

# Installation Manual

## Installation and Appliance Setup

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

**OWNER:** Retain this manual for future reference.

**NOTICE:** DO NOT discard this manual!

### ARTISAN SERIES



#### Models:

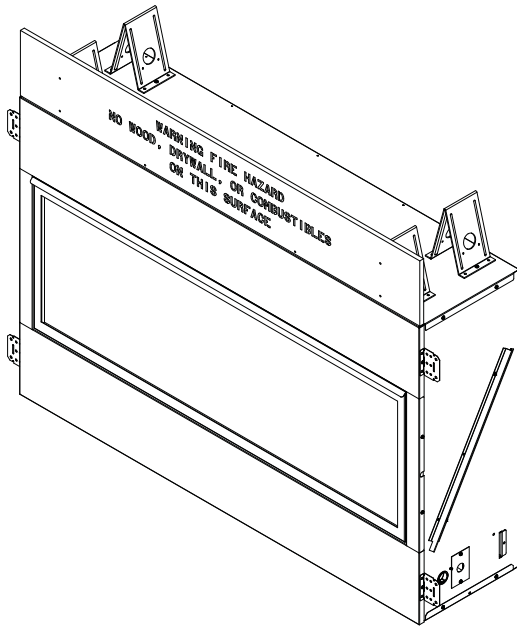
AVFL42NIP-BU/PIP-BU

AVFL42NIP-RB/PIP-RB

AVFL48NIP/PIP

AVFLST48NIP/PIP

AVFL60NIP-B/PIP-B



This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to Page 6.

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.

#### ▲ WARNING:

#### FIRE OR EXPLOSION HAZARD

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

- **DO NOT** store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **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.

**DO NOT** install this appliance in a bedroom or bathroom. Please refer to page 6 Section F for proper appliance placement.

This appliance may be installed in an after-market, permanently located, manufactured (mobile) home, where not prohibited by local codes. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

## ▲ Safety Alert Key:

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

## Table of Contents

Installation Standard Work Checklist . . . . . 3

### 1 Product Specific and Important Safety Information

- A. Appliance Certification . . . . . 4
- B. BTU Specifications . . . . . 4
- C. High Altitude Installations . . . . . 4
- D. Non-Combustible Materials Specification . . . . . 4
- E. Combustible Materials Specification . . . . . 4
- F. Electrical Codes . . . . . 4

### 2 Getting Started

- A. Design and Installation Considerations . . . . . 5
- B. Tools and Supplies Needed . . . . . 5
- C. Inspect Appliance and Components . . . . . 5
- D. Getting Started . . . . . 6
- E. Planning the Installation . . . . . 6
- F. Adequate Combustion Ventilation Air . . . . . 6
- G. Important Safety and Operating Information . . . . . 8

### 3 Framing and Clearances

- ▶ A. Appliance & Framing Dimensions/Weight . . . . . 10
- ▶ B. Clearances and Height Requirements . . . . . 14
- ▶ C. Good Faith Wall Surface TV Guidelines . . . . . 16
- D. Constructing the Appliance Chase . . . . . 18
- E. Floor Protection . . . . . 18

### 4 Appliance Preparation

- A. Securing and Leveling the Appliance . . . . . 19
- B. Installing Non-Combustible Facing Material . . . . . 20

### 5 Gas Information

- A. Fuel Type . . . . . 21
- B. Gas Pressure . . . . . 21
- C. Gas Service Access . . . . . 21
- D. Connect to Gas . . . . . 23
- E. Valve Access . . . . . 24
- F. Check Gas Pressure . . . . . 24
- G. Gas Connection . . . . . 25
- H. High Altitude Installations . . . . . 25

### 6 Electrical Information

- A. General Information . . . . . 26
- B. Wiring Requirements . . . . . 27

### 7 Final Installation

- A. Black Magic Glass Installation . . . . . 29
- ▶ B. Installation of Air Deflection Glass . . . . . 30
- C. Crushed Glass Media Only Placement . . . . . 30
- D. Glass and Optional Stone Kit Placement . . . . . 30
- E. Placement of Optional Logs . . . . . 32
- F. Lighting Instructions (IPI) . . . . . 35

### 8 Finishing

- ▶ A. Facing and Finishing Instructions . . . . . 36
- B. Operation During a Power Outage . . . . . 38
- ▶ C. Detailed Component Operating Instructions.—Intellifire Plus ODS . . . . . 39
- ▶ D. Troubleshooting . . . . . 41
- E. Accessories . . . . . 43

**▲ WARNING! RISK OF FIRE OR EXPLOSION AND ASPHYXIATION HAZARD**

Improper adjustment, alteration, service, maintenance, or installation of this heater or its controls can cause death or serious injury.  
Read and follow instructions and precautions in User's Information Manual provided with this heater.

# Installation Standard Work Checklist

## ATTENTION INSTALLER: Follow this Standard Work Checklist

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

<b>Customer:</b> _____ <b>Lot/Address:</b> _____ <b>Model (circle one):</b> AVFL42NIP-BU/PIP-BU, AVFL42NIP-RB/PIP-RB AVFL48NIP/PIP, AVFLST48NIP/PIP, AVFL60NIP-B/PIP-B	<b>Date Installed:</b> _____ <b>Location of Appliance:</b> _____ <b>Installer:</b> _____ <b>Dealer/Distributor Phone #</b> _____ <b>Serial #:</b> _____
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**WARNING! Risk of Fire or Explosion!** Failure to install appliance according to these instructions could lead to a fire or explosion.

	YES	IF NO, WHY?
<b>Appliance Install Sections 2 and 4</b>	<input type="checkbox"/>	_____
Verified that the chase is insulated and sealed.	<input type="checkbox"/>	_____
Required non-combustible board is installed.	<input type="checkbox"/>	_____
Verified clearances to combustibles.	<input type="checkbox"/>	_____
Fireplace is leveled and secured.	<input type="checkbox"/>	_____
Adequate provisions for combustion and ventilation air have been verified.	<input type="checkbox"/>	_____
<b>Gas Section 5</b>	<input type="checkbox"/>	_____
Proper appliance for fuel type.	<input type="checkbox"/>	_____
Leak check performed and inlet pressure verified.	<input type="checkbox"/>	_____
Verified proper air shutter setting for installation type.	<input type="checkbox"/>	_____
<b>Electrical Section 6</b>	<input type="checkbox"/>	_____
Unswitched power (110-120 VAC) provided to the appliance.	<input type="checkbox"/>	_____
Switch wires properly installed.	<input type="checkbox"/>	_____
<b>Crushed Glass Media &amp; Logs Section 7</b>	<input type="checkbox"/>	_____
All packaging and protective materials removed (inside & outside of appliance).	<input type="checkbox"/>	_____
Crushed glass media installed correctly.	<input type="checkbox"/>	_____
Accessories installed properly.	<input type="checkbox"/>	_____
<b>Finishing Section 8 (Pg 27)</b>	<input type="checkbox"/>	_____
Verified all clearances meet installation manual requirements.	<input type="checkbox"/>	_____
Mantels and wall projections comply with installation manual requirements.	<input type="checkbox"/>	_____
Manual bag and all of its contents are removed from inside/ under the appliance and given to party responsible for use and operation.	<input type="checkbox"/>	_____
Started appliance and verified no gas leaks exist.	<input type="checkbox"/>	_____

**Hearth & Home Technologies recommends the following:**

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

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

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

➔ = Contains updated information.

# 1 Product Specific and Important Safety Information

## A. Appliance Certification

**MODEL:** AVFL42NIP-BU, AVFL42PIP-BU, AVFL42NIP-RB, AVFL42PIP-RB, AVFL48NIP, AVFL48PIP, AVFLST48NIP, AVFLST48PIP, AVFL60NIP-B, AVFL60PIP-B

**LABORATORY:** UNDERWRITERS LABORATORIES, INC. (UL)

**TYPE:** Unvented Room Heaters

**STANDARD:** ANSI Z21.11.2:19

This product is listed to ANSI standards for "Unvented Room Heaters" and applicable sections of "Gas Burning Heating Appliances for Manufactured Homes" and "Gas Fired Appliances for Use at High Altitude."

**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.

### 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. BTU Specifications

Models		Maximum Input BTU/h	Minimum Input BTU/h	Orifice Size (DMS)
AVFL42NIP-BU (NG)	(0-2000 FT)	34,000	23,500	.1110(#34)
AVFL42PIP-BU (PROPANE)	(0-2000 FT)	33,000	26,000	.070(#50)
AVFL42NIP-RB (NG)	(0-2000 FT)	24,500	17,500	.096(#41)
AVFL42PIP-RB (PROPANE)	(0-2000 FT)	24,000	19,000	.0595(#53)
AVFL48NIP (NG)	(0-2000 FT)	39,000	27,500	.120(#31)
AVFL48PIP (PROPANE)	(0-2000 FT)	38,000	31,000	.076(#48)
AVFLST48NIP (NG)	(0-2000 FT)	39,000	27,500	.120(#31)
AVFLST48PIP (PROPANE)	(0-2000 FT)	38,000	31,000	.076(#48)
AVFL60NIP-B (NG)	(0-2000 FT)	40,000	28,000	.120(#31)
AVFL60PIP-B (PROPANE)	(0-2000 FT)	39,000	30,500	.076(#48)

**NOTE:** For LP models an external regulator is required to reduce supply pressure to a maximum of 13" w.c.

## GAS PRESSURES

	NATURAL	PROPANE (LP)
Inlet Minimum	5.0" w.c.	11.0" w.c.
Inlet Maximum	10.0" w.c.	13.0" w.c.
Regulator Pressure Setting	3.5" w.c.	10" w.c.
Pilot Regulator	3.5" w.c.	—

## C. 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: Reduce input rate 4% for each 1000 feet above 2000 feet.

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

## D. 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.

## E. 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.

## F. 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.



**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](http://www.P65Warnings.ca.gov).

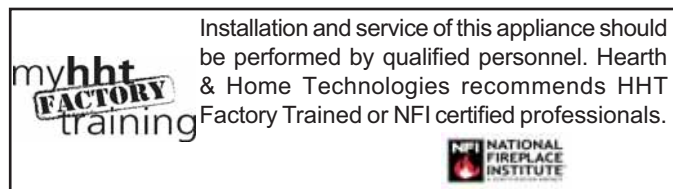
## 2 Getting Started

### A. Design and Installation Considerations

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.
- Gas supply piping.
- Electrical wiring requirements.
- Framing and finishing details.
- Whether optional accessories—devices such as a wall switch or remote control—are desired.



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

### B. Tools and Supplies Needed

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

- Tape measure
- Pliers
- Hammer
- Gloves
- Voltmeter
- Level
- Manometer
- Framing material
- Phillips screwdriver
- Framing square
- Plumb line
- Safety glasses
- Reciprocating saw
- Flat blade screwdriver
- 1/2 - 3/4 in. length, #6 or #8 Self-drilling screws
- Non-corrosive leak check solution
- Electric drill and bits (1/4 in. magnetic)
- External regulator (for propane/LPG only)
- Piping which complies with local codes
- Pipe sealant approved for use with propane/LPG (Resistant to sulfur compounds)
- Manual shutoff valve
- Sediment trap
- Tee joint
- Pipe wrench

### C. Inspect Appliance and Components

- Carefully remove the appliance and components from the packaging.
- The accessories and fronts may be shipped in separate packages.
- Crushed Glass Media may be packaged separately.
- Report to your dealer any parts damaged in shipment, particularly the condition of the glass.
- **Read all of the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.**

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

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

- Installation and use of any damaged appliance.
- Modification of the appliance.
- Installation other than as instructed by Hearth & Home Technologies.
- 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.

**⚠ WARNING**

**This appliance is equipped for (natural or propane) gas. Field conversion is not permitted.**

## D. Getting Started

Verify that all listed parts have been received. You should have the following:

- Unvented gas heater
- Two (2) anchoring screws
- Installation and Owner's instructions
- 7.25" non-combustible board
- Deflector glass
- Five (5) bags crushed glass media (60" appliances)
- Four (4) bags crushed glass media (42" and 48" appliances)
- RC300 remote control

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately inform the dealer from whom you purchased the appliance. **Do not attempt to install any part of the appliance unless you have all parts in good condition.**

### **⚠ WARNING**

**Do not install the heater:**

- **Where curtains, furniture, clothing, or other flammable objects are less than 36" from the front of the heater.**
- **In high traffic areas.**
- **In windy or drafty areas.**

### **⚠ WARNING**

**Gloves are recommended when handling ceramic fiber logs to prevent skin irritation from loose fibers. Logs are fragile—handle with care.**

## E. Planning the Installation

When planning the installation of the appliance it is necessary to determine where the appliance is to be installed and whether optional accessories are desired. Gas supply piping should also be planned. The following steps represent the normal sequence of installation. Each installation is unique, however, and might require a different sequence.

1. Position appliance in desired location. Refer to the *Appliance Location* (page 7, Figure 2.2) and *Clearances and Height Requirements* (page 12, Figures 3.6 and 3.7) sections and *Appliance and Framing Dimensions* (page 10 and 11, Figure 3.4 and 3.5) illustration found in this manual.

**NOTE:** Be sure all packing material has been removed from under and behind the unit.

2. Install following the instructions found in this manual.
3. Field wire main power supply to junction box. Refer to the *Electrical Installation* section (page 23). (Electrical connections should only be performed by an experienced, licensed certified service person).

4. Plumb gas line. Gas line may be run either through bottom of unit or left side. There is no right side access. Refer to the *Connect the Gas* (page 20, Figure 5.3) section found in this manual. (Gas connections should only be performed by an experienced, licensed/certified service person).
5. Complete finish wall material and/or surround.

## F. Adequate Combustion Ventilation Air

This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air.

The National Fuel Gas Code, (ANSI Z223.1/NFPA54), defines a confined space as a space whose volume is less than 50 cubic feet per 1,000 BTU per hour (4.8m<sup>3</sup> per kw) of the aggregate input rating of all appliances installed in that space, and an unconfined space as a space whose volume is not less than 50 cubic feet per 1,000 BTU per hour (4.8 m<sup>3</sup> per kw) of the aggregate input rating of all appliances installed in that space. Rooms communicating directly with the space in which the appliances are installed, through openings not furnished with doors, are considered a part of a confined space.

Unusually tight construction is defined as construction where:

- a. Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of 1 perm (6 x 10<sup>11</sup> kg per pa/sec-m<sup>2</sup>) or less with openings gasketed or sealed, and
- b. Weather stripping has been added to windows and doors, and
- c. Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical and gas lines and other openings.

The following formula can be used to determine the maximum heater rating per the definition of unconfined space:

$$\text{BTU/Hr} = \frac{(L_1 + L_2) \text{ Ft} \times (W) \text{ Ft} \times (H) \text{ Ft}}{50}$$

Consider two connecting rooms with an open area between, with the following dimensions:

$$L_1 = 15\frac{1}{2} \text{ Ft.}, L_2 = 12 \text{ Ft.}, W = 12 \text{ Ft.}, H = 8 \text{ Ft.}$$

$$\text{BTU/Hr} = \frac{(15\frac{1}{2} + 12) \times (12) \times (8)}{50}$$

If there were a door between the two rooms the calculation would be based only on the room with the heater.

$$\text{BTU/Hr} = \frac{(15\frac{1}{2}) \times (12) \times (8)}{50}$$

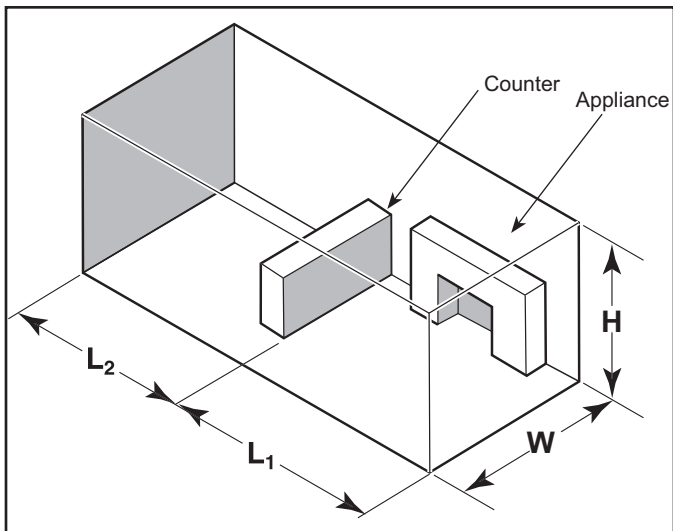


Figure 2.1

### ⚠ WARNING

If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.

## APPLIANCE LOCATION

This unvented gas heater requires no outside venting and burns cleanly and efficiently. As a zero-clearance unvented gas heater, it can be installed against (or recessed into) any wall that is accessible to a gas line.

Carefully select the best location for installation of your unvented appliance. The following factors should be taken into consideration.

- Clearance to side wall, ceiling, woodwork and window or other combustibles. Refer to *Clearance and Height Requirements* section on *Page 12*. Minimum clearances to combustibles **must be maintained**.
- Location must not be affected by drafts caused by kitchen exhaust fans, ceiling fans, return air registers for forced air furnaces / air conditioners, windows or doors.
- Installation must provide adequate ventilation and combustion air.
- **DO NOT INSTALL THIS MODEL IN A BEDROOM OR BATHROOM.**
- Location should be out of high traffic areas and away from furniture and draperies due to heat from firebox.

- Never obstruct the front opening of the unvented appliance or restrict the flow of combustion and ventilation air.
- Minimize modifications to existing construction. Refer to Figure 2.2 below for location suggestions.
- Do not install in the vicinity where gasoline or other flammable liquids may be stored. The unvented firebox must be kept clear and free from the combustible materials.

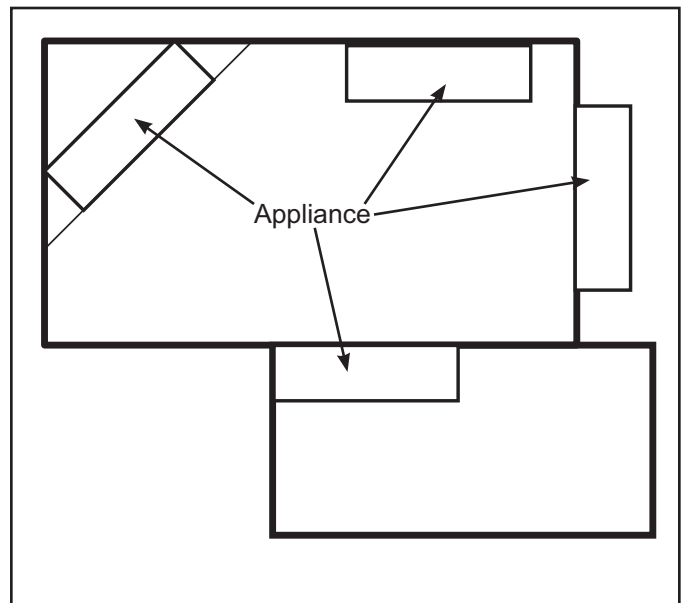


Figure 2.2

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

It is important to follow the framing and finishing instructions step by step to ensure proper placement of appliance in the surrounding framing/finishing materials.

## G. Important Safety and Operating Information

### WARNING

- Any change to this appliance or its controls can be dangerous.
- Improper installation or use of the appliance can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.
- Do not allow fans to blow directly into the appliance. Avoid any drafts that alter burner flame patterns.
- Do not use a blower insert, heat exchanger insert or other accessory, not approved for use with this heater where applicable.

1. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
2. Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.
3. Young children should be carefully supervised when they are in the same room with the appliance.
4. Do not place clothing or other flammable material on or near the appliance.
5. Any safety screen or guard removed for servicing an appliance, must be replaced prior to operating the heater.
6. Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean.
7. This appliance is intended for supplemental heating.

8. **CARBON MONOXIDE POISONING:** Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Have the heater serviced as it may not be operating properly.
9. The installation must conform with local codes or, in the absence of local codes, with the **National Fuel Gas Code, ANSI Z223.1/NFPA54.**
10. Do not install this appliance in a bathroom or bedroom.
11. Correct installation of the crushed glass media, optional stone and ceramic fiber logs, proper location of the appliance, and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the appliance. Refer to log placement instructions for proper installation.

12. **WARNING:** Do not allow fans to blow directly into the appliance. Avoid any drafts that alter burner flame patterns. Do not place a blower inside burn area of appliance. Ceiling fans may create drafts that alter burner flame patterns. Sooting and improper burning will occur.
13. **Caution:** Candles, incense, oil lamps, etc. produce combustion by-products including soot. Vent-free appliances will not filter or clean soot produced by these types of products. In addition, the smoke and/or aromatics (scents) may be reburned in the vent-free appliance which can produce odors. It is recommended to minimize the use of candles, incense, etc. while the vent-free appliance is in operation.
14. This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, the *International Fuel Gas Code* or applicable local codes.
15. Keep room area clear and free from combustible materials, gasoline and other flammable vapors and liquids.
16. Unvented appliances emit moisture into the living area. In most homes of average construction, this does not pose a problem. In houses of extremely tight construction, additional mechanical ventilation is recommended.
17. During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance; possibly causing headaches or eye or lung irritation. This is a normal and temporary occurrence. The initial break-in operation should last three to four hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in period will be slight and will disappear with continued use.
18. Input ratings are shown in BTU per hour and are for elevations up to 2,000 feet. For elevations above 2,000 feet, input ratings should be reduced 4 percent for each 1,000 feet above sea level. Refer to the National Fuel Gas Code.



19. The appliance and its appliance main gas valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of ½ psig (3.5 kPa).
20. The appliance must be isolated from gas supply piping system by closing its equipment shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than ½ psig (3.5 kPa).
21. Do not use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
22. Never burn solid fuels in a appliance where a unvented room heater is installed.
23. **WARNING:** Failure to keep the primary air opening of the burner clean may result in sooting and property damage.
24. **WARNING:** Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.

### BUILDING CODE INFORMATION

Adhere to all local codes or, in their absence, the latest edition of THE NATIONAL FUEL GAS CODE ANSI Z223.1 or NFPA54 which can be obtained from:

**American National Standards Institute, Inc.**  
 1430 Broadway  
 New York, NY 10018  
 or

**National Fire Protection Association, Inc.**  
 Batterymarch Park  
 Quincy, MA 02269

### General Operating Parts

Figure 3.2 references the general operating parts of the appliance and the section of this manual in which they are discussed.

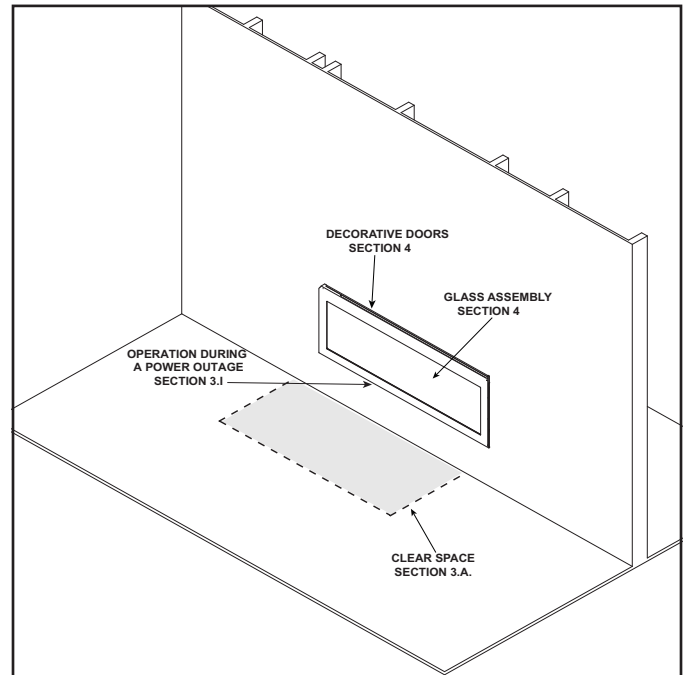


Figure 3.2 General Operating Parts

### C. Fuel Specifications

**WARNING! Risk of Fire or Explosion!** Appliance must be set up for compatible gas type!

- This appliance is designed to operate on either natural gas or propane. Make sure the appliance is compatible with gas type selected for installation site.

**WARNING! Risk of Fire!** Comply with all minimum clearances to combustibles as specified in the installation instructions.

# 3 Framing and Clearances

## ► A. Appliance and Framing Dimensions/Weight

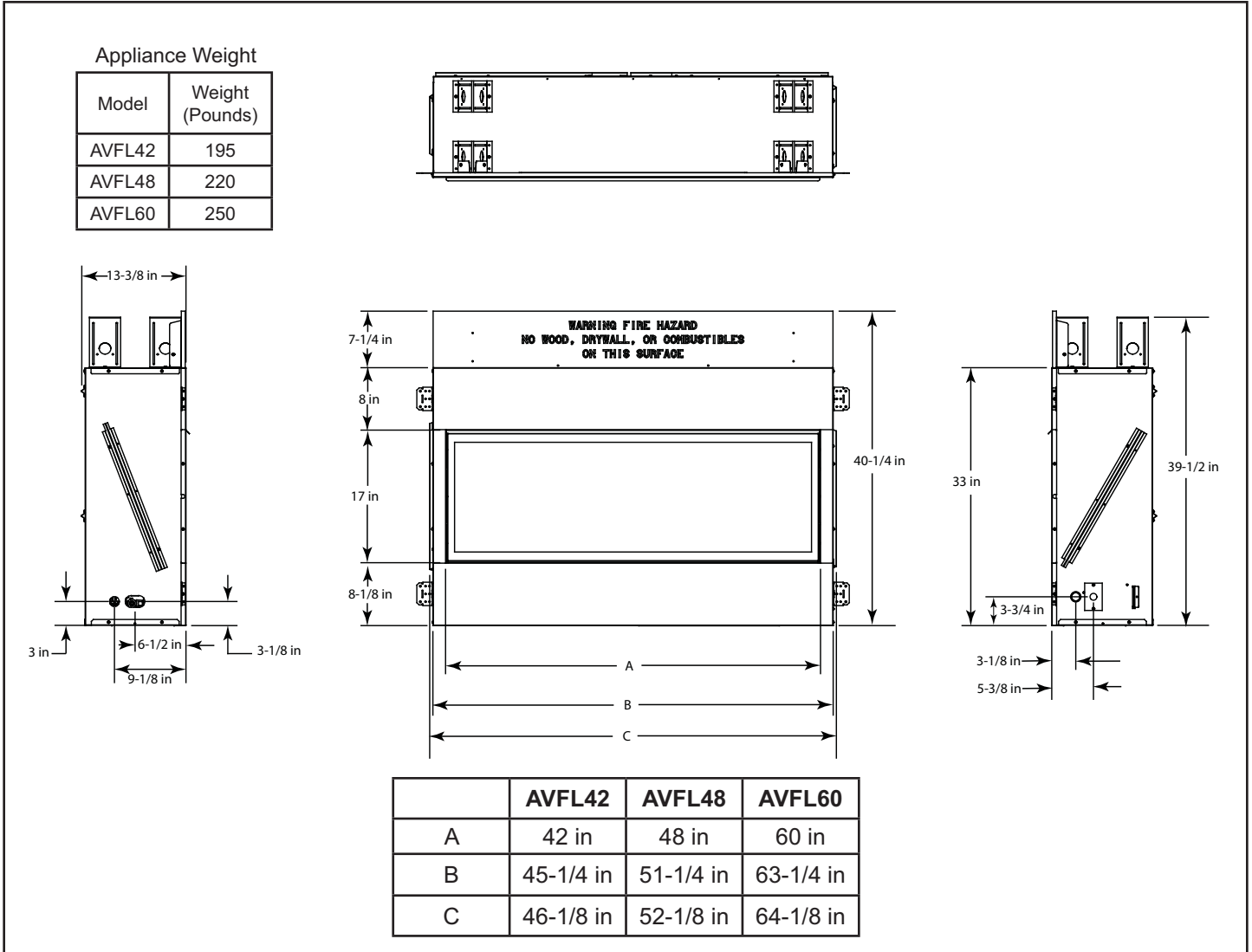


Figure 3.1 - Appliance Dimensions

Appliance Weight

Model	Weight (Pounds)
AVFLST48	205

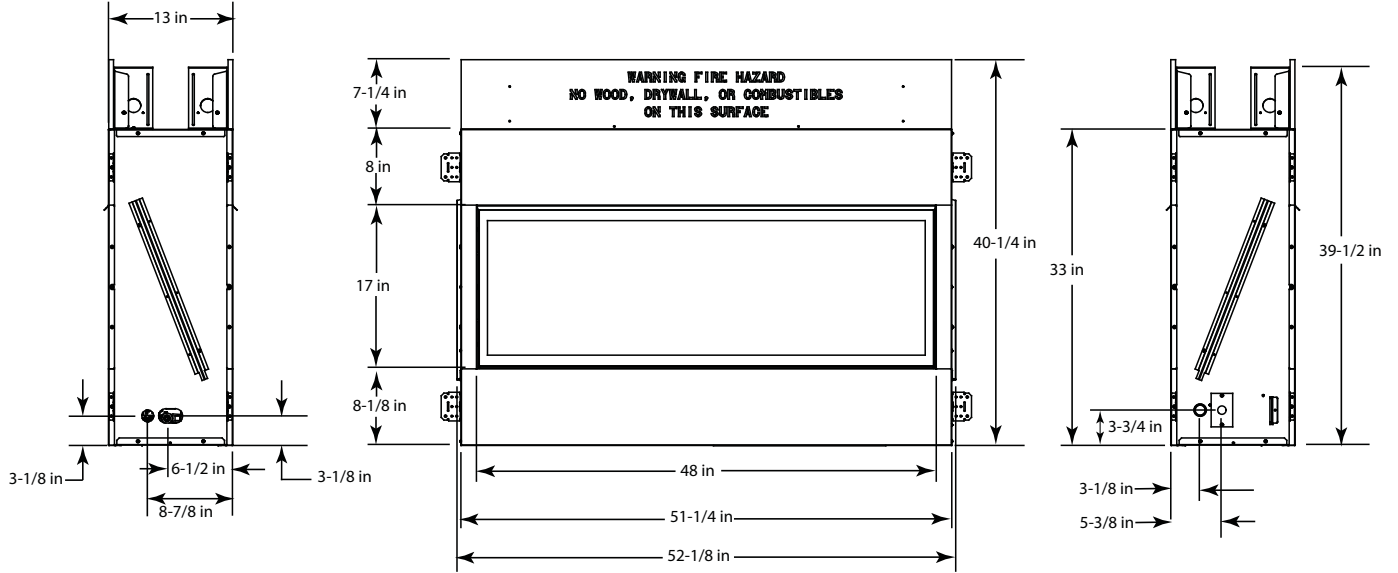


Figure 3.2 - AVFLST48 Appliance Dimensions

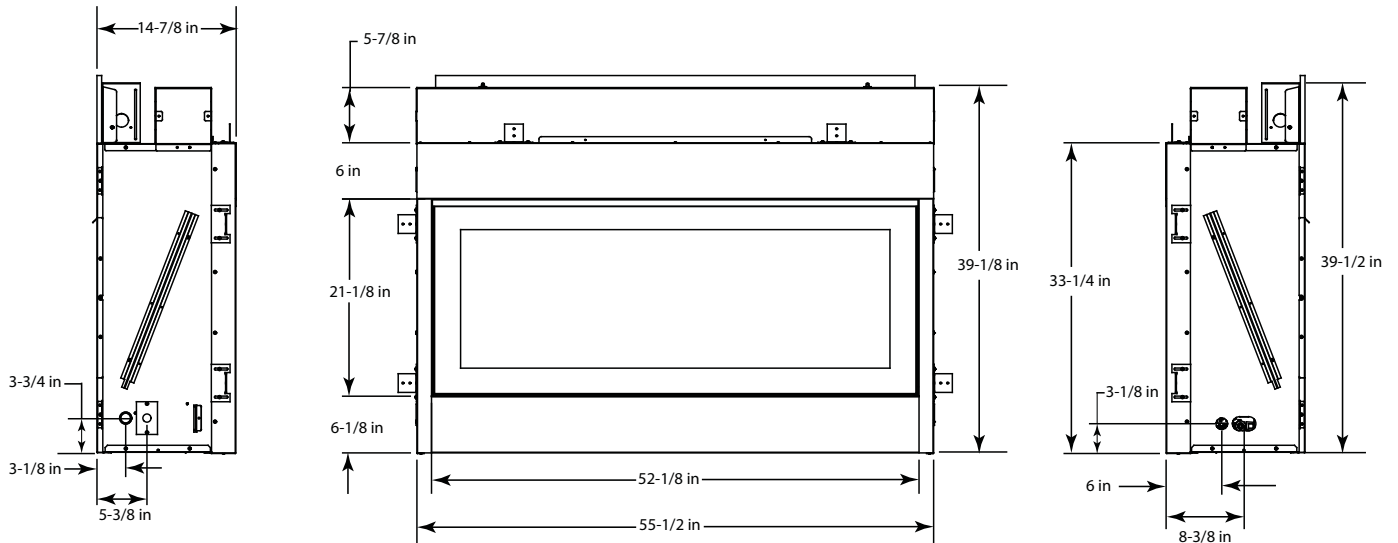
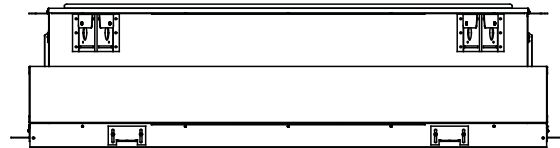
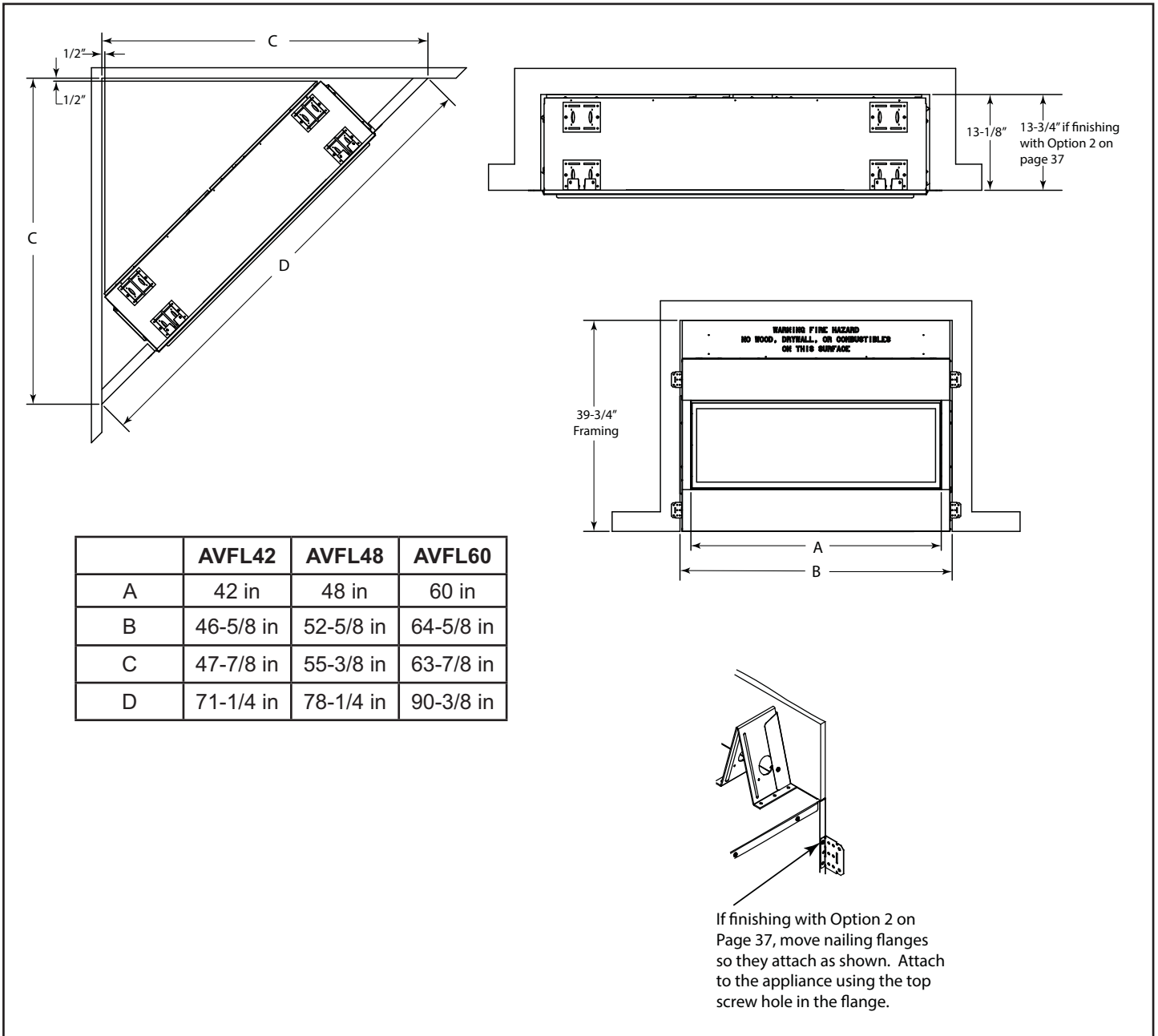
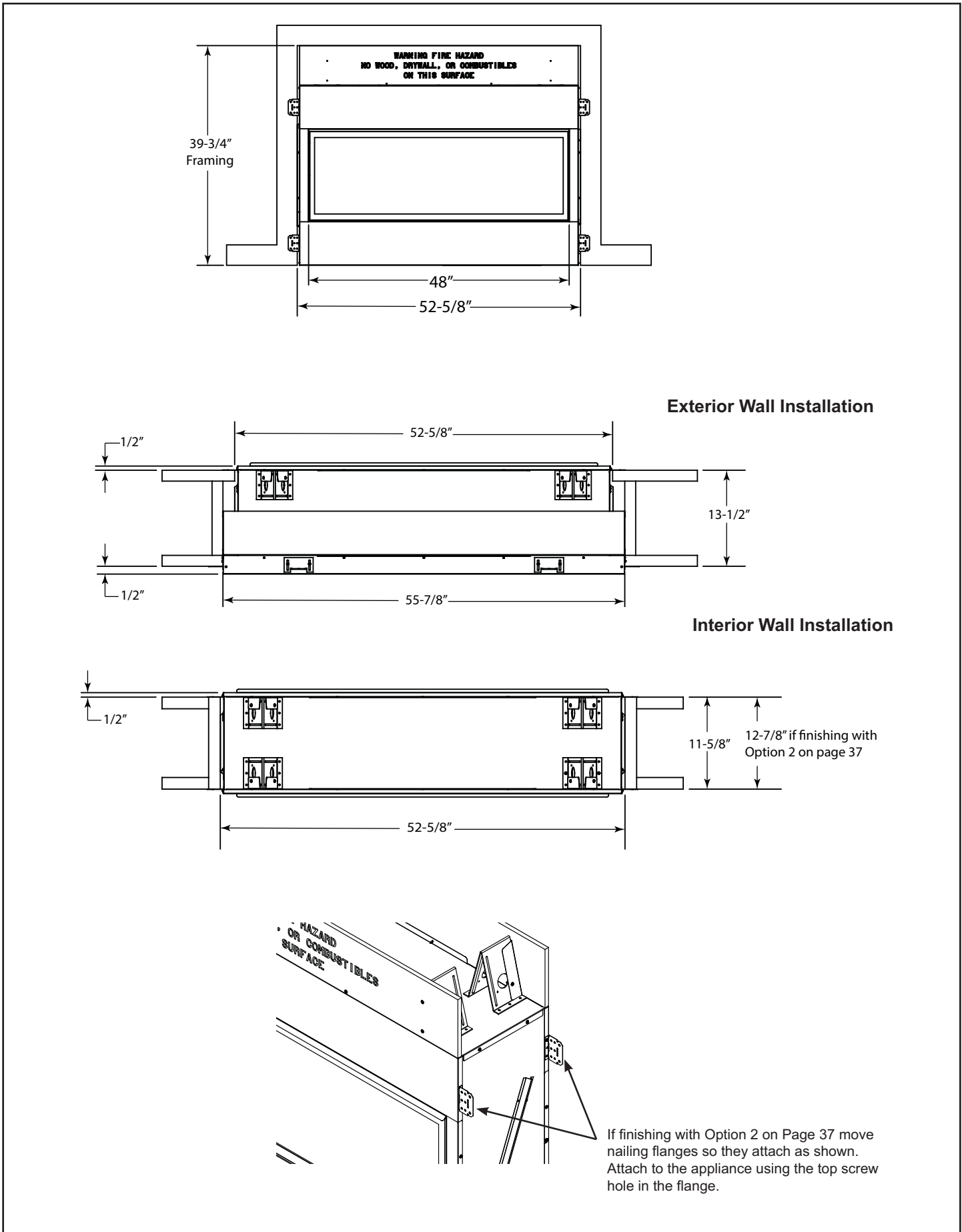


Figure 3.3 - AVFLST48 With Outdoor Kit Appliance Dimensions



► Figure 3.4 - Framing Dimensions



► Figure 3.5 - AVFL48ST Framing Dimensions

## B. Clearances and Height Requirements

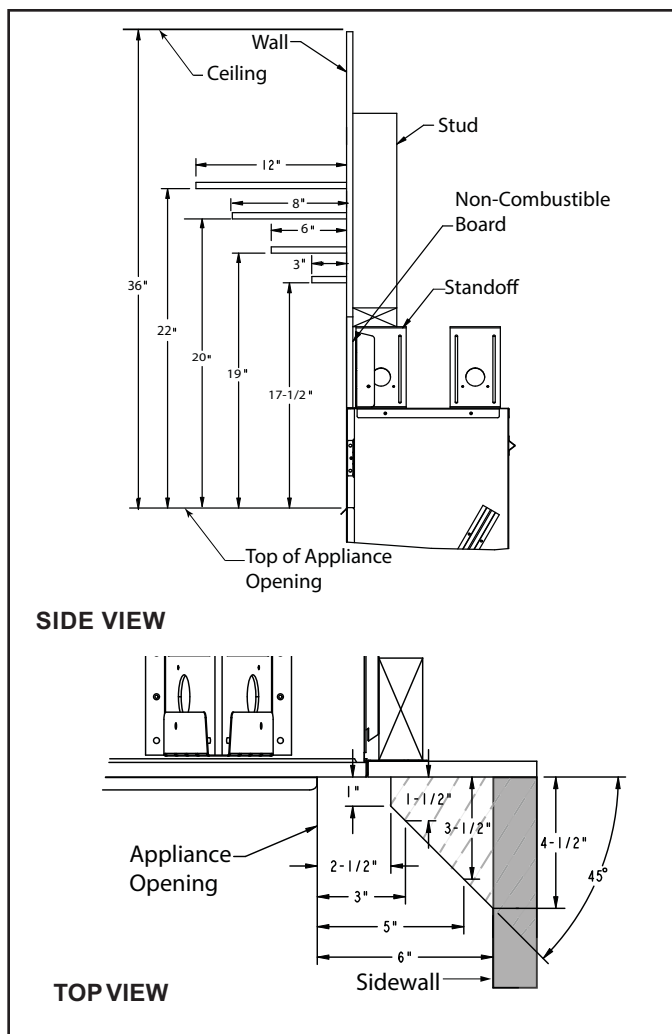
Ensure that minimum clearances shown in Figures 3.6, 3.7, 3.8 and 3.9 are maintained. Left and right clearances are determined when facing the front of the appliance.

Follow these instructions carefully to ensure safe installation. Failure to follow these requirements may create a fire hazard.

**Sidewall and Mantel Clearances** — The clearance from the inside of the appliance to any combustible adjacent wall should not be less than 6". Mantel leg clearances are projected out at a 45° angle. Figure 3.6, 3.7, 3.8 and 3.9.

**Ceiling Clearance** — The ceiling must be at least 36" from the appliance opening. Figure 3.6, 3.7, 3.8 and 3.9.

**Back Wall Clearance** — The appliance may be placed against a combustible back wall.



**Figure 3.6 - Combustible Mantel Clearances (AVFL42N(P)IP-BU, AVFL48N(P)IP, AVFL60N(P)IP-B, AND AVFLST48N(P)IP appliances)**

See Good Faith Guidelines for TV Installations on pages 16 & 17, Figure 3.10 & 3.11.

**⚠ WARNING**

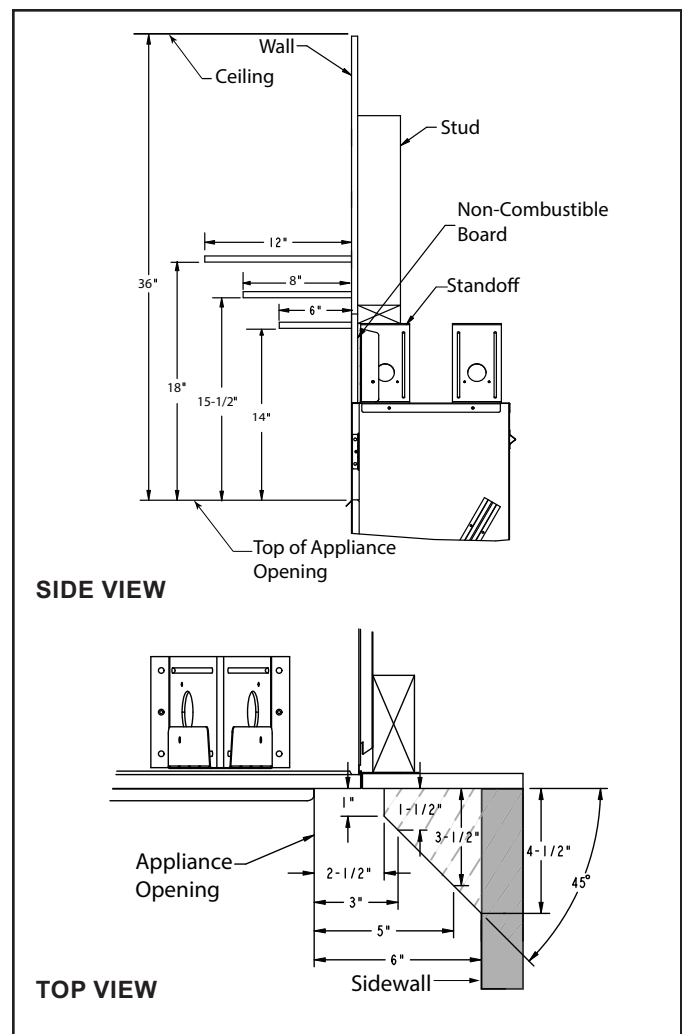
**The dimensions shown in Figures 3.6, 3.7, 3.8 and 3.9 are minimum clearances to maintain when installing this appliance. Left and right clearances are determined when facing the front of the heater.**

**Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.**

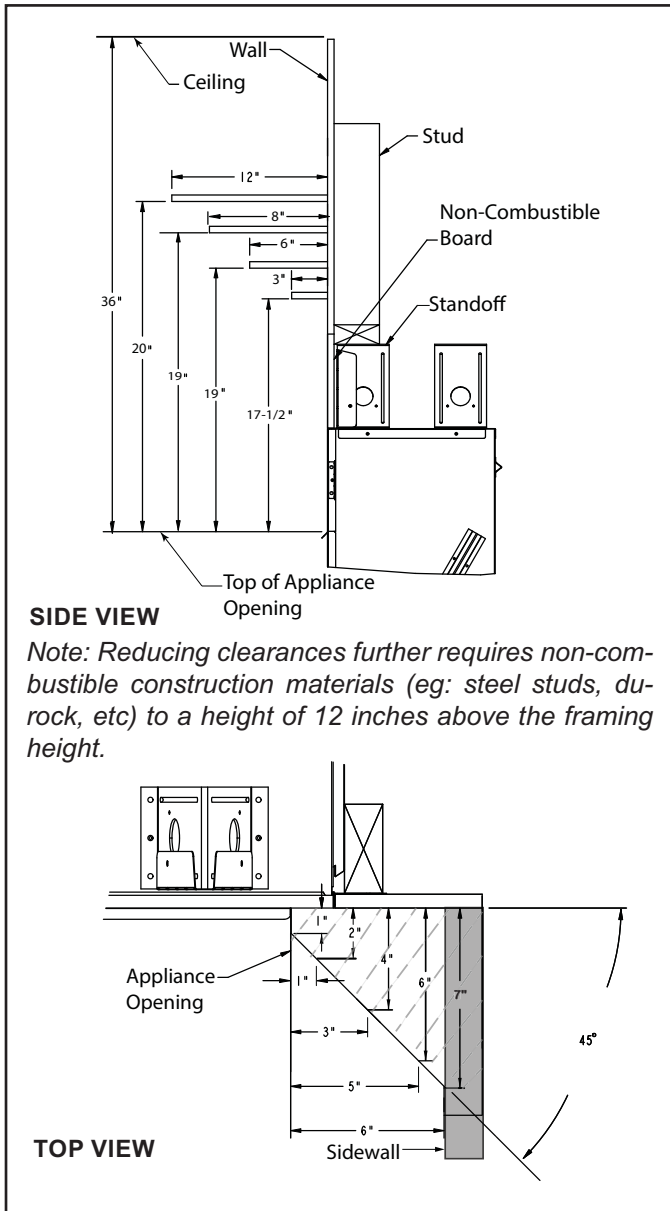
**Floor Clearance** — The appliance may be installed directly on a combustible floor or a raised platform of an appropriate height. Do not place appliance on carpeting, vinyl, tile or other soft floor coverings. It may, however, be placed on flat wood, plywood, particle board or other hard surfaces. Be sure appliance rests on a solid continuous floor or platform with appropriate framing for support so that no cold air can enter from under the firebox.

► Note: For installations with vinyl flooring, special clearance recommendations apply. See section 3E Vinyl Flooring.

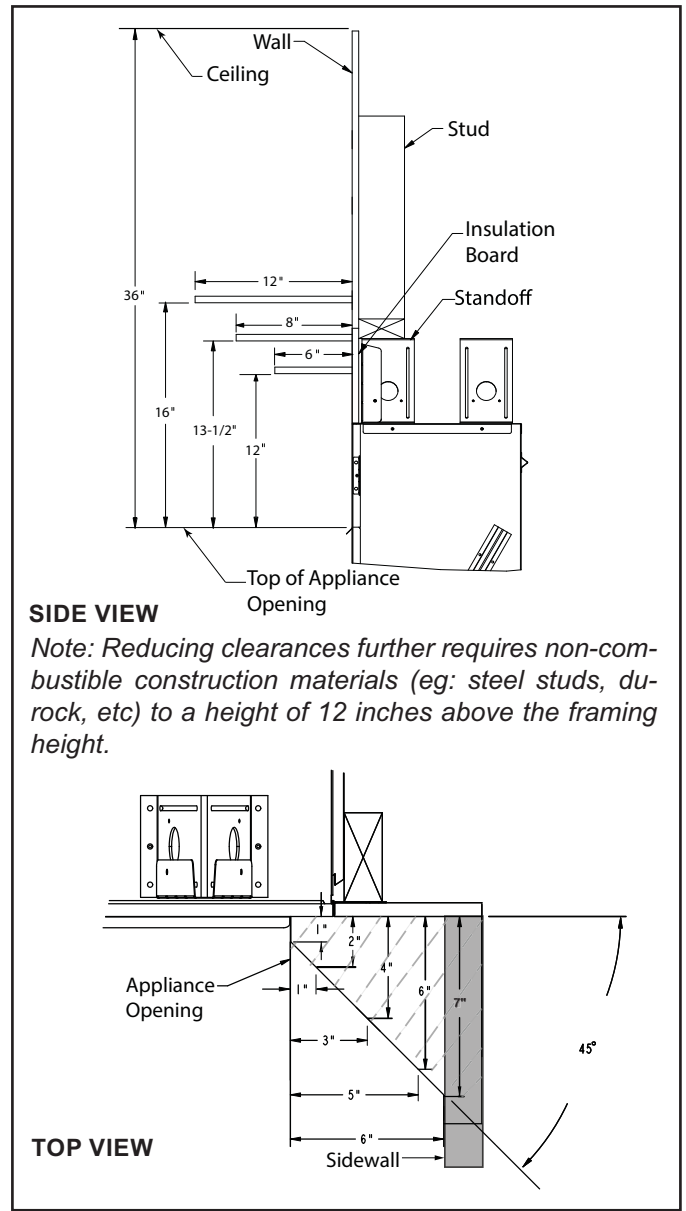
**Mantel clearances** — Must meet the clearance requirements detailed in Figures 3.6, 3.7, 3.8 and 3.9.



**Figure 3.7 - Combustible Mantel Clearances (AVFL42N(P)IP-RB)**



**Figure 3.8 - Non-Combustible Mantel Clearances (AVFL42N(P)IP-BU, AVFL48N(P)IP, AVFL60N(P)IP-B, AND AVFLST48N(P)IP appliances)**



**Figure 3.9 - Non-Combustible Mantel Clearances (AVFL42N(P)IP-RB)**

### ►C. Good Faith Wall Surface TV Guidelines

(AVFL42N(P)IP-BU, AVFL48N(P)IP, AVFL60N(P)IP-B, AND AVFLST48N(P)IP appliances)

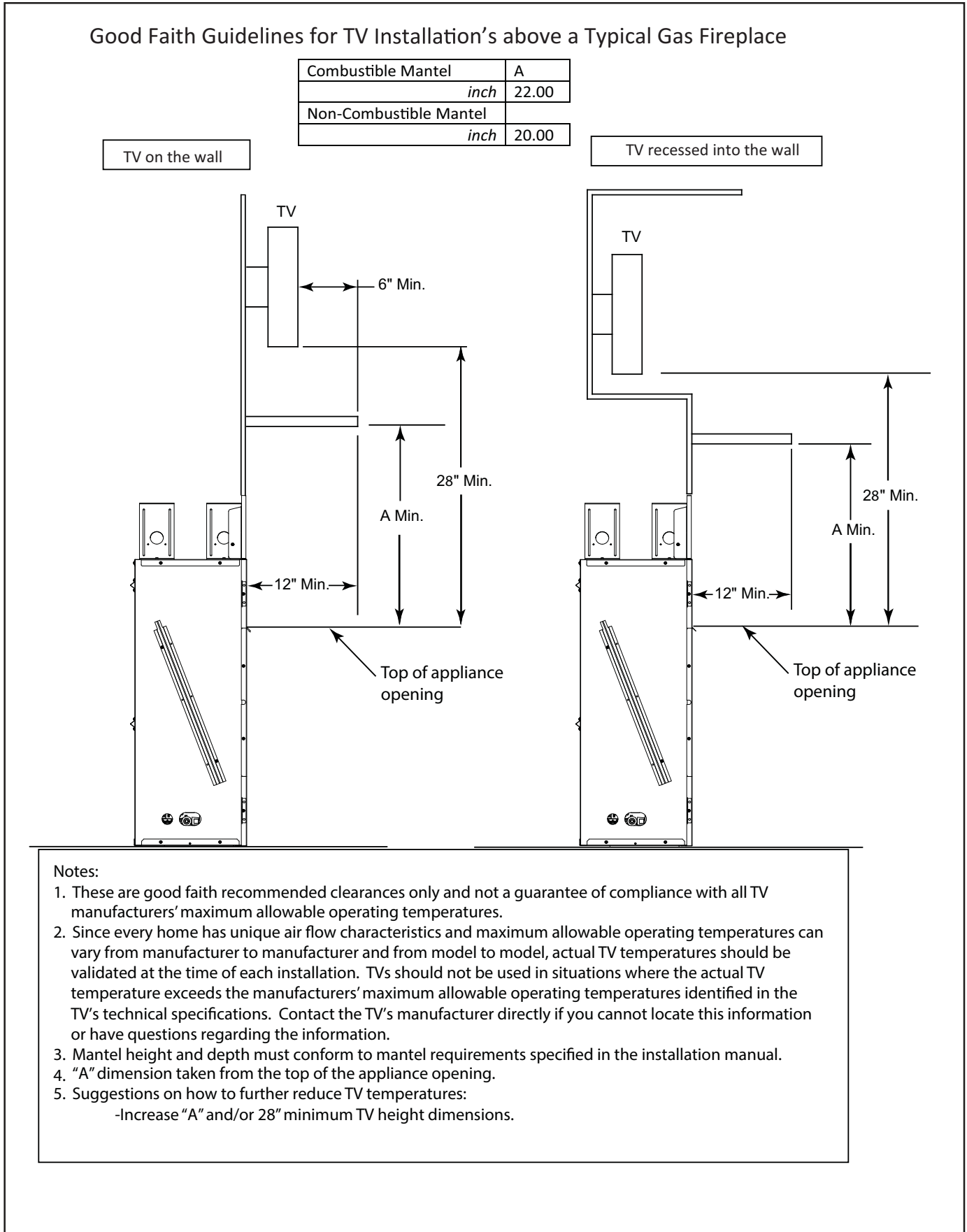


Figure 3.10 - Good Faith TV Guidelines



## Good Faith Wall Surface TV Guidelines (continued)

(AVFL42N(P)IP-RB)

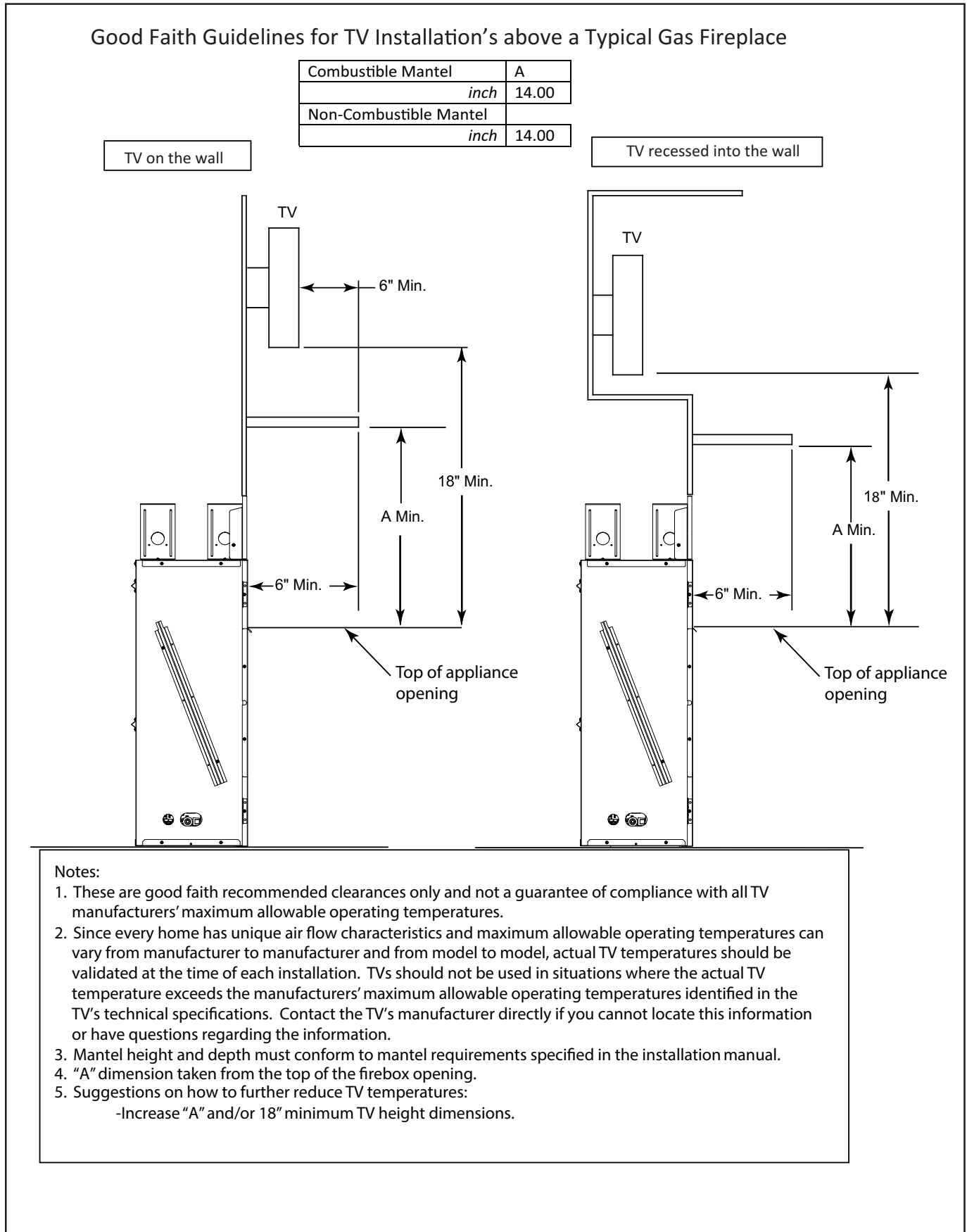


Figure 3.11 - Good Faith TV Guidelines

## D. Constructing the Appliance Chase

A chase is a vertical box-like structure built to enclose the gas appliance.

**NOTICE:** Construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Therefore, you **MUST** check local building codes to determine the requirements to these steps.

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

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

To further prevent drafts, the wall shield and ceiling fire-stops should be sealed with caulk with a minimum of 300°F continuous exposure rating to seal gaps. Gas line holes and other openings should be sealed 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.

**Note:** Figure 3.10, 3.11, and 3.12 show the appliance installed on the floor. However, this appliance can be elevated off the floor provided that the appliance is properly supported by framing materials and the ceiling clearances are maintained.

## E. Floor Protection

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

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

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

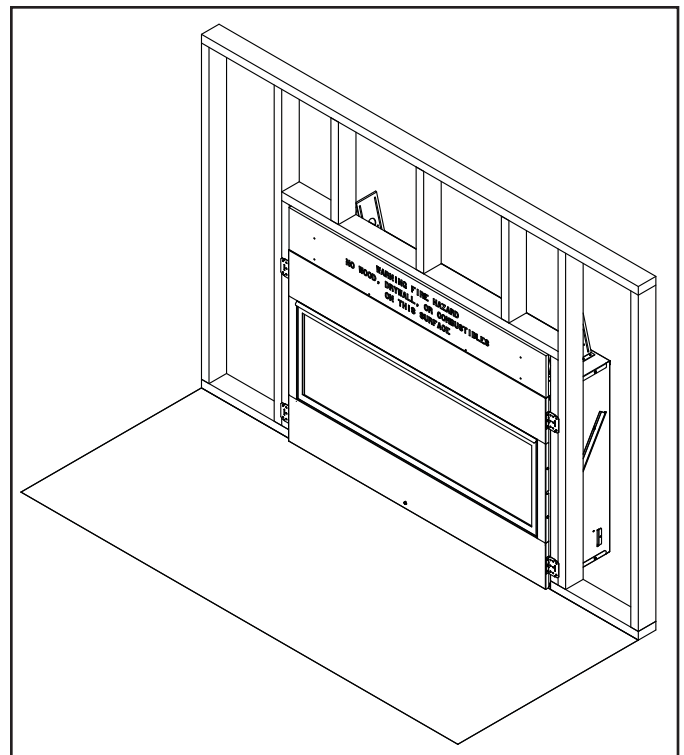


Figure 3.12 - Floor Protection

### ► Vinyl Flooring

Vinyl Flooring is sensitive to heat. A 14 inch minimum depth hearth extension is recommended when using vinyl flooring up to the wall. See Figure 3.13.

**NOTICE:** Clearances that do not meet the minimum guidelines could result in damage or buckling to the vinyl flooring and is done at the installer's risk.

Hearth and Home Technologies does not recommend adhesive based vinyl flooring due to thermal expansion. Floating-style flooring can be used, but will reach temperatures up to 110°F in a room with ambient temperature of 70°F. Consult flooring specifications to ensure compatibility.

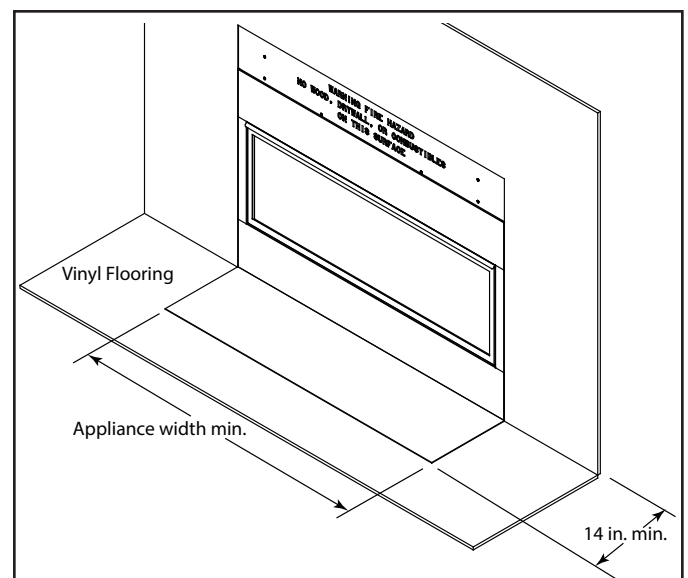


Figure 3.13 - Vinyl Flooring Exception

# 4 Appliance Preparation

## A. Securing and Leveling the Appliance

**WARNING! Risk of Fire!** Prevent contact with:

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

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

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

To properly position, level, and secure the appliance, see below. Nailing tabs are provided to secure the appliance to the framing members.

- Bend out the two nailing tabs on each side.
- Place the appliance into position.
- Keep nailing tabs flush with the framing. See Figure 4.2.
- 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.

Some figures in manual show the appliance installed on the floor. However, this appliance can be elevated off the floor provided that the appliance is properly supported by framing materials and the ceiling clearances are maintained.

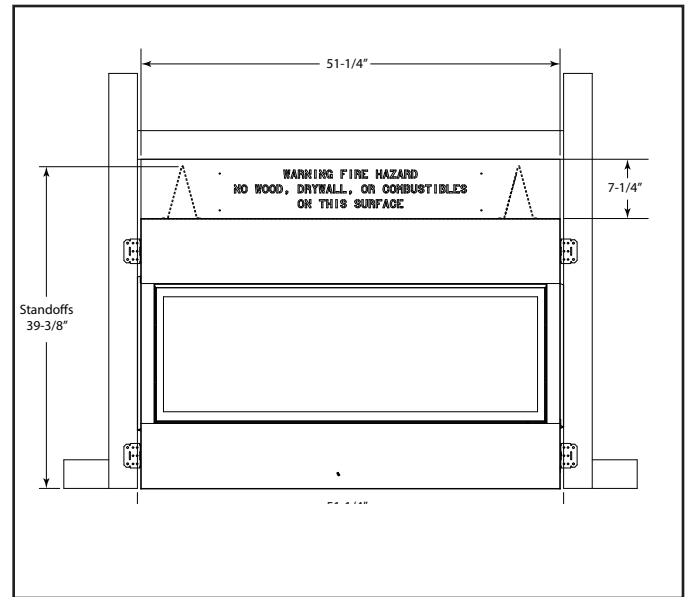


Figure 4.1 - Non-Combustible Board Installation

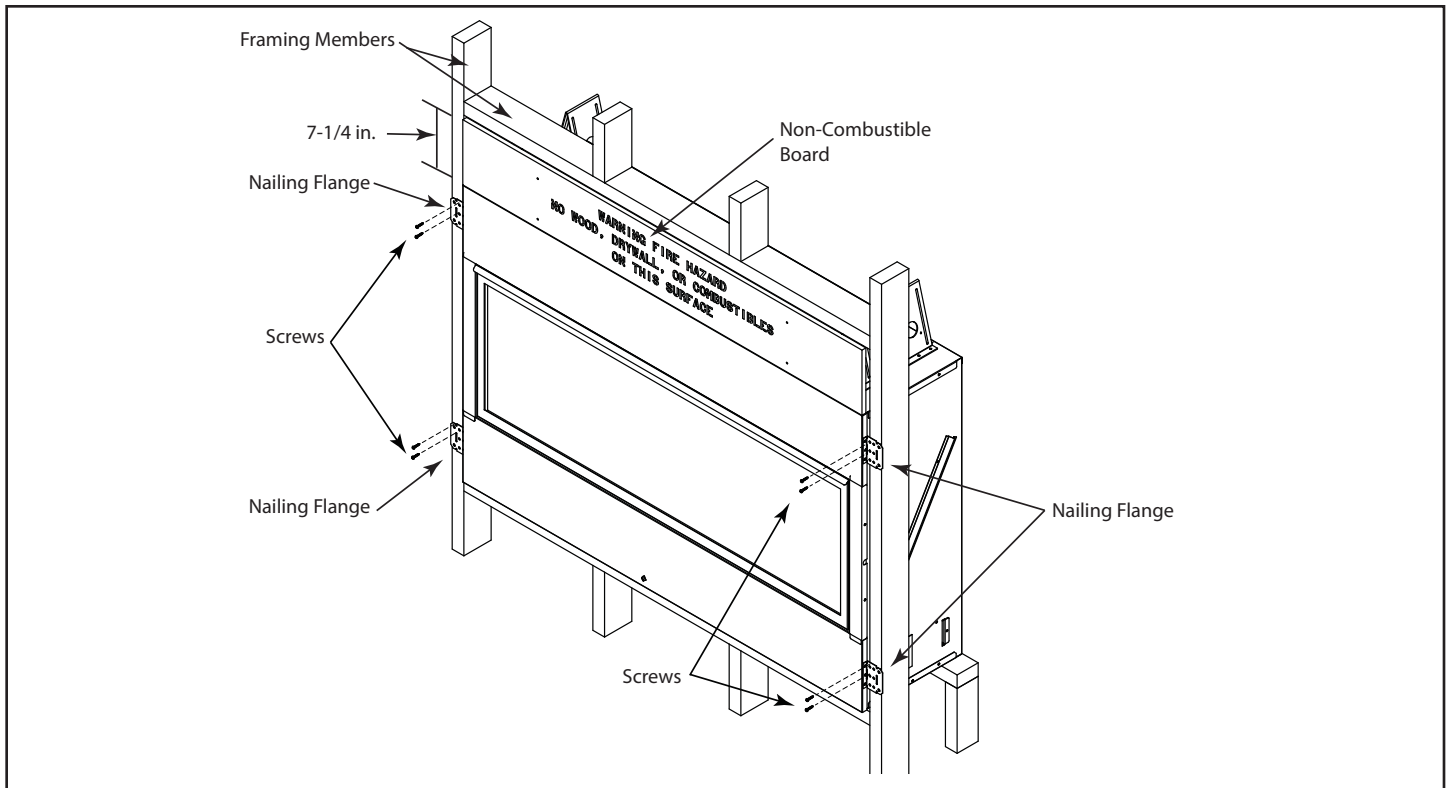


Figure 4.2 - Securing Appliance to Framing

## Setting the Appliance into the Framing

The left and right nailing tabs were designed as a means to ensure the appliance is mounted flush with the framing materials. See Figures 4.2 and 4.3.

1. Bend out all nailing tabs. The AVFL60 has four nailing tabs, two on each side in the middle of the appliance.
2. Screw each nailing tab to the adjoining framing material. See Figures 3.1-3.7 for framing and clearance details.

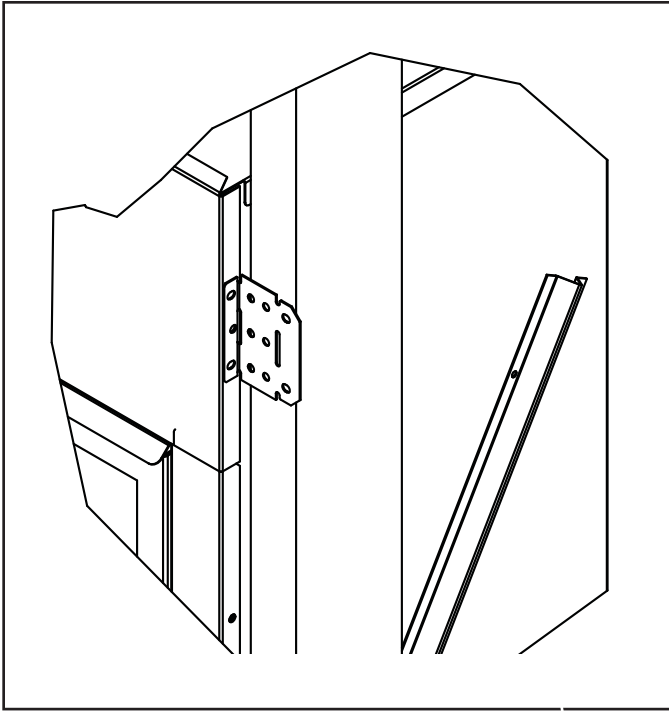


Figure 4.3 - Nailing Tabs

## B. Installing Non-Combustible Facing Material

### **WARNING! Risk of Fire!**

- Follow these instructions exactly.
- Facing materials must be installed properly to prevent fire.
- No materials may be substituted without authorization by *Hearth & Home Technologies*.
- Non-combustible facing material needs to be at least 7-1/4" high and the full width of the appliance.
- Attach non-combustible facing material to the framing members with regular sheetrock screws.
- Use a wet or dry towel or soft brush to remove dust or dirt from facing material.
- See Section 8 for finishing materials guidelines.

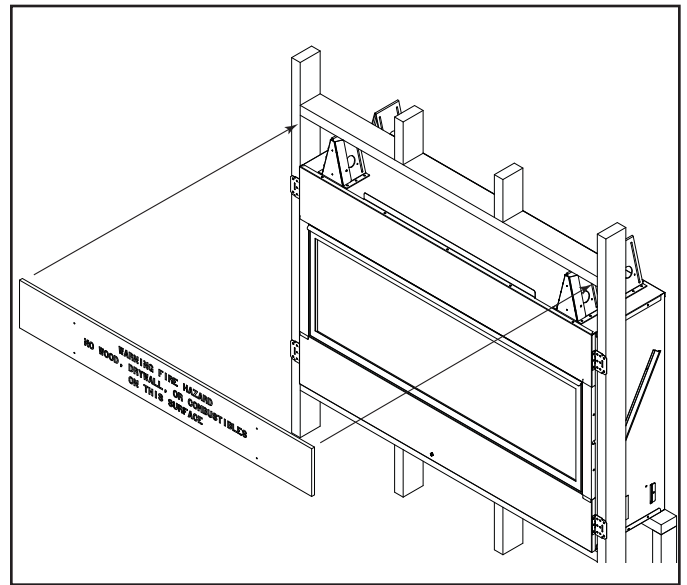


Figure 4.4 - Install Non-Combustible Facing Material

# 5 Gas Information

## A. Fuel Type

- This appliance is equipped for either natural or propane gas. **Field conversion is not permitted.**
- Make sure the appliance is compatible with available gas types.

## 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.
- Pressure requirements are:

	NATURAL	PROPANE (LP)
Inlet Minimum	5.0" w.c.	11.0" w.c.
Inlet Maximum	10.0" w.c.	13.0" w.c.
Regulator Pressure Setting	3.5" w.c.	10" w.c.
Pilot Regulator	3.5" 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.
- Valve pressure taps are accessible by lifting the engine assembly. See Figures 5.1 & 5.2.

**Note:** Have the gas supply line installed in accordance with local codes, if any. If not, follow ANSI Z223.1. 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 Service Access

**NOTE:** This appliance does include a manual gas shutoff valve that is located in the valve compartment. This manual gas shutoff valve is accessible for service by lifting the engine assembly. See Figure 5.2. The valve is most accessible if it is located forward in the control cavity of the appliance.

Depending upon local code, an additional manual gas shutoff, in a readily accessible area may be required and located upstream from the appliance.

**⚠ 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.

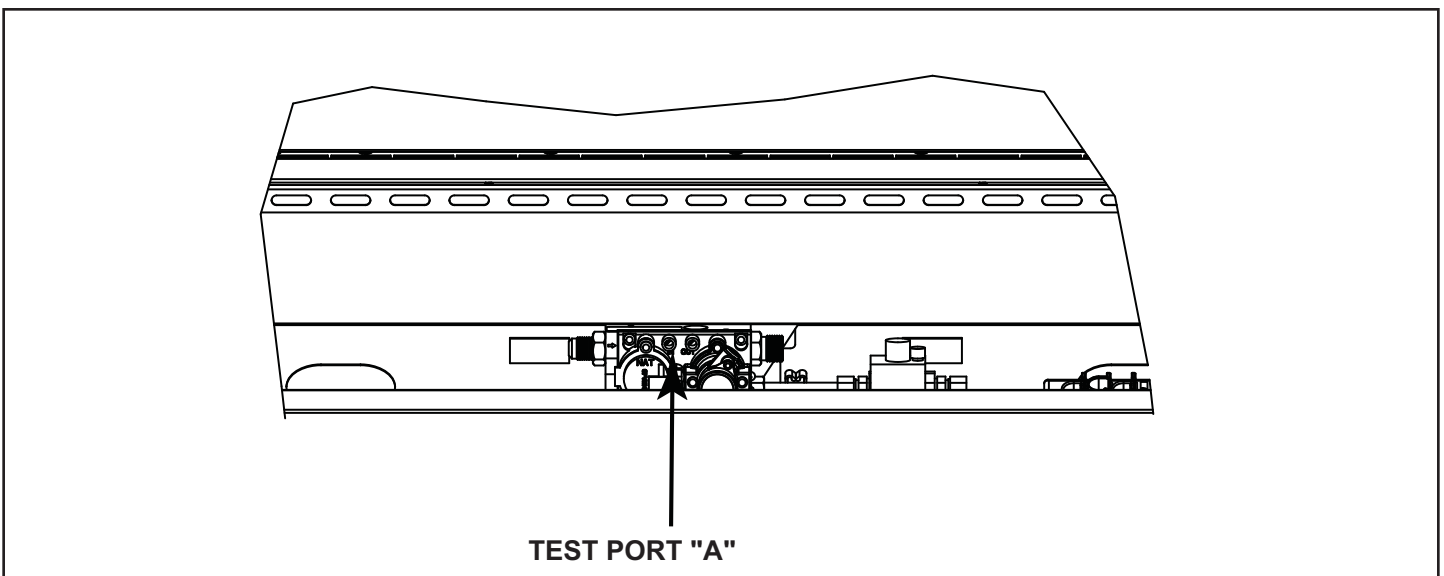


Figure 5.1.- Valve Pressure Tap

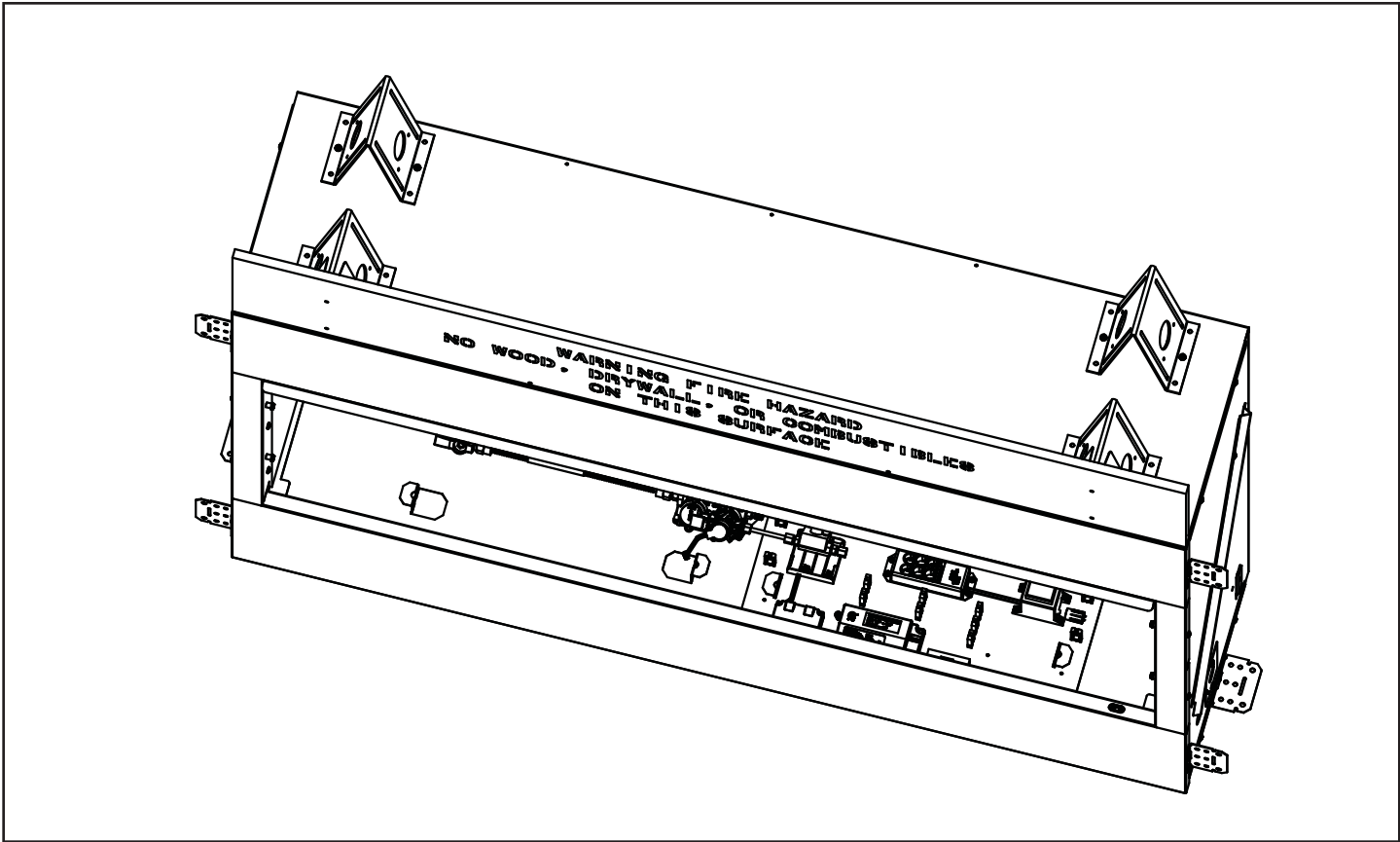


Figure 5.2 - Valve Access

## D. Connect to Gas

**NOTICE:** A qualified gas appliance installer must connect the heater to the gas supply. Consult all local codes.

### ⚠ WARNING

**THIS APPLIANCE IS EQUIPPED FOR EITHER NATURAL OR PROPANE GAS. FIELD CONVERSION IS NOT PERMITTED.**

### ⚠ WARNING

Use new black iron or steel pipe. Internally finned copper or copper tubing can be used per National Fuel Code, section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (Listed on Data Plate) at the maximum flow rate (BTU/hr). Undue pressure loss will occur if the pipe is too small.

A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance. Figure 5.3

A sediment trap should be installed upstream to prevent moisture and contaminants from passing through the pipe to appliance controls and burners. Failure to do so could prevent the appliance from operating reliably. Figure 5.3

When an appliance is connected to a fixed piping system, the installation must conform with local codes, or in the absence of local codes with the **National Fuel Gas Code, ANSI Z223.1/NFPA 54** or **International Fuel Gas Code**.

### ⚠ WARNING

**CHECK GAS TYPE:** The gas supply must be the same as stated on the heater's rating plate. If the gas supply is different, **DO NOT INSTALL THE HEATER**. Contact your dealer for the correct model.

**IMPORTANT:** Loosen the pipe adapter on the flex tube before installing to the system piping.

Always use an external regulator for all propane/LPG heaters only, to reduce the supply tank pressure to a maximum of 13" w.c. This is in addition to the internal regulator in the heater valve.

When tightening the joint to the valve, hold the valve securely to prevent movement.

Test all gas joints from the gas meter to the heater valve for leaks using a gas analyzer or soap and water solution after completing connection. **DO NOT USE AN OPEN FLAME.**

### ⚠ WARNING

**Connecting directly to an unregulated propane/LP tank can cause an explosion.**

**DO NOT USE OPEN FLAME TO CHECK FOR GAS LEAKS.**

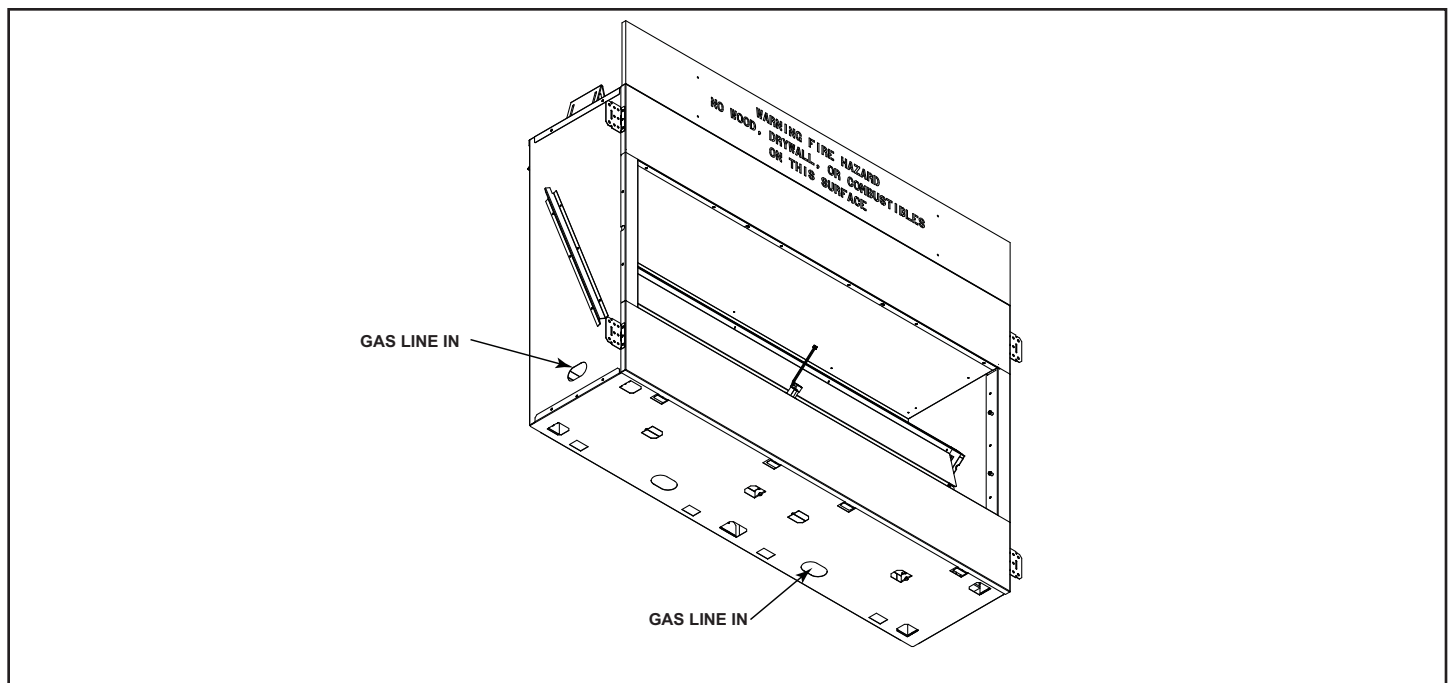


Figure 5.3 - Gas Line In

## E. Valve Access

The valve and controls are located in the appliance control area. See Figure 5.4.

The controls area can be accessed by lifting engine assembly as shown in Figure 5.4.

- Make sure appliance is off and cool.
- Remove crushed glass media and deflection glass panel from hearth pan.
- Remove two (2) screws securing burner assembly to appliance, set aside.
- Lift the burner assembly and place the two engine supports, provided under the engine, against lower front space at the bottom of the face, and slide into the slots at the bottom of the engine assembly. See Figure 5.4.
- Locate valve on face of engine assembly.
- Gas line sizing requirements will be determined in ANSI Z223.1 National Fuel Gas Code in the USA.
- Pressure requirements are:

These pressures can be verified by lifting engine and removing control cover to reveal the valve.

When an appliance is connected to a fixed piping system, the installation must conform with local codes, or in the absence of local codes with the **National Fuel Gas Code, ANSI Z223.1/NFPA 54** or **International Fuel Gas Code**.

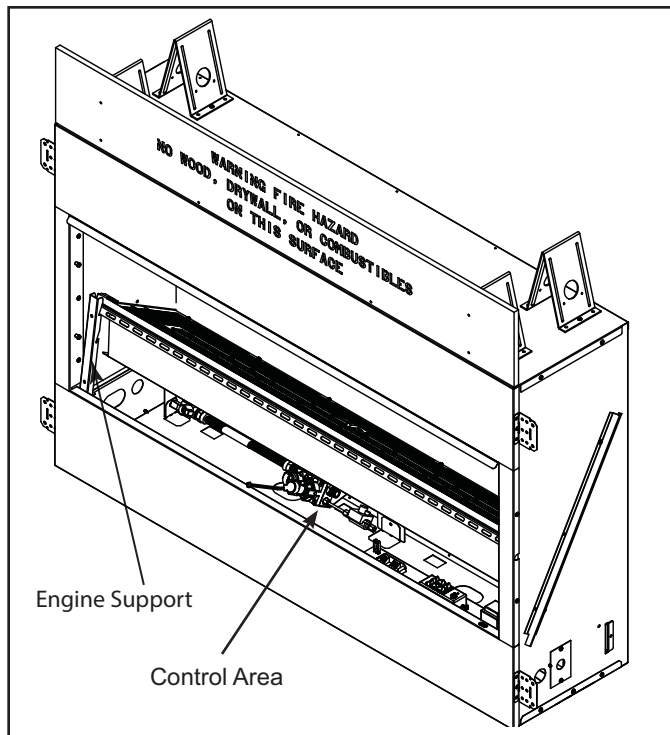


Figure 5.4 - Valve Access

## F. Check Gas Pressure

Check the gas pressure with the appliance burning and the control set to **HIGH**.

The valve regulator controls the burner pressure which should be checked at the pressure test point.

Turn captured screw counterclockwise two or three turns and then place tubing to pressure gauge over test point. Use test point "A" closest to gas inlet. After taking pressure reading, be sure and turn captured screw clockwise firmly to reseal. Do not over torque. Check for gas leaks. See Figure 5.5.

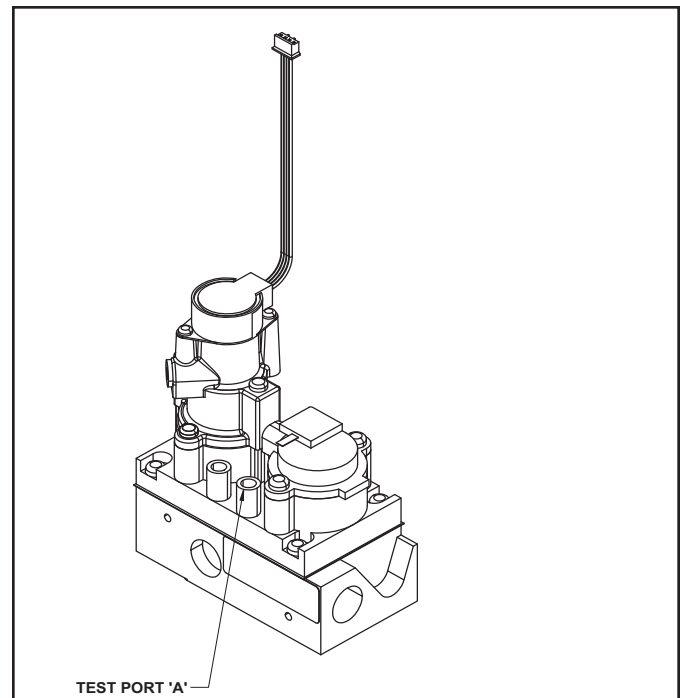


Figure 5.5 - Pressure Test Point Location

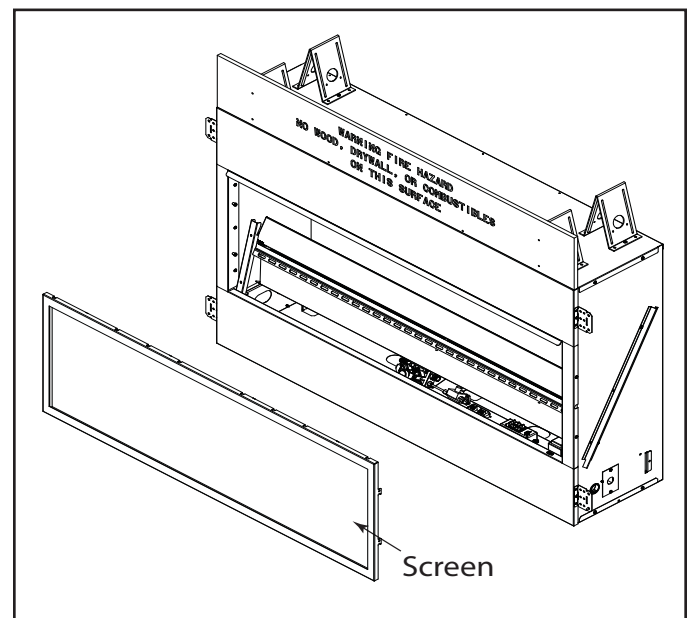


Figure 5.6 - Gas and Electrical Access - Remove Screen



## G. Gas Connection

- Refer to Figure 5.7 for location of gas flex line access in appliance.
- Gas line may be run through the left side or right bottom of the appliance. See Figure 5.3.
- The gap between supply piping and gas access hole may be sealed with caulk or aluminum foil tape with a minimum of 300°F continuous exposure rating or stuffed with non-combustible, unfaced insulation to prevent cold air infiltration.
- Ensure that gas line does not come in contact with outer wrap of the appliance. Follow local codes.
- Pipe incoming gas line into valve compartment.
- Connect incoming gas line to the 1/2 in. (13 mm) connection on manual shutoff valve.

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

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

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

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

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

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

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

## H. 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 reduce input 4% for each 1000 feet above 2000 feet.

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

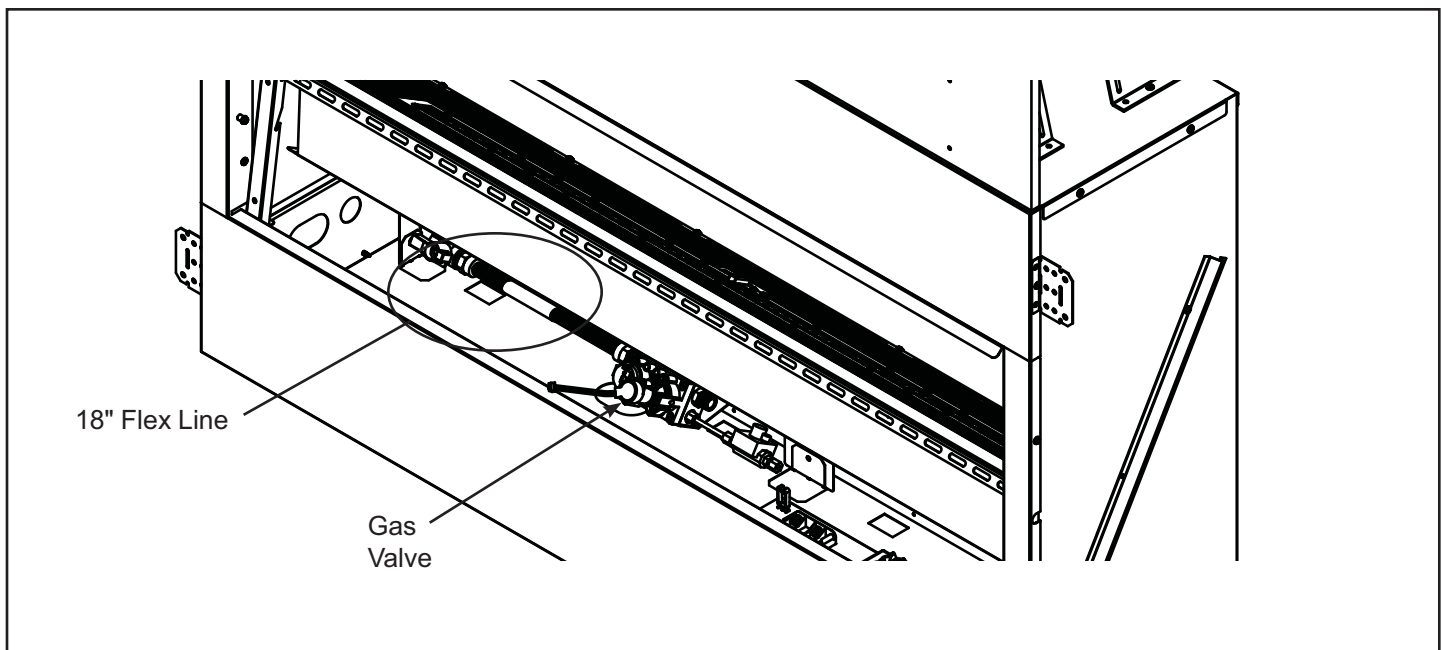


Figure 5.7 - Gas Fitting Access

# 6 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**.

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

## Electrical Service and Repair

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

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

## Accessories Requirements

- The AVFL48 and AVFL60 ship standard with a wall switch to turn the appliance on and off. The AVFL42 appliances ship without a wall switch but the AVFL42LED light kit can be purchased separately. This kit includes LED lights, switches and wiring to control the lights as well as a wall switch to turn the appliance on and off.

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

## Junction Box Installation

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

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

## Junction Box Wiring

1. This should be done before framing the appliance. Wire the receptacle into an electrical circuit.
2. The junction box cover has a Romex style strain relief connector located in the Owner's Manual. After con-

necting the wires, route the wire leads through this connector. Refer to the wiring diagram in Figure 6.2.

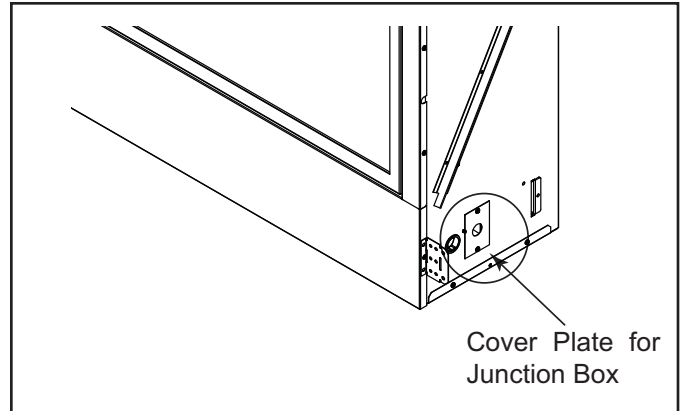


Figure 6.1 - Cover Plate for Junction Box

### ⚠ WARNING

Electrical connections should only be performed by a qualified, licensed electrician. Main power must be off when connecting to main electrical power supply or performing service. All wiring shall be in compliance with all local, city and state codes. The appliance, when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70 (latest edition) and Canadian Electrical Code, CSA C22.1.

### ⚠ WARNING

Do not connect wall switch to 110 V circuit.

### CAUTION

Label all wires before disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation.

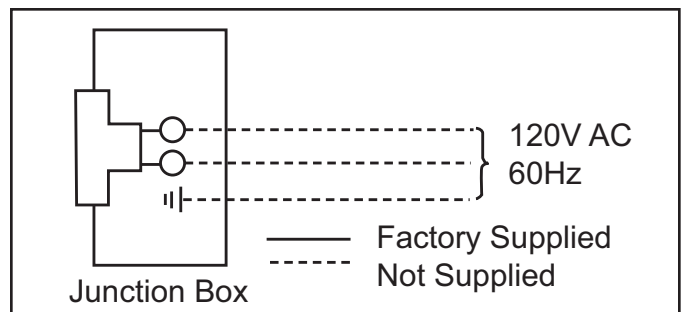


Figure 6.2 - Junction Box Wiring Diagram

## B. Wiring Requirements

### Intellifire™ Plus ODS 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 IFP ODS controlled appliance junction box to a switched circuit. Incorrect wiring will override IFP ODS safety lock-out.

- Refer to Figure 6.3, IFP ODS Wiring Diagram.
- This appliance is equipped with an Intellifire™ Plus 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.

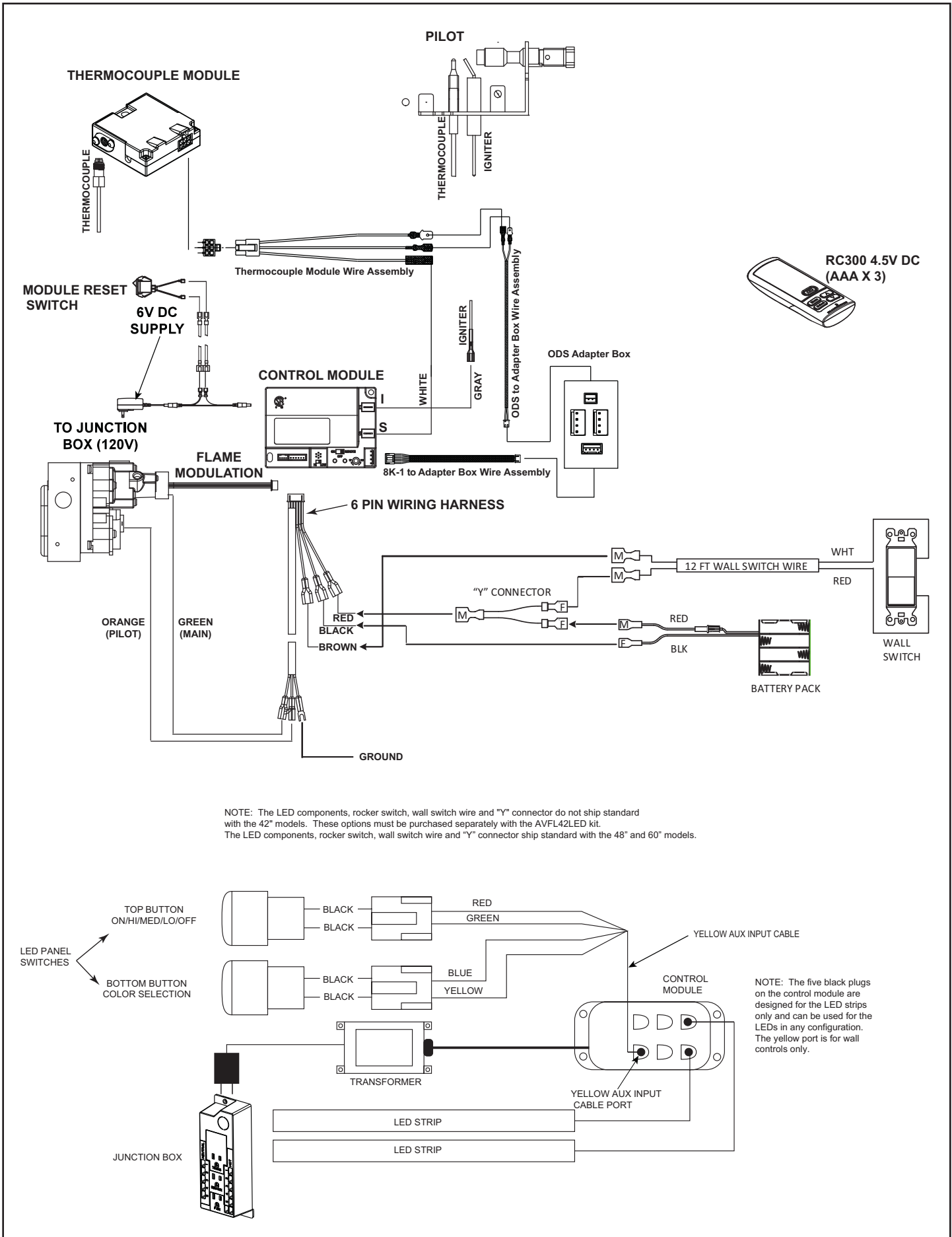


Figure 6.3 - IntelliFire™ Plus ODS Wiring Diagram

# 7 Final Installation

## A. Black Magic Glass Installation

NOTE: Black Magic Glass does not ship standard with the 42" appliances. This option must be purchased separately with the AVFL42BGL kit.

NOTE: After gas and electric are connected and the appliance has been test fired the glass can be installed.

1. Remove the screen from the front of the appliance.
2. Remove and discard the 2 screws holding the burner tray to the side of the appliance for shipping.
3. Remove the right and left black glass bracket that are shipped in place. Save bracket and screws for installing black glass. See Figure 7.1.



Figure 7.1 - Remove Left and Right Black Magic Glass Brackets

4. Remove the rear black glass bracket that is shipped in place. Save bracket and screws for installing black glass. (Not needed on See Through Appliances) See Figure 7.2.



Figure 7.2 - Remove Rear Black Magic Glass Bracket

5. (Skip this step for See Through Appliances) Slide the burner assembly forward approximately 3/8" to allow more room to install the rear black glass.
6. (Skip this step for See Through Appliances) Place the rear glass panel against the rear wall of the firebox, resting behind the burner assembly. The dimples in the glass will face the firebox. Slide the burner assembly back against the rear black glass. Reinstall the rear black glass bracket.
7. Place the left side panel between the burner assembly and firebox, resting to the left of the burner assembly. Reinstall the left black glass bracket.
8. Repeat step 6 on the right side black glass.

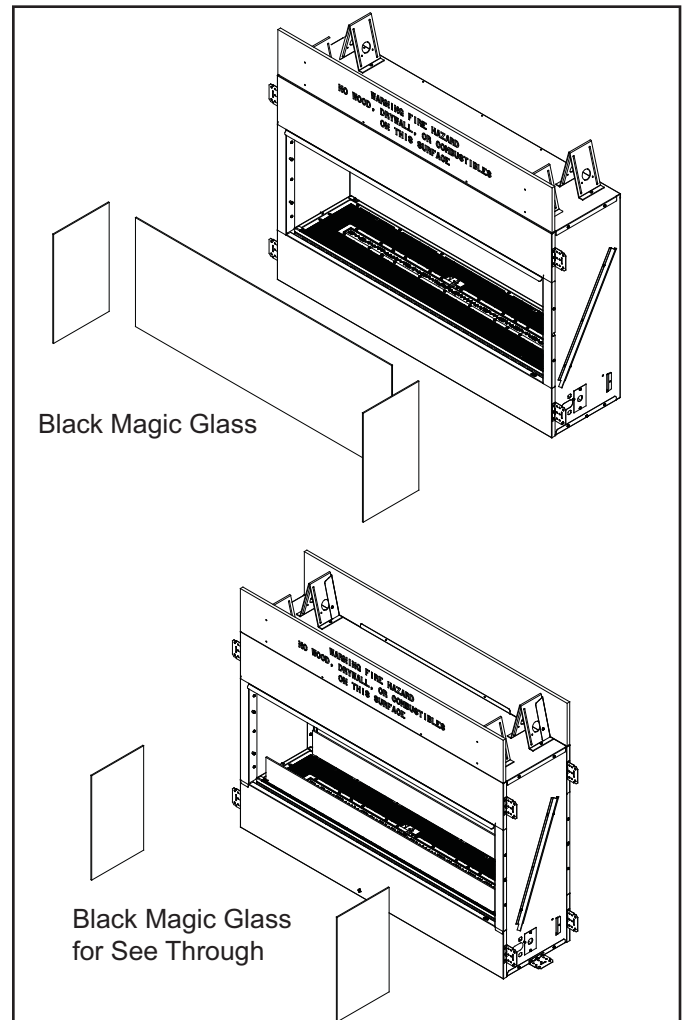


Figure 7.3 - Black Magic Glass Installation

## ► B. Installation of Air Deflection Glass

**NOTE:** If installing optional driftwood logs be sure to install log pin brackets prior to installing air deflection glass or crushed glass media. See pages 28, 29 or 30 for instructions.

**NOTE:** The air deflection glass must be installed prior to placing any crushed glass media, stone kit or log set. Bend the deflection glass tabs up at a 45° angle. Place the edge of the deflection glass into the two position tabs (located at the front of the engine base) and slide into fingers until reaching the bottom of the tab slots, in front of the burner ports. The glass should stand upright, neither leaning forward nor backward. See Figure 7.4.

**NOTE:** The optional stone kit and log kit are to be installed alone and never in combination.

## C. Crushed Glass Media Only Placement

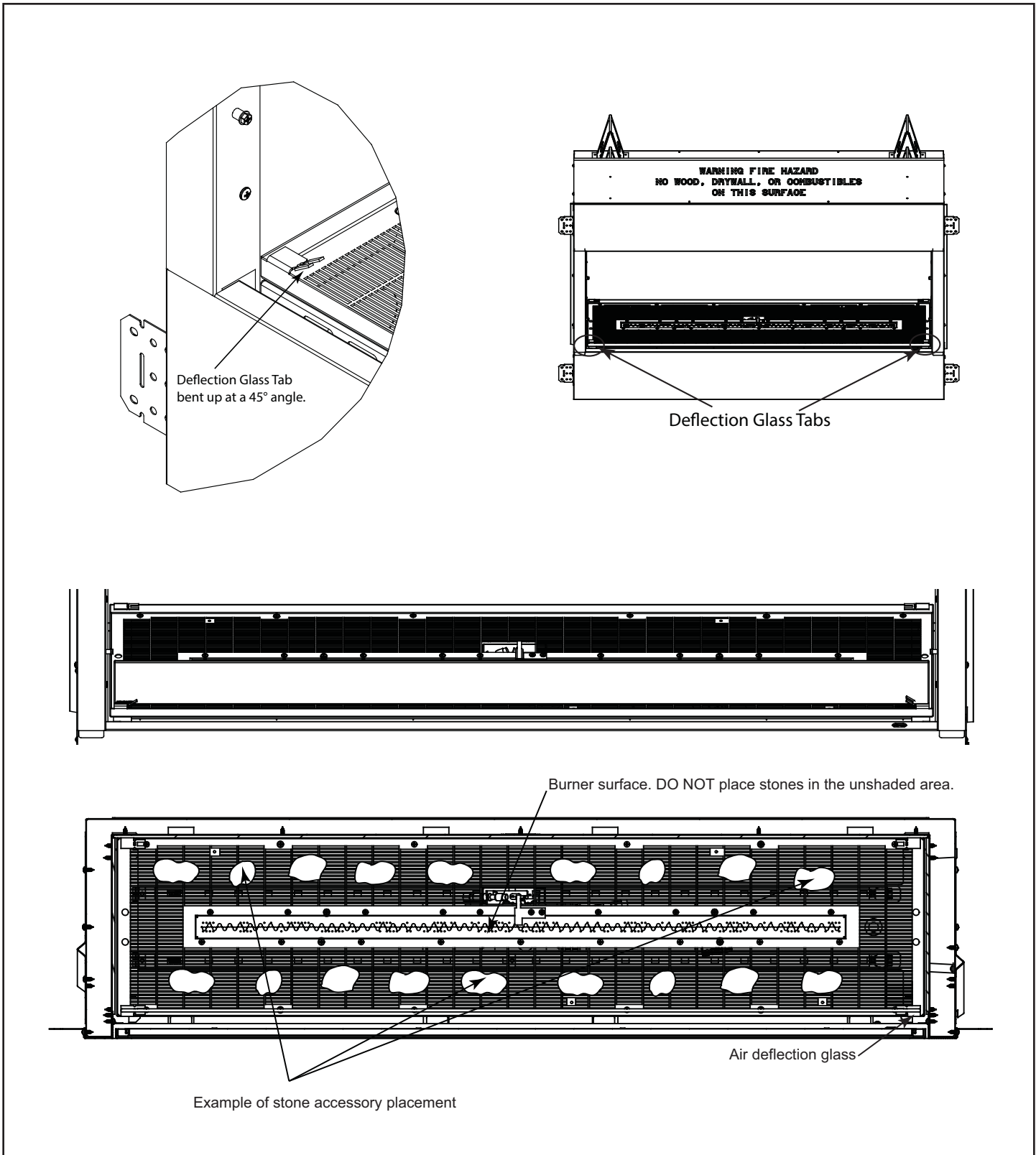
**NOTE:** Five (5) bags of crushed glass media are supplied with the 60" appliance and Four (4) bags of crushed glass media are supplied with the 42" and 48" appliance.

The crushed glass media is used to cover the entire floor and burner. We advise against using additional crushed glass media as too much can cut off the proper amount of air the burner needs to burn cleanly. This may cause sooting.

1. Spread crushed glass media evenly in one layer over the entire floor and burner. It is important to not have the crushed glass media too thick on ported area (single layer only).
2. Turn burner on and adjust crushed glass media over ported areas to achieve an even, clean flame.

## D. Glass and Optional Stone Kit Placement

1. For best results, spread crushed glass media evenly over the entire floor and burner making sure the glass is not too thick over the burner ports (single layer only). See Figure 7.4.
2. Place the stones randomly in front of and behind the burner. **CAUTION: Do not allow stones to sit directly on burner or in flame.** See Figure 7.4.
3. Turn burner on and adjust crushed glass media over the ported area to achieve an even, clean flame.



► Figure 7.4– Air Deflection Glass and Stone Placement

## E. Placement of Optional Logs

### ⚠ WARNING

The positioning of the logs is critical to the safe and clean operation of this heater. Sooting and other problems may result if the logs are not properly and firmly positioned in the appliance. Never add additional logs or embellishments such as pine cones, vermiculite or rock wool to the heater. Only use the logs supplied with the optional log kit (CDLS).

Failure to position the parts in accordance with diagrams below or to use only parts specifically approved for this heater may result in property damage or personal injury.

**WARNING:** Turn off appliance and allow to cool completely before beginning installation. DO NOT use this kit with any other internal hearth option such as stones.

#### Kit Contents:

- Three (3) driftwood logs
- Six (6) log support pin brackets
- Six (6) #8 bracket mounting screws

**NOTE:** Do not handle logs with your bare hands. **Always wear gloves to prevent skin irritation from log material.** After handling the logs, wash your hands with soap and water to remove any traces of fibers.

**NOTE:** Prior to installing the log set, you must first install the pin brackets on the burner. The air deflection glass and glass media should only be installed after the pin brackets are in place. The air deflection glass should be installed prior to placing glass media on the burner. The logs must then be placed in the unit after the glass media and air deflection glass. If the optional logs are added to the appliance after installation of deflective glass and glass media, move the glass media away from the pin location holes on the firebox bottom assembly as per Figure 7.5 or 7.7.

#### AVFL42N(P)IP-BU, AVFL42N(P)IP-RB, AVFL48N(P)IP, and AVFLST48N(P)IP

1. Mount the four log support pin brackets using mounting holes and screws provided in locations indicated in Figure 7.5 for the front and rear log. Only one hole of the pin bracket will be used to secure the pin to the outside of the burner assembly base. The other hole remains unused and rests on the mesh area. Next, arrange glass media evenly across the burner again.

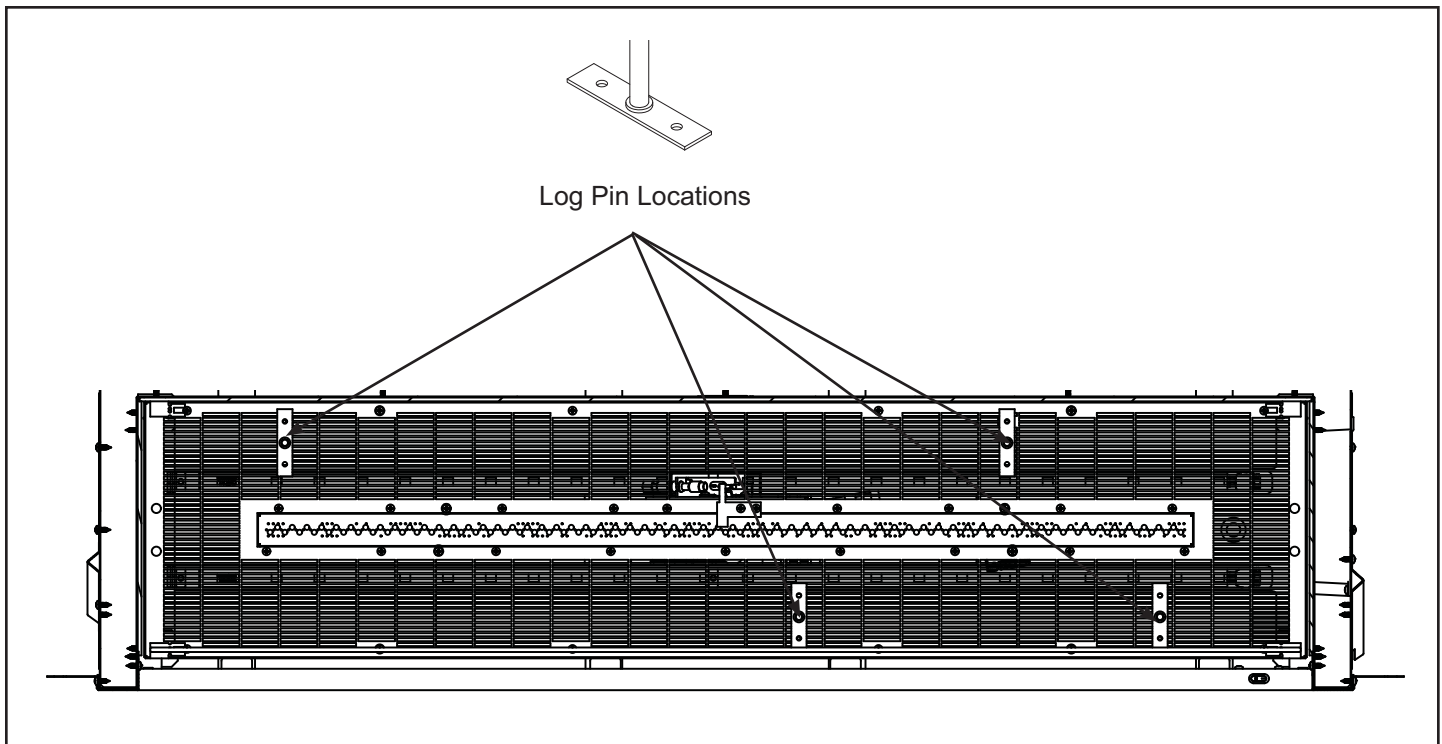


Figure 7.5– Log Pin Placement for AVFL42N(P)IP-BU, AVFL42N(P)IP-RB, AVFL48N(P)IP, AVFLST48N(P)IP, ODLANAIG-48 AND ODLANAIGST-48



2. Place the rear log (#1) by aligning the holes in the bottom of the log with the two pins in back of the burner. See Figure 7.6.
3. Place the front log (#2) by aligning the holes in the bottom of the log with the two pins in front of the burner. See Figure 7.6.

**WARNING:** Log #3 does not get used with the AVFL42N(P)IP-BU, AVFL42N(P)IP-RB, AVFL48N(P)IP, and AVFLST48N(P)IP. This log should be discarded when installing this kit with these appliances. Do not install any extra logs in these appliances.



Figure 7.6 – Log Placement for AVFL42N(P)IP-BU, AVFL42N(P)IP-RB, AVFL48N(P)IP, and AVFLST48N(P)IP,

**AVFL60N(P)IP AND ODLANAIG-60**

1. Mount the six log support pin brackets using mounting holes and screws provided in locations indicated in Figure 7.7 for the front logs and rear log. Only one hole of the pin bracket will be used to secure the pin to the

outside of the burner assembly base. The other hole remains unused and rests on the mesh area. Next, arrange glass media evenly across the burner again.

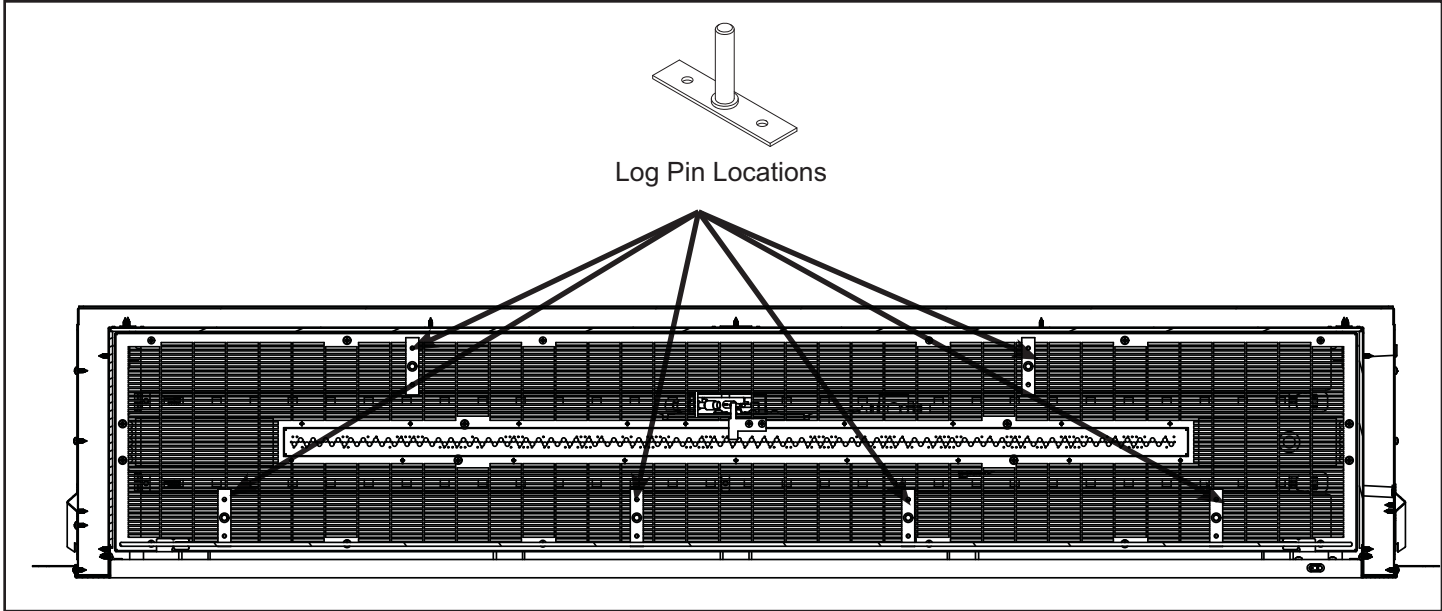


Figure 7.7 – Log Pin Placement for AVFL60N(P)IP AND ODLANAIG-60

2. Place the rear log (#1) by aligning the holes in the bottom of the log with the two pins in back of the burner. See Figure 7.8.
3. Place the front right log (#2) by aligning the holes in the bottom of the log with the two pins in front of the burner. See Figure 7.8.
4. Place the front left log (#3) by aligning the holes in the bottom of the log with the two pins in front of the burner. See Figure 7.8.

**WARNING:** Logs must be located in the correct position on the pins so they do not interfere with the burner surface.



Figure 7.8 – Log Placement for AVFL60N(P)IP AND ODLANAIG-60

## F. Lighting Instructions (IPI)

### FOR YOUR SAFETY READ BEFORE LIGHTING

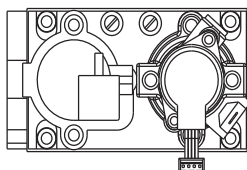
**WARNING:** If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

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

### LIGHTING INSTRUCTIONS (IPI)

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

**GAS  
VALVE**



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

### TO TURN OFF GAS TO APPLIANCE

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

4604-200

## WARNING:

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

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

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

## CAUTION:

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

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

### NOT FOR USE WITH SOLID FUEL

This appliance must be installed in accordance with local codes, if any; if none, follow the *National Fuel Gas Code, ANSI Z223.1/NFPA 54*, or the *National Gas and Propane Installation code, CSA B149.1*.

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

4604-201

# 8 Finishing

## A. Facing and Finishing Instructions

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

### Finishing Instructions

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

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

**WARNING! Risk of Fire!** Non-combustible board **MUST** be installed. **DO NOT** remove or cover it with combustible material, such as:

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

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

### Non-Combustible Materials Specification

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

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

**WARNING! Risk of Fire!** Maintain specified air space clearances to combustibles. Inadequate air space could cause overheating and fire.

### Finishing Materials

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

**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.

This section discusses installation details associated with the Inside and Overlap Fit methods and specifies additional non-combustible materials required.

The appliance is designed to mate with 1/2 in. wall sheathing materials such as drywall, plywood, wood composites, or non-combustible materials.

### • Finishing Around Perimeter of Appliance (Install Option #1)

Gypsum wallboard (drywall) joints can be finished up to the perimeter of the left, right and bottom edge of the appliance flush with the face. The 7-1/4" of supplied non-combustible must be used at the top of the appliance where the gypsum board can then be finished to the left, right and top edge of the non-combustible board.

### • Finishing Around Opening of Appliance (Install Option #2)

**NOTE:** With this installation option, the appliance must be recessed to the depth of the non-combustible being used to ensure finish is flush with surrounding wall. This is the recommended install option for all finish kits shown on page 39. Refer to Trim Kit instructions for Option #2 installation before starting.

The 7-1/4" non-combustible must first be installed above the unit in the same manner as installation option #1, flush with the top face of the unit. In this option, non-combustible is required for all material covering the face of the unit. The non-combustible may be installed up to the firebox opening but must not overlap which would impede the removal of the screen. When installing material around the firebox opening, install the sheet with a pre-cut hole for the firebox opening in a single sheet, if possible. This will minimize joints across the appliance face and reduce cracking.

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

### Finish and Sealing Joints

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

### Painting

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

In extreme cases, lab tests have shown yellow pigments fading out of paints over time due to heat. Vent run and installation location will have an effect on wall temperature and fading. If fading occurs, consider avoiding paint that contains yellow pigment.

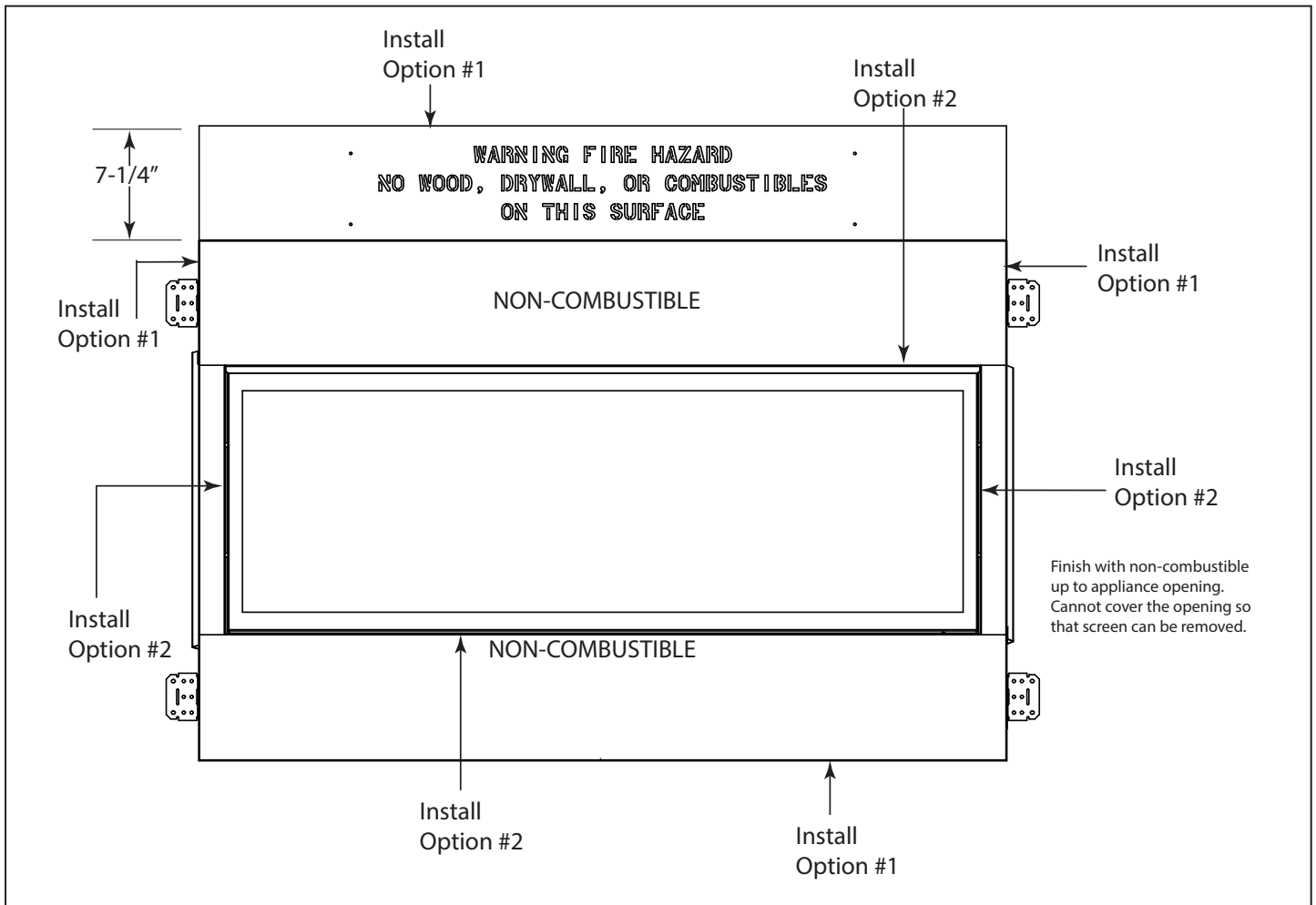
In regards to the sheetrock mud, apply a smooth, even layer, covering a wide area of the wall for the best results. For best results, follow the tips below.

<b>To Reduce the Risk of Sheetrock Cracking: DO</b>
Use all purpose joint compound.
Use eggshell paint (100% acrylic latex paint, gloss or semi-gloss).

<b>To Avoid Sheetrock Cracking: DO NOT</b>
Use a quick set or light weight joint compound.
Use flat paint.

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

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



► Figure 8.1 - Finishing Around Appliance

## B. Operation During A Power Outage

The IntelliFire™ Plus ODS intermittent pilot ignition system comes with a battery backup system that enables the system to operate in a power outage. The system offers seamless transition from household AC power to battery backup. A factory-installed battery pack is located in the control cavity of the appliance. See Figure 8.2. Battery longevity and performance will be affected by long term exposure to the service temperatures of this appliance.

**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.

### To Operate Appliance Using Battery Power (DC):

1. Access the control cavity of the appliance. See Figure 8.2 for location. Lift the screen frame off of the appliance. Remove the deflection glass and crushed glass media from the burner assembly. Lift the burner assembly and support with the 2 burner supports.
2. Locate the battery tray and insert four AA cell batteries. See Figure 8.2. Battery polarity must be correct or module damage will occur. A complete wiring diagram is included in the Electrical section of the appliance Installation Manual.
3. Lower the burner assembly. Reinstall the crushed glass media and deflection glass.
4. Turn the appliance on according to the instructions below for the appropriate type of control:

### Standard Wall Switch or Factory-Installed ON/OFF Switch:

- Toggle the switch as you would under normal circumstances.

### Wireless Remote:

- Remote receiver is integrated into the ignition module
- Use the remote to turn the appliance on.
- To preserve battery life, do not use the HI/LO flame or THERMOSTAT options.

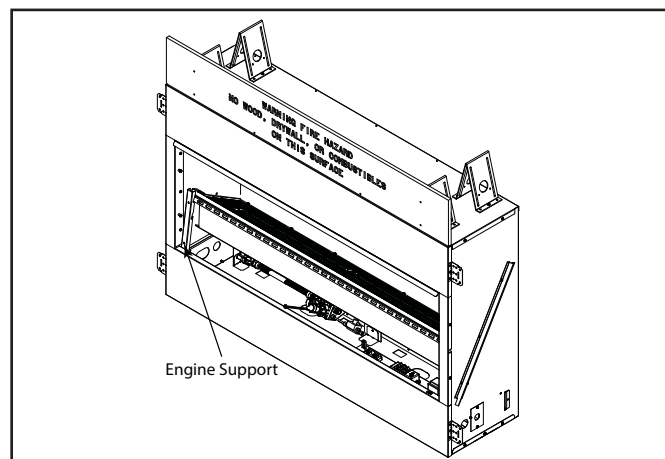
**NOTICE:** Some functionality will be lost when using battery backup including lights, or any other auxiliary functions that require household 110-120 VAC power.

### Standard Wall Switch or Factory-Installed ON/OFF Switch:

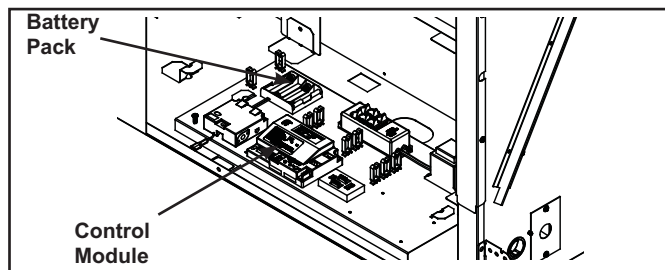
- Toggle the switch to OFF.
- Remove the deflection glass and crushed glass media from the burner assembly. Lift the burner assembly and support with the 2 burner supports.
- Remove the batteries from the battery tray.
- Lower the burner assembly. Reinstall the crushed glass media and deflection glass.

### Wireless Remote:

- Use the remote to turn the appliance off.
- Remove the deflection glass and crushed glass media from the burner assembly. Lift the burner assembly and support with the 2 burner supports.
- Remove the batteries from the battery tray.
- Lower the burner assembly. Reinstall the crushed glass media and deflection glass.



8.2 - Control Cavity Location (Cut away front view only for location purpose, no direct access from front)



8.3 - Battery Tray Location

## C. Detailed Component Operating Instructions— Intellifire™ Plus ODS

### Control Module Operation

1. The control module has an ON/OFF/REMOTE selector switch that must be set. See Figure 8.5.

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

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

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

2. If using a wired wall switch with the module in REMOTE mode, the flame output can be adjusted with the HI/LO selector switch on the module. See Figure 8.5. Note that the flame HI/LO selector switch will become inactive once a remote control (RC300) is programmed to the control module. Note that the control module will always ignite the fireplace on HI and remain so for the initial 10 seconds of operation. If the HI/LO is switched to the LO position, the flame output will automatically drop to the lowest setting after the flame has been established for 10 sec. After this 10 second period, the flame can be adjusted from HI to LO with the switch.
3. The control module has safety feature that automatically shuts down the fireplace after 9 hours of continuous operation without receiving a command from the RC300 remote.
4. If you intend to use both a wired wall switch and the RC300 remote control to operate your fireplace, the wall switch will override any commands given by the remote.

### ►5. Module Reset

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

- Check battery tray. Remove batteries if installed. Batteries should only be installed for use during power outages.
- Locate the reset switch in the lower front face. (See Figure 8.7).
- Set the reset switch to the OFF position.
- Wait five (5) minutes to allow possible accumulated gas to clear.
- Set the reset switch to ON.
- Start the appliance.

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

#### Nine Hour Safety Shutdown Feature

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

### Appliance ON/OFF

Use the IntelliFire™ Plus Remote Control to control the ON/OFF function of the appliance. Follow instructions included with the remote control. If desired, a wall switch may be installed to control the ON/OFF function of the appliance.

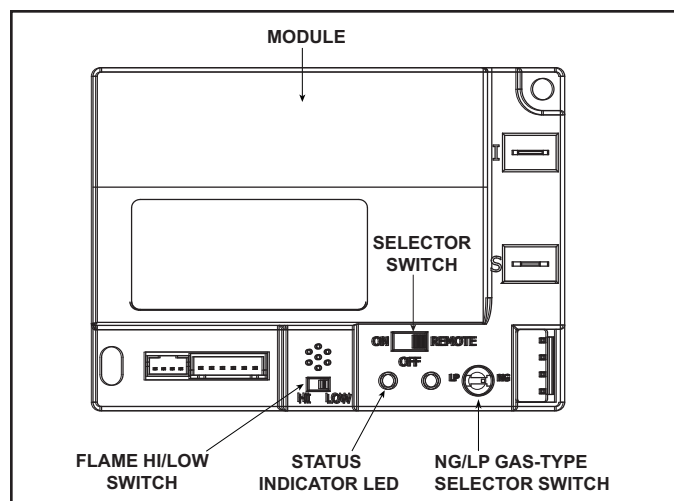


Figure 8.5 - Control Module

## Manual Appliance Shutoff

In the unlikely event that the remote wall switch malfunctions and will not turn off the appliance, call your dealer for service assistance. In the meantime, you may choose one of the following actions to turn off the appliance:

**CAUTION! Risk of burns!** Appliance surfaces are hot when operating and during cool down. Use care and wear gloves when opening the front and accessing components inside the appliance.

Check remote screen for battery level indicator, replace the batteries if low battery is indicated.

The appliance may be manually shut down by one of the following methods:

### Turn off power to the appliance (if back-up batteries are not installed):

- Unplug appliance from electrical source, if you cannot unplug then:
- Locate house circuit breaker for appliance.
- Turn off the circuit breaker.
- Turn the reset switch in the front face to the off position. See Figure 8.7.

## LED Control

(For the AVFL42NIP-BU, AVFL42PIP-BU, AVFL42NIP-RB, and AVFL42PIP-RB the AVFL42LED kit must be purchased separately if LED lights are needed)

- Multi-colored LED lights - The two (2) round buttons on the right in Figure 8.6 turn LEDs ON (HI/MED/LO) and OFF function and cycle through the color selection.
1. Color Fade - This setting will cycle through the colors shown below at a slower rate.
  2. Color Fade Slow - This setting will cycle through the colors shown below at a slower rate.
  3. Pause Color - This setting will pause the slow color fade at any color in the color wheel.
  4. Solid Color Selection - This setting will cycle through each color in order:
    - Blue
    - Violet
    - Red
    - Yellow
    - Green
    - Cyan
    - White

**CAUTION! Risk of Electrical Shock!** Avoid touching wires and electrical components in appliance control cavity.

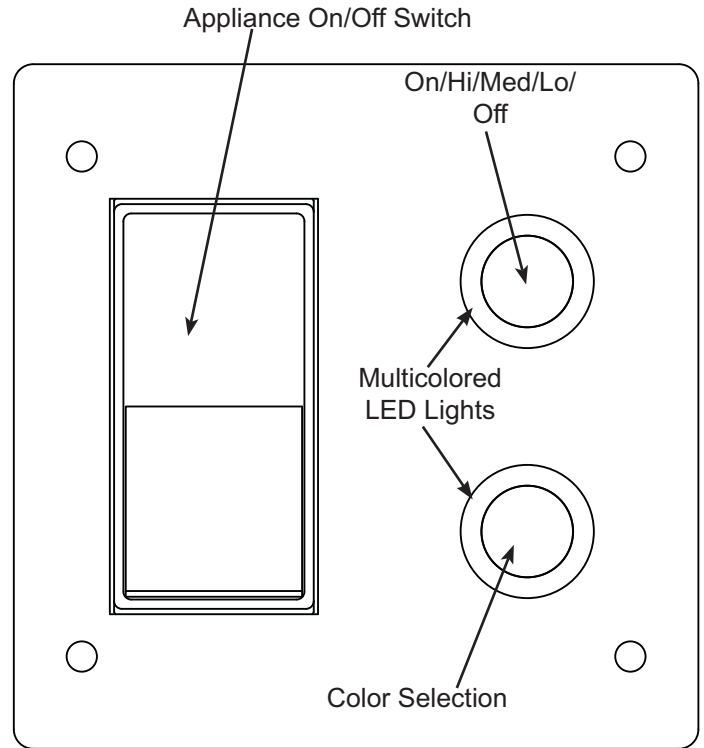
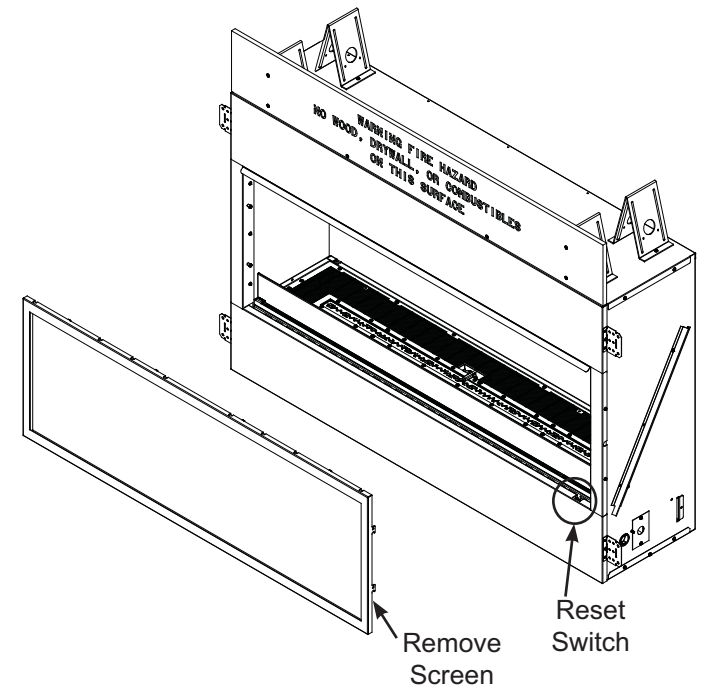


Figure 8.6 Wall Control Switch



► Figure 8.7 Reset Switch



## ►D. Troubleshooting

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

### IntelliFire™ Plus ODS Ignition System

Symptom	Possible Cause	Corrective Action
1. Pilot won't light. The igniter/module makes noise, but no spark.	A. Incorrect wiring.	Verify "S" wire (white) for sensor and "I" wire (orange) for igniter are connected to correct terminals on module and pilot assembly.
	B. Loose connections or electrical shorts in the wiring.	Verify no loose connections or electrical shorts in wiring from module to pilot assembly. Verify connections underneath pilot assembly are tight; also verify igniter and flame sense wires are not grounding out to metal chassis, pilot burner, pilot enclosure, mesh screen if present, or any other metal object.
	C. Igniter gap is too large.	Verify gap of igniter to right side of pilot hood. The gap should be approximately .095 in. (2.41 mm) to .135 in. (3.43 mm).
2. Pilot won't light, there is no noise or spark.	A. No power, transformer installed incorrectly, or depleted batteries.	Verify that transformer is installed and plugged into module. Check voltage of transformer at connection to module. Acceptable readings of a good transformer are between 6.4 and 6.6 volts DC. Battery power supply voltage must be at least 4 volts. If less than 4 volts, replace batteries.
	B. A shorted or loose connection in wiring configuration or wiring harness.	Remove and reinstall the wiring harness that plugs into module. Verify there is a tight fit. Verify pilot assembly wiring to module. Remove and verify continuity of each wire in wiring harness. Replace any damaged components.
	C. Improper wall switch wiring.	Verify that 110-120 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. Control module is locked out.	Reset the control module using the reset switch in the lower front face. See Figure 8.7.
3. Pilot sparks, but pilot will not light.	A. Gas supply is off or lacking pressure.	Verify that incoming gas line ball valve is "open." Verify that inlet pressure reading is within acceptable limits.
	B. Igniter gap is too large.	Verify gap of igniter to right side of pilot hood. The gap should be approximately .095 in. (2.41 mm) to .135 in. (3.43 mm).
	C. Module is not grounded.	Verify module is securely grounded to metal chassis of appliance.
	D. Pilot valve solenoid voltage is out of spec.	Verify that 1.5 to 1.8 VDC is supplied to pilot solenoid from module. If below 1.5 volts, replace module. If 1.5 volts or greater, replace valve.

## Intellifire™ Plus Ignition System - (continued)

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

## E. Accessories

- **Remote Controls, Wall Controls and Wall Switches**

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

For safety:

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

Contact your dealer if you have questions.

- **Crushed Glass Media**

- Diamond
- Bronze
- Onyx
- Sapphire

- **42" LED Light Kit (AVFL42LED)**

LED light kit for AVFL42 that includes a wall switch for the appliance

- **Driftwood Log Set (CDLS)**

Driftwood log set (2 logs for AVFL42 and AVFL48, 3 logs for AVFL60)

- **Optional Finish Kits**

The AVFL appliances have three optional finish kits for each appliance size

- AVFL42TKI-B, AVFL48TKI, AVFL60TKI-B - Black inside fit trim kit
- AVFL42CFVC, AVFL48CFVC, AVFL60CFVC-B - Contemporary veined copper face
- AVFL42CFSB, AVFL48CFSB, AVFL60CFSB - Contemporary satin black face

- **Optional Stone Kit (STONEKIT)**

-The look of water tumbled stones adds interest and appeal to your appliance.

- **Outdoor Kit for AVFLST48 (AVFLST48SSODK)**

- **Black Magic Glass Kit for AVFL42 (AVFL42BGL)**



Monessen, a brand of Hearth & Home Technologies  
7571 215<sup>th</sup> Street West, Lakeville, MN 55044  
[www.monessenhearth.com](http://www.monessenhearth.com)

Please contact your Monessen dealer with any questions or concerns.  
For the location of your nearest Monessen dealer,  
please visit [www.monessenhearth.com](http://www.monessenhearth.com)