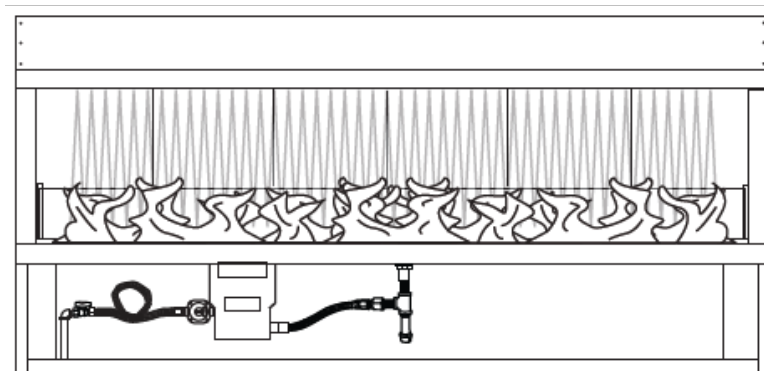


# ORTAL®



## Installation and Operation Manual Outdoor Vent Free Series



### Outdoor Series Fireplaces:

- 36" Outdoor Vent Free Fireplace
- 48" Outdoor Vent Free Fireplace
- 60" Outdoor Vent Free Fireplace
- 72" Outdoor Vent Free Fireplace

**INSTALLER:** Leave this manual with the appliance.  
**CONSUMER:** Retain this manual for future reference.

**IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS  
DO NOT ATTEMPT TO INSTALL OR OPERATE THIS APPLIANCE.**

### INSTALLATION PRECAUTION:

This fireplace requires a minimum of 18-square inches (per side) of cross ventilation. Failure to provide proper ventilation can void the warranty.

 **WARNING:** For Outdoor use Only



We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.



**DANGER**

**CARBON MONOXIDE HAZARD**

This appliance can produce carbon monoxide which has no odor.

Using it in an enclosed area can kill you.

Never use this appliance in an enclosed space such as a camper, tent, car or home.



**DANGER  
FIRE OR EXPLOSION  
HAZARD**

If you smell gas:

1. Shut off gas to the appliance.
2. Extinguish any open flame.
3. If the odor continues, leave the area immediately.
4. After leaving the area, call your gas supplier or fire department.



**WARNING**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or another appliance.

An LP cylinder not connected for use shall not be stored in the vicinity of this or any other appliance.

**WARNING**

Do not leave unattended during use.  
Do not use for cooking.  
Follow all gas leak procedures in this manual prior to operation.



**WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage, personal injury or loss of life



**DANGER**



**HOT GLASS WILL  
CAUSE  
BURNS**

**DO NOT TOUCH  
GLASS UNTIL COOLED**

**NEVER ALLOW CHILDREN  
TO TOUCH GLASS**

A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at-risk individuals.

**WARNING**

If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or **loss of life.**

**FOR YOUR SAFETY**

Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or other appliances.



**CALIFORNIA PROPOSITION 65  
WARNING**

This product is designed to operate with one of the following fuel sources: Liquid Propane or Natural Gas. The fuel used to operate this product, and the products of combustion of such fuel, can expose you to chemicals including Benzene which is known to the State of California to cause cancer, birth defects and other reproductive harm and Carbon Monoxide which is known to the State of California to cause birth defects or other reproductive harm.

(For more information go to:  
[www.p65Warnings.ca.gov](http://www.p65Warnings.ca.gov).)

## General

### Safety Information and Warnings

1. This appliance is configured from the factory only as Natural gas. It can be converted to LP gas.
2. Do not place Propane (LP) supply tanks inside any unapproved structures. Locate propane tanks outdoors if unsure.
3. This fireplace is to be used only outdoors in a well-ventilated space and shall not be used in a building, garage, or any other enclosed area.
4. Do not use this fireplace as a wood burning fireplace. Use only high temperature glass media approved for use with this fireplace.
5. Do not use this fireplace to cook or burn paper or other objects.
6. Do not use if exposed to or under water. Immediately call a qualified service technician to inspect the fireplace and replace any part of the control system and any gas control which has been under water.
7. Turn the fireplace OFF and let cool before servicing. Only a qualified service person should perform service.

### Massachusetts Requirements

These appliances are approved for installation in the US state of Massachusetts if the following additional requirements are met:

- Un-vented Room Heaters shall be installed in accordance with 527 CMR 30.
- Installation and repair must be done by a plumber or gas fitter licensed in the Commonwealth of Massachusetts.
- The flexible gas line connector used shall not exceed 36 inches (92 centimeters) in length.
- The individual manual shut-off must be a T-handle type valve.
- Unvented appliances may NOT be installed in bedrooms or bathrooms.
- A working smoke detector must be installed in the area where vent-free appliances are installed.
- Seller of unvented propane or natural gas-fired supplemental room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

### ALWAYS USE CAUTION WHEN USING THE FIREPLACE

Extra caution should be taken when lighting a fireplace when heavy rain, high humidity and moisture are present. Light the fireplace and leave the area while the heat dissipates any moisture out of the media. We strongly recommend that during this drying out time that you monitor the fireplace from a distance. This drying out period should be no less than 30 minutes. Continue monitoring the flame from a safe distance to ensure that all popping has ceased before fully enjoying the fire.

### LOCAL CODES

Install and use the fireplace with care. Follow all local codes. In the absence of local codes, use the latest edition of the National Fuel Gas Code ANSI Z223.1/ NFPA54.

### CAUTION:

All media (i.e. lava rock, lava stones, lava boulders and fire glass) have the potential of thermal spalling. This is a process that may occur when media is wet and moisture gets trapped inside of the material due to rapid temperature differences. When this happens, the media has the potential to crack or "pop" outside the fireplace. Heavy rains, high humidity and the presence of moisture can contribute to this process.

## Table of Contents

<b>General</b>	<b>3</b>
<b>Safety Information and Warnings</b>	<b>3</b>
<b>Product Information</b>	<b>5</b>
Models	5
Certification	6
Rating Label	7
<b>Installation Precautions</b>	<b>8</b>
<b>Gas Line &amp; Cross Ventilation Requirements</b>	<b>9</b>
Burner Pan Removal- ( <i>refer to removal of burner pan screws diagram above</i> )	9
Ventilation for Non-Combustible Enclosure	9
<b>Hard Piping &amp; High Elevation</b>	<b>10</b>
High Elevation Installation	10
<b>Specifications</b>	<b>11</b>
<b>Gas Pressures</b>	<b>11</b>
<b>Gas Pipe Sizing Chart</b>	<b>11</b>
<b>Front Facing Fireplace Application</b>	<b>13</b>
<b>Front Facing Fireplace Dimensions &amp; Clearances</b>	<b>14</b>
<b>Front Facing Framing Dimensions with Metal Studs</b>	<b>15</b>
<b>See-Through Fireplace Application</b>	<b>16</b>
<b>See-Through Fireplace Dimensions &amp; Clearances</b>	<b>16</b>
<b>See-Through Framing Dimensions with Metal Studs</b>	<b>17</b>
<b>LED Lighting Installation</b>	<b>17</b>
<b>Wiring Diagrams</b>	<b>23</b>
<b>LED Wiring Diagram</b>	<b>24</b>
<b>Gas Valve Wiring Diagram</b>	<b>25</b>
<b>Final Preparation</b>	<b>26</b>
<b>Installing the Pilot Covers</b>	<b>26</b>
<b>Pilot Operation &amp; Test Fire</b>	<b>26</b>
<b>Media Installation</b>	<b>27</b>
Log Sets	28
<b>Hood(s) Installation</b>	<b>29</b>
<b>Windshield(s) Installation</b>	<b>29</b>
Remaining Glass Clip Installation	29
Windshield Installation	29
<b>Flame Height</b>	<b>30</b>
<b>Operation</b>	<b>31</b>
<b>Lighting Instructions</b>	<b>31</b>
How to Turn on the Appliance	31
How to Turn off the Appliance	31
<b>Replacement Parts</b>	<b>32</b>
<b>Natural Gas to Propane Gas Conversion</b>	<b>34</b>
<b>Fireplace Maintenance</b>	<b>37</b>
<b>General Troubleshooting</b>	<b>38</b>
<b>Error Code Troubleshooting</b>	<b>39</b>

## Product Information

### Models

#### Outdoor Front Facing Models

<b>SKU #</b>	<b>Model #</b>	<b>Description</b>
Outdoor Front Facing 36" NG: <b>US36XXLIRMXNFLXOX</b>	Outdoor Front Facing 36" NG: <b>AMDOUTVFNG36</b>	36" Outdoor Linear Fireplace -2-Piece Glass Windshield Kit -LED Tray with LED Strip
Outdoor Front Facing 48" NG: <b>US48XLIRMXNFLXOX</b>	Outdoor Front Facing 48" NG: <b>AMDOUTVFNG48</b>	42" Outdoor Linear Fireplace -2-Piece Glass Windshield Kit -LED Tray with LED Strip
Outdoor Front Facing 60" NG: <b>US60XLIRMXNFLXOX</b>	Outdoor Front Facing 60" NG: <b>AMDOUTVFNG60</b>	60" Outdoor Linear Fireplace -2-Piece Glass Windshield Kit -LED Tray with LED Strip
Outdoor Front Facing 72" NG: <b>US72XLIRMXNFLXOX</b>	Outdoor Front Facing 72" NG: <b>AMDOUTVFNG72</b>	72" Outdoor Linear Fireplace -2-Piece Glass Windshield Kit -LED Tray with LED Strip

#### Outdoor See-Through Conversion Kits

<b>SKU #</b>	<b>Model #</b>	<b>Description</b>
Outdoor See-Through Kit 36" <b>VFOOUTVFCTU36</b>	Outdoor See-Through Kit 36" <b>AMDOUTVFCTU36</b>	See-Through Conversion Kit for 36" Fireplace: -2-Piece Glass Windshield Kit -LED Tray with LED Strip
Outdoor See-Through Kit 48" <b>VFOOUTVFCTU48</b>	Outdoor See-Through Kit 48" <b>AMDOUTVFCTU48</b>	See-Through Conversion Kit for 48" Fireplace: -2-Piece Glass Windshield Kit -LED Tray with LED Strip
Outdoor See-Through Kit 60" <b>VFOOUTVFCTU60</b>	Outdoor See-Through Kit 60" <b>AMDOUTVFCTU60</b>	See-Through Conversion Kit for 60" Fireplace: -2-Piece Glass Windshield Kit -LED Tray with LED Strip
Outdoor See-Through Kit 72" <b>VFOOUTVFCTU72</b>	Outdoor See-Through Kit 72" <b>AMDOUTVFCTU72</b>	See-Through Conversion Kit for 72" Fireplace: -2-Piece Glass Windshield Kit -LED Tray with LED Strip

## Certification

These outdoor fireplaces are tested and approved to ANSI Z21.97- 2017/CSA 2.41 standards by PFS agency using listing #20-024. It should be installed by a qualified installer in accordance with local and state building codes using National Fuel Gas Code ANSI Z223.1/ NFPA54 or current CSA-B149.1 installation codes for Gas Burning Appliances and Equipment in Canada.

### DESCRIPTION:

These Outdoor fireplace models come ready to operate with HI/LO capabilities once installation is complete. They use an electronic ignition that runs off a 7.5DCV adapter. In addition, each fireplace is equipped with LED lighting as a standard feature. All models can operate the LED lights with or without the fireplace operating. The LED lights operate from a 12-volt adapter.

Use only approved media. All models are shipped as Natural Gas but can be converted to Propane Gas by ordering an optional conversion kit.

NEVER obstruct the front opening(s) of the fireplace.

**CSA Group is approved by the American National Standards Institute (ANSI) as an Accredited Standards Developer.**

### Certification Standard:

**US: ANSI Z21.97 – Outdoor Decorative Gas Appliance**

**Canada: CSA 2.41 – Outdoor Decorative Gas Appliance**



The fireplaces are permitted for outdoor use only. An outdoor space is defined as the following per ANSI Z21.97: Outdoor spaces- An appliance is considered to be outdoor if installed with shelter no more inclusive than:

- With wall on all sides, but no over- head cover.
- Within a partial enclosure with includes an overhead cover and no more than two side walls. These side walls may be parallel, as in a breezeway or at right angles to each other; or
- Within a partial enclosure which includes an overhead cover and three sidewalls, as long as 30% or more of the horizontal periphery of the enclosure is permanently open.

### **!** IMPORTANT:

- Consult the authority having jurisdiction to determine the need for a permit prior to starting the installation.
- It is the responsibility of the fireplace dealer and installer to ensure that this fireplace is installed and framed in compliance with these instructions and all applicable codes.
- Before starting, take careful note of **ALL** the **WARNINGS** in this manual.






# Rating Label






## DEALERS/INSTALLERS:

You **MUST** leave the fireplace's rating label with the fireplace in an area easily accessible by the owner (typically near the access panel, if available). You must instruct the owner before handing over the fireplace where this label can be found.

## OWNERS:

Make sure the installer leaves your fireplace's rating label in an area that is easily accessible for you. This information is required for servicing and receiving replacement parts.

 #20-024	LISTED OUTDOOR DECORATIVE GAS APPLIANCE CERTIFIED FOR: U.S.A. & CANADA TESTED TO: ANSI Z21.97-2017/CSA 2.41	Manufactured by AMD Direct, Inc for: Ortal USA 2152 Citygate Drive Columbus, OH 43216 				
<b>OUTDOOR FIREPLACE SERIAL #</b>						
<b>RATINGS</b> Gas Type: Natural Gas (NG) <b>Pressure</b> Manifold: 4.0"WC (.99kPa) Min. Inlet: 5.0"WC (1.24kPa) Max. Inlet: 10.5"WC (2.61kPa) <b>AMDOUTVFNG36</b> Orifice #41 31K Btu's (9.08kW) (Hi) 18.5K Btu's (5.42kW) (Lo) <b>AMDOUTVFNG48</b> Orifice #32 43.5K Btu's (12.74kW) (Hi) 24.5K Btu's (7.18kW) (Lo) Altitude: 0-4500 Feet	<b>RATINGS</b> Gas Type: Natural Gas (NG) <b>Pressure</b> Manifold: 4.0"WC (.99kPa) Min. Inlet: 5.0"WC (1.24kPa) Max. Inlet: 10.5"WC (2.61kPa) <b>AMDOUTVFNG60</b> Orifice #30 50K Btu's (14.65kW) (Hi) 36K Btu's (10.55kW) (Lo) <b>AMDOUTVFNG72</b> Orifice #25 65K Btu's (19.04kW) (Hi) 42K Btu's (12.30kW) (Lo) Altitude: 0-4500 Feet	See manual for specific details <b>MINIMUM CLEARANCE TO COMBUSTIBLES</b> Side wall - Single-sided fireplace: 6" (153mm) Side wall - See-through fireplace: 36" (915mm) Top of fireplace to ceiling: 46½" (1180mm) Bottom of fireplace pan to floor: 11½" (292mm)				
<b>MODEL</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">AMDOUTVFNG36</td></tr> <tr><td style="text-align: center;">AMDOUTVFNG48</td></tr> <tr><td style="text-align: center;">AMDOUTVFNG60</td></tr> <tr><td style="text-align: center;">AMDOUTVFNG72</td></tr> </table>	AMDOUTVFNG36	AMDOUTVFNG48	AMDOUTVFNG60	AMDOUTVFNG72	 <b>DANGER: CARBON MONOXIDE HAZARD</b> This appliance can produce carbon monoxide which has no odor. Using it in an enclosed space can kill you.  Never use fireplace in and enclosed space such as a camper, tent, car or home.	
AMDOUTVFNG36						
AMDOUTVFNG48						
AMDOUTVFNG60						
AMDOUTVFNG72						
 Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to owner's manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier.						
		PN#90528 REV. A				

 #20-024	LISTED OUTDOOR DECORATIVE GAS APPLIANCE CERTIFIED FOR: U.S.A. & CANADA TESTED TO: ANSI Z21.97-2017/CSA 2.41	Manufactured by AMD Direct, Inc for: Ortal USA 2152 Citygate Drive Columbus, OH 43216 				
<b>OUTDOOR FIREPLACE SERIAL #</b>						
<b>RATINGS</b> Gas Type: Propane (LP) <b>Pressure</b> Manifold: 10.0"WC (2.48kPa) Min. Inlet: 10.5"WC (2.61kPa) Max. Inlet: 13.0"WC (3.23kPa) <b>AMDOUTVFLP36</b> Orifice #52 30K Btu's (8.79kW) (Hi) 19.5K Btu's (5.72kW) (Lo) <b>AMDOUTVFLP48</b> Orifice #48 42.5K Btu's (12.46kW) (Hi) 29K Btu's (8.50kW) (Lo) Altitude: 0-4500 Feet	<b>RATINGS</b> Gas Type: Propane (LP) <b>Pressure</b> Manifold: 10.0"WC (2.48kPa) Min. Inlet: 10.5"WC (2.61kPa) Max. Inlet: 13.0"WC (3.23kPa) <b>AMDOUTVFLP60</b> Orifice #44 50K Btu's (14.65kW) (Hi) 36K Btu's (10.55kW) (Lo) <b>AMDOUTVFLP72</b> Orifice #42 60K Btu's (17.15kW) (Hi) 45K Btu's (13.19kW) (Lo) Altitude: 0-4500 Feet	See manual for specific details <b>MINIMUM CLEARANCE TO COMBUSTIBLES</b> Side wall - Single-sided fireplace: 6" (153mm) Side wall - See-through fireplace: 36" (915mm) Top of fireplace to ceiling: 46½" (1180mm) Bottom of fireplace pan to floor: 11½" (292mm)				
<b>MODEL</b> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">AMDOUTVFLP36</td></tr> <tr><td style="text-align: center;">AMDOUTVFLP48</td></tr> <tr><td style="text-align: center;">AMDOUTVFLP60</td></tr> <tr><td style="text-align: center;">AMDOUTVFLP72</td></tr> </table>	AMDOUTVFLP36	AMDOUTVFLP48	AMDOUTVFLP60	AMDOUTVFLP72	 <b>DANGER: CARBON MONOXIDE HAZARD</b> This appliance can produce carbon monoxide which has no odor. Using it in an enclosed space can kill you.  Never use fireplace in and enclosed space such as a camper, tent, car or home.	
AMDOUTVFLP36						
AMDOUTVFLP48						
AMDOUTVFLP60						
AMDOUTVFLP72						
 Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to owner's manual provided with this appliance. For assistance or additional information consult a qualified installer, service agency or the gas supplier.						
		PN#90529 REV. A				

## Installation Precautions

1. These fireplaces are designed for outdoor use only. Not approved for any indoor use.
2. Determine which fireplace you are preparing to install, front facing or see-through.
3. **This fireplace is not a “load bearing” fireplace. All finishing materials must be supported by the surrounding structure and not rely on the fireplace itself.**
4. Fireplaces create hot temperatures; it is very important to have any combustibles at a safe distance.
5. The fireplace should never be left unattended while in operation. It should always be a safe distance from all trees and combustible landscape materials.
6. The fireplace must be installed on a flat, level, stable, non-combustible surface. **Exception:** It is permissible to place one layer of ½” cement board underneath the entire fireplace, then it may sit on a flat, level, stable, combustible surface. Drainage is critical to ensure that water does not damage gas valve and components. **Never install the fireplace below grade.**
7. **CAUTION:** A minimum of 18 square inches of cross ventilation (per side) is required to keep the inside of the enclosure dry. Install the supplied VENT-KIT-6x12SS approximately 3 to 4 inches from the floor centered on each end of the fireplace.
8. Only non-combustible materials (i.e. metal studs and cement board) should come in direct contact with any part of the fireplace. The underneath area should be non-combustible or a flat level combustible surface according to the clearances specified in this manual. Bend out nailing flanges on ends of fireplace and secure to metal studs.
9. **Hearth Extension:** A hearth extension is not required with this fireplace. Any hearth extension used is for appearance only and does not have to conform to standard hearth extension installation requirements.
10. This fireplace is designed to have glass media covering the burner trough, so the burner tube is not visible. Media is NOT provided and must be purchased separately. When installing media use minimum of ½” to ¾” diameter glass to fill the burner trough. After the burner trough is covered, you are permitted to fill the remaining area in the burner pan. **DO NOT COVER THE IGNITION HOOD WITH ANY ROCK OR MEDIA.**
11. Do not use media that will absorb moisture over time and will not release this moisture quickly. Moisture can boil in this media and can rapidly break apart and cause property damage or personal injury.
12. Never leave any other combustible material on top of the fireplace. This could cause unsafe operation of this system and damage to the components that will not be covered under our warranty.
13. It is recommended to wear gloves when moving the fireplace into position and watch for sharp edges when handling the fireplace.
14. We recommend using ¾” black iron pipe; however please refer to the NFPA54 (National Fuel Gas Code) for proper pipe sizing when exceeding 20-feet in length for fireplaces .
15. Follow the local code requirements for the gas type being used. This fireplace should be installed in accordance with local codes and ordinances or in the absence of local codes, with the latest National Fuel Gas Code, ANSI Z223.1 NFPA54 or CSA B149.1, Natural and Propane Installation Code in Canada.
16. This appliance must be electrically grounded in accordance with the local codes, or in the absence of local codes, with the National Electrical Code, ANSI/NFPA 70; or the Canadian Electrical Code, CSA C22.1, if applicable.
17. Gas lines and fittings must be installed into the non-combustible structure. All gas connections must be leak tested before installation of the fireplace. Leak detection is required before regular use of the fireplace.
18. **LED LIGHTING:** LED lighting must be installed before finishing materials are completed on this fireplace. Ensure electricity is run before the fireplace is installed. Ensure you follow the local codes regarding your installation.

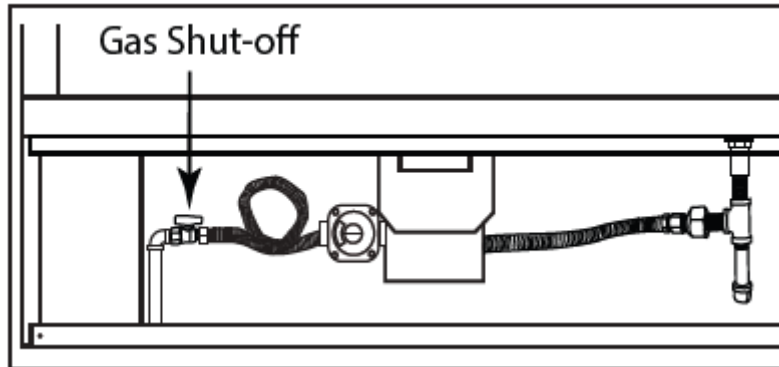
**CAUTION:** Before beginning installation carefully remove the glass windshield, parts box and any other packing materials from the fireplace and set aside for later use.

**FRAMING:** After framing is complete, place the fireplace into position and secure it with the side nailing flanges. Next install cement board, securing it to the metal studs and fireplace. The framing provides for a flush fit up to the opening of the fireplace. **DO NOT PRODUCE INTO THE FIREPLACE OPENING WITH CEMENT BOARD.**



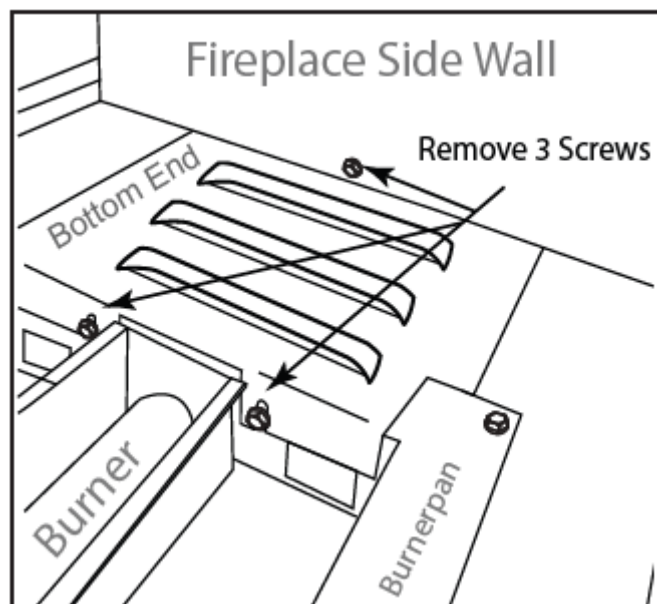
## Gas Line & Cross Ventilation Requirements

The gas line must have a predetermined location to enable it to be installed. The image below shows one example of an inlet gas line with a gas shut off at the fireplace. This allows a technician to shut the inlet gas supply OFF and remove the burner for servicing. Ensure you follow the local and state gas codes per your installation.



Close up view of inlet gas connection with shut off valve

**RECOMMENDATION:** Once the gas line is established it is recommended to remove the burner pan from the firebox until the fireplace is in the final stages and ready for burner installation. Burner pan removal requires the extraction of 4 screws at each corner of the burner pan lip in addition to the 3 screws shown below.



Removal of burner pan screws

**GAS CONVERSION:** The burner pan must be removed from the fireplace to convert to propane gas.

**IMPORTANT:** Air inlet to pilot must be facing a viewing area open to fresh air. One side available on front facing fireplaces only, while either side in see-through models is acceptable.

### **Burner Pan Removal-** *(refer to removal of burner pan screws diagram above)*

**Step 1:** Remove the bottom end (it had 3 screws) from the opposite end of the burner pan.

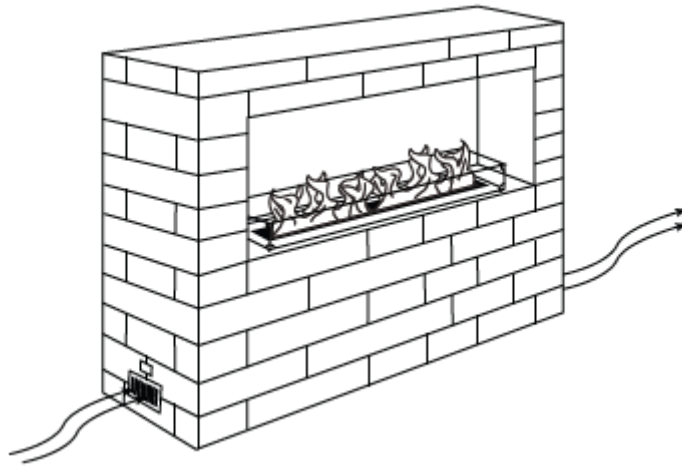
**Step 2:** Lift the bottom end up and out from both sides of the burner pan area.

**Step 3:** Remove the four screws (two on each end) of the burner pan. They are located at the outer edge of the burner pan, one on each corner.

### **Ventilation for Non-Combustible Enclosure**

Fireplaces are subjected to many outdoor elements such as rain, snow, wind, heat or cold. **A minimum of 18 square inches of cross ventilation (2 sides) is required to keep the components in good working order.**

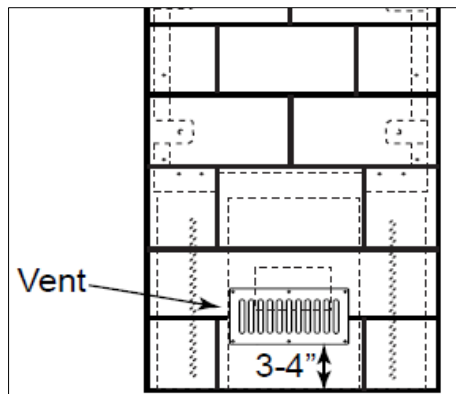
Never fill the cavity under and around the valve box with any material, this is an air space necessary for ventilation.



**Cross Ventilation Kit**

**Note:** Installation of two 18 square inch vents or one 36 square inch vent is required for ventilation of enclosures. When two vents are used, they may be installed on one wall. Install the bottom of the vent(s) within one foot of the floor level. See local codes or, in absence of local codes, with National Fuel Gas Code, ANSI Z223.1/NFPA 54 (USA) – latest edition or CAN.CGBA-B149.1 Natural Gas and Propane installation code (Canada) – latest edition. Do not place Propane (LP) supply tanks inside any structure or enclosure. Locate propane tanks outdoors.

The vents (VENT-KIT-6x12) used for cross ventilation should be installed at each end of the fireplace. Vents should be placed 3-4" from the bottom of the fireplace and centered side to side as shown below.



**Vent Location**

**WARNING:** Proper clearances from combustible construction materials must be maintained on all sides, top and bottom of this appliance.

**IMPORTANT:** Installation of NG or LP should be done by a qualified installer, service agency or gas supplier. This appliance must be isolated from the gas supply piping system by closing its manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal or less than 1/2" psig (3.5kPa),

## Hard Piping & High Elevation

We recommend using 3/4" black iron pipe, however, please refer to NFPA54 (National Fuel Gas Code) for proper pipe sizing when exceeding 20 feet in length for fireplaces rated above 100,000 BTU's.

1. Turn **OFF** gas supply system. **NOTE:** All gas connections (except for brass to brass) require the following: clean pipe threads using either a wire brush or steel wool. Apply pipe sealant to the fitting before making any connection. Be careful and ensure all gas connections are snug, but do not over tighten.
2. Extend the gas supply using minimum of 3/4" black iron or an approved flexible gas line from existing house supply. This can be accomplished by teeing off or tapping into a gas line connection. Install necessary pipe for distance required and then install a manual shut off valve at the exterior house wall. If the pipe is to pass through a foundation or house wall, make sure to re-seal the area around the pipe with weather sealant.
3. The primary gas shut off (supplied) will require 1/2" male flared fitting to enable connection of the stainless-steel flex gas line supplied with the fireplace.

## High Elevation Installation

This appliance is listed for from 0 to 4500 feet in Canada and the U.S. If elevation exceeds 4500 feet it may be necessary to decrease the input rating by changing the existing burner orifice to a smaller size. Input should be reduced 4% for each 1000 feet beyond the 4500 feet above sea level. Check with your local gas utility for assistance in determining the proper orifice in your location. In some cases, the heating value may already be reduced and downsizing the orifice may not be necessary.

## Specifications

These fireplaces come shipped as natural gas models only. There is an LP conversion kit available as an accessory. Ensure you order the specific conversion kit for your model fireplace.

Models:	NG Factory Orifice	NG BTU's High	NG BTU's Low	NG Low Rate Screw	LP Conversion Kit	LP Factory Orifice	LP Low Rate Screw
36"	#41	31,000 (9.08 kW)	18,500 (5.42 kW)	#44	SKU: <b>VFOOUTVFCLP36</b> Model: AMDOUTVFCLP36	OAS-LP52	ECO-LSS-52
48"	#32	43,500 (12.74 kW)	24,500 (5.42 kW)	#34	SKU: <b>VFOOUTVFCLP48</b> Model:AMDOUTVFCLP48	OAS-LP48	ECO-LSS-46
60"	#30	50,000 (14.65 kW)	36,000 (7.18 kW)	#27	SKU: <b>VFOOUTVFCLP60</b> Model: AMDOUTVFCLP60	OAS-LP44	ECO-LSS-42
72"	#25	65,000 (19.00 kW)	42,000 (12.30 kW)	#18	SKU: <b>VFOOUTVFCLP72</b> Model: AMDOUTVFCLP72	OAS-LP42	ECO-LSS-35

**Disclaimer:** BTU listings are based on 7.0" W.C (1.74 kPa) for Natural Gas at inlet side of the gas regulator. Flex line sizing and proper gas pip sizing can affect BTU's. As a result, your BTU's may vary slightly from the specification above.

### Gas Pressures

Pressure	NG	LP
Min Inlet	5.0" WC (1.24 kPa)	10.5" WC (2.61 kPa)
Max Inlet	10.5" WC (2.61 kPa)	13.0" WC (3.23 kPa)
Normal Inlet	7.0" WC (1.74 kPa)	11.0" WC (2.73 kPa)
Manifold	4.0" WC (.99 kPa)	10.0" WC (2.48 kPa)

## Gas Pipe Sizing Chart

Length of Pipe in Feet	Natural Gas: Pipe Sizing Chart								
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
10'	108	230	387	793	1237	2259	3640	6434	-
20'	75	160	280	569	877	1610	2613	5236	9521
30'	61	129	224	471	719	1335	2165	4107	7859
40'	52	110	196	401	635	1143	1847	3258	6795
50'	46	98	177	364	560	1041	1680	2936	6142
60'	42	89	159	336	513	957	1559	2684	5647
70'	38	82	149	317	476	896	1447	2492	5250
80'	36	76	140	239	443	840	1353	2315	4900
90'	33	71	133	275	420	793	1288	2203	4667
100'	32	68	126	266	411	775	1246	2128	4518
125'	28	60	117	243	369	700	1143	1904	4065
150'	25	54	105	215	327	625	1008	1689	3645
175'	23	50	93	196	303	583	996	1554	3370
200'	22	47	84	182	280	541	877	1437	3160
300'	17	37	70	145	224	439	686	1139	2539

• Natural Gas (NG) flow is given in thousands of BTU/hr. = 1 cubic foot of NG gas - 1000 BTU

• Nominal pressure at the burner for Natural Gas is 3.5" of water column. (Typical machine supply 5"-7")

• Pipe length must include additional length for all fittings. Add approximately 5 feet of pipe per fitting.

• Natural Gas Example: A machine with a burner that requires 440,000 BTU would need a 1 - 1/4" pipe for a 20" long run.

Length of  
Pipe in  
Feet

**Propane: Pipe Sizing Chart**

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
10'	275	567	1071	2205	3307	6221	10140	17990	35710
20'	189	393	732	1496	2299	4331	7046	12510	25520
30'	152	315	590	1212	1858	3465	5695	10110	20620
40'	129	267	504	1039	1559	2992	4778	8481	17300
50'	114	237	448	913	1417	2646	4343	7708	15730
60'	103	217	409	834	1275	2394	3908	6936	14150
70'	89	185	346	724	1086	2047	3329	5908	12050
80'	78	162	307	630	976	1811	2991	5309	10830
90'	69	146	275	567	866	1606	2654	4711	9613
100'	63	132	252	511	787	1496	2412	4281	8736
125'	54	112	209	439	665	1282	2083	3618	7382
150'	48	100	185	390	590	1138	1808	3210	6549
175'	43	90	168	353	534	10360	1637	2905	5927
200'	40	83	155	325	491	947	1505	2671	5450
300'	37	77	144	303	458	887	1404	2492	5084

•Liquid Propane (LP) flow is given in thousands of BTU/hr. = 1 cubic foot of LP gas - 2500 BTU

• This chart refers to low pressure LP, after regulation. Standard nominal pressure at the burner for LP is 11" of water column.

• Pipe length must include additional length for all fittings. Add approximately 5 feet of pipe per fitting.

• LP Example: A machine with a burner that requires 440,000 BTU would need a 1" pipe for a 20" long run.

**NOTE:** The sizing charts above list the specific pipe sizes required for the amount of BTU's for a new gas line installations. If you are using an existing gas line, you must take into consideration the existing gas line capacities to ensure you will have proper pressure. This chart is for reference only, we recommend you consult with a Licensed Plumber/Gas Fitter or NFPA54 (National Fuel Gas Code - current edition) for more details.

## Front Facing Fireplace Application

This fireplace comes with two boxes prepackaged inside and outside the fireplace. Do not discard any boxes unless noted to do so. Read the list below for the contents.

Part Number	Description	Quantity
VFO77146	LED parts box	1
VFO77102	12 VDC adapter for LED light operation	1
VFO01-487	01-487 connector valve ½"	1
VFO77151	Ignition screen	1
VFO77150	Pilot hood	1
VFOVENT-6X12SS	6x12 vent kit <i>(includes 2- stainless vents, 12 washers, 12 nuts, 12 screws)</i>	1
VFO77110	LED 24" harness at appliance	1
VFO77161	ECO OFP 10' module harness	1
VFO77111	LED 10' controller harness	1
VFOAF-4000ADP24	7.5 VDC adapter for gas valve system	1
VFO77117	RGB control box assembly	1
(36") VFO36-73232 (48") VFO48-74232 (60") VFO60-75232 (72") VFO72-76232	Windshield parts box	1
(36") VFO36-(60639) (48") VFO48-(60640) (60") VFO60-(60641) (72") VFO72-(60642)	LED tray assembly – right	1
(36") VFO36-(73131) (48") VFO48-(74131) (60") VFO60-(75131) (72") VFO72-(76131)	Hood	1
(36") VFOKB-36-73120 (48") VFOKB-48-74120 (60") VFOKB-60-75131 (72") VFOKB-72-76120	Windshield	1
VFO77145A	Windshield fastener bag <i>(includes 1 left LED glass clip (VFO77157), 1 right LED glass clip (VFO77156), 1 left Std. glass clip (VFO77155), 1 right Std. glass clip (VFO77154) &amp; 7 hood screws (VFO77129)</i>	1

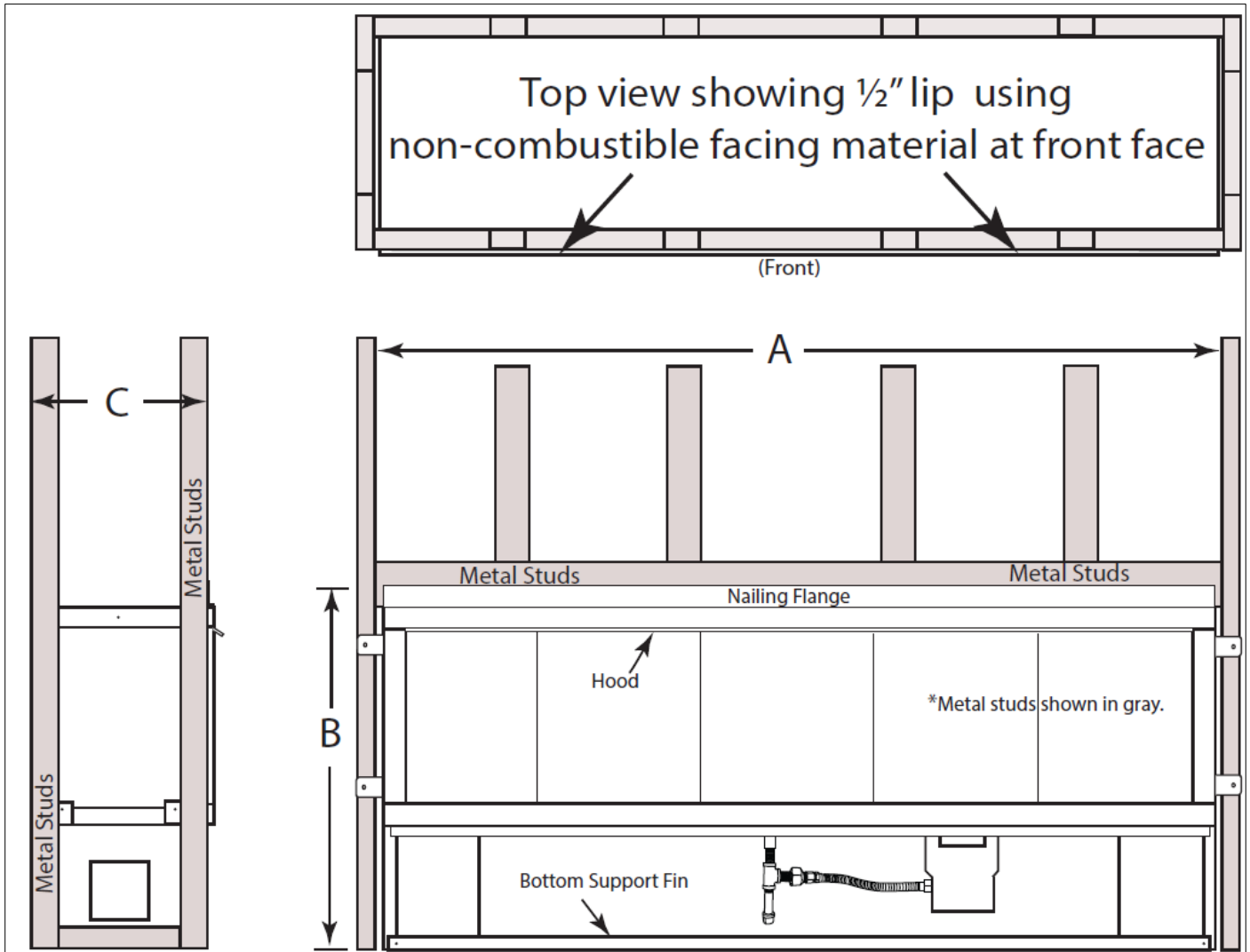
**It is important to understand that when installing this outdoor appliance, the installation must follow ANSI standards as described in this manual.**



## Front Facing Framing Dimensions with Metal Studs

This outdoor fireplace is not a "load bearing" fireplace. All finishing materials must be supported by the surrounding structure and not rely on the fireplace itself.

**NOTE:** This fireplace requires metal studs for framing. **Combustible studs are not permitted.**

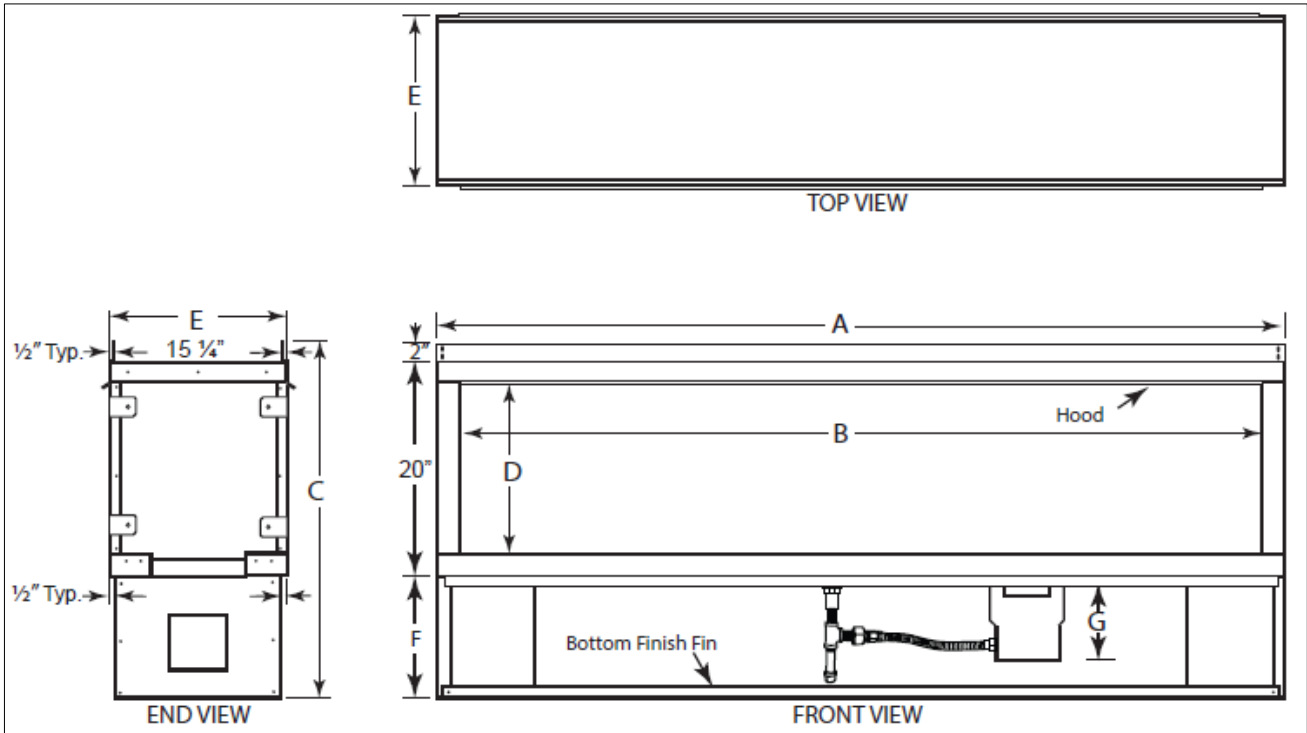


Fireplace Model	A Width	B Height	C Depth
36" Front Facing	40 1/2"	33 3/4"	15 3/4"
48" Front Facing	52 1/2"	33 3/4"	15 3/4"
60" Front Facing	64 1/2"	33 3/4"	15 3/4"
72" Front Facing	76 1/2"	33 3/4"	15 3/4"

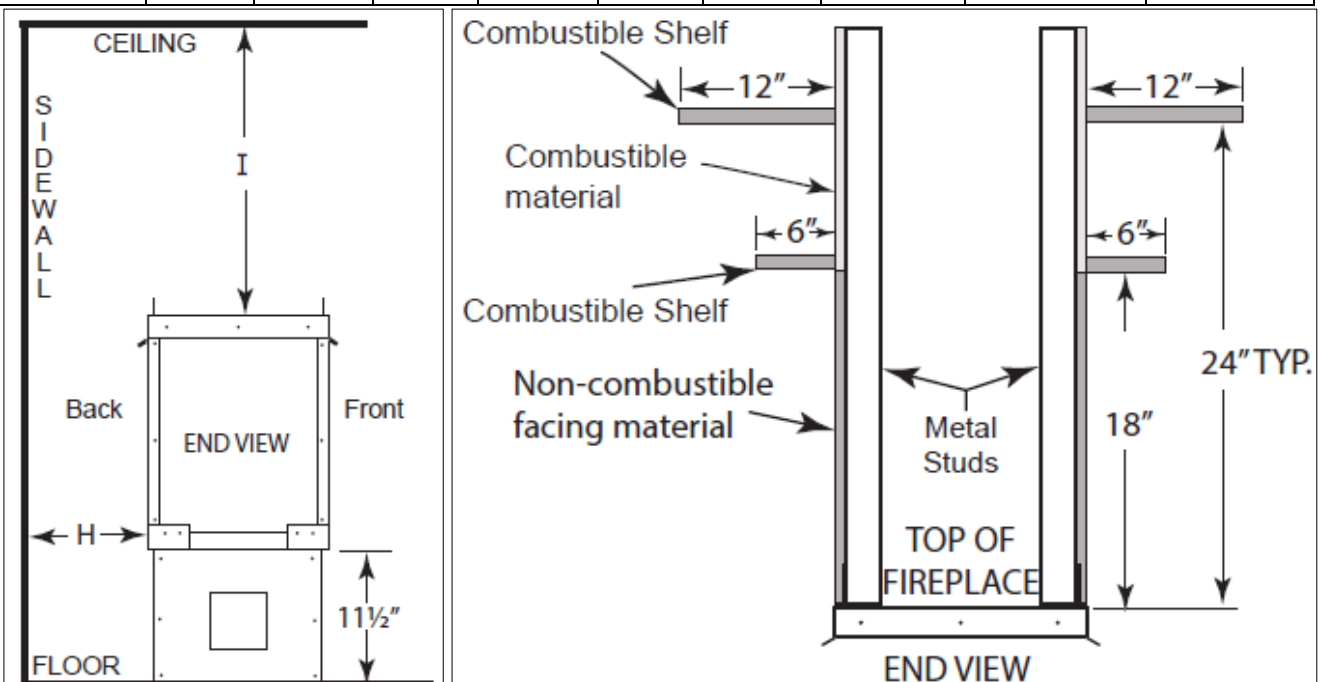
# See-Through Fireplace Application

## See-Through Fireplace Dimensions & Clearances

This fireplace ships from the factory as a front facing fireplace but can be converted into a see-through fireplace. Order the see-through kit to convert to a see-through model. Your specific application, front facing verses see-through, will determine how you install. Ensure you follow the proper clearances during installation.



Model:	A Overall Length	B Inside Opening	C Overall Height	D Opening Height	E Overall Depth	F Leg Height	G Valve Box Depth	H Clearance to Combustible Side Wall	I Clearance to Combustible Ceiling
36 See-Through	40"	36"	33 1/2"	16"	16"	11 1/2"	10 1/4"	36"	46 1/2"
48 See-Through	52"	48"	33 1/2"	16"	16"	11 1/2"	10 1/4"	36"	46 1/2"
60 See-Through	64"	60"	33 1/2"	16"	16"	11 1/2"	10 1/4"	36"	46 1/2"
72 See-Through	76"	72"	33 1/2"	16"	16"	11 1/2"	10 1/4"	36"	46 1/2"

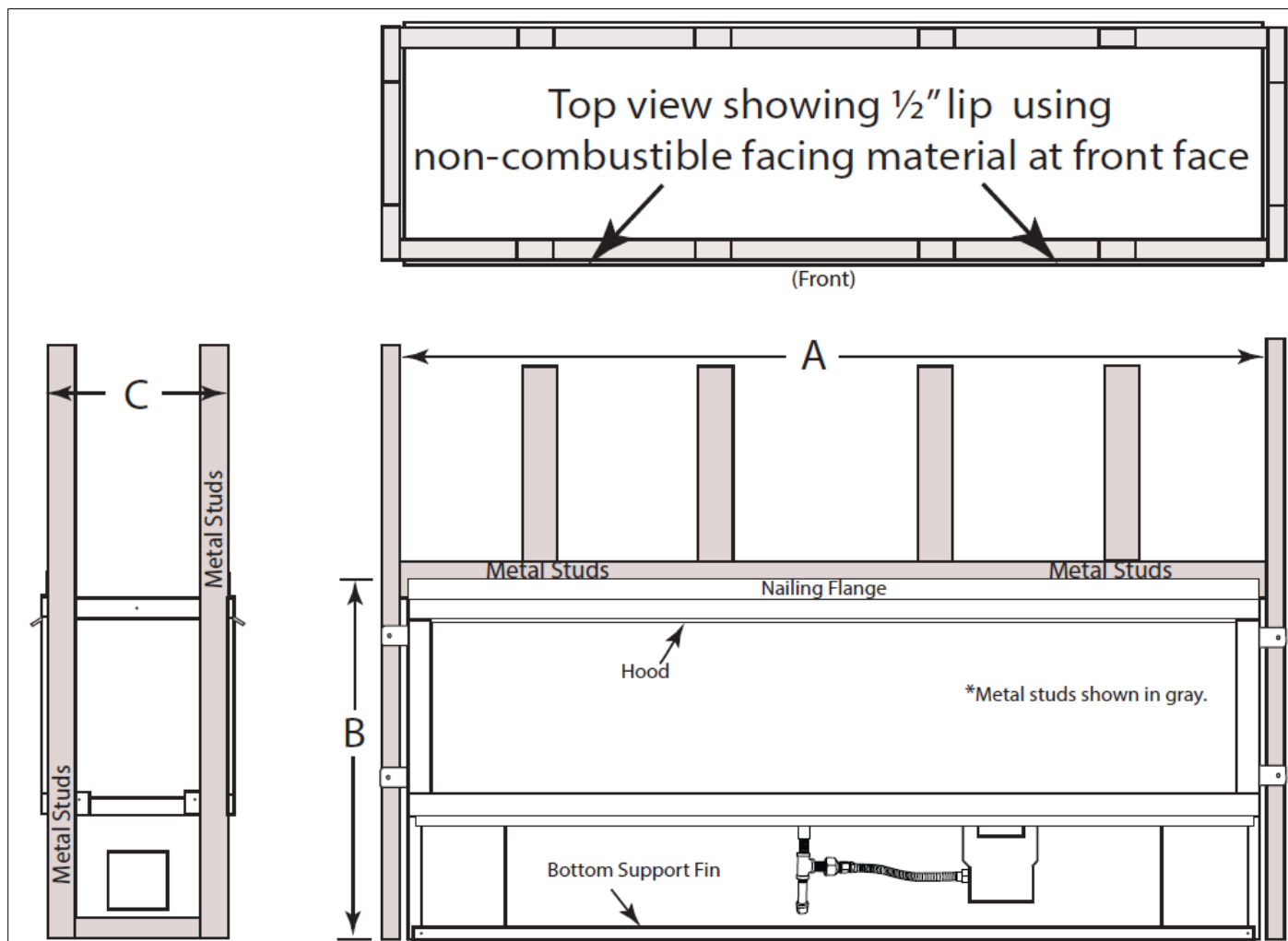




## See-Through Framing Dimensions with Metal Studs

This outdoor fireplace is not a "load bearing" fireplace. All finishing materials must be supported by the surrounding structure and not rely on the fireplace itself.

**NOTE:** This fireplace requires metal studs for framing. **Combustible studs are not permitted.**



Fireplace Model	A Width	B Height	C Depth
36" Front Facing	40 1/2"	33 3/4"	15"
48" Front Facing	52 1/2"	33 3/4"	15"
60" Front Facing	64 1/2"	33 3/4"	15"
72" Front Facing	76 1/2"	33 3/4"	15"

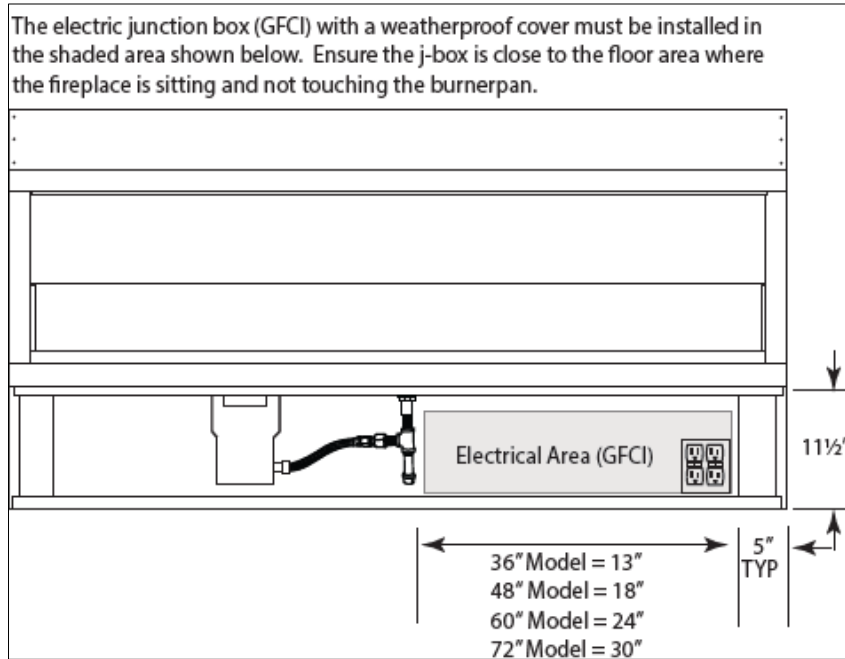
## LED Lighting Installation

This fireplace is equipped with LED lighting. **Preparation for the LED lighting must be planned before the fireplace finish materials are installed.** After the fireplace is set in its final location the LED lighting will need to be installed and tested before finishing materials are applied. You will need to provide the following:

- 120VAC GFCI outlet double gang junction box with a weatherproof cover. Provides power to LED lights and gas valve system. Follow local electrical codes for installation.
- A RGB control box (with 10' of wire) is provided with the fireplace. It must be installed within the framing parameters of the wire length. **Note:** Additional extension wires are available in the Accessory section of this manual.

**STEP 1**

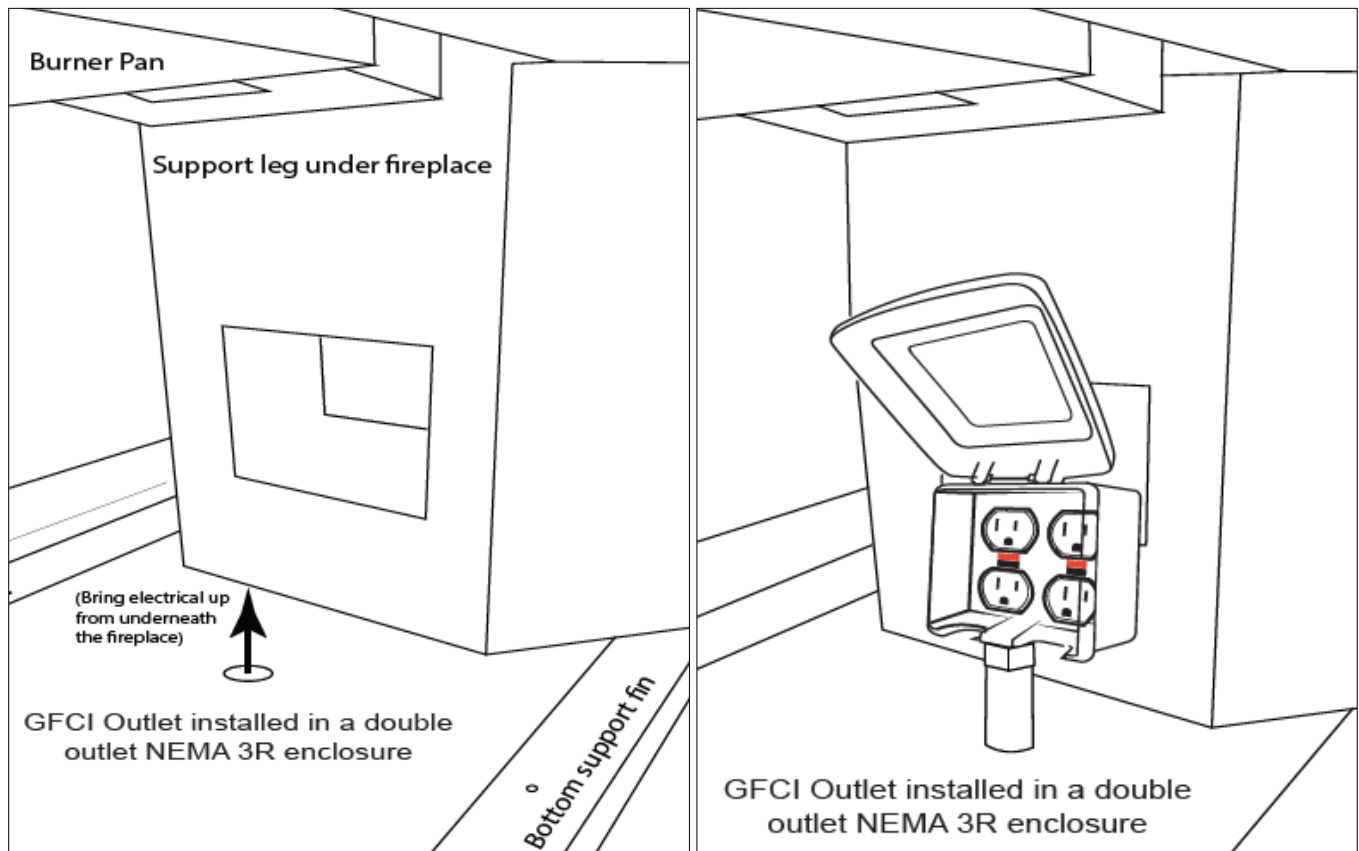
Install the GFCI outlet double gang junction box with a weatherproof cover on the opposite side of the inlet gas supply.



**Note:** This is not a requirement, however with the gang box on the opposite side of the inlet will create more room for LED installation.

**STEP 2**

Find the mounting location for the GFCI gang box. The image below shows a flat area underneath the burner pan. Mount the box underneath the burner pan, below the square cut out hold area. Image below shows the GFCI outlet double gang junction box with a weatherproof cover mounted underneath the fireplace.

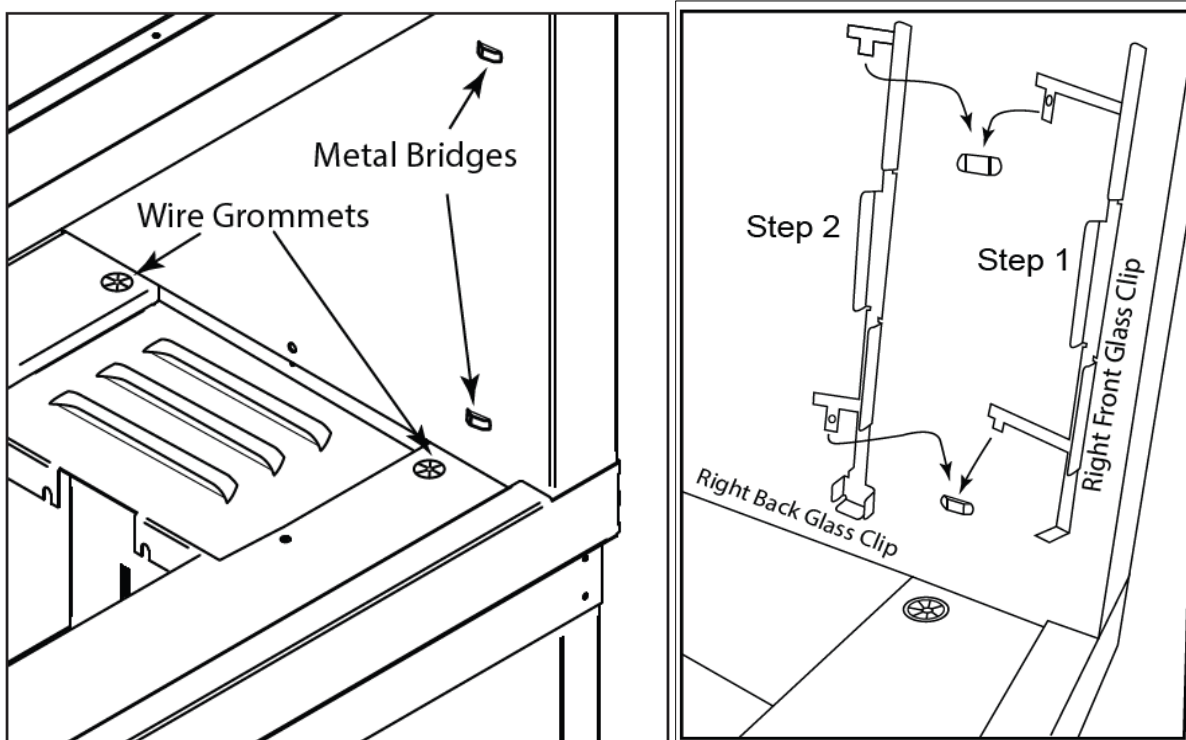


GFCI Location under Fireplace

GFCI Box Mounted in Fireplace

### STEP 3

Locate the wire grommets inside the firebox. Directly above them will be a series of metal bridges to install the glass panel clips. Remove the glass panel clips from the glass panel packaging. Caution: The metal clips may have sharp edges, handle with care.

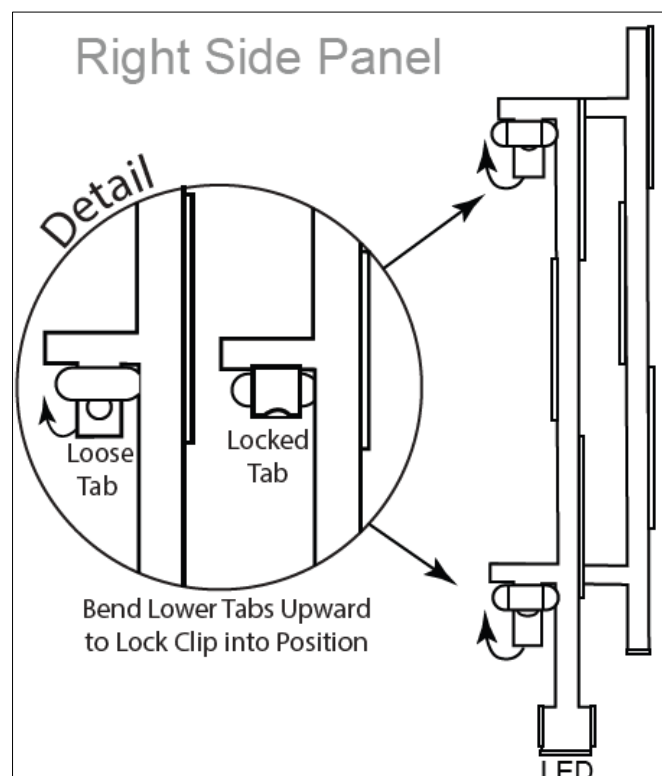


**Peel the plastic coating from each glass panel clip before installing.** There will be (4) glass clips. The two longest clips are used for the LED tray assembly and the shorter glass clips will be installed in front of the LED clips. The LED clips (two longest clips) are installed first, closest to the burner tray. **Note:** There are two right side and two left side clips supplied.

Install the LED glass clips by sliding them down through the metal bridges as shown in image above. Install (1) clip on the left and (1) clip on the right side of the inner fireplace side panel. **Note:** If you are preparing a see-through fireplace, you will install a total of (8) glass clips, two for each open side. The additional clips are supplied with the see-through conversion kit.

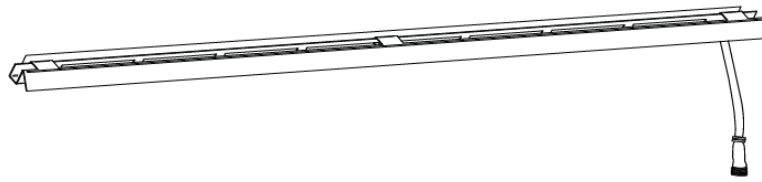
### STEP 4

After each LED glass clip is installed, use a flat blade screw and carefully bend the bottom tab out and upward to lock it into position. Use a fingertip or pliers to press the tab flat against the metal bridge.



**STEP 5**

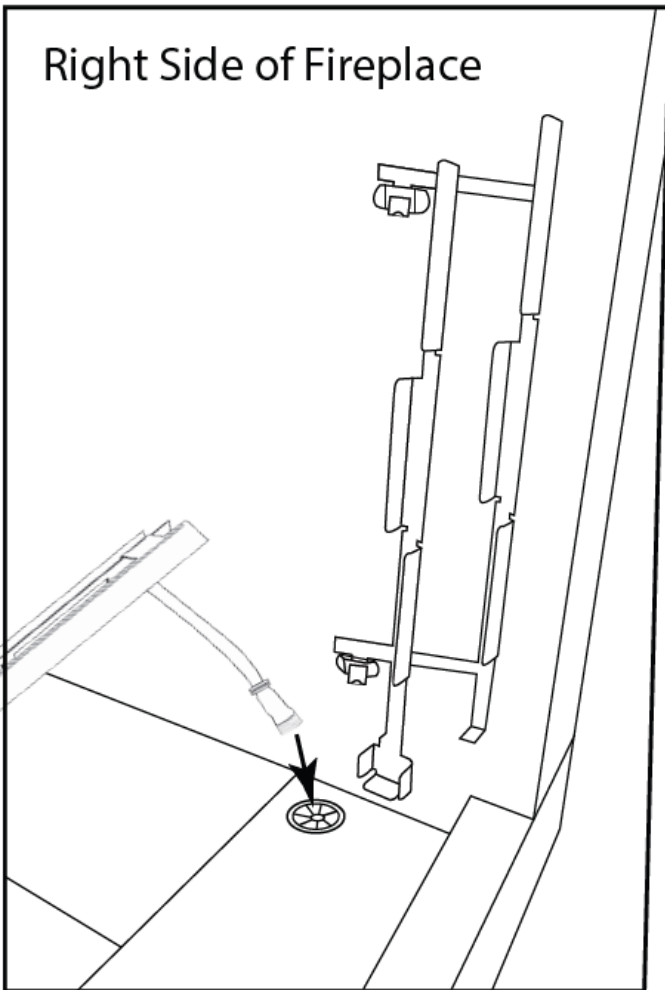
Remove the LED right channel assembly from the carton (The front of the channel has a shield facing the front with the LED wire hanging on the right side). See figures below. **Note:** If you are installing in a see-through fireplace, you will install both right and left channels assemblies.



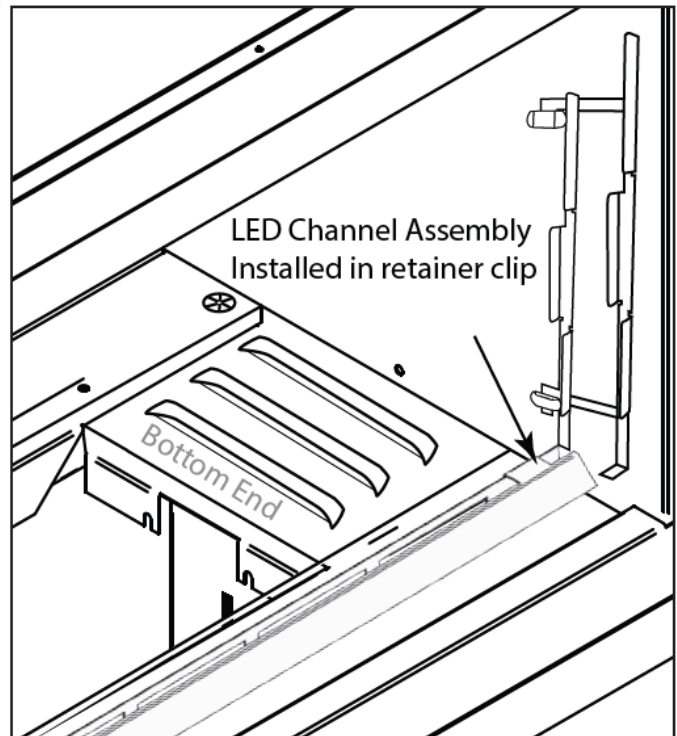
LED Right Channel

**STEP 6**

Carefully push the LED channel connector through the wire grommet. As you push it through the grommet sit the LED channel into the bottom of the glass clip. Ensure the other end of the channel is also sitting inside the other retainer clip. See figures below as a reference. **Note:** If you are installing in a see-through fireplace, install the other LED light strip and channel the same direction.



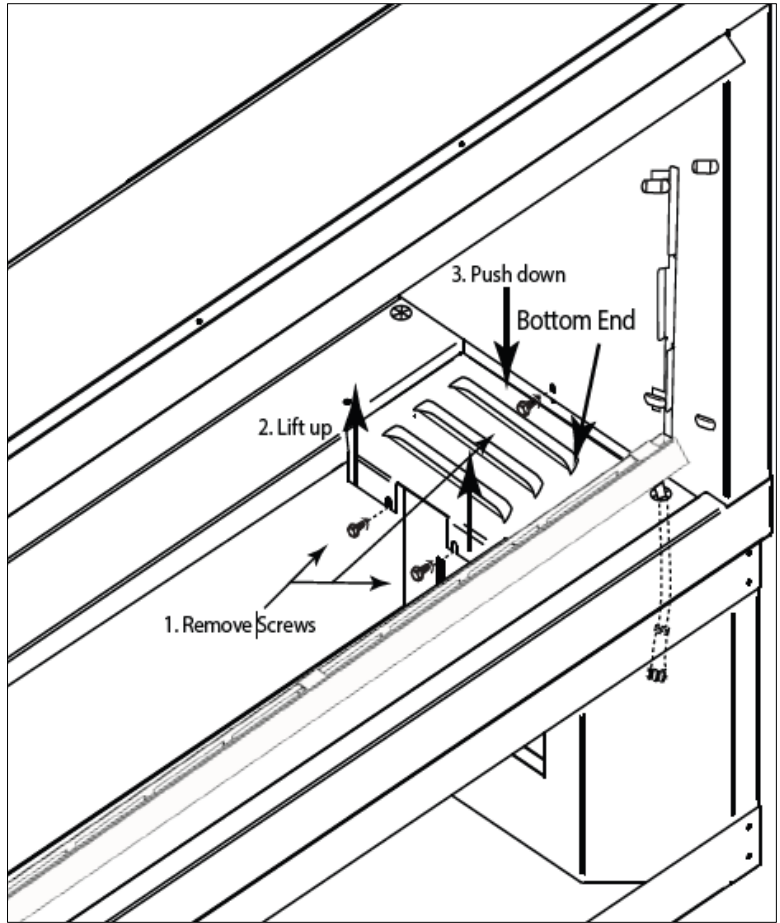
Installing LED light and Channel



LED Installed in Retainer Clip Inside Fireplace

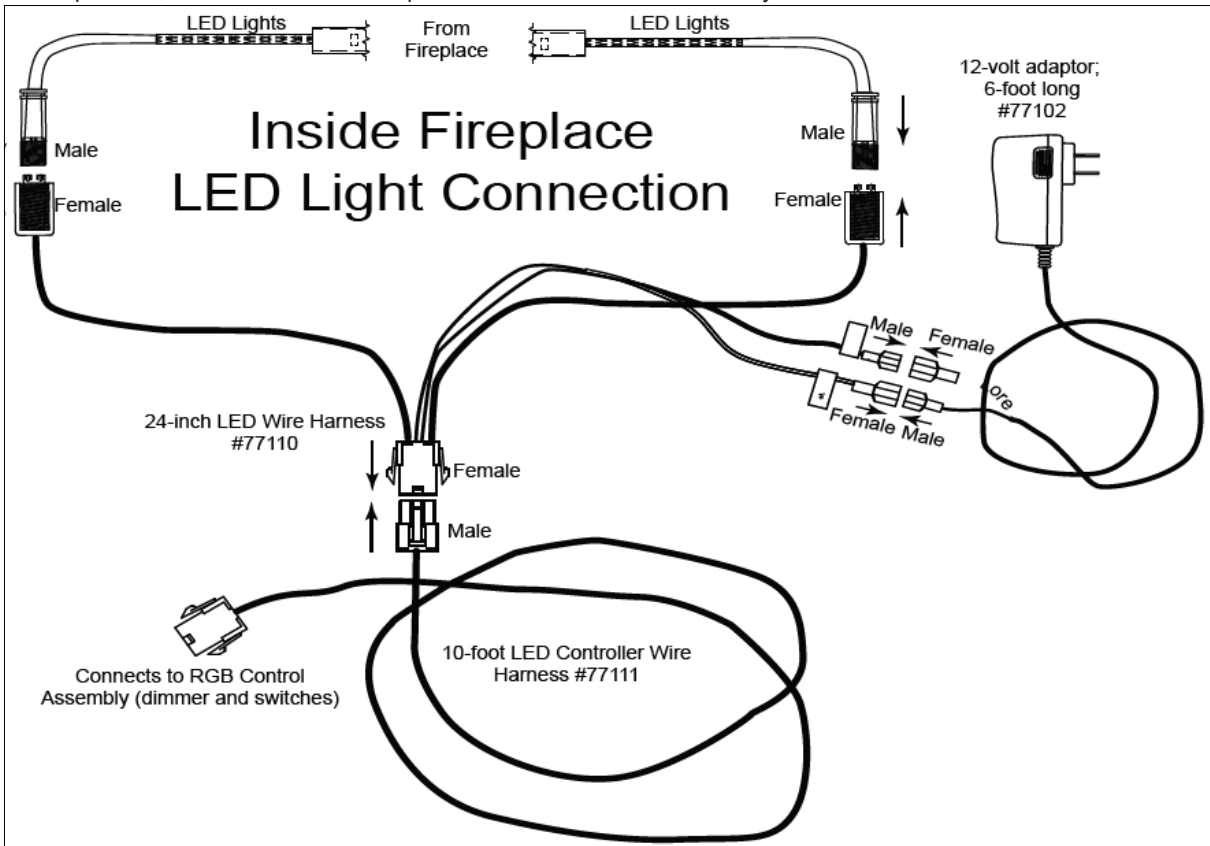
**STEP 7**

If needed, remove the screws from the “bottom end” of the burner pan area to provide additional room for wiring the LED lights. The “bottom end” fills the space between the burner pan and the fireplace side panel. It is held into place with three (3) screws. See the following image for reference. First remove the two inside screws, then the screw securing the side wall. Lift the area where the two screws were and push down where the single screw was, then lift the bottom end out of the fireplace.



**STEP 8**

Using figure below as reference, insert the LED channel assembly female connector (protruding through the wire grommets) to the LED male connector 77110. **Note:** The male end of the LED connector will only insert into the female connector in one direction. Once locked in position, screw the threaded cap of the female connector securely over the male connector.



### STEP 9

Attach the LED wire harness to the LED controller wire harness using the molex connectors. After connecting the LED lights into the 77111 wire harness insert the 12-volt adapter 77102 with ¼" terminals) into the (red & black wires) of LED wire harness. Plug the 12-volt adapter into the 120VAC GFCI box with weatherproof cover.

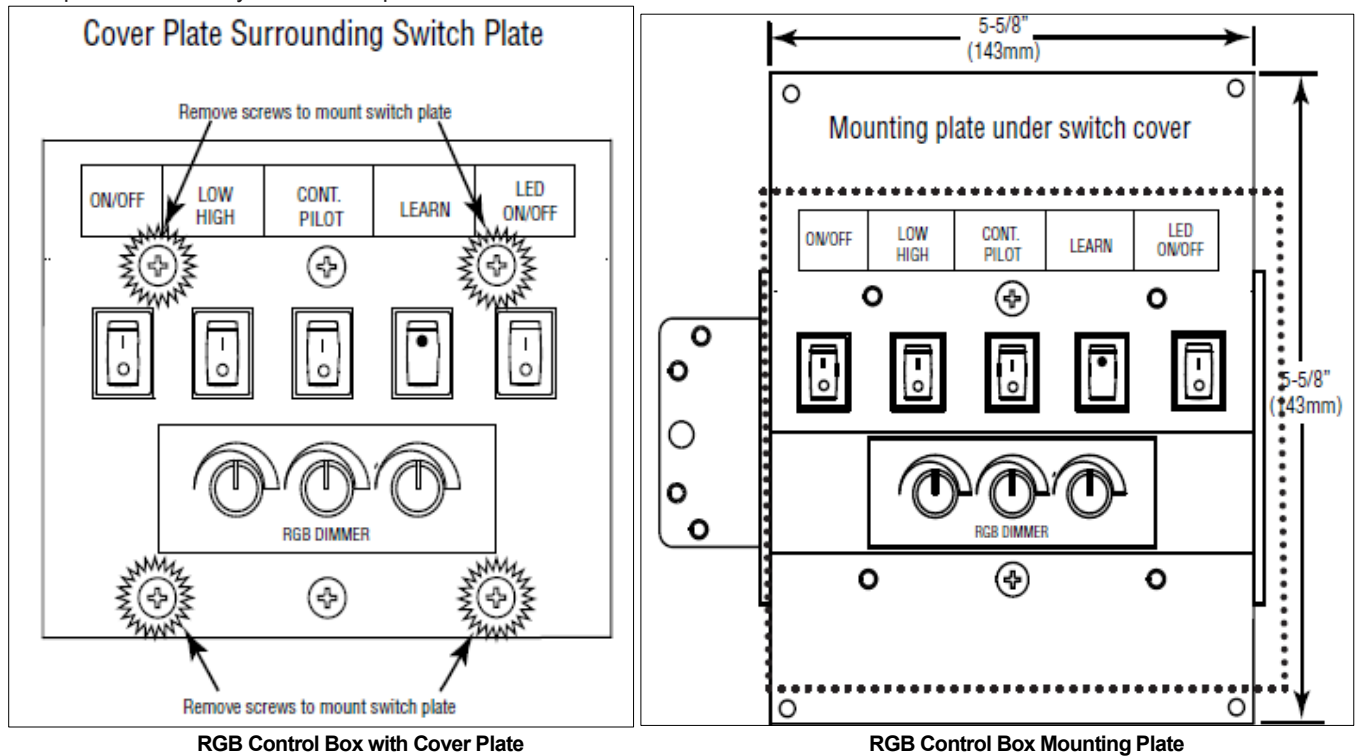
### STEP 10

Re-install the "bottom end" if applicable.

### STEP 11

Remove the RGB control box from the component's parts carton. Find a suitable location within a close proximity of the fireplace for convenience of operation and mount the control box upright and level as in the overview image. Use the following two images for dimensional reference. The fireplace is supplied with 10-feet of wiring for the RGB control box (switches and dimmer) installation.

**Note:** If desired, you can purchase 10-foot wire extensions in the accessories section that will enable you to move the RGB control box up to 50-feet away from the fireplace.



**CAUTION:** Ensure all switches are in the OFF position. "I" indicates ignite/ON and "O" indicates OFF. Learn button does not apply.

### STEP 12

Remove the four (4) outer screws from each corner inside the cover plate and lift off. See Fig. 24. This will expose the mounting plate, which is shown above on the right. **CAUTION:** Do not remove the two center screws from the cover plate. This will release the entire switch box wiring from inside the junction box and make it difficult to reinstall. Take note of the 8-PIN (77160) and 6-PIN (77111) wire connectors. These are labeled LED lights (6-PIN) and Control Module (8-PIN) connections. These will be the final connection to the fireplace and crucial to the operation.

### STEP 13

Find a desired location to mount the RGB control box. Cut a 6" wide x 5 ½" tall hole into the cement board. See the dotted line in figure up above on the right. Mount the RGB control box. **Note:** The wires from the switches can be removed for easier installation, if needed. Ensure to match the wires with the labels for each switch when reattaching. See LED Light Installation Section below.

### STEP 14

Remove the 8-PIN module wire harness (77161) from the components part box. Locate the 8-PIN male connector from the valve box (under the fireplace) and connect it to the 8-PIN female end of the wire harness. Connectors only attach one way; press together until it snaps locks into place. See diagram on the following page for reference.

### STEP 15

Feed the other end of the wire harness through the square access hole underneath the fireplace and pass the GFCI box, outside the fireplace to the RGB control box and connect. Connectors only attach one way; press together until it snap locks into place.

### STEP 16

Locate the two ¼" male terminals from the valve box and connect the AF-4000ADP24 adapter. Plug the 7.5VDC adapter into the 120VAC GFCI box.

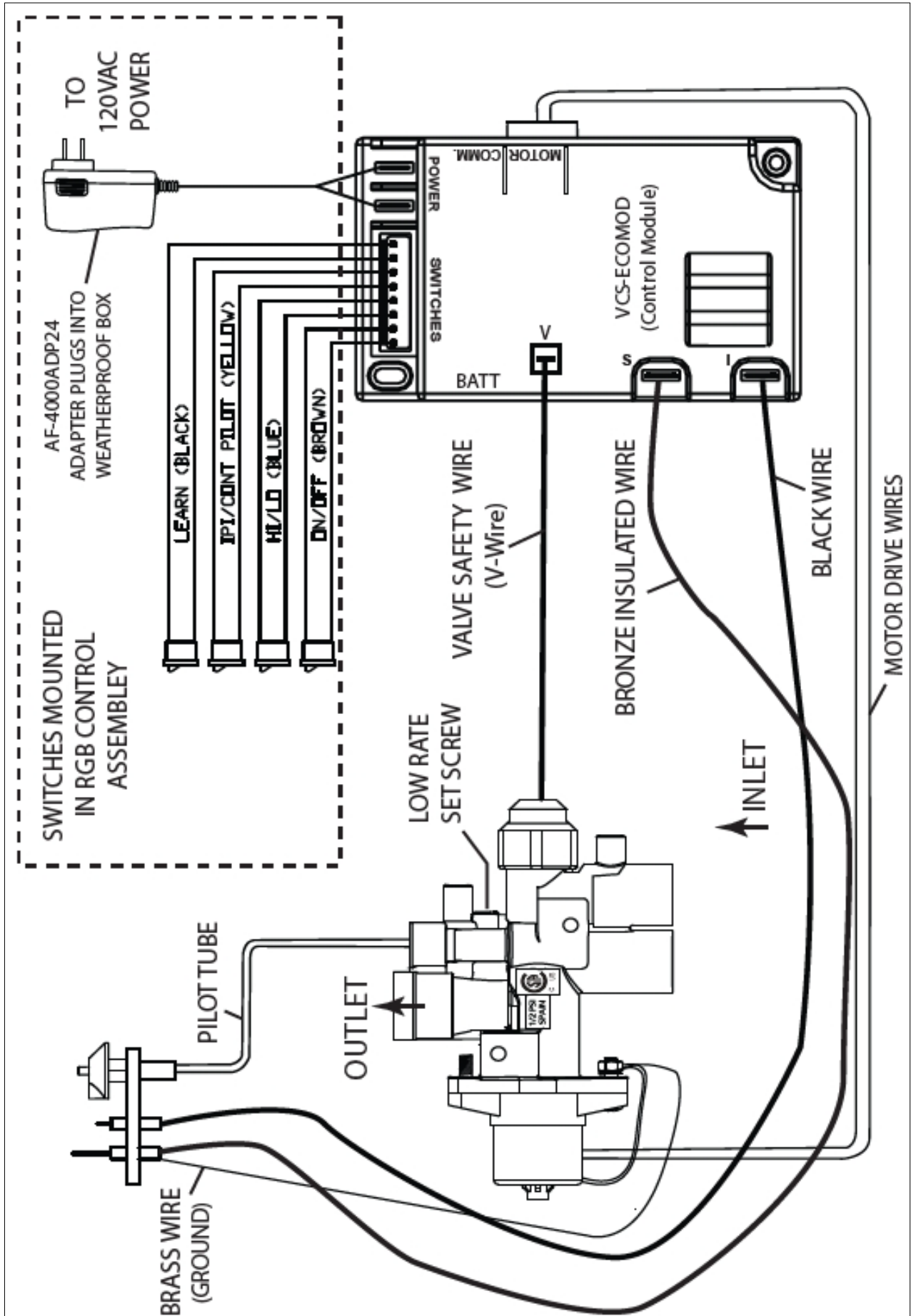






# Gas Valve Wiring Diagram

This wiring diagram shows the components inside the valve box. The dotted line box shows the components external of the valve box.

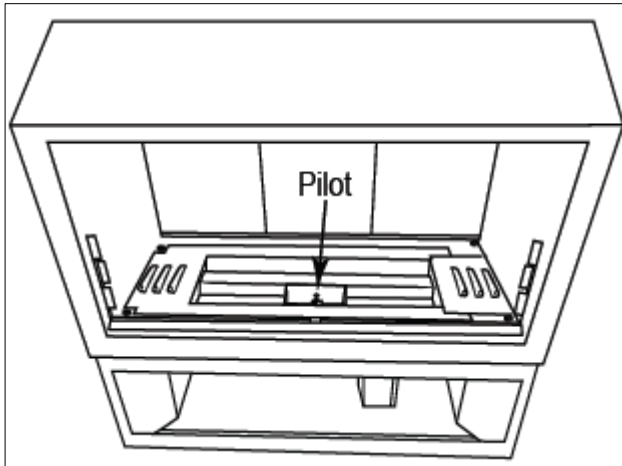


## Final Preparation

### Installing the Pilot Covers

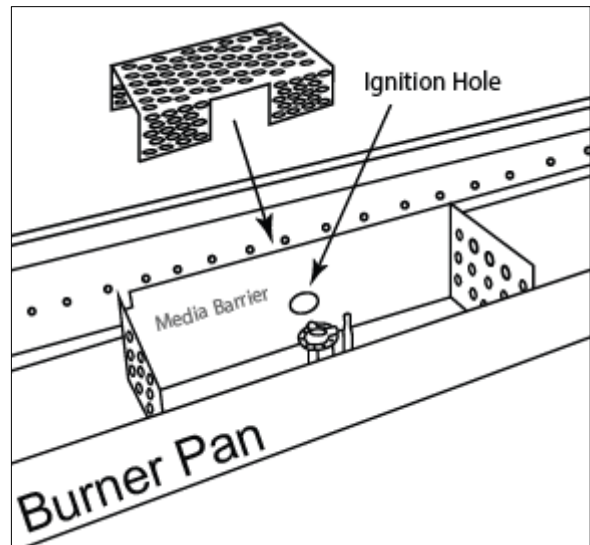
#### STEP 1

Install the burner pan back into the fireplace.



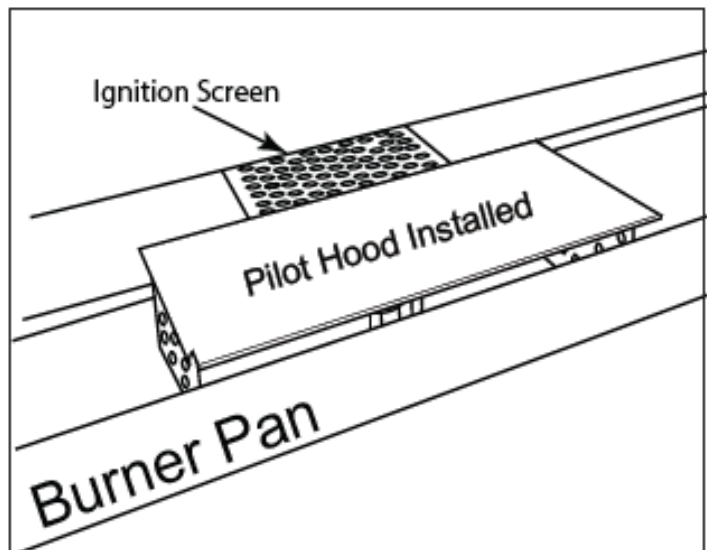
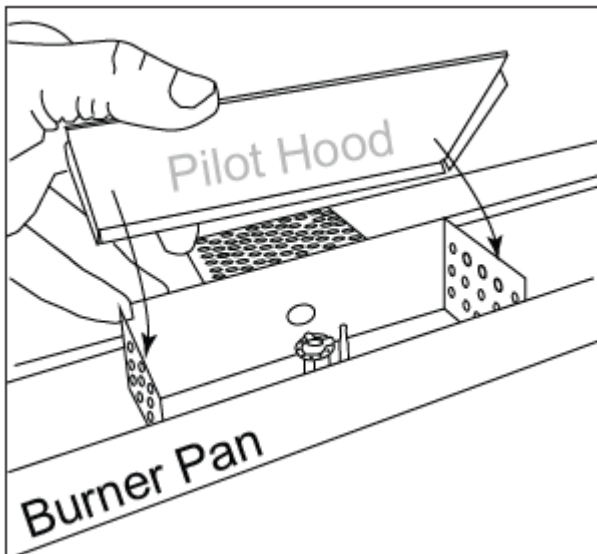
#### STEP 2

Install the ignition screen (from parts box) overtop the burner tube with the cutout area centered behind the pilot box ignition hole as shown below. The ignition screen will sit on top of the burner tube.



#### STEP 3

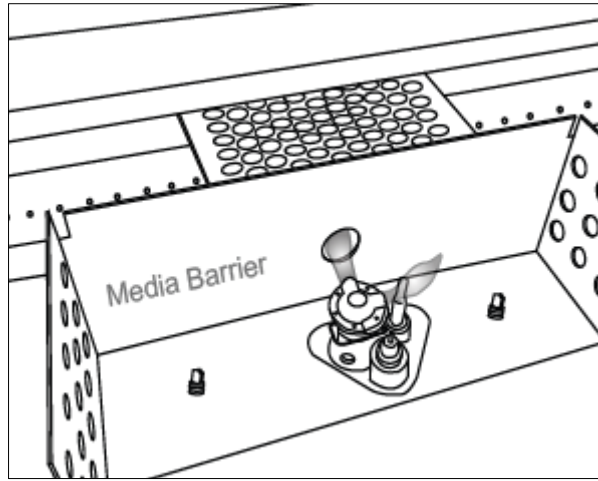
Place the pilot hood on top of the pilot box and ensure it sits flat, providing ventilation for the pilot at the front edge of the burner pan.



**NOTE:** The pilot hood will have a plastic film that must be removed before installation.

### Pilot Operation & Test Fire

The pilot assembly is located in the center of the burner. Ensure the pilot flame is passing through the ignition hole, to the burner for proper ignition. Use the image below as a guide.



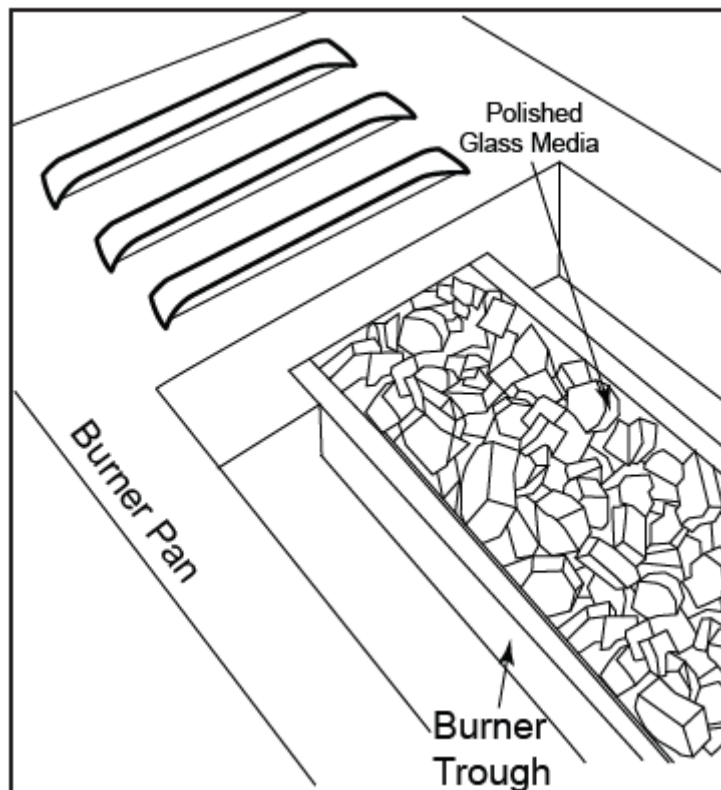
Proper Pilot Flame

Test fire the fireplace before installing media to ensure the flame is passing through ignition hole as shown above. This is a good time to double check for any gas leaks or electrical connections before finalizing the installation by installing the glass media.

## Media Installation

For approved media and quantity needed, please refer to the Pricebook.

Open the media box and install the glass media as shown below. Place media into the trough area first as shown. Use the remaining media to fill the burner pan equally on both sides. Install only one layer over top of the ignition screen, just enough to camouflage it. Keep media in burner pan the same level as the trough to allow the burner area to appear as one complete burner pan.

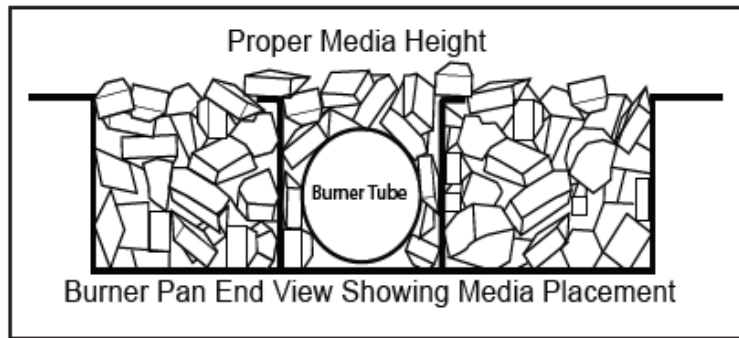


Installing Media into the Fireplace

**IMPORTANT:** Media can only be placed in the trough and burner pan area. No media is to be placed into the shaded area shown below.

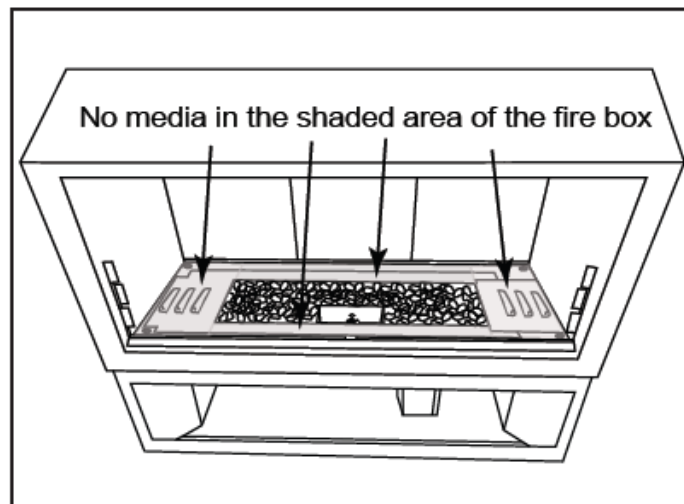
**CAUTION:** Ensure there is no media in the ignition hole area. The burner tube gas ignites in this area to light the fireplace. Media in this area could cause delayed ignition.

Only Ortal- media may be used in the fireplace. Using unapproved media can be a safety risk due to unexpected water absorption. Special approval for alternative media options will not be provided.



End View of Burner with Media

Ensure not to cover more than 1/2 -inch above the actual burner tube and keep all media within the burner pan area.

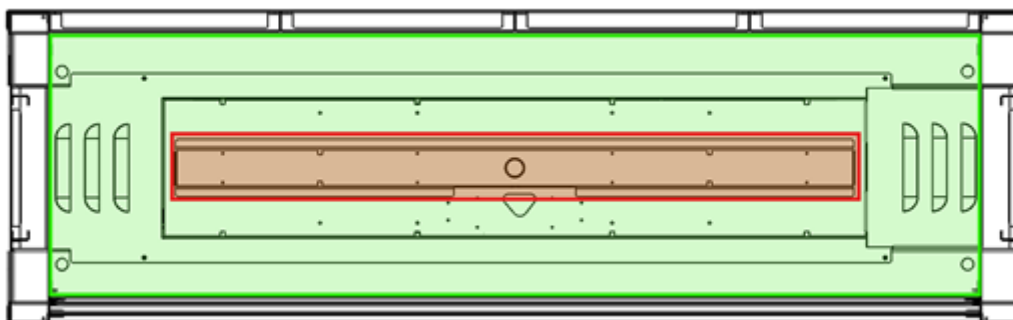


No Media Coverage in the Highlighted Area

**WARNING:** Media must be installed in the fireplace as previously described and used during operation.

## Log Sets

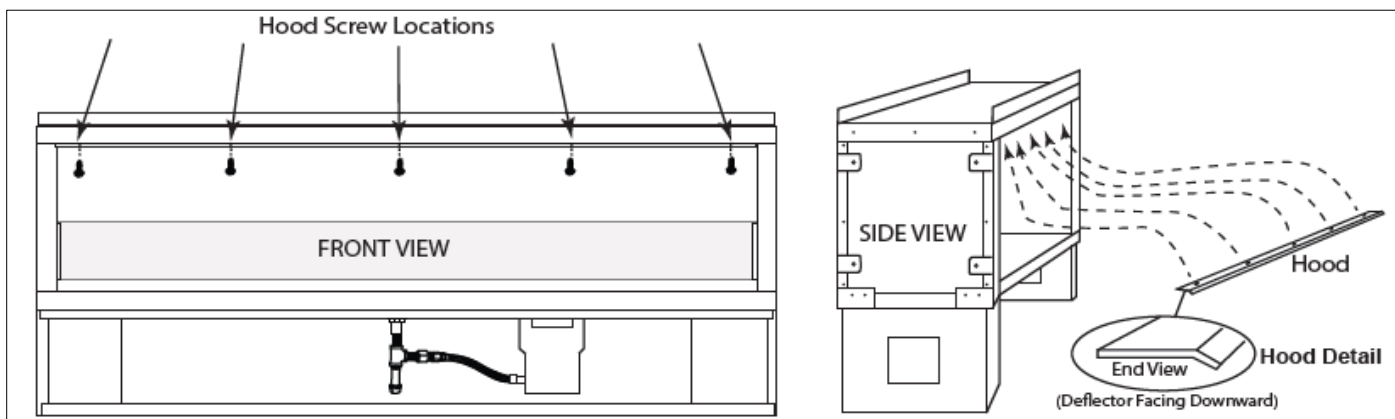
Ortal offers 3 different log options: Birch, Driftwood or New Oak.



- **Green Shaded Area:** Logs are allowed to be placed in this area.
- **Red Shaded Area:** **NO** logs are allowed to be placed in this area.
- Logs are not allowed to be placed over burner tubes
- Logs are not allowed to come in contact with direct flame.

## Hood(s) Installation

The fireplace requires a hood to be installed into the upper opening of the firebox. All models require five (5) screws to secure the hood to the fireplace except the 72-inch model, which uses seven (7) screws (77129 - 8-32x1/2" stainless pan head) to secure the hood. The hood protrudes 1-inch from the fireplace opening. The detail below shows the hole locations and installation process for hood installation. The protruding area of the hood is to be angled downward for proper installation, see Hood Detail below.

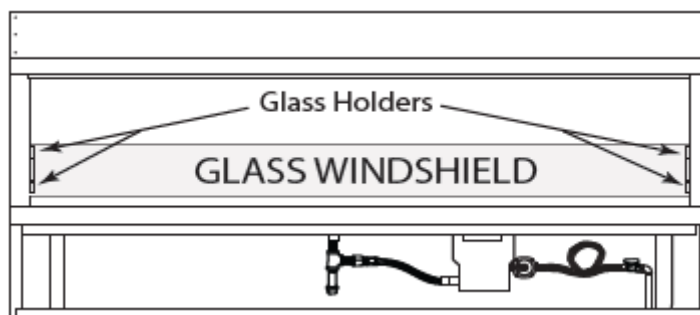


Hood (s) Installation

## Windshield(s) Installation

### Remaining Glass Clip Installation

Install the remaining (2) glass clips in front of the LED clips as described in step 3 of the LED Lighting Installation Section.



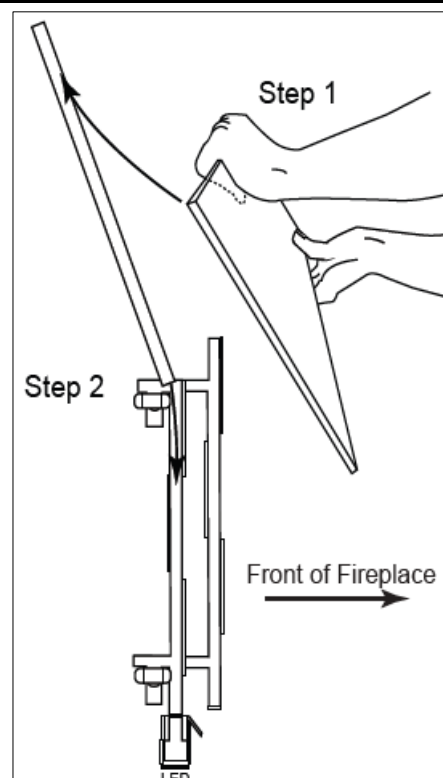
Glass Clips Location

### Windshield Installation

- Carefully unpack the glass panels.
- Using gloves carefully lift one glass panel, into the fireplace opening, over top of the glass clips, and slide it down into the metal retainer clip, supporting the glass at the top and bottom as you handle it.
- As the glass enters the clip the bottom edge of the glass will rest in place on the bottom of the clip.
- Install the second glass pane in the same manner as depicted to the right.
- Both glass panels should be level when installed.
- Center glass between clips after installation.

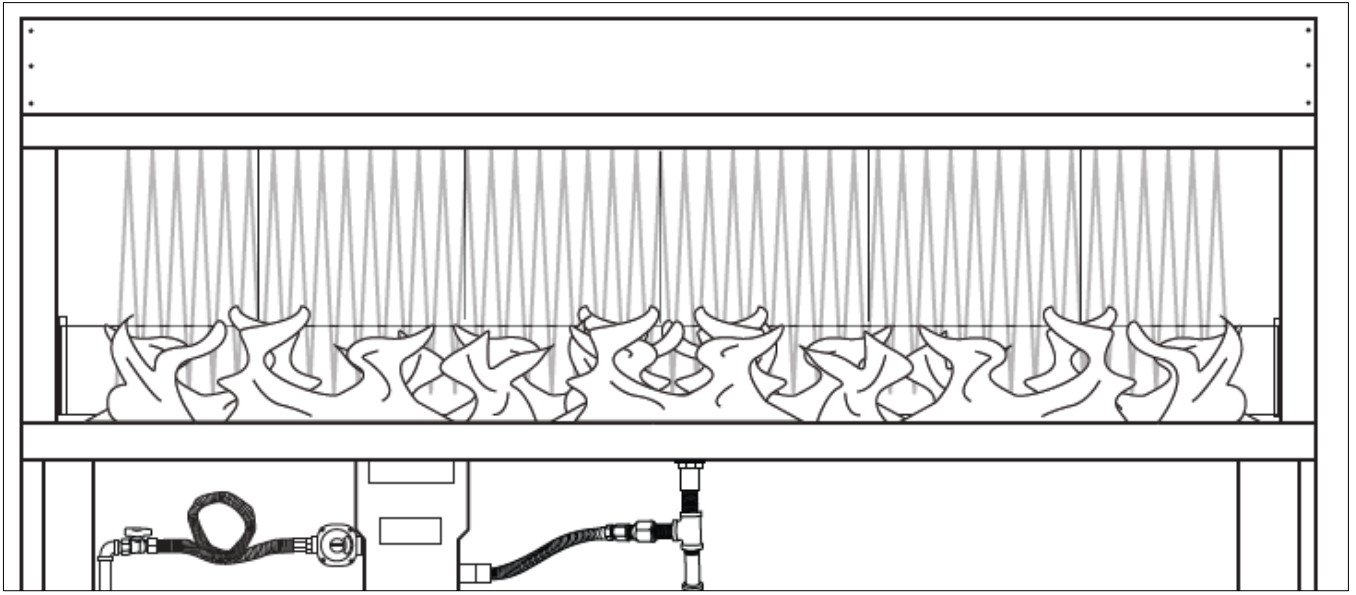
**WARNING:** Both glass panels must be installed when the fireplace is in operation. Note: All four (4) glass panels must be installed on See-Through fireplaces.

**CAUTION:** THIS IS TEMPERED GLASS. DO NOT CHIP GLASS. CHIPPED TEMPERED GLASS CAN BREAK WITHOUT WARNING.



## Flame Height

The proper flame height should be at the top edge of glass windshield (peaking above at times) while on HI setting. The glass windshield is 7-inches tall. The LO setting will be at least half of the height of HI or maybe lower. There can be a variance in flame height between Natural Gas and Liquid Propane (LP) Gas models.



Proper Flame Height

## Operation

**CAUTION:** Children and adults should be alerted to the hazards on high surface temperatures and should stay away to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the area of the appliance.

**WARNING:** Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

### **SAFETY WARNINGS**


1. Never leave the fireplace unattended during operation.
2. Clothing or other flammable materials should not be placed on or near the appliance.
3. Any guard or other protective device removed for servicing the appliance must be replaced prior to operating the appliance.
4. Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required as necessary. It is imperative that the control compartment, burners and circulating air passageways of the appliance be kept clean.
5. Inspect the fuel supply connection before each use of the appliance.
6. Temporary storage of this appliance indoors is permissible only if it has been disconnected from its fuel supply (Natural or L.P. gas line).

### **WARNING**

1. This appliance is hot when operated and can cause severe burns if contacted.
2. Do not burn any solid fuels in this appliance.

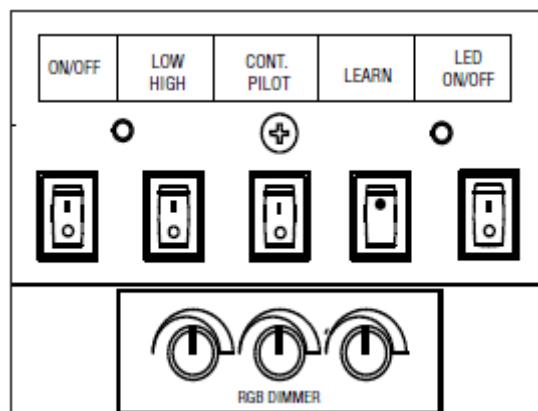
## Lighting Instructions

### How to Turn on the Appliance

1. Push the "I" on the ON/OFF switch to turn ON (System will take approximately 7-10 seconds before ignition after the gas line is purged). During this time, an Ignition In-Process" beeping pattern will take place. (e.g. one short beep, pause, three short beeps, pause; repeated until ignition occurs). NOTE: Beeping pattern may be difficult to hear outdoors.
2. The main flame ignites (defaults) in the HIGH position. Press the "I" on the LOW/HIGH button to adjust to the LOW setting.
3. A continuous pilot flame can be turned ON or OFF with the continuous pilot button.
4. Push the "I" on the LED ON/OFF switch. LED's will turn ON. Adjust the intensity of the lighting by turning the knobs clockwise  on each dimmer knob. There are infinite color combinations by adjusting the dimmer knobs to personal taste.

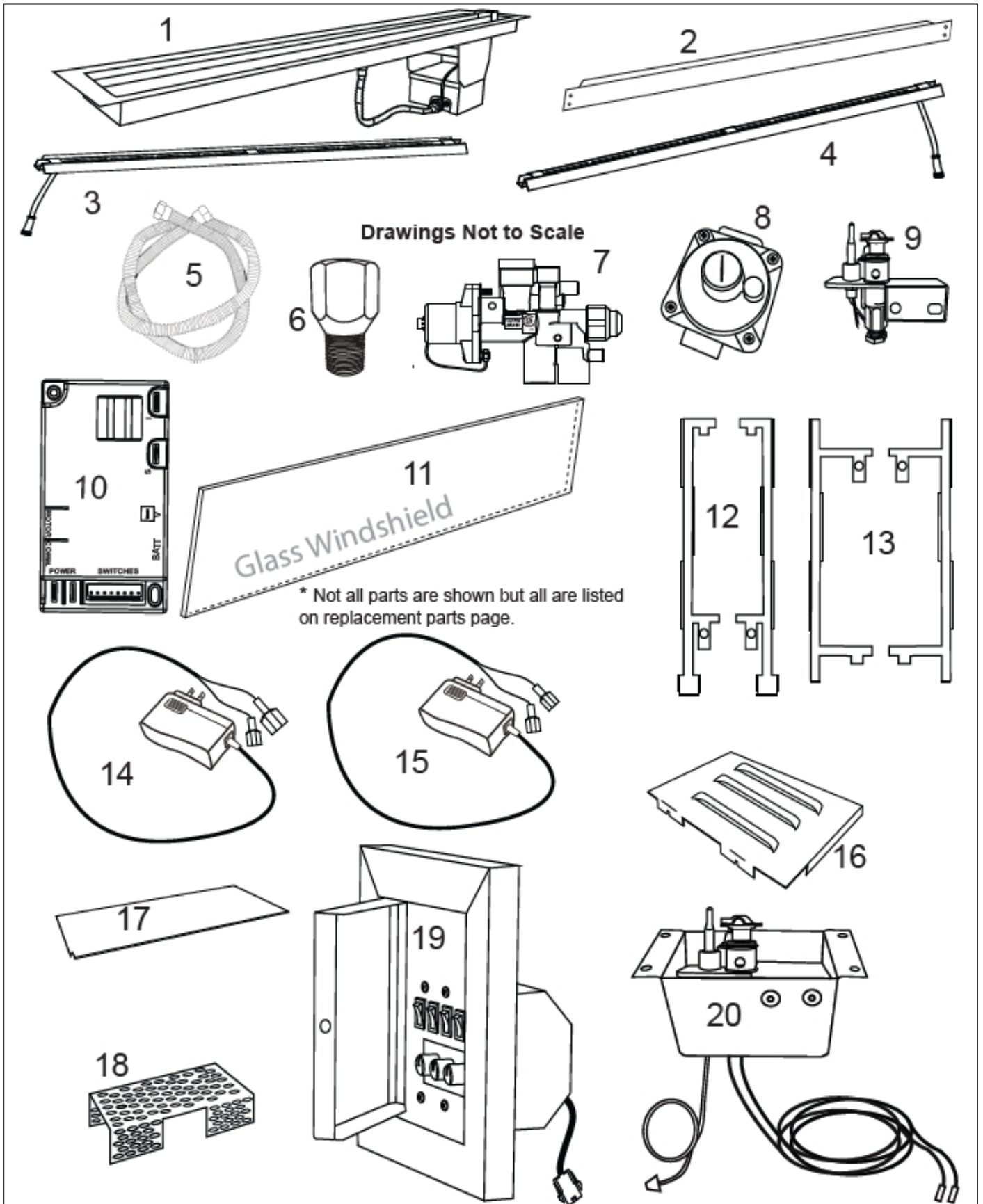
### How to Turn off the Appliance

1. To turn OFF the fireplace press the "O" position on the ON/OFF switch. This will turn OFF the fireplace. NOTE: Fireplace must be OFF for 5 minutes before relighting. To turn OFF the LED lights in the fireplace press the "O" position on the LED ON/OFF switch. This will turn OFF the LED lights. The LED lights are independent of the fireplace and can be used when the fireplace is not in operation.



Control Panel Rocker Switchers

# Replacement Parts





Item	Description	Part Number
1	Stainless Steel Burner Pan Assembly	36"- VFO36-(73235) 48"- VF048-(74235) 60"- VFO60-(75235) 72"- VF072-(76235)
2	Bottom Support Fin- (2 per unit)	36"- VFO36-(73130) 48"- VFO48-(74130) 60"- VFO60-(75130) 72"- VFO72-(76130)
3	Black LED Tray Assembly – Left	36"- VFO36-(60659) 48"- VFO48-(60660) 60"- VF060-(60661) 72"- VF072-(60662)
4	Black LED Tray Assembly – Right	36"- VFO36-(60639) 48"- VFO48-(60640) 60"- VFO60-(60641) 72"- VFO72-(60642)
5	½" Flex Gas Line (46" length)	FVOT-200-9898-46
6	Air Shutter Orifice NG (36" Model)	VFOGAS-NG41
6	Air Shutter Orifice NG (48" Model)	VFOGAS-NG32
6	Air Shutter Orifice NG (60" Model)	VFOGAS-NG30
6	Air Shutter Orifice NG (72" Model)	VFOGAS-NG25
7	EcoFlow Gas Valve with Step Motor (36" Model)	VFO73224
7	EcoFlow Gas Valve with Step Motor (48" Model)	VFO74224
7	EcoFlow Gas Valve with Step Motor (60" Model)	VFO75224
7	EcoFlow Gas Valve with Step Motor (72" Model)	VFO76224
8	Natural Gas Regulator (convertible to LP)	VFOREG-C80K-NG
9	Ignition Control Module (includes 8 pin wire harness)	VFOECO-VK-ECOMOD-WH
11	Tempered Glass Windshield (36" Model)	VFOKB-36-73120
11	Tempered Glass Windshield (48" Model)	VFOKB-48-74120
11	Tempered Glass Windshield (60" Model)	VFOKB-60-75120
11	Tempered Glass Windshield (72" Model)	VFOKB-72-76120
12	Black Rear Glass Clips support the LED channel	VFORight-(33265), VFOLeft-(33266)
13	Black Front Glass Clips (2) supports for glass panel only	VFORight-(33263), VFOLeft-(33264)
14	12-DC Volt Adapter for LED Lights	VFO77102
15	7.5 DC Volt Adapter for EcoFlow Operating System	VFOAF-4000ADP24
16	Bottom End (used to center burner pan)	VFO76125
17	Pilot Hood	VFO77150
18	Pilot Screen	VFO77151
19	RGB Control Box Assembly (includes LED controller)	VFO77117
20	Pilot Box Assembly (pilot installed in pilot box)	VFO77158
21	Manual Gas Shut Off Valve – not shown	VFO01-487
22	Fireplace Hood- not shown	36"- VFO36-(73131) 48"- VFO48-(74131) 60"- VFO60-(75131) 72"- VFO72-(76131)
23	Polu Lighting Label (inside control box)- not shown	VFO77144
24	10'-Module Wire Harness – not shown	VFO77161
25	10' LED Wire Harness- not shown	VFO77111
26	OFP Controller Extension Kit- not shown	VFO-78236

**Note:** All items are shipped as one replacement part unless noted in the description.

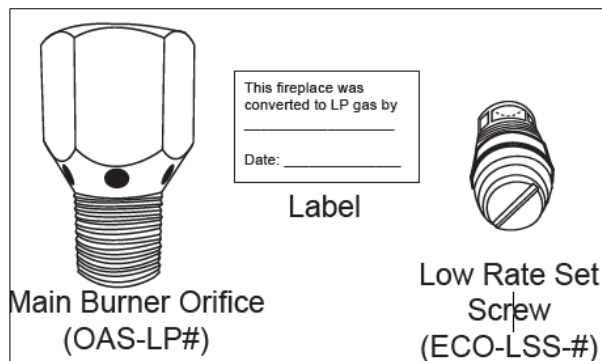
**Note:** #10 not available, pilot must be ordered as item #20. Pilot permanently secured to pilot box by factory.

# Natural Gas to Propane Gas Conversion

This kit will properly convert the outdoor fireplace to LP gas. Kit contents are:

(1) OAS-LP# (Brass orifice), (1) ECO-LSS# (Brass low rate set screw), (1) LP Conversion label (placed next to blank space on rating label), (1) Installation instruction.

Model (SKU)	Main Burner Orifice	Low Rate Set Screw
AMDOUTVFCLP36 (VFOOUTVFCLP36)	OAS-LPR52	ECO-LSS-52
AMDOUTVFCLP48 (VFOOUTVFCLP48)	OAS-LPR48	ECO-LSS-46
AMDOUTVFCLP60 (VFOOUTVFCLP60)	OAS-LPR44	ECO-LSS-42
AMDOUTVFCLP72 (VFOOUTVFCLP72)	OAS-LPR42	ECO-LSS-35



## STEP 1

Turn off the gas supply to the fireplace and disconnect any electrical power.

## STEP 2

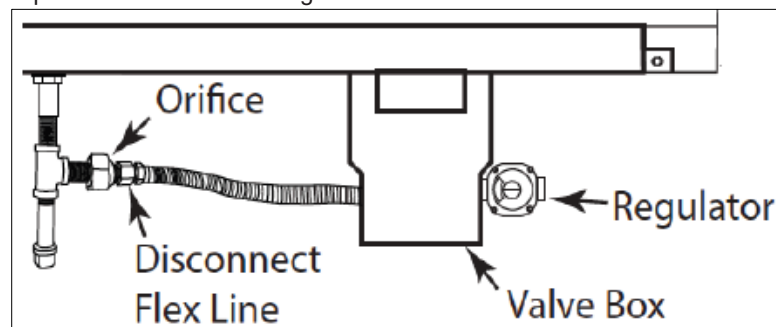
Remove the burner pan from the fireplace to enable conversion access.

## STEP 3

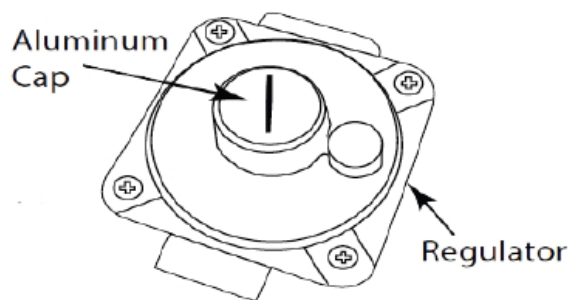
Disconnect the flex line at the main burner orifice. Then remove the orifice and flared fitting from the orifice. Re-tape the flared fitting with the new OAS-LP orifice per the table above. Ensure to use gas rated Teflon tape around the threads or pipe compound. Check for leaks after conversion is complete.

## STEP 4

Locate the gas regulator on the opposite side of the valve box. Using a regular size flat bladed screwdriver remove the aluminum cap and washer from the regulator.



Changing the Main Burner Orifice

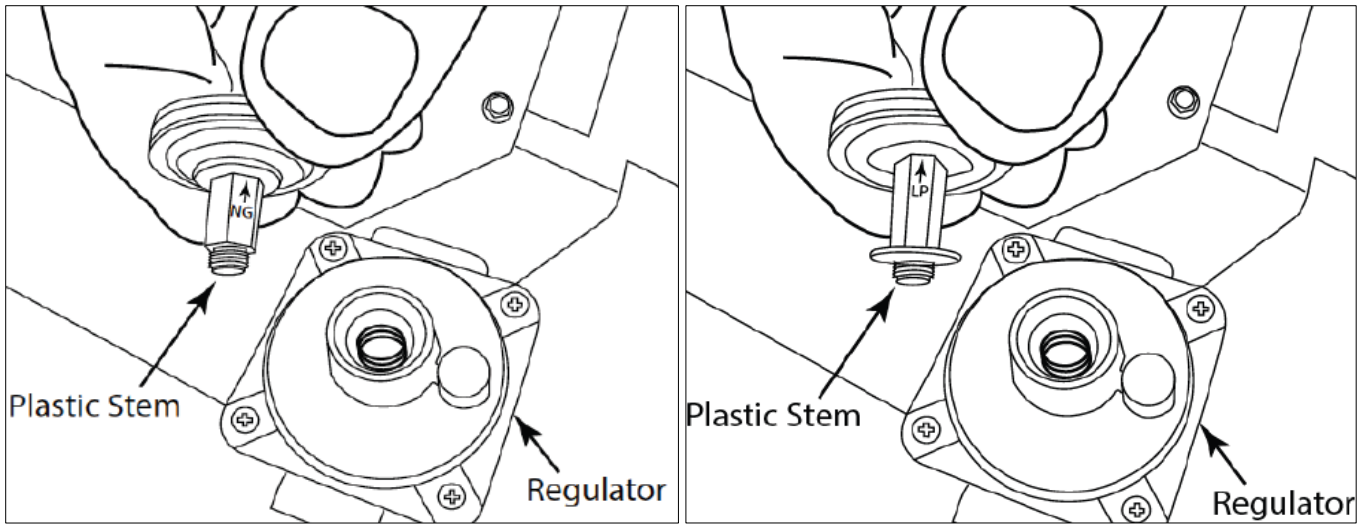


Regulator Cap Location

## STEP 5

On the underneath side of the aluminum cap is a plastic stem. Using a 6mm wrench remove the stem, unscrew the stem (counterclockwise), turn it over and install the opposite end back into the cap.

**NOTE:** The plastic stem has a marking on it with an arrow. Look carefully at the stem, it may be difficult to read. The gas type is determined with the arrow pointing at the aluminum cap as seen in the figures below.



**CAUTION:** Ensure the aluminum cap is installed with the plastic stem seated completely into the cap and the metal washer is installed with the aluminum cap.

**STEP 6**

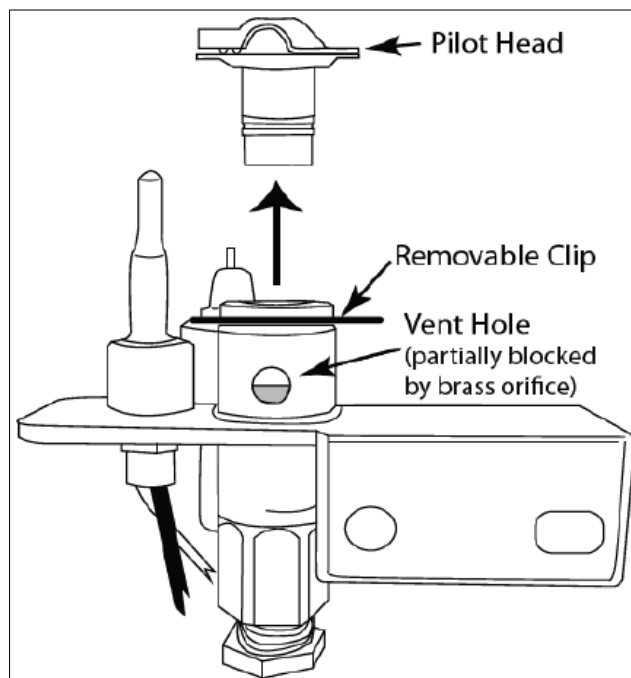
Secure the aluminum cap with a screwdriver.

**STEP 7**

In the center of the burner pan where the pilot is located, remove the pilot head. Some media may need to be removed to gain access.

**STEP 8**

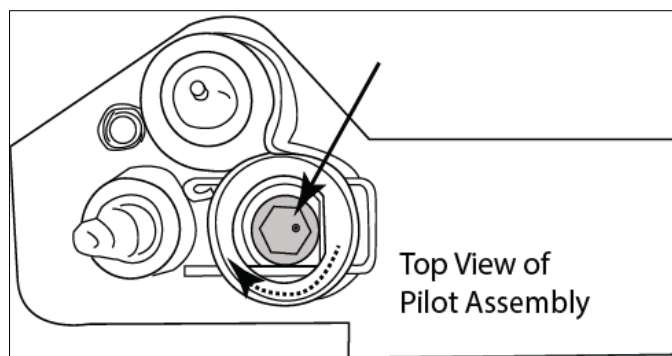
Lift/pull the pilot head straight up and out of the pilot assembly. If the pilot head does not move, then pull the wire clip, under the head, with a small screwdriver or needle nose pliers, then lift the head off.



**Pilot Head Removal**

**STEP 9**

Insert a 4mm hex head (Allen wrench) into the octagon hole of the brass orifice inside the pilot assembly and turn clockwise until it stops (approximately 2 full turns).



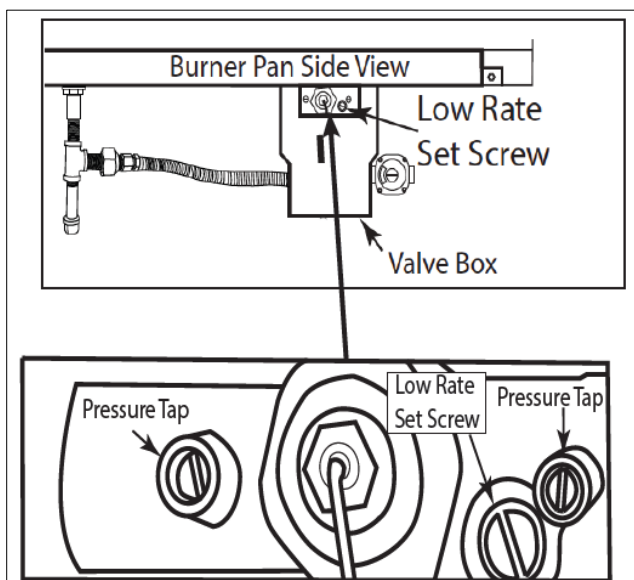
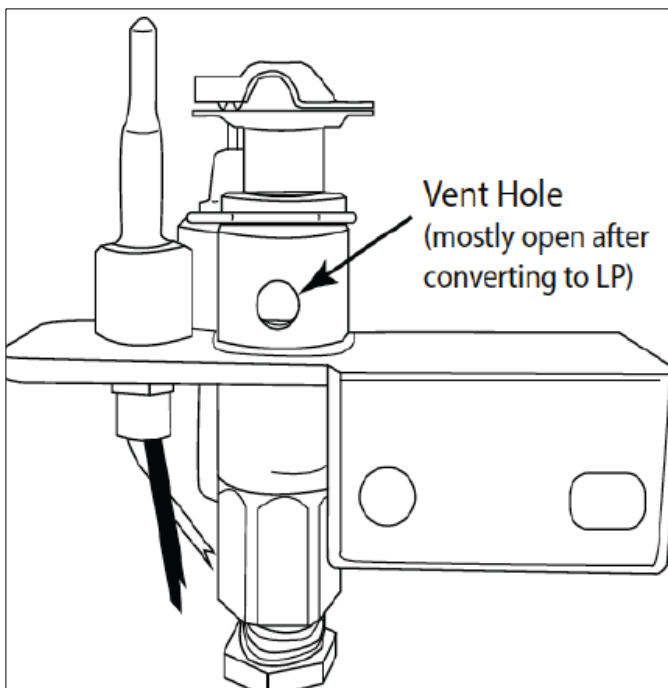
Slot Inside the Pilot Orifice

Once the orifice has been converted to LP then re-install the pilot hood, ensure the clip is in place (if removed) and mount the metal pilot box back into place in the same manner you removed it from the burner pan.

Image to the right: The vent hole will be mostly open when successfully converted to propane.

**STEP 10**

Look for the low rate set screw in the gas valve box. There is a cutout area that allows access to the low rate set screw. Figure below shows the side view of the burner pan and a close-up detail.



**STEP 11**

Remove the low rate set screw with a flat head screwdriver turning the screw counterclockwise. The set screw has a rubber "O" ring on the outer portion of the screw, as a result the screw will rotate only 3-4 revolutions and not unscrew any farther. **Note:** If you drop the low-rate screw inside the valve area you can retrieve it through the access door of the valve box.

**STEP 12**

Remove the low rate set screw using a small pair of needle-nose pliers. Grab the outer edge of the screw and pull outward.

**STEP 13**

Insert the correct new low-rate screw with a needle-nose pliers. Secure the new low rate set screw (clockwise) with screwdriver until it is tight and now longer spins.

**CAUTION:** DO NOT REMOVE OR LOOSEN THE SMALL SET SCREWS ON EACH SIDE OF THE V-WIRE. THESE ARE PRESSURE TEST PORTS. IF THESE ARE LOOSENED, THEY MUST BE RE-TIGHTENED TO ENSURE NO GAS LEAKS OCCUR.

**STEP 14**

Fill out the label "This fireplace has been converted to LP gas" and affix it to the blank area on the rating plate.

**STEP 15**

Ensure you test the burner pan after it is installed into the fireplace for any gas leaks.

**STEP 16**

Conversion is now complete.

# Fireplace Maintenance

1. The fireplace should be inspected and cleaned before first use at the beginning of each season by a qualified field service person.
2. Any component that is found faulty must be replaced with an approved component.
3. Any tampering with or modifying the fireplace is dangerous and voids all warranties.
4. During winter months in cold climates and various seasons operation the fireplace may be affected by weather conditions. It is recommended to use a weatherproof cover overtop for your fireplace to protect it from humid/rainy weather conditions when not in use. Heavy rains/downpours could affect the fireplace operation if not covered; if this occurs ensure you allow the fireplace time to dry out before attempting to operate. **NOTE:** If a combustible type of cover is used over the fireplace when not in use be sure to remove it before operation to prevent a severe safety hazard.
5. Carbon (soot) may build up on the metal interior during heavy use and sooting may also occur periodically under the pilot cover. Do the following: To clean, mix several drops of dish washing liquid into a bucket of hot water. The dish soap assists in breaking up the soot and removing it from the metal. **CAUTION:** Ensure the fireplace is cool to touch and gas is turned OFF before cleaning.
  - a. Dip a scrubbing sponge into the soapy water and wipe it back and forth over the soot deposits. This breaks off the majority of the soot from the metallic surface.
  - b. Spray any remaining soot deposits with a combination of warm water and white vinegar mixed in a spray bottle in a half-and-half solution. White vinegar is slightly acidic, and this helps break up the soot and cleans the metal effectively.
  - c. Run a nylon scrub brush against any stubborn soot to remove it from the metal. Avoid using a metal scrub brush since this can result in scratching.
  - d. Buff the metal with a damp rag to remove any remaining soap or vinegar and then dry it with a dry rag.
6. Over time stainless steel parts can discolor when heated, usually a golden or brown hue. This discoloration is normal and does not affect the performance of the appliance.
7. LED lights can get dirty over time and may require cleaning.
  - a. Remove the glass windshield.
  - b. Use a Q-tip dipped in alcohol to gently wipe the top of the LED lights. Careful not to puncture the light strip.
  - c. Replace the glass windshield.

## General Troubleshooting

Symptom	Remedy
<b>Fireplace won't Light</b>	<ol style="list-style-type: none"> <li>1. Bleed the gas line.</li> <li>2. Ensure all gas lines are turned ON.</li> <li>3. Ensure there is not too much media overtop the burner, it can inhibit the gas flow. Too little or no media can also contribute to non-lighting.</li> <li>4. Media blocking pilot hole.</li> </ol>
<b>No Spark to Ignite</b>	<ol style="list-style-type: none"> <li>1. Visually look at ignitor for any physical damage.</li> <li>2. Ensure batteries in battery pack measure 1.5 volts each.</li> <li>3. Listen closely to vent area for any beeping sound. If beeping is heard reference next page.</li> </ol>
<b>Continues to Spark after Lighting</b>	<ol style="list-style-type: none"> <li>1. Thermocouple out of alignment.</li> <li>2. Check connection of thermocouple at "S" terminal on the control module to ensure its connected.</li> <li>3. Control module "proves" flame before lighting. See ignition safety on the next page.</li> </ol>
<b>Low Flame</b>	<ol style="list-style-type: none"> <li>1. Ensure all proper media has been installed into the burner trough.</li> <li>2. Ensure all shut-off valves are fully open.</li> <li>3. Check for spider webs inside the burner orifice.</li> <li>4. Check gas type and gas pressures.</li> <li>5. Wrong media installed into the burner trough.</li> <li>6. Too much media installed over top of the trough.</li> </ol>
<b>Water in my Fireplace</b>	<ol style="list-style-type: none"> <li>1. Excess dust/sand material from media may be blocking the weep holes to relieve water. Remove all media and unplug the holes. Clean or install new media free of dust and dirt.</li> <li>2. Ensure the fireplace enclosure has proper drainage for water and proper ventilation to dry out.</li> <li>3. Recommended to purchase a cover (if applicable) to keep excessive water out of the fireplace.</li> </ol>
<b>Whistling Noises</b>	<ol style="list-style-type: none"> <li>1. Check the media to ensure it is not too tightly packed around the burner tube.</li> <li>2. Ensure a non-whistling flex connector is being used.</li> </ol>
<b>Fireplace won't Stay Lit</b>	<ol style="list-style-type: none"> <li>1. Check alignment of pilot flame through ignition hole.</li> <li>2. Thermocouple reading should be between 10-20mV while operating. Use a multimeter and test at the brass ground lead on gas valve and the gold lead at the "S" terminal on the control module. If no millivolts are maintained replace the thermocouple. Must test with pilot operating to obtain readings.</li> <li>3. Check continuity of the thermocouple. Using a multimeter remove the TC test lead "S" from the control module and the brass fork terminal from the gas valve. Test for continuity. If not continuity, replace the thermocouple.</li> <li>4. Ensure thermocouple is clean and free of any debris. Excessive soot can be an issue.</li> </ol>
<b>Sooting</b>	<ol style="list-style-type: none"> <li>1. Incorrect gas for the fireplace. Ensure the rating label has proper model number for gas being used.</li> <li>2. Too much media can cause sooting.</li> <li>3. Wrong media being used.</li> </ol>

# Error Code Troubleshooting

## Error Codes

The control module has the ability to detect problems with the fireplace and will initiate error codes when they occur. If an error code occurs the control module will emit a series of “beeping” patterns to determine the error. Due to the outdoor environment, it may be difficult to hear the control module “beeping” inside the fireplace. We suggested to “listen” at the vents or next to the burner tube.

**The error codes listed below will guide you through troubleshooting issues.**

**Ignition Safety Error:** One short beep every one second.

**Cause:** Pilot did not light within the trial period of 50-60 seconds therefore the stepper motor will turn gas valve to OFF position.

**Corrective Action:** Press OFF button to clear. Wait 30 seconds and try again.

**Recycle Safety Error:** Two short beeps every one second.

**Cause:** 1. Pilot automatically lights and drops out 3-times within 2-minutes causes step motor to turn gas valve to OFF position. 2. Someone has pressed the ON/OFF button 6-times within 2-minutes causing the step motor to turn gas valve to OFF position.

**Corrective Action:** Press OFF button to clear. After 5-minutes the beeping will stop then retry.

**Sensor Safety Error:** Four short beeps every one second (constant beeping).

**Cause:** Pilot flame sensor voltage too high, ground circuit not properly connected, pilot ground wire loose or not connected, or motor not plugged into control module; therefore, step motor will turn gas valve to OFF position.

**Corrective Action:** Press OFF button to clear. Wait 30-seconds for the thermocouple to cool down. If persist, then check other potential causes and retry.

**Thermal Safety:** Four short beeps every two seconds.

**Cause:** System has overheated and exceeded 170°F internal temperature limit and the step motor will turn gas to OFF.

**Corrective Action:** Internal temperature must cool down to below 160°F then press the OFF button to clear and retry.

**Communication Safety:** One short beep every four seconds.

**Cause:** Transmitter and module are not communicating properly. Could be related to distance greater than 20-feet away from each other or weak/dead batteries in one or the other.

**Corrective Action:** Module must receive a signal from transmitter.

© Ortal 2024  
Version 2.0, October 2024  
SKU: KPMANOUTFPV2.0

Ortal USA  
2152 Citygate Drive, Columbus, OH 43216  
T: (818) 238-7000 | F: (818) 678-0541  
info@ortalheat.com | www.ortalheat.com

---