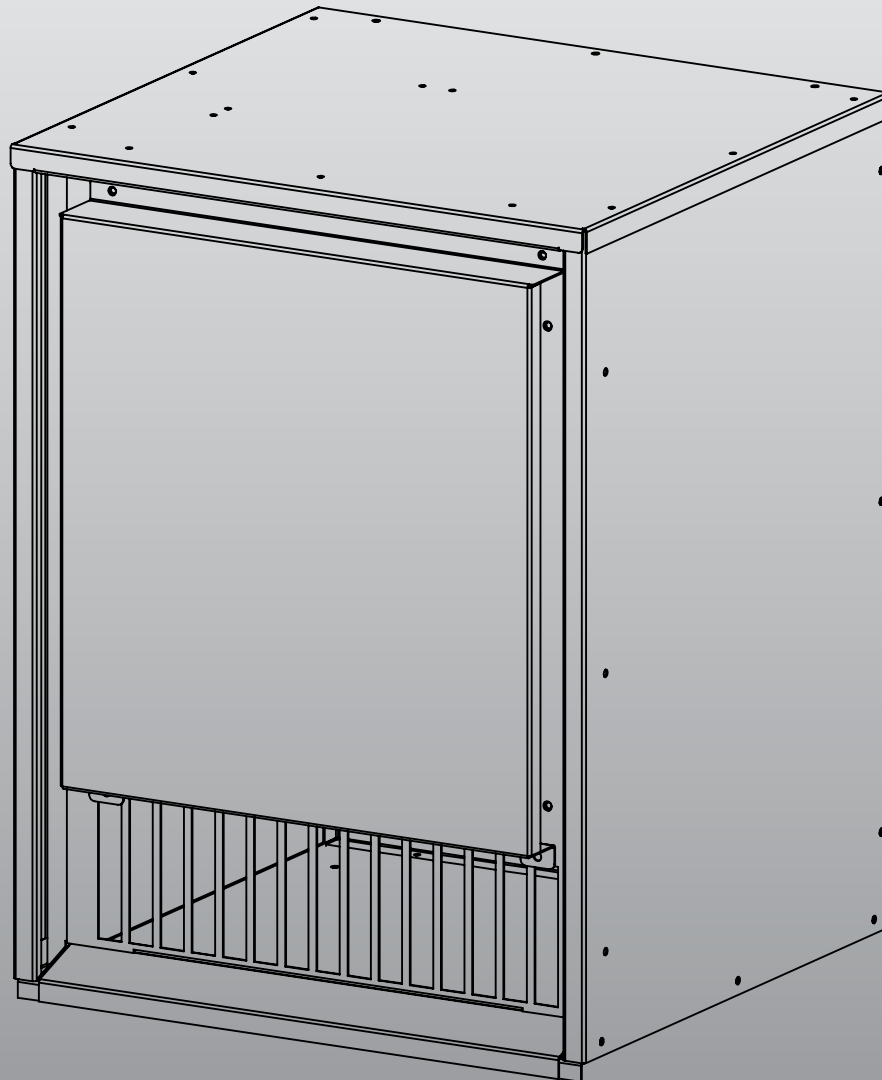


URBANA

LUXURY FIREPLACES

50-4333 High Output Horizontal Power Vent

INSTALL MANUAL



RECOGNIZED
COMPONENT



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. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

Intertek
C#4001609

TESTED TO: ANSI Z21.50 / CSA 2.22 VENTED GAS FIREPLACE HEATERS

50-4333

This manual to be used by qualified installers only

Specifications 3

- Dimensions 3
- Kit Contents 3

Installation 4

- Venting 4
- Exhaust Restriction 6
- Termination Restrictions & Clearances 7
- Termination Framing 8
- Termination 9

Wiring 10

- Termination 10
- Diagram 12
- Fireplace 13

Enable PV Mode 14

Troubleshooting 15

Parts List 16

DIMENSIONS:

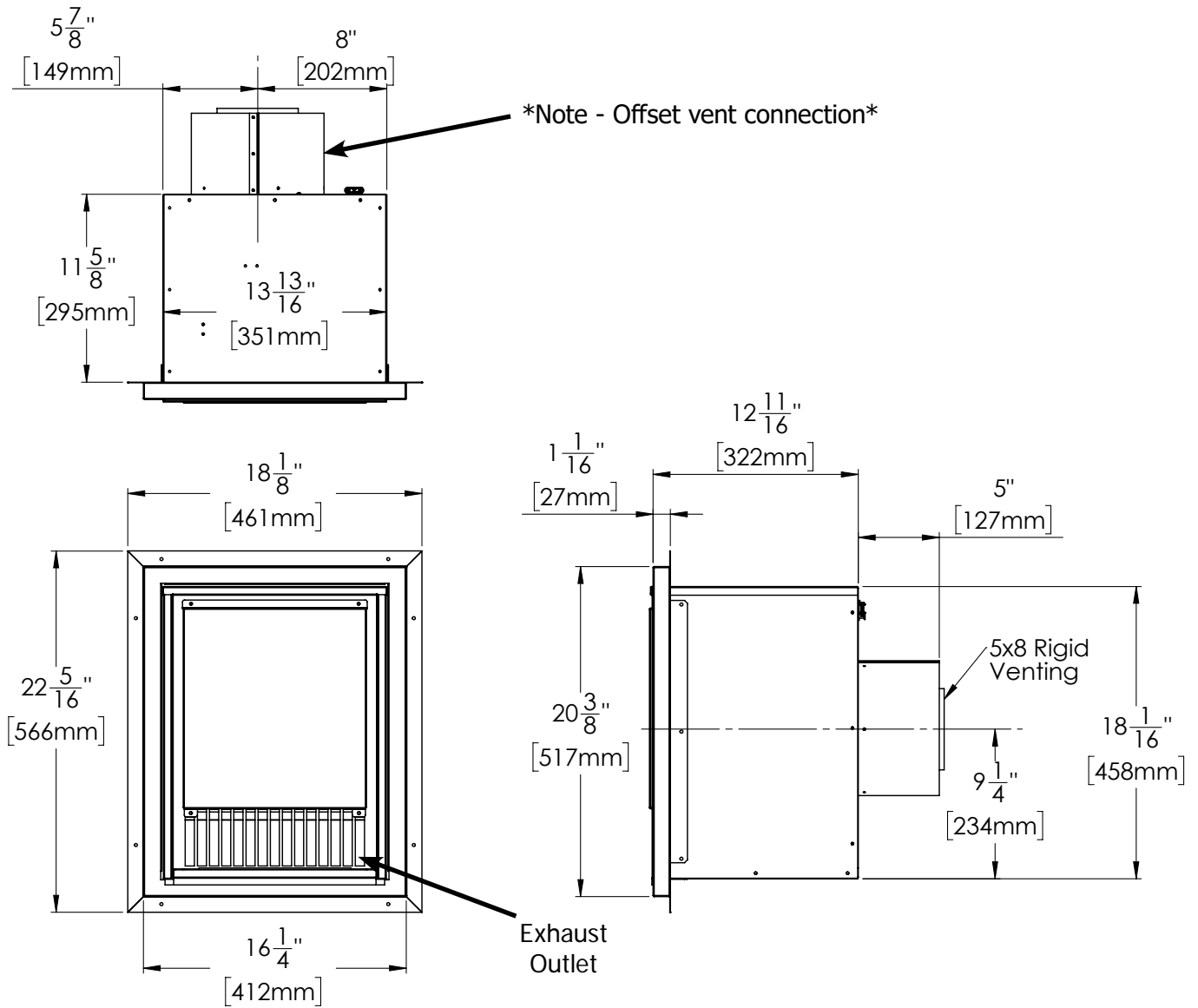


Figure 1: Power Vent Dimensions

KIT CONTENTS:

The table below outlines the complete contents of the High Output Horizontal Power Vent Kit (50-4333). Refer to the parts diagram section of this manual for reference and ensure that your kit is complete and undamaged.

Table 1: Power Vent Kit Contents

Part Description	Qty
Power Head Assembly w/ Finishing Face	1
Framing Thimble Assembly w/ Inner Wall Cover	1
5 Lead Cable - 110ft / 33.5m	1

Plan out the venting and wiring installation. Important notes to consider when planning where the venting will be installed:

- **Approved Venting:** This power vent kit has been approved for use with only 5 x 8" co-axial rigid venting.
- **Minimum total venting run allowed is 20 ft (6.1m).** If required venting run is shorter than 20ft (6.1m) the fireplace must be direct vented. See fireplace installation manual for further information regarding permitted venting and restrictions.
- **Maximum total venting run allowed is 66 ft (m)** ($V_1 + H_1 + V_2 + H_2 + H_3 + H_4 + H_5$), refer to Figures 2. Note, linear lengths of vent count the same whether in the vertical or horizontal plane.
- **Maximum negative vertical run allowed is 4ft (1.2m)** as measured from the elbow where it started (see V2 in Figures 2).
- Multi-elbow installations are possible with a **maximum of six (6) 90° elbows** (two (2) 45° elbows is equivalent to one (1) 90° elbow)

NOTE: A 90° elbow in the horizontal plane is equivalent to 3' of vent and a 45° elbow in the horizontal plane is equivalent to 1 1/2', these equivalencies must be added to the total vent length.

- **U55 models: Additional 8 x 11" to 5 x 8" vent reducer required (not included)** for all power vent installations. Refer to Table 2 below for the required part number.

Table 2: Vent Reducer

8 x 11" to 5 x 8" Vent Reducer			
Brand Name	ICC EXCELDirect	Metal-Fab Sure-Seal	Urbana
Part Number	R85	8DV5A	50-4022

- **Venting Clearances:** 1" (25 mm) clearance to combustibles must be maintained around any vertical vent pipe. Around a horizontal vent pipe, the clearance to combustibles should be 2" (51 mm) above and 1" (25 mm) on the sides and bottom. When combustible materials are directly above a 90° elbow, 3" (76 mm) of clearance is necessary. **Additionally** all venting clearances, within the chase, must be followed as listed in the fireplace installation manual.

U55

*After reducer, no initial rise (V1) is required prior to an elbow.

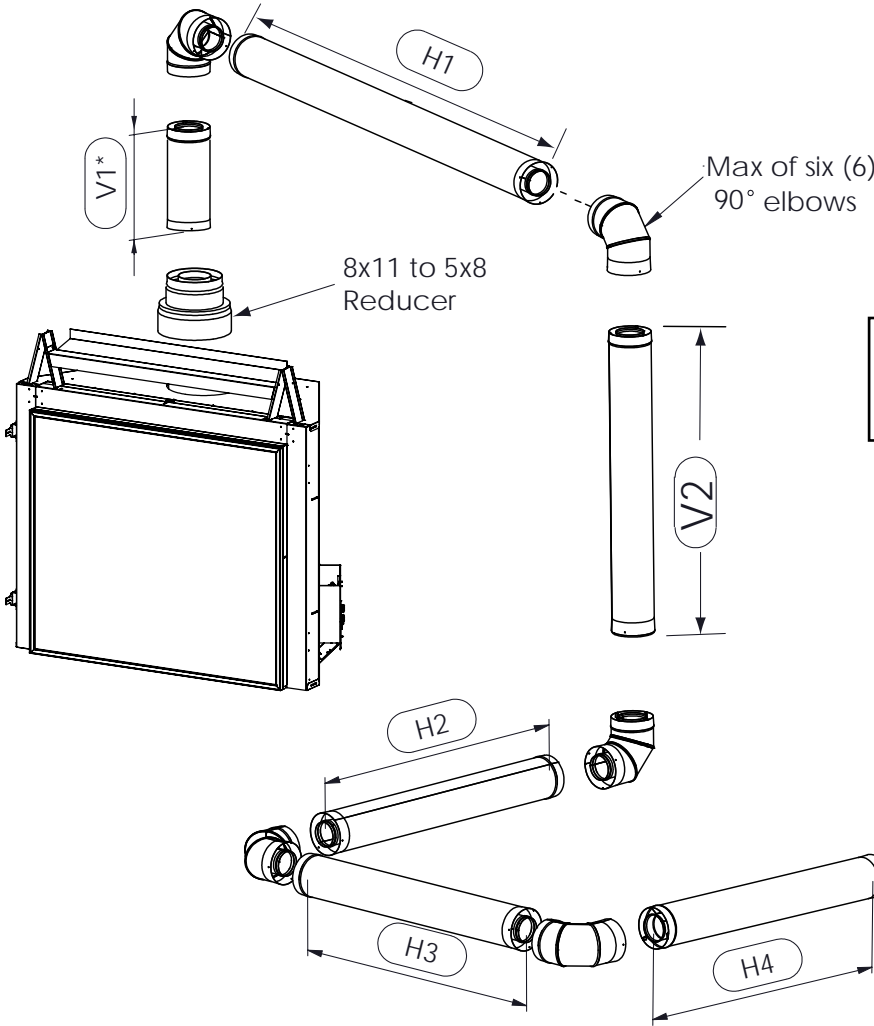


Figure 2: U55 Power Venting

For proper operation, the correct restrictor setup is critical when power venting an Urbana fireplace.

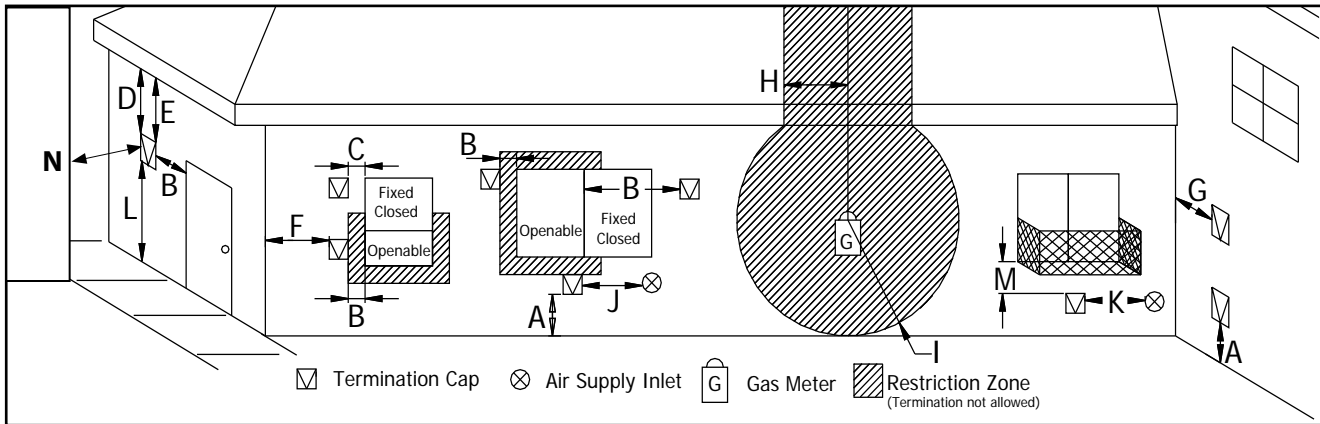
The total vent length and number of elbows is important where as horizontal and vertical length is less important. Remember to consider elbows in the HORIZONTAL plane account for total vent length.

Calculate the total vent length accounting for horizontal plane elbows to confirm it is within the permitted limits and refer to the chart below (Table 3) for the correct restrictor setup. Your climate and altitude may alter what restrictor is required for your particular application. Refer to the fireplace's manual for instructions regarding the restrictor adjustment.

Table 3: Restrictor Settings

Fireplace	U55	
Fuel Type	NG	LP
Vent Length	Restrictor Setting	
20ft	Setting 3	Setting 3
25ft		
30ft		
35ft	Setting 2	Setting 2
40ft		
45ft		
50ft		
55ft	Setting 1	Setting 1
60ft		
66ft		

Table 4: Vent Termination Restrictions & Clearances



Letter	Canadian Installation ¹	US Installation ²	Description
A	12 in (30 cm)		Clearance above grade, verandah, porch, deck, or balcony.
B	12 in (30 cm)	9 in (23 cm)	Clearance from window or door that may be opened.
C	12 in (30 cm)*		Clearance from permanently closed window (to prevent condensation).
D	0 in (0 cm)		Vertical clearance to ventilated soffit located above the terminal, within a horizontal distance of 2 ft (60 cm) from center line of terminal.
E	0 in (0 cm)		Clearance to unventilated soffit.
F	12 in (30 cm)*		Clearance to outside corner.
G	4 in (10.2 cm)		Clearance to inside corner.
H	3 ft (91 cm) within a height of 15 ft (4.5 m) above the meter/regulator assembly	3 ft (91 cm) within a height of 15 ft (4.5 m) above the meter/regulator assembly*	Clearance to each side of center line extended above meter/regulator assembly.
I	3 ft (91 cm)	3 ft (91 cm)*	Radial clearance around service regulator vent outlet.
J	12 in (30 cm)	9 in (23 cm)	Clearance to non-mechanical air supply inlet to building, or the combustion air inlet to any other appliance.
K	6 ft (1.83 m)	3 ft (91 cm) above if within 10 ft (3 m) horizontally	Clearance to mechanical air supply inlet.
L	7 ft (2.13 m) [†]	7 ft (2.13 m) ^{*†}	Clearance above paved sidewalk or paved driveway located on public property.
M	0 in (0 cm) ⁺		Clearance under verandah, porch, deck, or balcony.
N	3 ft (91 cm)		Clearance to an adjacent building, wall, or structure

¹ In accordance with the current CSA B149, Natural Gas and Propane Installation Code.

² In accordance with the current ANSI Z223.1 NFPA 54, National Fuel Gas Code.

* These numbers are only estimates.

[†] A vent shall not terminate directly above a side walk or paved driveway that is located between two single family dwellings and it serves both dwellings.

⁺ Permitted only if verandah, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

Clearances are in accordance with local installation codes and the requirements of the gas supplier.

1. Determine the location of the power vent termination based on Table 5 Vent Termination Minimum Clearances on the previous page.

NOTE: The Urbana Power Vent Kit allows for a **minimum wall thickness of 8" (203mm)** and a **maximum wall thickness of 12" (305mm)**.

2. Cut and frame an opening that is **20 1/4" (514mm) tall by 14 5/8" (371mm) wide** for the exterior thimble as shown in Figure 7.

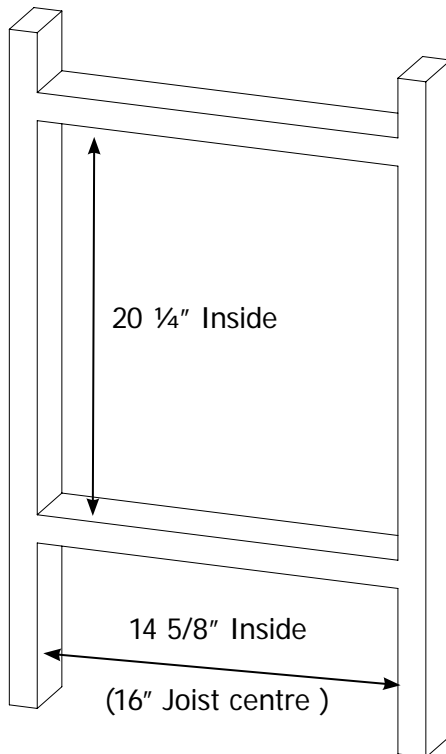


Figure 7: Power Vent Framing Dimensions

4. Repeat step 2 for the interior thimble using the same dimensions.

5. Repeat step 3 by sliding the interior thimble, identified with a "2" on the face, around the sleeve of the exterior thimble. The interior thimble does NOT have a notch at the top, again ensure the thicker border is at the bottom.

NOTE: Ensure the two framed openings are the same height from the ground as thimble alignment will be greatly impacted.

6. Mount the inner wall plate to the interior thimble using eight (8) of the supplied black screws as shown in Figure 9.

3. Fasten the exterior thimble, using standard wood screws to the framed opening. Making note to install the thimble with the thicker border at the bottom. Refer to Figure 8. Wall cladding can now be applied on top of the thimble while leaving only the opening for the power vent terminal installation.

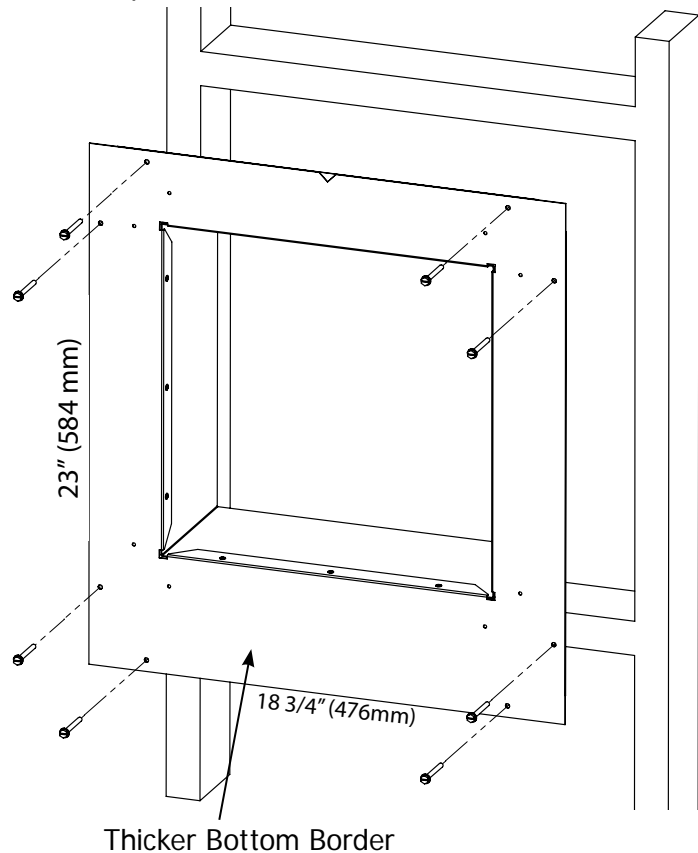


Figure 8: Exterior Thimble Installation

7. Determine the depth that the power vent terminal will sit within the wall. For wall thicknesses greater than 9", the power vent terminal will mount flush with the finishing face. For walls thinner than 9", the power vent terminal will be required to protrude from the finishing face.

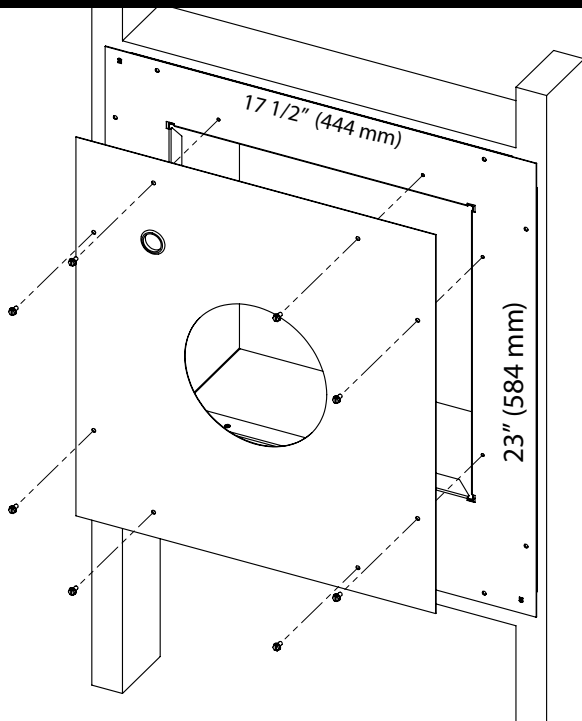


Figure 9: Inner wall plate installed

8. Upon completion of Step 5, mount the finishing face to the power vent terminal using the eight (8) self-tapping screws. Three (3) screws for each side and two (2) screws for the bottom tab. Seal the screw heads with silicone. **IMPORTANT:** Ensure the finishing face is mounted square to the front of the power vent terminal.

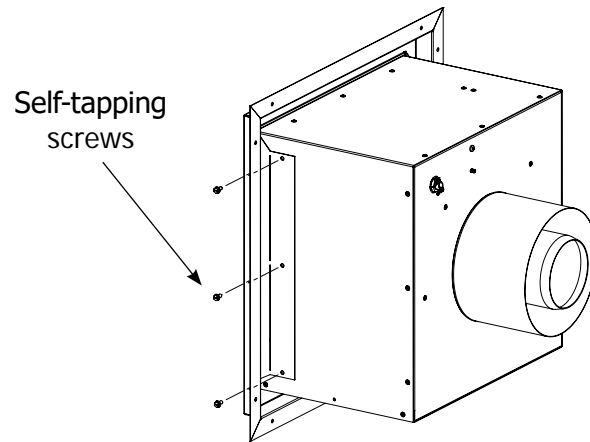


Figure 10: Finishing face installed

To wire the power vent terminal to the fireplace, this kit includes a 5 lead cable that is equal in length to the maximum permitted venting run. BX armored cable (not supplied), similar to furnace wiring, may also be used if desired.

9. BEFORE the power vent terminal is inserted into the wall the 5 lead cable needs to be routed to the termination point.

a) Prepare the cable by stripping each wire in preparation of being attached to the electrical termination block within the power vent.

b) Feed the cable through the rubber grommet in the inner wall plate.

c) Then feed the cable through the strain relief on the back of the power vent terminal. Roughly 3-6" of harness is recommended to be feed into the power vent terminal. See Figure 11 for reference.

d) Tighten the two (2) screws on the strain relief to clamp down and secure the cable within the power vent terminal.

10. Install the power vent terminal into the exterior thimble and fasten in place using eight (8) standard wood screws. See Figure 13 for reference.

NOTE: Be sure to pull any cable slack back through the inner wall plate so it does not bind within the thimbles.

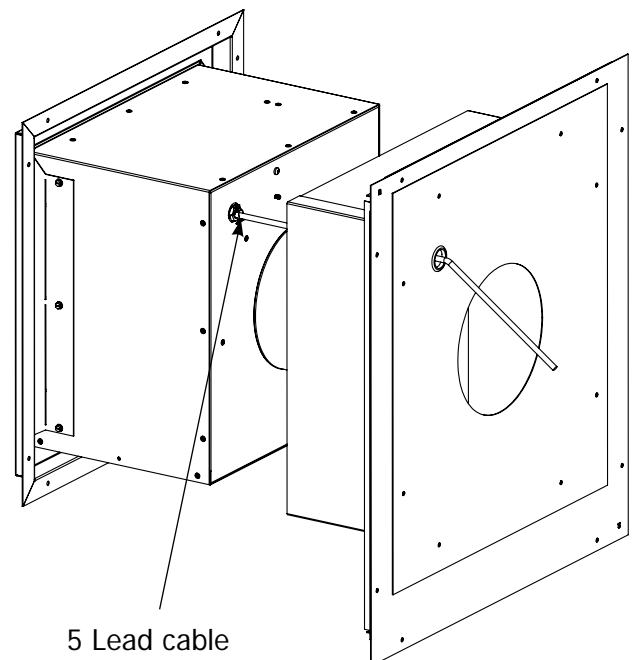


Figure 11: Cable Routing

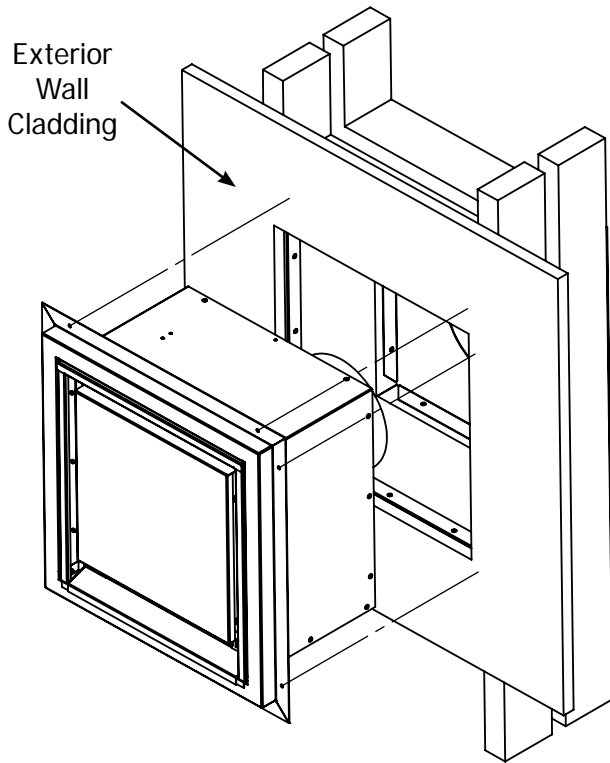


Figure 12: Power vent terminal installation

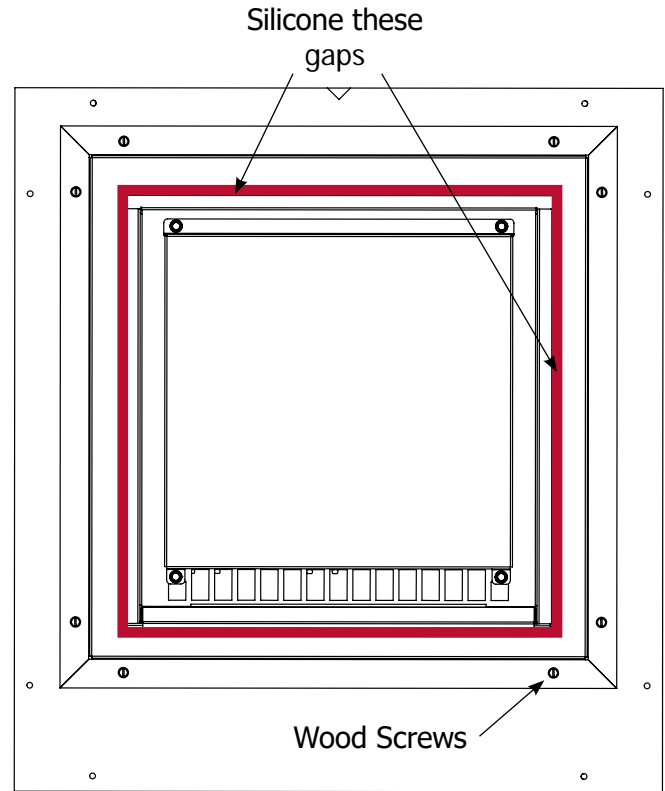
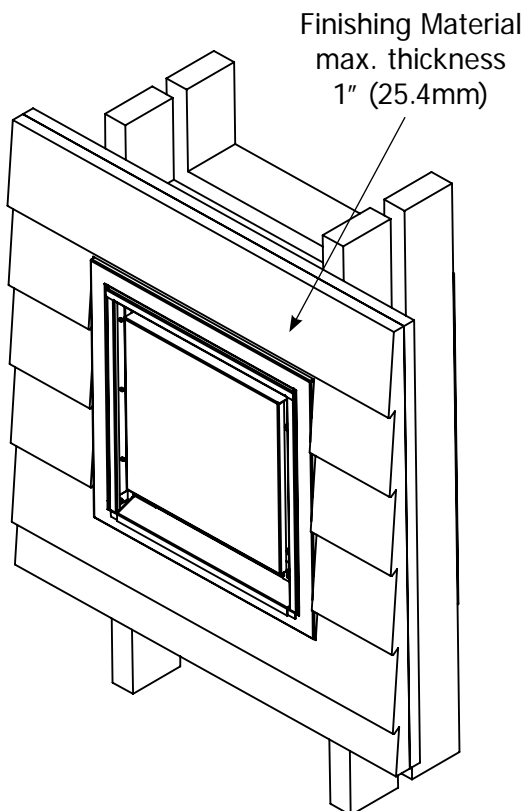


Figure 13: Silicone locations

11. Seal the perimeter of the power vent terminal between the power vent terminal and the finishing face with silicone or caulking. Refer to Figure 13 for exact locations.



12. The exterior wall finishing material can now be installed around the power vent terminal. The finishing material can butt up against the perimeter of the finishing face but the thickness cannot exceed 1" (25.4mm). Refer to Figure 14.

Figure 14: Finishing Material

POWER VENT TERMINATION WIRING:

To wire the power vent terminal to the fireplace, a 5 lead cable is included that is equal in length to the maximum permitted venting run. BX armored cable (not supplied), similar to furnace wiring, may also be used if desired.

NOTE: The cable end with electrical quick connects attached is for wiring to the fireplace. The other end of the cable is for wiring the termination.

1. Remove the power vent's front cover by removing the four (4) #10-24 bolts using a 5/16" nut driver. See Figure 15.
2. Remove the power vent mid plate by removing the six (6) #10-24 bolts using a 5/16" nut driver. See Figure 16.

3. Determine which wires within the 5 lead cable will be used for which connections. Use the terminal block wiring diagram in Figure 17 for reference. The cable consists of 1 ground lead (GREEN), 2 pressure switch leads (RED and BROWN), and 2 blower motor leads (BLACK and WHITE).

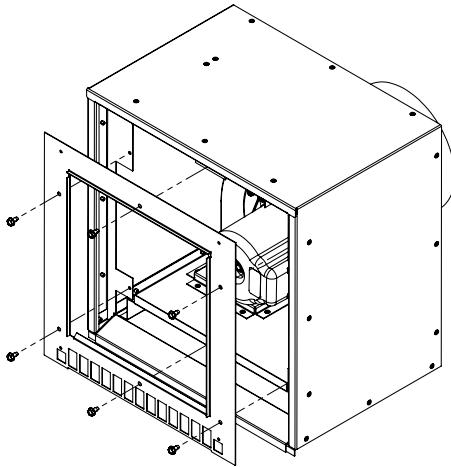


Figure 16: Mid plate removal

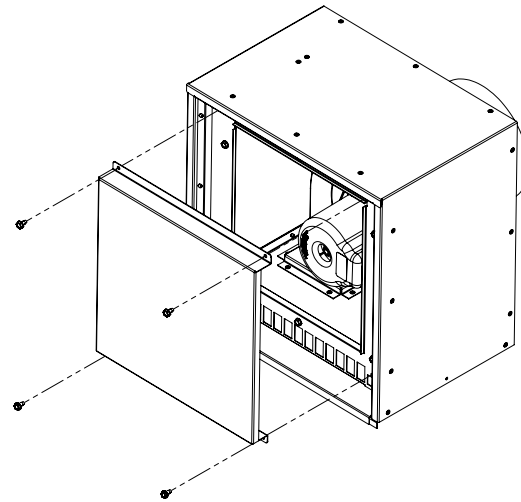


Figure 15: Front cover removal

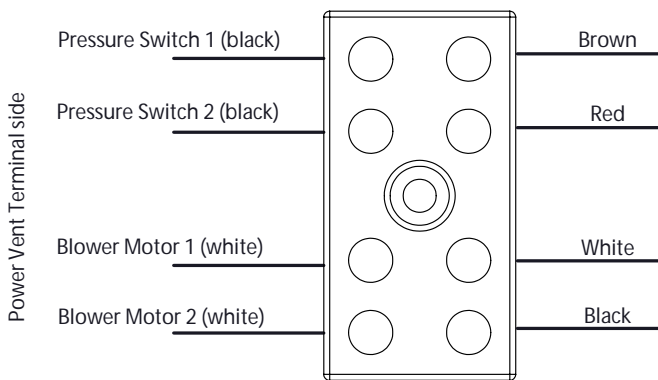


Figure 17: Power Vent electrical termination block wiring

4. Install the ground wire (GREEN) onto the stud above the terminal block and clamp it down between the two nuts. See Figure 18 for reference.

5. Insert the RED and BROWN pressure switch leads into the top two slots in the termination block using a small flathead screwdriver to secure. See Figure 18.

NOTE: Polarity of the leads does not effect operation

6. Insert the BLACK and WHITE blower motor leads into the bottom two slots in the termination block, using a small flathead screwdriver to secure. See Figure 18.

NOTE: Polarity of the leads does not effect operation

7. Reinstall the power vent mid plate and front cover to complete the power vent termination installation.

The fireplace must be electrically connected and grounded in accordance with local codes or, in the absence of local codes, with the current CSA C22.1 Canadian Electrical Code Part 1, Safety Standards For Electrical Installations, or The National Electrical Code ANSI / NFPA 70 in the US.

CAUTION: When servicing controls, label all wires prior to disconnection. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

If any of the original wire supplied with the appliance must be replaced, it must be replaced with 18 AWG wire with a temperature rating of 105°C.

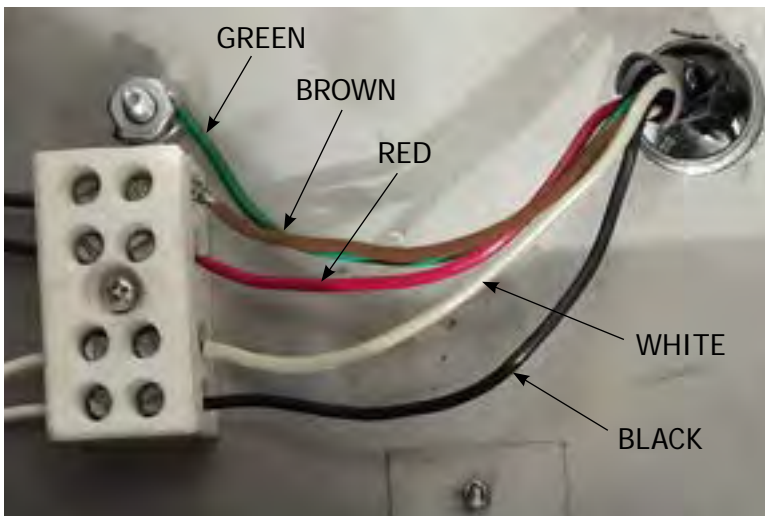


Figure 18: Power vent cable installed

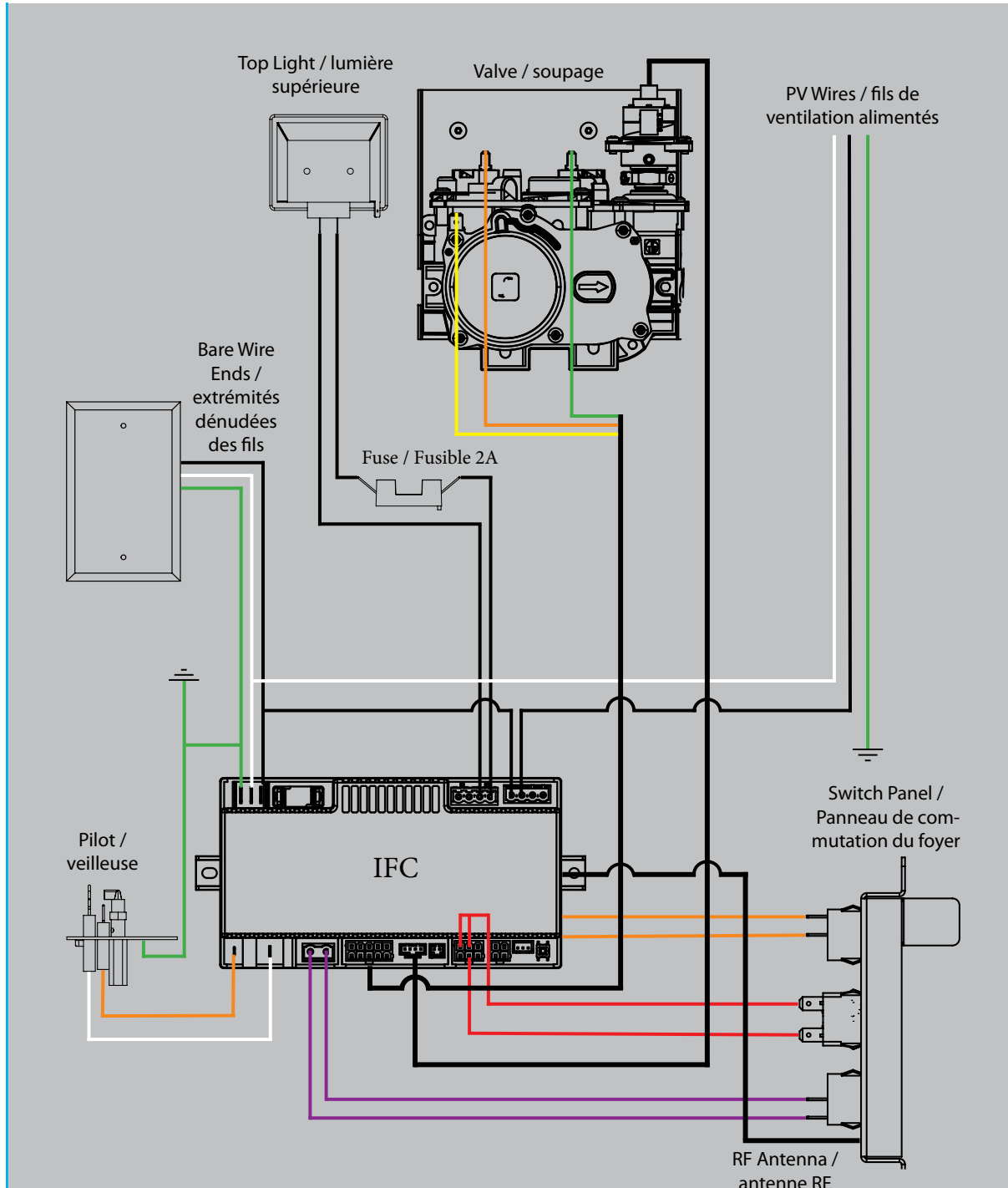


Figure 20: U55 Wiring Diagram

All Urbana fireplaces come pre-wired for power venting to make the wiring as easy as possible.

IMPORTANT: Prior to wiring the fireplace all incoming power must be disconnected.

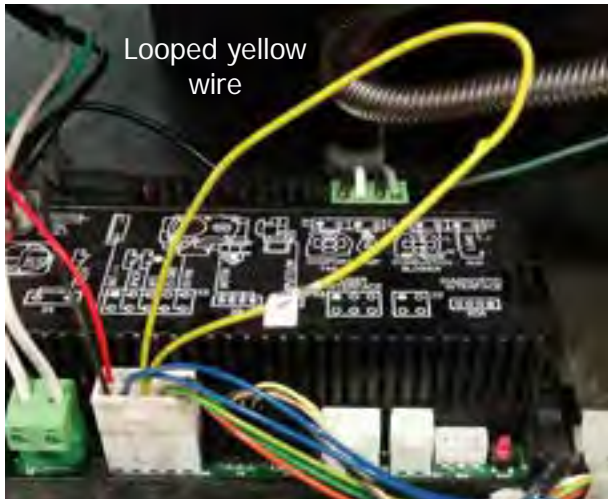


Figure 21: Location of the pressure switch wire

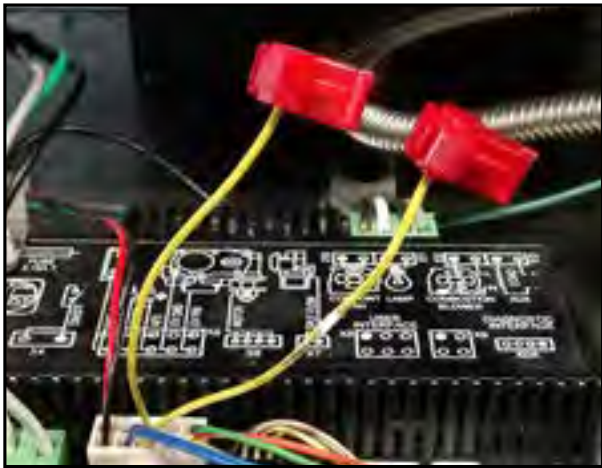


Figure 22: Pressure switch wire taps attached

1. Wiring the pressure switch - The power vent kit utilizes a pressure switch as a safety feature.

IMPORTANT: Proper wiring of the pressure switch is critical for operation of the power vent circuit.

a. Locate the large white 10-pin connector at the front of the IFC, this wiring harness will be modified

b. Locate the looped yellow wire within the wiring harness of the large white plug shown in Figure 21. Note: the wiring harness cable tie may need to be cut for slack, replace the cable tie upon completion.

c. Cut the yellow looped wire at the center of the loop using wire cutters.

d. Attach one of the supplied red wire taps to each of the cut leads as shown in Figure 22. Install the wire taps roughly 1/2" from the end of the leads. Make sure there is an audible click upon closing the wire taps.

Note: the wires do not require stripping when using the supplied wire taps.

2. Routing the 5-Wire Cable - Locate the unused electrical strain relief on the right side of the appliance of U55 models (Figure 24) and route the supplied 5-wire cable through it. Feed enough cable through to reach the IFC then tighten the strain relief.

3. Connecting the 5-Wire Cable - Refer to the wiring diagrams (Figure 19 & 20) while following the directions below.

POWER - Locate the unused BLACK lead on the green terminal block plugged into X12 on the IFC. Connect the BLACK cable lead to it. Next, locate the unused WHITE lead on the 8 position busbar behind the IFC. Connect the WHITE cable lead to it.

GROUND - Locate the unused GREEN wire and connect the GREEN cable lead to it.

PRESSURE SWITCH - Connect the remaining RED and BROWN cable leads to the wire taps installed in step 1. The polarity of the wires doesn't effect operation.

The fireplace power vent wiring is now complete but **DO NOT connect main power yet.**

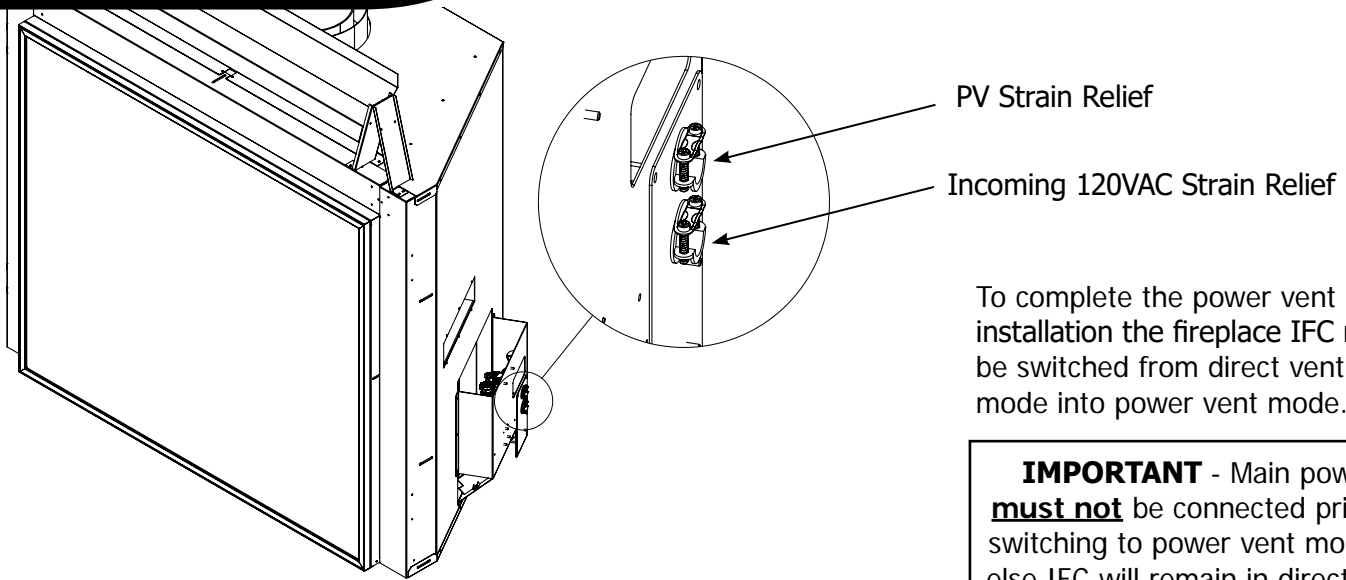


Figure 24: Power Vent Cable Strain Relief (U55 models)

To complete the power vent installation the fireplace IFC must be switched from direct vent mode into power vent mode.

IMPORTANT - Main power **must not** be connected prior to switching to power vent mode or else IFC will remain in direct vent mode

To switch the IFC into power vent (PV) mode locate the fireplace switch panel behind the right side panel on U55 models (Figure 26). The top rocker switch with the cover above it controls the mode setting of the IFC. From the factory the - symbol is down, press the rocker switch so that the **O** symbol is down.. To clarify:

- symbol down = Direct Vent (DV) mode
- O** symbol down = Power Vent (PV) mode

If for some reason the IFC needs to be switched back to DV mode simply press the switch again with main power disconnected. This completes the power vent installation and now main power can be supplied to the fireplace. For fireplace operation refer to the User Manual included with the fireplace.

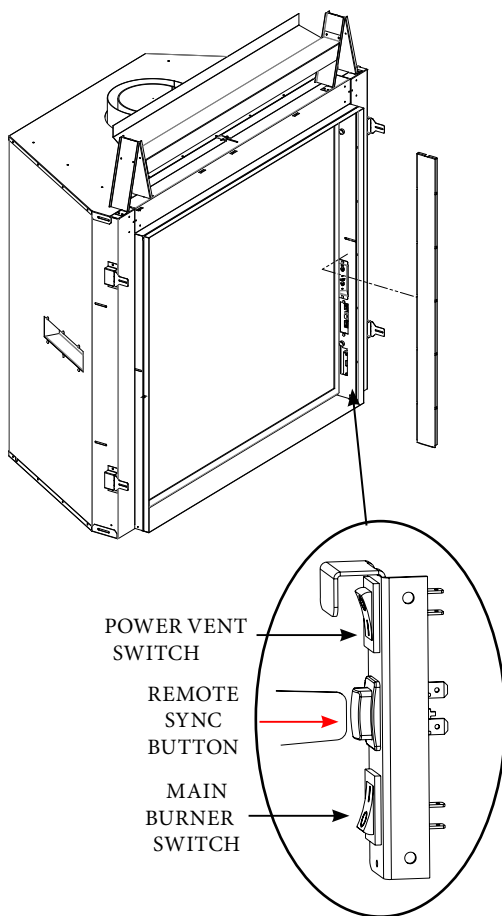
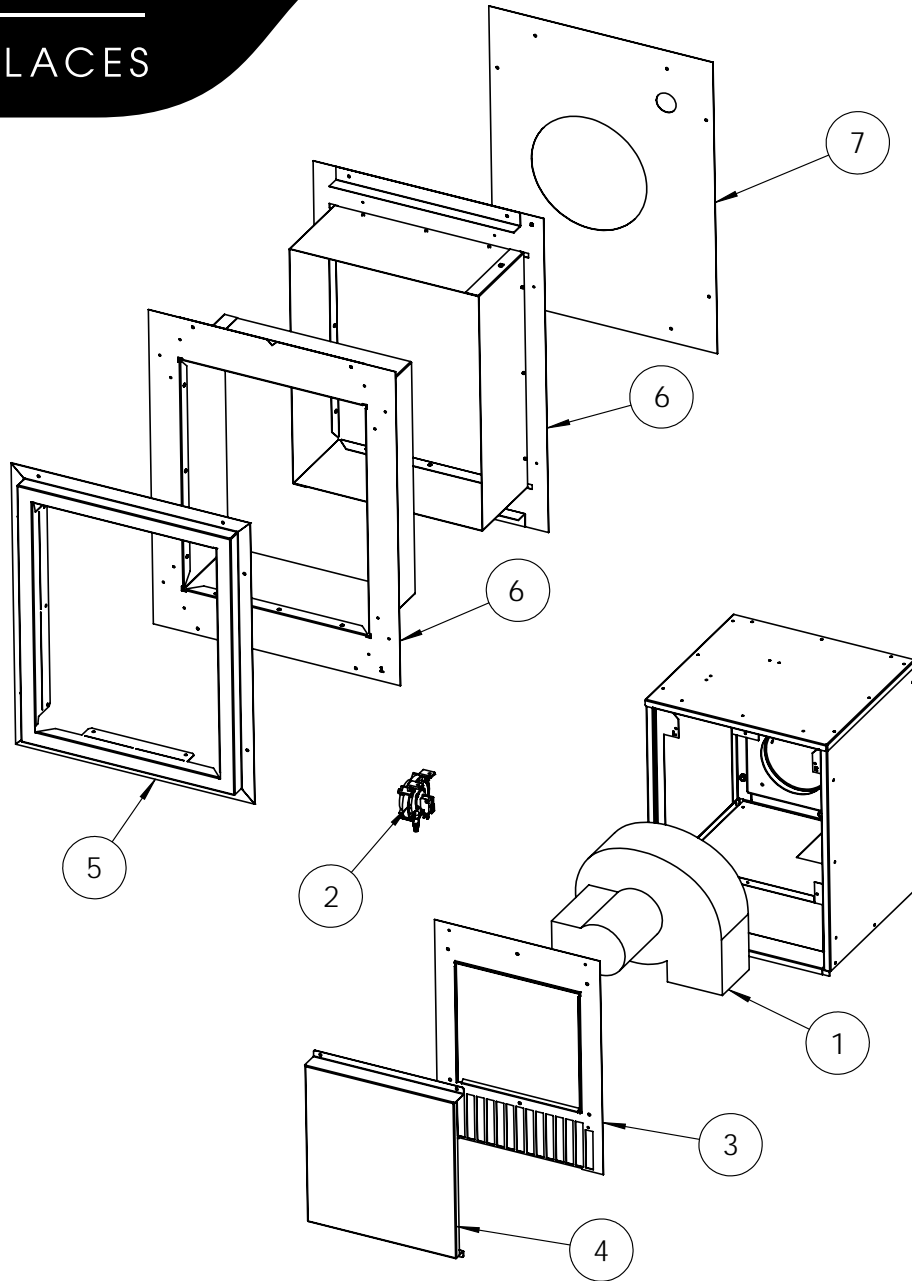


Figure 26: Fireplace Switch Panel (U55 models)

Problem	Possible Cause	Solution
Power vent blower doesn't turn on.	Incorrect Wiring	<ul style="list-style-type: none"> Yellow wire harness loop has not been cut. Refer to wiring instructions and confirm the blower and wire taps have been wired correctly. Use a volt meter to confirm incoming and outgoing power at the IFC. Confirm all spade connectors are correctly engaged.
	Blower Motor	<ul style="list-style-type: none"> Confirm blower is operational by wiring it to a direct 120VAC power source outside of IFC circuit. Replace blower.
	IFC	<ul style="list-style-type: none"> IFC is in lockout state. Fully reset the IFC. PV mode hasn't been enabled. Confirm "O" side of power vent rocker switch is pushed down. Replace IFC.
Power vent blower runs but pilot will not try to light.	Valve / Pilot Wiring	<ul style="list-style-type: none"> Confirm the red valve wire was not disconnected during PV installation. Confirm the orange and white pilot wires were reconnected to the IFC during PV installation.
	Vacuum Switch	<ul style="list-style-type: none"> Ensure the vacuum switch is mounted in a vertical non-angled position within Power Vent cap. Ensure the silicone hose is attached to the port furthest from electrical connections. Check electrical connections, the middle spade connector of the vacuum switch should be UNUSED. Jump the cut yellow harness wires together after the blower turns on. If pilot and burner turns on, there is a problem with the vacuum switch circuit. Replace vacuum switch.
Burner will not light.	Valve Wiring	<ul style="list-style-type: none"> Confirm the green valve wire was not disconnected during PV installation.
	Vent Restriction	<ul style="list-style-type: none"> The fireplace is not restricted enough. Increase the restrictor setting/size as needed.
Flames are very low on HIGH.	Venturi Setting	<ul style="list-style-type: none"> Venturi is set too open, adjust it closed accordingly
	Vent Restriction	<ul style="list-style-type: none"> The fireplace is not restricted enough for the vent run. Increase the restrictor setting/size as needed.
Flames are transparent / lifting off burner.	Venturi Setting	<ul style="list-style-type: none"> Venturi is set incorrectly, adjust it accordingly.
	Vent Restriction	<ul style="list-style-type: none"> The fireplace is over restricted for the vent run. Reduce the restrictor setting/size as needed.
Power vent blower runs post shutdown.	Normal Operation	<ul style="list-style-type: none"> The blower will operate for a few minutes post shutdown to purge remaining flue gas from the vent. Blower will remain in continuous operation if pilot is left in CPI mode.



Reference Number	Part Description	Part Number
1	High Output Power Vent Blower	50-4443
2	PV Vacuum Switch	50-3766
3	High Output PV Mid Plate	50-4444
4	High Output PV Front Cover	50-4445
5	High Output PV Finishing Face	50-4446
6	High Output PV Framing Thimble Assembly	50-4447
7	PV Framing Thimble - Inner Wall Cover	50-4448
-	8x11" to 5x8" Vent Reducer	50-4022
-	High Output Power Head - Complete (<i>less wall thimble & wire</i>)	50-4449
-	WiFi ready Proflame 2 IFC (0.584.665)	50-3887

MANUFACTURED BY: SHERWOOD INDUSTRIES LTD.
6782 OLDFIELD RD. SAANICHTON, BC, CANADA V8M 2A3
www.Urbanfireplaces.com
October 2023
C-16989