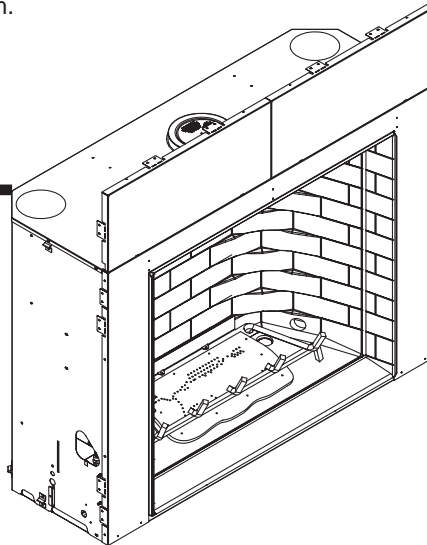


HEAT&GLO™

No one builds a better fire

Model:
Escape-42DV



Owner's Manual Installation and Operation

GAS-FIRED



CAUTION



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.

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*.

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

⚠ 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.



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.

Congratulations

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

As the owner of a new appliance, 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 appliance will give you years of durable use and trouble-free enjoyment. Welcome to the Heat & Glo family of appliance products!

Homeowner Reference Information

We recommend that you record the following pertinent information about your appliance.

Model Name: _____ Date purchased/installed: _____

Serial Number: _____ Location on appliance: _____

Dealership purchased from: _____ Dealer Phone: _____

Notes: _____

Listing Label Information/Location

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

Type of Gas

Gas and Electric Information

Model Number

Serial Number

This product may be covered by one or more of the following patents: (Nos produits sont couverts par un ou plusieurs des brevets suivants): (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408; or other U.S. and foreign patents pending (ou autres brevets américains et étrangers en attente).

HEAT & GLO
No one builds a better fire

Heat & Glo, a brand of Hearth & Home Technologies, Inc.
20802 Kensington Boulevard, Lakeville, MN 55044

GAS-FIRED
UL
LISTED

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

ALTITUDE:	0-0000 FT.	IN CANADA	0000-0000FT.	Model:	XXXXXXXX
MAX. INPUT BTUH:	00,000		00,000	(Modele):	
MIN. INPUT BTUH:	00,000		00,000	Serial	XXXXXXXX
ORIFICE SIZE:	#XXXXX		#XXXXX	(Serie):	

Table of Contents

1 Listing and Code Approvals

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

2 Getting Started

A. Design and Installation Considerations	6
B. Tools and Supplies Needed	6
C. Inspect Appliance and Components	6
D. Inspect Firebox	7

3 Framing and Clearances

A. Selecting Appliance Location	8
B. Constructing the Appliance Chase	9
C. Clearances	9
D. Mantel Projections	10
E. Hearth Extension	10

4 Termination Locations

A. Vent Termination Minimum Clearances	11
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5 Vent Information and Diagrams

A. Vent Table Key	13
B. Use of Elbows	13
C. Measuring Standards	13
D. Vent Diagrams	14

6 Vent Clearances and Framing

A. Pipe Clearances to Combustibles	18
B. Wall Penetration Framing	18
C. Vertical Penetration Framing	19

7 Appliance Preparation

A. Removing Non-combustible Facing Material Assembly . .	20
B. Securing and Leveling the Appliance	20
C. Installing Non-combustible Facing Material	21

8 Installing Vent Pipe

A. Assembly of Vent Sections	22
B. Disassembly of Vent Sections	24
C. Installing Heat Shield and Horizontal Termination Cap . .	25
D. Installing Roof Flashing and	26
Vertical Termination Cap	26

9 Gas Information

A. Fuel Conversions	28
B. Gas Pressures	28
C. Gas Connection	28

10 Electrical Information

A. Recommendation for Wire	30
B. Connecting to the Appliance	30
C. Intellifire Ignition System Wiring	30

11 Finishing

A. Mantel Projections	33
B. Facing Material	33
C. Finishing Materials Requirements	34

12 Appliance Setup

A. Remove Shipping Materials	35
B. Clean the Appliance	35
C. Accessories	35
D. Ember Placement	35
E. Positioning the Logs	36
F. Glass Assembly	40
G. Screen Mesh	40
H. Air Shutter Setting	40

13 Operating Instructions

A. Before Lighting Appliance	41
B. Lighting Appliance	42
C. After Appliance is Lit	43
D. Frequently Asked Questions	43

14 Troubleshooting

A. Intellifire Ignition System	44
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15 Maintaining and Servicing Appliance

A. Maintenance Tasks	46
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16 Reference Materials

A. Appliance Dimension Diagram	48
B. Vent Components Diagrams	49
C. Service Parts List	53
D. Limited Lifetime Warranty	55
E. Contact Information	57

➔ = Contains updated information.

1 Listing and Code Approvals

A. Appliance Certification

MODEL: ESCAPE-42DV

LABORATORY: Underwriters Laboratories, Inc. (UL)

TYPE: Direct Vent Gas Appliance Heater

STANDARD: ANSI Z21.88-2002 • CSA2.33-M2002 • UL307B

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”.

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

Hearth & Home Technologies appliances manufactured with tempered glass may be installed in hazardous locations such as bathtub enclosures as defined by the Consumer Product Safety Commission (CPSC). The tempered glass has been tested and certified to the requirements of **ANSI Z97.1** and **CPSC 16 CFR 1202** (Safety Glazing Certification Council **SGCC# 1595** and **1597**. Architectural Testing, Inc. Reports **02-31919.01** and **02-31917.01**).

This statement is in compliance with **CPSC 16 CFR Section 1201.5** “Certification and labeling requirements” which refers to **15 U.S. Code (USC) 2063** stating “...Such certificate shall accompany the product or shall otherwise be furnished to any distributor or retailer to whom the product is delivered.”

Some local building codes require the use of tempered glass with permanent marking in such locations. Glass meeting this requirement is available from the factory. Please contact your dealer or distributor to order.

Note: 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.

C. BTU Specifications

Models (U.S. or Canada)		Maximum Input BTU/h	Minimum Input BTU/h	Orifice Size (DMS)
Escape-42DV (NG)	US (0-2000 FT)	52,000	35,000	26
	CANADA (2000-4500 FT)	46,800	31,500	27
Escape-42DV (LP)	US (0-2000 FT)	50,000	33,000	45
	CANADA (2000-4500 FT)	45,000	29,700	46

D. High Altitude Installations

U.L. Listed gas appliances are tested and approved without requiring changes for elevations from 0 to 2000 feet in the U.S.A. and Canada.

When installing this appliance at an elevation above 2000 feet, it may be necessary to decrease the input rating by changing the existing burner orifice to a smaller size. Input rate should be reduced by 4% for each 1000 feet above a 2000 foot elevation in the U.S.A., or 10% for elevations between 2000 and 4500 feet in Canada. If the heating value of the gas has been reduced, these rules do not apply. To identify the proper orifice size, check with the local gas utility.

If installing this appliance at an elevation above 4500 feet (in Canada), check with local authorities.

⚠ WARNING

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.

E. Non-Combustible Materials Specification

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

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

F. Combustible Materials Specification

Materials made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that can ignite and burn, whether flame proofed or not, or whether 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) inch in size, **“GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS”**.

Inspection

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

Exemptions

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

- The equipment listed in Chapter 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the Board; and
- Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

MANUFACTURER REQUIREMENTS

Gas Equipment Venting System Provided

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

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

Gas Equipment Venting System NOT Provided

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

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

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

See Gas Connection section for additional Commonwealth of Massachusetts requirements.

2 Getting Started

A. Design and Installation Considerations

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

CAUTION

Check building codes prior to installation.

- Installation **MUST** comply with local, regional, state and national codes and regulations.
- Consult local building, fire officials or authorities having jurisdiction about restrictions, installation inspection, and permits.

When planning an appliance installation, it's necessary to determine the following information before installing:

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



WARNING

Keep appliance dry.

- Mold or rust may cause odors.
- Water may damage controls.



B. Tools and Supplies Needed

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

Reciprocating saw	Framing material
Pliers	Hi temp caulking material
Hammer	Gloves
Phillips screwdriver	Framing square
Flat blade screwdriver	Electric drill and bits (1/4 in.)
Plumb line	Safety glasses
Level	1/2 - 3/4 inch length, #6 or #8 Self-drilling screws
Manometer	Voltmeter
Tape measure	Noncorrosive leak check solution
One 1/4 inch female connection (for optional fan).	

C. Inspect Appliance and Components



WARNING

Inspect appliance and components for damage. Damaged parts may impair safe operation.

- Do NOT install damaged components.
 - Do NOT install incomplete components.
 - Do NOT install substitute components.
- Report damaged parts to dealer.



- Carefully remove the appliance and components from the packaging.
- The vent system components and trim doors are shipped in separate packages.
- The gas logs may be packaged separately and must be field 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

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.

→ D. Inspect Firebox

Surface cracking or crazing of firebrick material is normal and expected. The following types of cracks are acceptable and do not require replacement of the unit or the firebox:

- Cracks that do not propagate entirely thru the material.
- Light fracture lines or “spider-webbing” on the surface of the material.
- Cracks that are less than 1/32 in. wide and less than 3 in. long.
- If cosmetically unacceptable, such cracks may be repaired with the SRV-PACK service kit. See Service Parts List.

Cracks that are unacceptable:

- Cracks greater than 1/32 in. wide and 3 in. long are at risk of growing.
- Cracks that penetrate entirely through the firebrick material.

Inspection for cracking should be run when the appliance is cool. Cracks tend to close as the appliance heats up.

3 Framing and Clearances

Note:

- 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.

A. Selecting Appliance Location

When selecting a location for your appliance it is important to consider the required clearances to walls (see figure 3.1).

⚠ WARNING



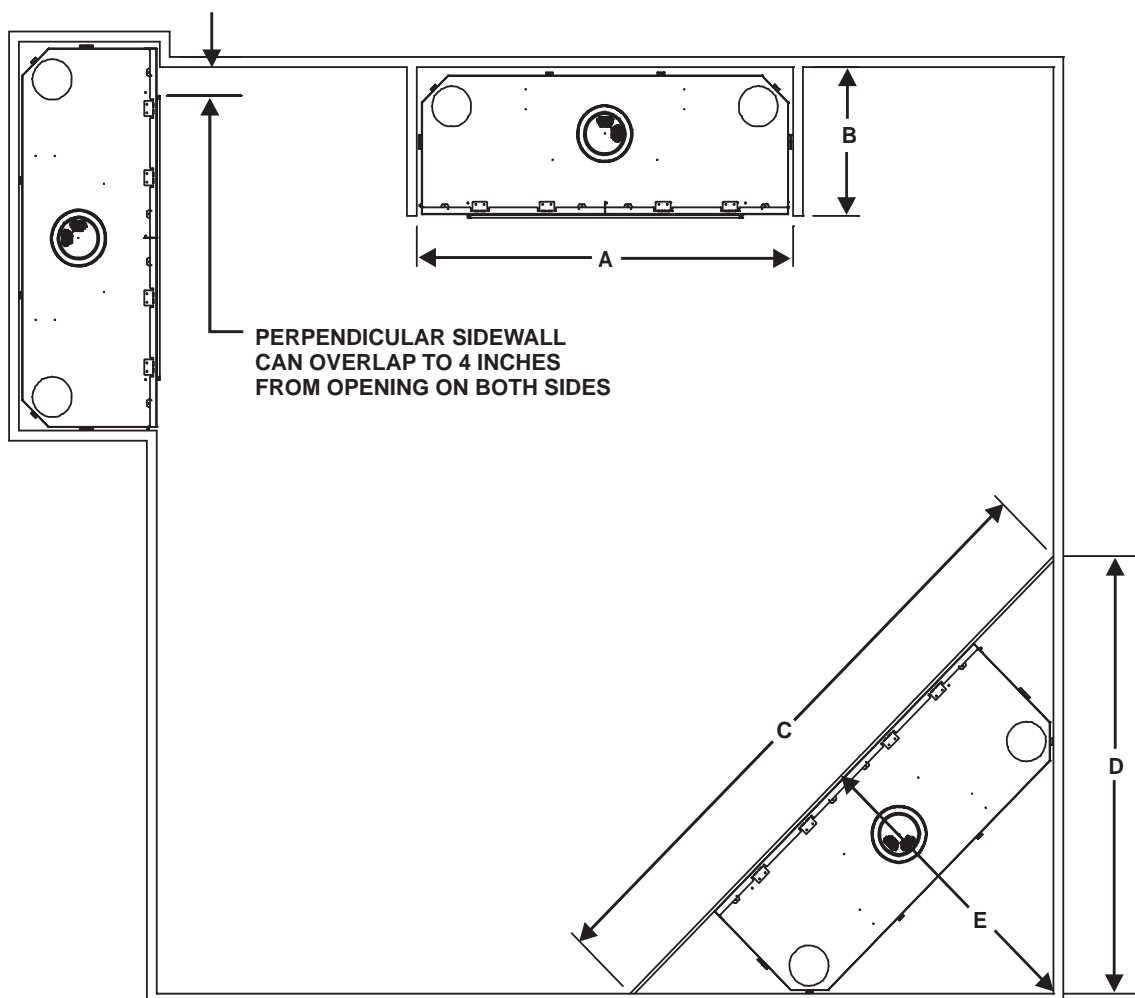
Fire Risk

Provide adequate clearance:

- Around air openings
- To combustibles
- For service access

Locate appliance away from traffic areas.

NOTE: For actual appliance dimensions refer to Section 16.



In addition to these framing dimensions, also reference the following sections:

- Clearances and Mantel Projections (**Sections 3.C and 3.D**)
- Vent Clearances and Framing (**Section 6**).

	A	B	C	D	E
Inches	57-1/2	22	91-1/2	64-3/4	45-3/4
Millimeters	1461	559	2325	1644	1162

Figure 3.1 Appliance Locations

B. Constructing the Appliance Chase

A chase is a vertical boxlike structure built to enclose the gas appliance and/or its vent system. Vertical vents that run on the outside of a building may be, but are not required to be, installed inside a chase.

Construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Local building codes MUST be checked.


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 high temperature caulk to seal gaps. Gas line holes and other openings should be caulked with high temp caulk or stuffed with unfaced

insulation. If the appliance is being installed on a cement slab, a layer of plywood may be placed underneath to prevent conducting cold up into the room.


C. Clearances



WARNING

Fire Risk.
Odor Risk.

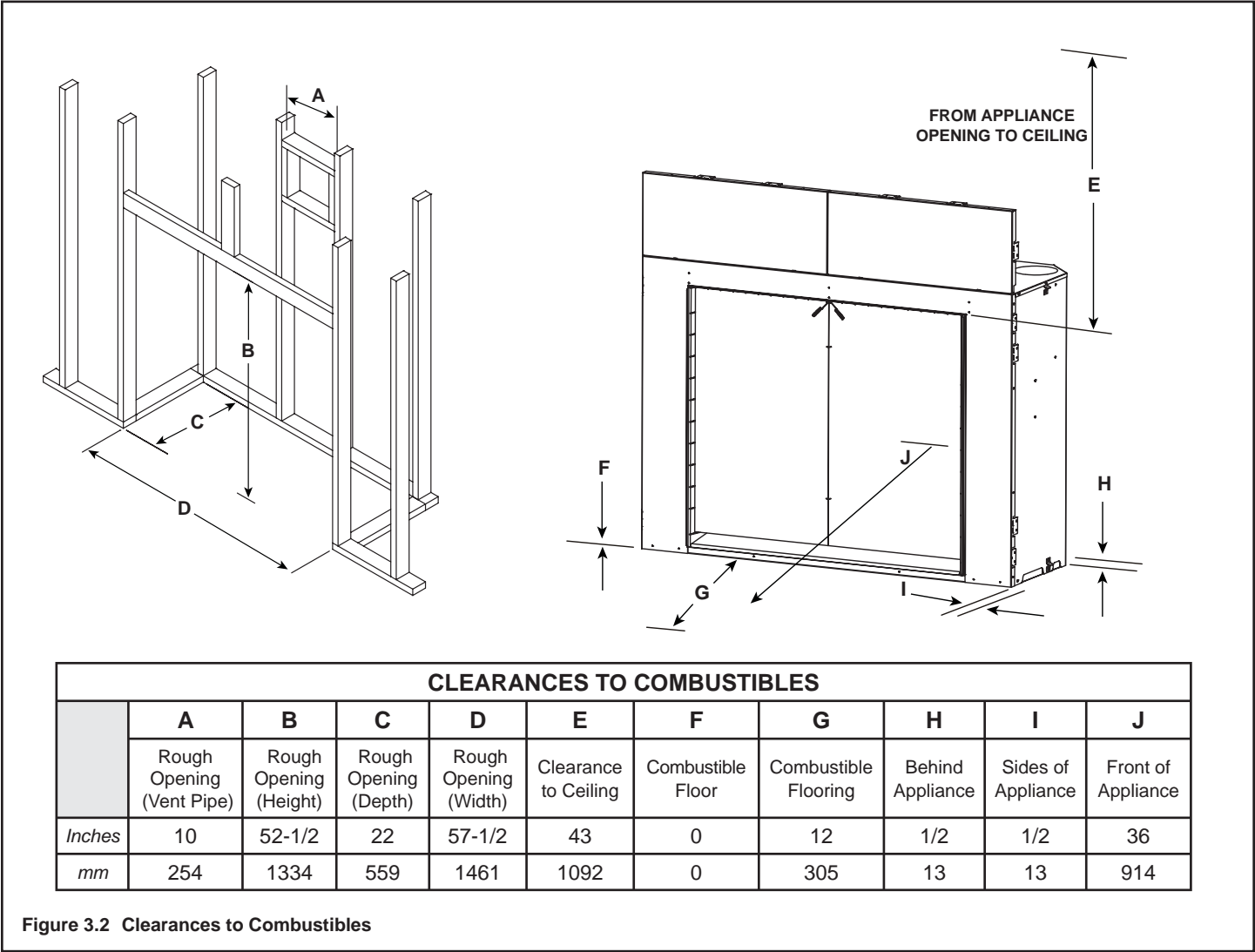
- Install appliance on hard metal or wood surfaces extending full width and depth of appliance.
- Do NOT install appliance directly on carpeting, vinyl, tile or any combustible material other than wood.



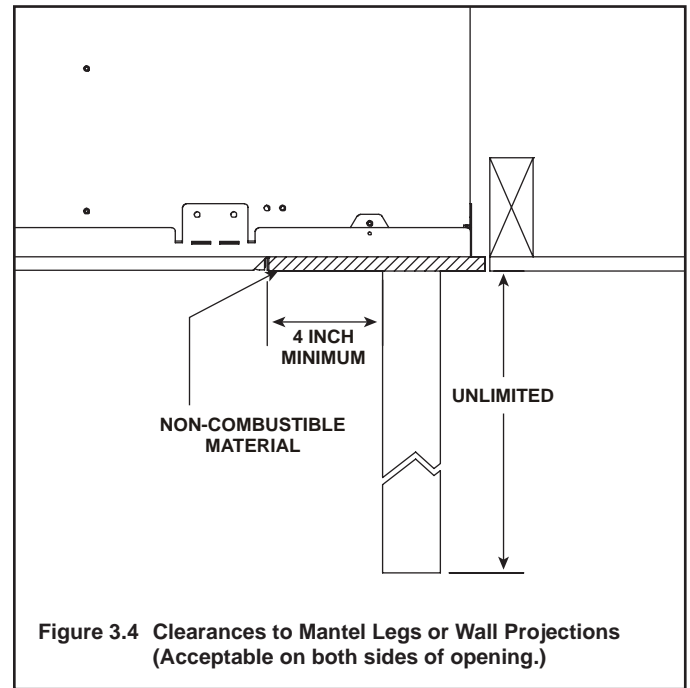
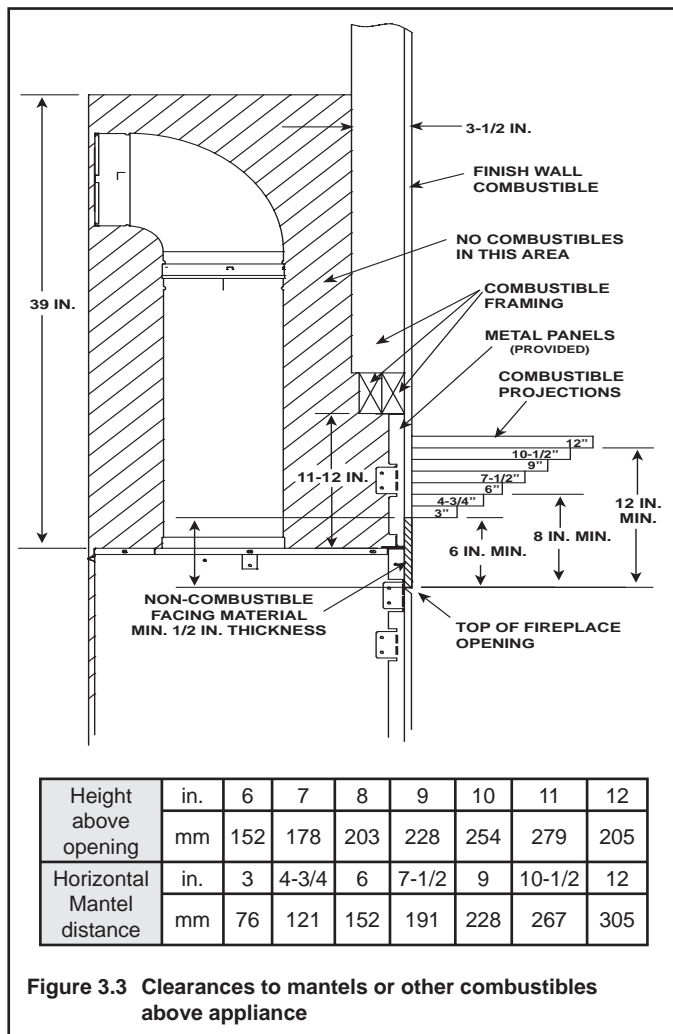
WARNING

Fire Risk.

- Construct chase to all clearance specifications in manual.
- Locate and install appliance to all clearance specifications in manual.

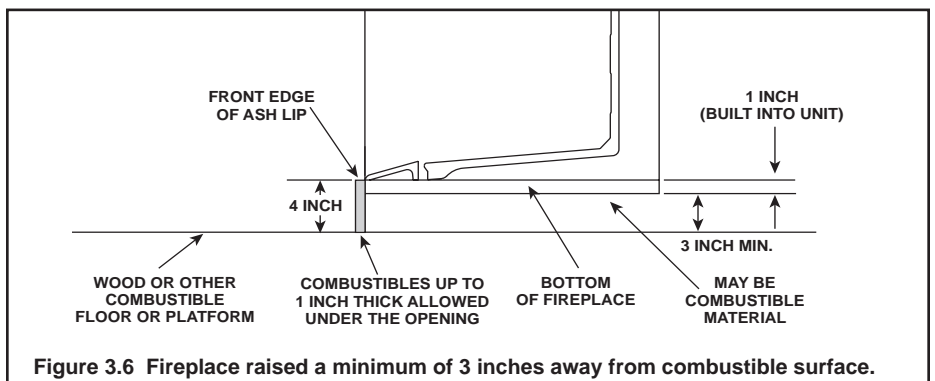
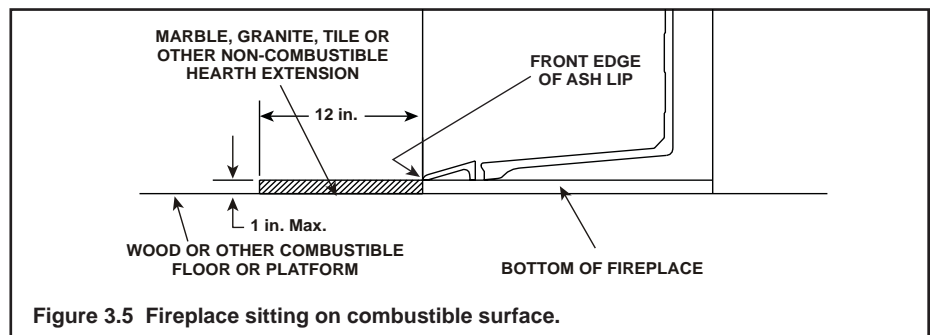


D. Mantel Projections




E. Hearth Extension

The base of the fireplace may sit on a combustible surface. The area in front of the fireplace must be protected by a non-combustible hearth extension, unless the fireplace is raised a minimum of 3 inches above the combustible floor or hearth. See figures 3.5 and 3.6.



4 Termination Locations


A. Vent Termination Minimum Clearances



WARNING

Fire Risk.
Explosion Risk.
Inspect external vent cap regularly.

- Ensure no debris blocks cap.
- Combustible materials blocking cap may ignite.
- Restricted air flow affects burner operation.



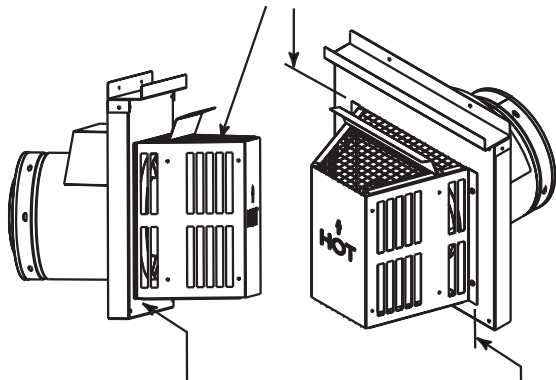
WARNING

Fire Risk.
Explosion 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 fire.

Measure vertical clearances from this surface.



Measure horizontal clearances from this surface.

(See Figure 4.4 for specific clearances)

Figure 4.1

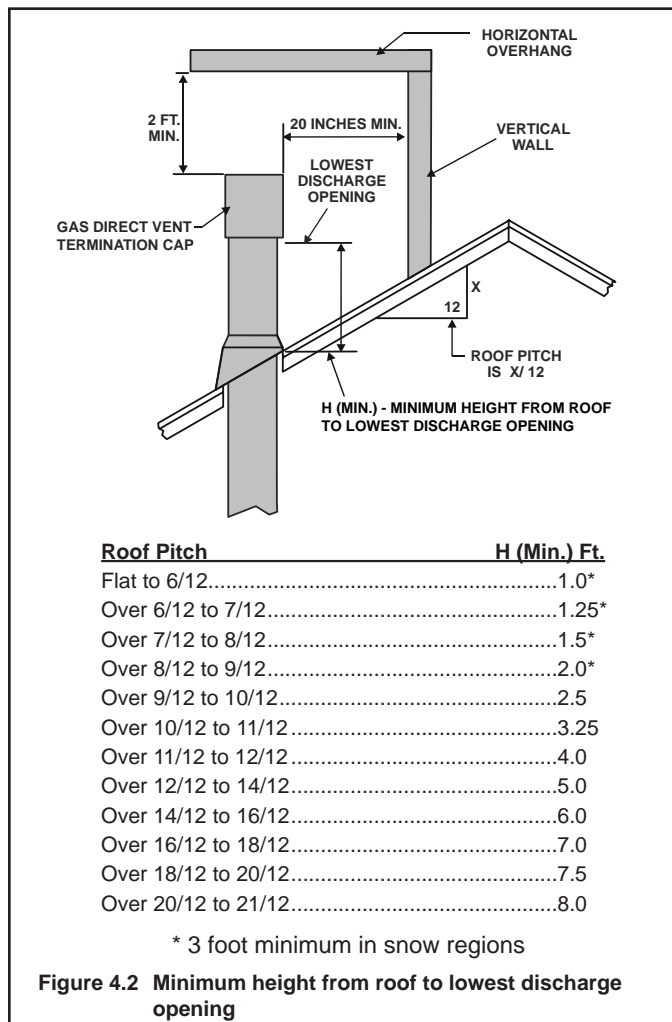
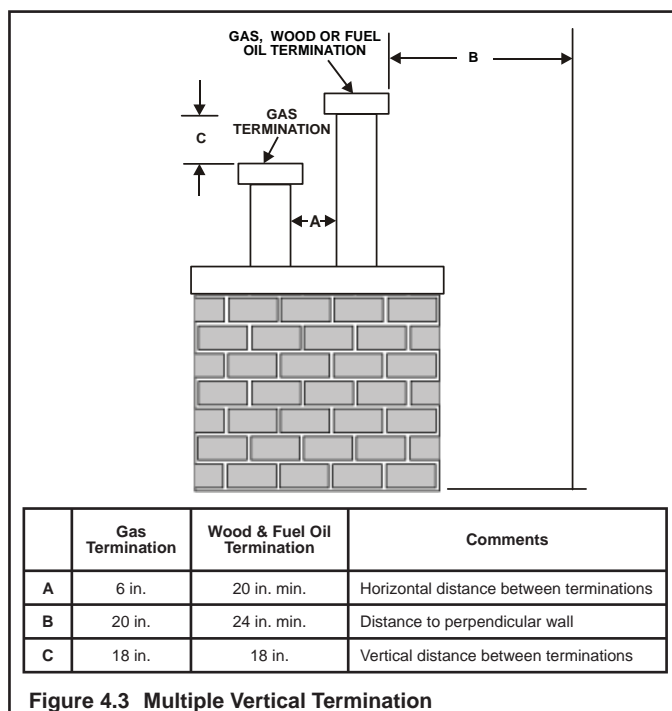
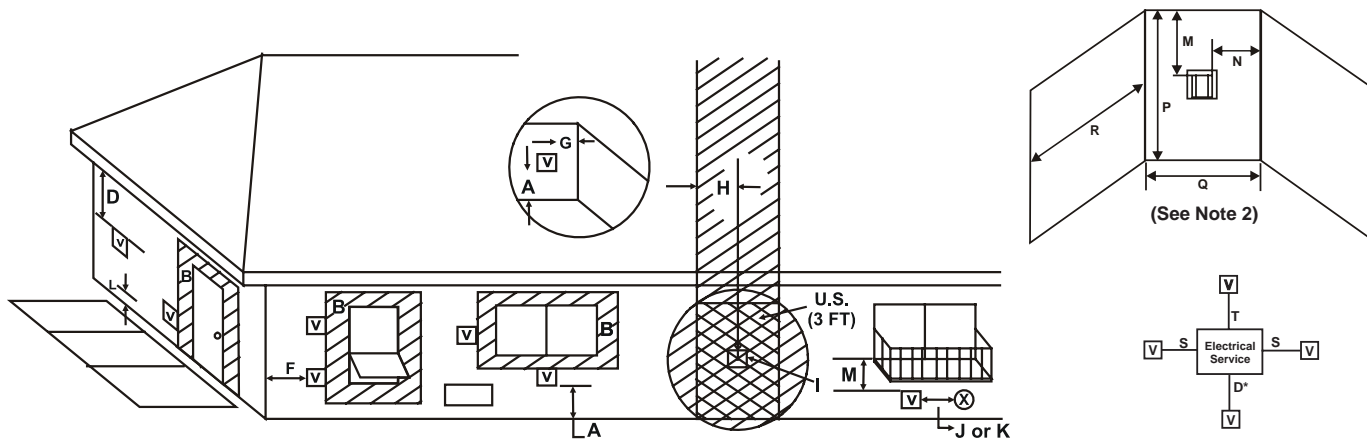


Figure 4.2 specifies minimum vent heights for various pitched roofs.





V = VENT TERMINAL **(X)** = AIR SUPPLY INLET = AREA WHERE TERMINAL IS NOT PERMITTED

A = 12 inches.....clearances above grade, veranda, porch, deck or balcony (See Note 1)	L** = 7 ft..... clearance above paved sidewalk or a paved driveway located on public property (See Note 1)
B = 12 inches.....clearances to window or door that may be opened, or to permanently closed window. (Glass)	M*** = 18 inches..... clearance under veranda, porch, deck, balcony or overhang
D* = 24 inches.....vertical clearance to unventilated soffit or to ventilated soffit located above the terminal	42 inches vinyl
*42 inches.....for vinyl clad soffits and below electrical service	S = 6 inches.....clearance from sides of electrical service (See Note 5)
F = 9 inches.....clearance to outside corner	T = 12 inches.....clearance above electrical service (See Note 5)
G = 6 inches.....clearance to inside corner	
H = 3 ft. (Canada).....not to be installed above a gas meter/regulator assembly within 3 feet (90 cm) horizontally from the center-line of the regulator	
I = 3 ft.....clearance to gas service regulator vent outlet	
J = 9 inches (U.S.A.) 12 inches (Canada) clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance	
K = 3 ft. (U.S.A.) 6 ft. (Canada).....clearance to a mechanical (powered) air supply inlet	

Alcove Applications

N = 6 inchesnon-vinyl sidewalls
12 inchesvinyl sidewalls

P = 8 ft.

	Q _{MIN}	R _{MAX}
1 cap	3 feet	2 x Q _{ACTUAL}
2 caps	6 feet	1 x Q _{ACTUAL}
3 caps	9 feet	2/3 x Q _{ACTUAL}
4 caps	12 feet	1/2 x Q _{ACTUAL}
Q _{MIN} = # termination caps x 3 R _{MAX} = (2 / # termination caps) x Q _{ACTUAL}		

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

*** only permitted if veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor, or meets Note 2.

NOTE 1: On private property where termination is less than 7 feet above a sidewalk, driveway, deck, porch, veranda or balcony, use of a listed cap shield is suggested. (See vents components page)

NOTE 2: Termination in an alcove space (spaces open only on one side and with an overhang) are permitted with the dimensions specified for vinyl or non-vinyl siding and soffits. **1.** There must be 3 feet minimum between termination caps. **2.** All mechanical air intakes within 10 feet of a termination cap must be a minimum of 3 feet below the termination cap. **3.** All gravity air intakes within 3 feet of a termination cap must be a minimum of 1 foot below the termination cap.

NOTE 3: Local codes or regulations may require different clearances.

NOTE 4: Termination caps may be hot. Consider their proximity to doors or other traffic areas.

NOTE 5: Location of the vent termination must not interfere with access to the electrical service.

WARNING: In the U.S: Vent system termination is **NOT** permitted in screened porches. You must follow side wall, overhang and ground clearances as stated in the instructions.

In Canada: Vent system termination is **NOT** permitted in screened porches. Vent system termination is permitted in porch areas with two or more sides open. You must follow all side walls, overhang and ground clearances as stated in the instructions.

Heat & Glo assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

Figure 4.4 Minimum Clearances for Termination

CAUTION: IF EXTERIOR WALLS ARE FINISHED WITH VINYL SIDING, IT IS SUGGESTED THAT A VINYL PROTECTOR KIT BE INSTALLED.

5 Vent Information and Diagrams

A. Vent Table Key

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

Symbol	Description
V ₁	First section (closest to appliance) of vertical length
V ₂	Second section of vertical length
H ₁	First section (closest to appliance) of horizontal length
H ₂	Second section of horizontal length

⚠ WARNING



Fire Hazard.

Explosion Risk.

Asphyxiation Risk.

Do NOT connect this gas appliance to a chimney flue serving a separate solid-fuel or gas burning appliance.



- Vent this appliance directly outside.
 - Use separate vent system for this appliance.
- May impair safe operation of this appliance or other appliances connected to the flue.

B. Use of Elbows

CAUTION

ALL vent configuration specifications MUST be followed.

- This product is tested and listed to these specifications.
- Appliance performance will suffer if specifications are not followed.

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 5.1).

Two 45° elbows may be used in place of one 90° elbow. On 45° runs, one foot of diagonal is equal to 8.5 inches horizontal run and 8.5 inches vertical run. A length of straight pipe is allowed between two 45° elbows (see Figure 5.1).

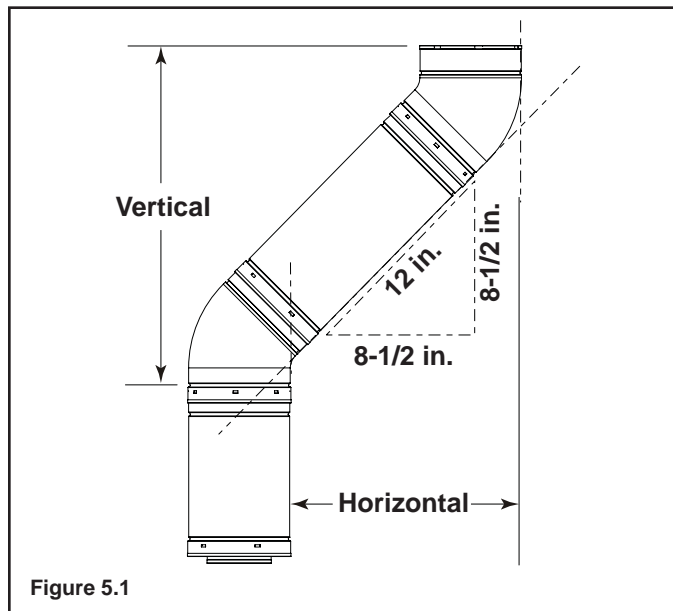


Figure 5.1

C. Measuring Standards


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


1. Pipe measurements are shown using the effective length of pipe (see Figure 5.2).
2. Measurements are made from the appliance outer wrap, not from the standoffs.
3. Horizontal terminations are measured to the outside mounting surface (flange of termination cap) (see Figure 4.1).
4. Vertical terminations are measured to bottom of termination cap.
5. 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 5.2 DVP Pipe Effective Length

D. Vent Diagrams



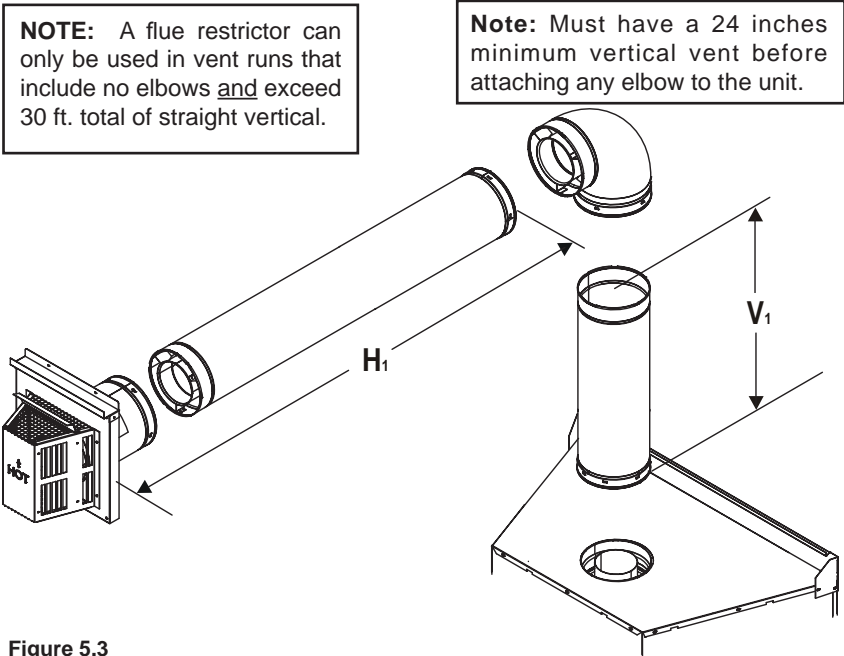
 **WARNING**

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

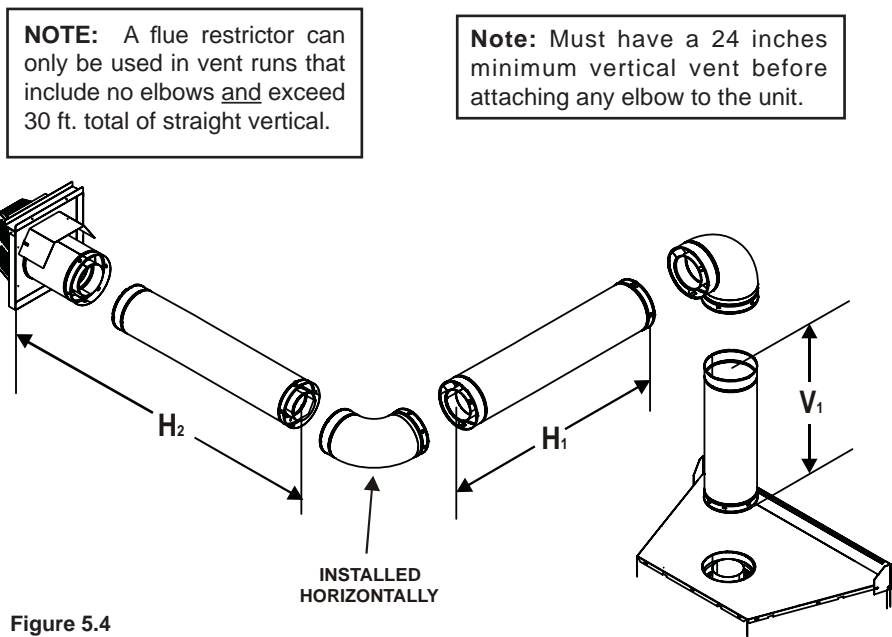


V ₁ Minimum		H ₁ Maximum	
2 ft	610 mm	7 in*	178 mm
3 ft	914 mm	2 ft	610 mm
4 ft	1.2 m	4 ft	1.2 m
5 ft	1.5 m	9 ft	2.7 m
6 ft	1.8 m	12 ft	3.7 m
7 ft	2.1 m	14 ft	4.3 m
10 ft	3.0 m	20 ft	6.1 m
20 ft	6.1 m	40 ft	12.2 m

After V₁ = 6 ft then H₁ = 2 x V ft Maximum
V₁ + H₁ = 60 ft Maximum
*when used with approved termination caps

Figure 5.3

Two Elbows



V ₁ Minimum		H ₁ + H ₂	
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 V₁ = 6 ft then H₁ = 2 x V₁ ft Maximum
V₁ + H₁ + H₂ = 60 ft Maximum
H₁ + H₂ = 20 ft Maximum

Figure 5.4

1. Top Vent - Horizontal Termination - (continued)

Three Elbows

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

NOTE: A flue restrictor can only be used in vent runs that include no elbows and exceed 30 ft. total of straight vertical.

V ₁		H ₁		V ₂	H ₂
2 ft	610 mm	7 in	178 mm	*	H ₂ Max = 2 X V ₂
3 ft	914 mm	2 ft	610 mm	*	H ₂ Max = 2 X V ₂
4 ft	1.2 m	4 ft	1.2 m	*	H ₂ Max = 2 X V ₂
5 ft	1.5 m	9 ft	2.7 m	*	H ₂ Max = 2 X V ₂
6 ft	1.8 m	12 ft	3.7 m	*	H ₂ Max = 2 X V ₂
7 ft	2.1 m	14 ft	4.3 m	*	H ₂ Max = 2 X V ₂
10 ft	3.0 m	20 ft	6.1 m	*	H ₂ Max = 2 X V ₂
V ₁ + H ₁ must be adhered to.					
* V ₂ has no specific restrictions EXCEPT,					
H _{t max} = 2 x V _t and V _{total} + H _{total} cannot exceed 60 ft Maximum					

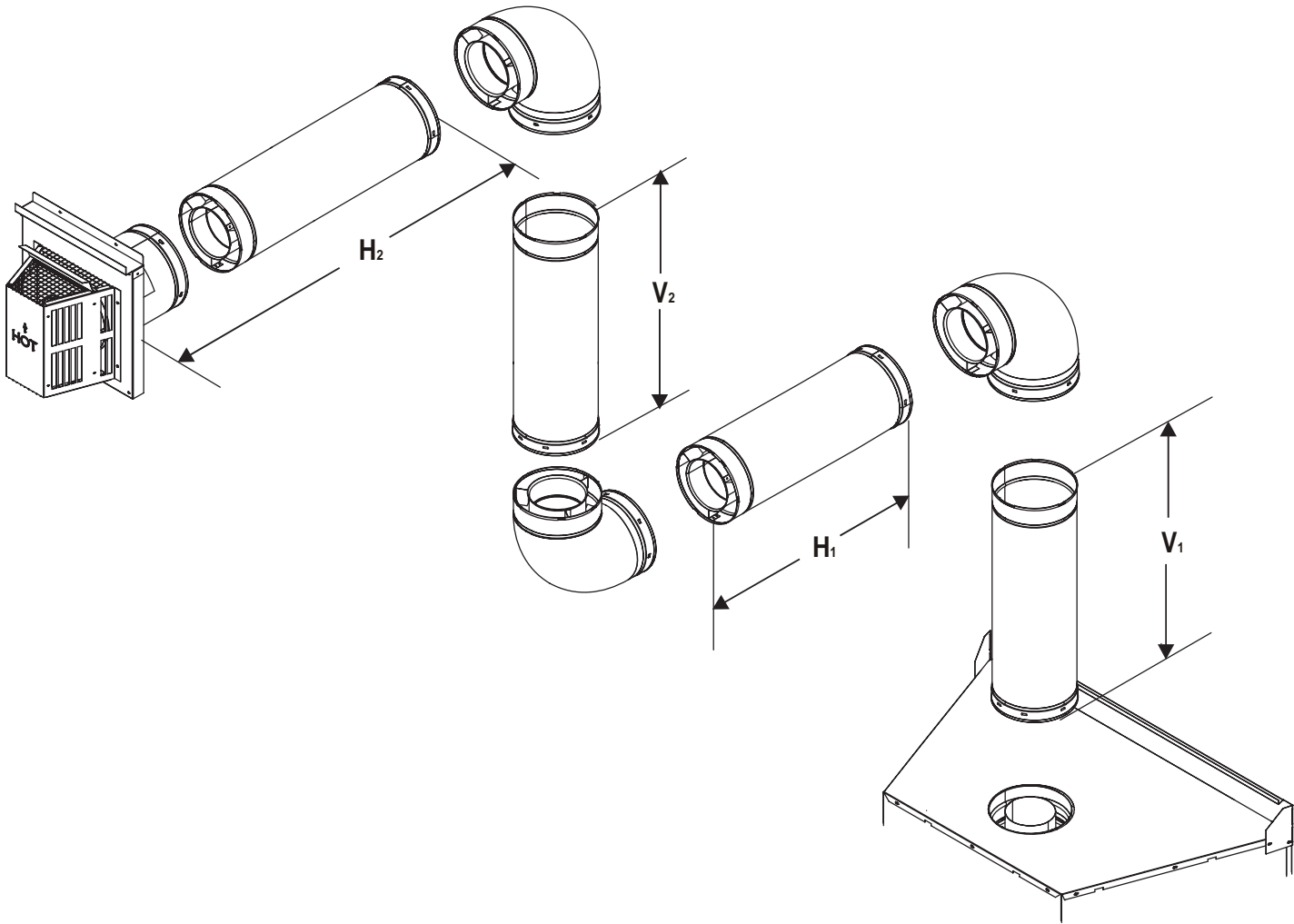
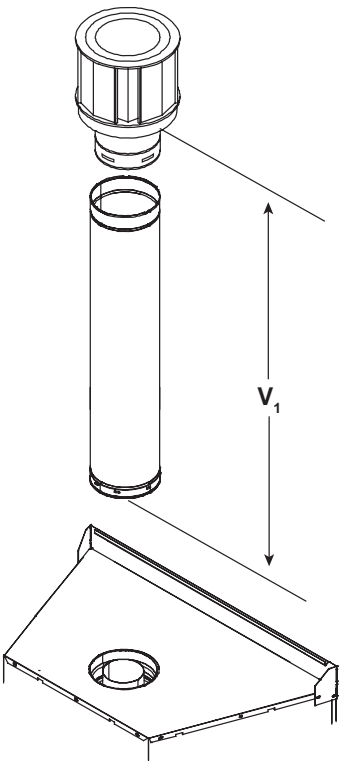


Figure 5.5

2. Top Vent - Vertical Termination

No Elbow

NOTE: A flue restrictor can only be used in vent runs that include no elbows and exceed 30 ft. total of straight vertical.



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

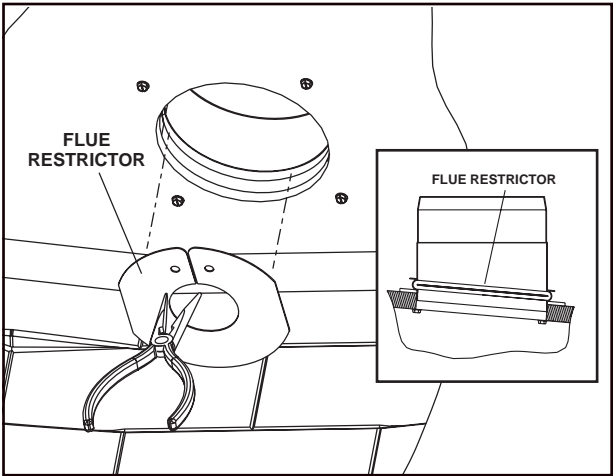
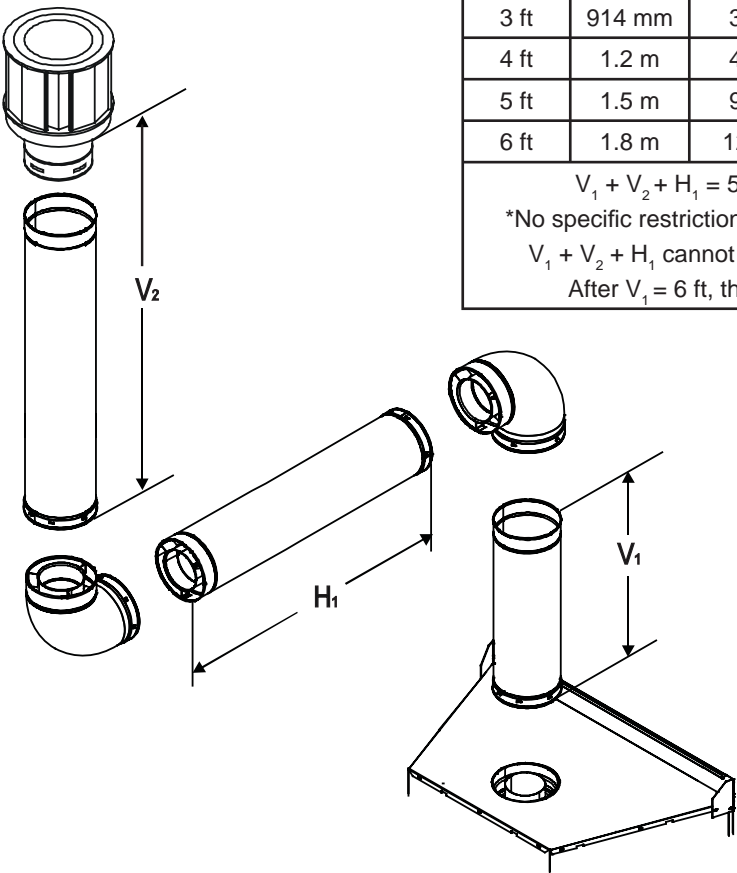


Figure 5.6

Two Elbows

NOTE: A flue restrictor can only be used in vent runs that include no elbows and exceed 30 ft. total of straight vertical.

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



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 5.7

2. Top Vent - Vertical Termination - (continued)

Three Elbows

NOTE: A flue restrictor can only be used in vent runs that include no elbows and exceed 30 ft. total of straight vertical.

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

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

*H₁ and H₂ has no specific restrictions EXCEPT, after V₁ = 6 ft, then H_t Max = 2 x V₁
**V_T + H_T = 60 ft Max.

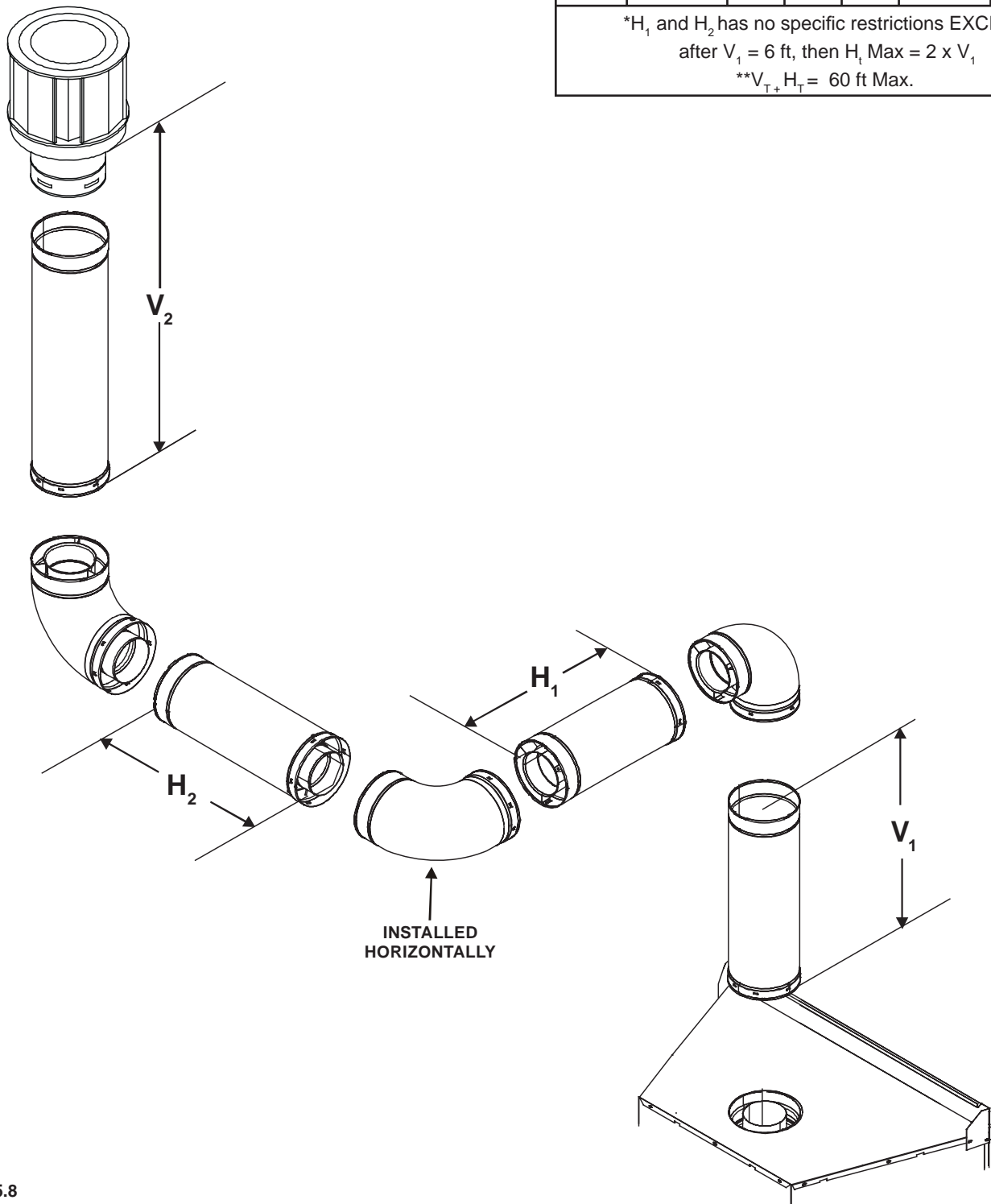



Figure 5.8

6 Vent Clearances and Framing

A. Pipe Clearances to Combustibles



⚠ WARNING

Fire Risk.
Explosion 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 fire.

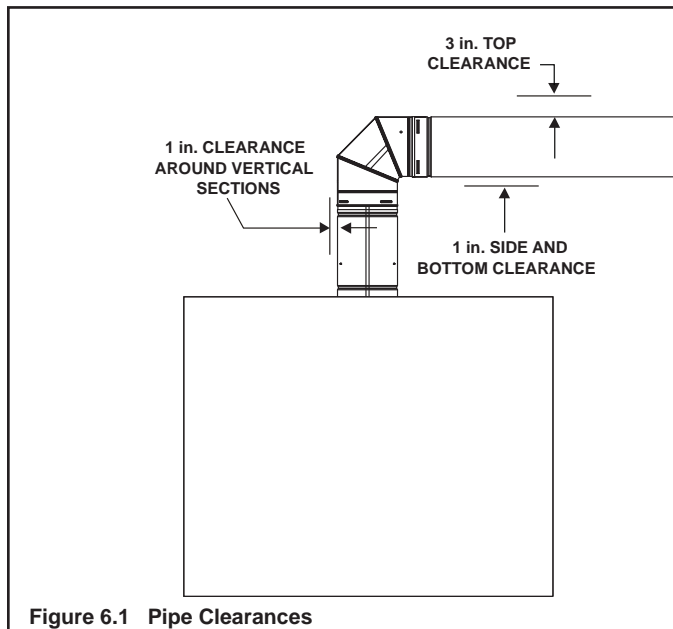


Figure 6.1 Pipe Clearances

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.

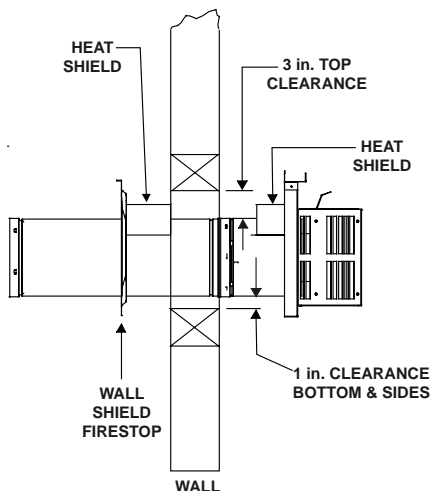


Figure 6.2 Horizontal Venting Clearances to Combustible Materials

B. Wall Penetration Framing

Combustible Wall Penetration

Frame a hole in a combustible wall for an interior wall shield firestop, (Figure 6.3) whenever a wall is penetrated. Use same size framing materials as those used in the wall construction. The wall shield firestop maintains minimum clearances and prevents cold air infiltration.

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.

If your local inspector requires the wall shield firestop on both sides, then both wall shield firestops must have a heat shield attached to them.

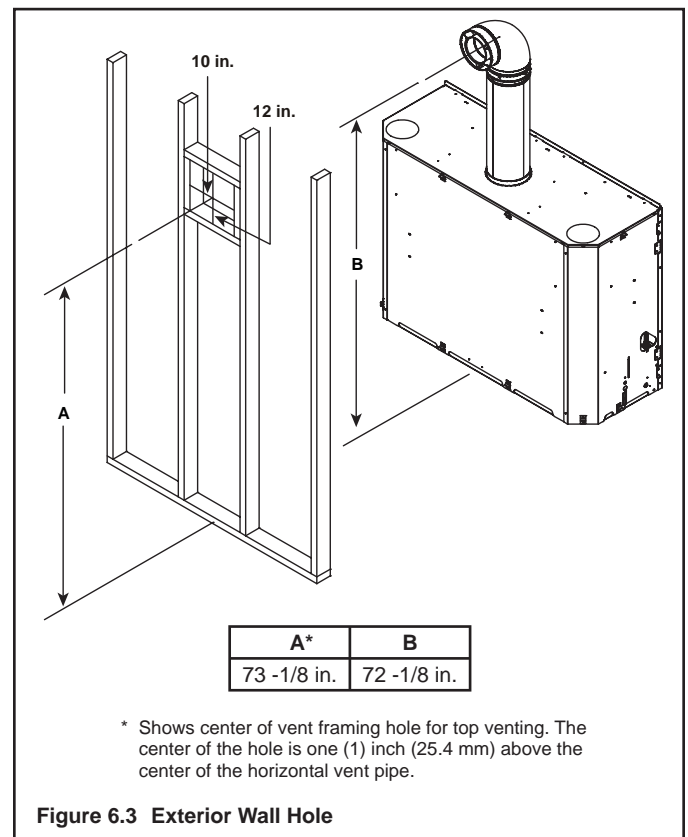


Figure 6.3 Exterior Wall Hole

C. Vertical Penetration Framing

⚠ WARNING



Fire Hazard

Keep loose materials or blown insulation from touching the vent pipe.

- National building codes recommend using attic shield to keep loose materials/blown insulation from contacting vent.
- Hearth & Home Technologies requires the use of an attic shield.

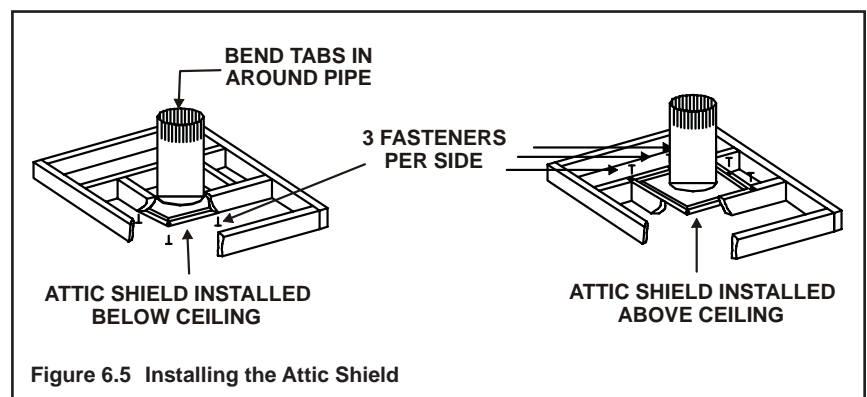
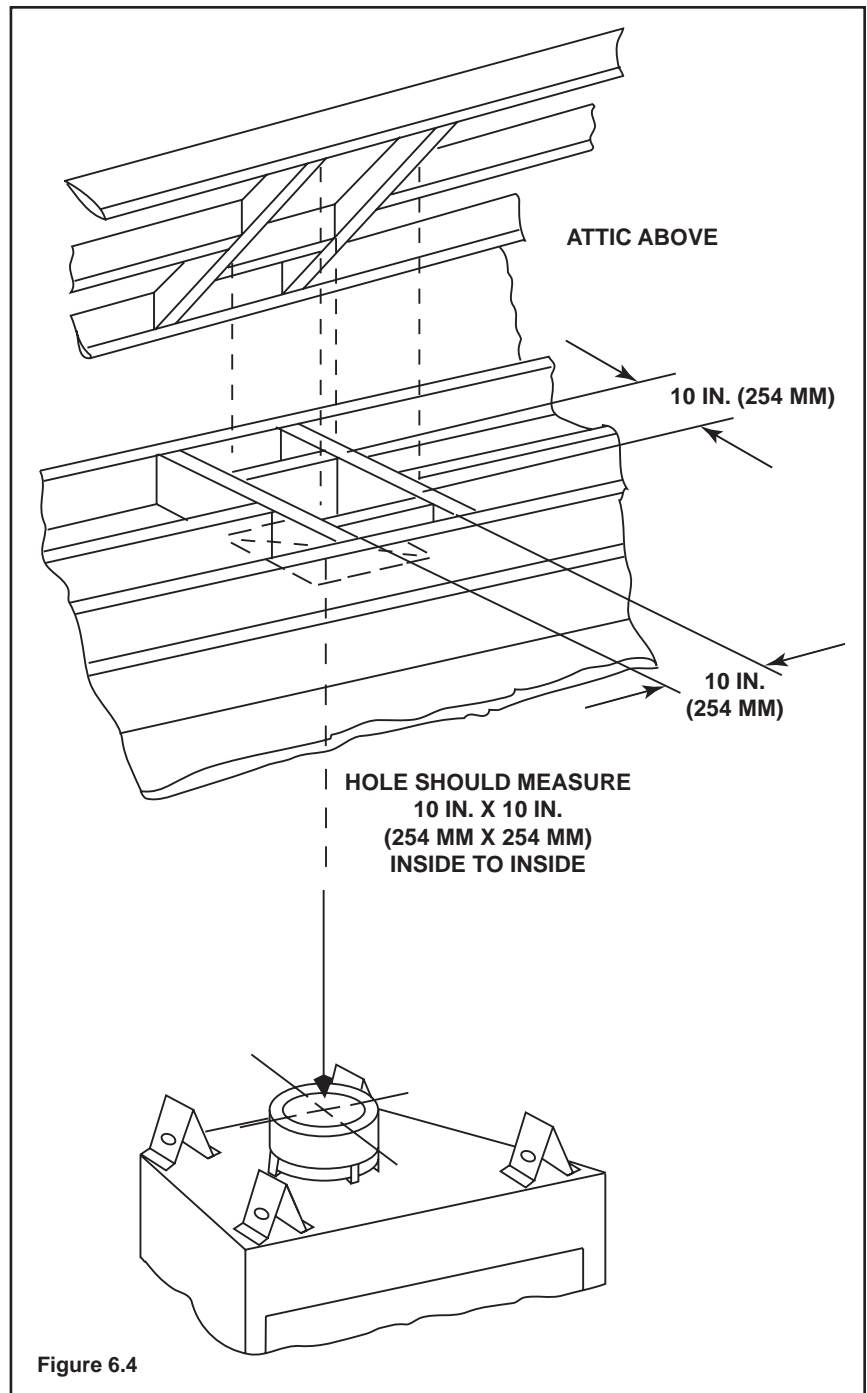
Installing the Ceiling Firestop

- Frame an opening 10 inches by 10 inches whenever the vent system penetrates a ceiling/floor (see Figure 6.4).
- Frame the area with the same sized lumber as used in ceiling/floor joist.
- When installing a top vent vertical termination appliance the hole should be directly above the appliance, unless the flue is offset.
- Do not pack insulation around the vent. Insulation must be kept away from the pipe.

Installing Attic Shield

Note: An additional ceiling firestop is not required if attic shield is used.

- Frame opening for attic shield.
- Attic shield may be installed above or below ceiling (see Figure 6.5).
- Secure with three fasteners on each side.
- Fold tabs at top of attic shield in toward vent pipe. Tabs must keep vent pipe centered within shield.
- Field construct additional shield height if insulation is deeper than height of attic shield.



7 Appliance Preparation

A. Removing Non-combustible Facing Material Assembly

The non-combustible assembly is located on the back side of appliance.

CAUTION

- Handle with care.
- Non-combustible material may be damaged if dropped.

- Hold non-combustible pieces in place.
- Remove and save two screws from upper bracket.
- Remove non-combustible pieces.
- Remove and save three screws from lower bracket.
- Discard brackets.
- Replace screws in holes where brackets were attached to appliance.

B. Securing and Leveling the Appliance

⚠ WARNING



Fire Risk.

- Prevent contact with sagging, loose insulation.
- Do NOT install against combustible materials such as exposed insulation, plastic and insulation backer.



CAUTION

Sharp Edges

- Wear protective gloves and safety glasses during installation.

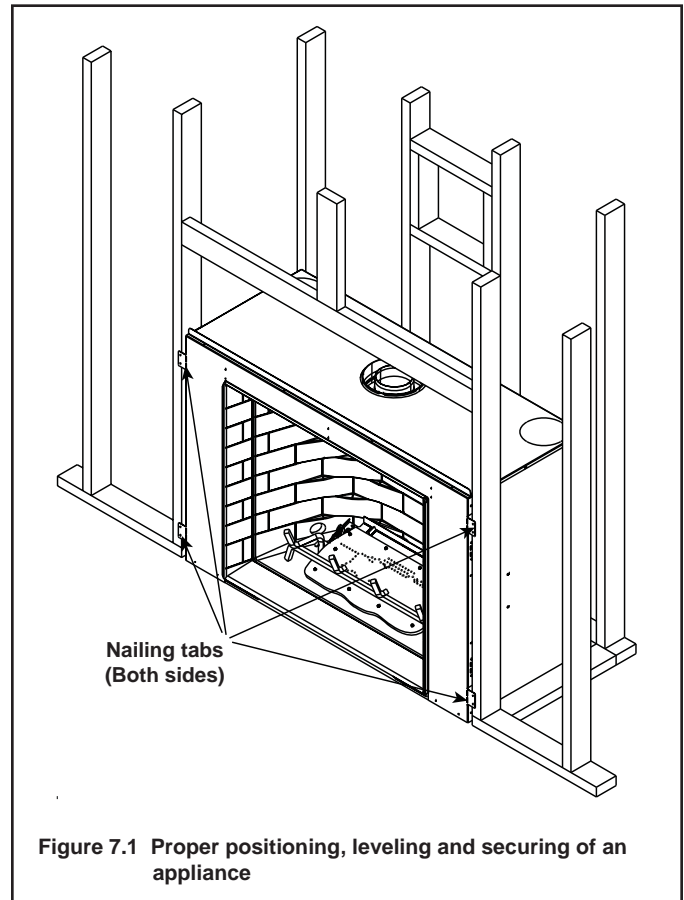


Figure 7.1 Proper positioning, leveling and securing of an appliance

⚠ WARNING

Fire Risk.

- ALWAYS maintain specified clearances around the appliance.
 - Do NOT notch into the framing around the appliance spacers.
- Failure to keep insulation, framing or other material away from the appliance may cause fire.



The diagram shows how to properly position, level, and secure the appliance (see Figure 7.1). Nailing tabs are provided to secure the appliance to the framing members.

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

NON-COMBUSTIBLE
FACING MATERIAL
(SUPPLIED ATTACHED
TO BACK OF APPLIANCE)

APPLY FASTENERS
FROM FASTENER PACKET
IN THESE AREAS

Figure 7.2 Attaching Non-combustible Facing Material

C. Installing Non-combustible Facing Material

WARNING



Fire Risk.

- Follow these instructions exactly.
- Facing materials must be installed properly to prevent fire.
- No materials may be substituted without authorization by Hearth & Home Technologies.

- Center and attach two top boards to the framing members. See Figure 7.2.
- Attach left and right side pieces to framing members.
- Use fasteners from fastener packet (in manual bag) in shaded areas.
- Use regular sheetrock screws in non-shaded areas.
- Use a wet or dry towel or soft brush to remove dust or dirt from facing material.
- Apply a non-combustible adhesive to attach tile, stone or other non-combustible finishing materials per manufacturer's instructions.

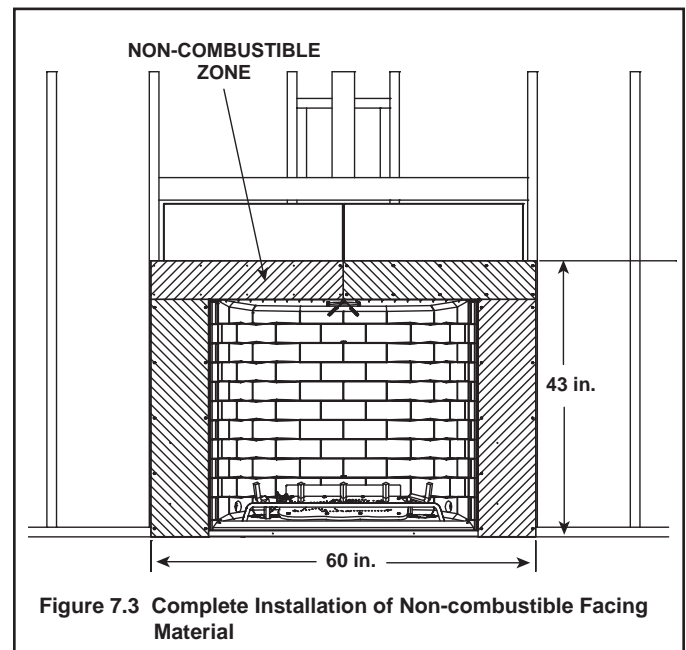


Figure 7.3 Complete Installation of Non-combustible Facing Material



8 Installing Vent Pipe

A. Assembly of Vent Sections



⚠ WARNING

Do not mix pipe, fittings or joining methods from different manufacturers.



⚠ WARNING

Fire Risk
Exhaust Fumes Risk
Impaired Performance of Appliance

- Overlap pipe slip sections at least 1-1/2 inches.
- Use pilot holes for screws.
- Screws must not exceed one inch long.
- Pipe may separate if not properly joined.

Attaching Vent to the Firebox Assembly



To attach the first pipe section to the collars, slide the male end of the inner vent of the pipe section over the inner collar on the firebox assembly. At the same time, slide the outer flue over the outer collar on the appliance. Push the pipe section into the appliance collar until all the lances (see Figure 8.1) have snapped in place. Tug slightly on the section to confirm it has completely locked into place.

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

For Installation into Commercial, multi-family (multi-level exceeding two stories) or high-rise applications: All pipe joints must be sealed with high temperature silicone, including the slip section that connects directly to the horizontal termination cap.

- Apply a bead of silicone sealant inside the female outer pipe joint prior to joining sections. See Figure 8.1
- Only outer pipes are sealed. Do not seal the inner flue. All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed in this manner, unless otherwise stated.

Note: The end of the pipe sections with the lances/tabs on it will face toward the appliance.



⚠ WARNING

Fire Risk
Explosion Risk

If slip section seals are broken during the removal of the termination cap, gas will leak and a fire or explosion may occur.

Do not break silicone seals on slip sections.

Assembling Pipe Sections

Insert the inner flue of section A into the flared inner flue of section B.

Start the outer flue of section A over the outer flue of section B (see Figure 8.2). **Note:** The end of the pipe sections with the lances/tabs on it will face towards the appliance.

Once both inner and outer flues are started, press section A onto section B firmly until all lances have snapped into place. Check to make sure they have snapped together (see Figure 8.3) and the seams are not aligned (see Figure 8.4). Tug slightly on section A to confirm it has completely locked into place. It is acceptable to use screws no longer than 1 inch 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 inch. If predrilling screw holes, do NOT penetrate inner pipe.

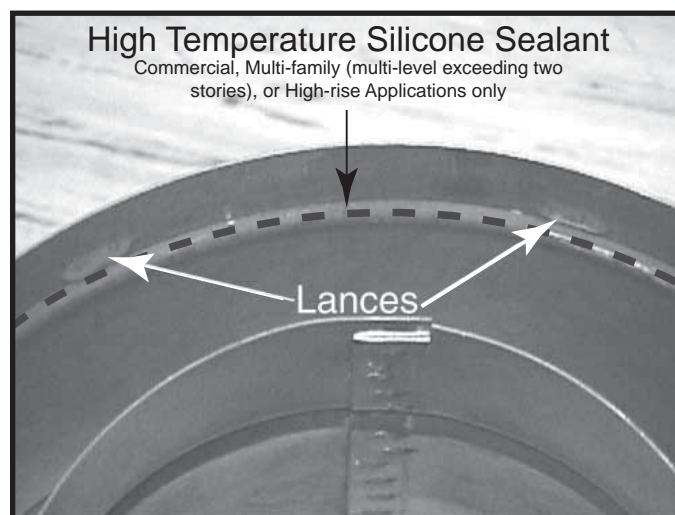


Figure 8.1 Lances

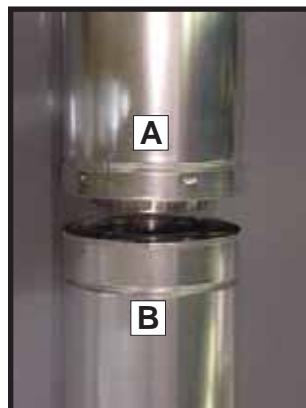
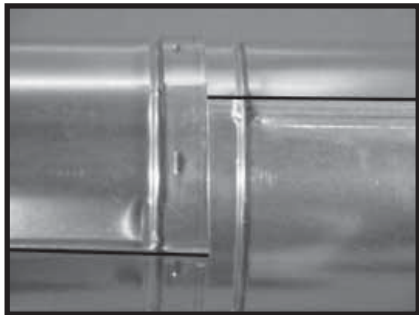


Figure 8.2

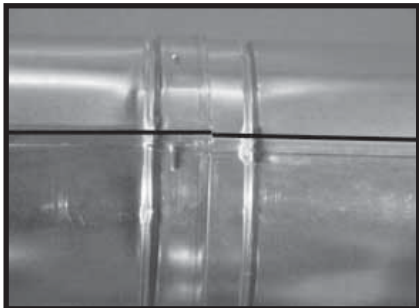


Figure 8.3

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



CORRECT



INCORRECT

Figure 8.4 Seams

Assembling Minimum Installations (MI) Sections

MI sections are non-unitized so that they can be cut to a certain length. Cut these sections to length from the non-expanded end (see Figure 8.5).

They can then be attached by first connecting the expanded end of the MI inner flue with the inner pipe from the adjacent pipe section and securing with three screws. The expanded portion of the MI inner flue must overlap completely with the unexpanded end of the adjacent pipe section.

The outer flue can then be inserted into the adjacent outer flue expanded end and attached to the next pipe section with three screws. The other end of the MI pipe section can then be attached by fitting another pipe section to it and snapping it together, as normal.

Assembling DVP-12A Slip Sections

The outer flue of the slip section should slide over the outer flue of the pipe section and into (inner flue) the last pipe section (see Figure 8.6).

Slide together to the desired length, making sure that a 1-1/2 inch outer flue overlap is maintained between the pipe section and slip section.

The pipe and slip section need to be secured by driving two screws through the overlapping portions of the outer flues using the pilot holes (see Figure 8.7).

This will secure the slip section to the desired length and prevent it from separating. The slip section can then be attached to the next pipe section.

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

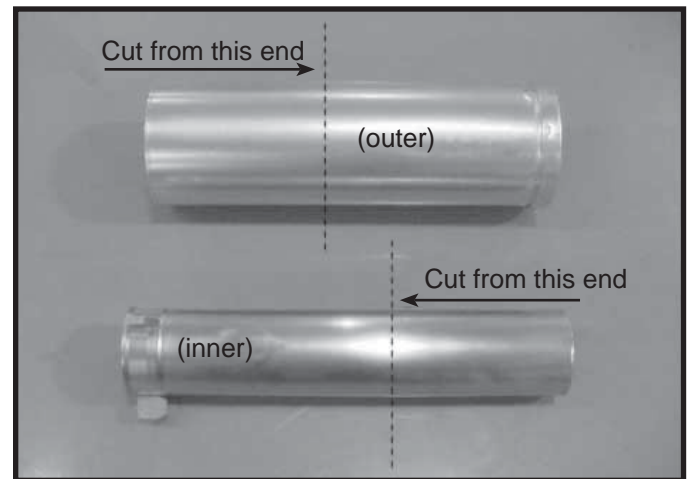


Figure 8.5

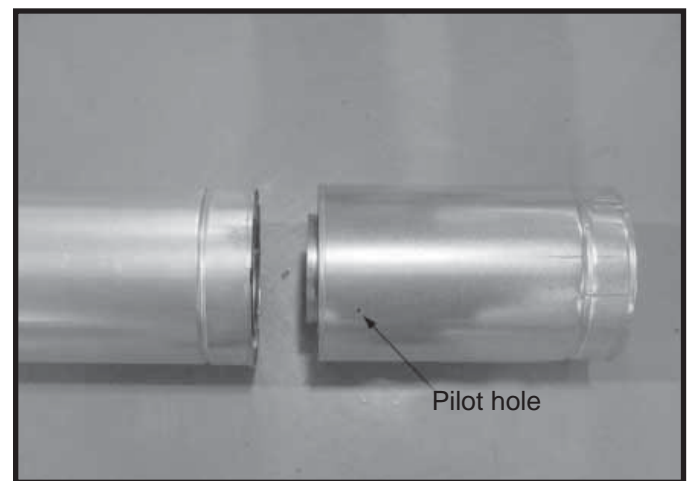


Figure 8.6 Slip Section Pilot Holes

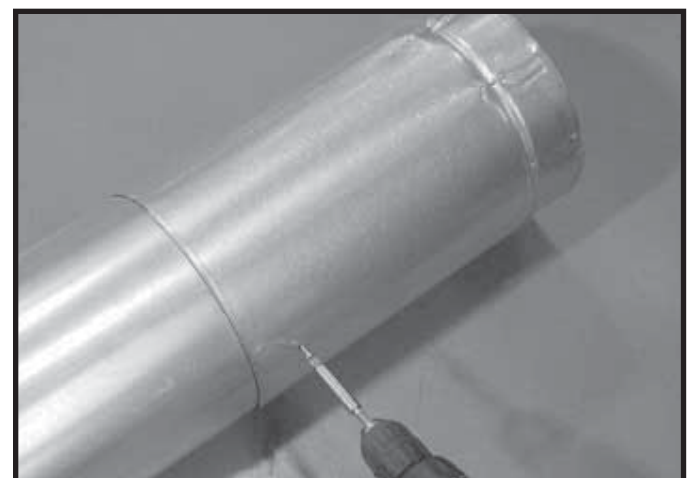


Figure 8.7 Screws into Slip Section

Securing the Vent Sections

Vertical Sections

Vertical sections of pipe must be supported every 8 feet after the 25 foot maximum unsupported rise. The vent support or plumber's strap (spaced 120° apart) may be used to do this (see Figure 8.8).

Horizontal Sections

Horizontal sections of vent must be supported every 5 feet with a vent support or plumber's strap.

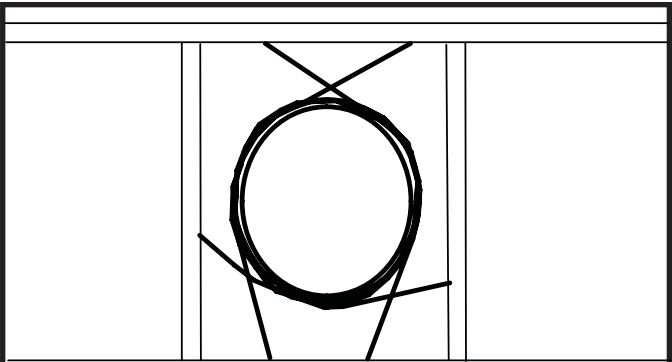


Figure 8.8 Securing Vertical Pipe Sections

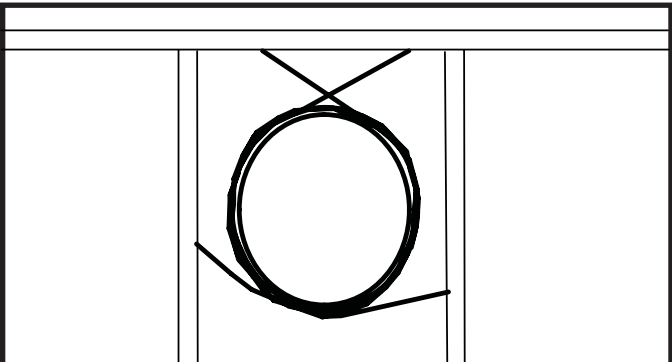


Figure 8.9 Securing Horizontal Pipe Sections

B. Disassembly of Vent Sections

To disassemble any two pieces of pipe, rotate either section (see Figure 8.10), so that the seams on both pipe sections are aligned (see Figure 8.11). They can then be carefully pulled apart.

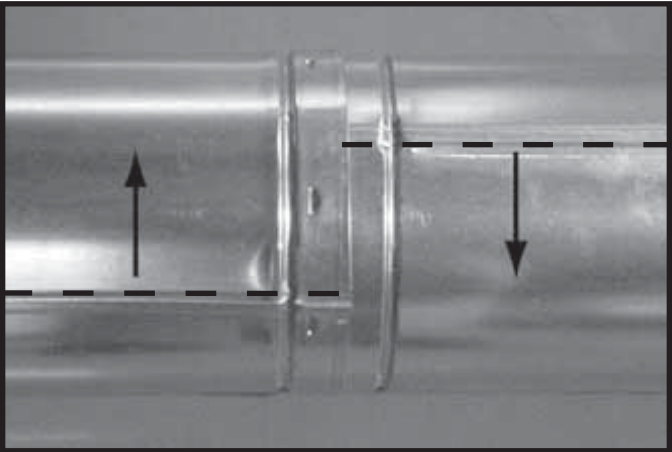


Figure 8.10 Rotate Seams for Disassembly

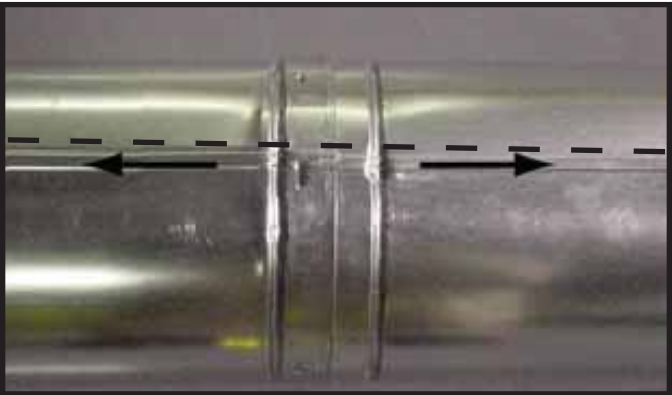





Figure 8.11 Align and Disassemble Vent Sections

 WARNING	
	Fire Risk. Explosion Risk. Combustion Fume Risk.
	Use vent run supports per installation instructions.
	Connect vent sections per installation instructions.
	<ul style="list-style-type: none">• Maintain all clearances to combustibles.• Do NOT allow vent to sag below connection point to appliance.
Improper support may allow vent to sag or separate.	

C. Installing Heat Shield and Horizontal Termination Cap

⚠ WARNING



Fire Hazard

Impaired performance of appliance

- Telescoping flue section of termination cap **MUST** be used when connecting pipe section to termination cap.
- Maintain a 1-1/2 inch minimum overlap on telescoping flue section of termination cap.

⚠ WARNING



Fire Risk

Exhaust Fumes Risk

Impaired Performance of Appliance



- Overlap pipe slip sections at least 1-1/2 inches.
- Use pilot holes for screws.
- Screws must not exceed 1 inch long.
- Pipe may separate if not properly joined.

Heat Shield Requirements for Horizontal Termination

For all horizontally vented appliances, a heat shield **MUST** be placed one inch above the top of the vent between the wall shield firestop and the base of the termination cap.

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 8.12.

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

Important Notice: Heat shields may not be field constructed.

The extended heat shield (DVP-HSM-B) may need to be cut to length. You will attach the cut heat shield to the existing cap heat shield or wall shield firestop heat shield (refer to Figure 8.12) using the supplied screws. You **MUST** maintain a 1-1/2 in. (38 mm) overlap of the extended heat shield and the existing shields (both ends of the heat shield). The small leg on the extended heat shield should rest on the top of the vent (pipe section) to properly space it from the pipe section.

Installing the Horizontal Termination Cap

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.

⚠ WARNING



Burn Risk

- Local codes may require installation of a cap shield to prevent anything or anyone from touching the hot cap.

Note: Where required, an exterior wall flashing is available. When penetrating a brick wall, a brick extension kit is available for framing the brick.

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.

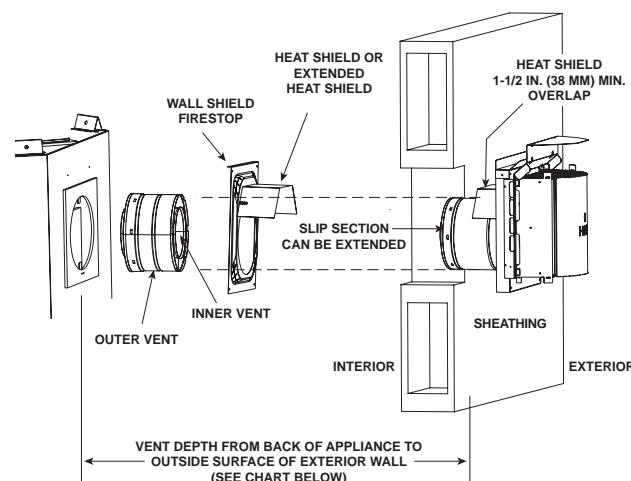


Figure 8.12 Venting through the Wall

Termination Cap Specification Chart (depth without using additional pipe sections)

Escape-42DV	DVP-TRAPK1 Top Vent Depth	DVP-TRAP1 Rear Vent Depth	DVP-TRAPK2 Top Vent Depth	DVP-TRAP2 Rear Vent Depth
	3-1/2 in. to 5-3/8 in.	N/A	6 in. to 10 in.	N/A
	DVP-HPC1 Top Vent Depth	DVP-HPC1 Rear Vent Depth	DVP-HPC2 Top Vent Depth	DVP-HPC2 Rear Vent Depth
	3-1/2 in. to 5-5/8 in.	N/A	5-3/4 in. to 9-3/4 in.	N/A

DVP-TRAP1 can adjust 1-1/2 in. (3-1/8 to 4-5/8)

DVP-TRAP2 can adjust 4 in. (5-3/8 to 9-3/8)

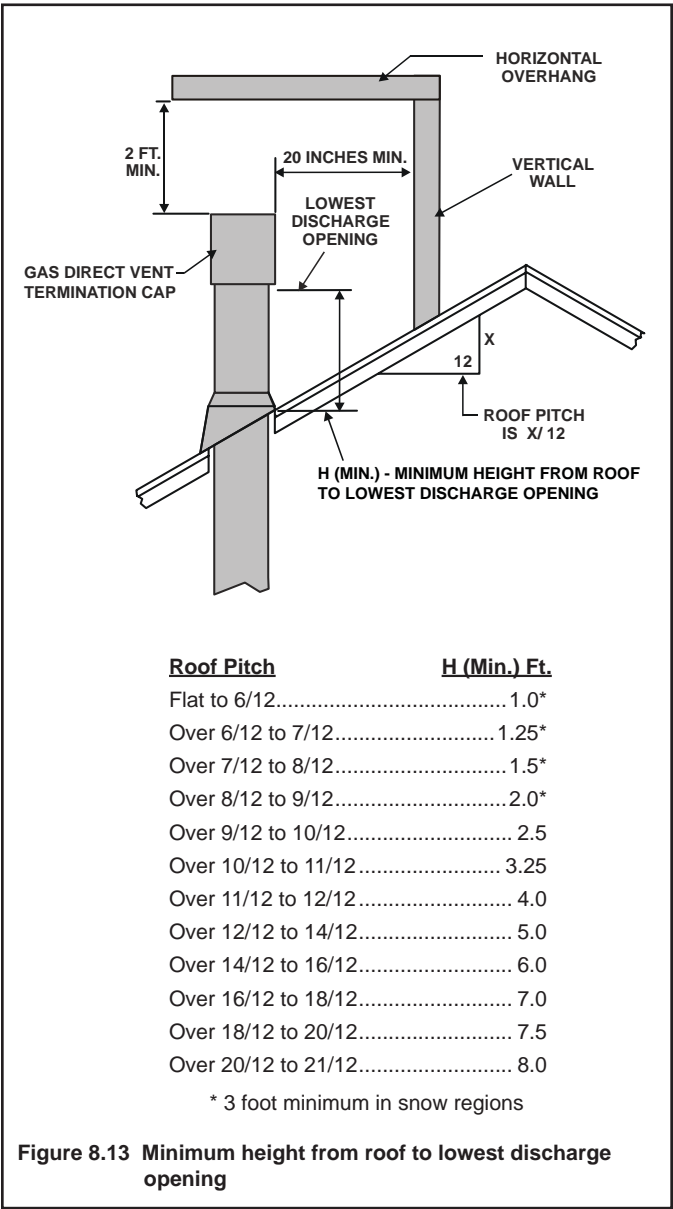
DVP-HPC1 can adjust 2-1/8 in. (4-1/4 to 6-3/8)



DVP-HPC2 can adjust 4-1/8 in. (6-3/8 to 10-1/2)

D. Installing Roof Flashing and Vertical Termination Cap

To install roof flashing see Figure 8.13.

For installation of vertical termination cap see minimum vent heights for various pitched roofs (see Figure 8.13).





⚠ WARNING

Fire Risk.
Explosion Risk.
Inspect external vent cap regularly.

- Ensure no debris blocks cap.
- Combustible materials blocking cap may ignite.
- Restricted air flow affects burner operation.

Caulk the gap between the roof flashing and the outside diameter of the pipe. Also caulk the perimeter of flashing that contacts roof surface as shown in Figure 8.15.

To attach the vertical termination cap, slide the inner collar of the cap into the inner flue of the pipe section and place the outer collar of the cap over the outer flue of the pipe section.

Secure with three screws into the outer flue. Secure the cap by driving the 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 8.14).

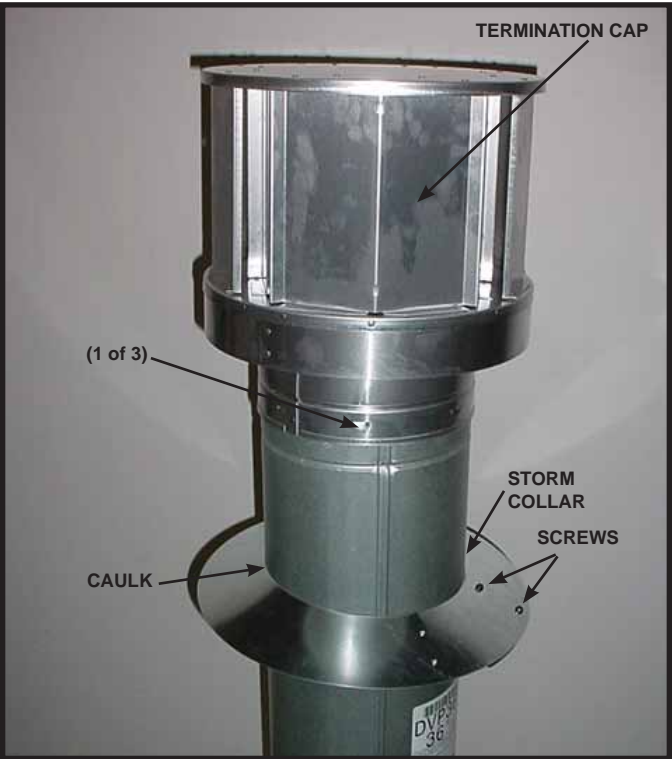


Figure 8.14

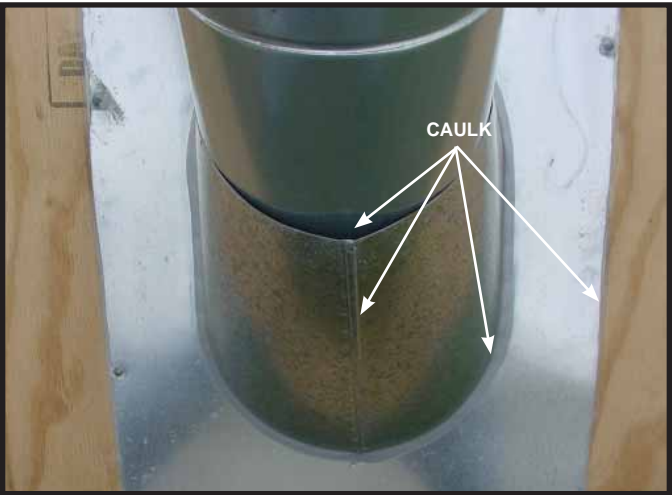


Figure 8.15

Assembling and Installing Storm Collar

	CAUTION
	<p>Sharp Edges</p> <ul style="list-style-type: none">• Wear protective gloves and safety glasses during installation. 

Connect both halves of the storm collar with two screws (see Figure 8.16).

Wrap the storm collar around the exposed pipe section and align brackets. Insert a bolt (provided) through the brackets and tighten nut to complete storm collar assembly (see Figure 8.17).

Slide the assembled storm collar down the pipe section until it rests on the roof flashing.

Caulk around the top of the storm collar (see Figure 8.14).



Figure 8.17 Assembling the Storm Collar Around the Pipe

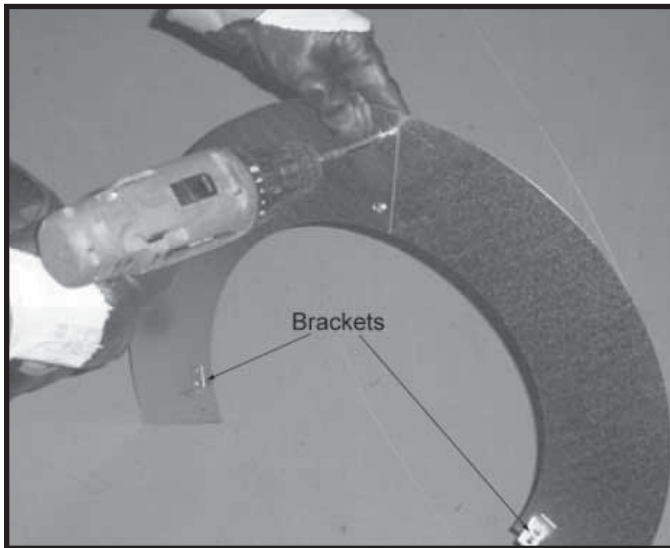


Figure 8.16 Assembling the Storm Collar

9 Gas Information

A. Fuel Conversions

Before making gas connections ensure that appliance being installed is compatible with the available gas type.

Any natural or propane gas conversions necessary to meet the appliance and locality needs must be made by a qualified technician using Hearth & Home Technologies specified and approved parts.

B. Gas Pressures

→ Proper input pressures are required for optimum appliance performance. Gas line sizing requirements need to be made following NFPA54.

⚠ WARNING



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

⚠ WARNING



- Verify inlet pressures.
- High pressure may cause overfire condition.
 - Low pressure may cause explosion.
 - Verify minimum pressures when other household gas appliances are operating.
- Install regulator upstream of valve if line pressure is greater than 1/2 psig.

Pressure requirements for appliance are shown in the table below. Minimum pressures must be met when other household gas appliances are operating.

Pressure	Natural Gas	Propane
Minimum inlet pressure	5.0 inches w.c.	11.0 inches w.c.
Maximum inlet gas pressure	14.0 inches w.c.	14.0 inches w.c.
Manifold pressure	3.5 inches w.c.	9.2 inches w.c.

C. Gas Connection

Note: Have the gas supply line installed in accordance with local building 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 inch (13 mm) T-handle manual shut-off valve and flexible gas connector are connected to the 1/2 inch (13 mm) control valve inlet.

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

Refer to **Reference Section 16** for location of gas line access in appliance.

Note: Gas line may be run from either side of the appliance provided the hole in the outer wrap does NOT exceed 2-1/2 inches in diameter and does not penetrate the firebox.



⚠ WARNING



- Gas Leak Risk
- Support control when attaching pipe to prevent bending gas line.

NOTE: The gap between supply piping and gas access hole may be caulked with high temperature caulk 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 appliance. Follow local codes.
- Incoming gas line should be piped into the valve compartment and connected to the 1/2 inch connection on the manual shutoff valve.

 WARNING	
	Fire or Explosion Hazard <ul style="list-style-type: none"> • Gas buildup during line purge may ignite. • Purge should be performed by qualified technician. • Ensure adequate ventilation. • Ensure there are no ignition sources such as sparks or open flames.



HIGH ALTITUDE INSTALLATIONS



U.L. Listed gas appliances are tested and approved without requiring changes for elevations from 0 to 2000 feet in the U.S.A. and Canada.

When installing this appliance at an elevation above 2000 feet, it may be necessary to decrease the input rating by changing the existing burner orifice to a smaller size. Input rate should be reduced by 4% for each 1000 feet above a 2000 foot elevation in the U.S.A., or 10% for elevations between 2000 and 4500 feet in Canada. If the heating value of the gas has been reduced, these rules do not apply. To identify the proper orifice size, check with the local gas utility.

If installing this appliance at an elevation above 4500 feet (in Canada), check with local authorities.

- A small amount of air will be in the gas supply lines. When first lighting 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	
	CHECK FOR GAS LEAKS Explosion Risk Fire Risk Asphyxiation Risk <ul style="list-style-type: none"> • Check all fittings and connections. • Do not use open flame. • After the gas line installation is complete, all connections must be tightened and checked for leaks with a commercially-available, non-corrosive leak check solution. Be sure to rinse off all leak check solution following testing.
	Fittings and connections may have loosened during shipping and handling.

 WARNING	
	Fire hazard. Do NOT change the valve settings. <ul style="list-style-type: none"> • This valve has been preset at the factory. • Changing valve settings may result in fire hazard or bodily injury.

10 Electrical Information


A. Recommendation for Wire

This appliance requires 110-120 VAC be wired to the factory installed junction box.

NOTE: 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 C221.1**.

- • 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.

B. Connecting to the Appliance

	<p>⚠ WARNING</p> <p>Wire 110V to electrical junction box. Do NOT wire 110V to valve. Do NOT wire 110V to wall switch.</p> <ul style="list-style-type: none">• Incorrect wiring will damage millivolt valves.• Incorrect wiring will override IPI safety lockout and may cause explosion.
--	--

This appliance comes standard with a multi-function wall switch installed in the unit. A bag containing the wall switch, cover plate and flame control solenoid is located in the manual bag assembly on the right side of the unit.

Follow the “Determine Location” and “Wiring the Wall Switch” sections of the WSK-MLT instructions.

Install the flame control solenoid by following Steps 5 - 11 in the “Installing the Control Box” section of the WSK-MLT instructions.

Also carefully follow the “Setting Flame Height/Manifold Pressure” section of the included instructions to properly set the valve pressure. Operating instructions are also included in the WSK-MLT instructions.

C. Intellifire Ignition System Wiring

This appliance requires a 110 VAC supply to the appliance junction box for operation. A wiring diagram is shown in Figure 10.2.

This appliance is equipped with an Intellifire control valve which operates on a 3 volt system.

This appliance is supplied with a battery pack and a 3 volt AC transformer, which requires the installation of the supplied junction box. It is highly recommended that the junction box be installed at this time to avoid reconstruction.

The battery pack requires two D cell batteries (not included). Batteries cannot be placed in the battery pack while using the 3 volt transformer. Batteries shouldn't be placed into the holder until needed. The higher temperatures will shorten their life.

CAUTION

Remove refractory panels and mesh when operating appliance using the battery pack or damage to components may occur.

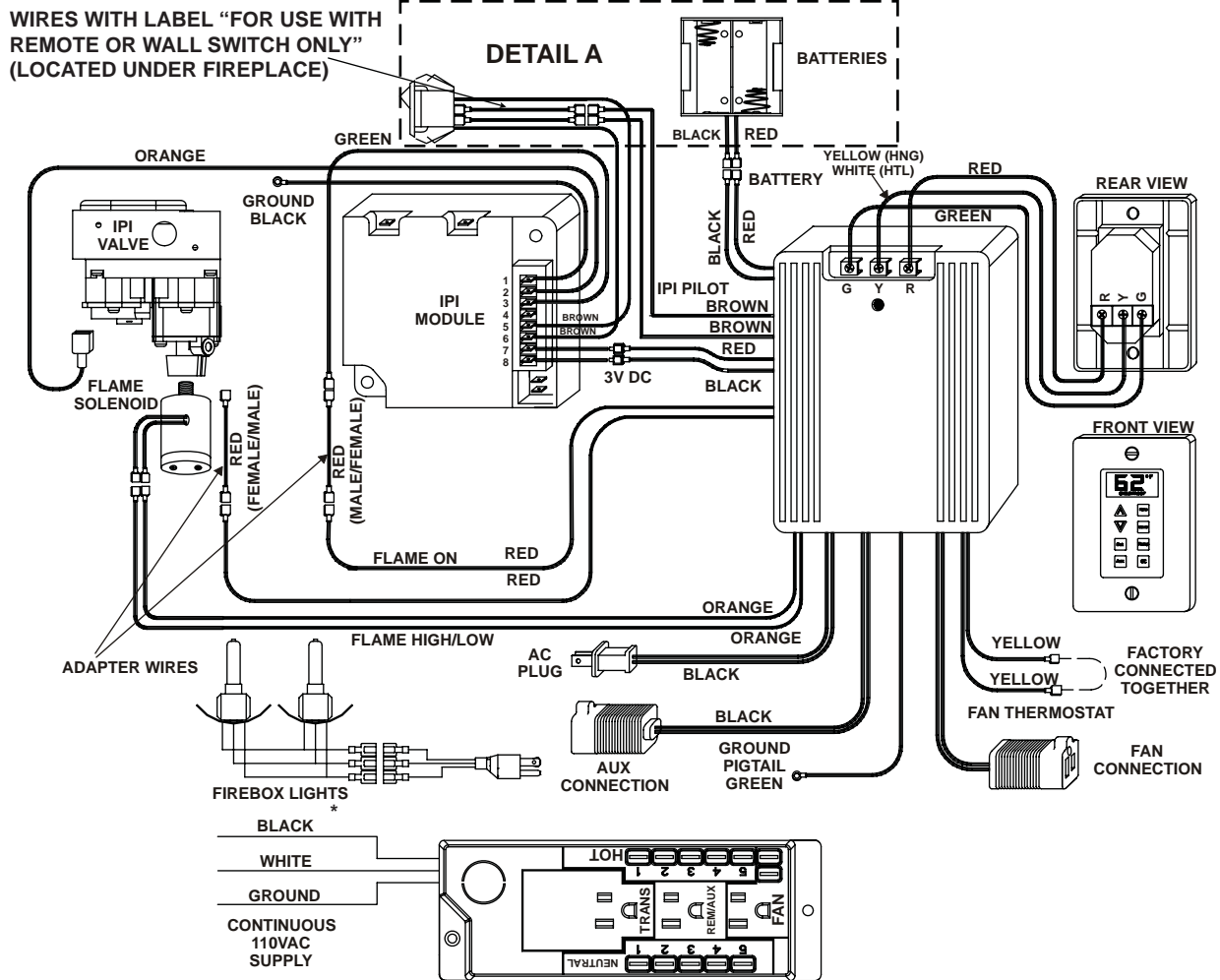
Use battery pack to operate appliance only in a power failure situation.

CAUTION

Battery polarity must be correct or module damage will occur.

Optional Accessories Requirements

Wiring for optional accessories should be done now to avoid reconstruction.



NOTE: BATTERY PACK AND SWITCH ARE LOCATED IN THE MANUAL BAG. THE BATTERY PACK IS TO BE USED ONLY IN THE CASE OF A POWER OUTAGE.

NOTE: APPLIANCE WILL NOT OPERATE UNLESS PROPERLY GROUNDED. *MUST ORDER PLUG-ADP SEPARATELY IF USING THE HEAT-ZONE.

NOTE: IGNITION MODULE, VALVE, PILOT AND WALL SWITCH OPERATE ON 3 VOLTS.

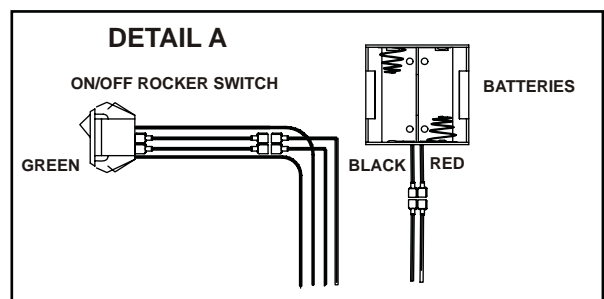


Figure 10.1 Intellifire Pilot Ignition (IPI) Wiring Diagram

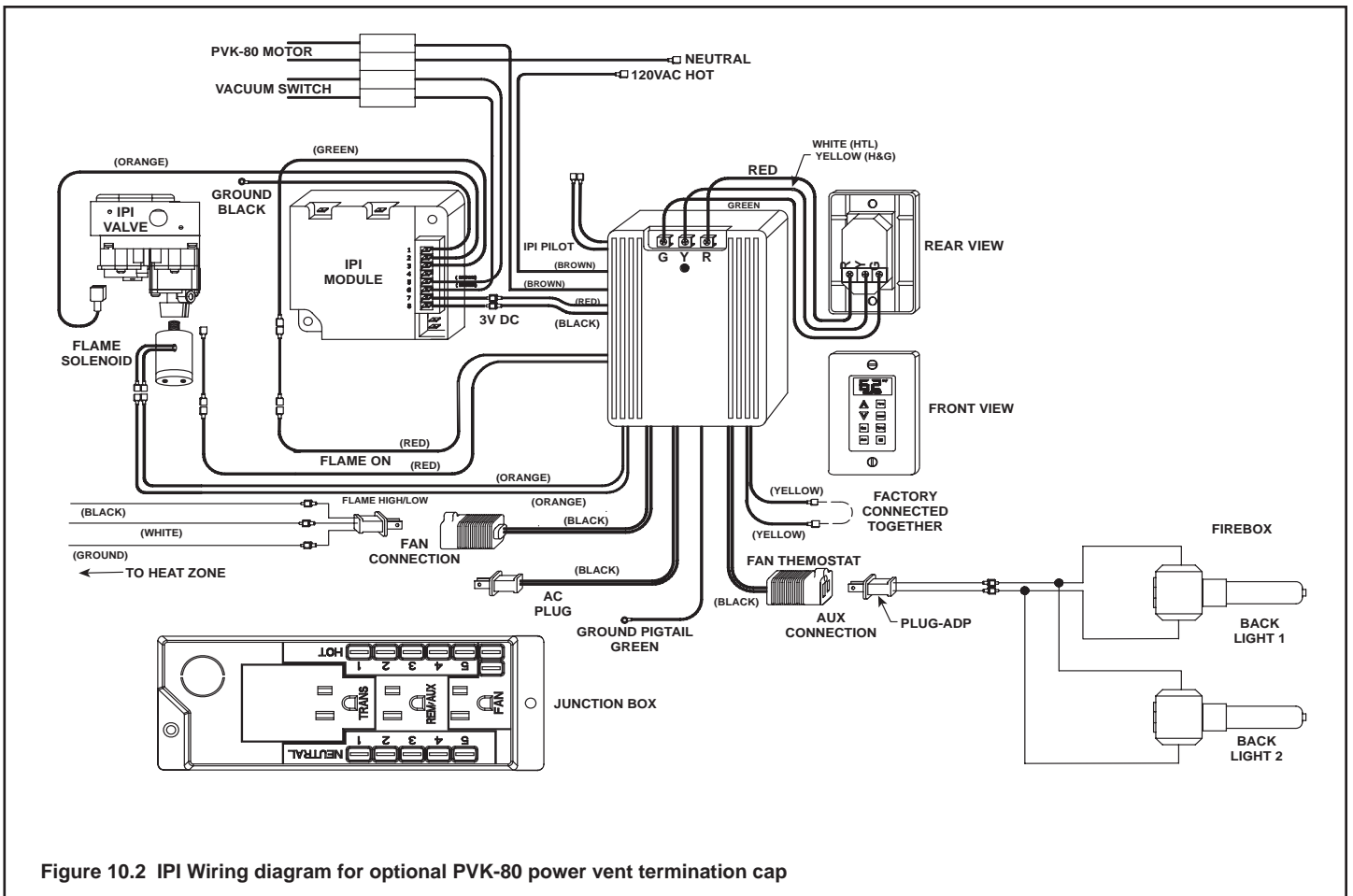


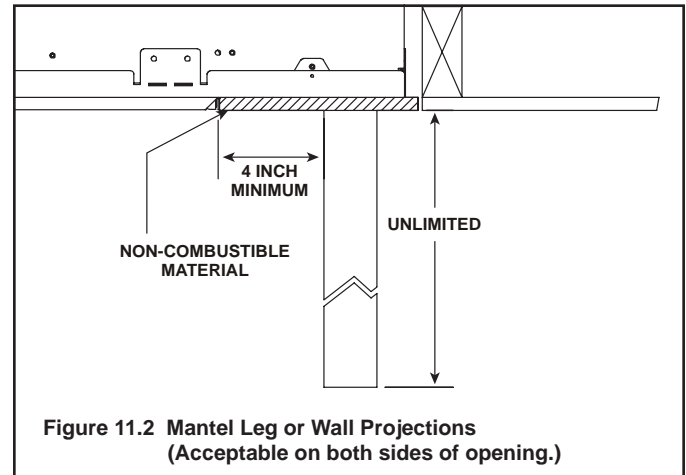
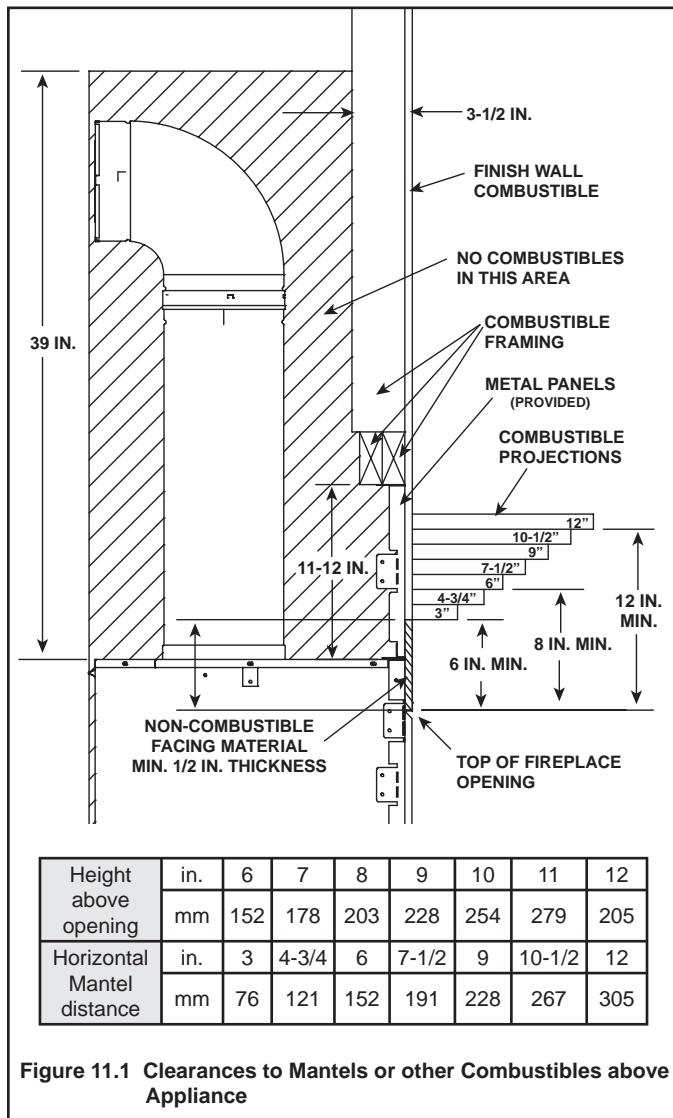
Figure 10.2 IPI Wiring diagram for optional PVK-80 power vent termination cap

11 Finishing

A. Mantel Projections

Figure 11.1 shows the minimum vertical and corresponding maximum horizontal dimensions of appliance mantels or other combustible projections above the top front edge of the appliance.

- Appliance front may be covered with combustible materials up to 4 inches from the opening sides and 6 inches from the opening top.
- Non-combustible materials must be used in the 4 inch zone on each side and 6 inches above the fireplace opening (see Figure 11.3).
- A side wall may be placed 4 inches from the opening (see Figure 3.1).



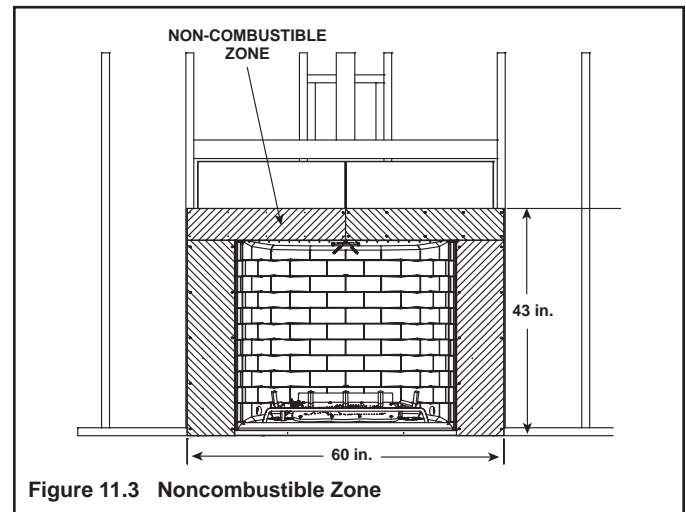
B. Facing Material

⚠ WARNING



Fire Risk.

- Facing and/or finishing material must never overhang into the glass opening.
- Finishing materials must not interfere with:
 - Operation of louvers or doors.
 - Access for service.



⚠ WARNING



Risk of Fire

- Non-combustible clearances **MUST** be maintained.
- Sheetrock, wood or other combustibles must **NOT** be used as sheathing or facing in the non-combustible zone.
- See **Section 11** for proper clearances.
- See **Section 1** for combustible/non-combustible definitions.





⚠ WARNING

Fire Risk.
Finish all edges and fronts to clearances and specifications listed in manual.

- Finishing material must NEVER pass the 1/2 inch metal edge around opening and overhang into glass opening.
- Only non-combustible material (using 300° F. Minimum adhesive, if needed) can be applied as facing to fireplace surround in first 4 inches from opening sides and 6 inches above the opening.
- Install combustible materials only up to specified clearances on top, front and side edges.
- Seal joints between the finished wall and appliance top and sides using only a 300° F minimum sealant.

C. Finishing Materials Requirements

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 fire screen. This is not required.

- Use the two metal panels shipped with fireplace.
- Unscrew the four screws holding two panels together.
- Slide the two tapered tabs on bottom of each panel into slots of top surround.
- Secure panels with sheetmetal screws previously removed from panels.

The metal panels will cover the width of appliance and height of appliance to header board (11-1/2 inch).

- Cover entire face of appliance with non-combustible finishing material, such as brick, stone or tile. See Figures 7.2, 7.3 and 11.4.
- The finishing material must NEVER pass the 1/2 inch metal edge around the opening and overhang into the glass opening.

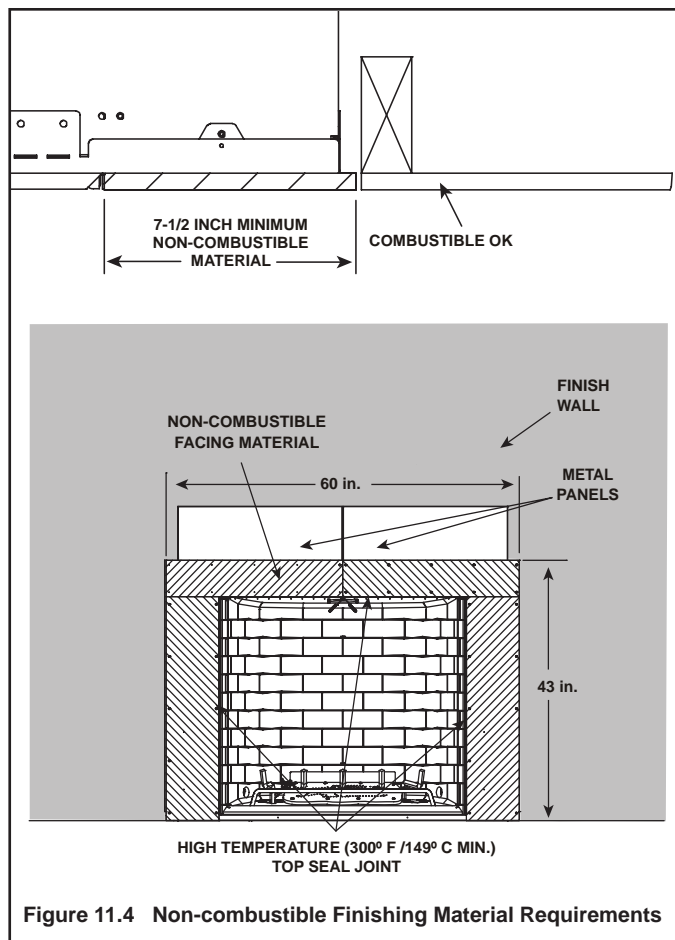


Figure 11.4 Non-combustible Finishing Material Requirements

12 Appliance Setup

A. Remove Shipping Materials



Remove shipping materials from inside or underneath the firebox.

B. Clean the Appliance


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

C. Accessories

Install approved accessories per instructions included with accessories. See Service Parts List for appropriate accessories. Refer to **Section 16**.

	⚠ WARNING
	<p>Shock or fire risk.</p> <p>Use ONLY optional accessories approved for this appliance.</p> <ul style="list-style-type: none">• Using non-listed accessories voids warranty.• Using non-listed accessories may result in a safety hazard.• Only Hearth & Home Technologies approved accessories may be used safely.

D. Ember Placement

⚠ WARNING	
	<p>Explosion Risk.</p> <ul style="list-style-type: none">• Follow ember placement instructions in manual.• Do NOT place embers directly over burner ports.• Replace ember material annually. <p>Improperly placed embers interferes with proper burner operation.</p>

Placing the Ember Material

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

- Remove the ash lip that is located in front of the glass.
- Remove the side panels located in front of the glass.
- Remove the pull mesh firescreen by unhooking from the fireplace.
- Pull and release the six glass latches (3 per side) located on the sides of the glass frame.
- Grasping the upper lip with one hand and the lower lip with the other, pull the bottom of the glass out first. Guide the bottom while letting the top drop down under the top of the opening (**see Section 12.F Glass Assembly**).
- There are two types of ember shipped with the unit. Embers for the burner surface and Mystic Embers for the floor of the unit.
- Do **NOT** place embers between log #3 and log #4. They may disrupt the flames and are not visible.
- Place Mystic Embers on the floor of unit. Use Mystic Embers to hide the pilot wires on left side of the burner.

CAUTION
Do NOT place Mystic Embers over lighted area of lens. Lens may melt if covered.

- Save the remaining ember materials for use during fireplace servicing.

E. Positioning the Logs

Log Assembly: LOGS-Escape-42

If the gas logs have been factory installed they should not need to be positioned. If the logs have been packaged separately, refer to the following instructions.

NOTE: If sooting occurs, the logs may need to be repositioned slightly to avoid excessive flame impingement.

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

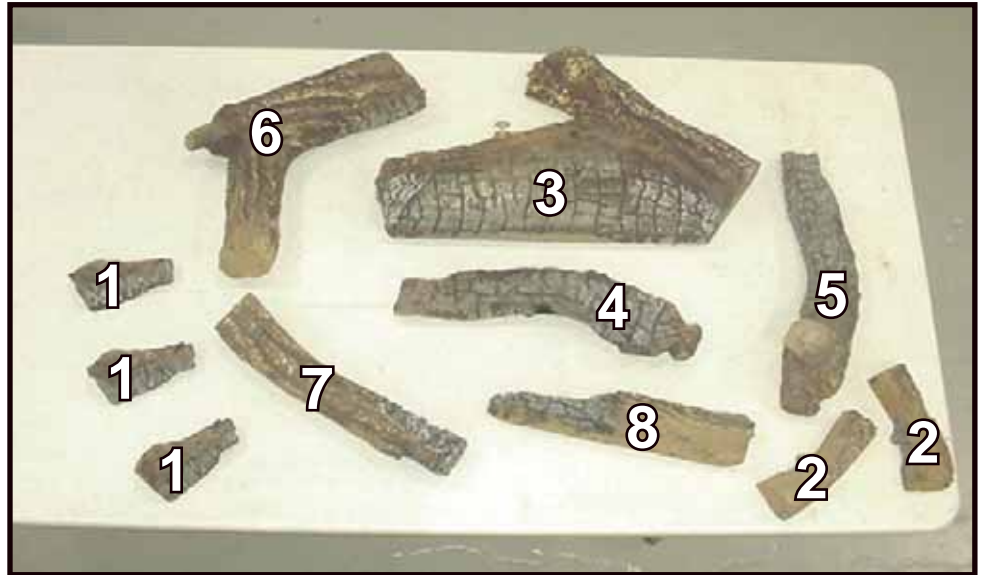


Figure 12.1

Step 1.

Note: If bulb and orange lens are already installed, proceed to Step 2.

Remove the bulb from its packaging and locate the sockets installed in the square cut outs in the firebox floor. The bulbs contacts push into the two small holes in the socket top, as shown.

Place the framed orange lens on top of the firebox floor covering the bulb as shown. The four tabs on the lens frame go into the square cut out to help locate the lens.



Figure 12.2



Figure 12.3

2052-925B

Step 2.

Place the grate onto the burner. The back of the right tine drops into the hole on the right rear of the burner. Line the grate up so it is parallel with the front of the firebox. Be sure to push the grate all the way down to the floor.



LOG #1

(SRV750-706) (Three):

There are quantity three (3) of log #1. Place one of the logs on the floor of the fireplace on the left side of the grate between the firebox and the left grate tine. Place the second log on the right side of the burner between the burner and the right grate tine. The second log can be slightly resting on the edge of the burner. Place third log on top of the left side of the burner. The burner ports will be around the log. Do NOT cover any burner ports with the log.



LOG #2 (SRV569-705) (Two):

There are quantity 2 (two) of log #2. Place one of the logs on the right side of the burner on the floor (see Figure A). The log will be in front of the orange Kapton lens.

Figure A



Place the right end of the second log on the pilot bracket. The left end of the log should rest on the base of the firebox (see Figure B).

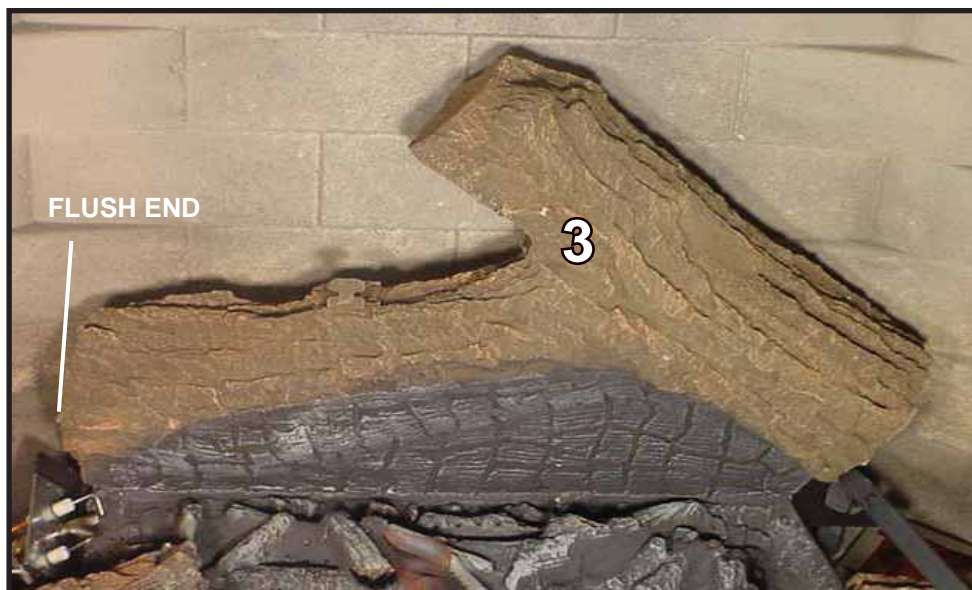
Figure B



LOG #3

(SRV2052-701):

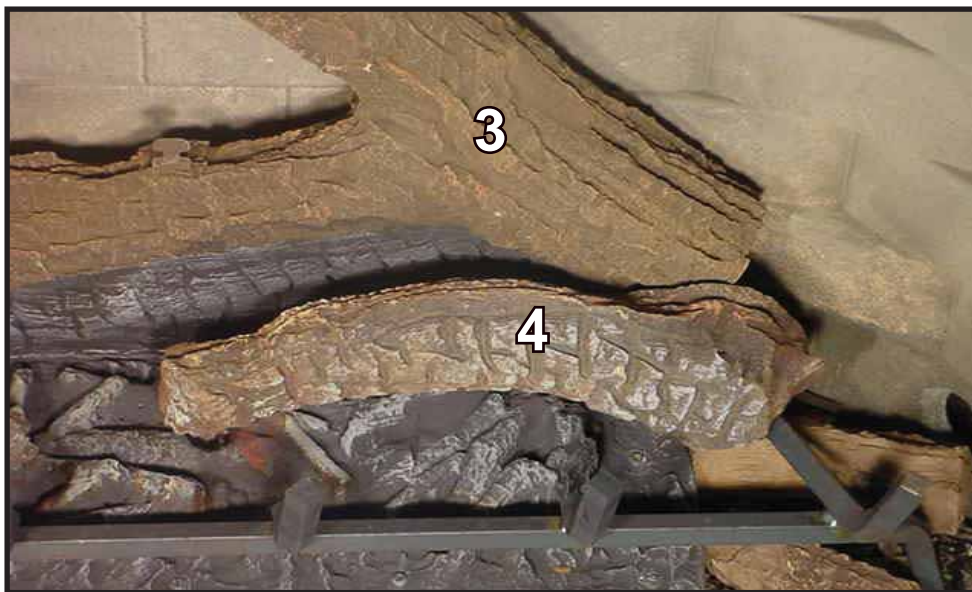
Place log #3 onto the back of the burner. The log sits on top of the burner surface. The back of the log is pushed up against the back metal wall of the burner and the left end of the log is flush with the left edge of the metal wall.



LOG #4

(SRV2012-162):

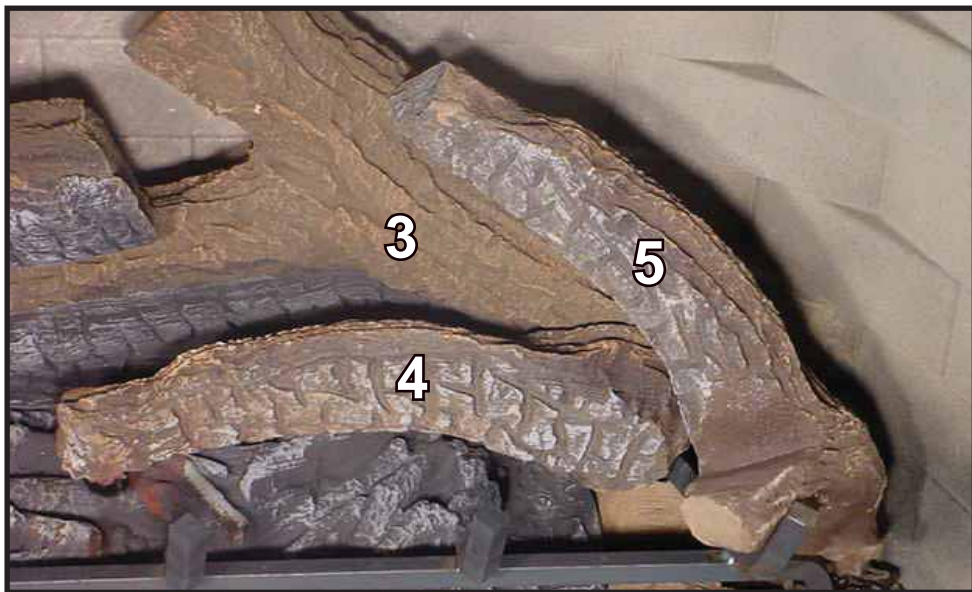
Place log #4 on top of the burner in front of log 3. The triangle shaped groove in the bottom fits onto the right grate tine. The right side is pushed back until it touches the back log. The left end of the log is moved back until it almost covers the burner ports behind it. Do NOT cover the burner ports.



LOG #5

(SRV2012-163):

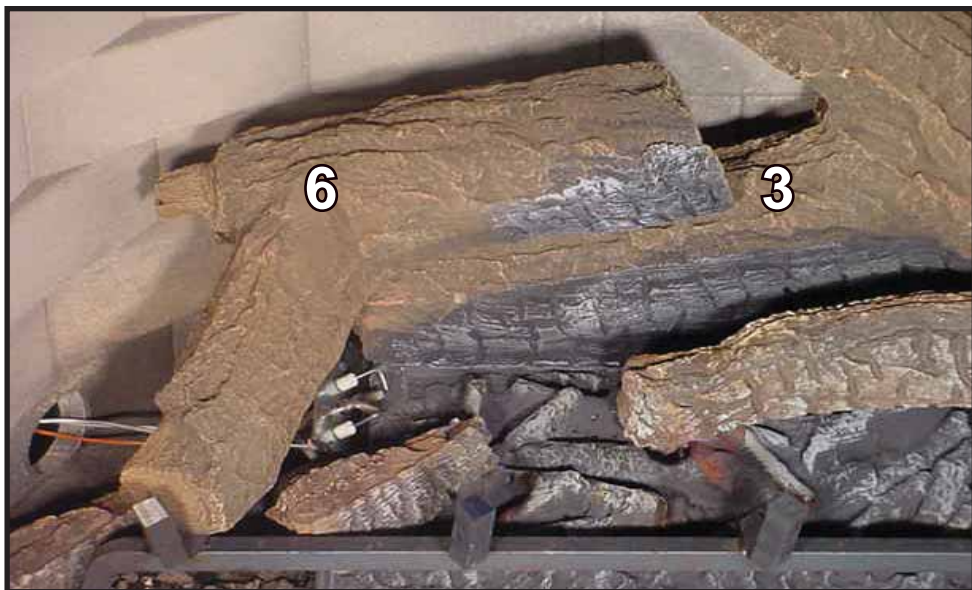
Place log #5 in front of log #4. The groove in the bottom end of the log fits into the right vertical grate tine. The back of the log rests in the small flat spot on top of log #3.



LOG #6

(SRV2052-702):

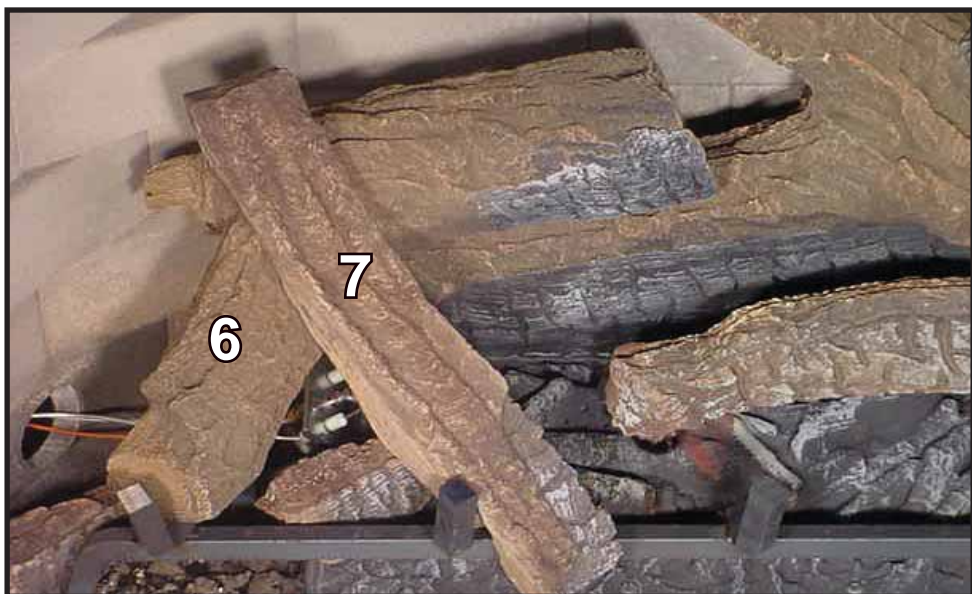
Place log #6 on the left side of the grate with the groove on the end of the log fitting into the vertical left grate tine. The other end has a slot in the bottom side. This slot fits over the metal tab in log #3.



LOG #7

(SRV2012-165):

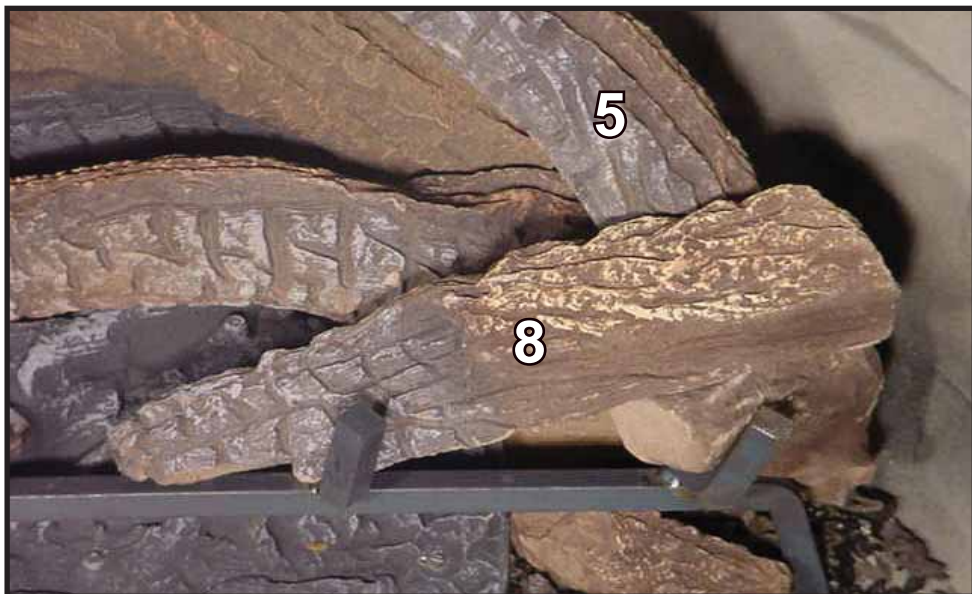
Place log #7 on top of log #6. The groove in the front side of the log fits into the second vertical tine from the left of the grate. The center of the log rests in the flat spot on log #6.



LOG #8

(SRV2012-166):


Place log #8 on top of log #5. The flat bottom of log #8 sits on the large flat area of log #5. The burned end of log #8 rests on the second vertical tine from the right of the grate. The tine fits on the burned out groove on the left end of the log.

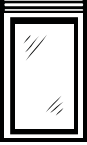


Final Step:

Place MYSTIC EMBERS generously around on the floor of the fireplace. Do NOT put Mystic embers on the burner surface around the ports. Place embers around the pilot wires to disguise the wires from view.

F. Glass Assembly

**WARNING**



Handle glass doors with care.

- Inspect the gasket to ensure it is undamaged.
- Inspect the glass for cracks, chips or scratches.
- Do NOT strike, slam or scratch glass.
- Do NOT operate appliance with glass door removed, cracked, broken or scratched.
- Replace glass door assembly as a complete appliance.

Removing Glass Assembly

- Remove the ash lip that is located in front of the glass.
- Remove the side panels located in front of the glass.
- Remove the pull mesh firescreen by unhooking from the fireplace.
- Pull and release the six glass latches (3 per side) located on the sides of the glass frame.
- Grasping the upper lip with one hand and the lower lip with the other, pull the bottom of the glass out first. Guide the bottom while letting the top drop down under the top of the opening (see Figure 12.13).

Replacing Glass Assembly

Replace the glass door on the appliance. Pull out and latch the six glass assembly latches into the groove on the glass frame.

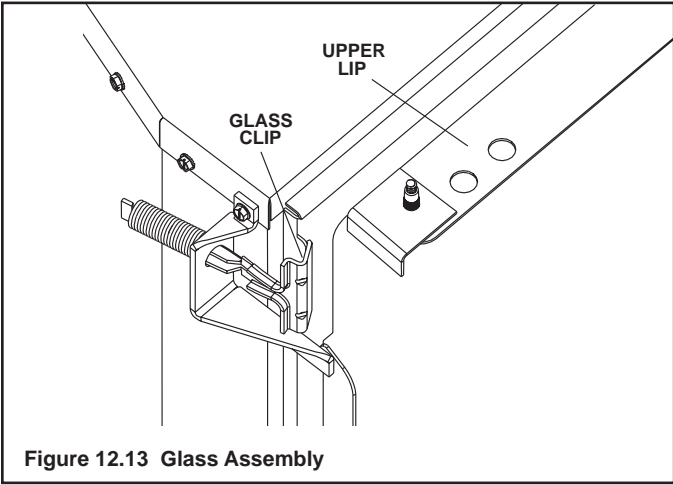


Figure 12.13 Glass Assembly

G. Screen Mesh

The pull-type firescreen hangs on the three hanger brackets located above the glass.

H. Air Shutter Setting

This appliance has an adjustable air shutter (which controls the primary air) factory set for the minimum vertical vent run. If your installation has more than the minimum required vertical vent length, adjustment of the air shutter may be necessary to obtain optimal flame appearance. **This should be adjusted by a qualified installer at the time of installation.**

Shutter Settings

	NG	LP
ESCAPE42-DV	3/8 in.	N/A
ESCAPE42-DVLP	N/A	11/16 in.

13 Operating Instructions

A. Before Lighting Appliance

This appliance has an Intellifire ignition system.

Before operating this appliance have a qualified technician:

- Remove all shipping materials from inside the firebox.
- Review proper placement of logs and embers.
- 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.
- Ensure that the flow of combustion air is not obstructed (vent caps).



⚠ WARNING

Glass door must be in place when appliance is operating.

Risk of:

- Combustion Fumes
- Fire

Do NOT operate appliance with glass door removed.

- Open viewing glass for servicing only.
- Glass door MUST be in place and sealed before operating appliance.
- Only use glass door certified for use with appliance.
- Glass replacement should be done by qualified technician.

⚠ 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.

⚠ WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to the owner's information manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

⚠ WARNING

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.

B. Lighting Appliance

IPI Ignition

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

WARNING:

DO NOT CONNECT 110 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.

CAUTION:

Hot while in operation. Do not touch. Keep children, clothing, furniture, gas-line and other liquids having flammable vapors away.

Do not operate the appliance with panel(s) removed, cracked or broken. Replacement of the panel(s) 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.

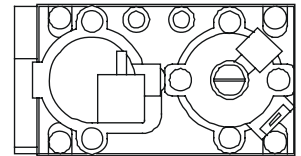
Also Certified for Installation in a Bedroom or a Bedsitting Room.

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

LIGHTING INSTRUCTIONS (IPI)

1. Turn off all electric power to the appliance.
2. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.

**GAS
VALVE**



3. 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 don't smell gas, go to next step.
4. Turn on all electric power to the appliance.
5. To light the burner, flip the ON/OFF switch to the "ON" position. (The ON/OFF switch may include a wall switch if so equipped).
6. If the appliance will not operate, follow the instructions "To Turn Off Gas to Appliance" and call your service technician or gas supplier.

TO TURN OFF GAS TO APPLIANCE

1. Turn off all electric power to the appliance if service is to be performed.
2. Flip ON/OFF switch to the "OFF" position.

593-913D

Final inspection by _____

C. After Appliance is Lit

Initial Break-in Procedure

When you light the appliance, you may notice that it produces heat which does have an associated odor or smell. If you feel this odor is excessive it may require the initial three to four hour continuous burn on high followed by a second burn up to 12 hours to fully drive off any odor from paint and lubricants used in the manufacturing process. Condensation of the glass is normal.

NOTE: The appliance should be run three to four hours on the initial start-up. Turn it off and let it cool completely. Remove and clean the glass. Replace the glass and run the appliance for an additional 12 hours. This will help to cure the products used in the paint and logs.

During this break-in period it is recommended that some windows in the house be opened for air circulation. This will help avoid setting off smoke detectors, and help eliminate any odors associated with the appliance's initial burning.

WARNING



Fire Risk.
High Temperatures.
Keep combustible household items away from appliance.
Do NOT obstruct combustion and ventilation air.

- Do NOT place combustible items on top of or in front of appliance.
- Keep furniture, draperies away from appliance.

CAUTION

- Prevent accidental appliance operation when not attended.
- Unplug or remove batteries from remote control if absent or if appliance will not be used for an extended period of time.
- Property damage possible from elevated temperatures.

CAUTION

Smoke and odors released during initial operation.

- Open windows for air circulation.
- Leave room during initial operation.
- Smoke may set off smoke detectors.

Smoke and odors may be irritating to sensitive individuals.

WARNING



Fire Hazard.

Keep combustible materials, gasoline and other flammable vapors and liquids clear of appliance.

- Do NOT store flammable materials in the appliance's vicinity.
- Do NOT use gasoline, lantern fuel, kerosene, charcoal lighter fluid or similar liquids in this appliance.
- Combustible materials may ignite.

D. Frequently Asked Questions

ISSUE	SOLUTIONS
Condensation on the glass	This is a result of gas combustion and temperature variations. As the appliance warms, this condensation will disappear.
Blue flames	This is a result of normal operation and the flames will begin to yellow as the appliance is allowed to burn for 20 to 40 minutes.
Odor from appliance	When first operated, this appliance may release an odor for the first several hours. This is caused by the curing of the paint and the burning off of any oils remaining from manufacturing. Odor may also be released from finishing materials and adhesives used around the appliance.
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 to remove deposits left by oils from the manufacturing process. A non-abrasive cleaner such as gas fireplace 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 appliance.
Is it normal to see the pilot flame burn continually?	In an Intellifire ignition system it is normal to see the pilot flame, but it should turn off when ON/OFF is turned off. In a standing pilot system the pilot will always stay on.

14 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 person 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.

A. Intellifire Ignition System

Symptom	Possible Cause	Corrective Action
1. 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. Reversed wires at the module may cause system to make sparking noise, but spark may not be present at pilot hood.
	b. Loose connections or electrical shorts in the wiring.	Verify no loose connections or electrical shorts in wiring from module to pilot assembly. Rod closest to pilot hood should be ignitor. Verify connections underneath pilot assembly are tight; also verify connections 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 ignitor to pilot hood. The gap should be approximately .17 inch or 1/8 inch.
	d. Faulty module.	Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire "I" from module. Place ON/OFF Rocker switch or wall switch in ON position. Hold ground wire about 3/16 inch away from "I" terminal on module. If there is no spark at "I" terminal module must be replaced. If there is a spark at "I" terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode.
2. Pilot won't light, there is no noise or spark.	a. Transformer installed correctly.	Verify that transformer is installed and plugged into module. Check voltage of transformer under load at spade connection on module with ON/OFF switch in ON position. Acceptable readings of a good transformer are between 3.2 and 2.8 volts AC.
	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.
	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.
	e. Faulty module.	Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire "I" from module. Place ON/OFF Rocker switch or wall switch in ON position. Hold ground wire about 3/16 inch away from "I" terminal on module. If there is no spark at "I" terminal module must be replaced. If there is a spark at "I" terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode.
3. 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 sensor rod.	Verify all connections to wiring diagram in manual. Verify connections underneath pilot assembly are tight. Verify connections 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 sensor rod.	Verify that flame is engulfing sensor rod. If the pilot assembly does not have a ground strap, consider installing one to increase flame rectification. Verify correct pilot orifice is installed and inlet gas specifications. Flame carries rectification current, not the gas. If flame lifts from pilot hood, the circuit is broken. A wrong orifice or too high an inlet pressure can cause pilot flame to lift. The sensor rod may be contaminated. Clean sensor rod with emery cloth.

Intellifire Ignition System - (continued)

Symptom	Possible Cause	Corrective Action
3. (Continued) 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.)	c. Module is not grounded.	Verify that module is securely grounded to metal chassis of appliance. Verify that wire harness is firmly connected to module.
	d. Damaged pilot assembly or dirty sensor rod.	Verify that ceramic insulator around the sensor rod is not cracked, damaged, or loose. Verify connection from sensor rod to white sensor wire. Clean sensor rod with emery cloth to remove any contaminants that may have accumulated on sensor rod. Verify continuity with a multimeter with ohms set at lowest range.
	e. Faulty module.	Turn ON/OFF rocker switch or wall switch to OFF position. Remove ignitor wire "I" from module. Place ON/OFF Rocker switch or wall switch in ON position. Hold ground wire about 3/16 inch away from "I" terminal on module. If there is no spark at "I" terminal module must be replaced. If there is a spark at "I" terminal, module is fine. Inspect pilot assembly for shorted sparker wire or cracked insulator around electrode.
4. Pilot sparks, but Pilot will not light.	a. Correct gas supply.	Verify that incoming gas line ball valve is "open". Verify that inlet pressure reading is within acceptable limits, inlet pressure must not exceed 14 in. W.C.
	b. Ignitor gap is too large.	Verify that spark gap from ignitor to pilot hood is .17 in. or 1/8 in.
	c. Module is not grounded.	Verify module is securely grounded to metal chassis of appliance.
	d. Module voltage output / Valve/Pilot solenoid ohms readings.	Verify battery voltage is at least 2.7 volts. Replace batteries if voltage is below 2.7.

15 Maintaining and Servicing Appliance

A. Maintenance Tasks

Although the frequency of appliance servicing and maintenance will depend on use and the type of installation, a qualified service technician should perform an appliance checkup at the beginning of each heating season.

WARNING

Risk of injury or property damage.

Before servicing:

- Turn off gas.
- Turn off electricity to appliance.
- Disable remote control, if one is present.
- Ensure appliance is completely cooled.

After servicing:

- Replace any screen or barrier that was removed.
- Reseal and reinstall any venting removed for servicing.

WARNING

Annual inspection by qualified technician recommended.

Check:

- Condition of doors, surrounds and fronts.
- Condition of glass, glass assembly and glass seal.
- Obstructions of combustion and ventilation air.
- Condition of logs.
- Condition of firebox.
- Burner ignition and operation.
- Burner air shutter adjustment
- Gas connections and fittings.
- Obstructions of termination cap.

Clean:

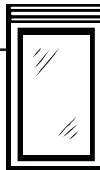
- Glass
- Air passageways, grilles, control compartment
- Burner, burner ports

Risk of:

- Fire
- Delayed ignition or explosion
- Exposure to combustion fumes
- Odors



CAUTION



Handle glass assembly with care.

NOTE: Clean glass after initial 3-4 hours operation. Longer operation without cleaning glass may cause a permanent white film on glass.

When cleaning glass door:

- Avoid striking, scratching or slamming glass.
- Do NOT use abrasive cleaners.
- Use a hard water deposit glass cleaner on white film.
- Do NOT clean glass when hot.
- Turn off appliance after 3-4 hours of operation and ALLOW TO COOL.
- Remove and clean glass assembly.
- Replace glass assembly and operate appliance for additional 12 hours.

Refer to maintenance instructions.

WARNING



Inspect external vent cap regularly.

- Ensure no debris blocks cap.

- Combustible materials blocking cap may ignite.
- Restricted air flow affects burner operation.

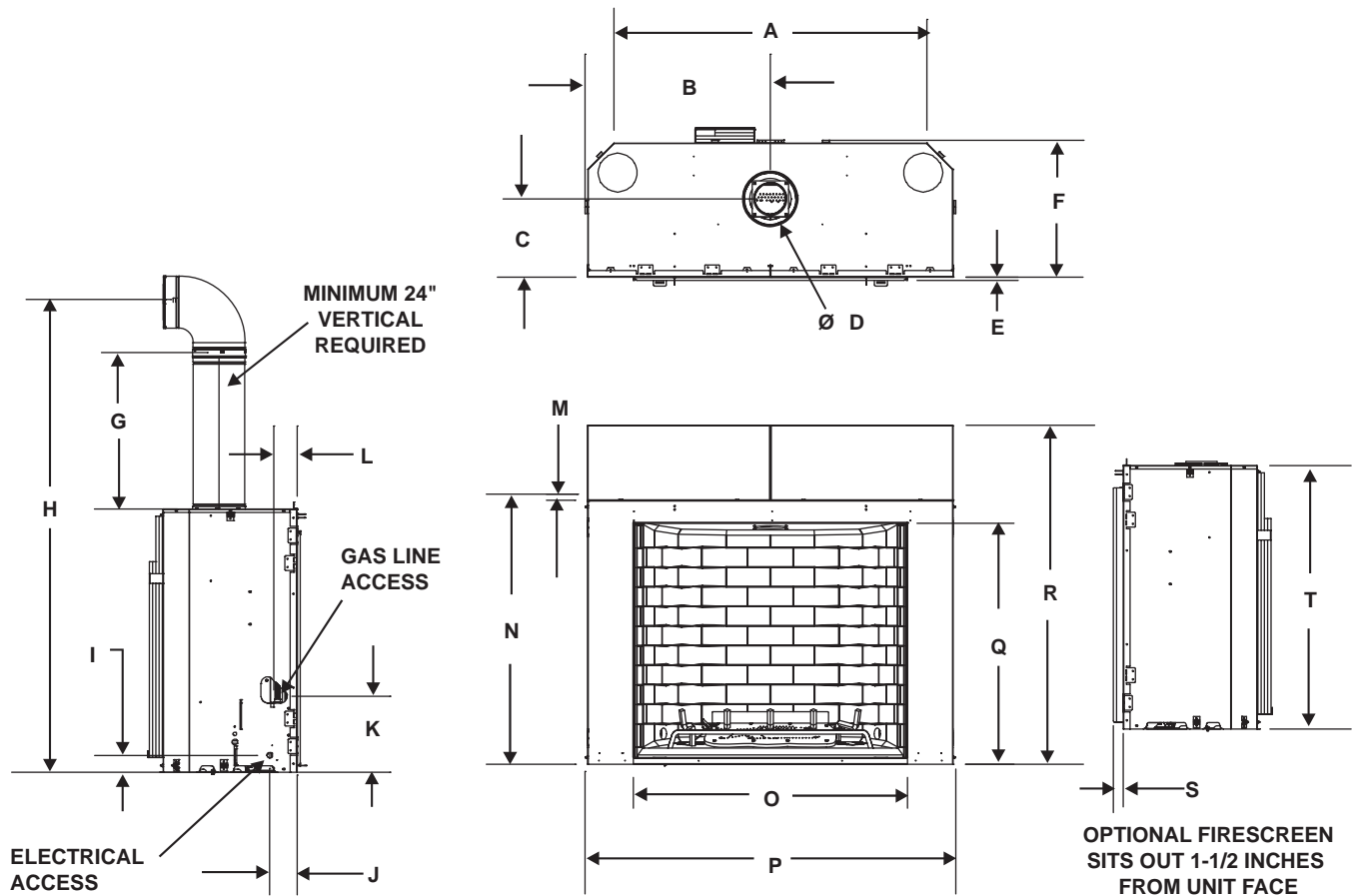


Inspect	Maintenance Tasks
Doors, Surrounds and Fronts	1. Assess condition of screen and replace as necessary. Recommend addition of screen if one is not present.
	2. Inspect for scratches, dents or other damage and repair as necessary.
	3. Verify no obstructions to airflow through the louvers.
	4. Verify maintenance of proper clearance to combustible household objects.
Gasket Seal, Glass Assembly and Glass	1. Inspect gasket seal and its condition.
	2. Inspect glass panels for scratches and nicks that can lead to breakage when exposed to heat.
	3. Confirm there is no damage to glass or glass frame. Replace as necessary.
	4. Verify that latches engage properly, clip studs are not stripped, and glass attachment components are intact and operating properly. Replace as necessary.
	5. Clean glass. Replace glass assembly if severely coated with silicate deposits that cannot be removed.
Valve Compartment and Firebox Top	1. 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.
	2. Remove any foreign objects.
	3. Verify unobstructed air circulation.
Logs	1. Inspect for broken, damaged, or missing logs. Replace as necessary.
	2. Verify correct log placement and no flame impingement causing sooting. Correct as necessary.
Firebox	1. Inspect for paint condition, warpage, corrosion or perforation. Sand and repaint as necessary.
	2. Replace appliance if firebox has been perforated.
Burner Ignition and Operation	1. Verify burner is properly secured and aligned with pilot or igniter.
	2. Clean off burner top, inspect for plugged ports, corrosion or deterioration. Replace burner if necessary.
	3. Replace ember materials with new dime-size and shape pieces. Do not block ports or obstruct lighting paths.
	4. Check for smooth lighting and ignition carryover to all ports. Verify there is no ignition delay.
	5. Inspect for lifting or other flame problems.
	6. Verify air shutter is clear of dust and debris.
	7. Inspect orifice for soot, dirt or corrosion.
	8. Verify manifold and inlet pressures. Adjust regulator as required.
	9. Inspect pilot flame strength. Clean or replace orifice as necessary.
	10. Inspect thermocouple/thermopile or IPI sensor rod for soot, corrosion and deterioration. Clean with emery cloth or replace as required.
	11. Verify millivolt output. Replace as necessary.
Venting	1. Inspect venting for blockage or obstruction such as bird nests, leaves, etc.
	2. Confirm that termination cap remains clear and unobstructed by plants, etc.
	3. Verify that termination cap clearance to subsequent construction (building additions, decks, fences or sheds) has been maintained.
	4. Inspect for corrosion or separation.
	5. Verify weather stripping, sealing and flashing remains intact.
	6. Inspect draft shield to verify it is not bent, damaged or missing.
Remote controls	1. Verify operation of remote.
	2. Replace batteries in remote transmitters and battery-powered receivers.
	3. Verify batteries have been removed from battery back-up IPI systems to prevent premature battery failure or leaking.

16 Reference Materials

A. Appliance Dimension Diagram

Dimensions are actual appliance dimensions. Use for reference only. For framing dimensions and clearances refer to Section 3.

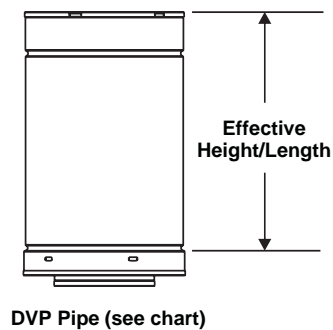


Location	Inches	Millimeters
A	48	1219
B	28-3/8	722
C	12	305
D	8	202
E	1/2	12
F	21	533
G	24	609
H	72-1/8	1831
I	2-5/8	66
J	4-1/4	107

Location	Inches	Millimeters
K	11-5/8	296
L	3-5/8	91
M	1	24
N	41-3/8	1052
O	42	1068
P	56-7/8	1445
Q	37	939
R	52	1320
S	1-1/2	38
T	40-3/8	1062

Figure 16.1 Appliance Dimensions

B. Vent Components Diagrams



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

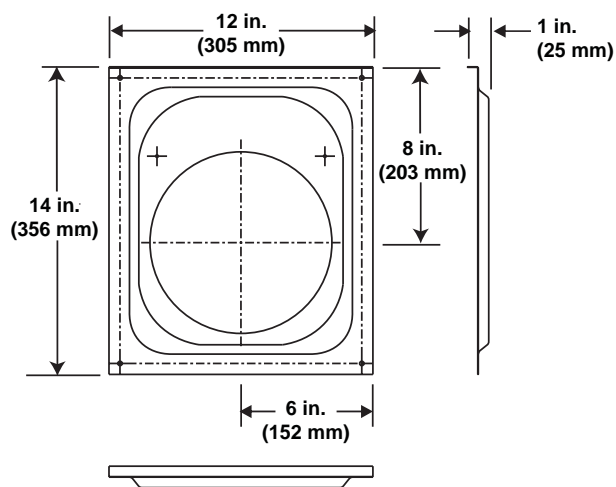
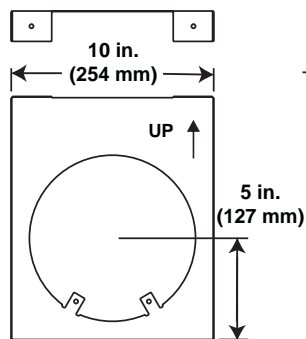
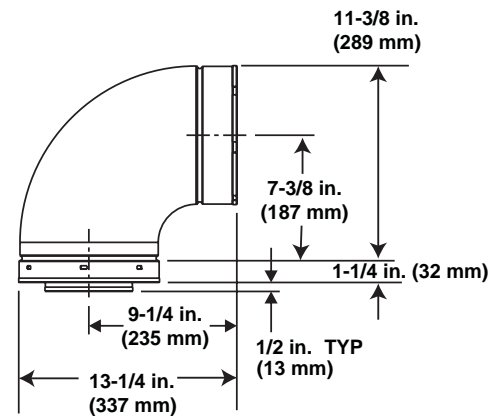
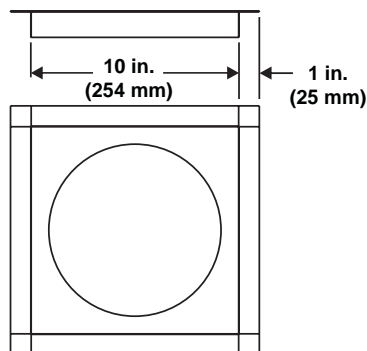
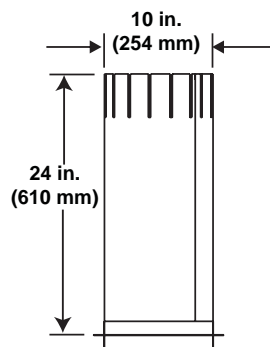
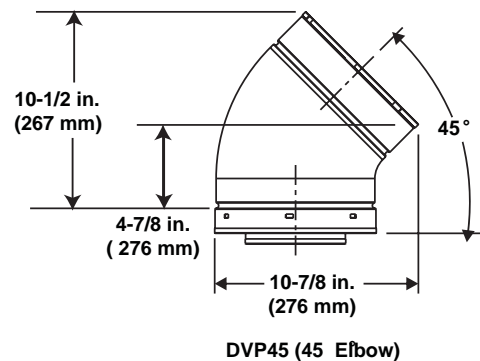
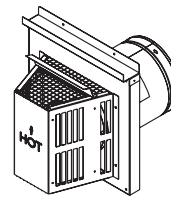
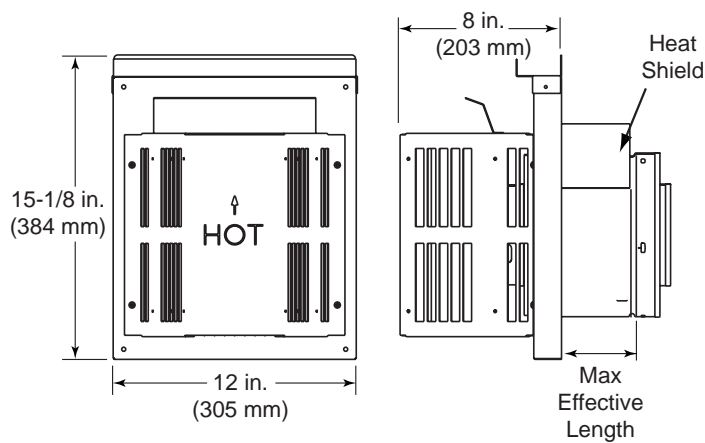


Figure 16.2 DVP vent components

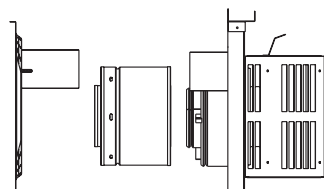
B. Vent Components Diagrams (continued)

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.

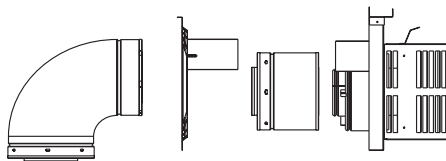


Term Cap	Minimum Effective Length	Maximum Effective Length
Trap1	3-1/8 in.	4-5/8 in.
	79 mm	117 mm
Trap2	5-3/8 in.	9-3/8 in.
	137 mm	238 mm

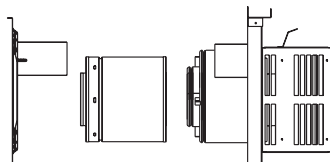
DVP-TRAP
Horizontal Termination Cap



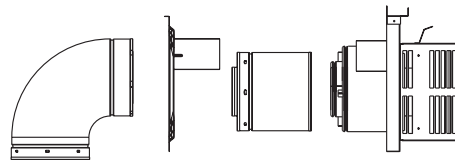
DVP-TRAP1



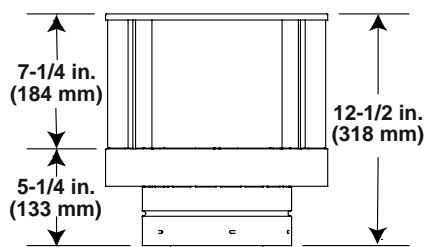
DVP-TRAPK1



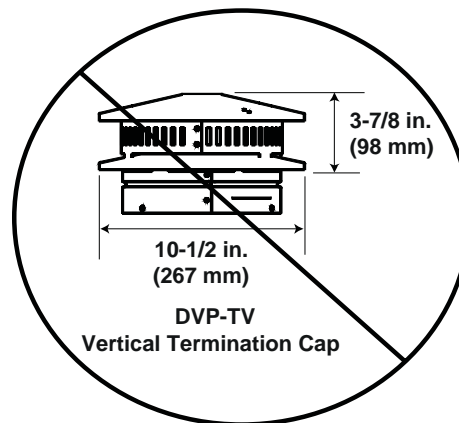
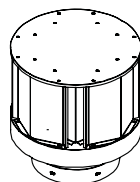
DVP-TRAP2



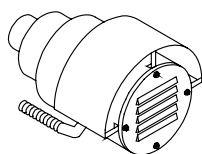
DVP-TRAPK2



DVP-TVHW
Vertical Termination Cap (Highwind)



DVP-TV
Vertical Termination Cap



PVK-80

(For use with IPI and DSI appliances only.)

Figure 16.3 DVP vent components

B. Vent Components Diagrams (continued)

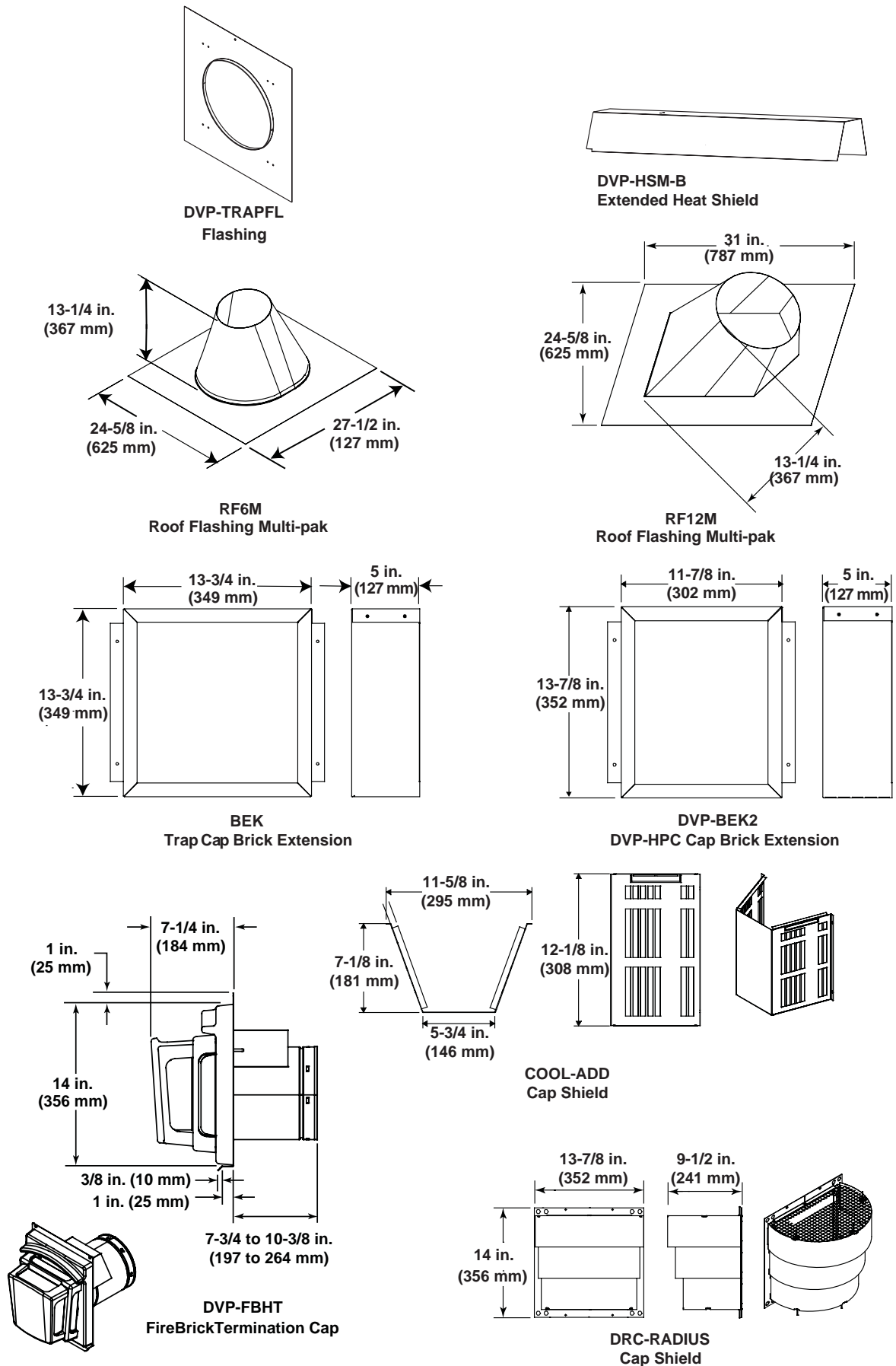
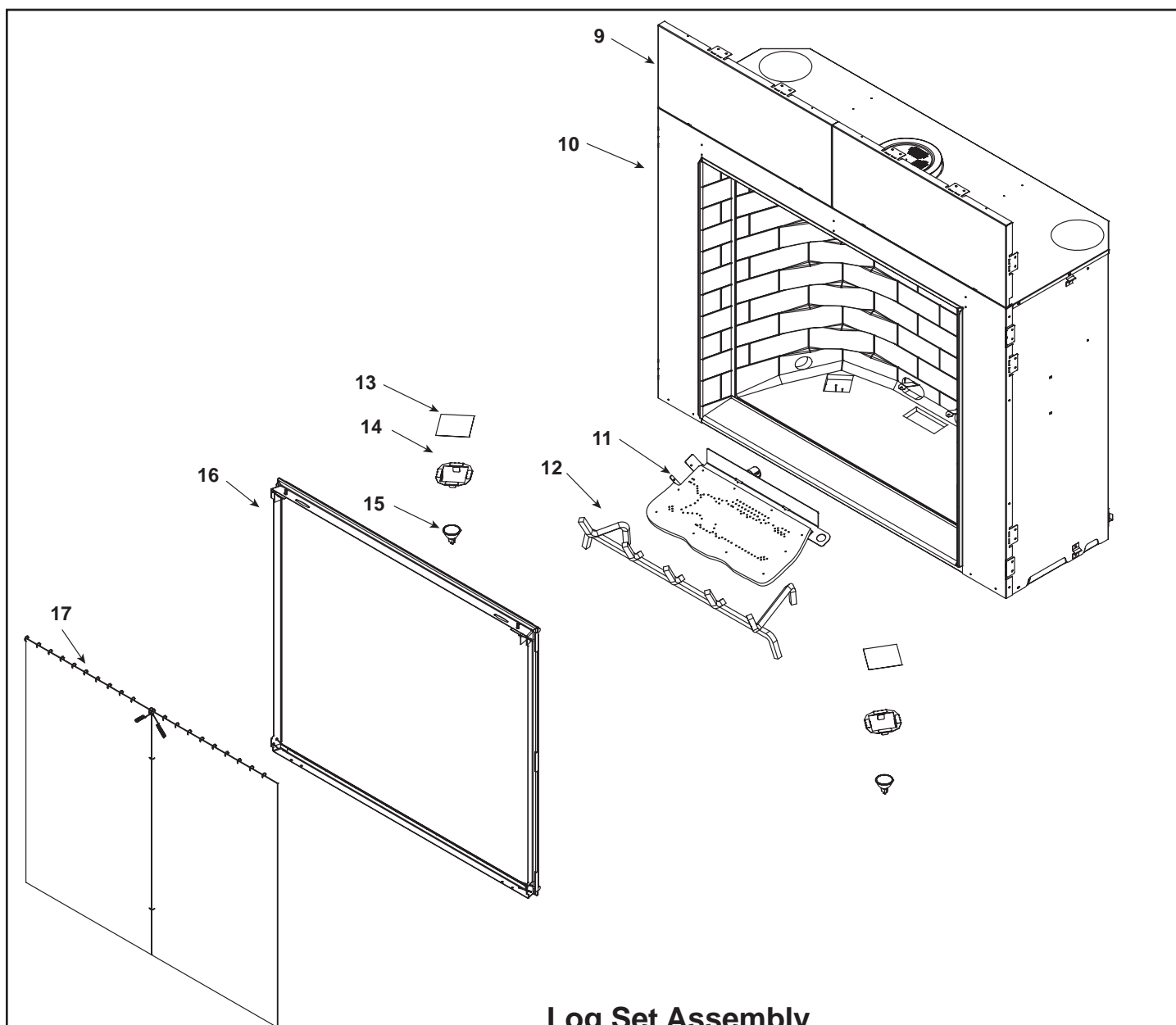


Figure 16.4 DVP vent components



Log Set Assembly



Part number list on following page.

C. Service Parts List

ESCAPE-42DV

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.

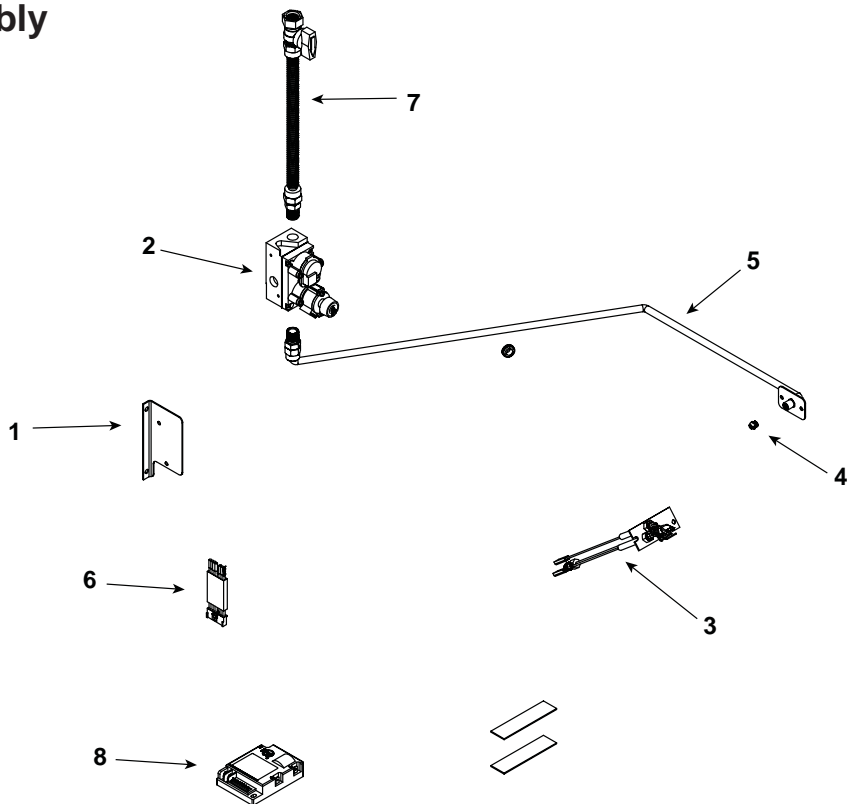


**Stocked
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
	Log Set Assembly		LOGS-ESCAPE-42	Y
1	Log 1 (Three logs)		SRV750-706	
2	Log 2 (Two logs)		SRV569-705	
3	Log 3		SRV2052-701	
4	Log 4		SRV2012-162	
5	Log 5		SRV2012-163	
6	Log 6		SRV2052-702	
7	Log 7		SRV2012-165	
8	Log 8		SRV2012-166	
9	Panel		2052-185	
10	Surround, Front		2052-115	
11	Burner Assembly		2052-006	Y
12	Log Grate		2052-002	
13	Kapton		2101-252	Y
14	Kapton Bracket		2052-193	
15	Ember Bulb		2088-136	Y
16	Glass Assembly		GLA-ESCAPE-42	Y
17	Mesh Assembly		2052-010	Y
	Fiber Patch Kit		SRV-PACK	
	Flue Restrictor 3" diameter		2012-124	
	Glass Latch		2052-022	
	Junction Box		4021-013	Y
	Mesh Rod		2052-160	
	Mineral Wool		050-721	
	Non-Combustible Board (Sold as set only)		2052-030	
	Refractory Panels (Sold as set only)		E42-PANEL-KIT	
	Touch Up Paint		TUP-GBK-12	
	Vermiculite Embers		MYSTIC-EMBERSXL	
	Conversion Kit NG		NGK-ESCAPE-42DV	Y
	Conversion Kit LP		LPK-ESCAPE-42DV	Y
	Pilot Orifice NG	Pre OCT 2005	446-505	Y
		Post OCT 2005	593-528	Y
	Pilot Orifice LP	Pre OCT 2005	446-517	Y
		Post OCT 2005	593-527	Y
	Regulator NG		NGK-DXV	Y
	Regulator LP		LPK-DXV	Y

Additional service part numbers appear on following page.

IPI Valve Assembly



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	
1	Valve Bracket		2012-106	
2	Valve NG		750-500	Y
2	Valve LP		750-501	Y
3	Pilot Assembly NG	Pre OCT 2005	385-510A	Y
		Post OCT 2005	2090-012	Y
	Pilot Assembly LP	Pre OCT 2005	385-511A	Y
		Post OCT 2005	2090-013	Y
4	Burner Orifice NG (#26C)		582-826	Y
4	Burner Orifice LP (#45C)		582-845	Y
5	Orifice Bracket Flex Tube		2012-008	Y
6	Wire Assembly		593-590A	Y
7	12 inch Flex Ball Valve Assembly		302-320A	Y
8	Control Module		593-592	Y
	Battery Pack		593-594A	Y
	On/Off Rocker Switch		060-521A	Y
	Wire, Wall Switch		2095-550	Y
	Wire Plug Assembly		700-550A	Y
	2 inch Jumper Wire		2012-206	Y

→ D. Limited Lifetime Warranty

Hearth & Home Technologies LIMITED WARRANTY

Hearth & Home Technologies ("HHT") and its respective brands extends the following warranty for HHT gas, wood, pellet and electric appliances purchased from an authorized HHT dealer and installed in the United States of America or Canada. Warranty starts with date of purchase by the original owner (End User) except as noted for replacement parts.

Warranty Period		HHT Manufactured Appliances and Venting						Components Covered
Parts	Labor	Gas	Wood	Pellet	EPA Wood	Electric	Venting	
1 Year		X	X	X	X	X	X	All Parts and Material Except as covered by Conditions, Exclusion, and Limitations listed
2 years				X	X			Igniters, Electronic Components, and Glass
		X	X	X	X			Blowers
			X					Molded Refractory Panels
3 years				X				Firepots
5 years	3 years			X	X			Castings & Baffles
7 years	3 years		X	X	X			Firebox, HHT Chimney, Termination & Heat Exchanger
10 years	1 year	X						Burners, Logs & Refractory
Limited Lifetime	1 year	X						Firebox & Heat Exchanger
90 Days		X	X	X	X	X	X	All Replacement Parts
See Conditions, Exclusions, and limitations.						9-01-08		

CONDITIONS, EXCLUSIONS & LIMITATION OF LIABILITY

- This warranty applies to the original owner and is transferable up to two years from date of purchase to the new homeowner, provided the purchase was made through an authorized dealer or distributor of HHT, and the appliance remains in its original place of installation.
- The maximum amount recoverable under this warranty is limited to the purchase price of the product.
- In no event shall HHT be liable for any incidental or consequential damages caused by defects in the product.
- Adjustments, regular maintenance, cleaning and temporary repairs, or the failure to duplicate the problem in the home is not covered under this warranty.

D. Limited Lifetime Warranty (*continued*)

- This limited warranty does not extend to or include surface finish on the appliance or terminations, door gasketing, glass gasketing, glass discoloration, firebrick, pellet logs, kaowool or other ceramic insulating materials. Rust and/or corrosion on any of the metal surfaces, cast iron components, baffles, firepots, doors, or firebox area are not covered by this warranty.
- Noise resulting from minor expansion, contraction, or movement of certain parts is normal and complaints related to this noise are not covered by this warranty.
- HHT's obligation under this warranty does not extend to damages resulting from: (1) installation, operation or maintenance of the appliance not in accordance with the installation instructions; operating instructions and the listing agent identification label furnished with the appliance; (2) installation which does not comply with local building codes; (3) shipping, improper handling, improper operation, abuse, misuse, accident or unworkmanlike repairs; (4) environmental conditions, inadequate ventilation or drafting caused by tight sealing construction of the structure or handling devices such as exhaust fans or forced air furnaces or other such causes; (5) use of fuels other than those specified in the operating instructions; (6) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; and/or (7) modification of the appliance not expressly authorized and approved by HHT in writing.
- This warranty does not apply to non-HHT venting components, hearth components or other accessories used in conjunction with the installation of this product.
- This warranty is void if the appliance has been over-fired or operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals the appliance is subject to prolonged periods of dampness or condensation, or 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.
- HHT's liability under this warranty is limited to the replacement and repair of defective components or workmanship during the applicable period. HHT may fully discharge all of its obligations under such warranties by repairing the defective component(s) at HHT's discretion. Shipping costs are not covered under this warranty.
- Some states do not allow exclusions or limitation of incidental or consequential damages, so those 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 WARRANTY SPECIFIED ABOVE.

This Limited Warranty is effective on all HHT appliances sold after September 01, 2008 and supersedes any and all warranties currently in existence.

If warranty service is needed, you should contact your installing dealer. If the installing dealer is unable to provide necessary parts or components, contact the nearest authorized HHT dealer or supplier.

E. Contact Information



No one builds a better fire

Heat & Glo, a brand of Hearth & Home Technologies Inc.
20802 Kensington Boulevard, Lakeville, MN 55044
www.heatnglo.com

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

- NOTES -

CAUTION



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.



This product may be covered by one or more of the following patents: (United States) 4593510, 4686807, 4766876, 4793322, 4811534, 5000162, 5016609, 5076254, 5113843, 5191877, 5218953, 5263471, 5328356, 5341794, 5347983, 5429495, 5452708, 5542407, 5601073, 5613487, 5647340, 5688568, 5762062, 5775408, 5890485, 5931661, 5941237, 5947112, 5996575, 6006743, 6019099, 6048195, 6053165, 6145502, 6170481, 6237588, 6296474, 6374822, 6413079, 6439226, 6484712, 6543698, 6550687, 6601579, 6672860, 6688302B2, 6715724B2, 6729551, 6736133, 6748940, 6748942, 6769426, 6774802, 6796302, 6840261, 6848441, 6863064, 6866205, 6869278, 6875012, 6880275, 6908039, 6919884, D320652, D445174, D462436; (Canada) 1297749, 2195264, 2225408, 2313972; (Australia) 780250, 780403, 1418504 or other U.S. and foreign patents pending.

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