealer.
Metallic noise	Noise is caused by metal expanding and contracting as it heats up and cools down, similar to the sound produced by a furnace or heating duct. This noise does not affect the operation or longevity of the fireplace.

# 3 Maintenance and Service

Any safety screen or guard removed for servicing must be replaced prior to operating the fireplace.

When properly maintained, your fireplace will give you many years of trouble-free service. We recommend annual service by a qualified service technician.

## A. Maintenance Tasks-Homeowner

Installation and repair should be done by a qualified service technician only. The fireplace should be inspected before use and at least annually by a professional service person.

The following tasks may be performed annually by the homeowner. If you are uncomfortable performing any of the listed tasks, please call your dealer for a service appointment.

More frequent cleaning may be required due to lint from carpeting or other factors. Control compartment, burner and circulating air passageway of the fireplace must be kept clean.

**CAUTION! Risk of Burns!** The fireplace should be turned off and cooled before servicing.

## Doors, Surrounds, Fronts

**Frequency:** Annually

**By:** Homeowner

**Tools needed:** Protective gloves, stable work surface

- Assess condition of screen and replace as necessary.
- Inspect for scratches, dents or other damage and repair as necessary.
- Check that louvers are not blocked.
- Vacuum and dust surfaces.

## Glass Cleaning

### (Exterior of Installed Glass Only)

**Frequency:** Seasonally

**By:** Homeowner

**Tools Needed:** Protective gloves, glass cleaner, drop cloth and a stable work surface.

**WARNING! Risk of Injury!** Glass installation and removal should be performed only by a qualified service technician.

- Homeowner may only clean outsides of glass.
- Call your dealer for a service appointment to have inside of glass cleaned.

**CAUTION! Glass is breakable.**

- Avoid striking, scratching or slamming glass
- Avoid abrasive cleaners
- **DO NOT** clean glass while it is hot
- Clean glass with a non-abrasive commercially available cleaner.
  - Light deposits: Use a soft cloth with soap and water
  - Heavy deposits: Use commercial fireplace glass cleaner (consult with your dealer)

## Venting

**Frequency:** Seasonally

**By:** Homeowner

**Tools needed:** Protective gloves and safety glasses.

- Inspect venting and termination cap for blockage or obstruction such plants, bird nests, leaves, snow, debris, etc.
- Verify termination cap clearance to subsequent construction (building additions, decks, fences, or sheds). See Section 6.
- Inspect for corrosion or separation.
- Verify weather stripping, sealing and flashing remains intact.
- Inspect draft shield to verify it is not damaged or missing.



## B. Maintenance Tasks-Qualified Service Technician

The following tasks must be performed by a qualified service technician.

### Glass Cleaning

#### (Exterior and Interior of Installed Glass)

**Frequency:** Seasonally

**By:** Qualified Service Technician

**Tools Needed:** Protective gloves, glass cleaner, drop cloth and a stable work surface.

**WARNING! Risk of Injury!** Glass installation and removal should be performed only by a qualified service technician.

**CAUTION! Handle fixed glass assembly with care.** Glass is breakable.

- Avoid striking, scratching or slamming glass
- Avoid abrasive cleaners
- **DO NOT** clean glass while it is hot
- Prepare a work area large enough to accommodate fixed glass assembly and door frame by placing a drop cloth on a flat, stable surface.

**Note:** Fixed glass assembly and gasketing may have residue that can stain carpeting or floor surfaces.

- Remove door or decorative front from fireplace and set aside on work surface.
- See Section 14.A for instructions to remove fixed glass assembly.
- Clean glass with a non-abrasive commercially available cleaner.
  - Light deposits: Use a soft cloth with soap and water
  - Heavy deposits: Use commercial fireplace glass cleaner (consult with your dealer)
- Carefully set fixed glass assembly in place on fireplace. Hold glass in place with one hand and secure glass latches with the other hand.
- Reinstall door or decorative front.

### Gasket Seal and Glass Assembly Inspection

**Frequency:** Annually

**By:** Qualified Service Technician

**Tools needed:** Protective gloves, drop cloth and a stable work surface.

- Inspect gasket seal and its condition.
- Inspect fixed glass assembly for scratches and nicks that can lead to breakage when exposed to heat.
- Confirm there is no damage to glass or glass frame. Replace as necessary.
- Verify that fixed glass assembly is properly retained and attachment components are intact and not damaged. Replace as necessary.

## Logs

**Frequency:** Annually

**By:** Qualified Service Technician

**Tools needed:** Protective gloves.

- Inspect for damaged or missing logs. Replace as necessary. Refer to Section 14 for log placement instructions.
- Verify correct log placement and no flame impingement causing sooting. Correct as necessary.

## Firebox

**Frequency:** Annually

**By:** Qualified Service Technician

**Tools needed:** Protective gloves, sandpaper, steel wool, cloths, mineral spirits, primer and touch-up paint.

- Inspect for paint condition, warped surfaces, corrosion or perforation. Sand and repaint as necessary.
- Replace fireplace if firebox has been perforated.

## Control Compartment and Firebox Top

**Frequency:** Annually

**By:** Qualified Service Technician

**Tools needed:** Protective gloves, vacuum cleaner, dust cloths

- Vacuum and wipe out dust, cobwebs, debris or pet hair. Use caution when cleaning these areas. Screw tips that have penetrated the sheet metal are sharp and should be avoided.
- Remove all foreign objects.
- Verify unobstructed air circulation.

## Burner Ignition and Operation

**Frequency:** Annually

**By:** Qualified Service Technician

**Tools needed:** Protective gloves, vacuum cleaner, whisk broom, flashlight, voltmeter, indexed drill bit set, and a manometer.

- Verify burner is properly secured and aligned with pilot or igniter.
- Clean off burner top, inspect for plugged ports, corrosion or deterioration. Replace burner if necessary.
- Replace Glowing embers with new dime-size pieces. **DO NOT** block ports or obstruct lighting paths. Refer to Section 14 for proper ember placement.
- Verify batteries have been removed from battery back-up IPI systems to prevent premature battery failure or leaking.
- Check for smooth lighting and ignition carryover to all ports. Verify that there is no ignition delay.
- Inspect for lifting or other flame problems.
- Verify air shutter setting is correct. See Section 14 for required air shutter setting. Verify air shutter is clear of dust and debris.

- Inspect orifice for soot, dirt and corrosion. Verify orifice size is correct. See Service Parts List for proper orifice sizing.
  - Verify manifold and inlet pressures. Adjust regulator as required.
  - Inspect pilot flame pattern and strength. See Figure 3.1 for proper pilot flame pattern. Clean or replace orifice spud as necessary.
- 
- Inspect IPI flame-sensing rod for soot, corrosion and deterioration. Polish with fine steel wool or replace as required.
  - Verify that there is not a short in flame sense circuit by checking continuity between pilot hood and flame-sensing rod. Replace pilot as necessary.



Figure 3.1 IPI Pilot Flame Patterns

## Light Bulb Maintenance

**Frequency:** As needed

**By:** Qualified Service Technician

**Tools needed:** Protective gloves, replacement light bulbs.

- See Section 14.F.

# 4 Getting Started

## Installer Guide

### A. Typical Appliance System

**NOTICE:** Illustrations and photos reflect typical installations and are for design purposes only. Illustrations/diagrams are not drawn to scale. Actual product may vary from pictures in manual

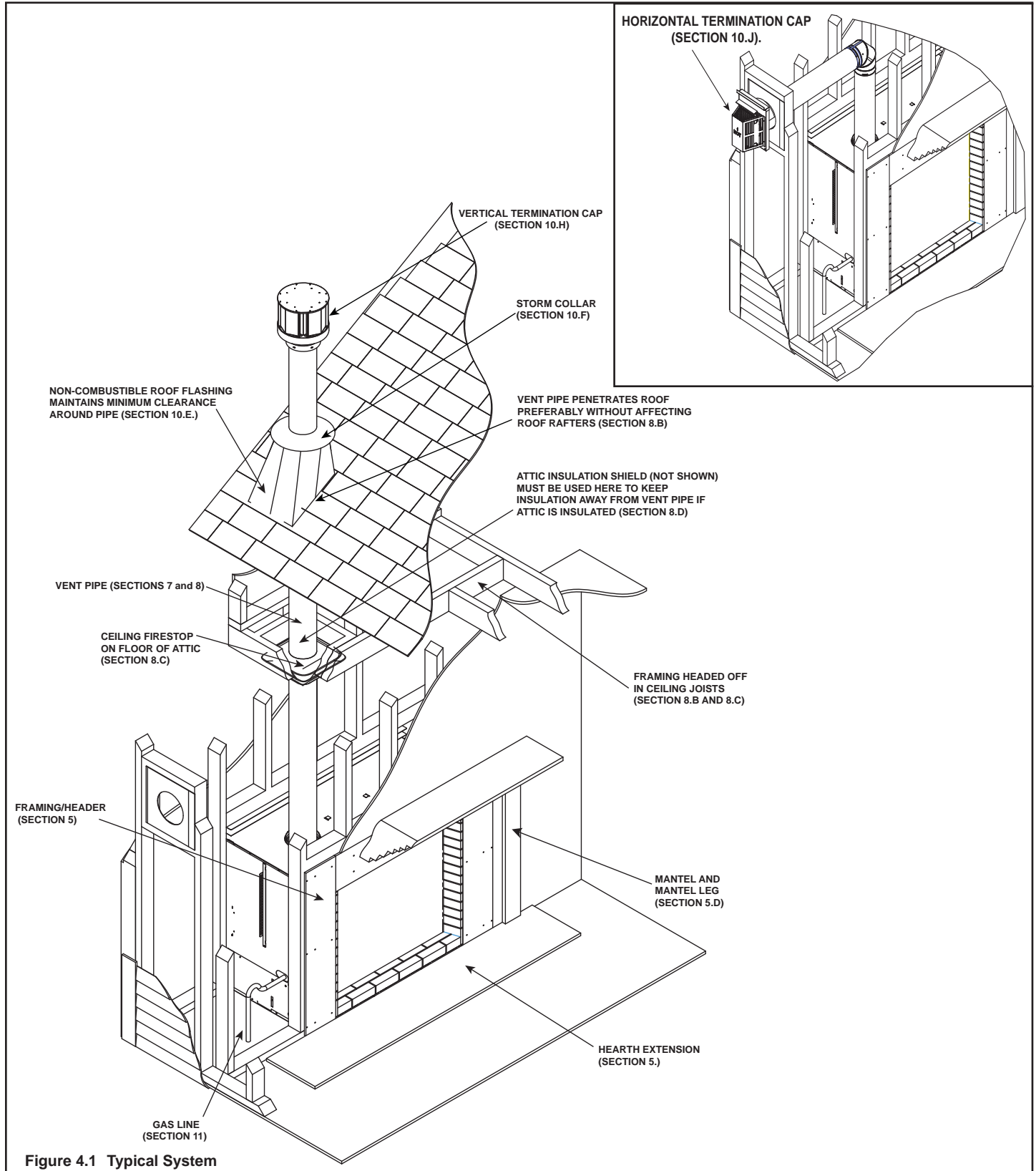


Figure 4.1 Typical System

## B. 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.

Before installing, determine the following:

- Where the appliance is to be installed.
- The vent system configuration to be used.
- Gas supply piping requirements.
- Electrical wiring requirements.
- Framing and finishing details.

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.

## C. 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
Gloves	Framing square
Voltmeter	Electric drill and bits (1/4 in.)
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).	

## D. 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 log set and appliance grate 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.

# 5 Framing and Clearances

## A. Selecting Appliance Location

When selecting a location for the appliance it is important to consider the required clearances to walls (see Figure 5.1).

**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.

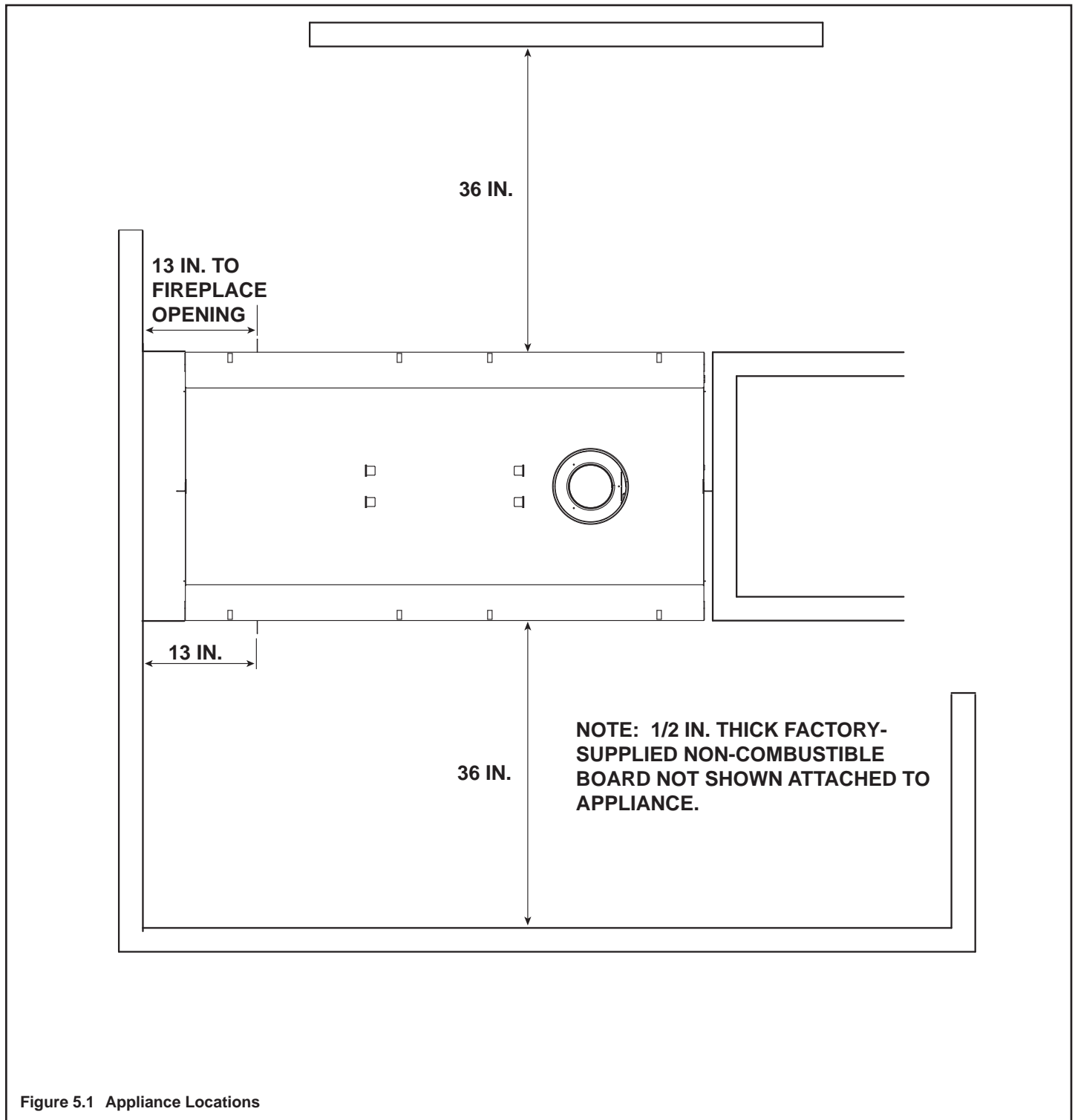


Figure 5.1 Appliance Locations

## B. 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.

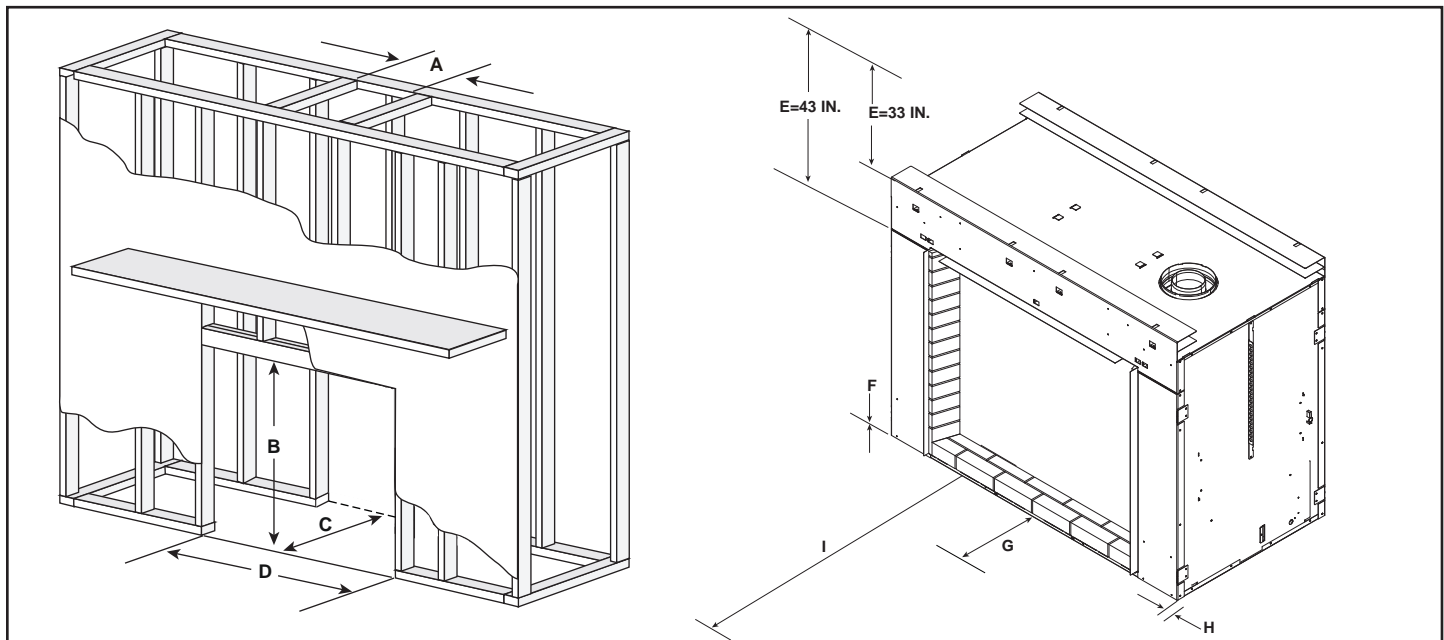
To further prevent drafts, the wall shield and ceiling firestops should be caulked with caulk with a minimum of 300°F continuous exposure rating to seal gaps. Gas line holes and other openings should be caulked with caulk with a minimum of 300°F continuous exposure rating or stuffed with unfaced insulation. 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.

## C. Clearances

**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 a fire.



**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 from opening	Clearance to ceiling from top of appliance	Combustible Floor	Combustible Flooring	Sides of Appliance	Front of Appliance
Inches	10	46-1/2	30	60-1/4	43	33	0	See Note Below	1	36
Millimeters	254	1181	762	1530	1092	838	0	See Note Below	25	914

\* Adjust framing dimensions for interior sheathing (such as sheetrock)

\*\* Fireplace may need to be elevated from the floor affecting framing height B, depending on hearth construction. See Section 5.E for hearth and combustible floor requirements.

**Figure 5.2 Clearances to Combustibles**



## D. Mantel and Wall Projections

**WARNING! Risk of Fire!** Comply with all minimum clearances as specified. Framing or finishing material closer than the minimums listed must be constructed entirely of non-combustible materials (i.e., steel studs, concrete board, etc). Failure to comply could cause fire.

### Combustible Mantels

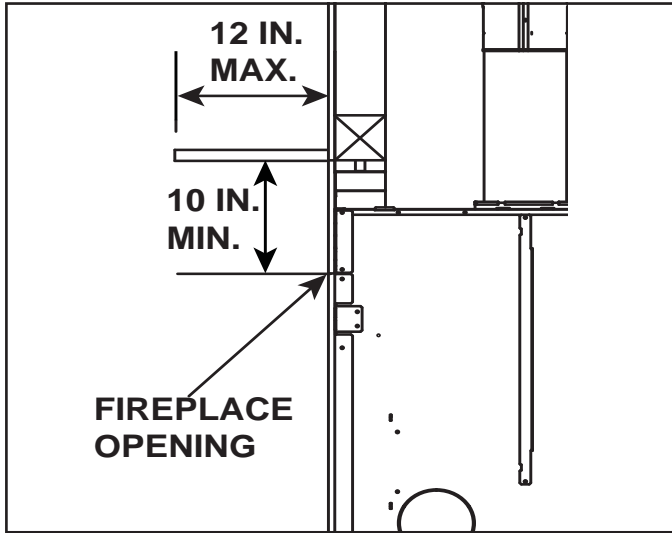


Figure 5.3 Clearances to mantels or other combustibles above appliance

### Non-combustible Mantels

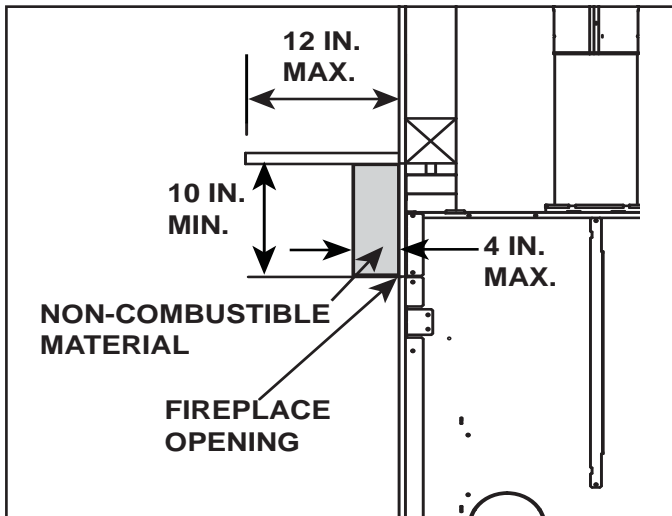


Figure 5.4 Clearances to Mantels or other Non-Combustibles Above Appliance

### Combustible Mantel Legs or Wall Projections

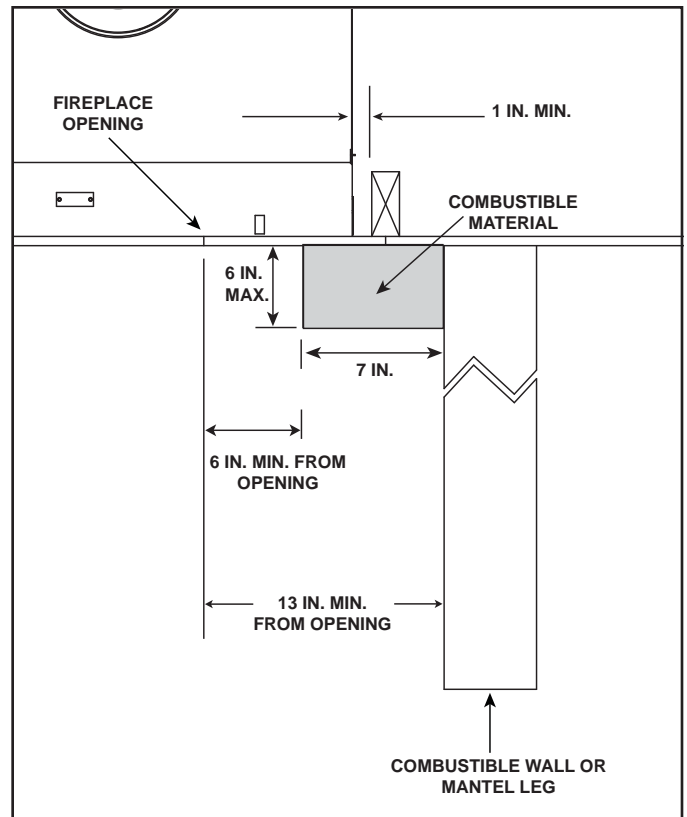


Figure 5.5 Clearances to Combustible Mantel Legs or Wall Projections.

### Non-Combustible Mantel Legs or Wall Projections

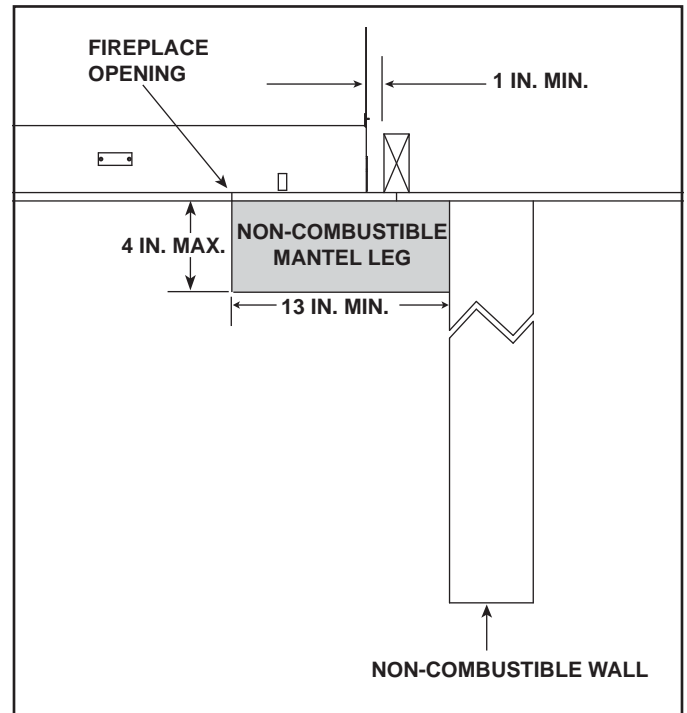


Figure 5.6 Clearances to Non-Combustible Mantel Legs or Wall Projections.

## E. Hearth Extension

**WARNING! Risk of Fire!** Hearth extension required to protect combustible floors in front of appliance.

**WARNING! Risk of Fire! DO NOT block ventilation slots.** A minimum 1/4 in. space between the bottom of hearth refractory and top of field installed hearth extension (marble, tile, granite, etc) is required across full width of fireplace.

If the appliance is to be placed directly on the floor, the non-combustible hearth material will be limited to 3/4 in. thick, including the floor adhesive. If the hearth material will exceed 3/4 in. thick, the appliance will need to be shimmed from the floor appropriately to maintain 1/4 in. minimum space between the floor hearth and hearth refractory.

The base of the fireplace may sit on a combustible surface. The area in front of the fireplace must be protected by a noncombustible hearth extension, unless the fireplace is raised a minimum of three inches above the combustible floor or hearth. See Figures 5.7, 5.8 and 5.10.

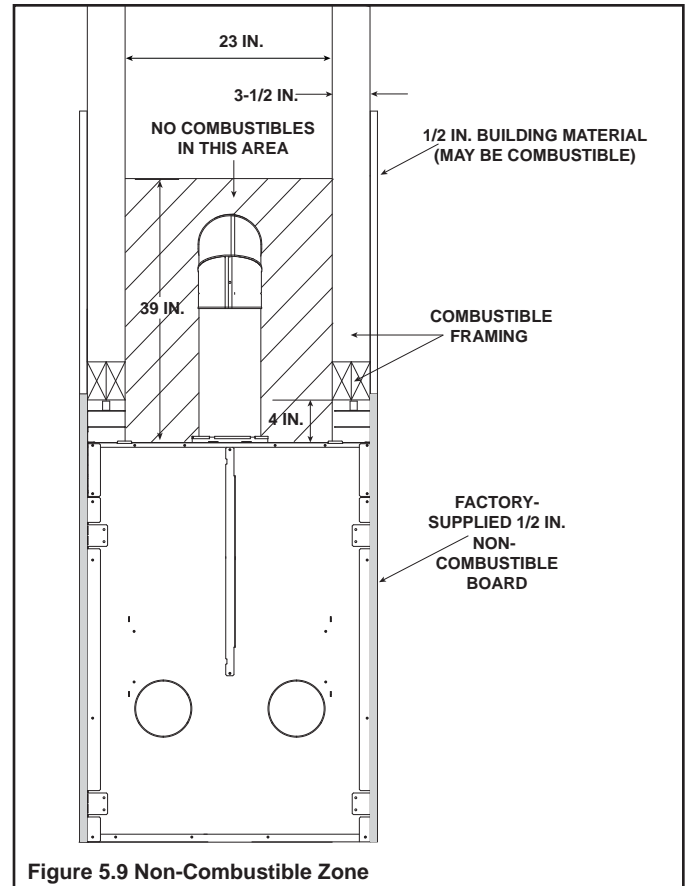


Figure 5.9 Non-Combustible Zone

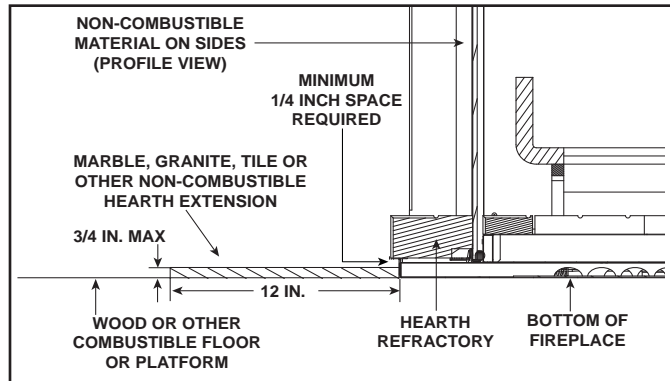


Figure 5.7 Fireplace Positioned on Combustible Surface

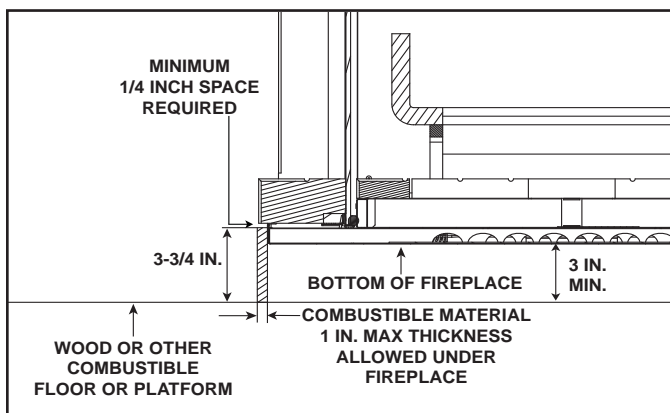


Figure 5.8 Fireplace Raised A Minimum of 3 Inches Above Combustible Surface

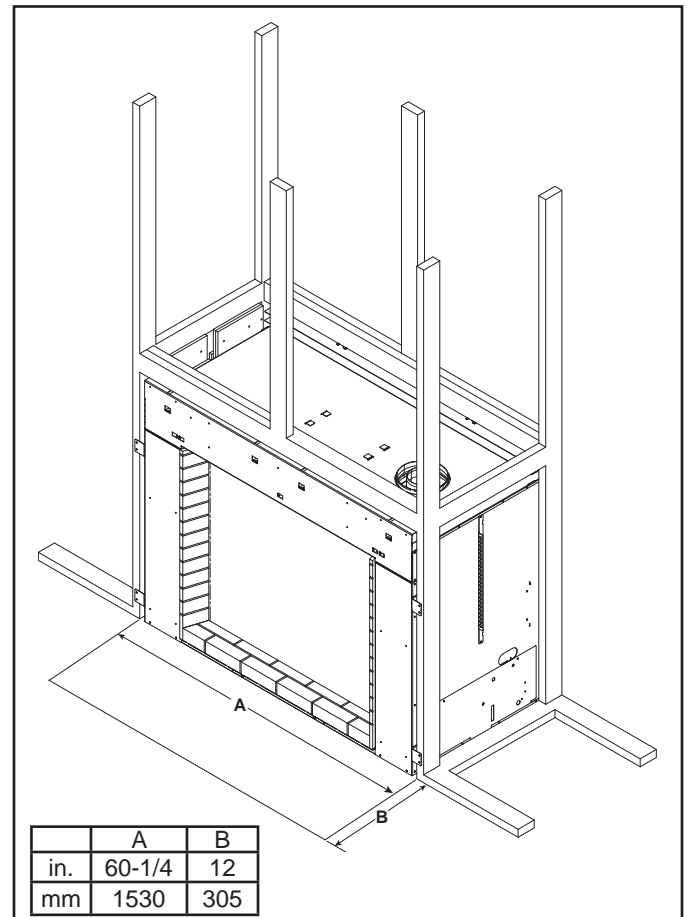



Figure 5.10 Non-Combustible Hearth Extension Minimum Dimensions (Fireplace Positioned on Combustible Surface)

# 6 Termination Locations

## A. Vent Termination Minimum Clearances

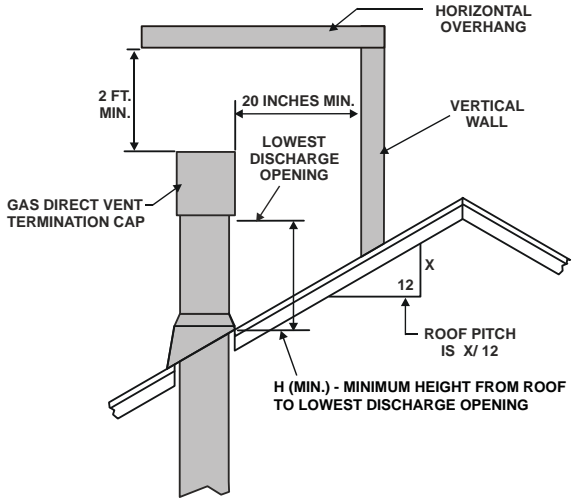


**WARNING**

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.

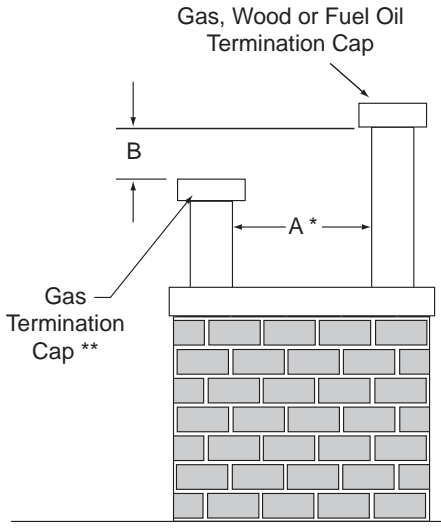


Roof Pitch	H (Min.) Ft.
Flat to 6/12.....	1.0*
Over 6/12 to 7/12.....	1.25*
Over 7/12 to 8/12.....	1.5*
Over 8/12 to 9/12.....	2.0*
Over 9/12 to 10/12.....	2.5
Over 10/12 to 11/12.....	3.25
Over 11/12 to 12/12.....	4.0
Over 12/12 to 14/12.....	5.0
Over 14/12 to 16/12.....	6.0
Over 16/12 to 18/12.....	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 6.1 Minimum Height From Roof To Lowest Discharge Opening**

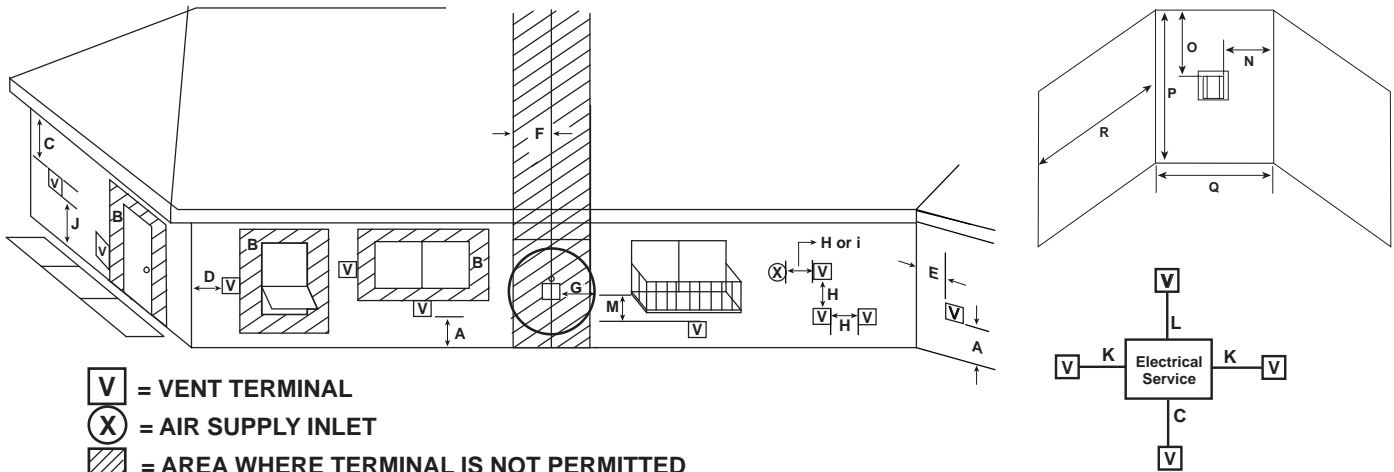
A	B
6 in. (minimum) up to 20 in. <i>152 mm/508 mm</i>	18 in. minimum <i>457 mm</i>
20 in. and over	0 in. minimum



\* 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 6.2 Staggered Termination Caps**



**V** = VENT TERMINAL  
**X** = AIR SUPPLY INLET  
 = 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 = 9 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 inches .....vinyl or composite overhang  
Permitted when veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor.

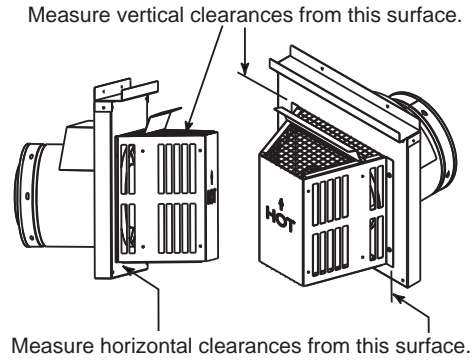
**Covered Alcove Applications**

(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	$2 \times Q_{ACTUAL}$
2 caps	6 feet	$1 \times Q_{ACTUAL}$
3 caps	9 feet	$2/3 \times Q_{ACTUAL}$
4 caps	12 feet	$1/2 \times Q_{ACTUAL}$

$Q_{MIN} = \# \text{ termination caps} \times 3$      $R_{MAX} = (2 / \# \text{ termination caps}) \times Q_{ACTUAL}$



**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 6.3 Minimum Clearances for Termination**

# 7 Vent Information and Diagrams

## A. Approved Pipe

This appliance is approved for use with Hearth & Home Technologies DVP venting systems. Refer to Section 16.B for vent component information.

**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.

## B. Vent Table Key

The abbreviations listed in this vent table key are used in the vent diagrams.

Symbol	Description
V <sub>1</sub>	First section (closest to appliance) of vertical length
V <sub>2</sub>	Second section of vertical length
H <sub>1</sub>	First section (closest to appliance) of horizontal length
H <sub>2</sub>	Subsequent sections of horizontal length

## C. Use of Elbows

**WARNING! Risk of Fire.** This appliance requires a minimum of 24 inches of vertical venting before attaching any elbow to the appliance. **DO NOT** attach elbow directly to the appliance.

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 7.1).

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 7.1).

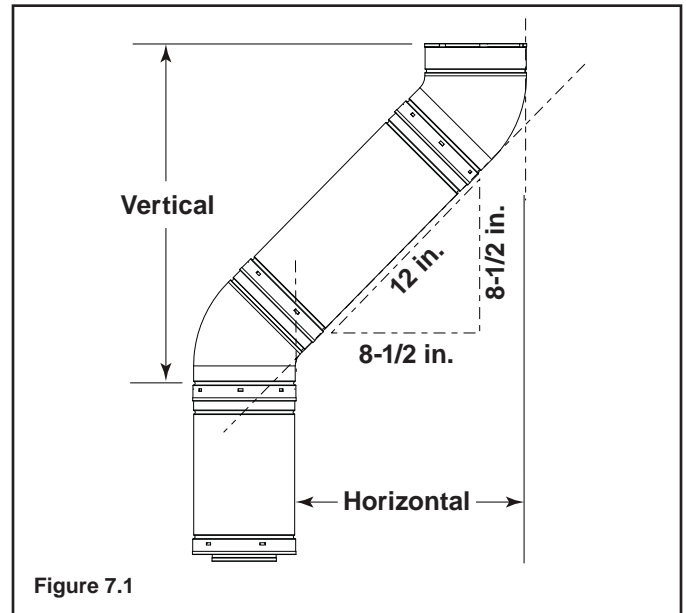


Figure 7.1

## D. 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 Figure 7.2).
- Horizontal terminations are measured to the outside mounting surface (flange of termination cap) (see Figure 6.4).
- Vertical terminations are measured to bottom of termination cap.
- Horizontal pipe installed level with no rise.

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
DVP12MI	3 to 12	76 to 305
DVP24MI	3 to 24	76 to 610

Figure 7.2 DVP Pipe Effective Length

## E. Vent Diagrams

**WARNING! Risk of Fire.** *This appliance requires a minimum of 24 inches of vertical venting before attaching any elbow to the appliance. **DO NOT** attach elbow directly to the appliance.*


General Rules:

- This appliance is approved for use with Hearth & Home Technologies DVP venting systems **ONLY**.
- When penetrating a combustible wall, a wall shield firestop must be installed.
- When penetrating a combustible ceiling, a ceiling firestop must be installed.
- This appliance requires a minimum of 24 inches of vertical pipe attached directly to the appliance starting collar before attaching a 90 degree or 45 degree elbow.



# 1. Top Vent - Horizontal Termination

## ⚠ 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.



## 1. Top Vent - Horizontal Termination

### One Elbow

**Note:** Flue restrictor is permitted ONLY on 30 ft. minimum vertical runs with no elbows.

**Note:** Must have a 24 inches minimum vertical vent before attaching any elbow to the appliance.

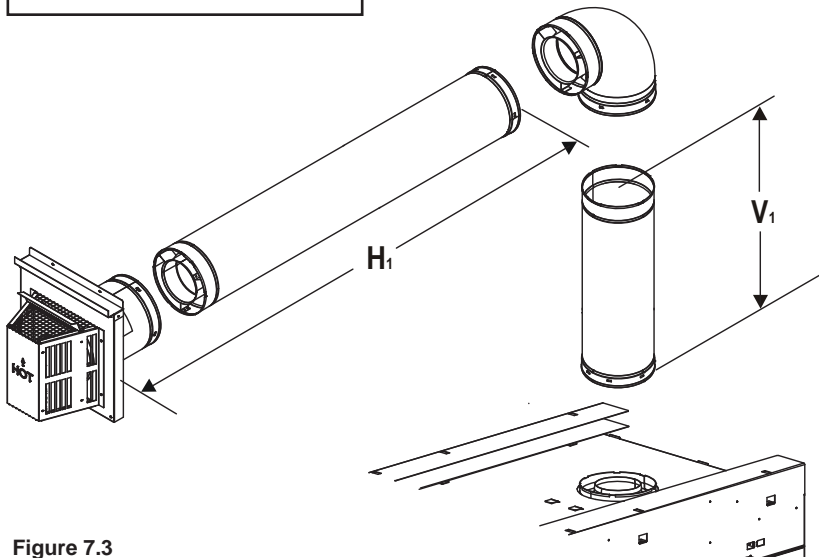


Figure 7.3

V <sub>1</sub> Minimum		H <sub>1</sub> Maximum	
2 ft	610 mm	7 in*	178 mm
3 ft	914 mm	2 ft	610 mm
4 ft	1.2 m	4 ft	1.2 m
5 ft	1.5 m	9 ft	2.7 m
6 ft	1.8 m	12 ft	3.7 m
7 ft	2.1 m	14 ft	4.3 m
10 ft	3.0 m	20 ft	6.1 m
20 ft	6.1 m	40 ft	12.2 m

After V<sub>1</sub> = 6 ft then H<sub>1</sub> = 2 x V ft Maximum  
V<sub>1</sub> + H<sub>1</sub> = 60 ft Maximum  
\*when used with approved termination caps

### Two Elbows

**Note:** Flue restrictor is permitted ONLY on 30 ft. minimum vertical runs with no elbows.

**Note:** Must have a 24 inches minimum vertical vent before attaching any elbow to the appliance.

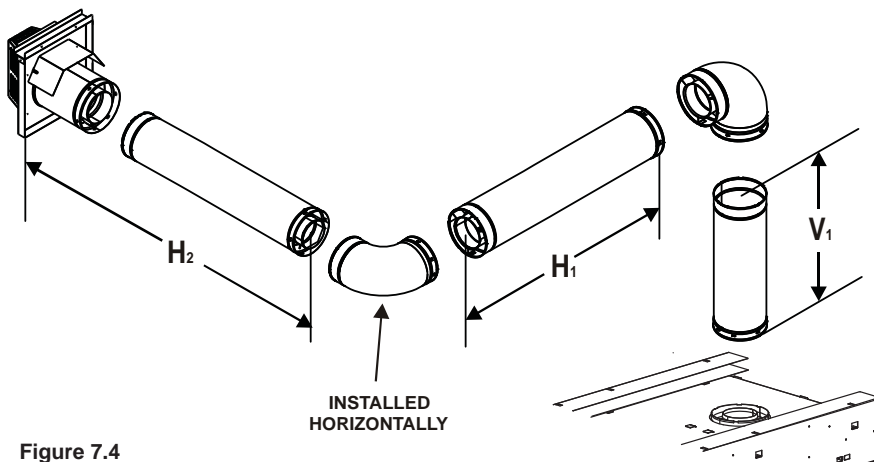


Figure 7.4

V <sub>1</sub> Minimum		H <sub>1</sub> + H <sub>2</sub>	
3 ft	914 mm	18 in	457 mm
4 ft	1.2 m	3 ft	914 mm
5 ft	1.5 m	7 ft	2.1 m
6 ft	1.8 m	10 ft	3.0 m
7 ft	2.1 m	12 ft	3.7 m
10 ft	3.0 m	18 ft	5.5 m
20 ft	6.1 m	20 ft	6.1 m

After V<sub>1</sub> = 6 ft then H<sub>1</sub> = 2 x V<sub>1</sub> ft Maximum  
V<sub>1</sub> + H<sub>1</sub> + H<sub>2</sub> = 60 ft Maximum  
H<sub>1</sub> + H<sub>2</sub> = 20 ft Maximum

# 1. Top Vent - Horizontal Termination - (continued)

## Three Elbows

**Note:** Must have a 24 inches minimum vertical vent before attaching any elbow to the appliance.

**Note:** Flue restrictor is permitted ONLY on 30 ft. minimum vertical runs with no elbows.

	V <sub>1</sub>	H <sub>1</sub>	V <sub>2</sub>	H <sub>2</sub>	
2 ft	610 mm	7 in	178 mm	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>
3 ft	914 mm	2 ft	610 mm	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>
4 ft	1.2 m	4 ft	1.2 m	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>
5 ft	1.5 m	9 ft	2.7 m	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>
6 ft	1.8 m	12 ft	3.7 m	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>
7 ft	2.1 m	14 ft	4.3 m	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>
10 ft	3.0 m	20 ft	6.1 m	*	H <sub>2</sub> Max = 2 X V <sub>2</sub>

V<sub>1</sub> + H<sub>1</sub> must be adhered to.  
 \* V<sub>2</sub> has no specific restrictions EXCEPT,  
 H<sub>t max</sub> = 2 x V<sub>1</sub> and V<sub>total</sub> + H<sub>total</sub> cannot exceed 60 ft Maximum

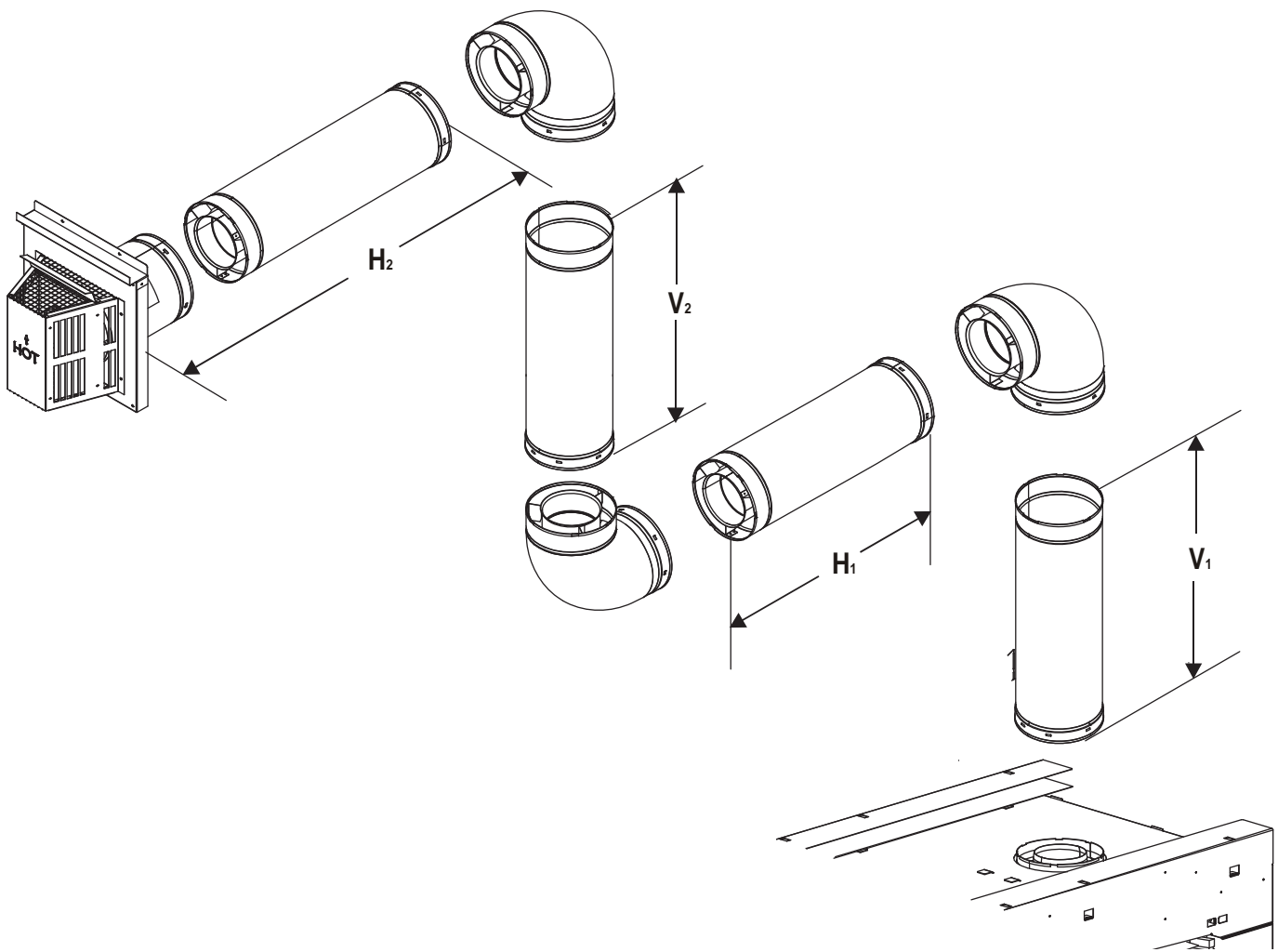


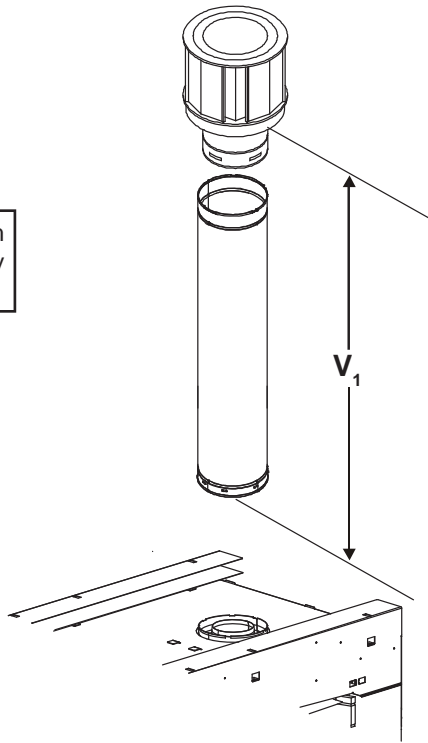
Figure 7.5

## 2. Top Vent - Vertical Termination

### No Elbow

**Note:** Flue restrictor is permitted ONLY on 30 ft. minimum vertical runs with no elbows.

**Note:** Must have a 24 inches minimum vertical vent before attaching any elbow to the appliance.



$V_1 = 50 \text{ ft. Max. (15.2 m)}$   
 $V_1 = 3 \text{ ft. Min. (914 mm)}$

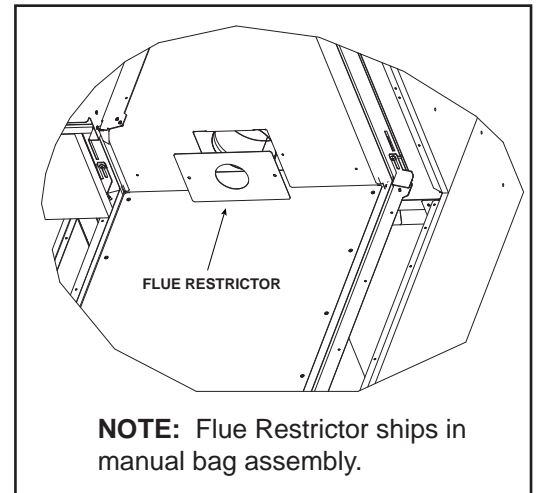
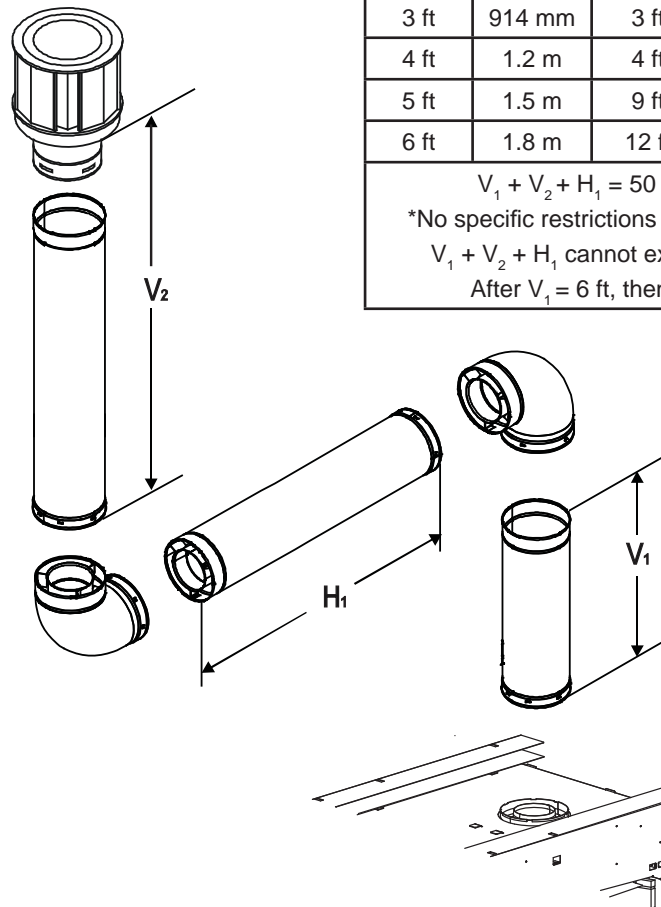


Figure 7.6

**Note:** Flue restrictor is permitted ONLY on 30 ft. minimum vertical runs with no elbows.

**Note:** Must have a 24 inches minimum vertical vent before attaching any elbow to the appliance.



	$V_1$		$H_1$	$V_2$	
	2 ft	610 mm	1 ft	305 mm	*
	3 ft	914 mm	3 ft	914 mm	*
	4 ft	1.2 m	4 ft	1.2 m	*
	5 ft	1.5 m	9 ft	2.7 m	*
	6 ft	1.8 m	12 ft	3.7 m	*

$V_1 + V_2 + H_1 = 50 \text{ ft (15.2 m) Max.}$   
 \*No specific restrictions on this value EXCEPT  
 $V_1 + V_2 + H_1$  cannot exceed 60 ft (18.3 m).  
 After  $V_1 = 6 \text{ ft}$ , then  $H_1 \text{ Max.} = V_1 \times 2$

Figure 7.7

### Three Elbows

**Note:** Flue restrictor is permitted ONLY on 30 ft. minimum vertical runs with no elbows.

**Note:** Must have a 24 inches minimum vertical vent before attaching any elbow to the appliance.

	$V_1$	$H_1$	$H_2$	$V_2$	$H_t$ Max.	
2 ft	610 mm	*	*	**	7 in	178 mm
3 ft	914 mm	*	*	**	2 ft	610 mm
4 ft	1.2 m	*	*	**	4 ft	1.2 m
5 ft	1.5 m	*	*	**	8 ft	2.4 m
6 ft	1.8 m	*	*	**	12 ft	3.7 m
7 ft	2.1 m	*	*	**	14 ft	4.3 m
10 ft	3.0 m	*	*	**	20 ft	6.1 m

\* $H_1$  and  $H_2$  has no specific restrictions EXCEPT, after  $V_1 = 6$  ft, then  $H_t$  Max =  $2 \times V_1$   
 \*\* $V_T + H_T = 60$  ft Max.

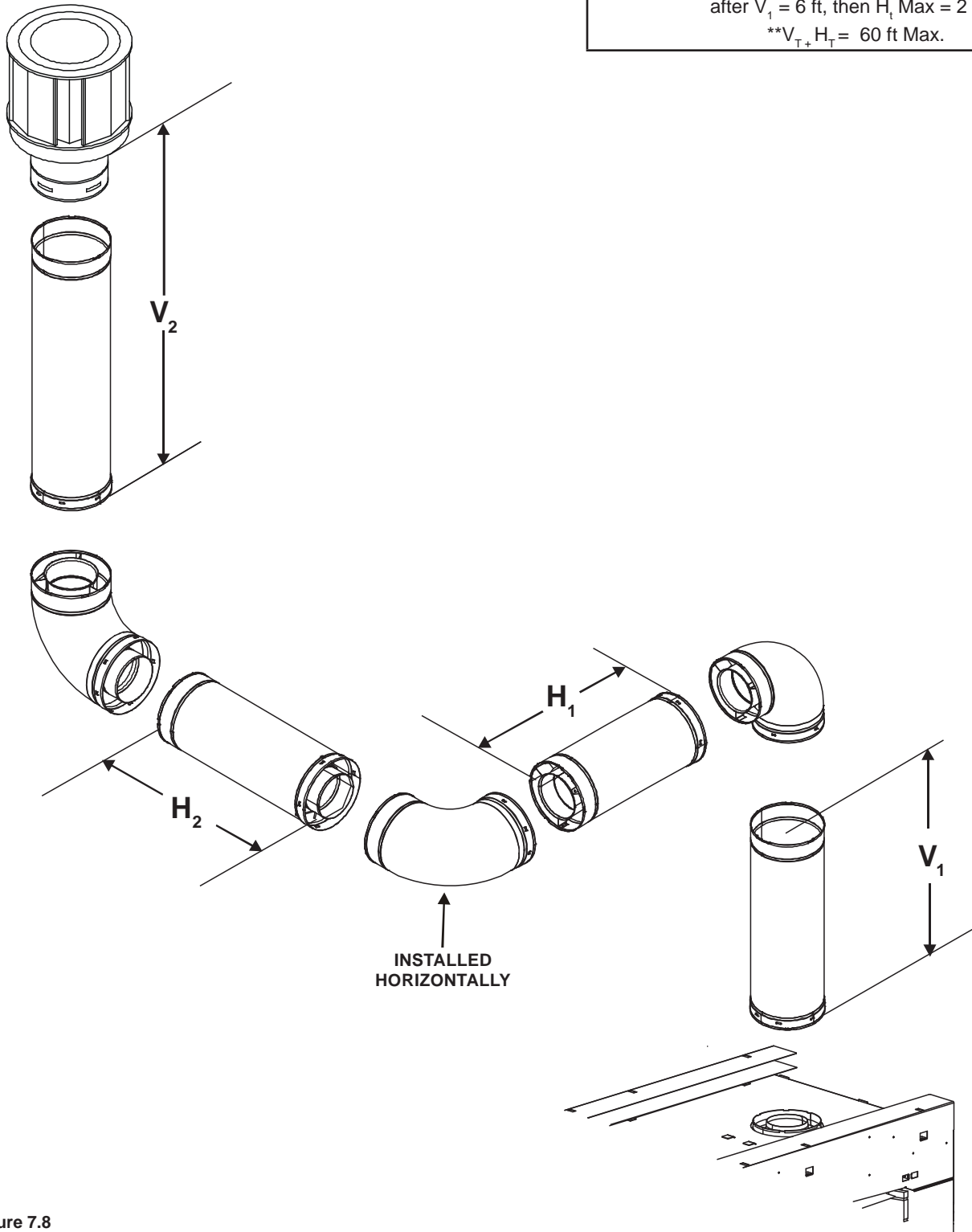


Figure 7.8

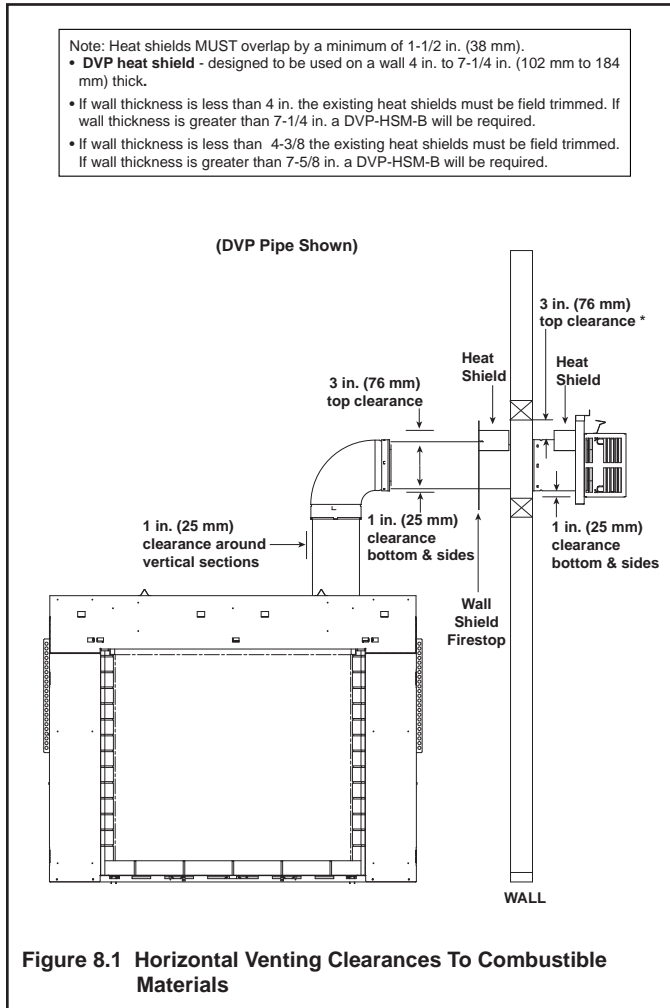
# 8 Vent Clearances and Framing

## 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 over heating and fire.



## B. Wall Penetration Framing

### 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.

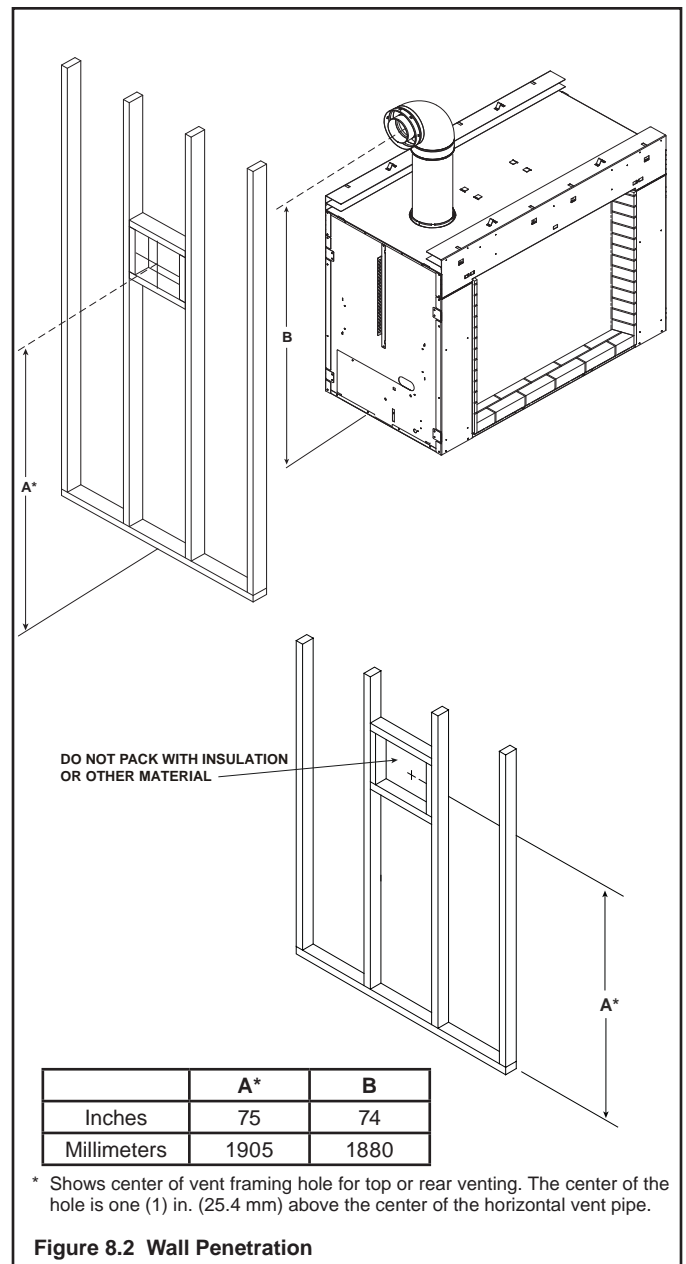
- The opening must be framed on all four sides using the same size framing materials as those used in the wall construction.
- SLP pipe - A wall shield firestop must be placed on each side of an interior wall. A minimum 1-1/2 in. (38 mm) overlap of attached heat shields must be maintained.

- DVP pipe - A wall shield firestop is required on one side only on interior walls. If your local inspector requires a wall shield firestop on both sides, then both wall shield firestops must have a heat shield (refer to Section 16.B.) attached to them.
- See Section 10.J. for information for regarding the installation of a horizontal termination cap.

### Non-Combustible Wall Penetration

If the hole being penetrated is surrounded by noncombustible 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.

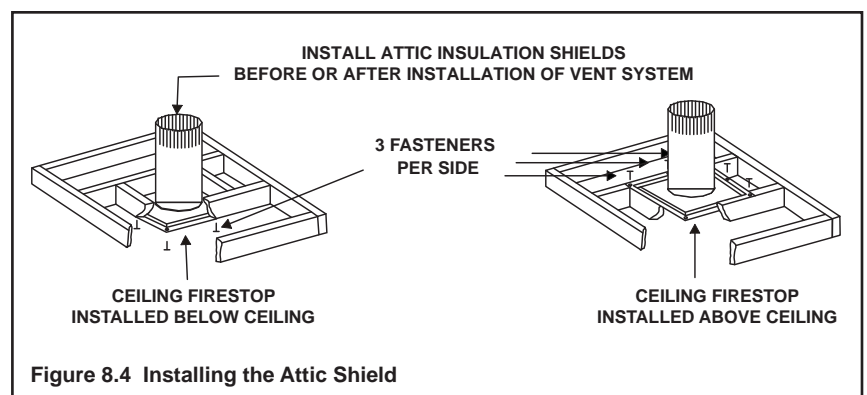
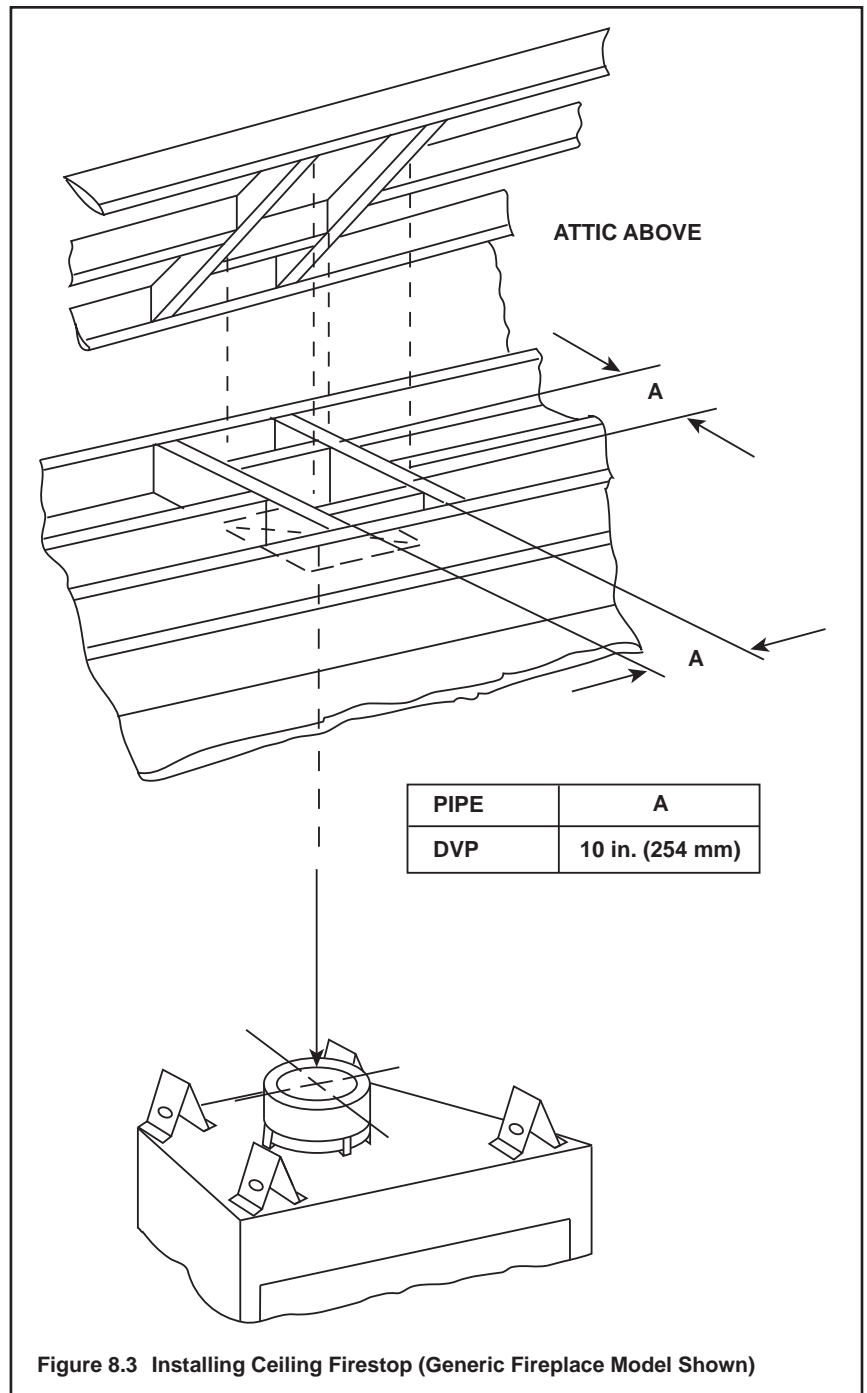


### C. Install the Ceiling Firestop

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 8.3).

**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 Inc. 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.

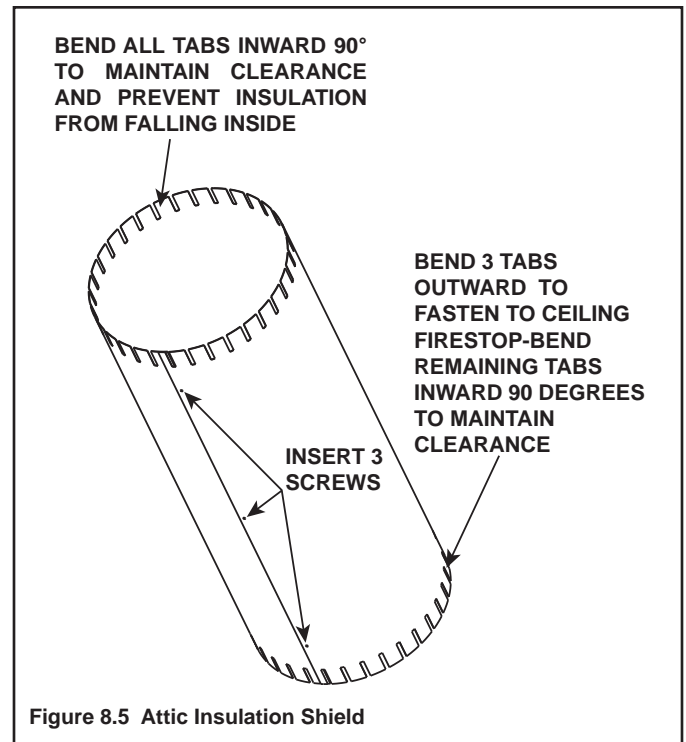
Attic shields must meet specified clearance and be secured in place.

### 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.

# 9 Appliance Preparation

## A. Top Vent

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

**NOTICE:** This appliance is top vented ONLY.

1. Remove shrink wrap from appliance.



Figure 9.1 Packaged Appliance.

2. The seal cap, shown in Figure 9.2, is included to prevent construction material from getting into appliance. Remove seal cap when pipe installation phase begins.



Figure 9.2 Seal Cap.

3. Remove the two non-combustible assemblies by removing the two 1/4 in. screws fastening the non-combustible assemblies to the appliance. See Figure 9.3.

4. Six sheet metal finishing strips are included with the appliance. The shipping location of the finishing strips is shown in Figure 9.3. Remove 1/4 in. screws that attach the strips to the appliance. Strips may be used during the final finishing steps of appliance setup. See Figure 9.7. Strips should be removed when finishing is completed.



Figure 9.3 Shipping Brackets and Finishing Strip Locations.

4. Once the appliance is finished into the wall and is ready for final installation, remove the rest of the components.

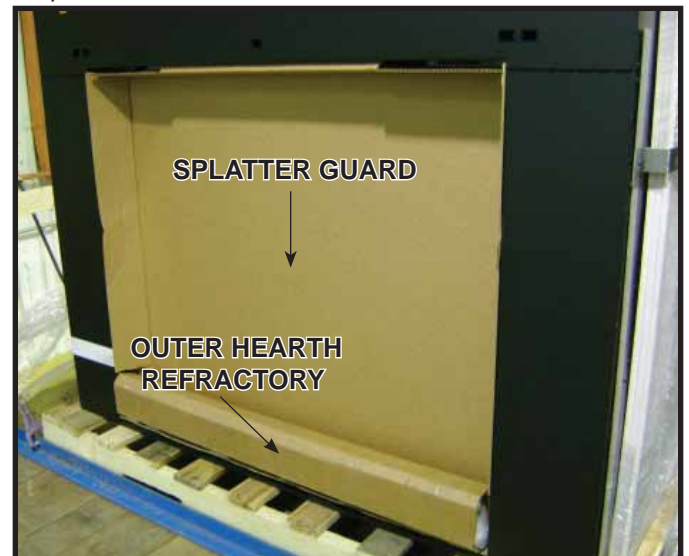


Figure 9.4.

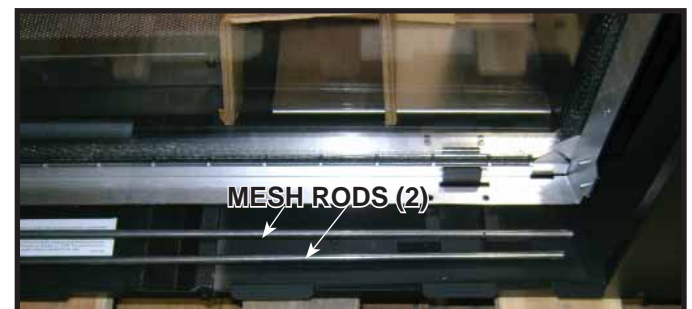


Figure 9.5 Mesh Rod Location, Gas Valve Side of Appliance.



Figure 9.6 Appliance Package Identification.

Attach the non-combustible board to the appliance and wall framing with the screws supplied in the manual bag assembly. See Figure 9.7

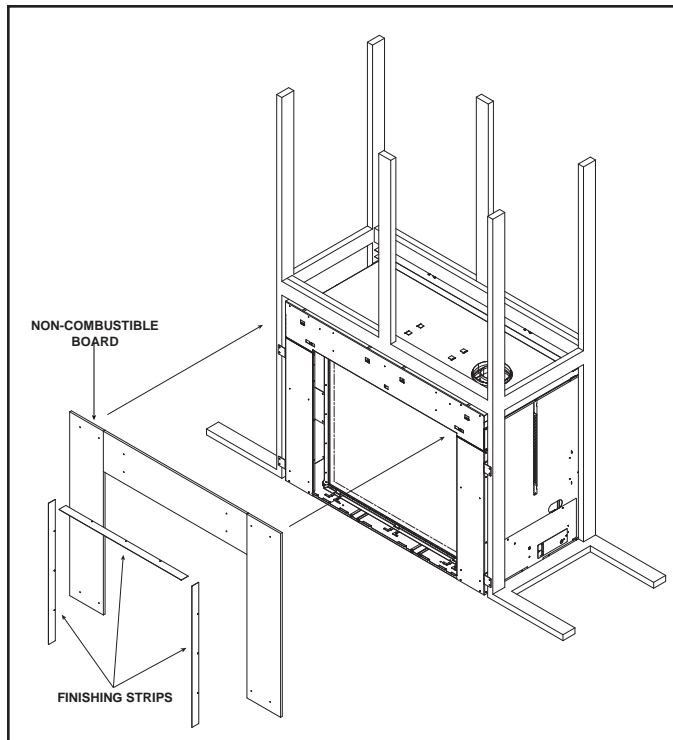


Figure 9.7 Attaching Non-Combustible Board

## 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.

The diagram shows how to properly position and secure the appliance (see Figure 9.8). Nailing tabs are provided to secure the appliance to the framing members.

- Bend out nailing tabs on each side.
- Place the appliance into position.
- Keep nailing tabs flush with the framing.
- 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.
- Secure the appliance to the floor by inserting two screws through the pilot holes at the bottom of the appliance.

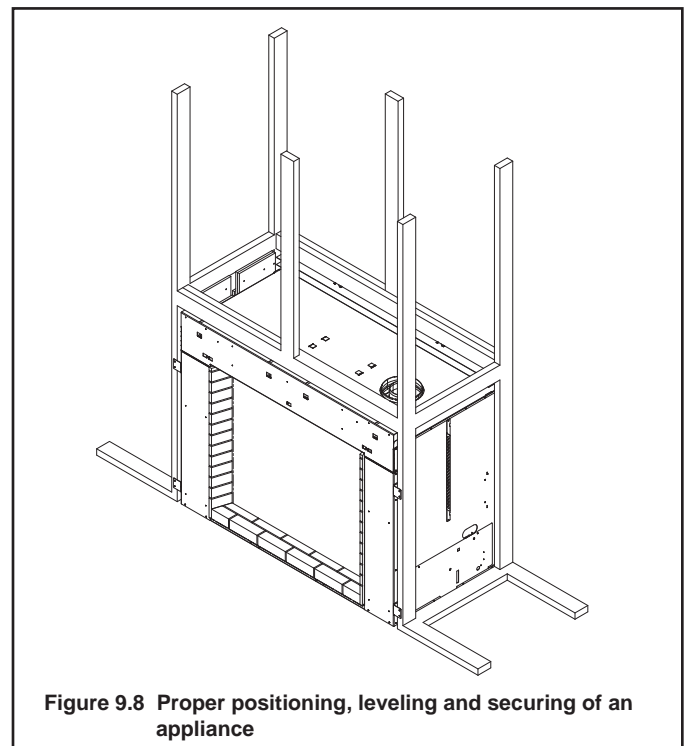


Figure 9.8 Proper positioning, leveling and securing of an appliance



# 10 Installing Vent Pipe

## 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 to 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.

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

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

- Apply a bead of silicone sealant (minimum of 300°F continuous exposure rating) inside the female outer pipe joint prior to joining sections. See Figure 10.1
- 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 10.2:

- 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 10.1 High Temperature Silicone Sealant

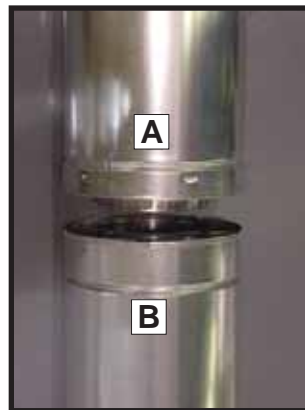


Figure 10.2



Figure 10.3

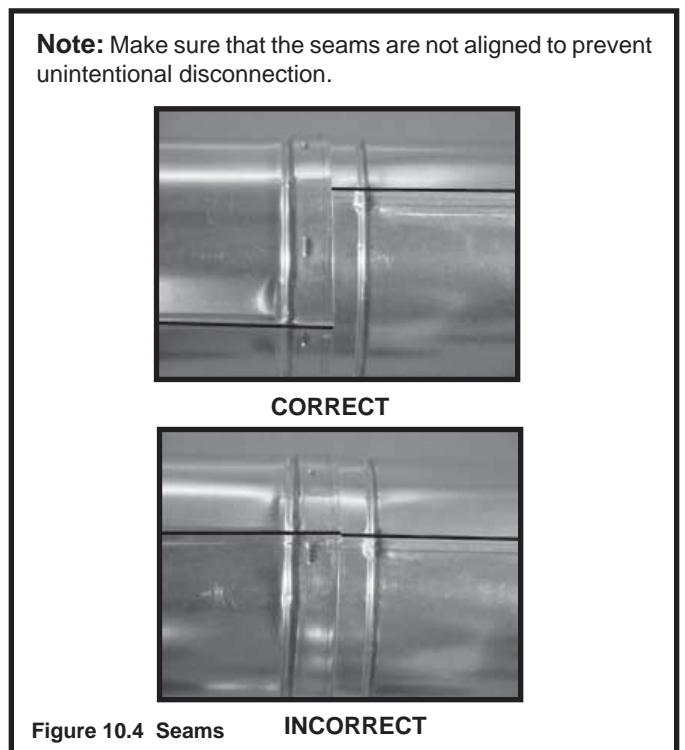


Figure 10.4 Seams

INCORRECT

## 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 10.6.
- Slide together to the desired length.

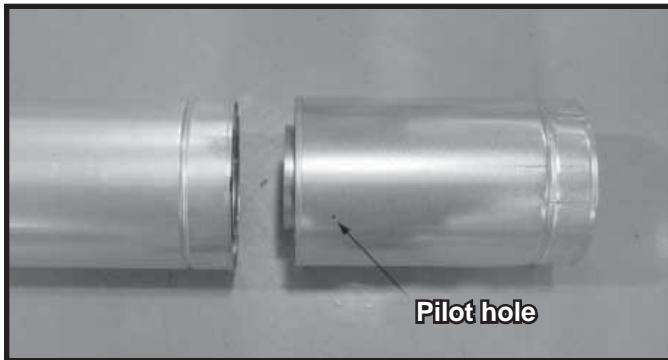


Figure 10.6 Slip Section Pilot Holes

- 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 10.7.

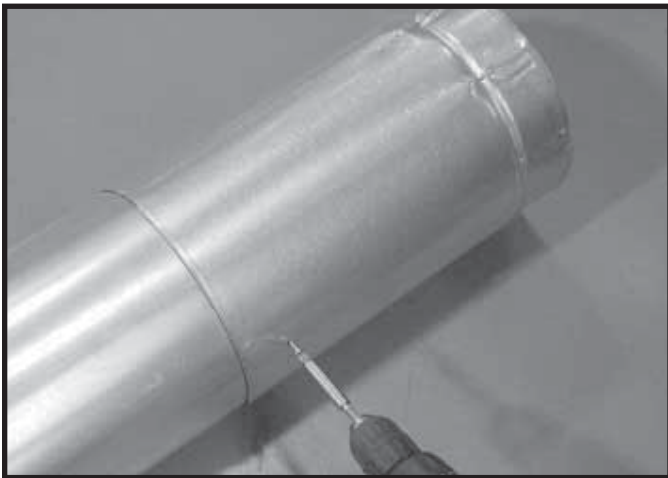


Figure 10.7 Screws into Slip Section

- 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.

## C. Secure the Vent Sections

- Vertical runs of DVP pipe must be supported every 8 ft. (2.44 m) after the 25 ft. (7.62 m) maximum unsupported rise.
- Vertical runs of SLP pipe must be supported every 8 ft. (2.44 m).
- Horizontal sections must be supported every 5 feet (1.52 m).
- Vent supports or plumbers strap (spaced 120° apart) may be used to support vent sections. See Figures 10.8 and 10.9.
- Wall shield firestops may be used to provide horizontal support vent sections.
- SLP 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.

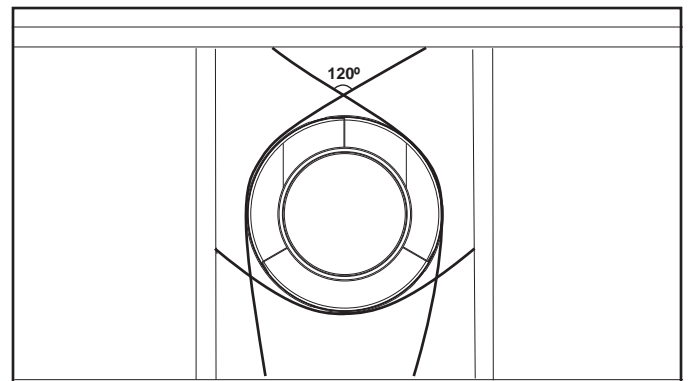


Figure 10.8 Securing Vertical Pipe Sections

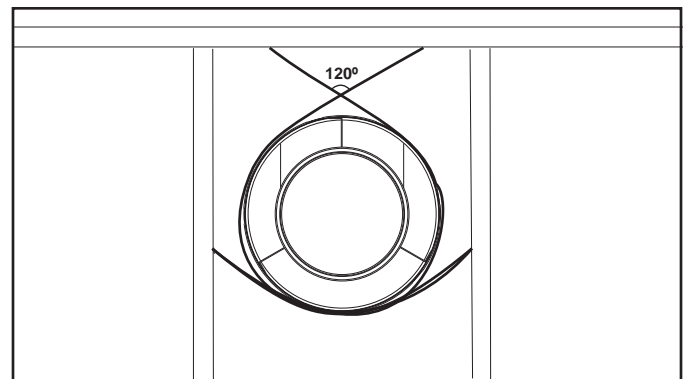


Figure 10.9 Securing Horizontal Pipe Sections

## D. Disassemble Vent Sections

- Rotate either section (see Figure 10.10) so the seams on both pipe sections are aligned as shown in Figure 10.11.
- Pull carefully to separate the pieces of pipe.

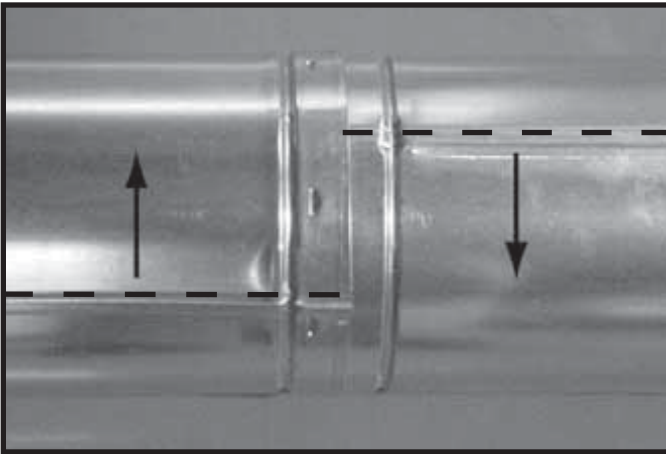


Figure 10.10 Rotate Seams for Disassembly

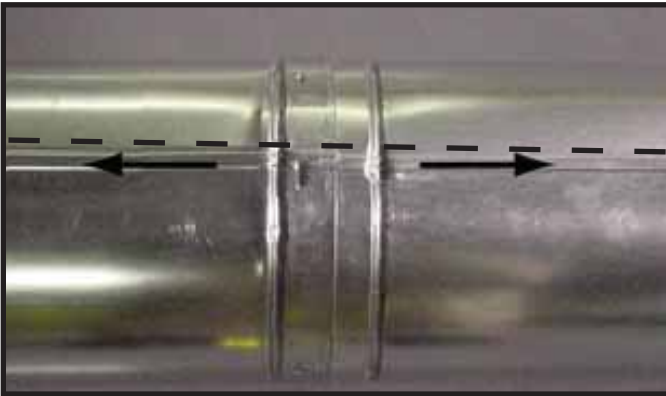
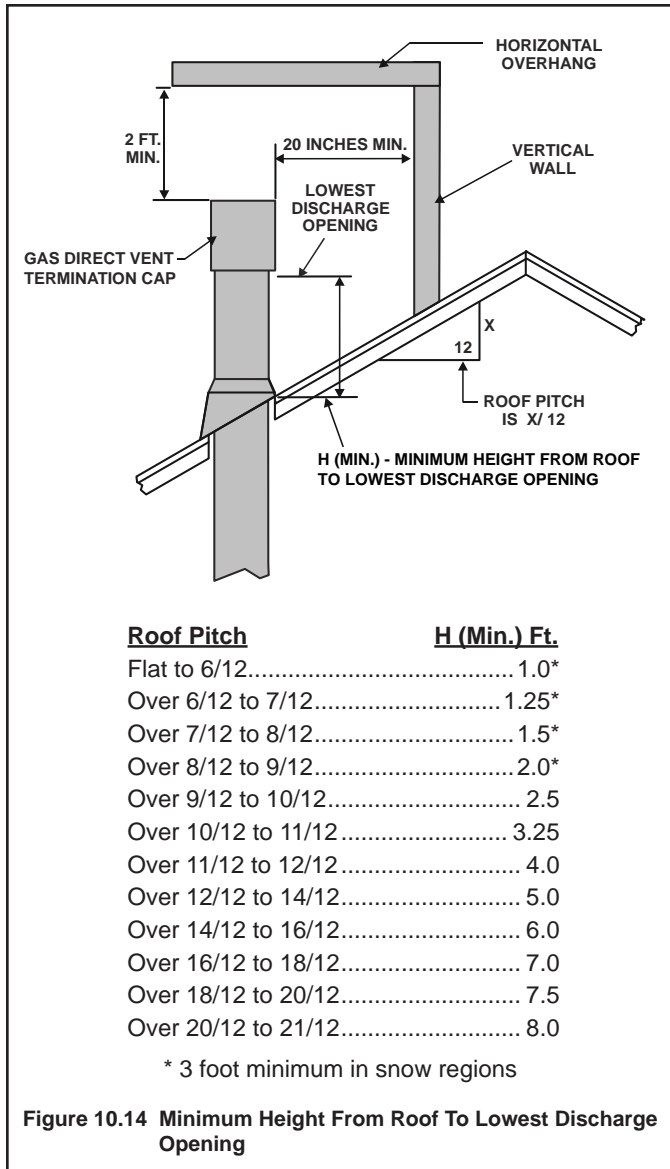


Figure 10.11 Align and Disassemble Vent Sections



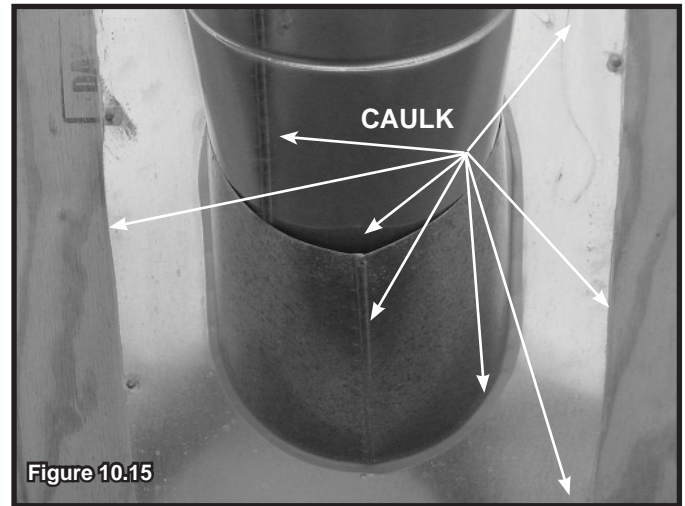
## E. Install Metal Roof Flashing

- See minimum vent heights for various pitched roofs (Figure 10.14) 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 10.15.



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

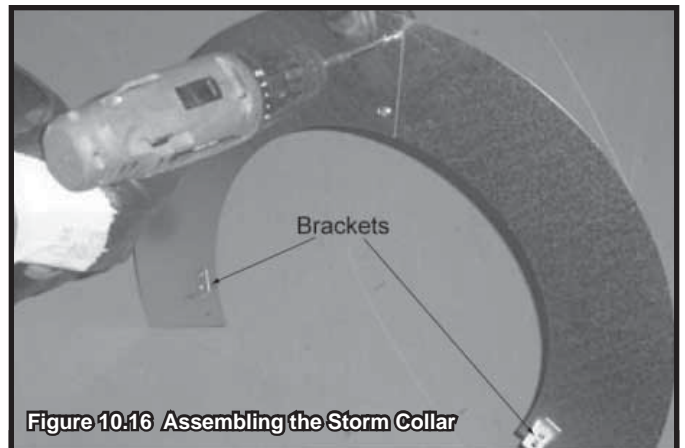
- Caulk the gap between the roof flashing and the outside diameter of the pipe.
- Caulk the perimeter of the flashing where it contacts the roof surface. See Figure 10.15.
- Caulk the overlap seam of any exposed pipe sections that are located above the roof line.



## F. 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.

- Connect both halves of the storm collar with two screws (see Figure 10.16).
- Wrap the storm collar around the exposed pipe section closest to the roof and align brackets. Insert a bolt (provided) through the brackets and tighten the nut to complete the storm collar assembly. Make sure the collar is tight against the pipe section.
- Slide the assembled storm collar down the pipe section until it rests on the roof flashing (see Figure 10.17).
- Caulk around the top of the storm collar (see Figure 10.18).



## G. 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 10.18).

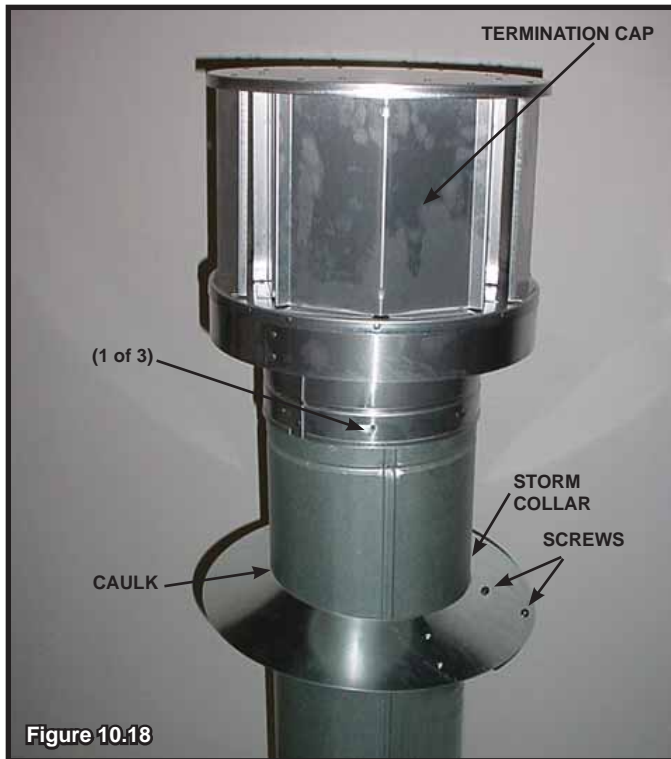


Figure 10.18

## H. 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.
- 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 10.18.

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 (DVP), 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.

## I. 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 is 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.

# 11 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	14.0 in. w.c.	14.0 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.

<b>⚠ WARNING</b>	
	<p>Fire Risk. Explosion Hazard. High pressure will damage valve.</p> <ul style="list-style-type: none"><li>• Disconnect gas supply piping <b>BEFORE</b> pressure testing gas line at test pressures above 1/2 psig.</li><li>• Close the manual shutoff valve <b>BEFORE</b> pressure testing gas line at test pressures equal to or less than 1/2 psig.</li></ul>

**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.**

## C. Gas Connection

- Refer to Reference Section 16 for location of gas line access in appliance.
- Gas line may be run through knockout(s) provided.
- 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.

# 12 Electrical Information

## A. Wiring Requirements

**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 110-120 VAC. This is required for use of optional accessories (standing pilot ignition) or proper operation of the appliance (Intellifire ignition).
- 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 VAC voltage cannot be shared within the same wall box.

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

## B. IntelliFire Plus™ Ignition System Wiring

- Wire the appliance junction box to 110 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 12.2, IntelliFire Plus™ (IPI) Wiring Diagram.
- This appliance is equipped with an Intellifire control valve which operates on a 6 volt system.

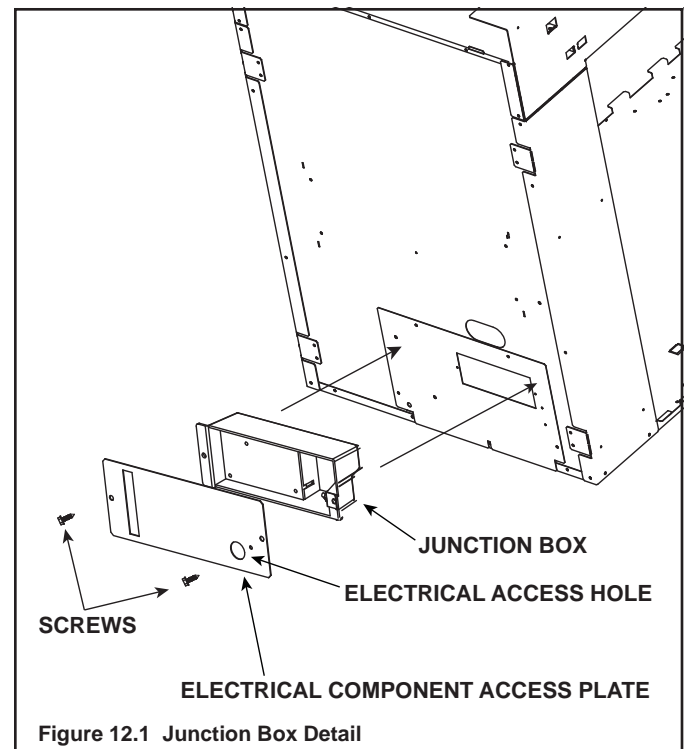
## C. Electrical Service and Repair

**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.

## D. Junction Box Installation

- Pull the electrical wires from outside the appliance through the opening into the valve compartment and secure wires with a Romex connector. See Figure 12.1.
- Make all necessary wire connections to the junction box/receptacle and reattach the junction box/receptacle to the outer shell.



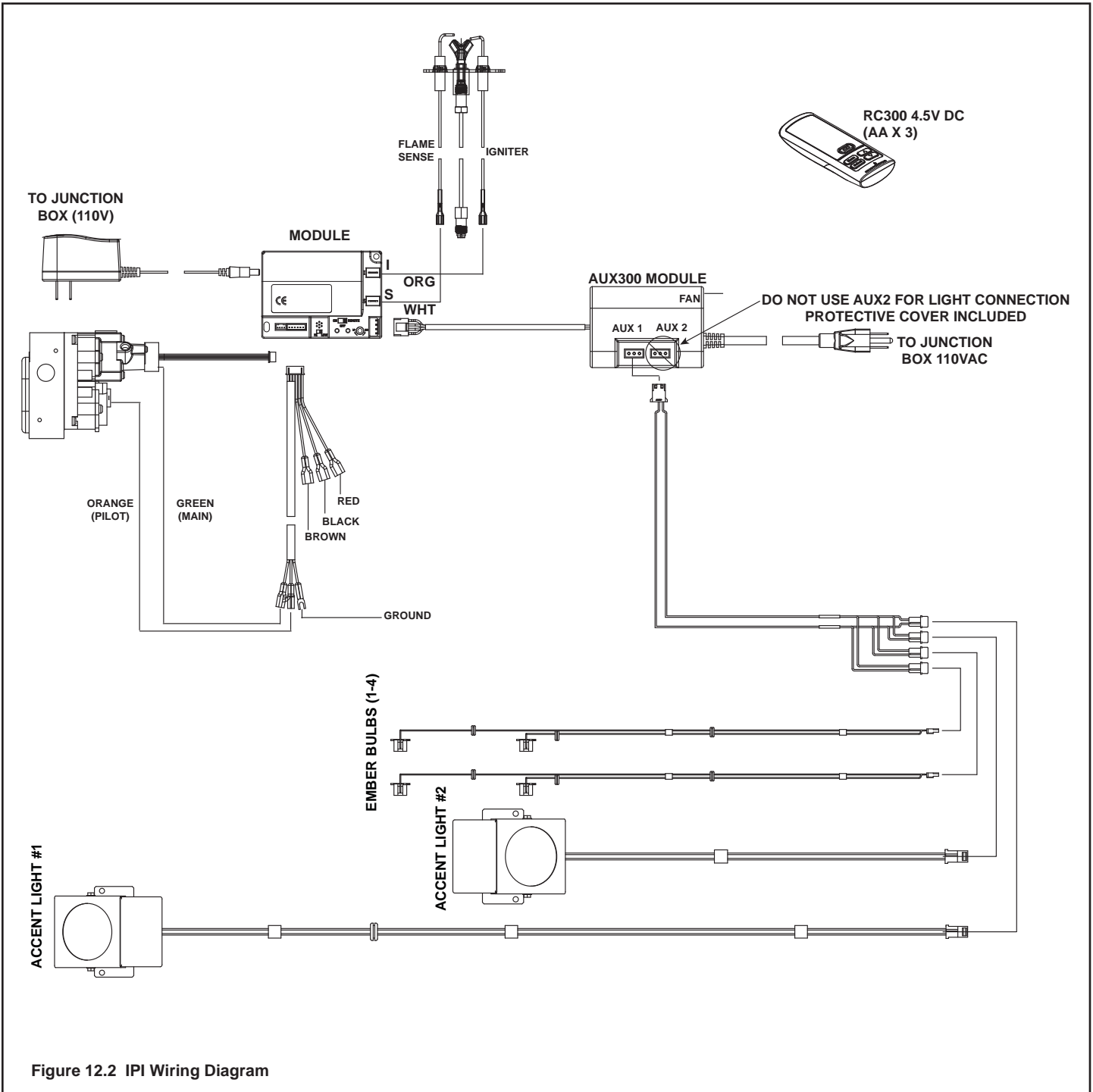


Figure 12.2 IPI Wiring Diagram



# 13 Finishing

## A. Mantel and Wall Projections

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

### Combustible Mantels

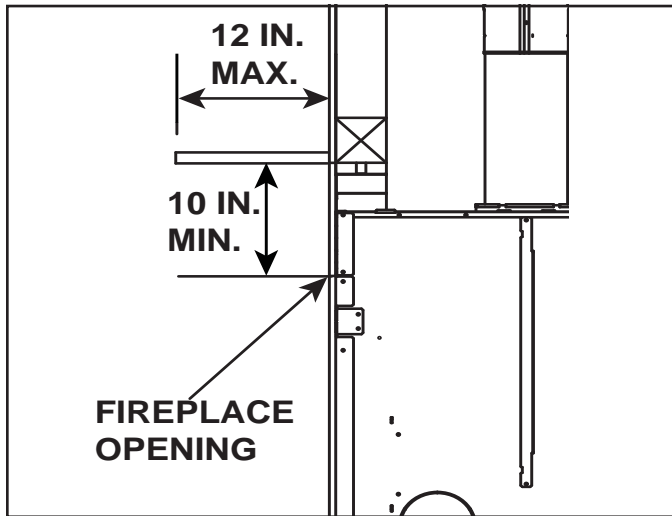


Figure 13.1 Clearances to Mantels or Other Combustibles Above Appliance

### Non-combustible Mantels

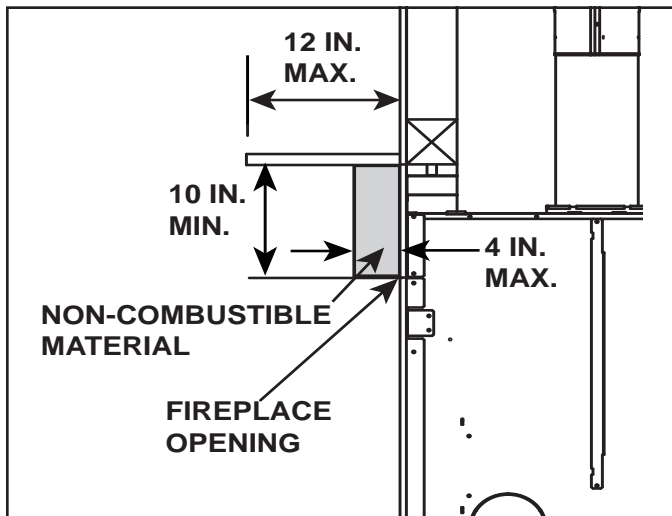


Figure 13.2 Clearances to Mantels or other Non-Combustibles Above Appliance

### Combustible Mantel Legs or Wall Projections

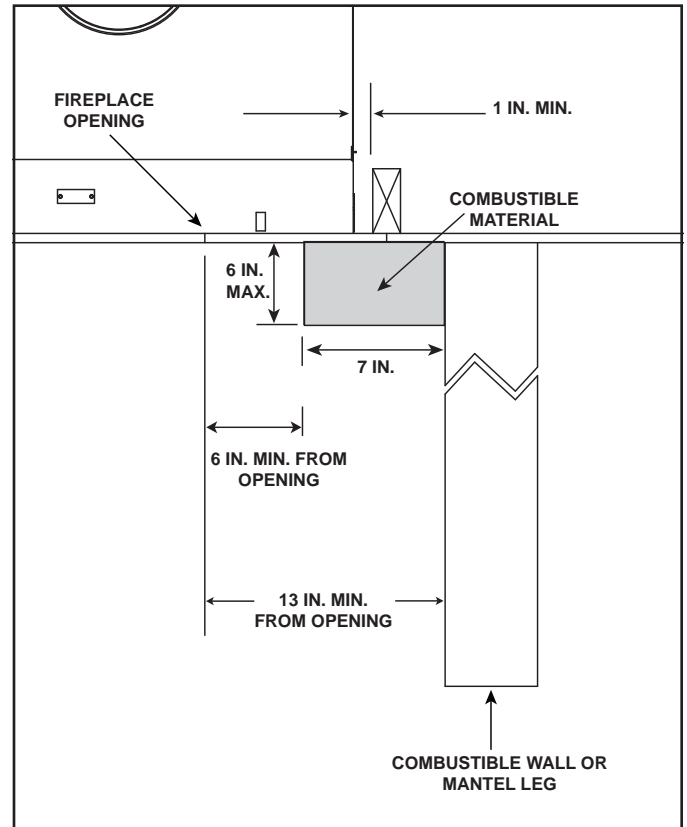


Figure 13.3 Clearances to Combustible Mantel Legs or Wall Projections.

### Non-Combustible Mantel Legs or Wall Projections

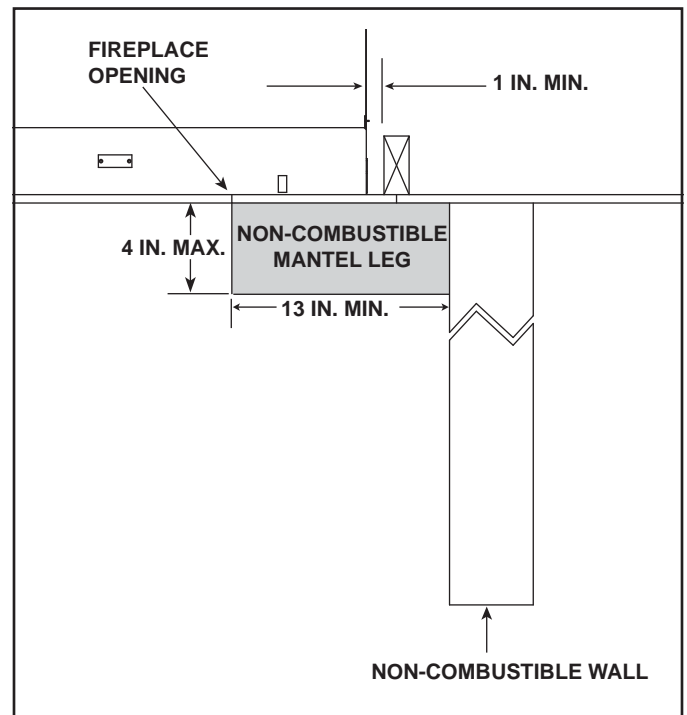


Figure 13.4 Clearances to Non-Combustible Mantel Legs or Wall Projections.



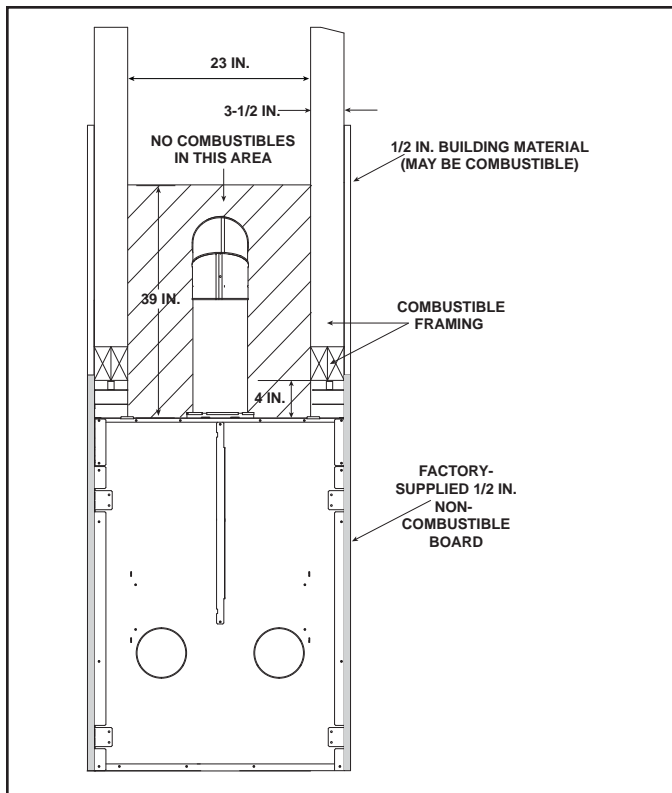


Figure 13.5

## B. Facing Material

- Metal front faces may be covered with non-combustible materials only.
- 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.

**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.

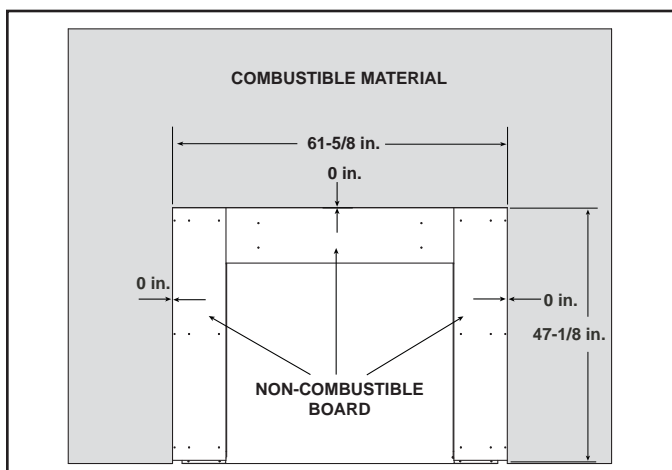


Figure 13.6 Noncombustible Facing Diagram

## C. Doors

Only doors certified for use with this appliance model may be used. Contact your dealer for a list of doors that may be used. Once you have determined what kind of door and finishing material is going to be used on the fireplace, you may use the table below which shows the door models and the finishing material thickness allowed.

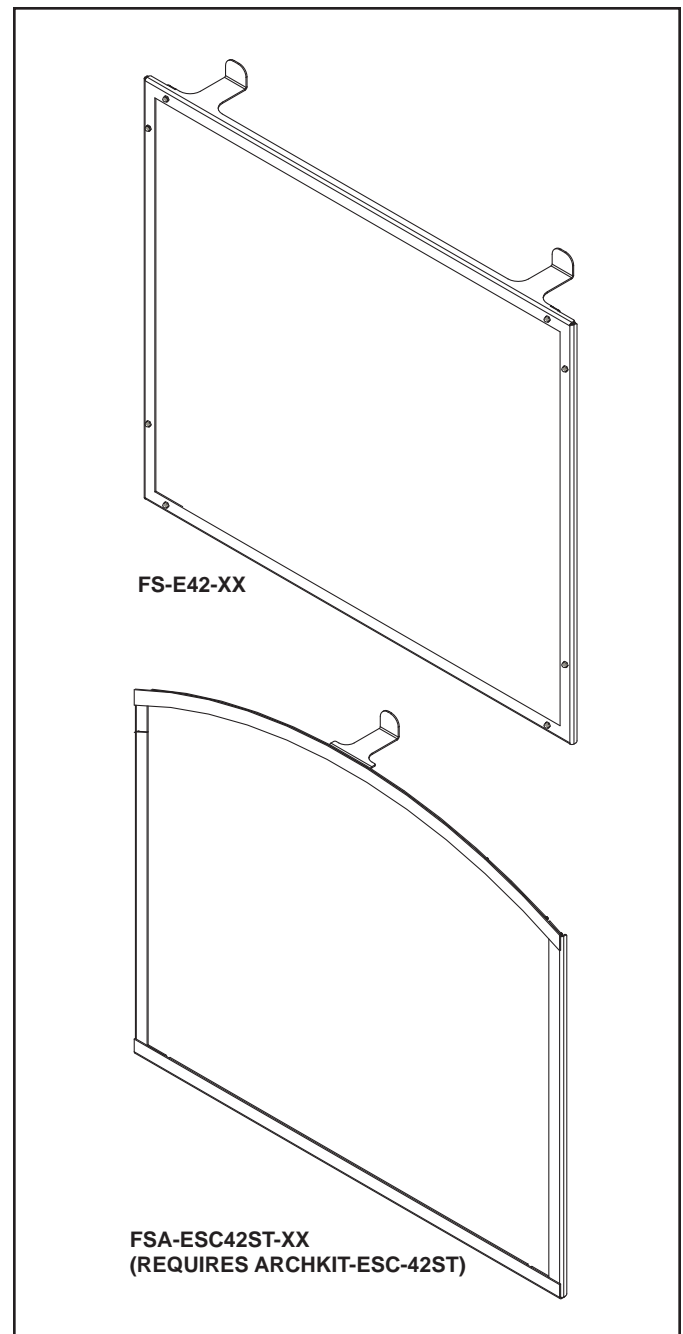


Figure 13.7 Approved Doors for ESC-42ST

Note: Optional firescreen sits out 1-1/2 inches from the face of the fireplace. When using thin finishing material, you may want to use thicker non-combustible backer board to bring the finishing material flush with the firescreen. This is not required.

## D. Elevated Hearth Systems

Use the table below to identify the hearth system that will be used. The table will also help identify effects on the various dimensions. Some hearth systems will elevate the appliance off the floor at a given dimension. The dimension noted in the table below, in the Elevated Appliance Dimension Column, will also have to be added to the following: Extension Wall Hole referenced in Figure 8.2 (Exterior Wall Hole) and Rough Opening Height (header height) referenced in Figure 5.2. Note: Finished floor thickness should also be considered when determining installation dimensions.

MODEL	DESCRIPTION	PART #	ELEVATED APPLIANCE DIMENSION See Note 1
ESC-42ST	Avalon Cast Mantel	AFANTC5244	1/2 in.
	Biltmore Cast Mantel	AFBETC5244	1/2 in.
	Hearst Cast Mantel	AFHTTC5244	1/2 in.

**Note 1. Add dimensions to Exterior Wall Hole (Figure 8.2) and Rough Opening Height (Figure 5.2).**

The above listed Hearth and Home Technologies manufactured hearth systems have been tested and certified for use with the ESC-42ST fireplace. The dimensions of these Hearth and Home Technologies manufactured hearth systems may differ slightly from the mantel specifications listed in Section 5.D and Section 13.A. The above listed Hearth and Home Technologies manufactured hearth systems are not required to meet the mantel specifications listed in Section 5.D and Section 13.A.

# 14 Appliance Setup

## A. Fixed Glass Assembly

**WARNING! Risk of Asphyxiation!** Glass installation and removal should be performed only by a qualified service technician. 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.

### Installing Fixed Glass Assembly

1. Identify the top and bottom of the glass assembly. The top of the glass frame has three engagement grooves. The engagement groove is highlighted in Figure 14.1.



Figure 14.1 Glass Top Tab Detail.

2. Start by tipping the top of the glass frame toward the fireplace. Center the glass between the left and right firebox supports. Push “up” and “in” and set the glass assembly on the bottom three glass latch tabs. See Figure 14.2 .



Figure 14.2 Initial Positioning of Frame into Opening.

3. With the glass assembly resting (not engaged) on the bottom glass latch tabs, allow for the top of the glass assembly to tip away from the fireplace. Lift up slightly and ensure the glass assembly bottom seal is tight to the bottom of the firebox. See Figure 14.3.



Figure 14.3 Second Position of Frame into Opening.

4. Engage the bottom glass latch tabs into the three slots in the bottom of the glass frame.

To engage the tabs into the frame slots, manipulate the glass clips by pulling out the glass latch handles. Figure 14.3 shows the middle glass latch tab engaged.

Engage an end latch first, then middle latch, and finally the last end latches.



Figure 14.4 Glass Latch Engaged into Frame Latch.

- Ensure all three bottom glass latch tabs are engaged and centered in the three slots in the glass frame. The glass latch tab should protrude through the slot in the glass frame about 1/4 in. See Figure 14.5



Figure 14.5 Bottom Glass Latch Tabs Installed in Glass Frame

- Engage the three glass latches on top. Push the top of the glass toward the fireplace. Use index fingers to manipulate top glass latches and pull out and latch the three glass assembly latches into the engagement grooves. See Figure 14.6 and Figure 14.7.



Figure 14.6 Top Glass Latch Access

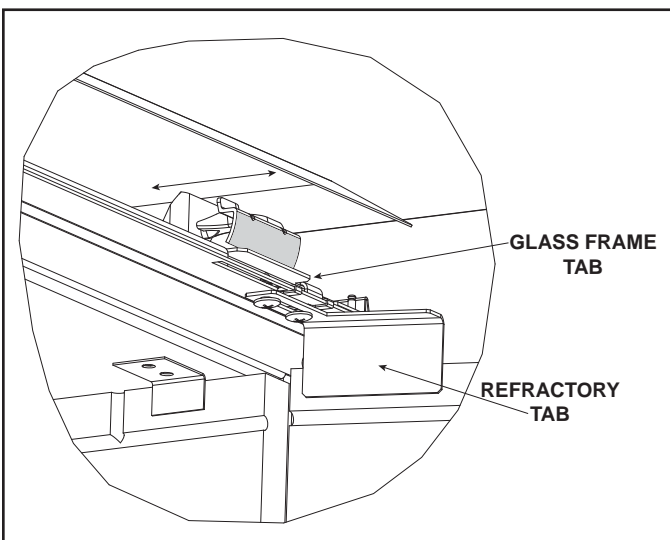


Figure 14.7. Top Glass Latch Detail

## Removing Fixed Glass Assembly

- Remove glass assembly by reversing these glass installation instructions.

## B. Remove the Shipping Materials

Remove shipping materials from inside or underneath the firebox.

## C. Clean the Appliance

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

## D. Accessories

Install approved accessories per instructions included with accessories. Contact your dealer for a list of approved accessories.

**WARNING! Risk of Fire and Electric Shock! Use ONLY Hearth & Home Technologies-approved optional accessories with this appliance. Using non-listed accessories could result in a safety hazard and will void the warranty.**

## E. Installing the Optional Heat-Zone® Gas Kit

- Remove the knockout from the side of the appliance and discard it (see Figure 14.8).
- Center the duct collar around the exposed hole and attach it to the appliance with 3 screws. **Note:** Do this **BEFORE** final positioning of the appliance.
- Determine the location for the air register/fan housing assembly.

Reference the Heat-Zone® Gas Kit instructions for the remaining installations steps.

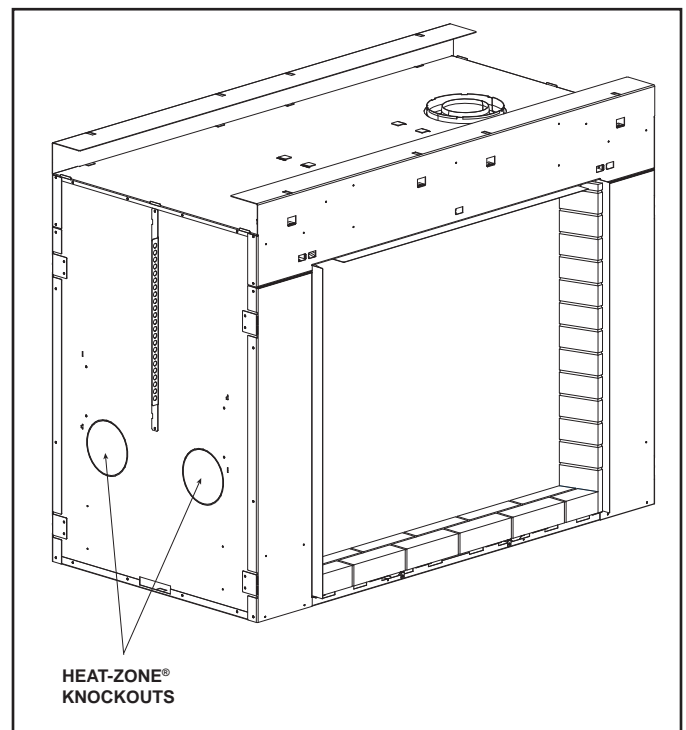


Figure 14.8 Heat-Zone® Gas Knockouts.



## F. Install Light Bulbs

**Note:** Light bulbs are shipped in the installation manual bag.

### Ember Lights

1. Remove ember basket by lifting it from fireplace. There is one metal tab on each end of the ember box that engages slots in the ember basket. See Figure 14.9.

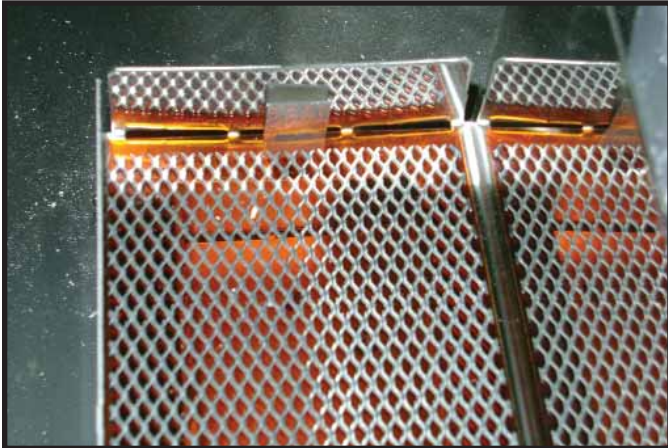


Figure 14.9 Ember Basket

2. Install two 20 watt halogen bulbs per side. See Figure 14.10.

**NOTICE:** Grip bulb by the porcelain base only. DO NOT TOUCH glass bulb. Touching the bulbs with fingers will greatly reduce the operating life of these bulbs.



Figure 14.10 Ember Light Bulb Installed

3. Reinstall ember basket over the ember box by inserting the tabs on the ember box in the slots on the ember basket. See Figure 14.9.

### Accent Lights

1. Remove the screw that secures the two bottom sheet metal refractory standoffs that are installed around the left and right accent light assemblies. See Figure 14.13.

2. Install the two accent lights by removing (2) screws that hold the light housing to the firebox bottom. Install bulb by inserting the 2 pins on the bulb base into the 2 holes in the socket. See Figure 14.11 and Figure 14.12.

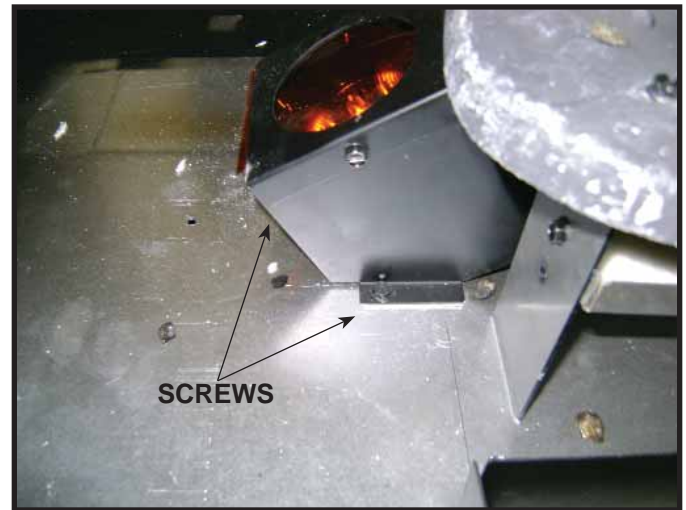


Figure 14.11 Light Housing Removal

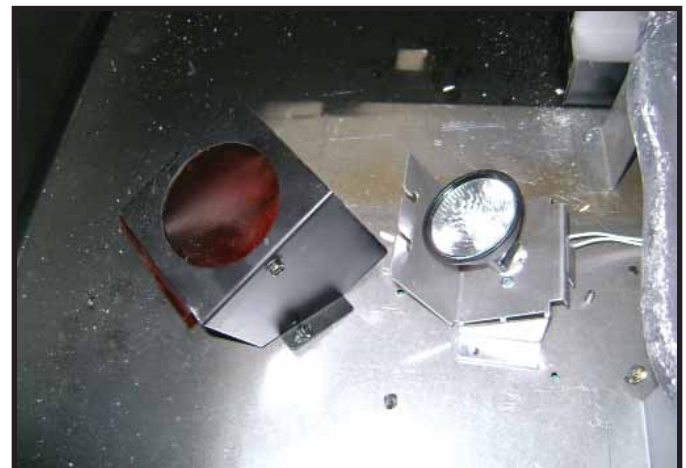


Figure 14.12 Light Housing Removed, Bulb Installed

3. Reinstall accent light cover to light socket assembly and install with two screws to firebox bottom.
4. Reinstall the two bottom sheet metal refractory standoffs with one screw each. See Figure 14.13.



Figure 14.13 Accent Light Bulb Installation Completed

## G. Install Refractory

**CAUTION:** Refractory pieces are fragile! Carefully remove the refractory pieces from the packaging.

1. Locate the four refractory clips pre-installed in the top of the firebox and remove. Install side refractory with the notched end of the refractory on the bottom. See Figure 14.14 and Figure 14.15. Ensure that side refractory panels are centered left and right and do not extend past the outer firebox flange. Secure each side refractory with two refractory clips.



Figure 14.14 Notched End of Side Refractory

2. Install the left and right refractory middle base refractory pieces on top of the left and right bottom refractory standoffs. See Figure 14.16 and 14.17. Position so that the edge is flush with the ember light housing.



Figure 14.15 Refractory Clip Installation



Figure 14.16 Positioning Inner Bottom Refractory



Figure 14.17 Positioning Left and Right Middle Base Refractory



Figure 14.18 Positioning Outer Bottom Refractory.

5. Install two outer bottom refractory pieces as shown in Figure 14.18. Ensure that outer bottom refractory pieces do not extend past the outer firebox flange.



## H. Install Teco-Sil (Glass Ember Rock)

1. Install the glass ember rock (Teco-Sil) that is shipped with this fireplace into the left and right ember light trays. See Figure 14.19.



Figure 14.19 Glass Ember Bed

2. Using TUP-GBK-12 spray paint, dust the glass ember rock to create a more natural looking ash bed. Care should be taken to avoid overspray onto refractory and stainless steel back plate. See Figure 14.20 and Figure 14.21.



Figure 14.20 Ember Bed Painting



Figure 14.21 Finished Ember Bed

## I. Mystic Ember Placement

**WARNING! Risk of Explosion!** Follow ember placement instructions in manual. **DO NOT** place embers directly over burner ports. Replace ember material annually. Improperly placed embers interfere with proper burner operation.

Ember material is shipped with this gas appliance. Use this material to give the appliance a realistic ash bed. To place the ember material:

1. Place Mystic Embers in a random pattern around the base refractory away from port holes as shown in Figure 14.22.
2. Save the remaining ember materials for use during appliance servicing. The embers provided should be enough for 3 to 5 applications.



Figure 14.22 Ember Placement on Base Refractory

## J. Install the Log Assembly

Log Set Assembly: LOGS-ESC42ST  
For Model: ESC-42ST

# LOG PLACEMENT INSTRUCTIONS

**CAUTION:** Logs are fragile! Carefully remove the logs from the packaging.



Figure 1



Figure 2



Figure 3

**GRATE:** Locate the pilot assembly. The pilot assembly is denoted in this instruction by a black or white arrow (→) on each photo. For the purpose of placing logs according to this instruction, begin with the pilot on the left side. Position grate by locating the four indentations on the bottom refractory. Place grate legs in the indentations as shown in Figure 3.



Figure 4



Figure 5 Reverse View

**LOG NUMBER 1 (SRV2146-701):** Locate the pilot assembly. It should be on the left side of the fireplace. Place log #1 onto the grate and pull forward so that the indentation on the front of the log engages the left grate tine. The "burnt" tip of Log #1 should rest on the burner. The log must **NOT** block any burner ports. See Figure 4.



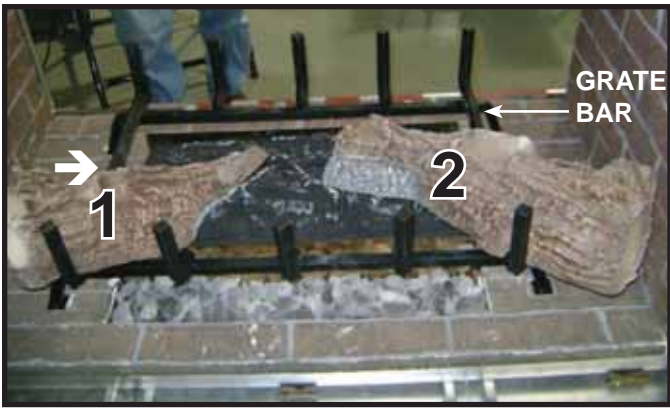


Figure 6



Figure 7 Reverse View

**LOG NUMBER 2 (SRV2146-702):** Place Log #2 as shown. The groove on the bottom of Log #2 engages with the grate bar. Pull log forward so it engages the far right grate tine as shown in Figure 6. The “burnt” end of the log rests on the burner. The log must **NOT** block any burner ports.



Figure 8

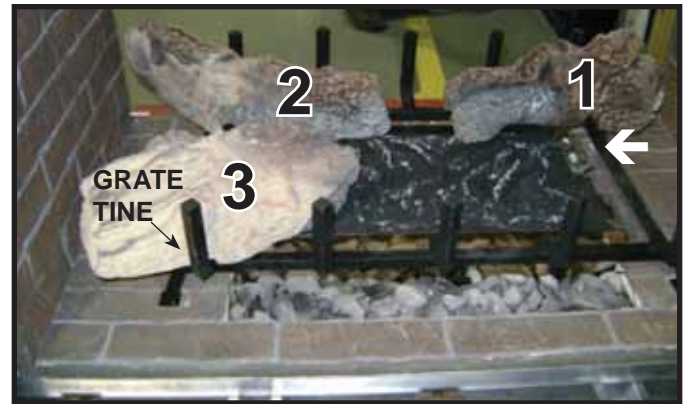


Figure 9 Reverse View

**LOG NUMBER 3 (SRV2146-703):** Place Log #3 so that groove on bottom of log engages the grate bar. Push log back so that it rests against grate tine as shown in Figure 9. The “burnt” end of the log rests on the burner. The log must **NOT** block any burner ports.

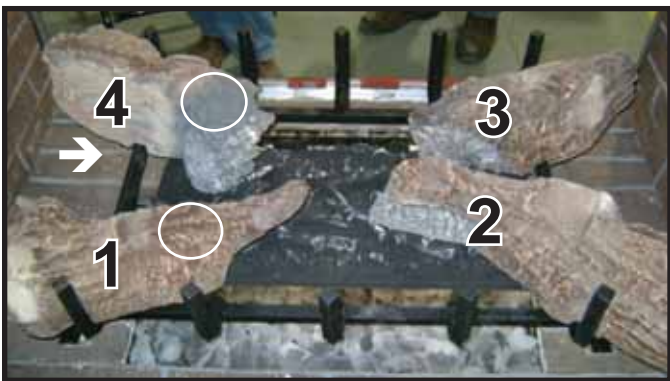


Figure 10



Figure 11 Reverse View

**LOG NUMBER 4 (SRV2146-704):** Place Log #4 so that the groove on bottom of log rests on the grate bar as show in Figure 10. Push log so that it rests against the grate tine shown in Figure 11. The “burnt” end of the log rests on the burner. The log must **NOT** block any burner ports.

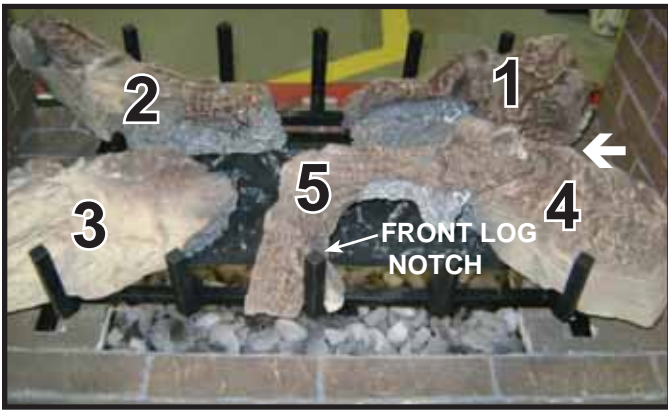


Figure 12

**LOG NUMBER 5 (SRV2146-705):** Place Log #5 from side of unit where pilot is located on your right side. Place log so the front log notch engages the center grate tine as shown in Figure 12 and the right side of log rests on the notch in Log #4. See Figure 11. The notch is visible in Figure 11. The log must **NOT** block or sit directly over any burner ports.

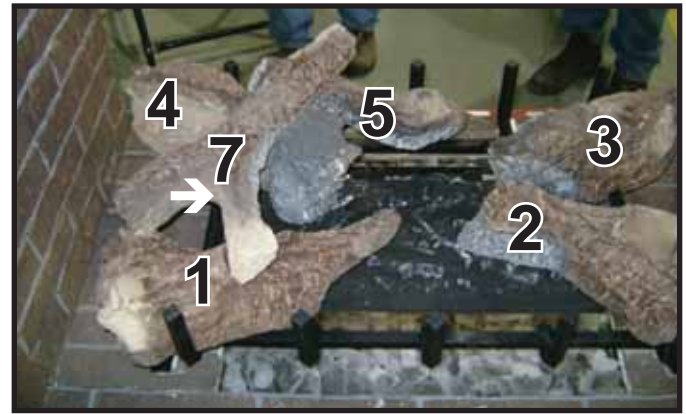


Figure 13

**LOG NUMBER 7 (SRV2146-707):** Log #7 rests on the notch on top of log #1 and the notch on top of log #4. See Figure 13. The points of contact on Log #1 and Log #4 where Log #7 rests are indicated by the circles in Figure 10.

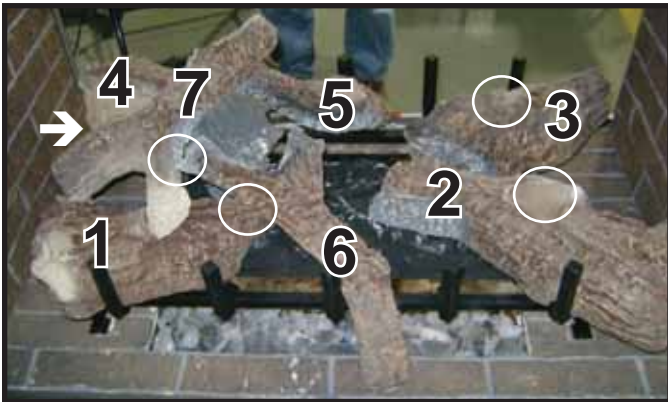


Figure 14

**LOG NUMBER 6 (SRV2146-706):** Place Log #6 onto grate and log #1. The groove on the bottom of the log will engage the center grate bar and the other end of the log will rest on Log #1, with the tip touching Log #7. The points of contact are indicated by the circles located on Log #6 and Log #7 in Figure 14. The log must **NOT** block or sit directly over any burner ports.

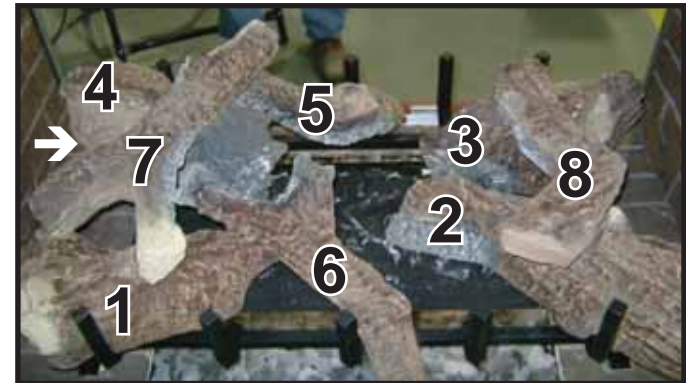


Figure 15

**LOG NUMBER 8 (SRV2146-708):** Locate notch on Log #2 and notch on Log #3 indicated by the circles on Figure 14. Place Log #8 so that it rests in these notches. See Figure 15.

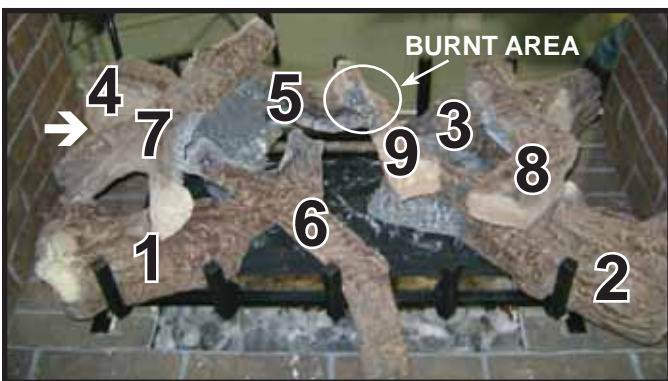


Figure 16.

**LOG NUMBER 9 (SRV582-707):** Place log #9 onto Log #2 and Log #5. The "burnt area" of log 9 will face the pilot side of the log assembly.



## K. Ember/Mineral Wool Placement

**WARNING! Risk of Explosion! DO NOT place embers directly over burner ports. Improperly placed embers interfere with proper burner operation. See instructions.**

Ember material is shipped with this gas appliance. To place the ember material:

- Place dime-size pieces of Glowing Embers® just in front of the port trail, but not on or in between the ports. See Figure 14.23. Embers are to be placed adjacent to burner port holes. Care should be taken so that the ports are not covered. Failure to follow this procedure will likely cause lighting and sooting problems.
- Embers CANNOT be placed directly over ports. Care should be taken not to cover the lighting trail of ports (from back to front).

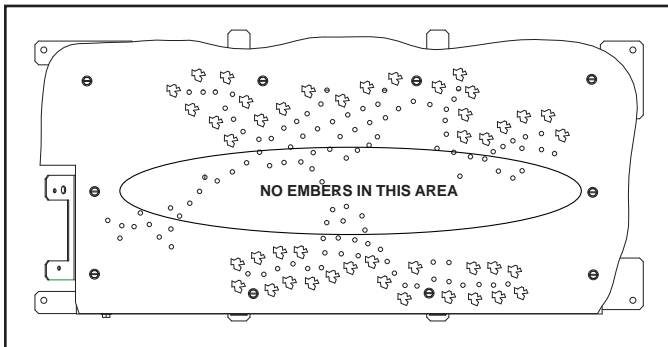


Figure 14.23 Ember Placement



Figure 14.25 Back Support Tab Bent Into Position



Figure 14.26 Side Refractory Brackets

## L. Install Outer Refractory Panels

1. Install glass assembly. Refer to Section 14.A for glass installation.
2. The refractory brackets are shipped wire-tied to the right side support opposite the valve. See Figure 14.24. Bend the back support of the refractory tab down. See Figure 14.25. Install the two refractory brackets to the glass frame and secure, but do not tighten. One screw per bracket is required. See Figure 14.26.
3. Install both outer refractory panels and install refractory bracket to secure refractory panels in place. See Figure 14.26.
4. Install Outer Hearth. See Figure 14.27.



Figure 14.27 Outer Hearth Installation



Figure 14.24 Shipping Location of Refractory Brackets



## M. Install Mesh

Two hanging mesh assemblies ship standard with this appliance. If using an optional mesh door, do not install the standard hanging mesh assemblies.

1. Insert the mesh rod into all the rings attached to the mesh assembly.
2. The mesh rod is supported by 3 tabs located in the top outer surround. These tabs are located on the left and right sides and one in the middle. Tabs are bent in at the factory. Figure 14.28 shows these tabs flat for visual purposes.



Figure 14.28 Mesh Rod Support Tabs

## N. Install Trim and/or Surround

- Install optional trim kits and/or surrounds using the instructions included with the accessory.
- Use non-combustible materials to cover the gap between the sheet rock and the appliance (if desired).

## O. Air Shutter Setting

Air shutter settings should be adjusted by a qualified service technician at the time of installation. The shutter adjustment rod is located adjacent to the gas valve. The shutter setting is preset at the factory for either NG or LP. These are tested settings that work well for most venting applications. Units with increased vertical venting may require a shutter setting that is more closed. Installations with extended horizontal venting may require a more open shutter setting. The measurement is taken from the face of the appliance to the end of the silicone cap. See Figure 14.29.

- Push the air handle in to close the air shutter.
- Pull the air handle out to open the air shutter.

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

### Air Shutter Settings

	NG	LP
ESC-42ST	1-1/2 in.	Fully Open

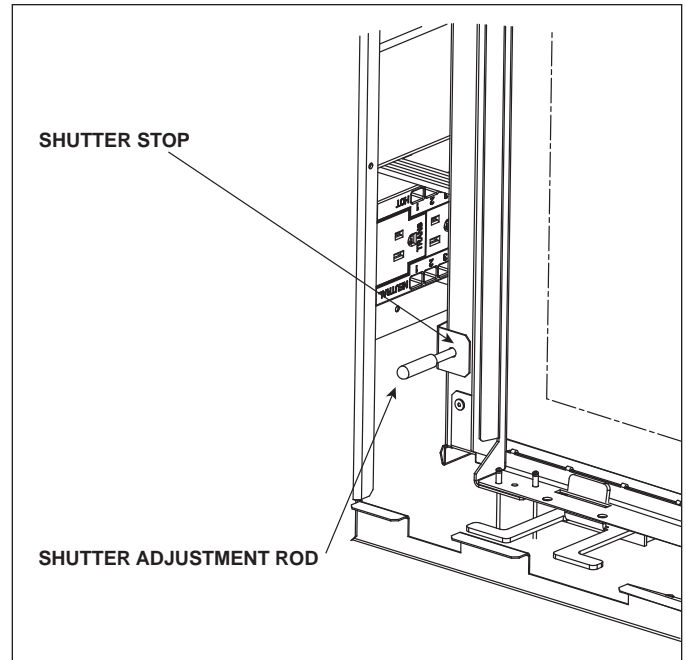


Figure 14.29 Shutter Adjustment Rod and Shutter Stop

# 15 Troubleshooting

With proper installation, operation, and maintenance your gas appliance will provide years of trouble-free service. If you do experience a problem, this troubleshooting guide will assist a qualified service technician in the diagnosis of a problem and the corrective action to be taken. This troubleshooting guide can only be used by a qualified service technician. Contact your dealer to arrange a service call by a qualified service technician.

## A. IntelliFire Plus™ Ignition System

Symptom	Possible Cause	Corrective Action
1. Pilot won't light. The ignitor/module makes noise, but no spark.	A. Incorrect wiring.	Verify "S" wire (white) for sensor and "I" wire (orange) for ignitor are connected to correct terminals on module and pilot assembly.
	B. Loose connections or electrical shorts in the wiring.	Verify no loose connections or electrical shorts in wiring from module to pilot assembly. Verify connections underneath pilot assembly are tight; also verify igniter and flame sense wires are not grounding out to metal chassis, pilot burner, pilot enclosure, mesh screen if present, or any other metal object.
	C. Ignitor gap is too large.	Verify gap of igniter to right side of pilot hood. The gap should be approximately .17 in. or 1/8 in. (3 mm).
2. Pilot won't light, there is no noise or spark.	A. No power, transformer installed incorrectly, or depleted batteries.	Verify that transformer is installed and plugged into module. Check voltage of transformer at connection to module. Acceptable readings of a good transformer are between 6.4 and 6.6 volts AC. Battery power supply voltage must be at least 4 volts. If less than 4 volts, replace batteries.
	B. A shorted or loose connection in wiring configuration or wiring harness.	Remove and reinstall the wiring harness that plugs into module. Verify there is a tight fit. Verify pilot assembly wiring to module. Remove and verify continuity of each wire in wiring harness. Replace any damaged components.
	C. Improper wall switch wiring.	Verify that 110/VAC power is "ON" to junction box.
	D. Module not grounded.	Verify black ground wire from module wire harness is grounded to metal chassis of appliance.
3. Pilot sparks, but Pilot will not light.	A. Gas supply.	Verify that incoming gas line ball valve is "open". Verify that inlet pressure reading is within acceptable limits.
	B. Ignitor gap is too large.	Verify gap of igniter to right side of pilot hood. The gap should be approximately .17 in. or 1/8 in. (3 mm).
	C. Module is not grounded.	Verify module is securely grounded to metal chassis of appliance.
	D. Pilot valve solenoid.	Verify that 1.5 to 1.8 VDC is supplied to pilot solenoid from module. If below 1.5 volts, replace module. If 1.5 volts or greater, replace valve.

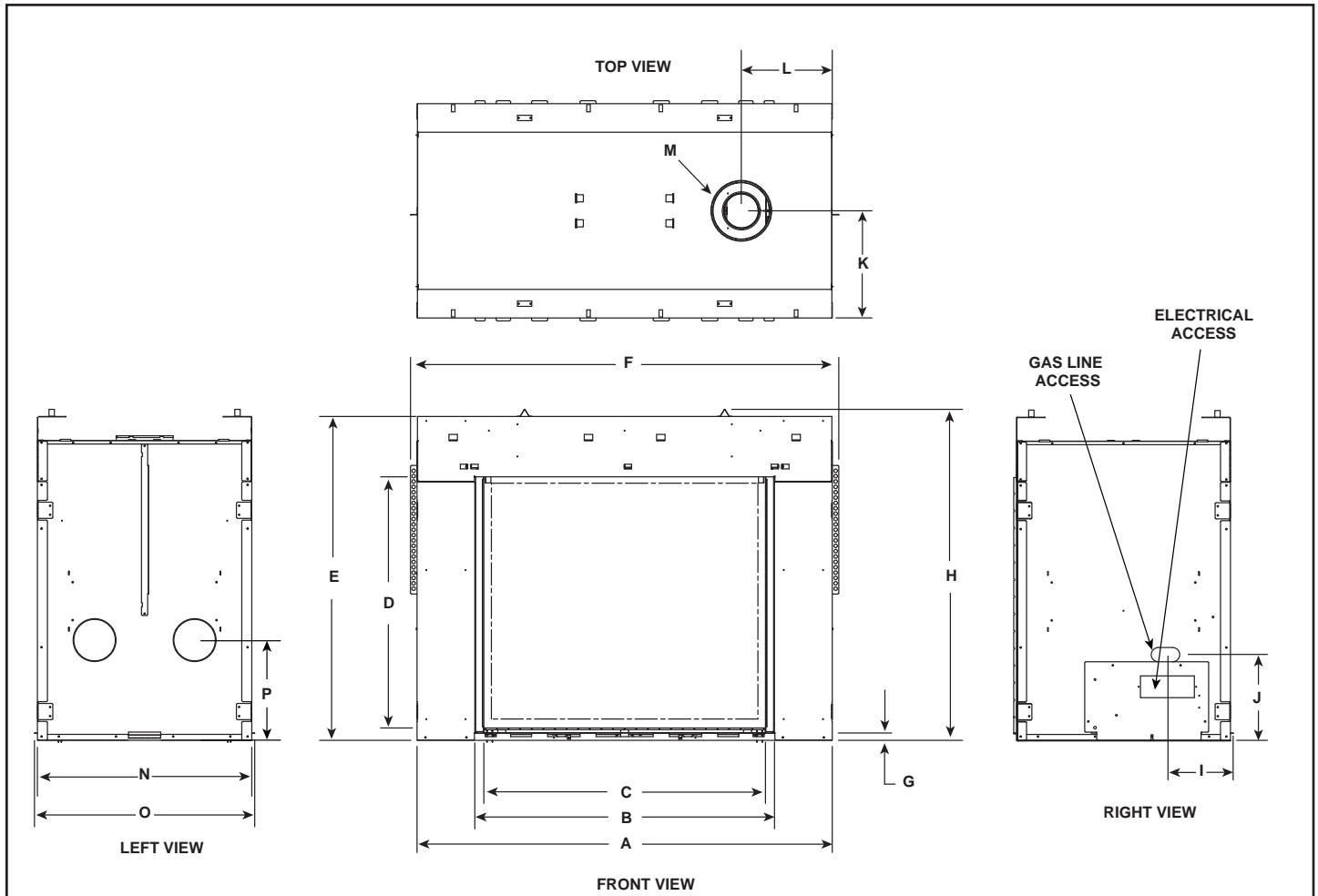
## Troubleshooting (continued)

Symptom	Possible Cause	Corrective Action
4. Pilot lights but continues to spark, and main burner will not ignite. (If the pilot continues to spark after the pilot flame has been lit, flame rectification has not occurred.)	A. A shorted or loose connection in flame sensing rod.	Verify all connections to wiring diagram in manual. Verify connections underneath pilot assembly are tight. Verify flame sense or igniter wires are not grounding out to metal chassis, pilot burner, pilot enclosure or screen if present, or any other metal object.
	B. Poor flame rectification or contaminated flame sensing rod.	With fixed glass assembly in place, verify that flame is engulfing flame sensing rod on left side of pilot hood. Flame sensing rod should glow shortly after ignition. With a multi-meter, verify that current in series between module and sense lead is at least 0.14 microamps. Verify correct pilot orifice is installed and gas inlet is set to pressure specifications. Polish flame sensing rod with fine steel wool to remove any contaminants that may have accumulated on flame sensing rod. ←
	C. Module is not grounded.	Verify module is securely grounded to metal chassis of appliance. Verify that wire harness is firmly connected to the module.
	D. Damaged pilot assembly or contaminated flame sensing rod.	Verify that ceramic insulator around the flame sensing rod is not cracked, damaged, or loose. Verify connection from flame sensing rod to white sensor wire. Polish flame sensing rod with fine steel wool to remove any contaminants that may have accumulated on flame sensing rod. Verify continuity with a multi-meter with ohms set at lowest range. Replace pilot if any damage is detected. ←

# 16 Reference Materials

## A. Appliance Dimension Diagram

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



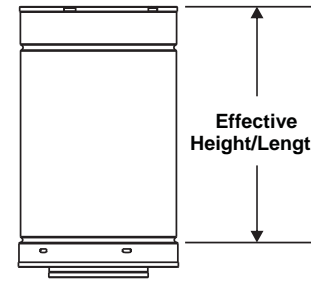
Appliance Dimensions Table

Location	Inches	Millimeters
A	58-1/8	1476
B	42	1067
C	39-7/16	1002
D	35-1/8	892
E	45-3/8	1153
F	60	1524
G	1	25
H	46-3/8	1178

Location	Inches	Millimeters
I	9-1/8	232
J	12	305
K	15	381
L	12-3/4	324
M	8 dia.	203
N	30	762
O	30-3/8	772
P	14	356

Figure 16.1 Appliance Dimensions

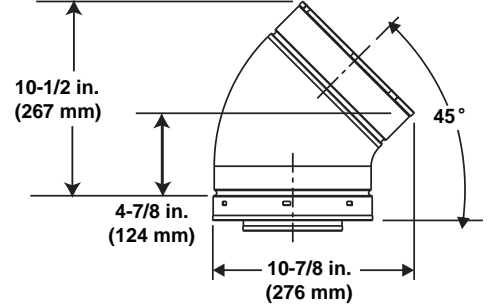
## B. Vent Components Diagrams



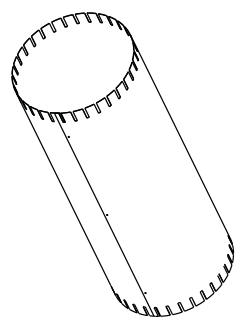
Effective Height/Length

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
DVP12MI	3 to 12	76 to 305
DVP24MI	3 to 24	76 to 610

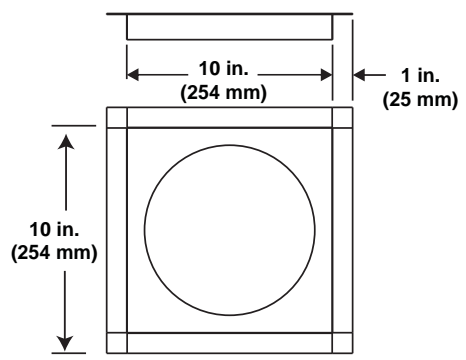


DVP45 (45° Elbow)

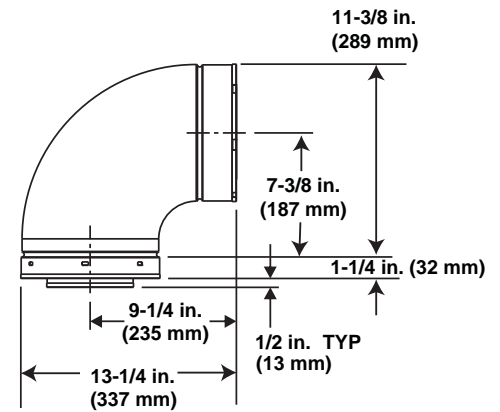


Assembled Height: 24 in./610 mm  
Diameter: 10 in./254 mm

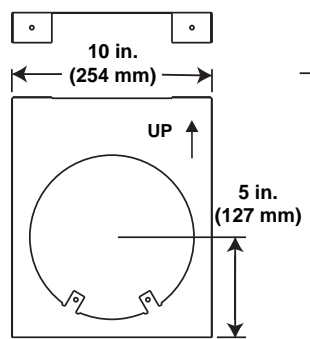
DVP-AS2



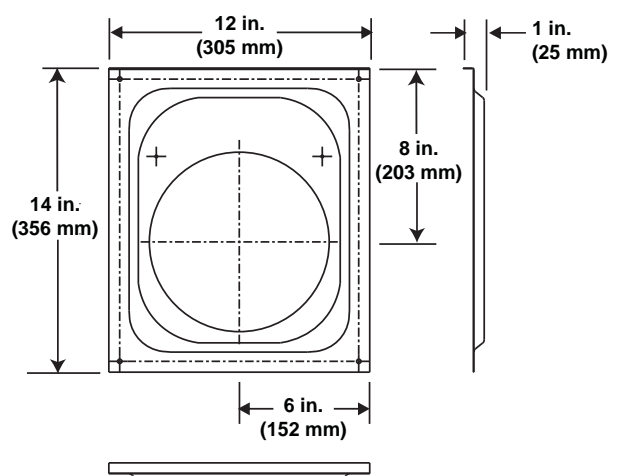
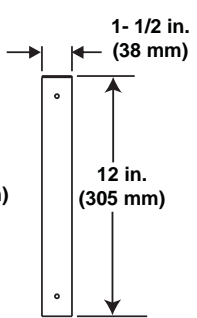
DVP-FS (Ceiling Firestop)



DVP90ST (90° Elbow)



DVP-HVS (Vent Support)



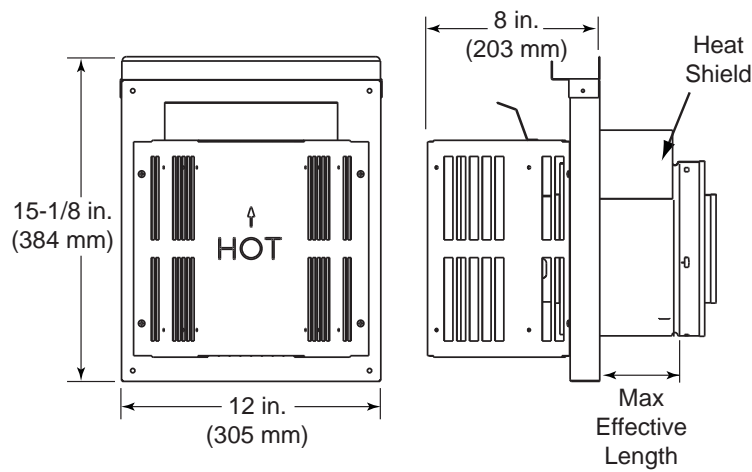
DVP-WS (Wall Shield Firestop)

Figure 16.2 DVP vent components

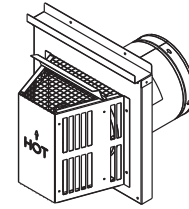


## B. Vent Components Diagrams (continued)

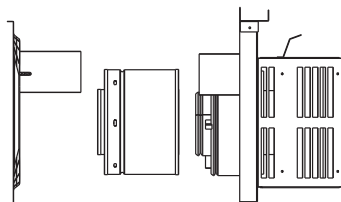
Note: Heat shields MUST overlap by a minimum of 1-1/2 in. (38 mm). **The heat shield is designed to be used on a wall 4 in. to 7-1/4 in. (102 mm to 184 mm) thick.** If wall thickness is less than 4 in. (102 mm) the existing heat shields must be field trimmed. If wall thickness is greater than 7-1/4 in.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



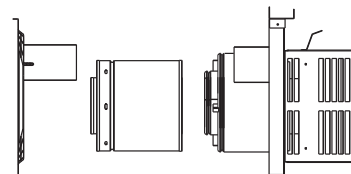
**DVP-TRAP**  
Horizontal Termination Cap



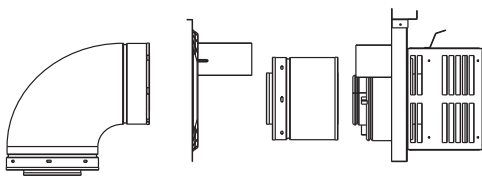
Term Cap	Minimum Effective Length	Maximum Effective Length
Trap1	3-1/8 in.	4-5/8 in.
	79 mm	117 mm
Trap2	5-3/8 in.	9-3/8 in.
	137 mm	238 mm



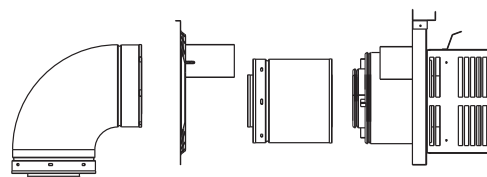
**DVP-TRAP1**



**DVP-TRAP2**



**DVP-TRAPK1**



**DVP-TRAPK2**

Figure 16.3 DVP vent components

## B. Vent Components Diagrams (continued)

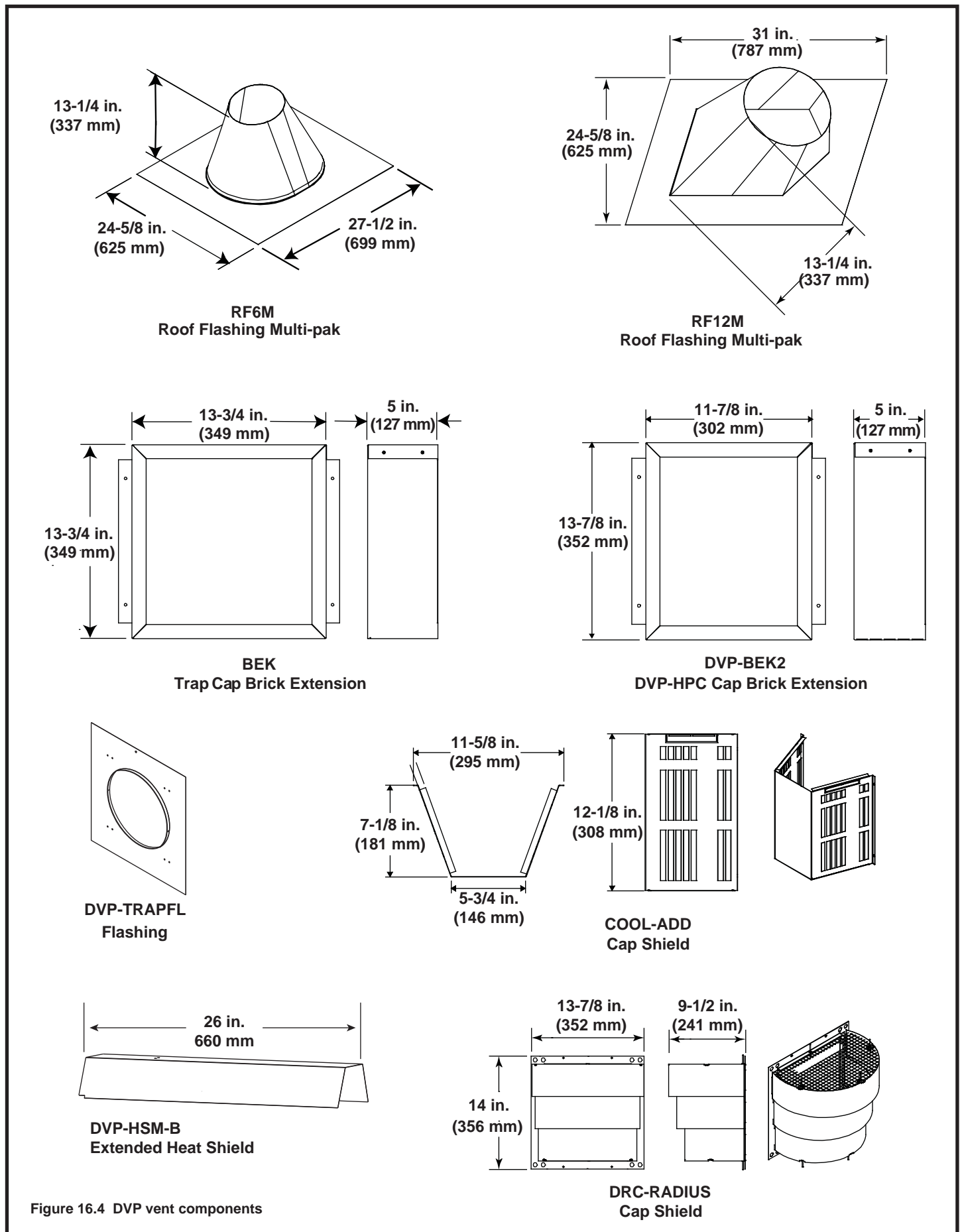
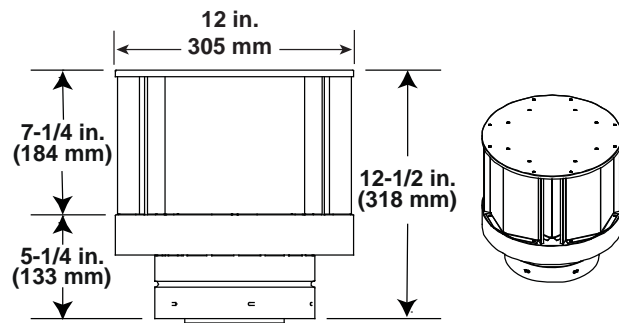
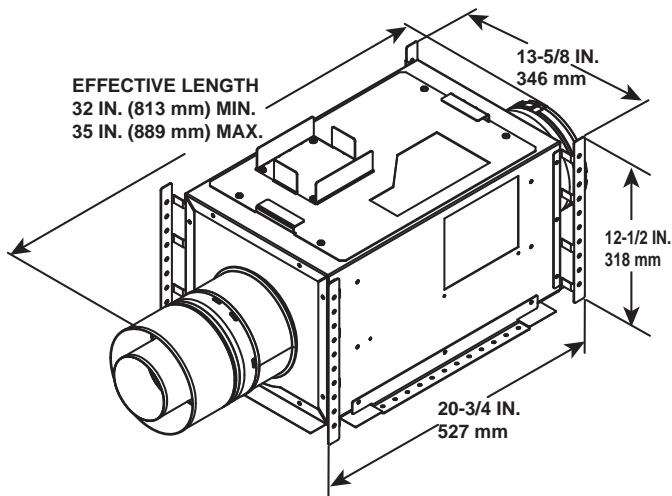


Figure 16.4 DVP vent components

## B. Vent Components Diagrams (continued)



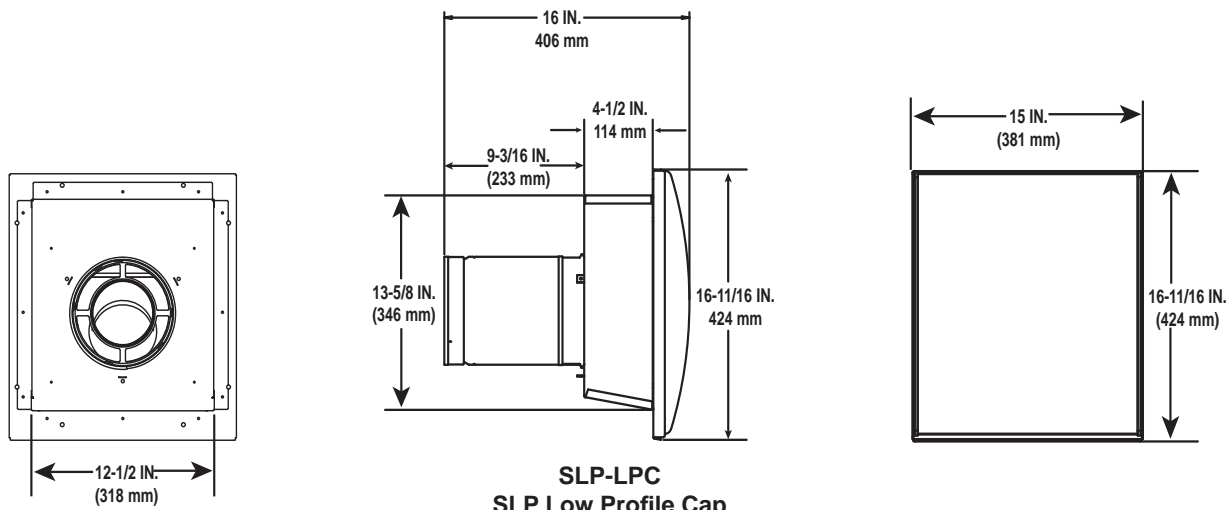
**DVP-TVHW**  
Vertical Termination Cap (Highwind)



**PVI-SLP**  
Power Vent Inline

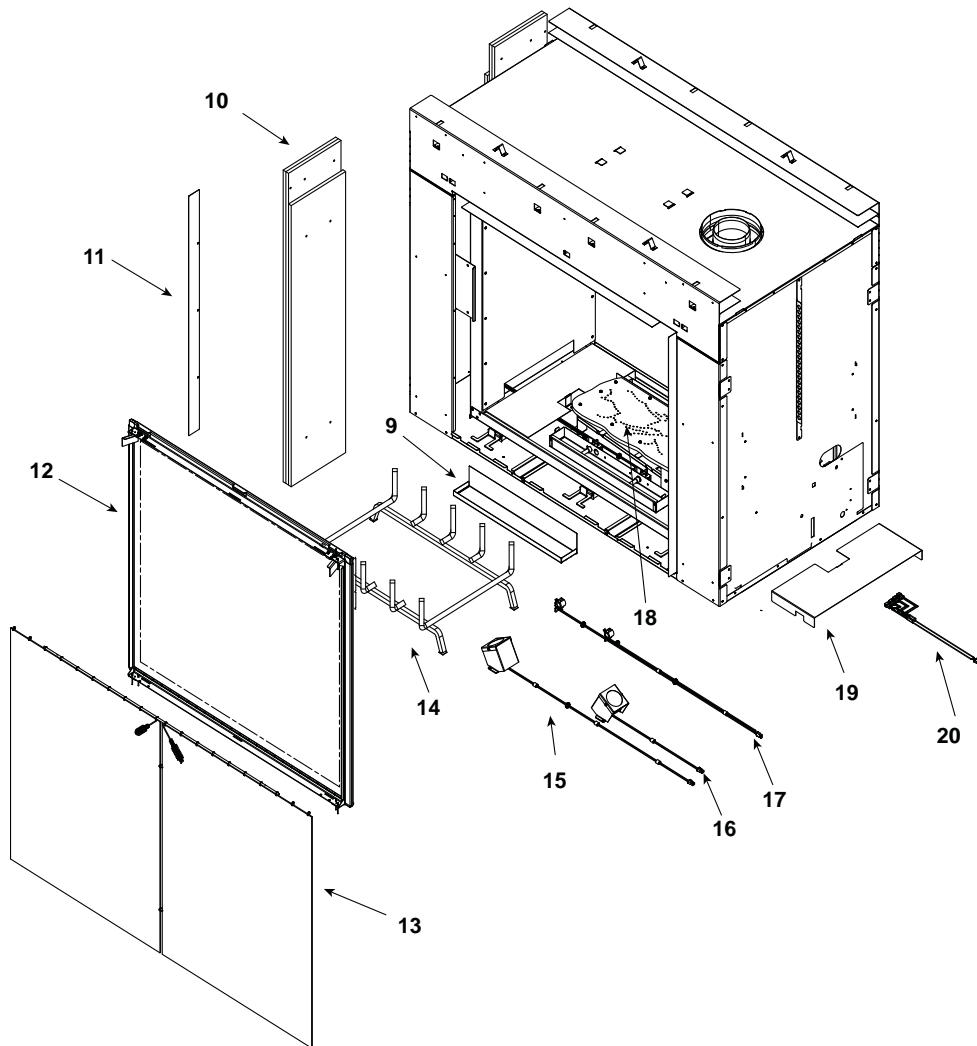
Optional Wire Harness	
DESCRIPTION	PART NUMBER
10 ft. PV Wire Harness	PVI-WH10
20 ft. PV Wire Harness	PVI-WH20
40 ft. PV Wire Harness	PVI-WH40
60 ft. PV Wire Harness	PVI-WH60
80 ft. PV Wire Harness	PVI-WH80
100 ft. PV Wire Harness	PVI-WH100

**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.

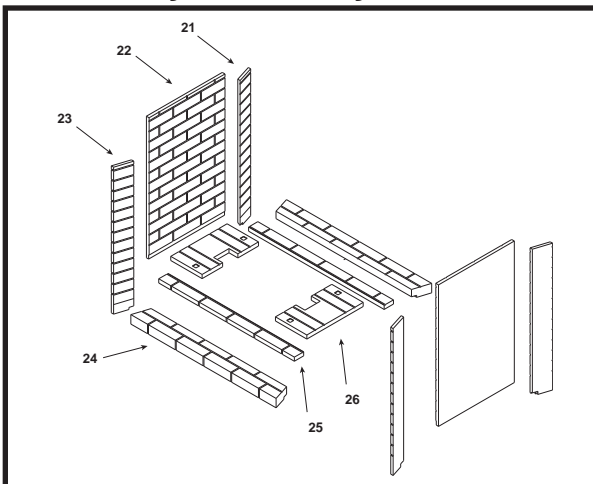


**SLP-LPC**  
SLP Low Profile Cap

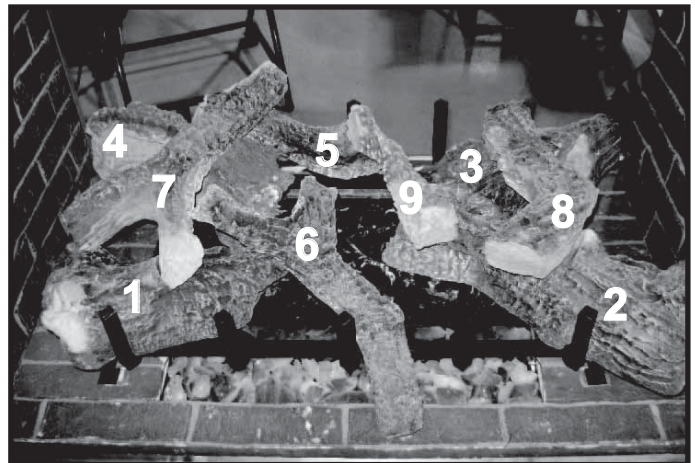
Figure 16.5 Vent Components



### Refractory Assembly



### Log Set Assembly



Part number list on following page.

## C. Service Parts List

ESC-42ST

IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



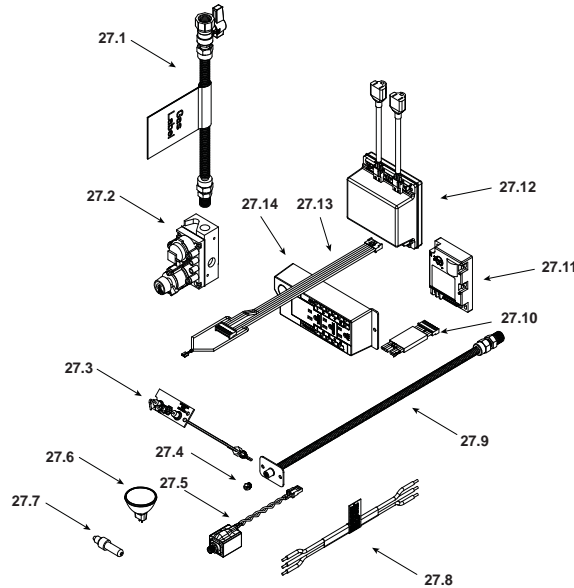
**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	Stocked at Depot
	Log Set Assembly		LOGS-ESC42ST	Y
1	Log 1		SRV2146-701	
2	Log 2		SRV2146-702	
3	Log 3		SRV2146-703	
4	Log 4		SRV2146-704	
5	Log 5		SRV2146-705	
6	Log 6		SRV2146-706	
7	Log 7		SRV2146-707	
8	Log 8		SRV2146-708	
9	Light Box Mesh Assembly	Qty 2 req	2146-016	
10	Non-combustible Board	Qty 2 req	2146-051	
11	Finishing Strips	Qty 6 req	2146-129	
12	Glass Door Assembly	Qty 2 req	GLA-ESC42ST	Y
13	Mesh Assembly	Qty 2 req	2146-031	Y
14	Log Grate		2146-015	
15	Light Assembly Accent	35"	2146-013	
16	Light Assembly Accent	17"	2146-014	
17	Light Assembly, Ember		2146-404	
18	Burner		2146-007	Y
19	Refractory Support	Qty 2 req	2146-152	
20	Light Wire Connectors		2146-407	
21	Refractory Panel - Outside Left	Qty 2 req	SRV2146-315	
22	Refractory Panel- Inside Side	Qty 2 req	SRV2146-311	
23	Refractory Panel- Outside Right	Qty 2 req	SRV2146-314	
24	Refractory Panel-Outside Bottom	Qty 2 req	SRV2146-316	
25	Refractory Panel-Inside Front	Qty 2 req	SRV2146-312	
26	Refractory Panel-Inside Middle	Qty 2 req	SRV2146-313	
	Access Plate, Junction Box		2146-169	
	Fiberglass Rope		060-455	
	Flue Restrictor		2146-158	
	Mineral Wool		050-721	
	Teco-Sil, 5lb. Bag White Ember Bed Rock		700-790	
	Touch Up Paint		TUP-GBK-12	
	Twig Center		SRV582-707	
	Vermiculite Embers		MYSTIC-EMBERS	

Additional service part numbers appear on following page.



### #27 IPI Valve Assembly Pre SN 002120860



IMPORTANT: THIS IS DATED INFORMATION. When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.

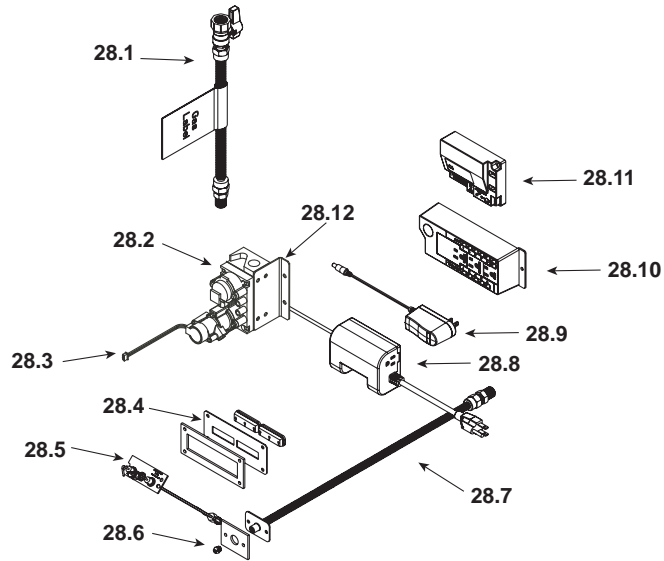


**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
27.1	Flex Ball Valve Assembly		302-320A	Y
27.2	Valve NG		750-500	Y
	Valve LP		750-501	Y
27.3	Pilot Assembly NG		2146-020	Y
	Pilot Assembly LP		2146-021	Y
27.4	Burner Orifice (#24C) NG		582-824	Y
	Burner Orifice (#44C) LP		582-844	Y
27.5	Solenoid	<b>No longer available</b>	2101-029	
27.6	Bulb, Halogen, Accent	Qty 2 req	2088-136	Y
27.7	Bulb, Halogen, Ember	Qty 4 req	2146-540	Y
27.8	Wire, Wall Switch		2095-550	Y
27.9	Flexible Gas Connector		2005-009	Y
27.10	Wire Assembly		593-590A	Y
27.11	Module		593-592	Y
27.12	Remote	<b>No longer available</b>	2101-025	
27.13	Cable Assembly		2101-027	
27.14	Junction Box		4021-013	Y
	Wall Control Assembly Upgrade		WSK-MLT-GLX	Y
	Conversion Kit NG		NGK-ESC42ST	Y
	Conversion Kit LP		LPK-ESC42ST	Y
	Pilot Orifice (NG)		593-528	Y
	Pilot Orifice (LP)		593-527	Y
	Regulator (NG)		NGK-DXV	Y
	Regulator (LP)		LPK-DXV	Y

Additional service part numbers appear on following page.

### #28 IPI Valve Assembly Post SN 0022120860



**IMPORTANT: THIS IS DATED INFORMATION.** When requesting service or replacement parts for your appliance please provide model number and serial number. All parts listed in this manual may be ordered from an authorized dealer.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
28.1	Flex Ball Valve Assembly		302-320A	Y
28.2	Valve NG		2166-302	Y
	Valve LP		2166-303	Y
28.3	Wire Harness		2166-304	Y
28.4	Side Panel Bracket		2146-150	
28.5	Pilot Assembly NG		2146-020	Y
	Pilot Assembly LP		2146-021	Y
28.6	Burner Orifice (#24C) NG		582-824	Y
	Burner Orifice (#44C) LP		582-844	Y
28.7	Flexible Gas Connector		2005-009	Y
28.8	Aux RC300		2166-335	Y
28.9	DC Regulator		2166-305	Y
28.10	Junction Box		4021-013	Y
28.11	Module		2166-306	Y
28.12	Valve Bracket		2146-192	
	Remote		2166-330	Y
	Conversion Kit NG		NGK-ESC42ST-B	Y
	Conversion Kit LP		LPK-ESC42ST-B	Y
	Pilot Orifice (NG)		593-528	Y
	Pilot Orifice (LP)		593-527	Y
	Regulator (NG)		NGK-DXV-50	Y
	Regulator (LP)		LPK-DXV-50	Y



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