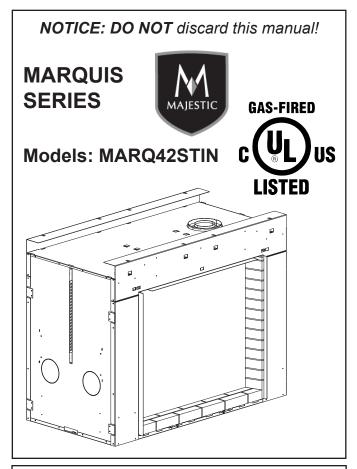
# Installation Manual Installation and Appliance Setup

**INSTALLER:** Leave this manual with party responsible for use and operation. **OWNER:** Retain this manual for future reference.



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

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

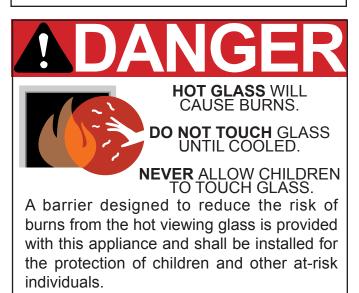
In the Commonwealth of Massachusetts installation must be performed by a licensed plumber or gas fitter.

See Table of Contents for location of additional Commonwealth of Massachusetts requirements.

## 

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

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



## A Safety Alert Key:

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

## **Table of Contents**

#### 1 Product Specific and Important Safety Information

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

#### 2 Getting Started

Α.	Design and Installation Considerations	6
В.	Good Faith Wall Surface/TV Guidelines	6
C.	Tools and Supplies Needed	6
D.	Inspect Appliance and Components	7

#### **3 Framing and Clearances**

Α.	Appliance/Decorative Front Dimension Diagrams 8
В.	Clearances to Combustibles 10
C.	Constructing the Appliance Chase 11
D.	Hearth Extension
E.	Elevated Hearth Systems

#### **4** Termination Location and Vent Information

	A. Vent Termination Minimum Clearances 14	ŧ
	B. Chimney Diagram 18	5
→	C. Approved Pipe 16	3
	D. Use of Elbows	3
	E. Measuring Standards 17	7
	F. Vent Diagrams 18	3

#### **5 Vent Clearances and Framing**

Α.	Pipe Clearances to Combustibles	23
В.	Wall Penetration Framing/Firestops	23
C.	Ceiling Firestop/Floor Penetration Framing	24
D.	Install Attic Insulation Shield.	24

#### **6 Appliance Preparation**

Α.	Vent Collar Preparation	25
В.	Securing and Leveling the Appliance	26

#### 7 Venting and Chimneys

	A. Assemble Vent Sections 2	27
→	B. Assemble Slip Sections 2	8
	C. Secure the Vent Sections	8
	D. Disassemble Vent Sections 2	9
	E. Vertical Termination Requirements	29
→	F. Horizontal Termination Requirements	51

#### 8 Electrical Information

Α.	General Information	32
Β.	Wiring Requirements	33

#### 9 Gas Information

A. Fuel Conversion	4
B. Gas Pressure	4
C. Gas Connection	4
D. High Altitude Installations	4
E. Air Shutter Setting	5

#### **10 Finishing**

Α.	Facing Material	36
В.	Mantel and Wall Projections	37
C.	Decorative Fronts	38

#### **11 Appliance Setup**

Α.	Fixed Glass Assembly 39
В.	Remove the Shipping Materials
C.	Clean the Appliance 40
D.	Accessories
E.	Installing the Optional Heat-Zone® Gas Kit
F.	Install Light Bulbs 41
G.	Install Teco-Sil (Glass Ember Rock)
Η.	Mystic Ember Placement 43
١.	Ember/Mineral Wool Placement
J.	Log Set Assembly 44
K.	IntelliFire™ Touch Control System Setup

#### **12 Reference Materials**

-	Α.	Vent Components Diagrams	50
	В.	Accessories	56

 $\rightarrow$  = Contains updated information.

## **Installation Standard Work Checklist**

## **ATTENTION INSTALLER:**

Follow this Standard Work Checklist

This standard work checklist is to be used by the installer in conjunction this installation manual. Customer: Date Installation		stead of, t	he instructions contained in
Lot/Address: Model (circle one): MARQ42STIN	Location of Fireplace: Installer: Dealer/Distributor Phone #		
WARNING! Risk of Fire or Explosion! Failure to	Serial #:		instructions can lead to a
fire or explosion. Appliance Install Information		YES	IF NO, WHY?
Verified clearances to combustibles requirements are main	ntained. (Pg. 10-11)		

Verified elegenence to combustibles requirements are maintained (Dr. 10.11)		,
Verified clearances to combustibles requirements are maintained. (Pg. 10-11) Verified that the chase is insulated and sealed. (Pg. 11)		
Verified mantel and wall clearance requirements are maintained. (Pg. 37-38) Verified hearth extension requirements are maintained. (Pg. 13)	H	
Verified appliance is leveled and secured. (Pg. 26)		
Verified required factory-supplied non-combustible board installed. (Pg.26)	님	
		·····
Venting/Chimney Section 7 (Pg. 27-31)	_	
Verified venting configuration complies to vent diagrams.		
Verified venting installed, locked and sealed/secured in place.		·····
Verified venting meets clearance to combustible requirements.		····
Verified wall/ceiling firestops are installed (if applicable).		
Verified attic insulation shield is installed (if applicable).		
Verified Exterior wall/Roof flashing is installed and sealed. Verified termination cap is installed and sealed.		
Electrical Section 8 (Pg. 32-33)		
Verified unswitched power (110-120 VAC) provided to the appliance.		
Verified wall switch wires are properly installed (if applicable).		
<u>Gas</u> Section 9 (Pg. 34-35)		
Verified appliance is using proper fuel type.		
If converted, verified proper fuel conversion kit was used.		
Verified that gas components (fittings, pressure taps, etc) are leak free and fireplace is		
operating under correct pressures.		
Finishing Section 10 (Pg. 36-38)	_	
Verified that finish material does not interfere with install/operation of decorative front.		
Verified combustible materials are not installed in non-combustible areas.		
Verified all clearances meet installation manual requirements.		
Verified mantels/wall projections comply with installation manual requirements.		
Appliance Setup Section 11 (Pg. 39-48)		
Verified all packaging and protective materials are removed (inside & outside of appliance).		
Verified Teco-Sil installed and properly fogged with black high temperature paint.		
Verified Lava Rock, Mystic Embers, Glowing Embers, and logs installed correctly.		
Verified fixed glass assembly installed and secured.		
Verified that a required decorative door option is installed properly.		
Verified remote control has been programmed and is fully functional.		<u> </u>
Verified proper air shutter setting for installation type and vent configuration.		
Manual bag and all of its contents are removed from inside/under the appliance and given to party responsible for use and operation.		
Hearth & Home Technologies recommends the following:		

- Photographing the installation and copying this checklist for your file.

 That this checklist remain visible at all times on the appliance until the installation is complete.
 Comments: Further description of the issues, who is responsible (Installer/ Builder/ Other Trades, etc) and corrective action needed \_\_\_\_\_

Comments Communicated to party responsible	by		on
$\rightarrow$ = Contains updated information.	(Builder / Gen. Contractor/)	(Installer)	(Date) 2272-982 9/16

## A. Appliance Certification

#### MODELS: MARQ42STIN

LABORATORY: Underwriters Laboratories, Inc. (UL) TYPE: Direct Vent Heater

STANDARD: ANSI-Z21.88-2017 • CSA 2.33-2017

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

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

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

## **B. Glass Specifications**

This appliance is equipped with 5 mm ceramic glass with an anti-reflective coating. Replace glass only with glass with identical specifications. Please contact your dealer for replacement glass.

## C. BTU Specifications

Models (U.S. or Canada)	)	Maximum Input BTU/h	Minimum Input BTU/h	Orifice Size (DMS)
MARQ42STIN (NG)	US (0-2000 FT)	57,500	43,000	#24
MARQ42STIN (Propane)	US (0-2000 FT)	52,000	39,000	#44

## D. High Altitude Installations

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

When installing above 2000 feet elevation:

- In the USA: Reduce input rate 4% for each 1000 feet above 2000 feet.
- In CANADA: Input ratings are certified without a reduction of input rate for elevations up to 4500 feet (1370 m) above sea level. Please consult provincial and/or local authorities having jurisdiction for installations at elevations above 4500 feet (1370 m).

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

## E. Non-Combustible Materials Specification

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

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

## F. Combustible Materials Specification

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

## **G. Electrical Codes**

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

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

## H. California

**WARNING:** This product and the fuels used to operate this product (liquid propane or natural gas), and the products of combustion of such fuels, can expose you to chemicals including benzene, which is known to the State of California to cause cancer and reproductive harm. For more information go to: www. P65Warnings.ca.gov.

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

### I. Requirements for the Commonwealth of Massachusetts

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

#### Installation of Carbon Monoxide Detectors

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

In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

#### **Approved Carbon Monoxide Detectors**

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

#### Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) in. in size, "GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OB-STRUCTIONS".

#### Inspection

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

#### Exemptions

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

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

#### MANUFACTURER REQUIREMENTS

#### **Gas Equipment Venting System Provided**

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

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

#### Gas Equipment Venting System NOT Provided

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

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

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

#### See Gas Connection section for additional Commonwealth of Massachusetts requirements.

## A. Design and Installation Considerations

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

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

Before installing, determine the following:

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

L'installation et l'entretien de cet appareil doit être fait par un personnel qualifié. Hearth & Home Technologies recommande HHT Factory membres du personnel ou des personnes certifiés NFI.

NATIONAL

FIREPLACE



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

## B. Good Faith Wall Surface/TV Guidelines

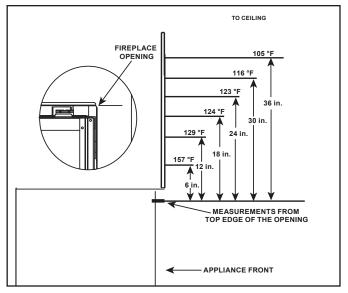


Figure 2.1 Good Faith Wall Surface Temperatures Above Appliance

**NOTICE:** Temperatures listed above are taken with a temperature measuring probe as prescribed by the test standard used for appliance certification. Temperatures on walls or mantels taken with an infrared thermometer may yield increased temperatures of up to 30 degrees or more depending on the thermometer settings and material characteristics being measured.

## C. Tools and Supplies Needed

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

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

## **D. Inspect Appliance and Components**

- Carefully remove the appliance and components from the packaging.
- The vent system components and decorative doors and fronts may be shipped in separate packages.
- If packaged separately, the log set and appliance grate must be installed.
- Report to your dealer any parts damaged in shipment, particularly the condition of the glass.
- This product is factory-equipped with an IntelliFire<sup>™</sup> Touch remote control, which was paired to the appliance at the factory. This specific remote control needs to remain with the contents of the manual bag. Do not install batteries in the remote control until performing the final appliance setup and checklist.
- Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.

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

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

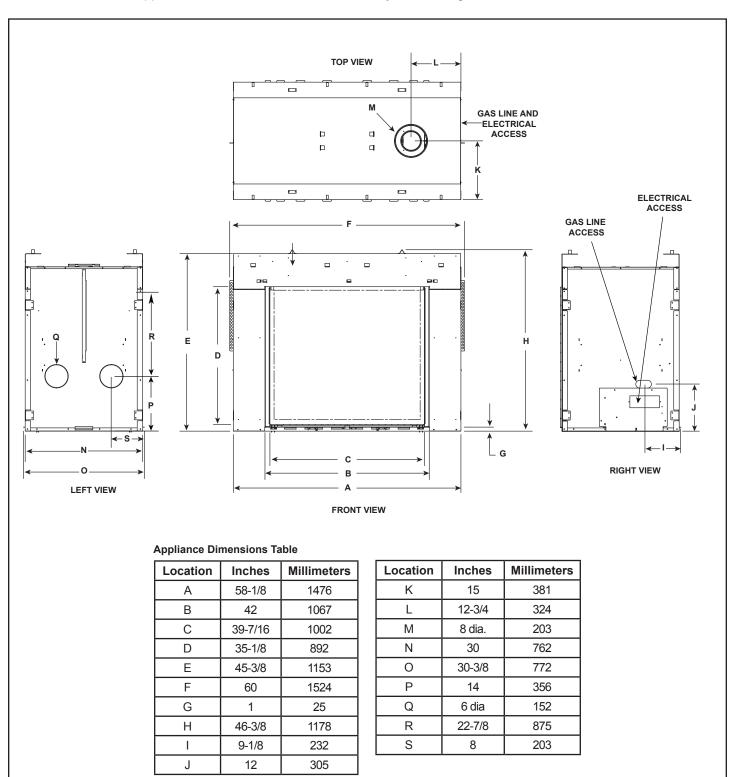
- Installation and use of any damaged appliance or vent system component.
- · Modification of the appliance or vent system.
- Installation other than as instructed by Hearth & Home Technologies.
- Improper positioning of the gas logs or the glass door.
- Installation and/or use of any component part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

Any such action may cause a fire hazard.

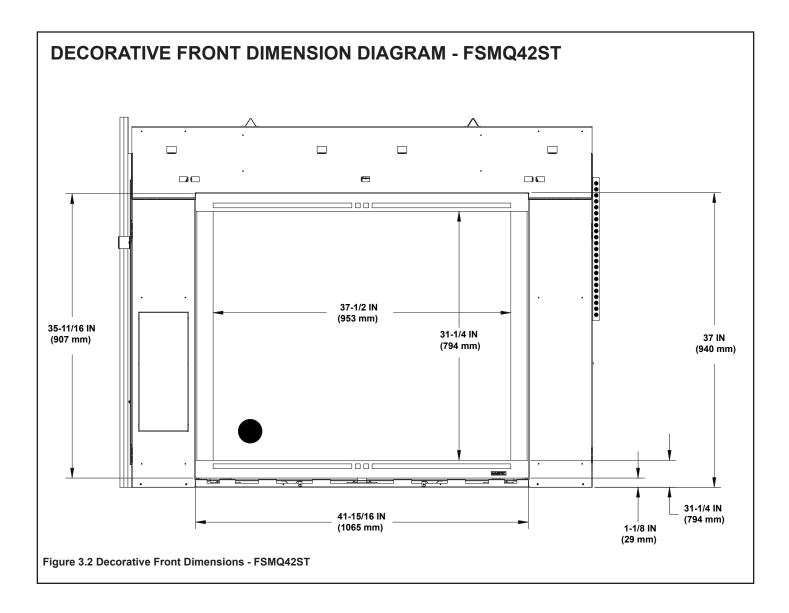
WARNING! Risk of Fire, Explosion or Electric Shock! DO NOT use this appliance if any part has been under water. Call a qualified service technician to inspect the appliance and to replace any part of the control system and/or gas control which has been under water. Framing and Clearances

## A. Appliance/Decorative Front Dimension Diagrams

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



#### Figure 3.1 Appliance Dimensions



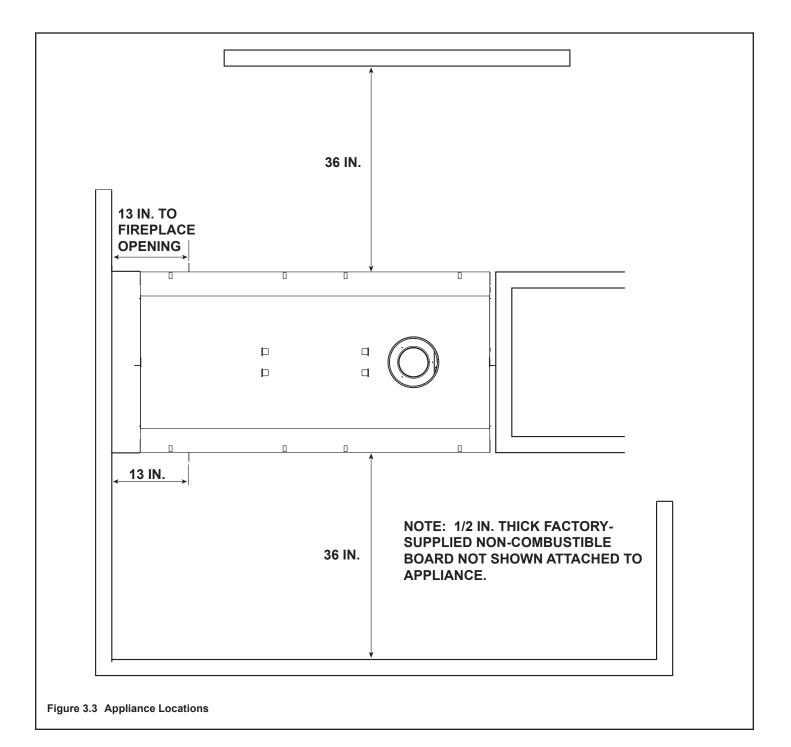
## B. Clearances to Combustibles

When selecting a location for the appliance it is important to consider the required clearances to walls (see Figure 3.3).

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

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

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



## C. Constructing the Appliance Chase

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

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

**NOTICE:** When installing a sprinkler head in a fireplace chase, it is recommended to use a sprinkler head with a sprinkler activation temperature classified as Extra High. Keep sprinkler head away from vent and chimney.

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.

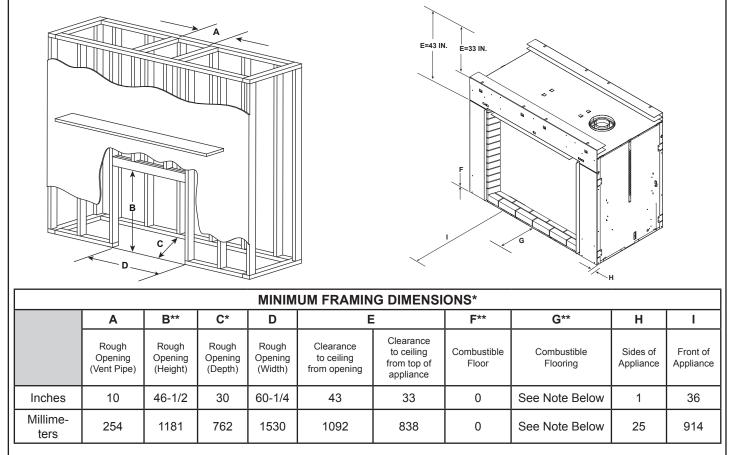
Walls, ceiling, base plate and cantilever floor of the chase should be insulated. Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, in regions where cold air infiltration may be an issue, the inside surfaces may be sheetrocked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

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

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

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

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



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

\*\* Fireplace may need to be elevated from the floor affecting framing height B, depending on hearth construction. See Section 3.D for hearth and combustible floor requirements.

Figure 3.4 Clearances to Combustibles

## **D. Hearth Extension**

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

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

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

The base of the fireplace may sit on a combustible surface. The area in front of the fireplace must be protected by a noncombustible hearth extension, unless the fireplace is raised a minimum of three inches above the combustible floor or hearth. See Figures 3.5, 3.6 and 3.8.

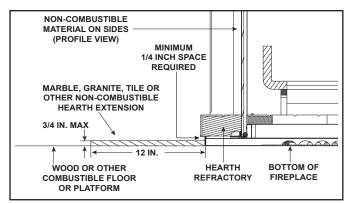


Figure 3.5 Fireplace Positioned on Combustible Surface

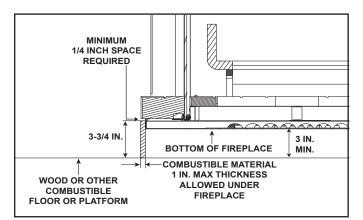
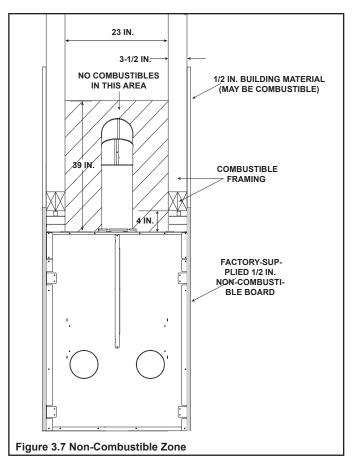


Figure 3.6 Fireplace Raised A Minimum of 3 Inches Above Combustible Surface



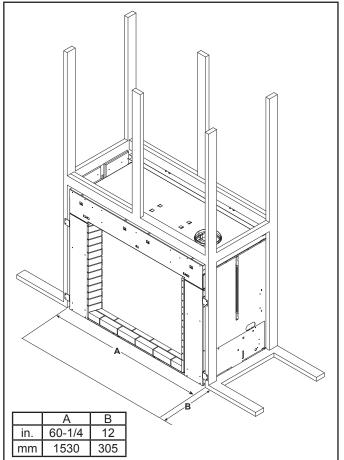


Figure 3.8 Non-Combustible Hearth Extension Minimum Dimensions (Fireplace Positioned on Combustible Surface)

## E. Elevated Hearth Systems

Use the table below to identify the hearth system that will be used. The table will also help identify effects on the various dimensions. Some hearth systems will elevate the appliance off the floor at a given dimension. The dimension noted in the table below, in the Elevated Appliance Dimension Column, will also have to be added to the following: Extension Wall Hole referenced in Figure 5.2 (Exterior Wall Hole) and Rough Opening Height (header height) referenced in Figure 3.4. Note: Finished floor thickness should also be considered when determining installation dimensions.

MODEL	DESCRIPTION	PART #	ELEVATED APPLIANCE DIMENSION See Note 1
	Avalon Cast Mantel	AFANTC5244	1/2 in.
MARQ42STIN	Biltmore Cast Mantel	AFBETC5244	1/2 in.
	Hearst Cast Mantel	AFHTTC5244	1/2 in.

#### Note 1. Add dimensions to Exterior Wall Hole (Figure 5.2) and Rough Opening Height (Figure 3.4).

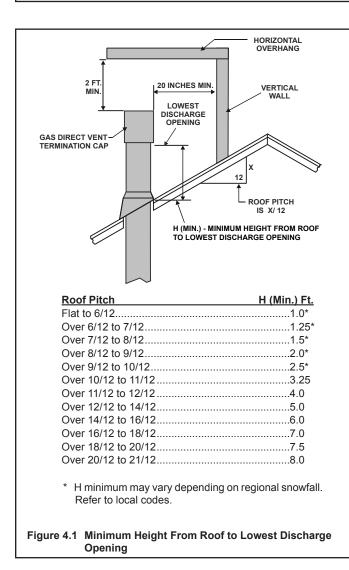
The above listed Hearth and Home Technologies manufactured hearth systems have been tested and certified for use with the MARQ42STIN fireplace. The dimensions of these Hearth and Home Technologies manufactured hearth systems may differ slightly from the mantel specifications listed in Section 10.B. The above listed Hearth and Home Technologies manufactured hearth systems are not required to meet the mantel specifications listed in Section 10.B.

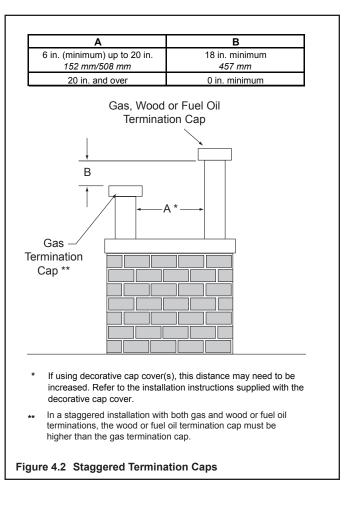


## A. Vent Termination Minimum Clearances

Fire Risk. Maintain vent clearance to combustibles as specified. • DO NOT pack air space with insulation or other materials.

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





## B. Chimney Diagram

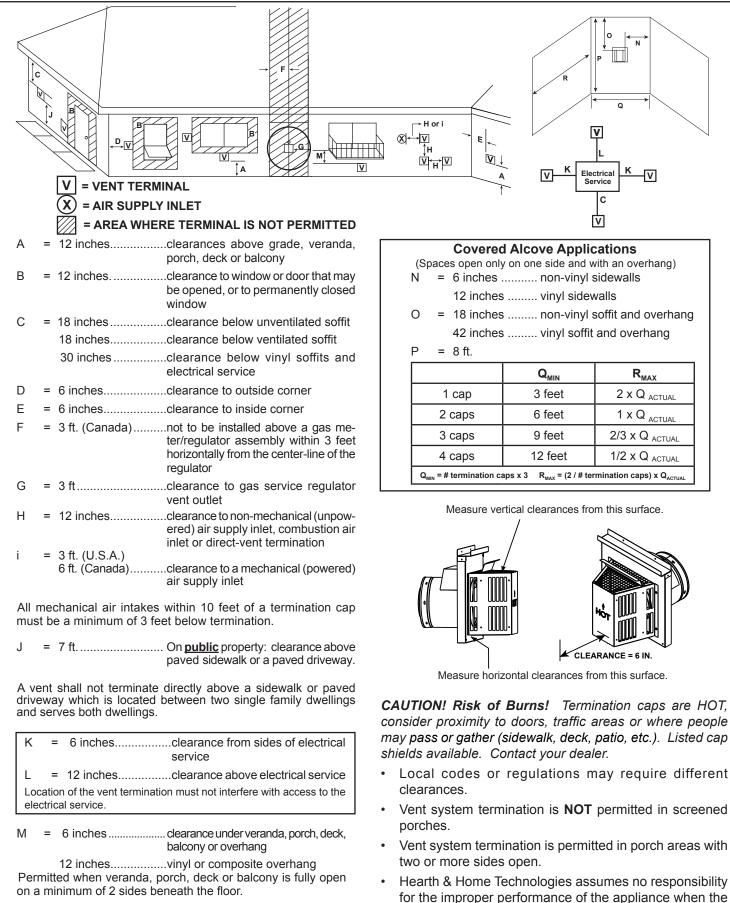


Figure 4.3 Minimum Clearances for Termination

venting system does not meet these requirements. Vinyl protection kits are suggested for use with vinyl siding.

## C. Approved Pipe

This appliance is approved for use with Hearth & Home

➔ Technologies DVP venting systems. Refer to Section 12.A for vent component information and dimensions.

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

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

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

## D. Use of Elbows

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

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

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

Figure 4.5 shows the vertical and horizontal offsets for DVP elbows.

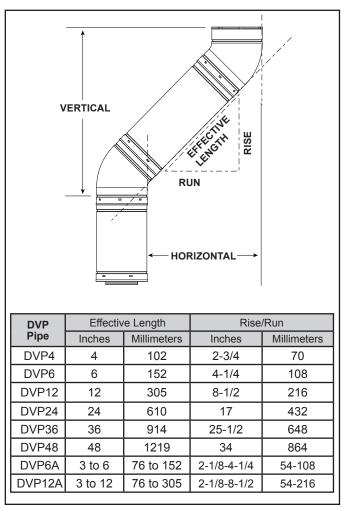


Figure 4.4

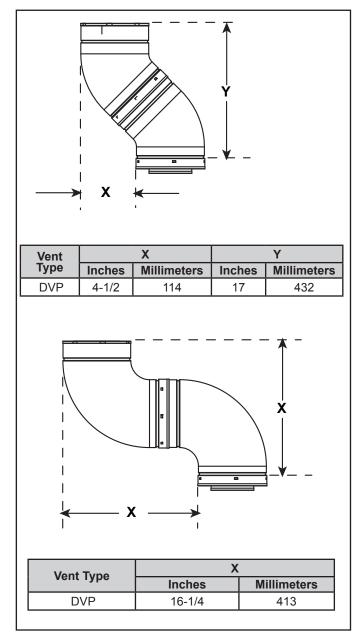


Figure 4.5 Vertical and Horizontal Offset for DVP and SLP Elbows

## E. Measuring Standards

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

- Pipe measurements are shown using the effective length of pipe. See Section 12.A Figure 12.1 for information on effective length of pipe components.
- Horizontal terminations are measured to the outside mounting surface (flange of termination cap) (see Figure 4.6).
- Vertical terminations are measured to top of last section of pipe. See Figure 4.7.
- · Horizontal pipe installed level with no rise.

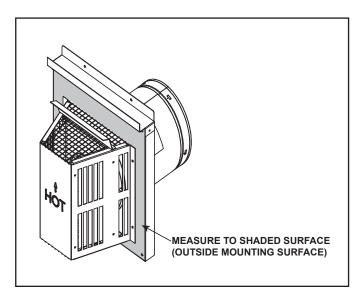


Figure 4.6 Measure to Outside Mounting Surface

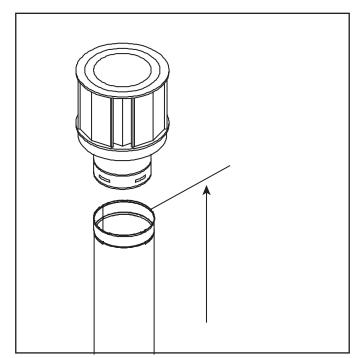


Figure 4.7. Measure to Top of Last Section of Pipe

## F. Vent Diagrams

General Rules:

- SUBTRACT 3 ft. from the total H measurement for each 90° elbow installed horizontally.
- SUBTRACT 1-1/2 ft. from the total H measurement for each 45° elbow installed horizontally.
- A maximum of three 90° elbows (or six 45° elbows) may be used in any vent configuration. Some elbows may be installed horizontally. See Figure 4.14.
- Elbows may be placed back to back anywhere in the system.
- Any 90° elbow may be replaced with two back to back 45° elbows.
- When penetrating a combustible wall, a wall shield firestop must be installed.
- When penetrating a combustible ceiling, a ceiling firestop must be installed.
- This appliance requires a minimum of 24 inches of vertical pipe attached directly to the appliance starting collar before attaching a 90 degree or 45 degree elbow.
- Horizontal runs of vent do not require vertical rise; horizontal runs may be level.
- Horizontal termination cap should have a 1/4 inch downward slant to allow any moisture in cap to be released. See Figure 4.8.

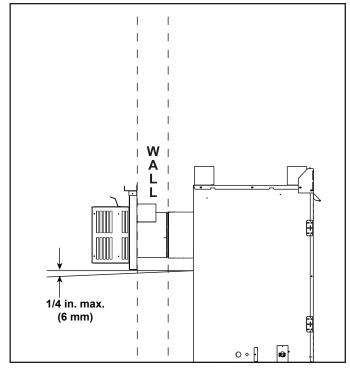
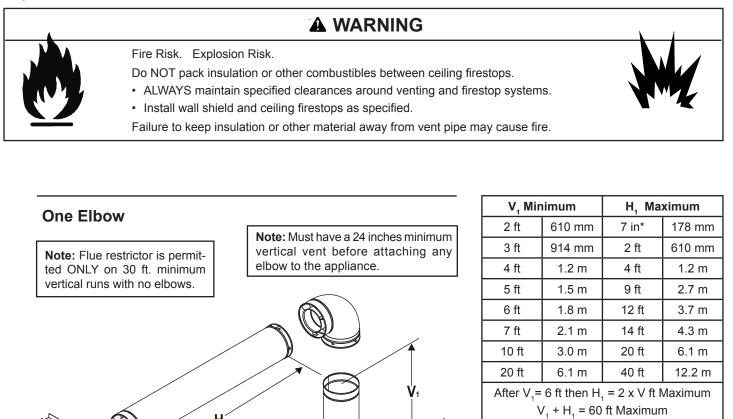


Figure 4.8



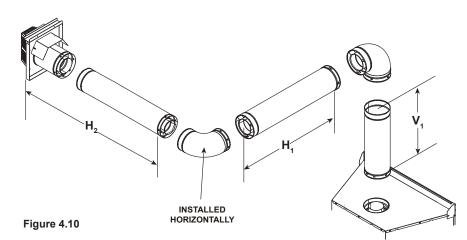
#### when used with approved termination caps



#### **Two Elbows**

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

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



V₁ Minimum		H <sub>1</sub> +	· H <sub>2</sub>		
3 ft	914 mm	18 in	457 mm		
4 ft	1.2 m	3 ft	914 mm		
5 ft	1.5 m	7 ft	2.1 m		
6 ft	1.8 m	10 ft	3.0 m		
7 ft	2.1 m	12 ft	3.7 m		
10 ft	3.0 m	18 ft	5.5 m		
20 ft 6.1 m 20 ft 6.1 m					
After $V_1 = 6$ ft then $H_1 = 2 \times V_1$ ft Maximum					
$V_1 + H_1 + H_2 = 60$ ft Maximum					
$H_1 + H_2 = 20$ ft Maximum					

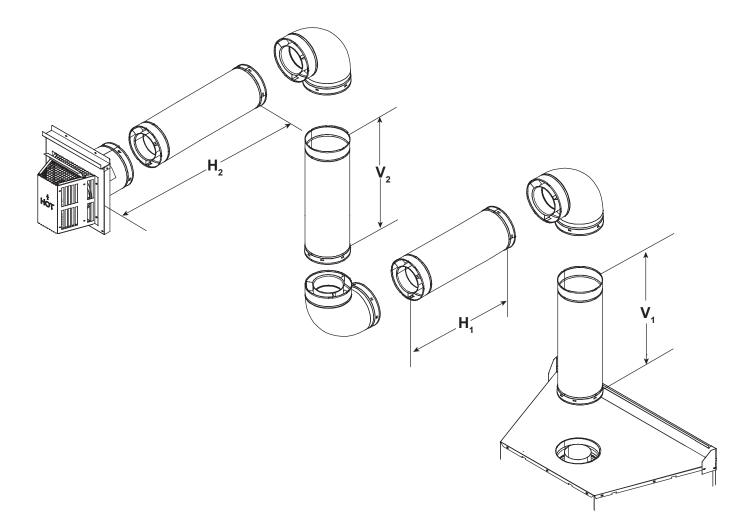
## Top Vent - Horizontal Termination - (continued)

## **Three Elbows**

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

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

	<b>V</b> <sub>1</sub>	H <sub>1</sub>		<b>V</b> <sub>2</sub>	H <sub>2</sub>
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 <sub>2</sub> Max = 2 X			
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, $H_{t_{max}} = 2 \times V_t$ and $V_{total} + H_{total}$ cannot exceed 60 ft Maximum					

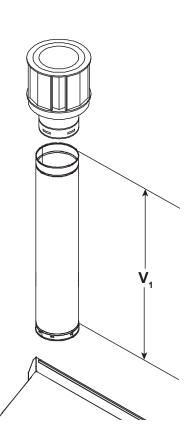


## **Top Vent - Vertical Termination**

#### No Elbow

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

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



 $V_1 = 50$  ft. Max. (15.2 m)  $V_1 = 3$  ft. Min. (914 mm)

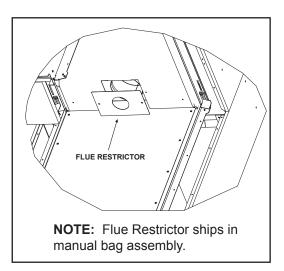


Figure 4.12

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

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

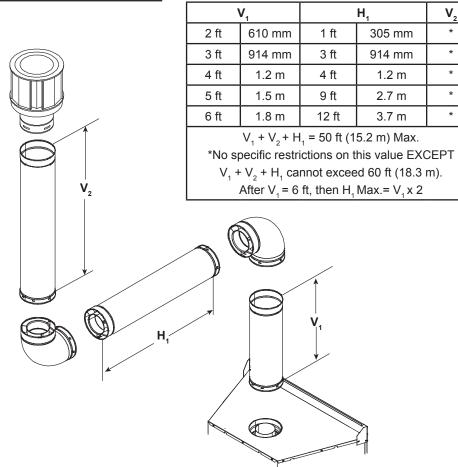


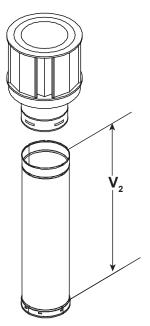
Figure 4.13

## **Three Elbows**

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

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

	<b>V</b> <sub>1</sub>	H <sub>1</sub>	H <sub>2</sub>	<b>V</b> <sub>2</sub>	H, I	Max.
2 ft	610 mm	*	*	**	7 in	178 mm
3 ft	914 mm	*	*	**	2 ft	610 mm
4 ft	1.2 m	*	*	**	4 ft	1.2 m
5 ft	1.5 m	*	*	**	8 ft	2.4 m
6 ft	1.8 m	*	*	**	12 ft	3.7 m
7 ft	2.1 m	*	*	**	14 ft	4.3 m
10 ft	3.0 m	*	*	**	20 ft	6.1 m
$^{*}H_{1}$ and $H_{2}$ has no specific restrictions EXCEPT,						
after $V_1 = 6$ ft, then $H_t Max = 2 \times V_1$						
	$**V_{T_{+}}H_{T} = 60 \text{ ft Max.}$					



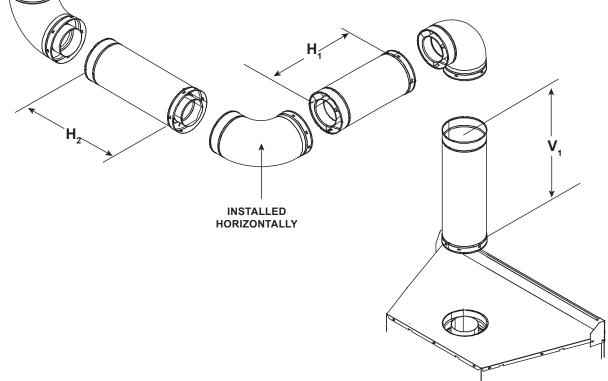


Figure 4.14

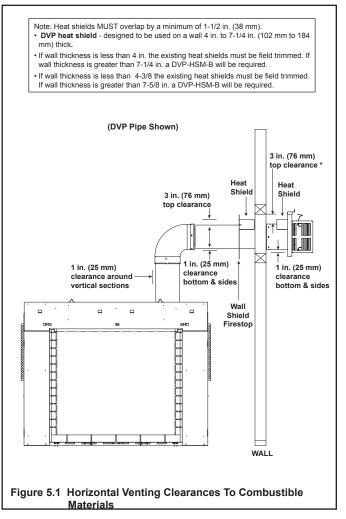


## A. Pipe Clearances to Combustibles

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

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

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



## **B. Wall Penetration Framing/Firestops**

#### **Combustible Wall Penetration**

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

- The opening must be framed on all four sides using the same size framing materials as those used in the wall construction.
- DVP pipe A wall shield firestop is required on one side only on interior walls. If your local inspector requires a wall shield firestop on both sides, then both wall shield

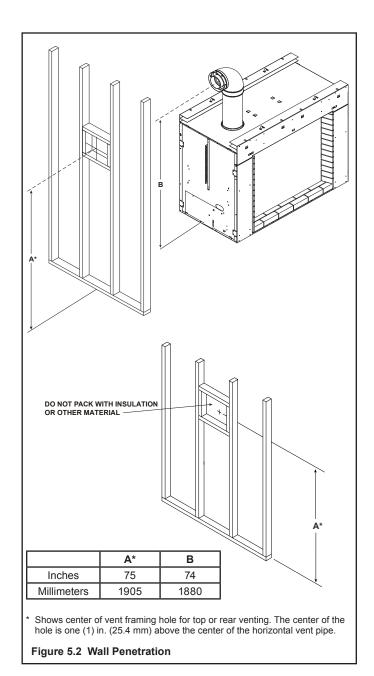
firestops must have a heat shield (refer to Section 12.A.) attached to them.

• See Section 7.F. for information for regarding the installation of a horizontal termination cap.

#### Non-Combustible Wall Penetration

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

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



## C. Ceiling Firestop/Floor Penetration Framing

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

- Frame an opening 10 in. by 10 in. (254 mm by 254 mm) whenever the vent penetrates a ceiling/floor (see Figure 5.3).
- Frame the area with the same sized lumber as used in ceiling/floor joist.
- The ceiling firestop may be installed above or below the ceiling joists when installed with an attic insulation shield. It must be under joists between floors that are not insulated. Refer to Figure 5.4.
- · Secure in place with nails or screws.

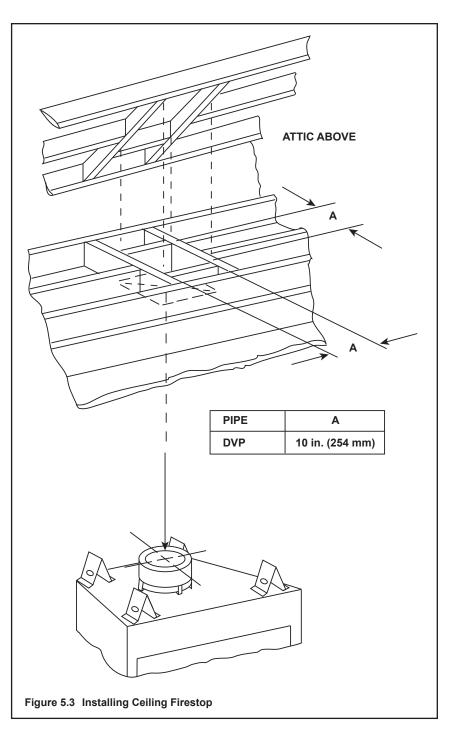
**WARNING! Risk of Fire! DO NOT pack insu**lation around the vent. Insulation must be kept back from the pipe to prevent overheating.

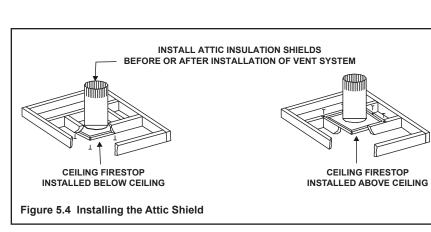
## D. Install Attic Insulation Shield

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

The International Fuel Gas Code requires an attic shield constructed of 26 gauge minimum steel that extends at least 2 in. (51 mm) above insulation.

- Attic insulation shields must meet specified clearances to combustible materials and be secured in place.
- An attic insulation shield kit is available from Hearth & Home Technologies. Contact your dealer to order. Install attic insulation shield according to instructions included with kit.







## A. Vent Collar Preparation

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

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

1. Remove shrink wrap from appliance.



Figure 6.1 Packaged Appliance.

 The seal cap, shown in Figure 6.2, is included to prevent construction material from getting into appliance. Remove seal cap when pipe installation phase begins.



Figure 6.2 Seal Cap.

 Remove the two non-combustible assemblies by removing the two 1/4 in. screws fastening the non-combustible assemblies to the appliance. See Figure 6.3. 4. Six sheet metal finishing strips are included with the appliance. The shipping location of the finishing strips is shown in Figure 6.3. Remove 1/4 in. screws that attach the strips to the appliance. Strips may be used during the final finishing steps of appliance setup. See Figure 6.5. Strips should be removed when finishing is completed.



Figure 6.3 Shipping Brackets and Finishing Strip Locations.

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

Attach the non-combustible board to the appliance and wall framing with the screws supplied in the manual bag assembly. See Figure 6.4.

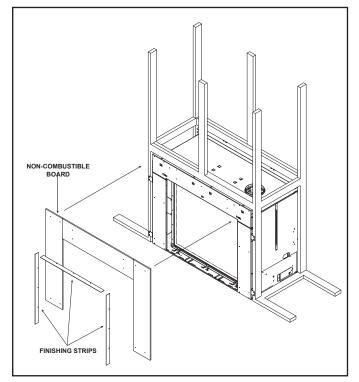


Figure 6.4 Attaching Non-Combustible Board

## B. Securing and Leveling the Appliance

WARNING! Risk of Fire! Prevent contact with:

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

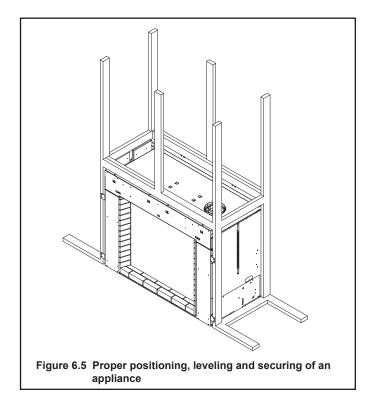
Block openings into the chase to prevent entry of blownin insulation. Make sure insulation and other materials are secured.

**DO NOT** notch the framing around the appliance standoffs.

Failure to maintain air space clearance may cause overheating and fire.

The diagram shows how to properly position and secure the appliance. See Figure 6.5. Nailing tabs are provided to secure the appliance to the framing members.

- Bend out nailing tabs on each side.
- Place the appliance into position.
- · Keep nailing tabs flush with the framing.
- Level the appliance from side to side and front to back.
- Shim the appliance as necessary. It is acceptable to use wood shims underneath the appliance.
- Secure the appliance to the framing by using nails or screws through the nailing tabs.
- Secure the appliance to the floor by inserting two screws through the pilot holes at the bottom of the appliance.
- Optional: Secure the appliance to the floor by inserting two screws through the pilot holes at the bottom of the appliance.



# Venting and Chimneys

## A. Assemble Vent Sections

## (DVP Pipe Only)

#### Attach Vent to the Firebox Assembly

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

Attach the first pipe section to the starting collar:

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

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

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

 Apply a bead of silicone sealant (300 °F minimum continuous exposure rating) inside the female outer pipe joint prior to joining sections. See Figure 7.1. <u>OR</u>

Apply a bead of silicone sealant (300 °F minimum continuous exposure rating) to the outside of connecting joint after joining sections  $\underline{OR}$ 

Apply aluminum foil tape (300 °F minimum continuous exposure rating) to the outside of connecting joint after joining sections. On horizontal pipe runs, it is recommended that the tape seam is positioned on the bottom side of the vent pipe.

• Only outer pipes need to be sealed. All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed in this manner, unless otherwise stated.

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

#### **Assemble Pipe Sections**

Per Figure 7.2:

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

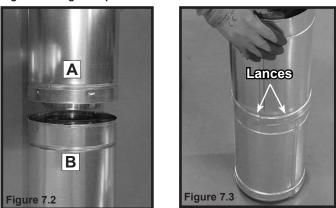
It is acceptable to use screws no longer than 1/2 in. (13 mm) to hold outer pipe sections together. If predrilling holes, **DO NOT** penetrate inner pipe.

For 90° and 45° elbows that are changing the vent direction

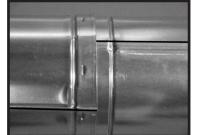
from horizontal to vertical, one screw minimum should be put in the outer flue at the horizontal elbow joint to prevent the elbow from rotating. Use screws no longer than 1/2 in. (13 mm). If predrilling screw holes, **DO NOT** penetrate inner pipe.



Figure 7.1 High Temperature Silicone Sealant



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



CORRECT

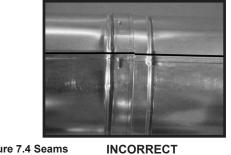


Figure 7.4 Seams INCOF

## **B. Assemble Slip Sections**

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

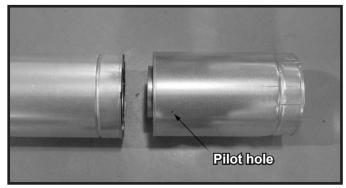


Figure 7.5 Slip Section Pilot Holes

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

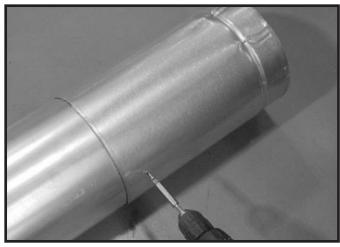


Figure 7.6 Screws into Slip Section

• Continue adding pipe as necessary following instructions in "Assembling Pipe Sections."

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

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

- Apply a bead of silicone sealant (300 °F minimum continuous exposure rating) inside the female outer pipe joint prior to joining sections.
- Only outer pipes are sealed, sealing the inner flue is not required.
- All unit collar, pipe, slip section, elbow and cap outer flues shall be sealed.

## C. Secure the Vent Sections

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

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

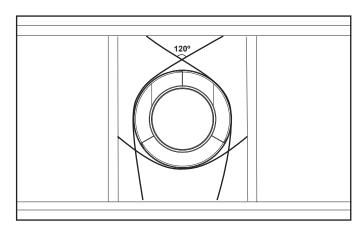


Figure 7.7 Securing Vertical Pipe Sections

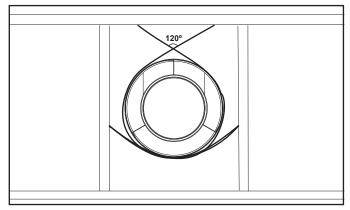


Figure 7.8 Securing Horizontal Pipe Sections

## D. Disassemble Vent Sections

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

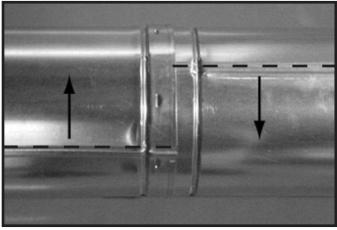


Figure 7.9 Rotate Seams for Disassembly

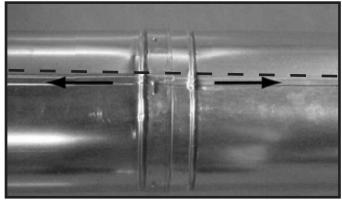
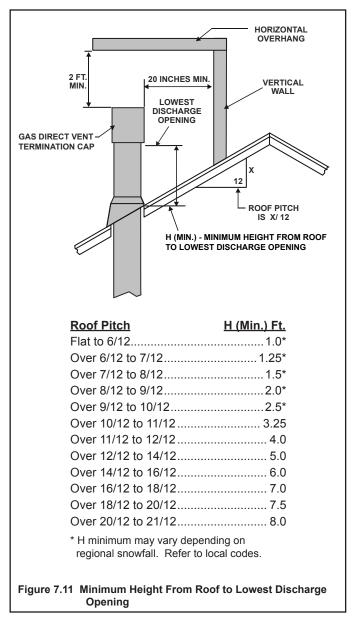


Figure 7.10 Align and Disassemble Vent Sections

## E. Vertical Termination Requirements

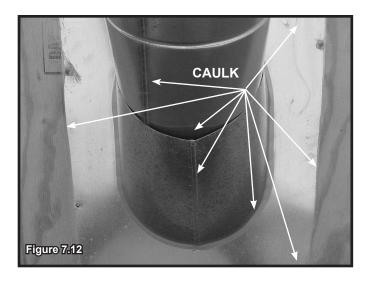
## **Install Metal Roof Flashing**

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



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

- Caulk the gap between the roof flashing and the outside diameter of the pipe.
- Caulk the perimeter of the flashing where it contacts the roof surface. See Figure 7.13.
- Caulk the overlap seam of any exposed pipe sections that are located above the roof line.



## Assemble and Install Storm Collar

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

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



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

## **Install Vertical Termination Cap**

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



## F. Horizontal Termination Requirements

# Heat Shield Requirements for Horizontal Termination

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

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

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

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

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

Important Notice: Heat shields may not be field constructed.

## Install Horizontal Termination Cap

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

- 1-1/2 (38 mm) minimum overlap of flue telescoping section is required.
- Failure to maintain overlap could cause overheating and fire.
- Vent termination must not be recessed in the wall. Siding may be brought to the edge of the cap base.
- Flash and seal as appropriate for siding material at outside edges of cap.
- When installing a horizontal termination cap, follow the cap location guidelines as prescribed by current **ANSI Z223.1** and **CAN/CGA-B149** installation codes and refer to Section 4 of this manual.

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

**NOTICE:** When penetrating a brick wall, a brick extension kit is available for framing the brick.

**Electrical Information** 

### A. General Information

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

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

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

#### **Junction Box Installation**

- Pull the electrical wires from outside the appliance through the opening into the valve compartment and secure wires with a Romex connector. See Figure 8.1.
- Make all necessary wire connections to the junction box/ receptacle and reattach the junction box/receptacle to the outer shell.

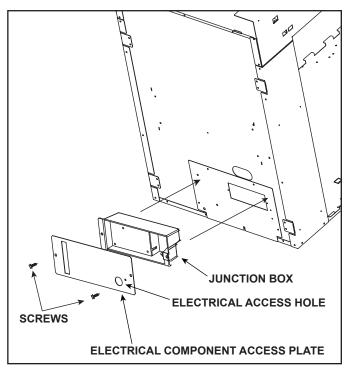


Figure 8.1 Junction Box Detail

#### **Accessories Requirements**

• This appliance may be used with a wall switch, wall mounted thermostat and/or a remote control.

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

## **Electrical Service and Repair**

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

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

## **B. Wiring Requirements**

## Intellifire™ Touch Ignition System Wiring

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

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

- Refer to Figure 8.3 or 8.4, IFT Wiring Diagram.
- This appliance is equipped with an Intellifire™ Touch control valve which operates on a 6 volt/1.5 AMP system.
- Plug the 6 volt transformer plug into the appliance junction box to supply power to the unit OR install 4 AA cell batteries (not included) into the battery pack before use.

**NOTICE:** Batteries should only be used as a power source in the event of an emergency power outage. Batteries should not be used as a primary long-term power source. Battery polarity must be correct when installing batteries. When using batteries as a power source, the 6-volt transformer must be unplugged from the receptacle.

Do not store batteries in the battery pack when the appliance is powered by the 6 volt transformer connected to permanent electrical service.

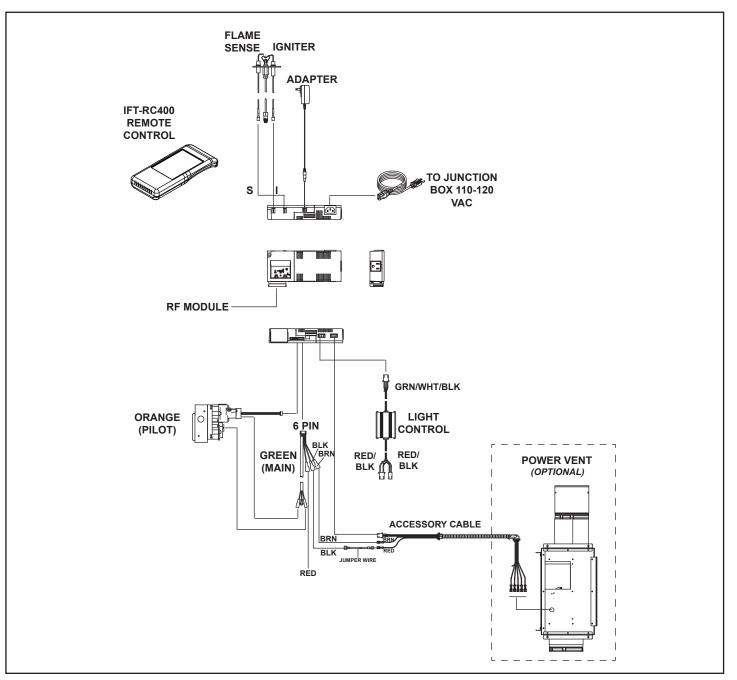


Figure 8.3 IFT Wiring Diagram

Gas Information

## A. Fuel Conversion

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

## B. Gas Pressure

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

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

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

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



## **WARNING**

Fire Risk. Explosion Hazard.

High pressure will damage valve.

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

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

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

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

## C. Gas Connection

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

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

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

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

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

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

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

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

## D. High Altitude Installations

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

When installing above 2000 feet elevation:

- In the USA: Reduce input rate 4% for each 1000 feet above 2000 feet.
- In CANADA: Input ratings are certified without a reduction of input rate for elevations up to 4500 feet (1370 m)above sea level. Please consult provincial and/ or local authorities having jurisdiction for installations at elevations above 4500 feet (1370 m).

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

## E. Air Shutter Setting

Air shutter settings should be adjusted by a qualified service technician at the time of installation. The shutter adjustment rod is located adjacent to the gas valve. The shutter setting is preset at the factory for either NG or LP. These are tested settings that work well for most venting applications. Units with increased vertical venting may require a shutter setting that is more closed. Installations with extended horizontal venting may require a more open shutter setting. The measurement is taken from the face of the appliance to the end of the silicone cap. See Figure 9.1.

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

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

#### **Air Shutter Settings**



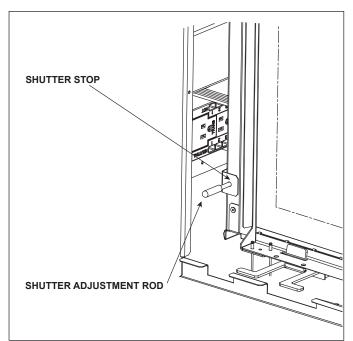


Figure 9.1 Shutter Adjustment Rod and Shutter Stop



## A. Facing Material

- Metal front faces may be covered with non-combustible materials only.
- Facing and/or finishing materials must not interfere with air flow through louvers, operation of louvers or doors, or access for service.
- Facing and/or finishing materials must never overhang into the glass opening.
- Observe all clearances when applying combustible materials.
- Seal joints between the finished wall and appliance top and sides using a 300 °F minimum sealant. Refer to Figure 10.1.

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

**NOTICE:** Surface temperatures around the appliance will become warm while the appliance is in operation. Ensure finishing materials used for all surfaces (floor, walls, mantels, etc.) will withstand temperatures up to 190°F.

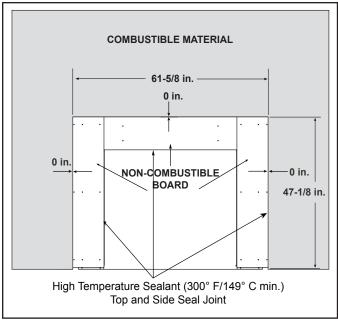


Figure 10.1 Non-combustible Facing Diagram

# **B. Mantel and Wall Projections**

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

#### **Combustible Mantels**

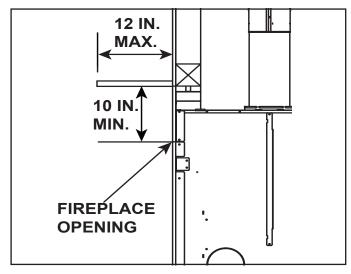


Figure 10.2 Clearances to Mantels or Other Combustibles Above Appliance

#### **Non-combustible Mantels**

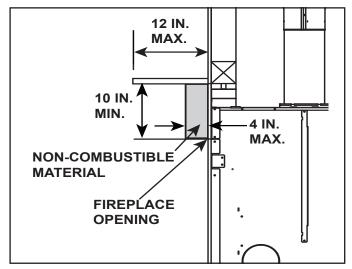


Figure 10.3 Clearances to Mantels or other Non-Combustibles Above Appliance

### **Combustible Mantel Legs or Wall Projections**

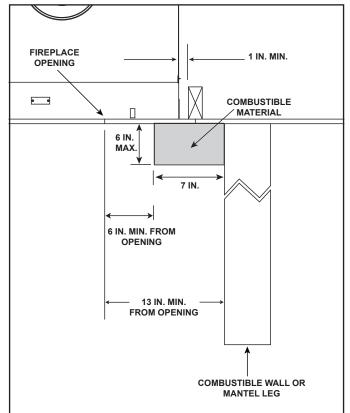


Figure 10.4 Clearances to Combustible Mantel Legs or Wall Projections.

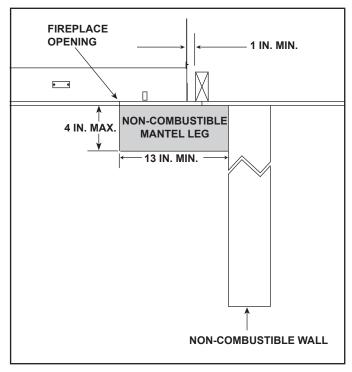


Figure 10.5 Clearances to Non-Combustible Mantel Legs or Wall Projections.

### Non-Combustible Mantel Legs or Wall Projections

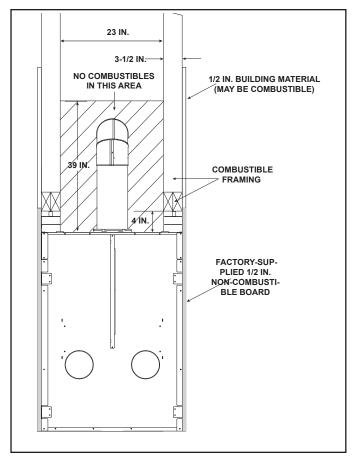


Figure 10.6

### **C. Decorative Fronts**

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

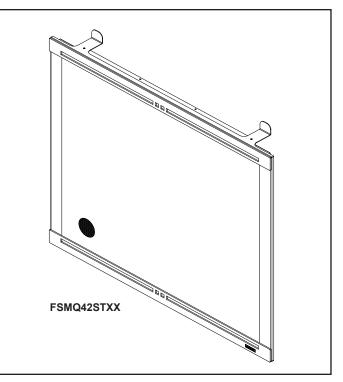


Figure 10.7 Approved Decorative Fronts for MARQ42STIN

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



# A. Fixed Glass Assembly

**WARNING!** Risk of Asphyxiation! Glass installation and removal should be performed only by a qualified service technician. Handle fixed glass assembly with care. Inspect the gasket to ensure it is undamaged and inspect the glass for cracks, chips or scratches.

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

### Installing Fixed Glass Assembly

 Identify the top and bottom of the glass assembly. The top of the glass frame has three engagement grooves. The engagement groove is highlighted in Figure 11.1.



Figure 11.1 Glass Top Tab Detail.

2. Start by tipping the top of the glass frame toward the fireplace. Center the glass between the left and right firebox supports. Push "up" and "in" and set the glass assembly on the bottom three glass latch tabs. See Figure 11.2.



Figure 11. 2 Initial Positioning of Frame into Opening.

3. With the glass assembly resting (not engaged) on the bottom glass latch tabs, allow for the top of the glass assembly to tip away from the fireplace. Lift up slightly and ensure the glass assembly bottom seal is tight to the bottom of the firebox. See Figure 11.3.



Figure 11.3 Second Position of Frame into Opening.

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

To engage the tabs into the frame slots, manipulate the glass clips by pulling out the glass latch handles. Figure 11.3 shows the middle glass latch tab engaged.

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

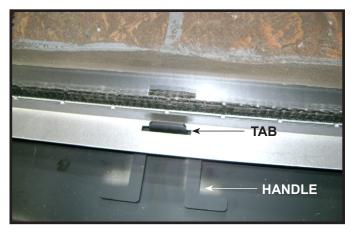


Figure 11.4 Glass Latch Engaged into Frame Latch.

5. Ensure all three bottom glass latch tabs are engaged and centered in the three slots in the glass frame. The glass latch tab should protrude through the slot in the glass frame about 1/4 in. See Figure 11.5



Figure 11.5 Bottom Glass Latch Tabs Installed in Glass Frame

6. Engage the three glass latches on top. Push the top of the glass toward the fireplace. Use index fingers to manipulate top glass latches and pull out and latch the three glass assembly latches into the engagement grooves. See Figure 11.6 and Figure 11.7.



Figure 11.6 Top Glass Latch Access

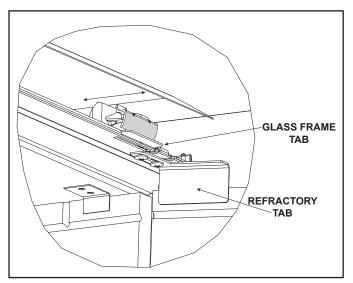


Figure 11.7. Top Glass Latch Detail

### **Removing Fixed Glass Assembly**

• Remove glass assembly by reversing these glass installation instructions.

### **B.** Remove the Shipping Materials

Remove shipping materials from inside or underneath the firebox.

• The splatter guard is a piece of corrugated material used to protect the appliance during the installation process before finishing work on the whole hearth is complete. Splatter guards may be factory installed or accompany the decorative front of the appliance, depending on the fireplace model. Splatter guards must be removed before appliance is fired.

**WARNING!** Risk of Fire! Close the ball valve before installing the splatter guard to prevent accidental lighting. Remove the splatter guard before lighting the appliance.

### C. Clean the Appliance

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

## **D.** Accessories

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

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

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

- 1. Remove the knockout from the side of the appliance and discard it. See Figure 11.8.
- Center the duct collar around the exposed hole and attach it to the appliance with 3 screws. Note: Do this BEFORE final positioning of the appliance.
- 3. Determine the location for the air register/fan housing assembly.

Reference the Heat-Zone<sup>®</sup> Gas Kit instructions for the remaining installations steps.

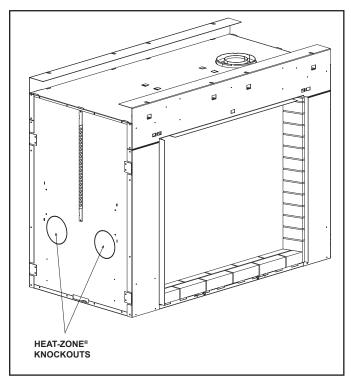


Figure 11.8 Heat-Zone® Gas Knockouts.

## F. Install Light Bulbs

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

#### **Ember Lights**

1. Remove ember basket by lifting it from fireplace. There is one metal tab on each end of the ember box that engages slots in the ember basket. See Figure 11.9.

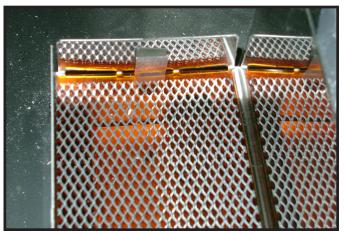


Figure 11.9 Ember Basket

2. Install two 20 watt halogen bulbs per side. See Figure 11.10.

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

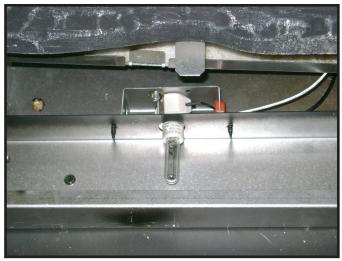


Figure 11.10 Ember Light Bulb Installed

3. Reinstall ember basket over the ember box by inserting the tabs on the ember box in the slots on the ember basket. See Figure 11.9.

#### **Accent Lights**

1. Remove the screw that secures the two bottom sheet metal refractory standoffs that are installed around the left and right accent light assemblies. See Figure 11.13.

2. Install the two accent lights by removing (2) screws that hold the light housing to the firebox bottom. Install bulb by inserting the 2 pins on the bulb base into the 2 holes in the socket. See Figure 11.11 and Figure 11.12.

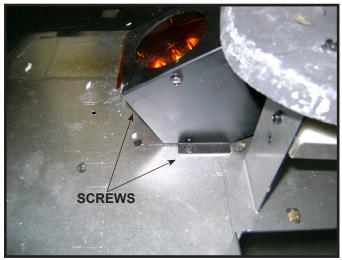


Figure 11.11 Light Housing Removal

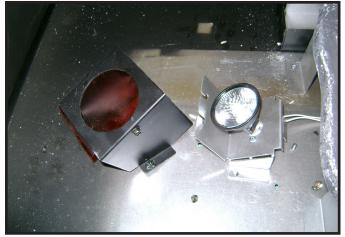


Figure 11.12 Light Housing Removed, Bulb Installed

- 3. Reinstall accent light cover to light socket assembly and install with two screws to firebox bottom.
- 4. Reinstall the two bottom sheet metal refractory standoffs with one screw each. See Figure 11.13.



Figure 11.13 Accent Light Bulb Installation Completed

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

1. Install the glass ember rock (Teco-Sil) that is shipped with this fireplace into the left and right ember light trays. See Figure 11.14.



Figure 11.14 Glass Ember Bed

2. Using TUP-GBK-12 spray paint, dust the glass ember rock to create a more natural looking ash bed. Care should be taken to avoid overspray onto refractory and stainless steel back plate. See Figure 11.15 and Figure 11.16.



Figure 11.15 Ember Bed Painting



Figure 11.16 Finished Ember Bed

# H. Mystic Ember Placement

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

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

- 1. Place Mystic Embers in a random pattern around the base refractory away from port holes as shown in Figure 11.17.
- 2. Save the remaining ember materials for use during appliance servicing. The embers provided should be enough for 3 to 5 applications.



Figure 11.17 Ember Placement on Base Refractory

# I. Ember/Mineral Wool Placement

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

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

- Place dime-size pieces of Glowing Embers® just in front of the port trail, but not on or in between the ports See Figure 11.18. Embers are to be placed adjacent to burner port holes. Care should be taken so that the ports are not covered. Failure to follow this procedure will likely cause lighting and sooting problems.
- Embers CANNOT be placed directly over ports. Care should be taken not to cover the lighting trail of ports (from back to front).

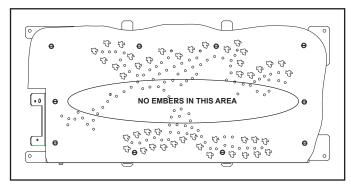


Figure 11.18 Ember Placement

# Log Set Assembly: LOGSMARQ42ST Models: MARQ42STIN

# LOG PLACEMENT INSTRUCTIONS

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

Log Set:

Log #1 - 2272-701 (21) Log #2 - 2272-702 (22) Log #3 - 2272-703 (23) Log #4 - 2272-704 (24) Log #5 - 2272-705 (25) Log #6 - 2272-706 (26) Log #7 - 2272-707 (27) Log #8 - 2272-707 (27) Log #9 - 2272-708 (28) Log #10 - 2272-708 (28) Log #11 - 2272-709 (29)

Logs can be identified by the number molded into the bottom of the log. The numbers are listed in parentheses above.



Figure 1. Log Set



Figure 2. Burner and grate from front.



Figure 3. Grate leg placement.

**GRATE:** Locate the pilot assembly. The pilot assembly is denoted in this instruction by a black or white arrow ( $\rightarrow$ ) on each photo. For the purpose of placing logs according to this instruction, begin with the pilot on the left side. From this position, the close side of the unit will be considered the front and the far side of the unit will be considered the back. Position grate by locating the four indentations on the bottom refractory. Place grate legs in the indentations as shown in Figure 3.





Figure 4. Log #1 from rear.

Figure 5. Log #1 from above, showing end butting into grate tine.

**LOG NUMBER 1 (SRV2272-701):** Locate the pilot assembly. It should be on the left side of the fireplace. Place log #1 into the grate such that the groove on the bottom sits on the far right grate tine as shown in Figure 4. Push the log forward until the end of the log butts up against the middle grate tine on the far side. See Figure 5. The log must NOT block any burner ports.



Figure 6. Log #2 from front.



Figure 7. Log #2 close-up from front.

**LOG NUMBER 2 (SRV2272-702):** Place Log #2 as shown. The groove on the bottom of Log #2 should rest on the far left grate tine as shown in Figure 6. Place the log at the far end of the tine and slide it towards the front until the end of the log rests in a ridge on the burner as shown in Figure 8. The log must NOT block any burner ports. Note: Logs #2 & # 3 look very similar. Compare the numbers molded into the bottom of the logs against the list above.





Figure 8. Log #3 from front,

Figure 9. Log #3 close-up from front.

LOG NUMBER 3 (SRV2272-703): Place Log #3 as shown. The groove on the bottom of Log #3 should rest on the far right grate tine as shown in Figure 9. Pull the log toward the front end of the unit until it contacts the far right grate tine. The log must NOT block any burner ports. Note: Logs #2 & #3 look very similar. Compare the numbers molded into the bottom of the logs against the list above.



Figure 10. Log #4 from front showing grate tine groove.



Figure 11. Log #4 close-up on the side showing groove against tine.

**LOG NUMBER 4 (SRV2272-704):** Place Log #4 so that the groove on the bottom of the log rests on the grate bar as shown in Figure 10. Twist the log until the notch on the side of the log contacts the second grate tine from the left as shown in Figure 11. The end of the log should rest on a ridge on the burner as shown in Figure 10. Note that there are burner ports close to the log on both sides - the log must NOT block any burner ports.



Figure 12. Log #5 from above.



Figure 13. Log #5 from rear showing resting point on log and grate tine.

**LOG NUMBER 5 (SRV2272-705):** Place Log #5 as shown. The groove on the underside of Log #5 shall rest on the far right grate tine as shown in Figure 12. The other side of the log will sit in the groove on Log #1. See Figure 13. The log must NOT block or sit directly over any burner ports.



Figure 14. Log 6 from above.



Figure 15. Log 6 close-up of end.

**LOG NUMBER 6 (SRV2272-706):** Place Log #6 on the groove on Log #2 and the far side of the grate. The end of the log will sit on the grate base with the tip against the middle grate tine as shown in Figure 14. The log must NOT block or sit directly over burner ports.



Figure 16. Log #7 from rear.

**LOG NUMBER 7 (SRV2272-707):** Note that Logs #7 and #8 are identical to each other. Place Log #7 on the close side of the grate base and Log #4. Slide the end of the log into the second grate tine from the right. Note that the "burnt" side of the log will face in toward the burner.

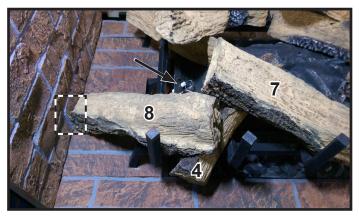


Figure 17. Log #8 from front.

**LOG NUMBER 8 (SRV2272-707):** Note that Logs #7 and #8 are identical to each other. Place Log #8 on top of Log #4, resting on the far left grate tine and the outside brick panels as shown in Figure 17. The end of the log should align with the mortar jointin the brick refractory. Pull Log #7 back slightly to secure Log #8 against the grate tine. The "burnt" side of the log will face in toward the burner. Care should be taken not to place the log where It will restrict the function of the accent lights.



Figure 18. Log 9 from rear.

**LOG NUMBER 9 (SRV2272-708):** Note that Logs #9 and #10 are identical to each other. Place Log #9 on the groove on Log #2 with the end resting against the side and bottom brick panels as shown in Figure 18.



Figure 19. Log #10 from front.

**LOG NUMBER 10 (SRV2272-708):** Note that Logs #9 and #10 are identical to each other. Place Log #10 on the Log #7 and the groove on Log #3 – the thin end of the log should sit roughly between the second and third grate tines from the right as shown in Figure 19. The log must NOT block or sit directly over burner ports.



Figure 20. Log #11 from front.

**LOG NUMBER 11 (SRV2272-709):** Place Log #11 on the groove on Log #3. The other end of the log should rest against the side and bottom brick panels as shown in Figure 20. Care should be taken not to place the log where it will restrict the function of the accent lights.

### K. IntelliFire<sup>™</sup> Touch Control System Setup

- Detailed instructions for electrical wiring and connections are provided in Section 8.
- Determine if this appliance is equipped with a Module Reset Switch. See Section 8. Verify this switch is in the ON position.
- Verify that the 3-Position switch on the IFT-ECM is switched to the REMOTE position. Detailed Operating Instructions for the IFT-ECM are provided in Section 3.J of the Owner's Manual.

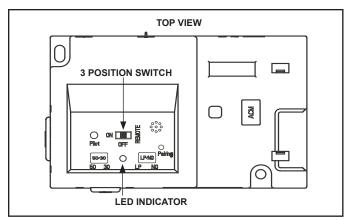
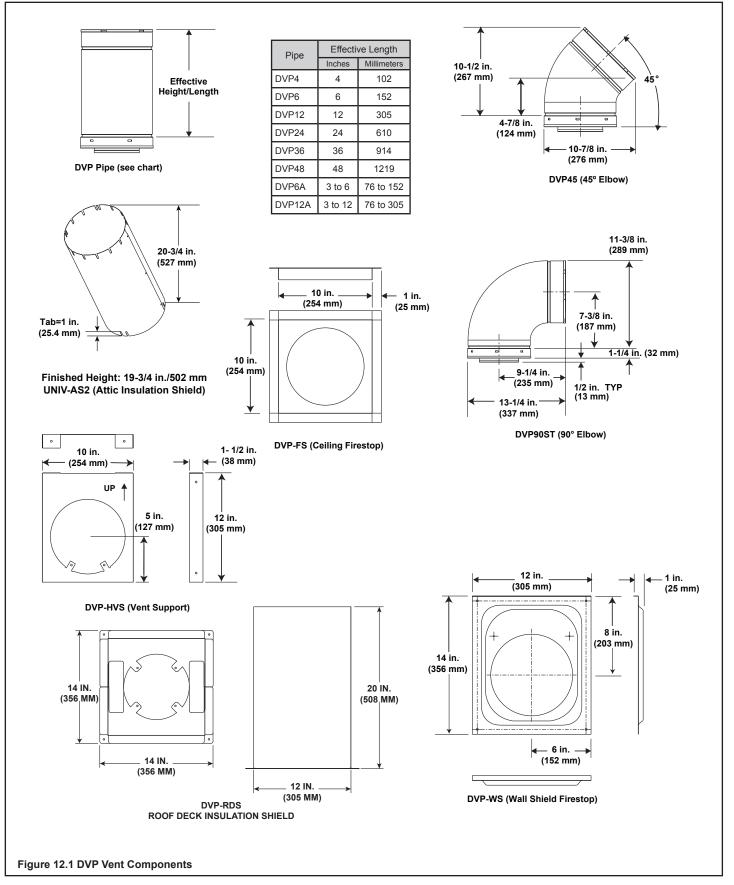


Figure 11.5 IFT-ECM

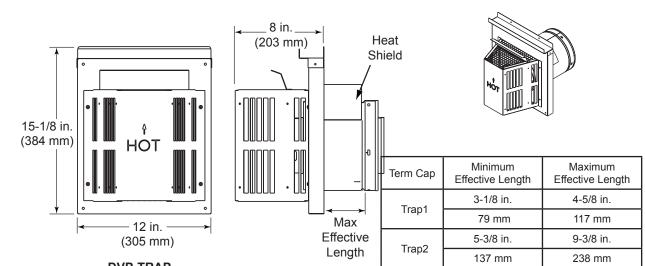
This appliance is factory-equipped with an IntelliFire<sup>™</sup> Touch remote control. The remote was paired to the fireplace and tested at the factory. It does not need to be paired again, unless an accessory kit will be added at the time of installation. If no additional accessory will be added, simply follow steps one through seven below.

- 1. If installed, remove batteries from remote.
- 2. Verify that the new appliance has power and secure electrical connections.
- 3. Adjust the ECM selector switch to 'REMOTE' mode.
- 4. Switch the master reset switch to 'ON' (if equipped).
- Wait to verify LED indicator on the ECM stops flashing.
- 6. Install batteries in the RC400 remote.
- 7. The RC400 remote will automatically pair to the appliance as pre-set at the factory.

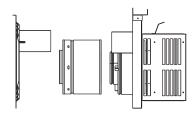
# A. Vent Components Diagrams



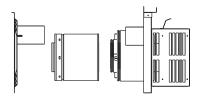
Note: Heat shields MUST overlap by a minimum of 1-1/2 in. (38 mm). **The heat shield is designed to be used on a wall 4 in. to 7-1/4 in. (102 mm to 184 mm) thick.** If wall thickness is less than 4 in. (102 mm) the existing heat shields must be field trimmed. If wall thickness is greater than 7-1/4 in.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



DVP-TRAP Horizontal Termination Cap



**DVP-TRAP1** 



DVP-TRAP2

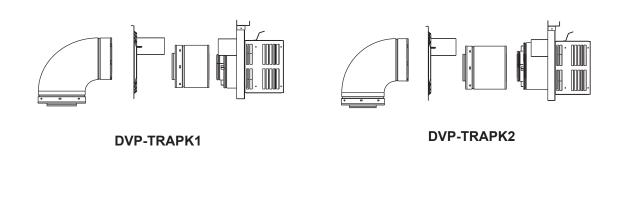
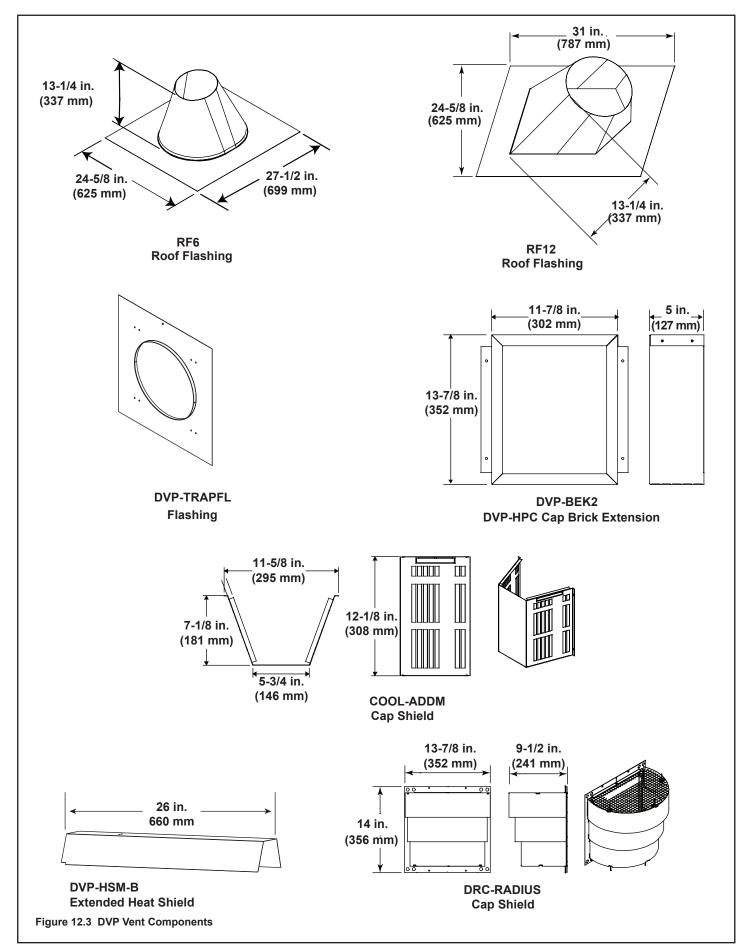
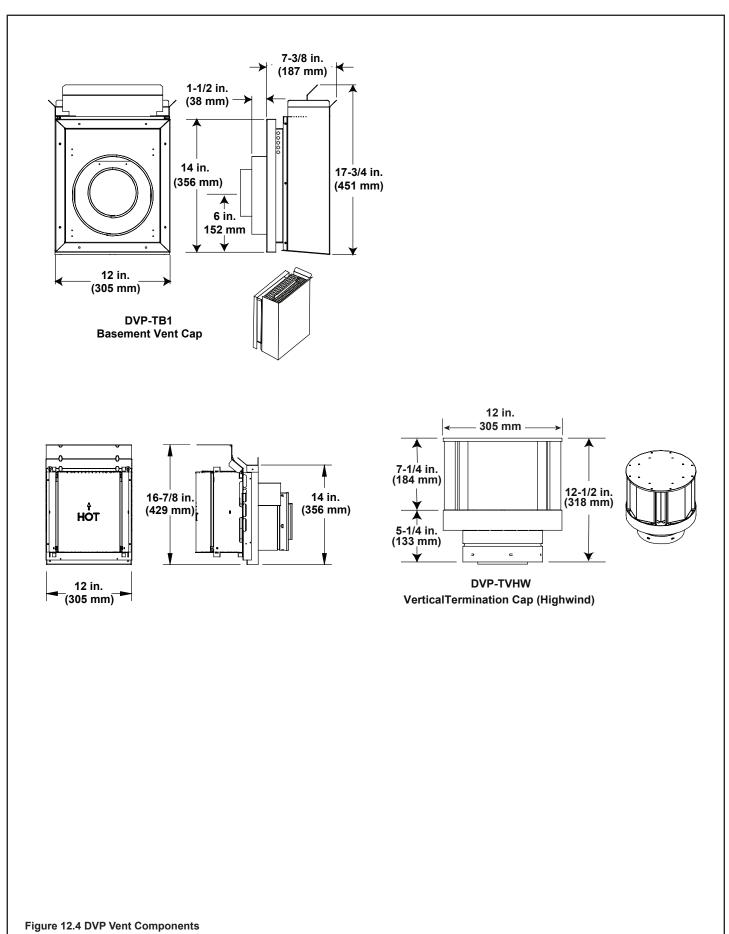


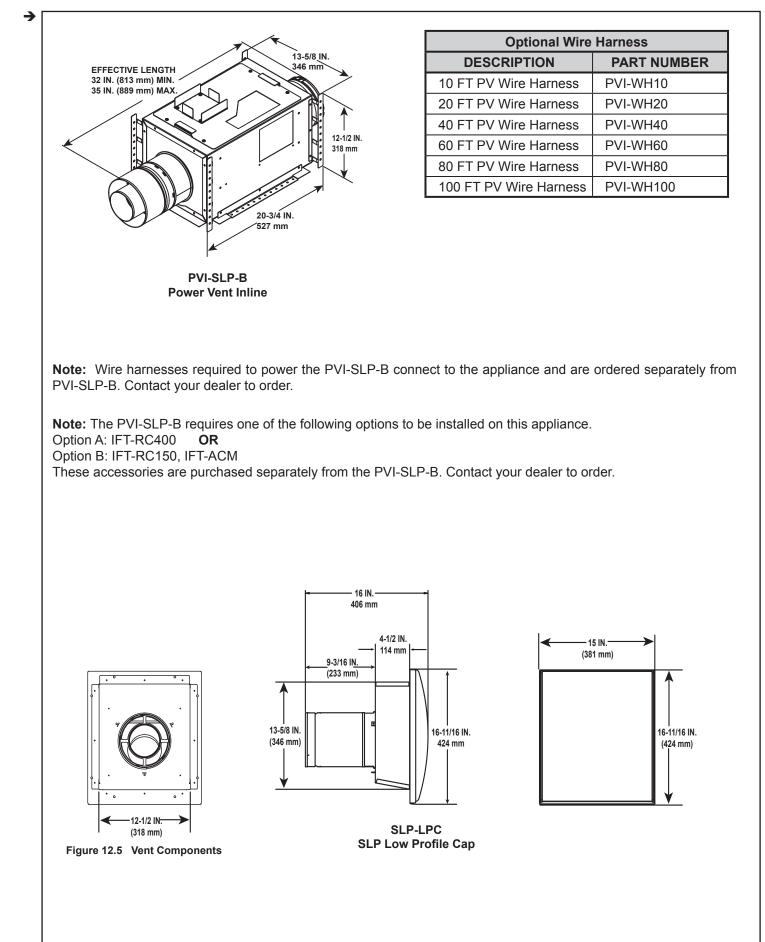
Figure 12.2 DVP Vent Components

# A. Vent Components Diagrams (continued)



# A. Vent Components Diagrams (continued)





# A. Vent Components Diagrams (continued)

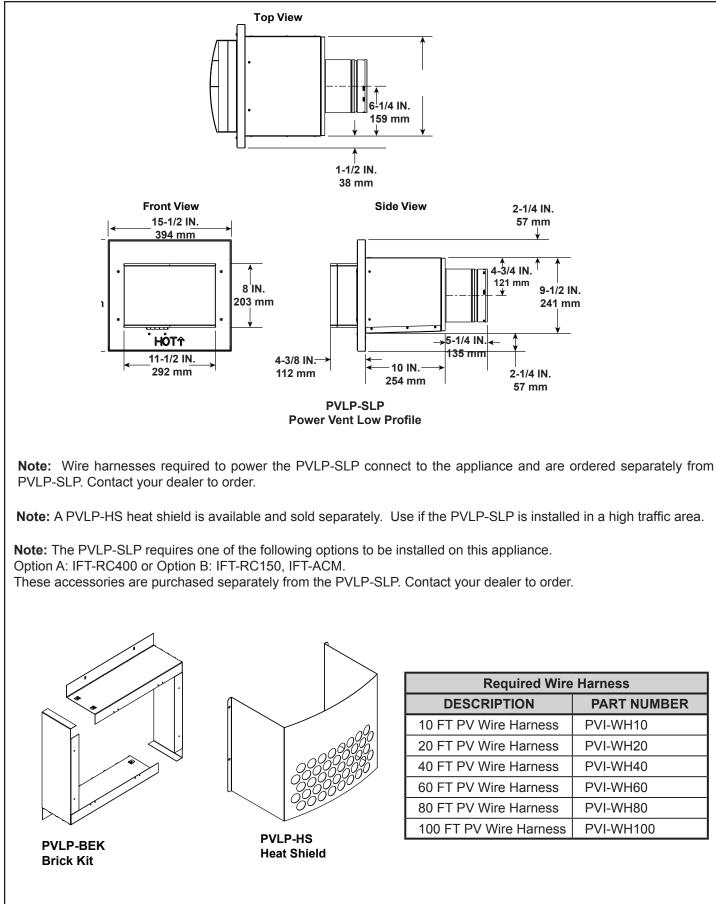


Figure 12.6 PVLP-SLP Vent Components

→

# **B.** Accessories

# **Remote Controls, Wall Controls and Wall**

### Switches

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

For safety:

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

See your dealer if you have questions.

# **Optional Heat-Zone® Gas Kit**

Follow the instruction supplied with the kit for operation. See your dealer if you have questions.

> Majestic, a brand of Hearth & Home Technologies 7571 215<sup>th</sup> Street West, Lakeville, MN 55044 www.majesticproducts.com

Please contact your Majestic dealer with any questions or concerns. For the location of your nearest Majestic dealer, please visit www.majesticproducts.com

Printed in U.S.A. - Copyright 2019