

**INSTALLATION INSTRUCTIONS FOR POWER VENT KIT MODEL PVK-ECO-SV4.5 (CAT. NO. F4777)  
FOR USE WITH ELECTRONIC IGNITION, DIRECT-VENT GAS FIREPLACES LISTED IN TABLE 2**



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.

**NOTICE**

- **READ ALL STEPS BEFORE STARTING INSTALLATION.**
- **LEAVE THESE INSTRUCTIONS WITH THE APPLIANCE.**
- All warnings, precautions, and instructions in the *Installation and Operation Instructions* provided with the appliance also apply to these instructions.
- If you encounter any problems, need clarification of these instructions, or are not qualified to properly install this kit, contact your local distributor or dealer.

**GENERAL INFORMATION**

**Power Vent Kit Model PVK-ECO-SV4.5** (illustrated in *Figure 1*) is only for use with certain INNOVATIVE HEARTH PRODUCTS, electronic, direct-vent, gas fireplaces. Compatible fireplaces and adaptor requirements are listed in *Table 2* on *Page 2*. See *Page 18* for venting components.



**This kit is NOT for use on millivolt appliances.**

Some compatible fireplace models (specified in *Table 2*) may require the use of a specific **Power Vent Adaptor Kit** (sold separately). See *Table 2, Page 2*.

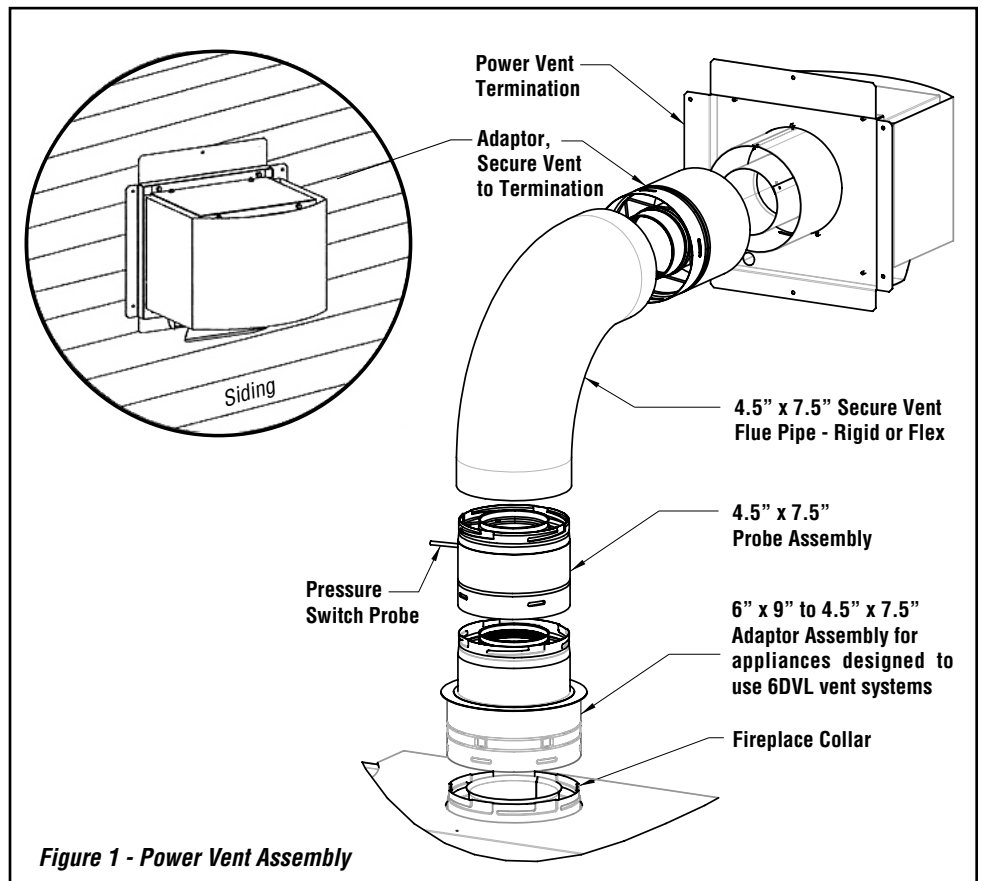
Installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54, latest edition (in Canada, the current CAN/CGA-B149.1 installation code).

**TABLE OF CONTENTS**

	Page
Required Parts (not provided)	1
General Information	1
Kit Contents	2
Compatible Fireplaces and Adaptor Kit Requirements	2
Typical Installation Sequence	2
Detailed Installation Instructions	3
Electronic Wiring Diagram	11
Power Vent Termination Dimensions	17
Power Vent Operating Instructions	17
Troubleshooting the Power Vent System	18
Listed Venting Components	19
Power Vent Replacement Parts	20

**REQUIRED PARTS (not provided)**

- 14-Gage AWG Grounded Romex Cable
- Wiring Junction Box



**Figure 1 - Power Vent Assembly**

### KIT CONTENTS

Power Vent Kit PVK-ECO-SV4.5 (Cat. No. F4777)

Item No.	Description	Qty.
1	Termination Power Vent	1
2	Vacuum Hose (13 ft.)	1
3	Power Wire Harness	1
4	Pressure Switch Assembly (includes adaptor wires)	1
5	Termination Adaptor	1
6	Strain Relief - 3/8"	1
7	Ring Terminal - #10	1
8	Insulated 1/4" Male Terminal	5
9	Firestop Assembly (Horizontal)	1
10	1 1/32" Hose Clamp	2
11	Plastic Bushing	1
12	Power Vent Relay	1
13	Relay Wire Harness	1
14	Plastic Clip	2
15	Probe Assembly	1
16	Ecoflow Power Vent Module	1
17	Velcro Circle Loop & Hook Set	1
18	Insulated 3/16" Female Terminal	2
19	Plug Wire Harness	1
20	Plug Splitter Wire Harness	1

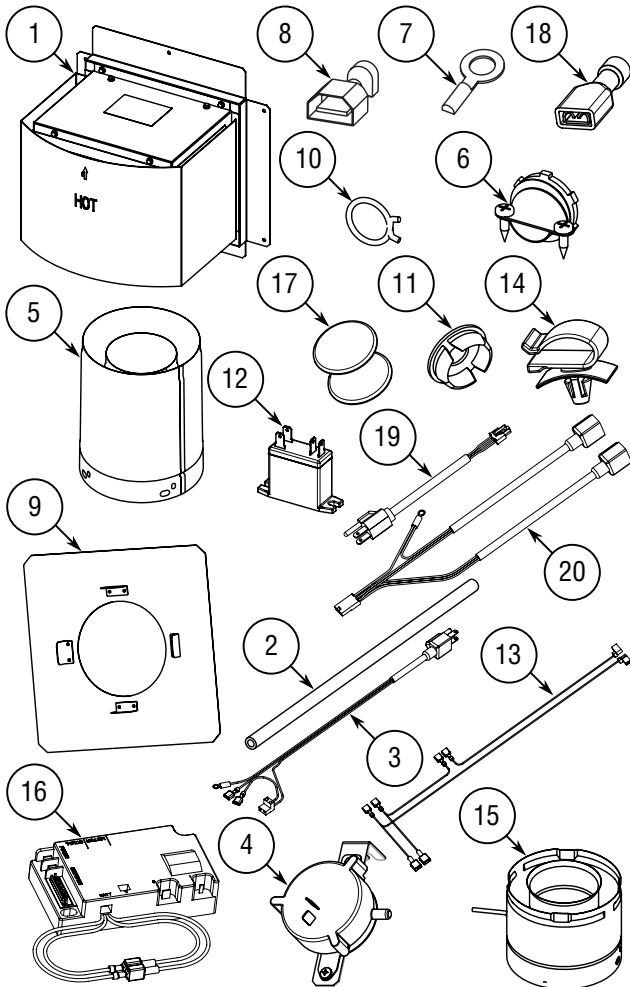


Table 1

### COMPATIBLE FIREPLACES & ADAPTOR KIT REQUIREMENTS

Power Vent Kit PVK-ECO-SV4.5 (Cat. No. F4777)

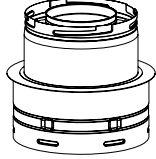
Fireplace Series	Fireplace Models	Required Power Vent Adaptor Kit Cat. No. (Model No.)
Astria	ALLUME60TEN-B ALLUME72TEN ALLUME84TEN ALLUMEDLX60TEN-B ALLUMEDLX72TEN ALLUMEDLX84TEN	F4380 (6DVL4.5PVA) <i>Adaptor Kit Contents:</i>  6" x 9" to 4-1/2" x 7-1/2" Adaptor
Astria	ALLUME48TEN ALLUMEDLX48TEN	No Adaptor Kit Required

Table 2

#### Approved Vent Components

This Power Vent Kit is designed, tested, and listed for operation and installation with the following vent components:

- Secure Vent Direct-Vent System Components.
- Secure Flex Flexible Vent Components

#### TYPICAL INSTALLATION SEQUENCE

**NOTE:** This power vent system can only be terminated horizontally.

1. [Page 3]: Install the fireplace according to the fireplace Installation Instructions.
2. [Page 3]: Plan the vent run.
3. [Page 4]: Install the appropriate power vent adaptor kit, if required for unit.  
(Sold Separately)

**NOTE:** Attach adaptor and probe assemblies FIRST, before connecting any other vent components to the fireplace.

4. [Page 4]: Complete the vent run.
5. [Page 7]: Install cover wire plate with strain relief, tube bushing, and route vacuum hose.
6. [Page 8]: Route Romex wiring and connect to termination.
7. [Page 10]: Install the power vent termination.
8. [Page 12]: Wiring and pressure switch installation.
9. [Page 16]: Set proper restrictor plate position.

## DETAILED INSTALLATION INSTRUCTIONS

### 1. Install the fireplace.

Install the fireplace according to the fireplace *Installation Instructions*. Compatible fireplaces are listed in **Table 2** on **Page 2**.

**⚠ CAUTION**

**Do NOT install this Power Vent system on an incompatible fireplace.**

**⚠ CAUTION**

**All power vented fireplaces must be set to Intermittent Pilot (IPI) mode and are not compatible with factory installed battery backup system.**

**NOTE:** Igniter will continuously spark and possibly light the burner if unit is left in Continuous Pilot Mode (CPI). To switch to Intermittent Pilot Mode (IPI), carefully follow **Step 8** on **Page 12**.

### 2. Plan the vent run.

Various venting configurations are possible with this Power Vent Kit. Analyze the vent routing, and determine the required flex and/or rigid venting components available in **Tables 3A and 3B**.

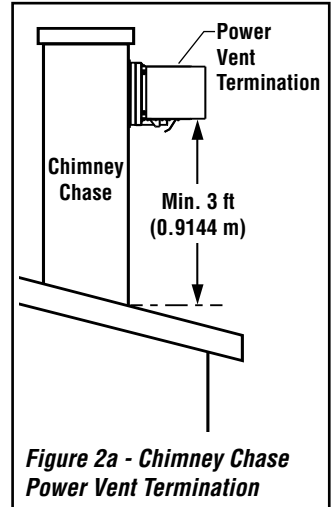
**NOTE:** The power vent chimney may be run vertically through a roof (see **Figure 2a**) or horizontally through an outside wall; however, **THE POWER VENT TERMINATION MUST BE INSTALLED HORIZONTALLY**. Building codes limit or prohibit horizontal termination in specific areas. For location guidelines, refer to local codes. Also see **Figure 5** on **Page 6**.

Refer to **Figures 2 and 3** for maximum/minimum vertical and horizontal vent lengths.

- Maximum vent run is 110 feet, plus six 90° (or twelve 45° turns, or equivalent combinations).
- Minimum vent length is 10 feet.
- Venting can be installed with any combination of rise and run between the appliance and the termination, including up to 3 feet below the unit (see **Figure 2**).

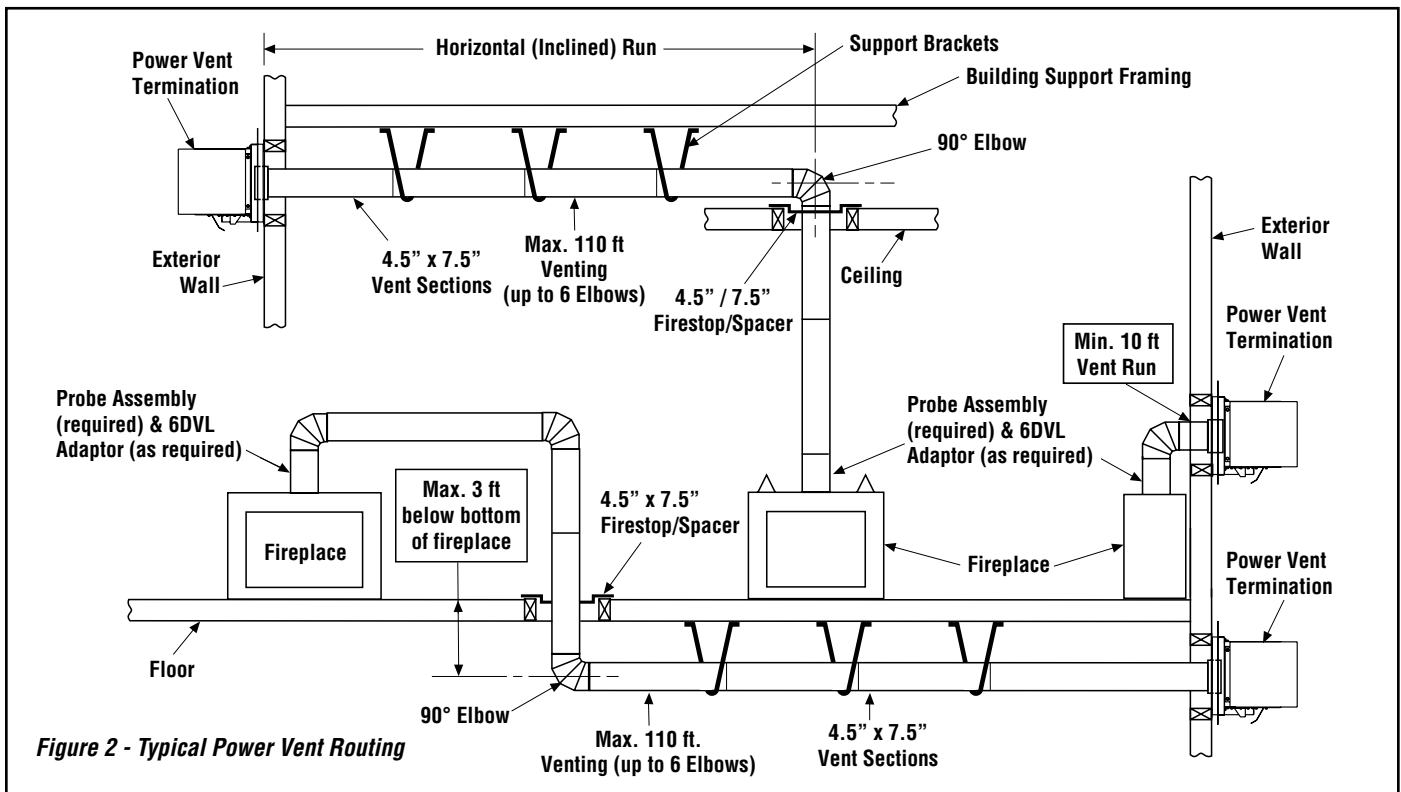
**NOTE:**

- Plan vent lengths to prevent joints at intersections of ceiling or roof joists.
- Ensure vent pipe is properly supported (for details, see the fireplace *Installation Instructions*).
- Make allowances for elbows, as indicated in the fireplace *Installation instructions*. Elbows are available in 90° and 45° configurations.
- To select vent length combinations and view a list of straight vent effective lengths, see the fireplace *Installation Instructions*.
- For approved venting components and Cat. No.s, see “Listed Vent Components” in this manual, as well as the fireplace *Installation Instructions*.
- For additional details on venting installation, see the fireplace *Installation Instructions*.



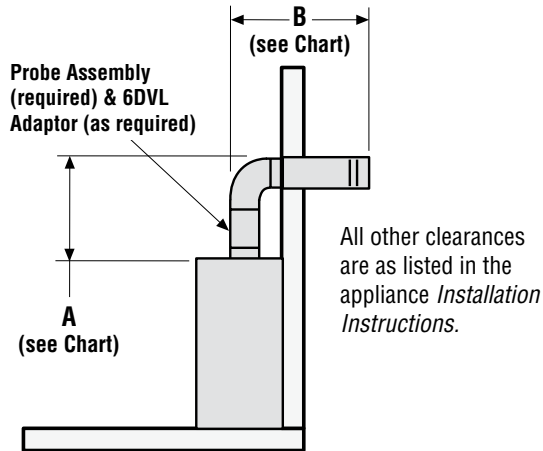
**Figure 2a - Chimney Chase Power Vent Termination**

**Remember to maintain minimum clearances to combustibles! See Figure 3A on Page 4.**



**Figure 2 - Typical Power Vent Routing**

VENTING CHART	
Power Vent Kit PVK-ECO-SV4.5 (Cat. No. F4777)	
Maximum Number of 90° Elbows	6
Maximum Vent Run (A + B)	110 ft
Minimum Run (B)	10 ft



MINIMUM CLEARANCES TO COMBUSTIBLES	
Vertical Vent Pipe	1 in. (25.4 mm)
Horizontal Vent Pipe	Top: 3 in. (76.2 mm) Sides: 1 in. (25.4 mm) Bottom: 1 in. (25.4 mm)

Figure 3A

**3. Attach the 6DVL Adaptor (if required) and probe assemblies to the fireplace collar.**

**NOTE:**

- Attach the assemblies before connecting any other vent components to the fireplace.

Apply a high temperature sealant to the inner and outer connections and attach the **Adaptor Assembly** directly to the fireplace collar in the manner shown in **Figure 4**. Then install the **Probe Assembly** [#15] directly on top of the **Adaptor** with the probe facing the side of the fireplace that the vacuum hose is going to be routed down (see **Step 5**).

All fireplace models compatible with this Power Vent Kit are fitted with collars that have locking channels. Compatible fireplaces are listed in **Table 2** on **Page 2**.

**4. Complete the vent run.**

After attaching the **Adaptor** and **Probe Assemblies**, add additional vent system components in accordance with the requirements and vent charts in the specific fireplace **Installation Instructions**.

Attach vent system components in the manner shown in **Figure 4**, “**Connecting Adaptor, Probe, and Vent Components.**”

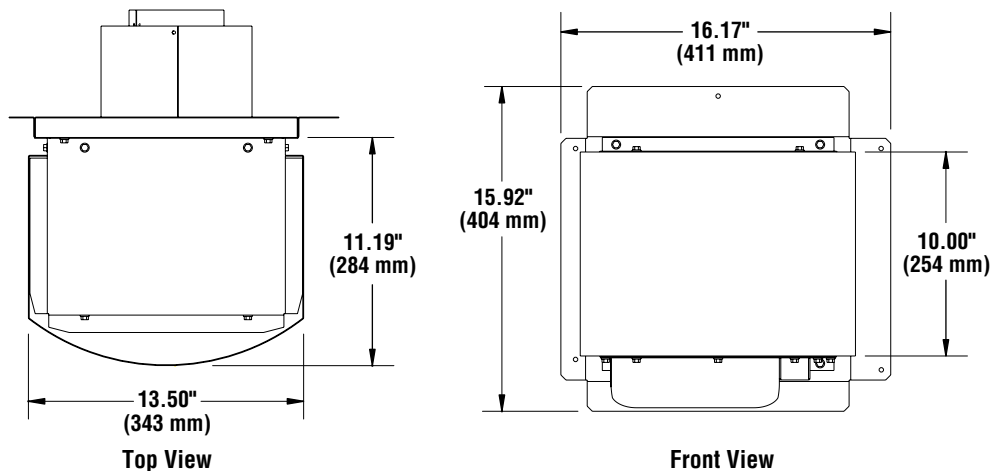


Figure 3B - Power Vent Termination Dimensions

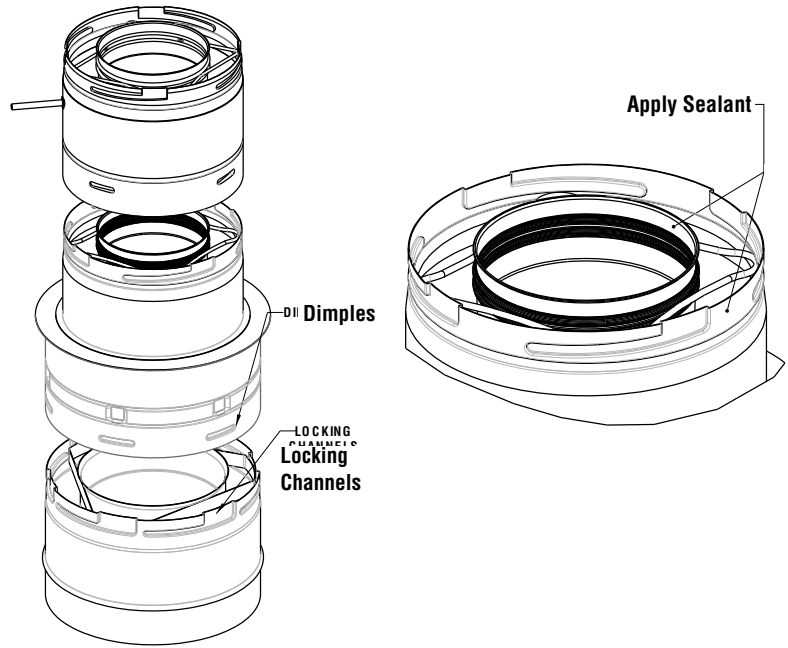
### Connecting Adaptor, Probe, and Vent Components

Direct-vent venting system components are unitized concentric pipe components featuring positive twist-lock connections.

#### To Connect Vent Components:

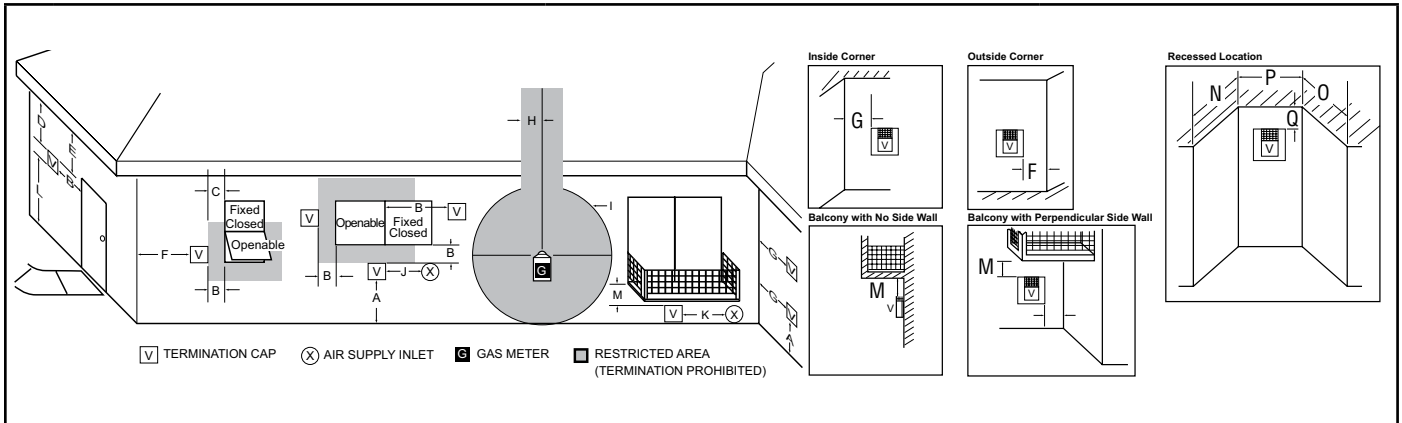
1. Apply a high temperature sealant to all inner and outer connections within the entire venting run to ensure a proper seal.
2. Attach the female dimpled end of one section to the incline-channel end of the other section, making sure to align the dimples with the channels.
3. Push the section being attached against the adjoining section until fully engaged.
4. Twist the section being attached **CLOCKWISE**, running the dimples down and along the channels until seated at the ends of the channels.

If desired, however, a #6 x 1/2" screw may be used at each joint (not required).



**Figure 4**

**EXTERIOR HORIZONTAL VENT TERMINATION CLEARANCE REQUIREMENTS (ANSI/CSA)**



	U.S. Installation **	Canadian Installation *
<b>A</b> Clearance above grade, veranda, porch, deck, or balcony	12" (300 mm) **	12" (300 mm) *
<b>B</b> Clearance to window or door that may be opened	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 9" (230 mm) for fireplaces > 10,000 Btu/h (3 kW), and < 50,000 Btu/h (15 kW), 12" (300 mm) for fireplaces > 50,000 Btu/h (15 kW) **	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 12" (300 mm) for fireplaces > 10,000 Btu/h (3 kW)
<b>C</b> Clearance to permanently closed window	9" (229 mm) recommended to prevent window condensation	12" (305 mm) recommended to prevent window condensation
<b>D</b> Vertical clearance to ventilated soffit located above the termination within a horizontal distance of 18" (458 mm)	18" (458 mm)	18" (458 mm)
<b>E</b> Clearance to unventilated soffit	12" (305 mm) 30" (760 mm) to vinyl soffit	12" (305 mm) 30" (760 mm) to vinyl soffit
<b>F</b> Clearance to outside corner	5" (127 mm) minimum	5" (127 mm) minimum
<b>G</b> Clearance to inside corner	6" (152 mm) minimum	6" (152 mm) minimum
<b>H</b> Clearance to each inside of center line extended above meter / regulator assembly	36" (910 mm) within a height of 15 ft above the meter / regulator assembly **	36" (910 mm) within a height of 15 ft above the meter / regulator assembly *
<b>I</b> Clearance to service regulator vent outlet	36" (910 mm) **	36" (910 mm) *
<b>J</b> Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other fireplace	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 9" (230 mm) for fireplaces > 10,000 Btu/h (3 kW) and < 50,000 Btu/h (15 kW), 12" (300 mm) for fireplaces > 50,000 Btu/h (15 kW) **	6" (150 mm) for fireplaces < 10,000 Btu/h (3 kW), 12" (300 mm) for fireplaces > 10,000 Btu/h (3 kW)
<b>K</b> Clearance to a mechanical air supply inlet	36" (910 mm) above if within 10 ft (3 m) horizontally **	72" (1830 mm) *
<b>L</b> Clearance above paved sidewalk or paved driveway located on public property	84" (2130 mm) ‡	84" (2130 mm) ‡
<b>M</b> Clearance under veranda, porch, deck or balcony	12" (300 mm) *‡	12" (300 mm) *‡
<b>N</b> Depth of alcove (maximum)	72" (1830 mm) **	72" (1830 mm) *
<b>O</b> Clearance to termination (alcove)	6" (152 mm) **	6" (152 mm) *
<b>P</b> Width of alcove (minimum)	36" (910 mm) **	36" (910 mm) *
<b>Q</b> Clearance to combustible above (alcove)	18" (457 mm) **	18" (457 mm) *

\* In accordance with the current CAN/CGA-B149.1 National Gas And Propane Installation Code

\*\* In accordance with the current ANSI Z223.1/NFPA 54 National Fuel Gas Codes

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

\*‡ Only permitted if veranda, porch, deck, or balcony is fully-open on a minimum two sides beneath the floor

Figure 5

**NOTE:** Typical fireplace shown in illustrations. Location of components on actual fireplace may vary. Numbers in brackets correspond to items in **Table 1 (Page 2)**.

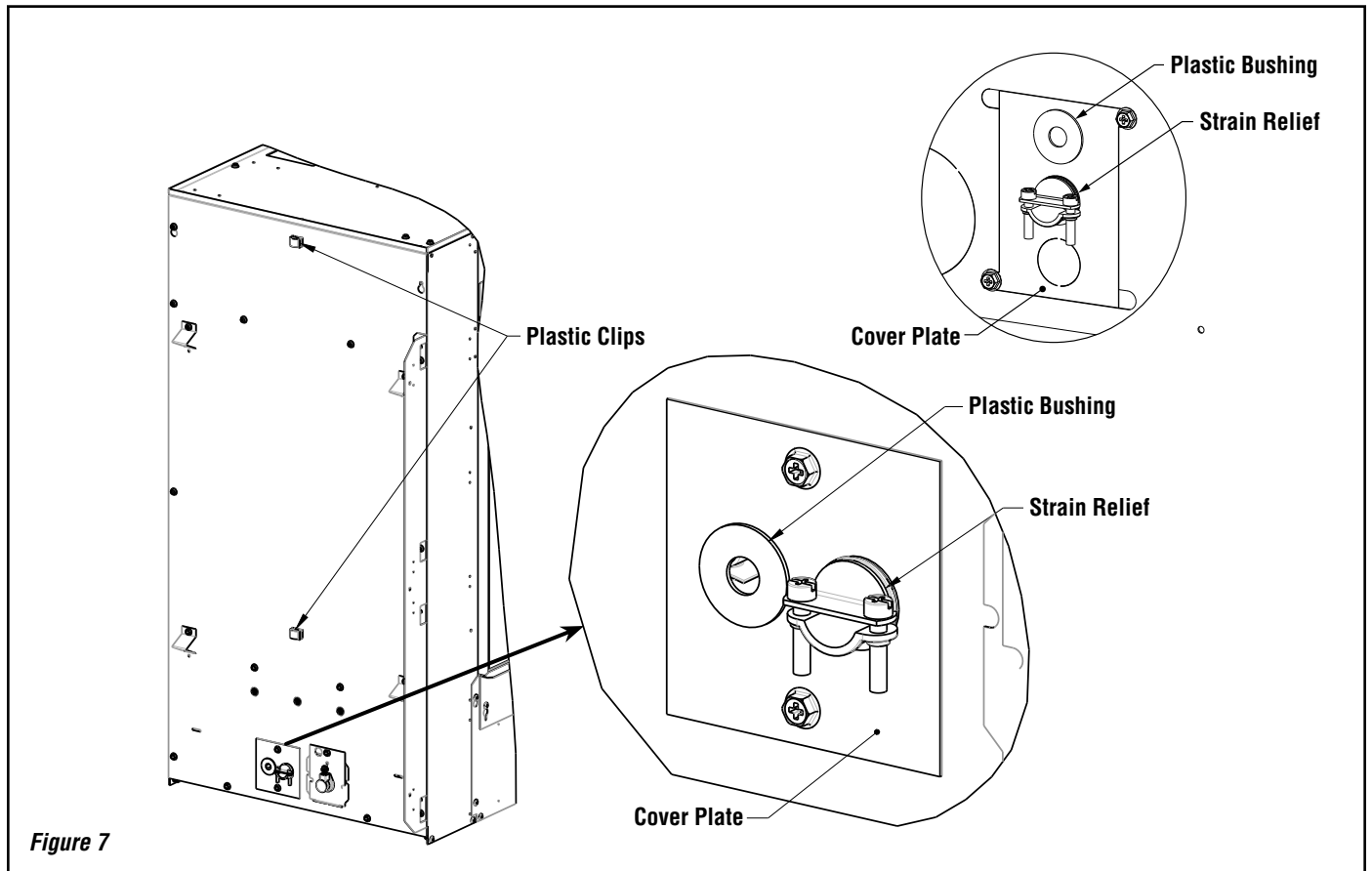
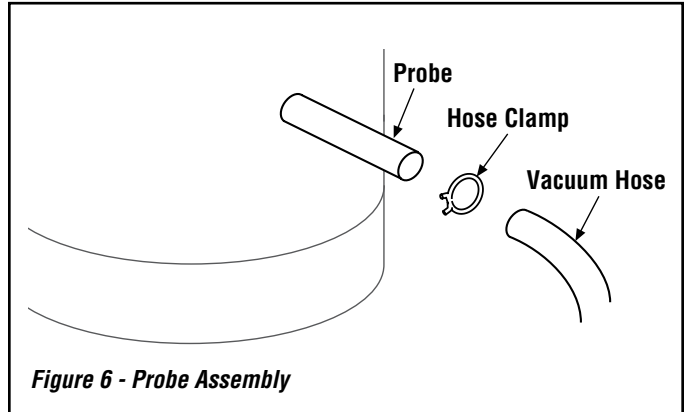
**NOTE:** It is highly recommended on the ALLUME48TEN and ALLUME48DLXTEN fireplaces to install the vacuum hose and power vent electrical wiring on the **right side** of the unit. This avoids routing interference from the fireplace's electrical junction box.

**5. Install cover wire plate and vacuum hose.**

- 5.1 Remove square **cover plate** from the chosen side of fireplace (**Figure 7**).
- 5.2 Push the **plastic bushing** [#11] into one of the two holes on the **cover plate**, it will snap in place. This will be for the vacuum hose.
- 5.3 Install the **strain relief** [#6] into the other hole on the **cover plate**. This will be for the Romex cable.
- 5.4 Push the two **plastic clips** [#14] in to the two holes on the chosen side of the fireplace, they will snap in place (**Figure 7**). These will be used for holding the vacuum hose in place.
- 5.5 Secure the **vacuum hose** [#2] to the probe on the **probe assembly** with one of the provided **hose clamps** [#10] (**Figure 6**).
- 5.6 Route the **vacuum hose** [#2] from the location of the probe assembly on the fireplace to the side with the plastic clips installed in **Step 5.4**, down the side, through the **plastic clips** [#14], and through the **plastic bushing** [#11] into the fireplace control compartment and toward the center of the fireplace.

**NOTE:**

- Take care not to kink or damage the hose.
- Allow enough hose at both ends for hookup (Cut off excess hose, if needed).
- The entire run of vacuum hose must be safety plated, to prevent damage from framing nails and finish screws.



## 6. Route Romex wiring and connect to termination.

**NOTE:** Electrical wiring must be performed by a qualified electrician.

**NOTE:** Electrical junction boxes must be accessible for maintenance and/or repairs. Refer to your local electrical codes.

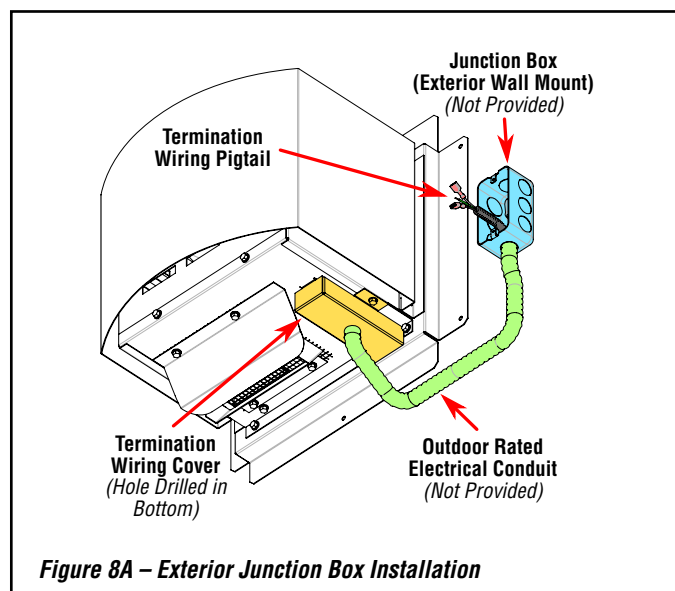


Figure 8A – Exterior Junction Box Installation

### 6A. Exterior Junction Box Wiring Instructions (Figure 8A)

Use this method when wires from the termination must be routed on the exterior wall near the termination.

#### ADDITIONAL REQUIRED PARTS (not provided)

- Outdoor Rated Electrical Junction Box & Cover Plate
- Outdoor Rated Electrical Conduit & Connectors
- 14-gauge AWG Grounded Romex Cable
- Silicone Adhesive or Waterproof 7/8" Hole Plug
- Wire Nut or (2) Ring Terminals<sup>1</sup>

<sup>1</sup> Ring terminals may be used when connecting ground wires to electrical junction box.

6A.1. Remove the **termination wiring cover** (see **Figure 8B**) by removing the screw on the right side of the cover. The cover needs to be tilted down to allow it to slide out of the capture slot on the termination.

6A.2. Pull **termination wiring pigtail** out of rear hole, then install **termination** to exterior wall (see **Step 8, "Install the power vent termination"**).

Cover up the hole with silicone. A waterproof 7/8" hole plug may be installed instead.

6A.3. Drill a hole in the bottom of the **termination wiring cover** with a size appropriate for a conduit connector. Attach conduit connector to **termination wiring cover**.

6A.4. Install an outdoor rated electrical junction box (not provided) within reach of the **termination wiring pigtail** on the exterior wall.

Install conduit from **termination wiring cover** to the electrical junction box.

**NOTE:** The junction box may be installed and the wire routed anywhere near the termination, except directly below the exhaust on the bottom of the termination.

6A.5. Route the **termination wiring pigtail** through the conduit and into the electrical junction box. Reinstall the **termination wiring cover**.

Route one end of a 14-gauge AWG grounded Romex cable (not provided) into the new junction box.

Route the other end of the Romex cable into the fireplace control compartment (through the strain relief installed in **Step 5**). Cut to length before installing the terminals.

**NOTE:** The wiring must be safety plated, to prevent damage from framing nails and finish screws.

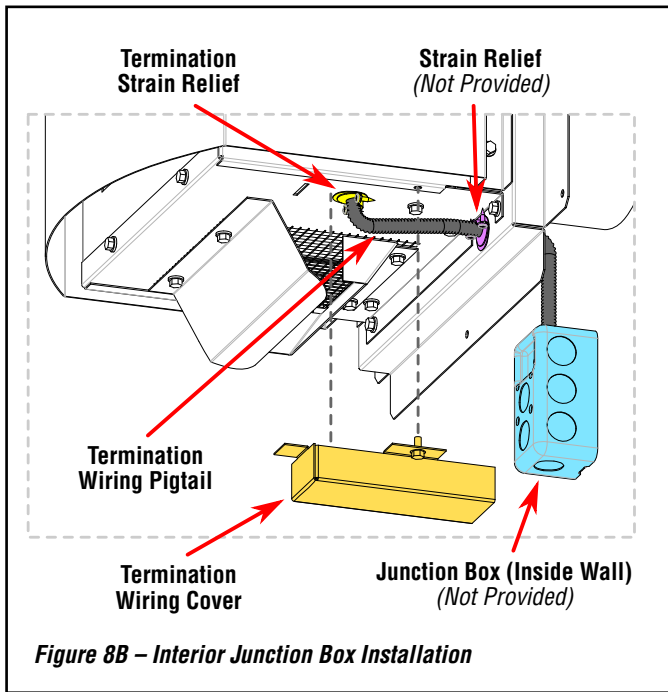
6A.6. See **Figure 9**. Install **ring terminal** [#7] on the fireplace side of the Romex GROUND wire.

Install **insulated male terminals** [#8] on both ends of the black and white wires of the Romex cable.

Using standard electrical practices, connect the three wires of the Romex cable to the **termination wiring pigtail**. The ground wires may either be screwed to the junction box using ring terminals (if a ground screw can be installed to the electrical junction box) or connected with a wire nut.

Install cover plate over electrical junction box.





**6B. Interior Junction Box Wiring Instructions (Figure 8B)**

Use this method when wires from the termination can be routed inside the exterior wall.

**ADDITIONAL PARTS REQUIRED (not provided)**

- Electrical Junction Box
- 14-gauge AWG Grounded Romex Cable
- Silicone Adhesive
- (2) Cable Connector/Strain Relief
- (Optional) Electrical Conduit & Connectors
- Wire Nut or (2) Ring Terminals<sup>1</sup>

<sup>1</sup> Ring terminals may be used when connecting ground wires to electrical junction box.

- 6B.1. Install an electrical junction box (not provided) within reach of the **termination wiring pigtail** (see **Figure 8B**). The box may be installed inside the wall or on the interior wall.
- 6B.2. Drill a hole through the **firestop** [#9] and install a cable strain relief or rubber grommet in the hole so that the **termination wiring pigtail** can route directly into the wall.

**NOTE:** The drilled hole and wiring must be located at least 2" from the flue pipe.

**NOTE:** Conduit may optionally be used between the drilled hole in the firestop and the installed junction box.

- 6B.3. Remove the **termination wiring cover** (see **Figure 8B**) by removing the screw on the right side of the cover. The cover needs to be tilted down to allow it to slide out of the capture slot on the termination.

Install an outdoor rated cable strain relief into the hole in the rear of the **termination** and route the **termination wiring pigtail** through that strain relief. Use silicone adhesive around the wire and strain relief to provide additional weather protection.

Reinstall the **termination wiring cover**.

- 6B.4. As the **termination** is being installed, route the **termination wiring pigtail** into the new junction box.
- 6B.5. Route one end of a 14-gauge AWG grounded Romex cable (not provided) into the new junction box.

Route the other end of the Romex cable into the fireplace control compartment (through the strain relief installed in **Step 5**). Cut to length before installing the terminals.

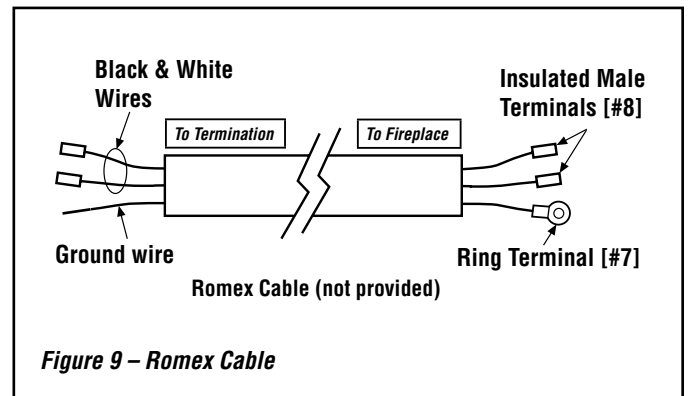
**NOTE:** The wiring must be safety plated, to prevent damage from framing nails and finish screws.

- 6A.6. See **Figure 9**. Install **ring terminal** [#7] on the fireplace side of the Romex GROUND wire.

Install **insulated male terminals** [#8] on both ends of the black and white wires of the Romex cable.

Using standard electrical practices, connect the three wires of the Romex cable to the **termination wiring pigtail**. The ground wires may either be screwed to the junction box using ring terminals (if a ground screw can be installed to the electrical junction box) or connected with a wire nut.

Install cover plate over electrical junction box.



**7. Install the power vent termination.**

7.1 Assemble the vent run to the exterior wall:

- a) If not previously measured, locate the center of the vent at the exterior wall, and prepare an opening as described in **Figures 10 and 11**.
- b) Assemble the vent system to the point where the end of the last section is within 8 inches of the outside wall surface where the **power vent termination** [#1] is to be mounted (**Figure 10**).
- c) If the end of the last section is not within this distance, use the **Telescopic Vent Section** (SV4.5LA) as the last vent section.

**NOTE:** For wall thicknesses greater than shown in **Figure 10**, refer to **Page 18** for other venting components that may be required.

7.2 See **Figure 11**. Attach the **termination adaptor** [#5] to the last vent section and secure with sheet metal screws. Attach the **termination adaptor** in the manner shown in **Figure 4**, “**Connecting Adaptor, Probe, and Vent Components**” (**Page 4**).

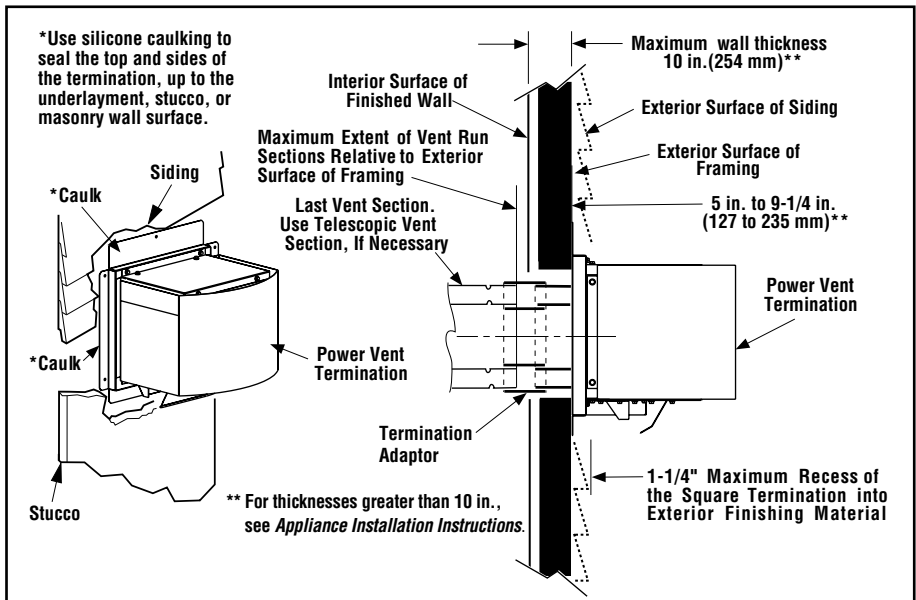
7.3 See **Figure 11**. Install the **firestop assembly** [#9]:

- a) Install the **firestop assembly** over the opening on the exterior side of the framing, long side up, with 3-inch spacer clearance at the top.
- b) Nail into place.

7.4 Install the **power vent termination** [#1]:

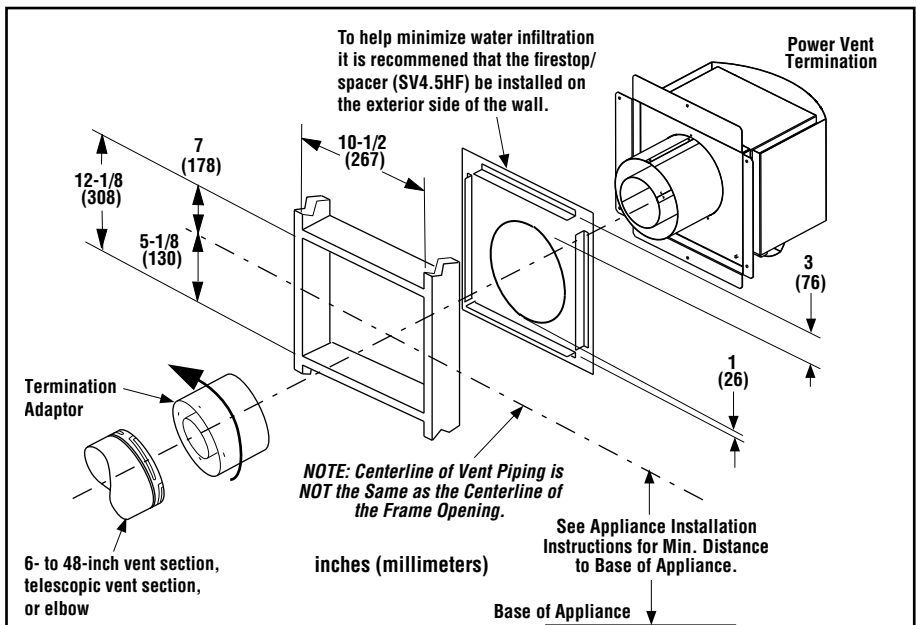
- a) From outside the exterior wall, slide the collars of the **termination** [#1] through the **firestop assembly** [#9] and into the **termination adaptor** [#5] until the **termination** seats against the exterior wall surface to which it will be attached.
- b) Orient the **termination** housing with the arrow pointing UP.
- c) Secure the **termination** to the exterior wall.

**NOTE:** Do not recess the termination into the exterior wall or siding by more than 1-1/4" (32 mm), as shown in **Figure 10**.



**Venting Connection and Exterior Wall Recessing of the Power Vent Horizontal Termination**

**Figure 10**



**Figure 11 - Installing Power Vent Horizontal Termination**

**NOTICE**

Our horizontal terminations are designed to perform in a wide range of weather conditions and meet or exceed industry standards.

**NEVER** place a horizontal termination where water from eaves or rooflines may create a heavy flow of cascading water onto the termination cap. If the cap must be placed where the possibility of cascading water exists, it is the responsibility of the builder to direct the water away from the termination cap using gutters or other means.

Carefully follow the installation instructions for the termination, including the use of silicone caulking where required.

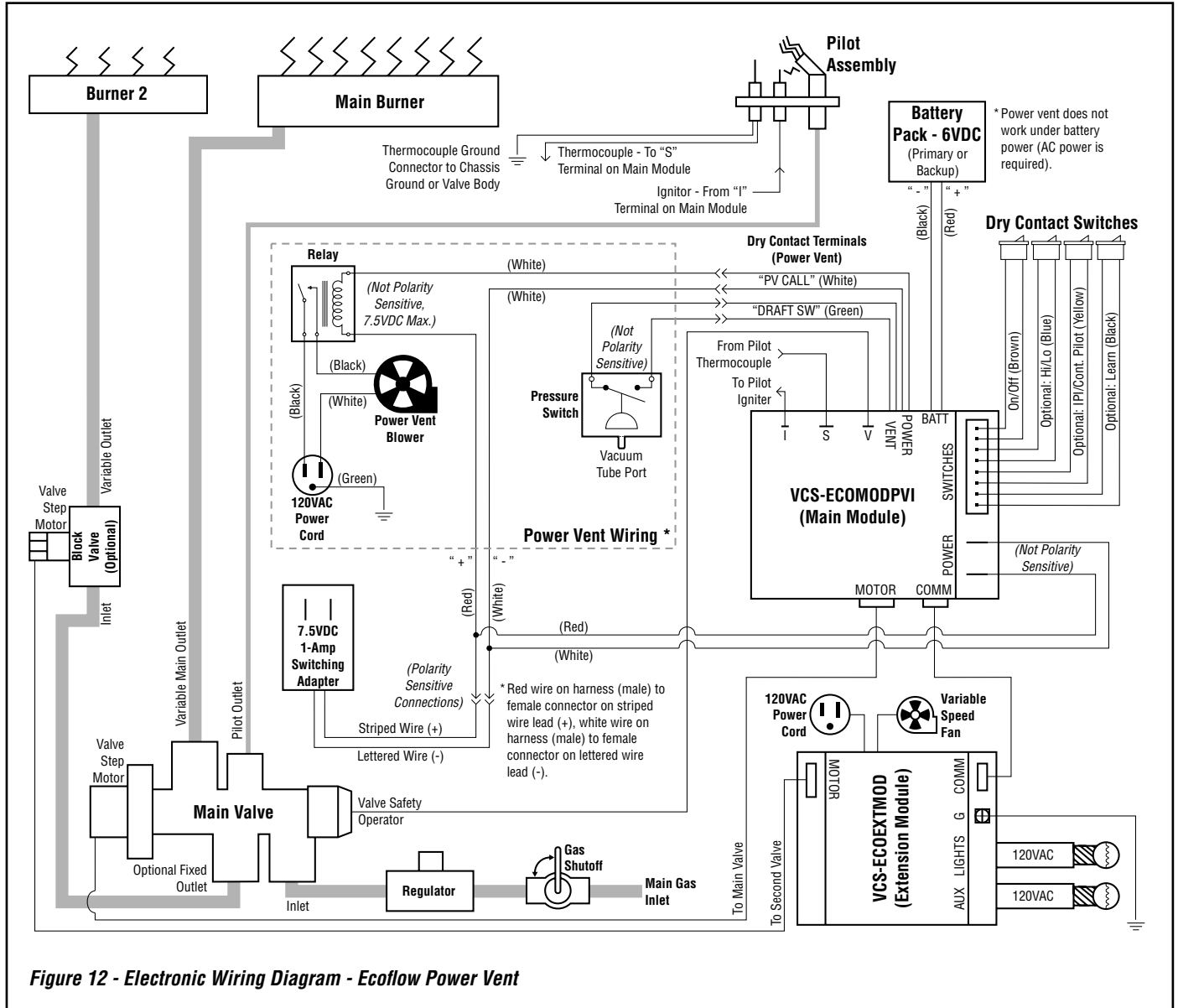
**CAUTION:** Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.

**ATTENTION :** Au moment de l'entretien des commandes, étiquetez tous les fils avant de les débrancher. Des erreurs de câblage peu-vent entraîner un fonctionnement inadéquat et dangereux.

Verify proper operation after servicing.

S'assurer que l'appareil fonctionne adéquatement une fois l'entretien terminé.

**CAUTION:** Ground supply lead must be connected to the wire attached to the green ground screw located on the module mounting bracket. Failure to do so will result in a potential safety hazard. The appliance must be electrically grounded in accordance with local codes or, in the absence of local codes, the National Electrical Code, ANSI/NFPA 70-latest edition (In Canada, the current CSA C22-1 Canadian Electrical Code).



## 8. Wiring Ecoflow electronic control system for Power Vent operation.

- 8.1 Disconnect POWER from the Ecoflow Control Module and all other wiring. Remove old Ecoflow Control Module (should be attached with Velcro) and discard (**Figure 13**).

**NOTE:** Take care not to damage the connectors or wires while disconnecting from module—some of the connectors have locking tabs. Needle nose pliers may be necessary to aid in removal.

**NOTE:** Ecoflow Power Vent Control Module can be identified by the mark on its label, VCS-ECOMODPVI, and by the green and white wires extending from the BATT opening in the module case.

- 8.2 Affix new **Ecoflow Power Vent Module** [#16] to fireplace using provided **Velcro Circles** [#17].

**NOTE:** There should already be Velcro installed on the fireplace base where the old control module was located. It should only be necessary to peel the adhesive side of the mating Velcro type and affix to the bottom of the new module.

- 8.3 Remove the battery backup connected to the fireplace controls and discard (**Figure 13**).
- 8.4 Disconnect lead wires from the switch labeled "PILOT", then remove and discard switch. Isolate disconnected wires to prevent shorting.
- 8.5 Install **Power Vent Relay** [#12] to the base of the firebox to the left side of the Switch Bracket using the provided mounting screws (**Figure 13**). Make sure the relay is oriented so the two tabs that are parallel with the long side of the relay are closer to the fireplace controls.

### CAUTION

The power vent relay wire harness is polarity sensitive. Failure to connect the relay wire harness properly may result in power vent control module degradation and failure.

- 8.6. Connect the positive lead of the Ecoflow Module Power Adaptor (the positive wire is marked with white stripes) to the male connector of the red wire of the **Relay Wire Harness** [#13].

Then connect the negative lead of the Ecoflow Module Power Adaptor (the negative wire is marked with text) to the male connector of the white wire of the **Relay Wire Harness** [#13].

See **Figure 14** for wiring details.

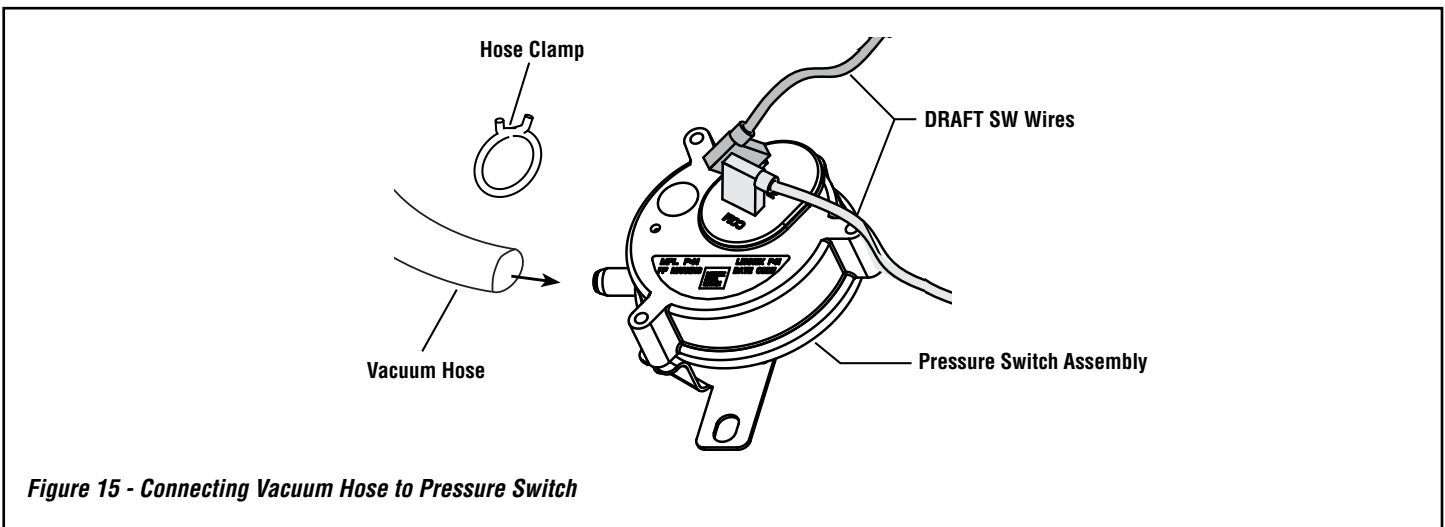
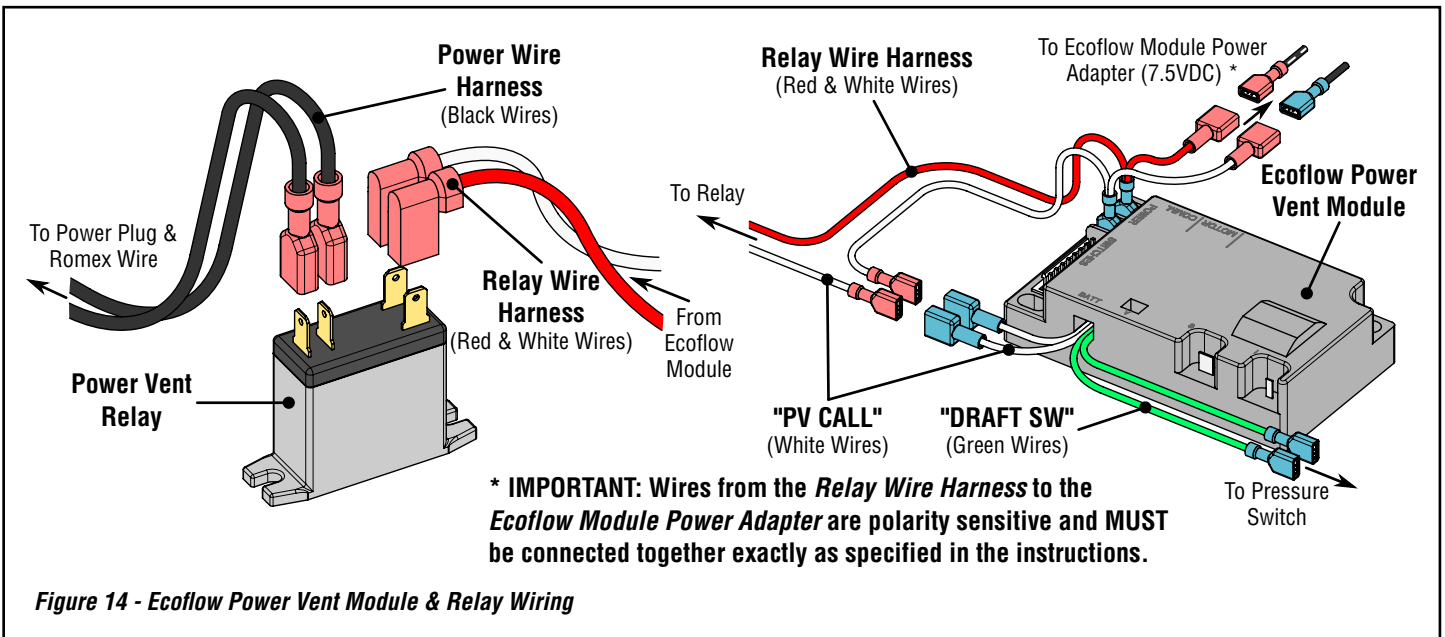
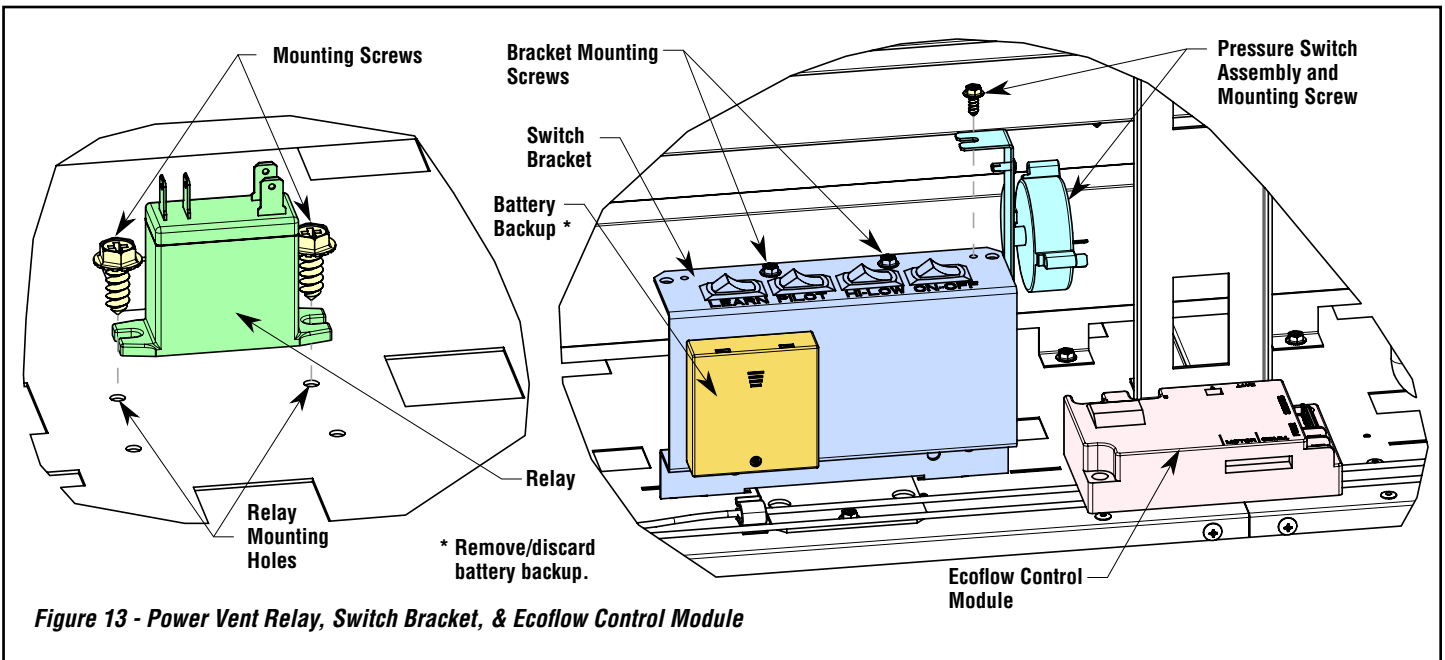
- 8.7. Connect the blue female connectors on the **Relay Wire Harness** [#13] immediately following the Ecoflow Module Power Adaptor to the new **Ecoflow Power Vent Module** [#16] "POWER" terminals (**Figure 14**). These wires each have two wires crimped into the connectors. These two connectors may be connected to the module in any order (they are not polarity sensitive).

- 8.8. Disconnect the white and green wires coming out of the **Ecoflow Power Vent Module** [#16] (they are labeled "PV CALL" and "DRAFT SW" respectively). Then connect the two white wires with male connectors ("PV CALL") to the next two white wires with female connectors on the **Relay Wire Harness** [#13]. These white wires may be connected to each other in any order (they are not polarity sensitive).

### CAUTION

Connecting the wires to incorrect sets of relay terminals will cause destruction of the relay and property damage, injury, or death may result. Read these instructions carefully and refer to **Figure 14** for proper installation.

- 8.9 Connect the two 90° female connectors from the **Relay Wire Harness** [#13] (these should be the red and white wires from the harness) to the **Power Vent Relay** [#12]. These wires must be connected to the two tabs which are parallel with the long side of the relay (**Figure 14**). The order of the wires to those two tabs do not matter (they are not polarity sensitive).
- 8.10 Install **Pressure Switch Assembly** [#4] to the right side of the switch bracket using the provided mounting screw (**Figure 13**).
- 8.11 Connect the two green wires on the **Ecoflow Power Vent Module** [#16] labeled "DRAFT SW" to the two terminals on the **Pressure Switch Assembly** [#4].
- 8.12 Secure the end of the **Vacuum Hose** [#2] the inlet port on the **Pressure Switch Assembly** [#4] with one of the provided **Hose Clamps** [#10] (**Figure 15**).



**9. Wiring power vent blower to the fireplace.**

9.1 Connect the male three pin connector on the **Plug Wire Harness** [#19] to the female three pin connector on the **Plug Splitter Wire Harness** [#20] (**Figure 16**).

**NOTE:** The connectors are keyed to help prevent wiring mistakes. Make sure the colors of the wires between the two harnesses match when connecting.

9.2 Connect the male plug from the **Plug Wire Harness** [#19] to the main outlet on the left side of the inside of the firebox control compartment. If there are no available outlets, then disconnect the cord that is not a plug splitter and plug that cord into one of the ends of the new splitter that is being installed.

Screw a ground screw through the #10 ring terminal attached to the green wires on the **Plug Splitter Wire Harness** [#20] and into the bottom of the fireplace.

**NOTE:** If the fireplace has another one of these splitters already attached and grounded, it may be easier to just add this ring terminal to the already installed ground screw from the other splitter.

9.3 From the **Power Wire Harness** [#3], unscrew the green two pin connector from the wire using a small flat head screwdriver. Remove the green connector from the wires and discard. Affix and crimp the two **Insulated 3/16" Female Terminals** [#18] to the bare ends of the black wires (**Figure 17**).

**NOTE:** Make sure the terminals are crimped to the wire properly and insulated as household line level voltages will be passing through these wires.

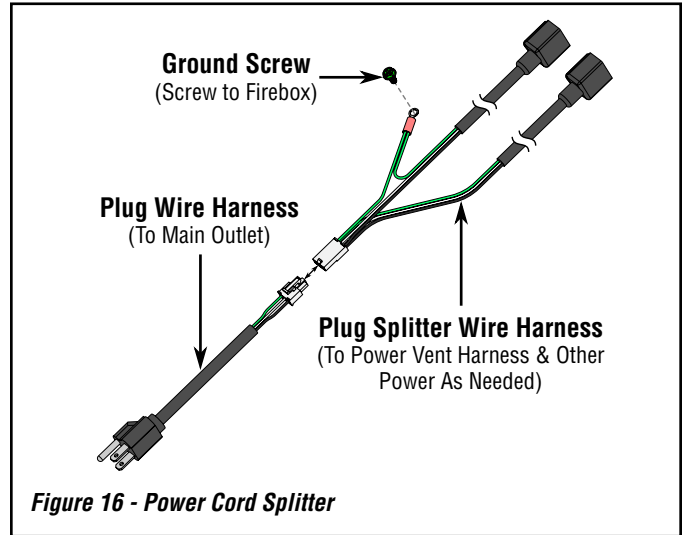
9.4 Connect the **Insulated 3/16" Female Terminals** [#18]—which are now crimped on to the **Power Wire Harness** [#3]—to the **Power Vent Relay** [#12]. These wires must be connected to the two tabs which are parallel with the short side of the relay (**Figure 14**). The order of these two wires to those two tabs do not matter.

9.5 Connect the black wire from the **Power Wire Harness** [#3] to the black wire on the Romex cable coming from the **Power Vent Termination** [#1] (**Figure 17**).

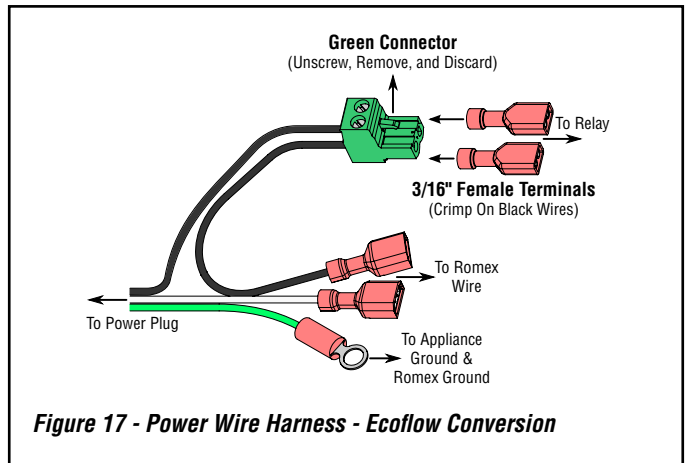
9.6 Connect the white wire from the **Power Wire Harness** [#3] to the white wire on the Romex cable coming from the **Power Vent Termination** [#1] (**Figure 17**).

9.7 Connect the ground wires from both the **Power Wire Harness** [#3] and the Romex cable to any ground screw on the fireplace.

9.8 Connect the male outlet plug from the **Power Wire Harness** [#3] to one of the free ends on the **Plug Splitter Wire Harness** [#20].



**Figure 16 - Power Cord Splitter**



**Figure 17 - Power Wire Harness - Ecoflow Conversion**

### Programming Remote Control to Ecoflow

To pair your remote control to your fireplace, you must do the following:

1. Press and release the momentary LEARN switch on the main fireplace controls. The module will beep indicating that the learning window has started and is ready to accept a new transmitter security code.
2. Press a transmitter button to send any command and the module will generate a series of beeps indicating a signal was received and paired to the remote.

**NOTE:** The LEARN window will remain open for 60 seconds. The control will learn up to 3 different transmitter security codes. These security codes will be retained in memory indefinitely if power is removed.

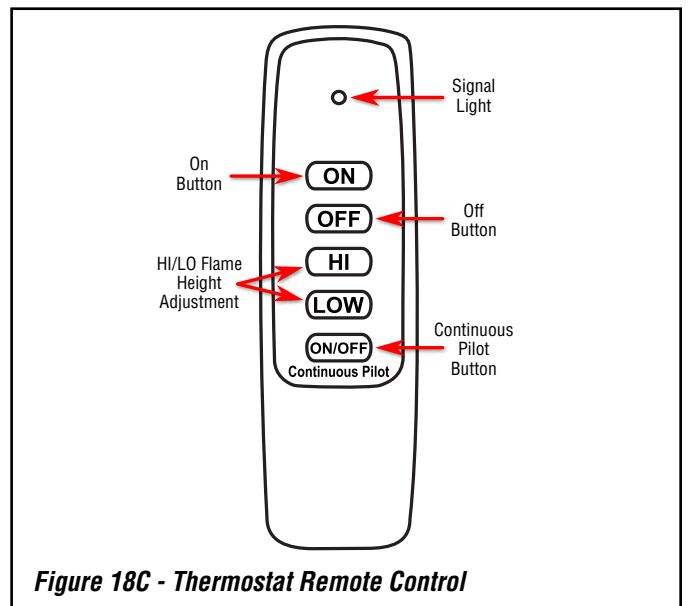
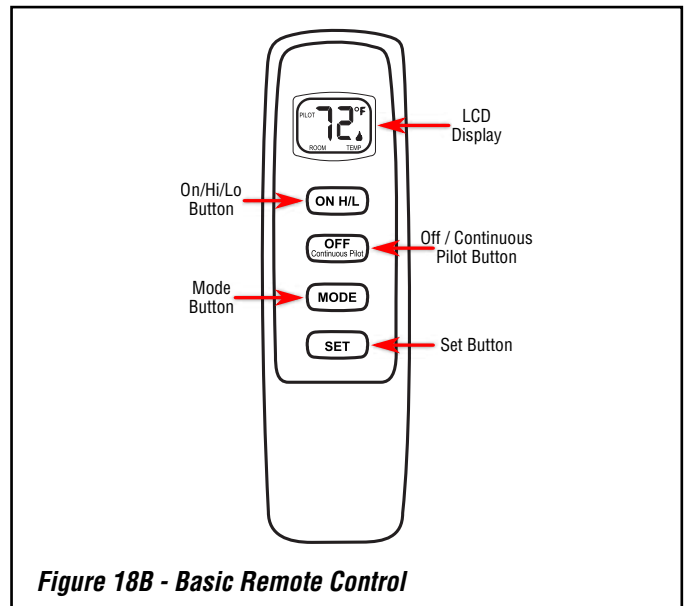
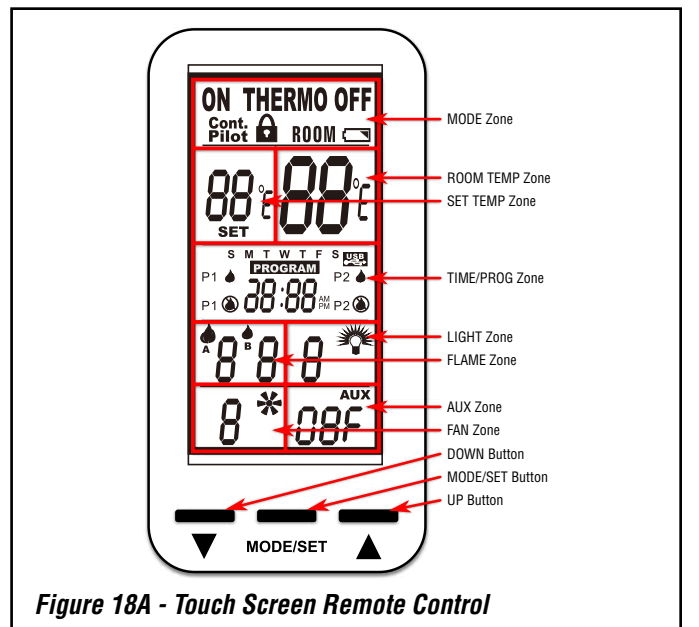
**NOTE:** To clear all transmitter security codes (unpairing all remote controls), press and hold the LEARN switch on the fireplace controls for 6 seconds. A series of 3 long beeps will indicate that the security codes were cleared.

### Converting Control from Natural Draft to Power Vent

The Ecoflow Power Vent system is designed to operate in **intermittent pilot ignition (IPI)** mode only. The remote control must be changed to IPI mode if it is currently set to **continuous pilot ignition (CPI)** mode.

With power connected to the fireplace and remote set to MANUAL OFF, perform the following steps depending on which remote controls are in use:

- **Touch-Screen LCD Remote Control (Figure 18A)**  
If the words "Cont. Pilot" is shown on the MODE Zone of the LCD, then the continuous pilot mode is on and must be turned off. To deactivate the Continuous Pilot feature, press and hold the MODE/SET and UP buttons simultaneously for 5 seconds. When deactivated, the "Cont. Pilot" indicator in the MODE zone will turn off.
- **Basic Remote Control (Figure 18B)**  
If the power vent is turning on and the pilot is lighting when the remote control is paired to the fireplace, then the continuous pilot mode is on and must be turned off. To deactivate the Continuous Pilot feature, press the ON/OFF Continuous Pilot button.
- **Thermostat Remote Control (Figure 18C)**  
If the word "PILOT" is shown on the LCD, then continuous pilot mode is on and must be turned off. To deactivate the Continuous Pilot feature, press and hold the OFF Continuous Pilot button for 5 seconds. When deactivated, the word "PILOT" will disappear from the LCD display.



**Allume Series Fireplaces - Configure fireplace for Power Vent Operation**

**10. Set restrictor plates.**

**NOTICE**

The Power Vent Kit requires that the restrictor plates on the fireplace are set to a certain position for the fireplace to operate correctly. This setting supersedes the settings specified in the *Appliance Installation Instructions*.

10.1 Remove the **front glass door**. Locate the spring-loaded door latches on top of the door, then pull and lift the latches to release the door from the fireplace. Carefully lift door out of channel on the bottom and set aside.

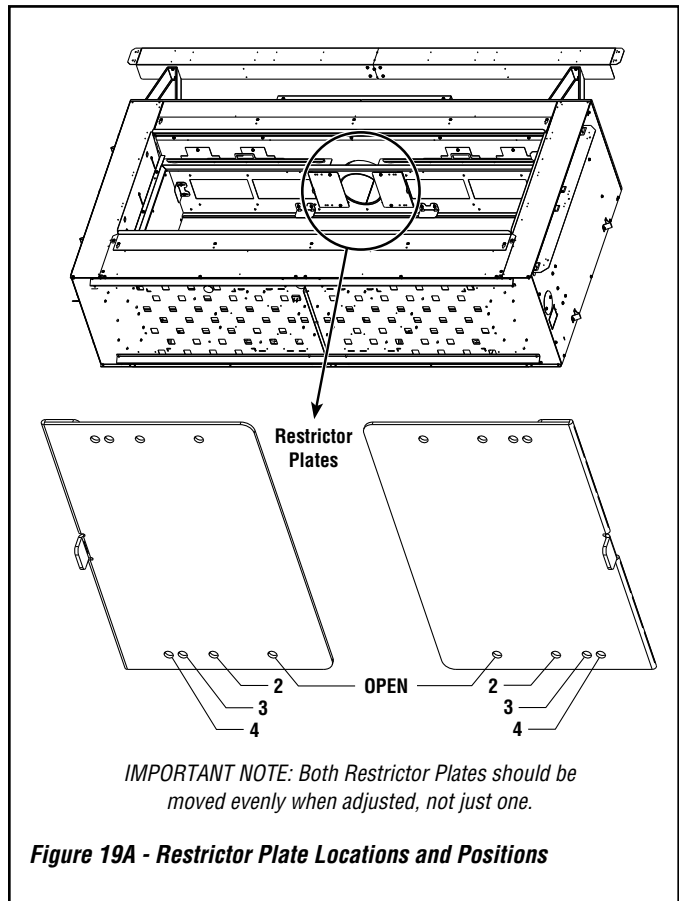
10.2 Specific fireplace models have a **flue baffle** (*Figure 19B*) located directly below the restrictor plates and flue pipe exhaust inside the top of the firebox. If installed, temporarily remove the baffle to access the restrictor plates.

**NOTE:** If present on fireplace model, this baffle is **REQUIRED** for safe and proper operation of the fireplace and **MUST** be reinstalled after adjusting the restrictor plates.

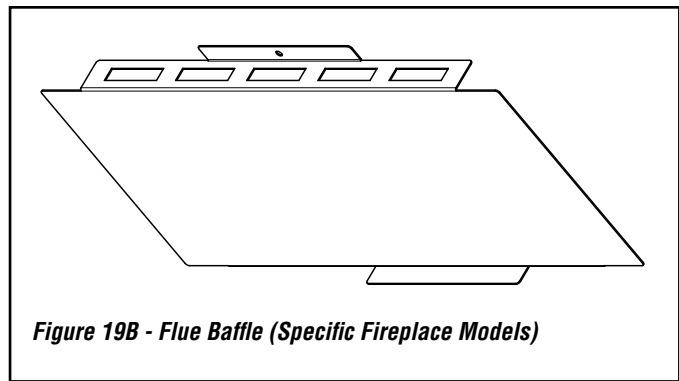
10.3 Remove screws holding the **restrictor plate(s)** to the top of the firebox. Mount the restrictor plates back to the firebox using **hole position #4** (closed position). See *Figure 19A* and *19C* for plate hole locations and restriction settings.

10.4 Reinstall **flue baffle** if removed in **Step 10.2**. Insert baffle into top of firebox with the back side angled up. It should fit into a channel at the top rear of the firebox. Pivot the baffle up, align small hole with screw hole in the center of the firebox, and reinstall screw.

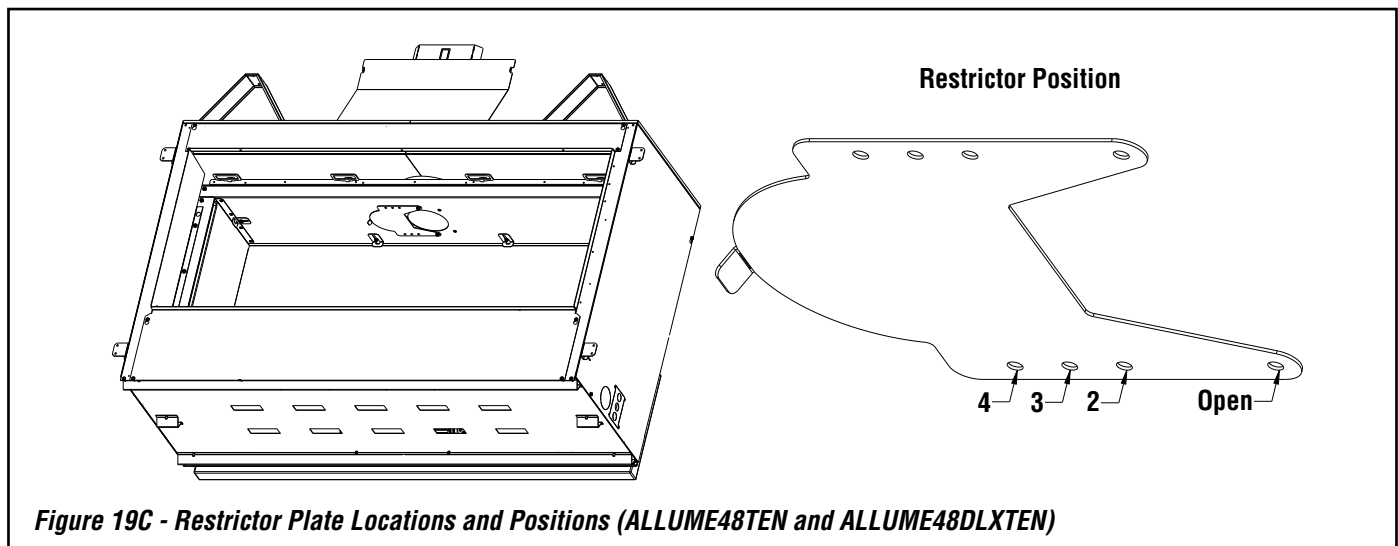
10.5 Reinstall the **front glass door** by performing the same steps to remove it except in reverse order.



**Figure 19A - Restrictor Plate Locations and Positions**



**Figure 19B - Flue Baffle (Specific Fireplace Models)**



**Figure 19C - Restrictor Plate Locations and Positions (ALLUME48TEN and ALLUME48DLXTEN)**



## Sequence of Operation

After the fireplace is turned on by the remote or wall switch the control will automatically:

1. Check to see if the pressure switch is open (no vacuum).
2. Close contact at PV CALL and turn on the Power Vent (there may be up to 5 sec. delay for this step).
3. Wait for the power vent to get up to speed and create enough vacuum to close the pressure switch contacts.
4. Complete the 15 second pre-purge to clear the firebox of any residual gas or combustion products.
5. Start the pilot and Main Ignition sequence.

## POWER VENT OPERATING INSTRUCTIONS

### Appliance Operation

Familiarize yourself with the gas control valve that your appliance uses. Refer to your fireplace *Installation Instructions* for the location of the gas control valve on your specific fireplace.

To light the appliance, refer to the detailed lighting instructions in the fireplace *Care and Operation Instructions* or on the pull-out lighting instruction labels attached to the gas control valve.

### Purge Cycle

The Power Vent Termination has an exhaust blower that expels the exhaust gases from the venting system. Read "NOTICE REGARDING PURGE CYCLE," **below**.

#### NOTICE REGARDING PURGE CYCLE

**This is a power-vented fireplace that requires household electrical power to operate. When the fireplace is turned OFF, the exhaust blower will continue to operate for up to two minutes, to purge exhaust gases from the venting system. This system will NOT operate during a power outage.**

If pressure switch is shorted or jumped the control will not turn on the power vent terminal until the pressure switch circuit is opened. After the power vent termination is powered the control must see the pressure switch close before starting ignition sequence.

### Post Purge

When the fireplace is turned off using the Remote Control or Wall Switch, the control system will automatically:

1. Turn off the gas to the Main burner and Pilot Burner.
2. Complete a 2 minute post purge cycle to clear the firebox of residual combustion products (Power vent will stay running during this time).
3. Turn off the Power Vent.

### Power Vent Control Sequences

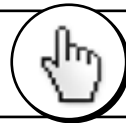
#### Turn ON

1. Turn ON the Thermostat or ON/OFF Switch.
2. The power vent should start immediately and run for about 15 seconds before ignition.
3. The ignitor will start sparking, and the pilot will light.
4. The burner should light after a few seconds.
5. The fireplace and the power vent should run continuously until the Thermostat or ON/OFF Switch is turned OFF.

#### Turn OFF

1. Turn OFF the Thermostat or ON/OFF Switch.
2. The burner and pilot light should be off immediately.
3. The power vent will continue to run for about 120 seconds, and then the blower will stop.

**For additional operating instructions, please refer to the manuals provided with your fireplace.**



Product manuals are available for download at [IHP.us.com](http://IHP.us.com) or [SuperiorFireplaces.us.com](http://SuperiorFireplaces.us.com) (Technical Support tab)

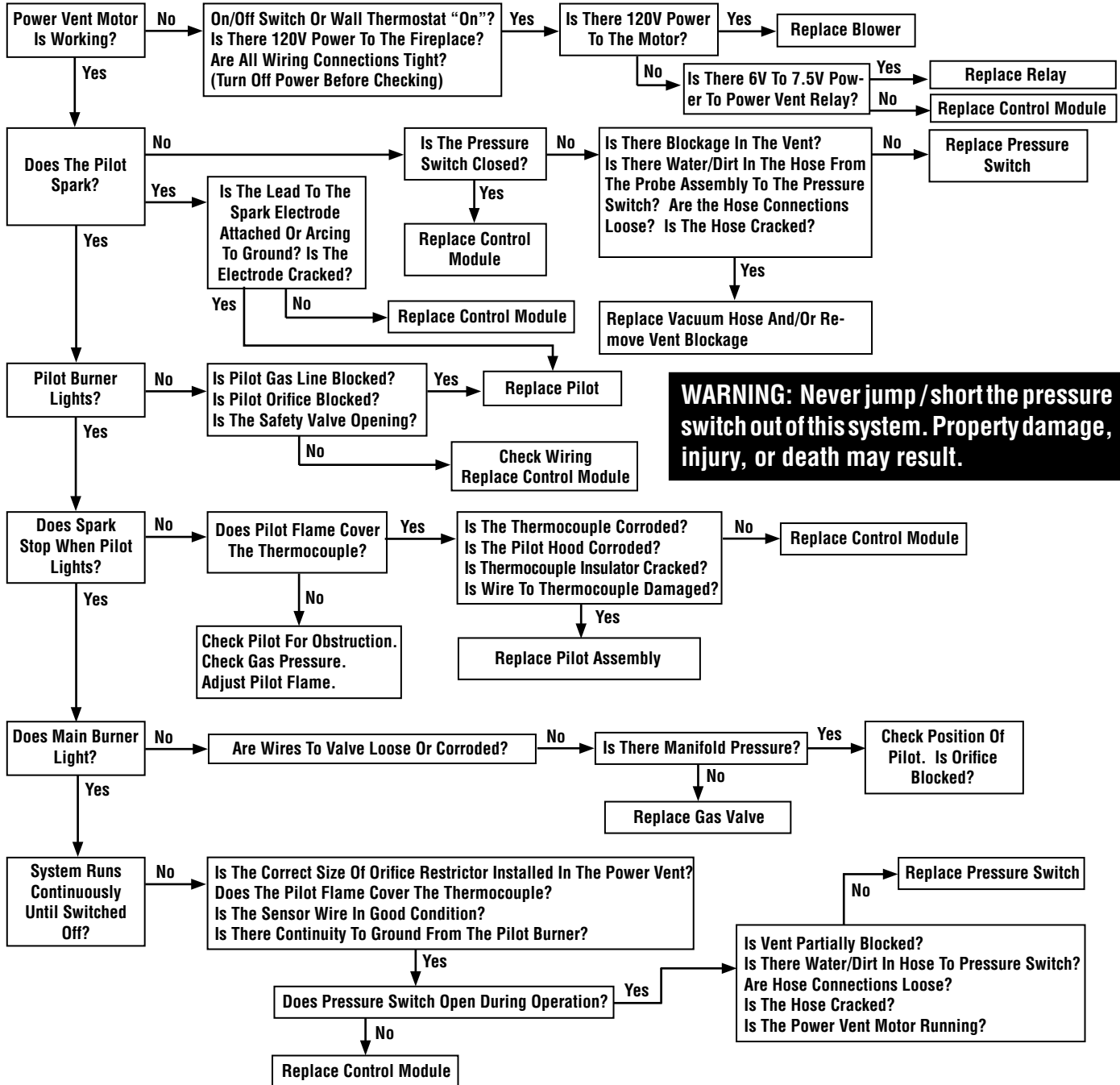
## TROUBLESHOOTING THE POWER VENT SYSTEM

**IMPORTANT:** Service must be performed by a qualified installer, service agency or your gas supplier.

BEFORE COMMENCING TO TROUBLESHOOT THE UNIT:

1. Check if there is power to the unit (fireplace).
2. Check if there is gas to the unit (fireplace).
3. The igniter module in the fireplace is equipped with a lockout device, which will put the unit into a lockout condition. Follow the steps in the chart below to reset the control: Turn the On/Off switch to the Off position, or turn the thermostat to the Off position.
4. If this is the first time that the unit has been fired, check the wiring of the unit against the wiring diagram before commencing troubleshooting.

START



**WARNING: Never jump / short the pressure switch out of this system. Property damage, injury, or death may result.**

**INSTALLATION ACCESSORIES**

**IMPORTANT NOTE:** *The installation accessories shown in this section are part of the safety agency listing for the product models represented in this manual.*

**Table 3A - Listed Secure Vent® Components**

	Cat. No.	Model	Description
The following flashing comes packaged with a storm collar			
	77L78	SV4.5F	Flat Roof Flashing
	77L79	SV4.5FA	1/12 to 7/12 Adjustable Flashing
	77L80	SV4.5FB	7/12 to 12/12 Adjustable Flashing
	77L81	SV4.5SC6	Storm Collar (6 pack)
	H6183	SV4.5HF5	Firestop Spacer, 5", rigid
	H6184	SF4.5HF5	Firestop Spacer, 5", flex
	H2246	SV4.5HF-10	Firestop/Spacer-Horizontal, rigid (3-1-1 spacing), 10 Pack
	H2247	SV4.5VF-10	Firestop/Spacer-Vertical, rigid (1-1-1 spacing), 10 Pack
	F2567	SV4.5VFS	Firestop/Spacer-Vertical, rigid (1-1-1 spacing), Each
	96K92	SV4.5SP	Support Plate
	F3191	SV4.5AdaptorKit	Secure Flex Adaptor Kit <i>Includes rigid to flex adaptor and flex to rigid adaptor (flex not included)</i>
Vent Sections (Rigid)			
	77L70	SV4.5L6	6" (152 mm)
	77L71	SV4.5L12	12" (305 mm)
	77L72	SV4.5L24	24" (610 mm)
	77L73	SV4.5L36	36" (914 mm)
	77L74	SV4.5L48	48" (1219 mm)
	77L75	SV4.5LA	Telescopic Length Slip Section ❶ (2" to 7-1/2" rigid)
	77L76	SV4.5E45	45° Elbow, Corrugated
	77L77	SV4.5E90	90° Elbow, Corrugated
	H5816 750,247M	SV4.5- TWSK10	Through Wall Shield Kit (to shield direct-vent pipe from blown insulation)(see 750247M)

**Table 3B - Listed Secure Flex® Components**

	Cat. No.	Model	Description
These termination kits include firestop/spacer, gear clamps, and flex adaptor.			
	60L10	SF-18	18 ft (5.49 m)* compressed flex (see 750053M)
	98K03	SF-12	12 ft (3.66 m)* compressed flex (see 750052M)
	H2248	SF4.5HF-10	Firestop/Spacer, Horizontal, flex (3-1-1 spacing), 10 Pack
	H2249	SF4.5VF-10	Firestop/Spacer, Vertical, flex (1-1-1 spacing), 10 Pack
	91L66	SFGC4-6	Gear Clamp 4.5" (114 mm) for flex (6-pack)
	91L67	SFGC7-6	Gear Clamp 7.5" (190.5 mm) for flex (6-pack)
	96K93	SV4.5SU	Support Strap
	H3907	SV4.5ARSA	Attic Insulation Shield with adjustable height, 12-22"
	10K81	SFMP	Mill-Pac, Black, High-Temperature Sealant
	89L40	SFMP-12	Mill-Pac, Black, High-Temperature Sealant (bulk 12-pack)
	H7748	----	36" Flex Connector Kit. 36" of flex with two adaptors for mating two rigid sections of vent together.

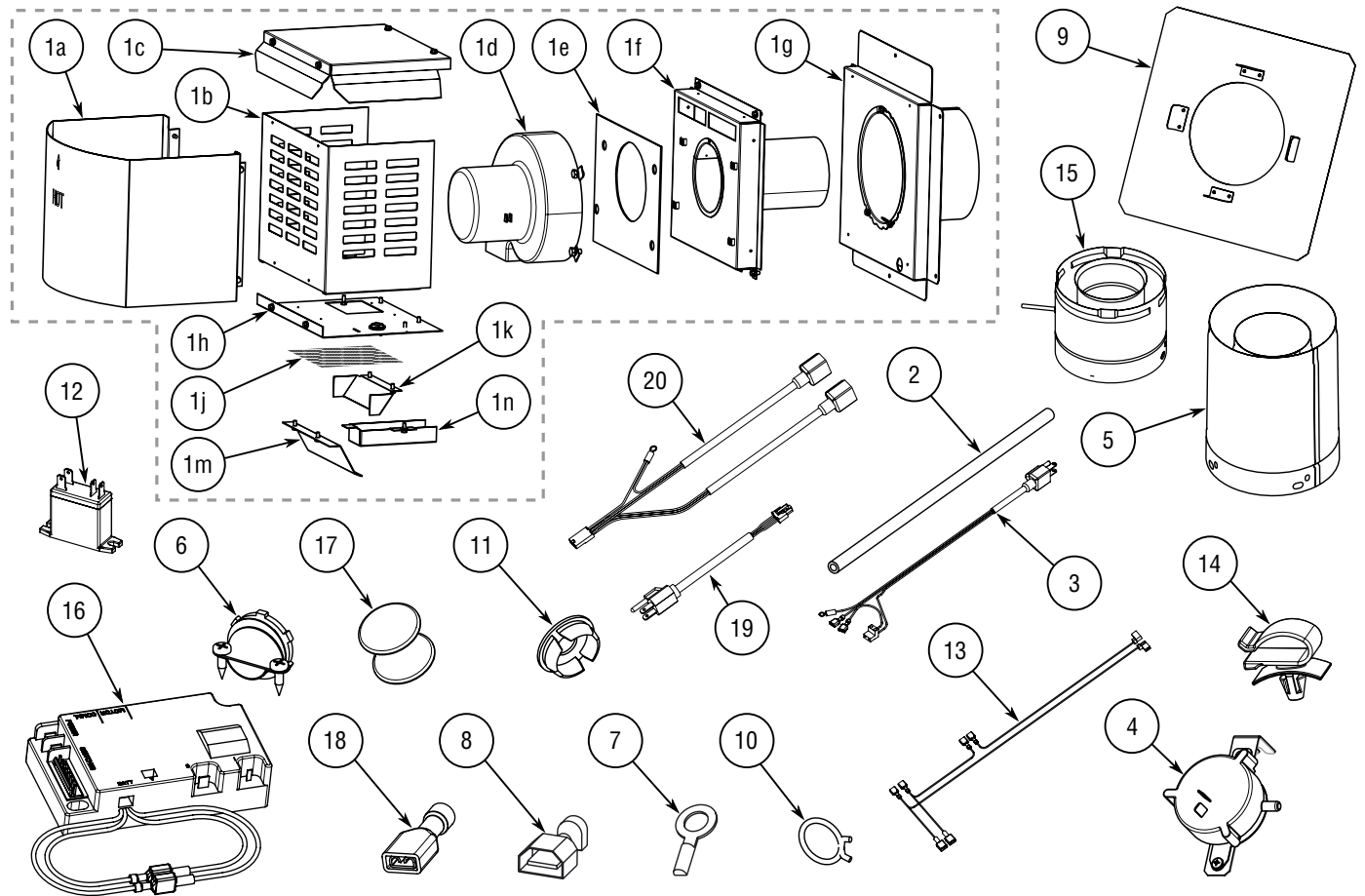
\*All compressed flex vents can be expanded up to two times.

❶ **The 20" slip section can be field cut to desired size (new length must allow a minimum of 1-3/4" overlap within pipe). Deburr cut edges as necessary.**

### POWER VENT REPLACEMENT PARTS

Item	Cat./Part No.	Description	Qty.
1	H7372	Termination Power Vent	1
1a	---	Wrapper Cover	1
1b	---	Wrapper	1
1c	---	Wrapper Top	1
1d	---	Blower Assembly	1
1e	---	Blower Gasket	1
1f	---	Kicker Assembly	1
1g	---	Base Assembly Power Vent	1
1h	---	Wrapper Bottom	1
1j	---	Wire Mesh	1
1k	---	Diverter Back	1
1m	---	Diverter Front	1
1n	---	Wiring Cover	1
2	---	Vacuum Hose (13 ft.)	1
3	---	Power Wire Harness	1
4	H8329	Pressure Switch Assembly	1

Item	Cat./Part No.	Description	Qty.
5	---	Termination Adaptor	1
6	---	Strain Relief	1
7	---	Ring Terminal - #10	1
8	---	Insulated 1/4" Male Terminal	5
9	---	Firestop Assembly (Horizontal)	1
10	---	1 1/32" Hose Clamp	2
11	---	Plastic Bushing	1
12	---	Wire Adaptor, Female/Male	1
13	---	Wire Adaptor, Female/Female	1
14	---	Plastic Clip	2
15	J7996	Probe Assembly	1
16	---	Ecoflow Power Vent Module	1
17	---	Velcro Circle Loop & Hook Set	1
18	---	Insulated 3/16" Female Terminal	2
19	---	Plug Wire Harness	1
20	---	Plug Splitter Wire Harness	1



NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

Innovative Hearth Products (IHP) reserves the right to make changes at any time, without notice, in design, materials, specifications, prices and also to discontinue colors, styles and products. Consult your local distributor for fireproof code information.