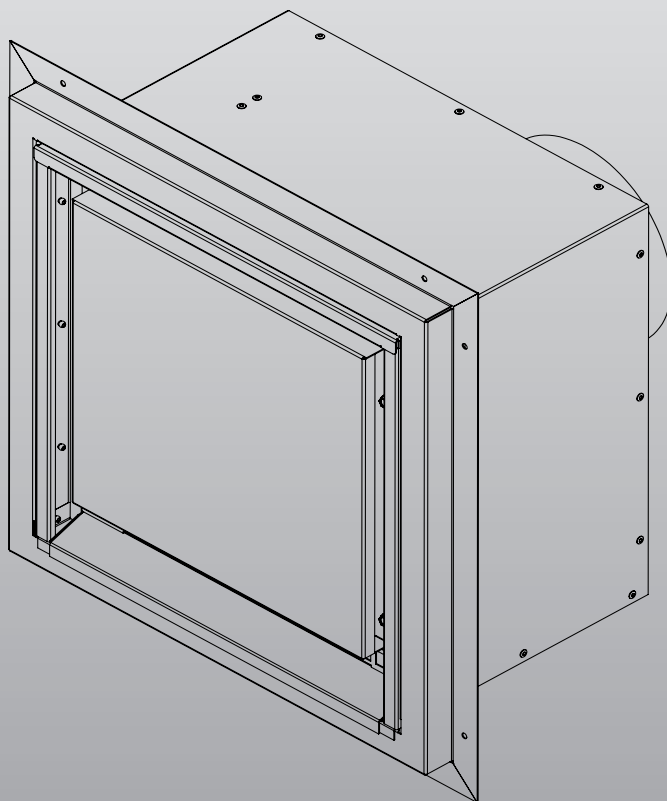


URBANA

LUXURY FIREPLACES

50-3883 Power Vent

INSTALL MANUAL



Intertek
C#4001609

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.

CERTIFIED TO: ANSI Z21.88 / CSA 2.33 VENTED GAS FIREPLACE HEATERS

50-3954

This manual to be used by qualified installers only

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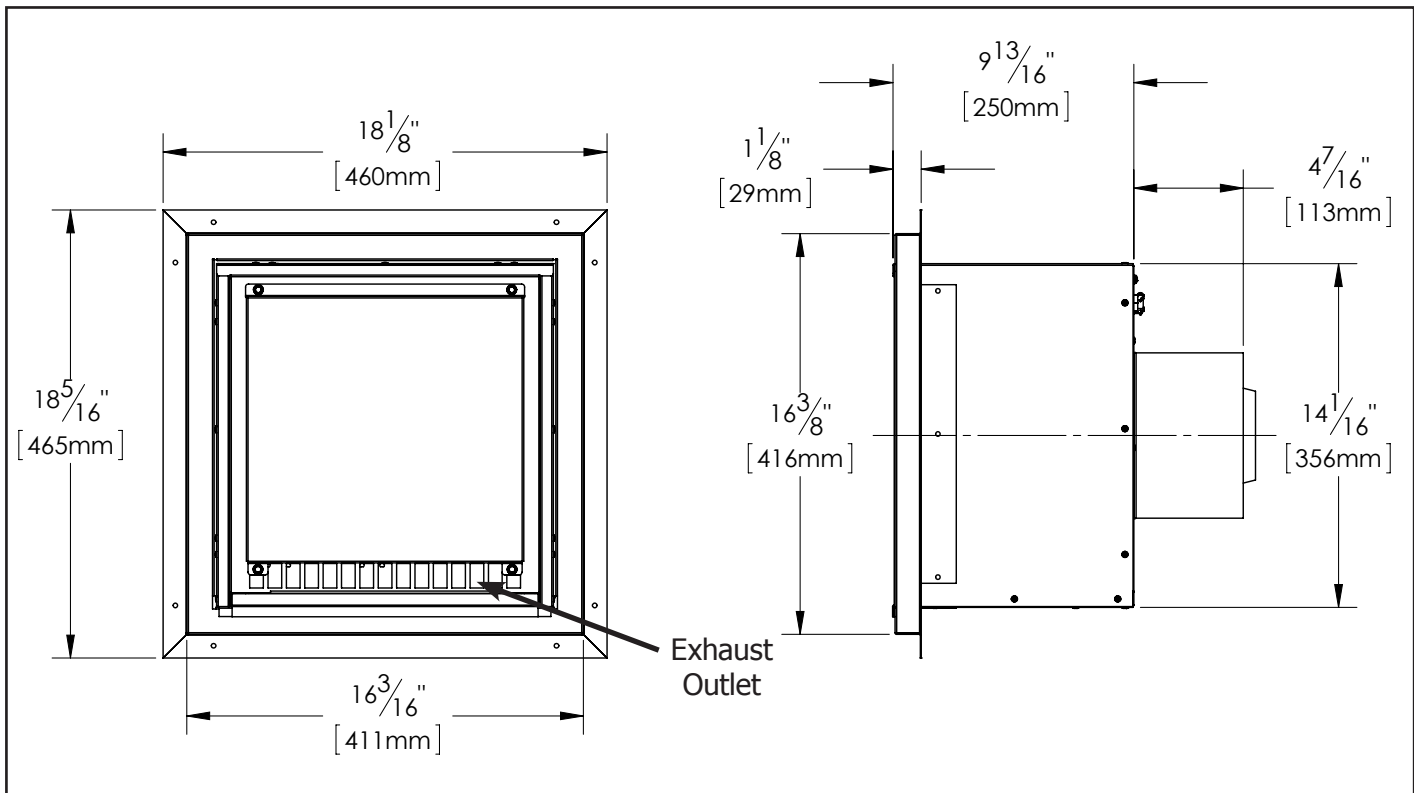
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DIMENSIONS:**Figure 1: Power Vent Dimensions****KIT CONTENTS:**

The table below outlines the complete contents of the Urbana Power Vent Kit (50-3883). 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	Part Description	Qty
Power Head Assembly w/ Finishing Face	1	5 Lead Cable - 110ft / 33.5m	1
Framing Thimble Assembly w/ Inner Wall Cover	1	U30 Restrictor Disk	1
U50 Restrictor Disk 1	1	U50 Restrictor Disk 2	1
U70 PV Baffle	1	#8-32 Wing Nuts	3
#8-32 Hex Nuts	2		

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

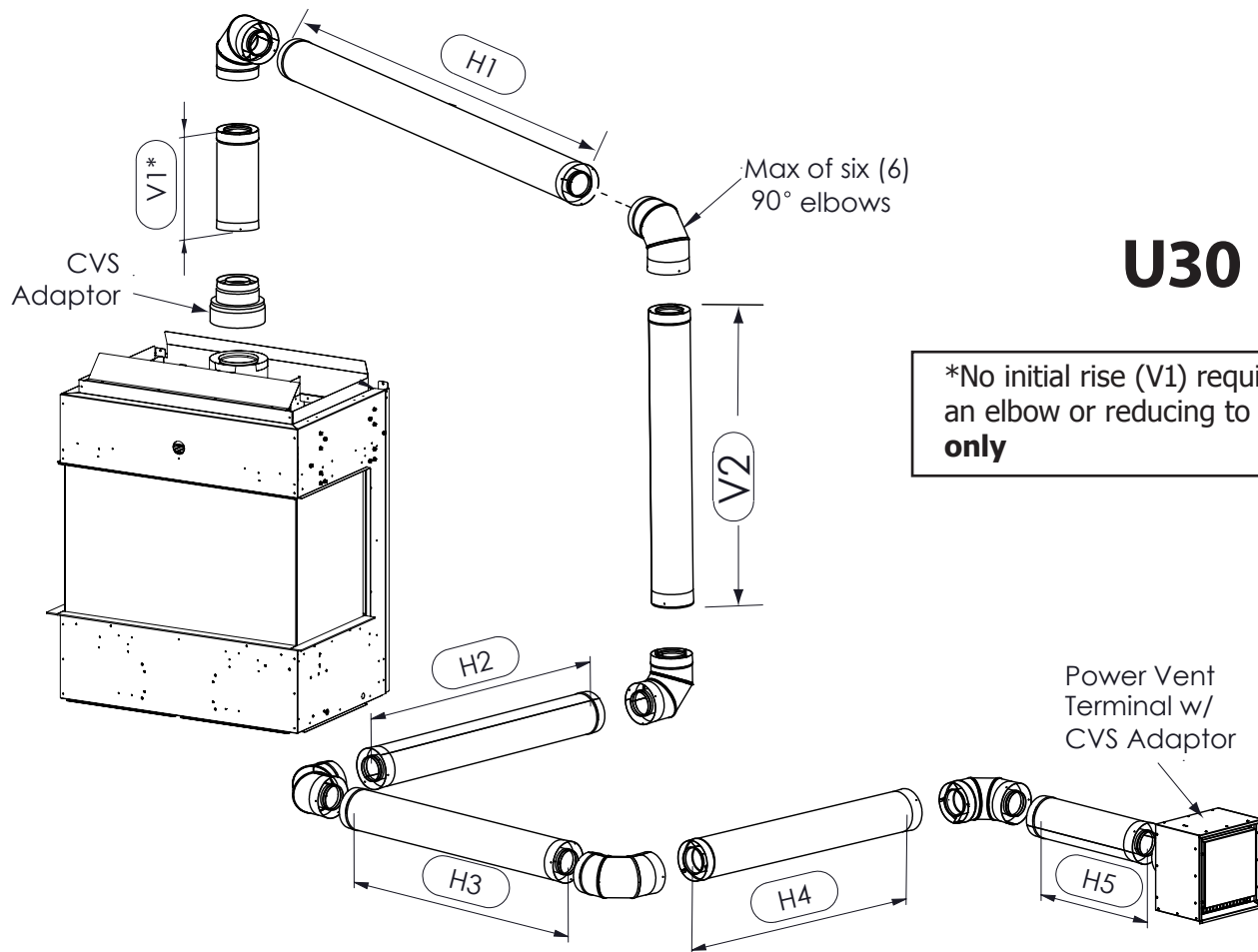
- **Minimum total venting run allowed is 20 ft (6.1m)**, see boxed notes in Figures 2 & 3. If required venting run is shorter than 20ft (6.1m) the fireplace must be direct vented. See fireplace installation manual for further information regarding permitted venting and restrictions.
- **Maximum total venting run allowed is 110 ft (33.5m)** ($V_1 + H_1 + V_2 + H_2 + H_3 + H_4 + H_5$), refer to Figures 2 & 3.
- **Maximum negative vertical run allowed is 4ft (1.2m)** as measured from the elbow where it started (see V2 in Figures 2 and 3).
- 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.
- **IMPORTANT:** This power vent kit has been approved for use with **only Duravent 3" x 5" CVS Venting**. **Specific venting adaptors are required (not included)** for both the fireplace and power head to enable the use of 3" x 5" CVS. Refer to Table 2 below for the required adaptors and part numbers.

Table 2: CVS Vent Adaptors

Fireplace End		Model		
Description	Duravent Part #	U30	U50	U70
4 x 6 5/8" to 3" x 5" CVS	46DVA-X35CVS	X		
5" x 8" to 4 x 6 5/8" *see below*	58DVA-X46		X	X
5" x 8" to 3" x 5" CVS	58DVA-X35CVS		X	X
Power Head End		Model		
3" x 5" CVS to 4 x 6 5/8"	35CVS-X46DVA	X	X	X

* If 5" x 8" to 4 x 6 5/8" reducer is used, 4 x 6 5/8" to 3" x 5" CVS adaptor must be used as well. 5" x 8" to 4 x 6 5/8" reducer can also be ordered using Urbana Part #50-2321.

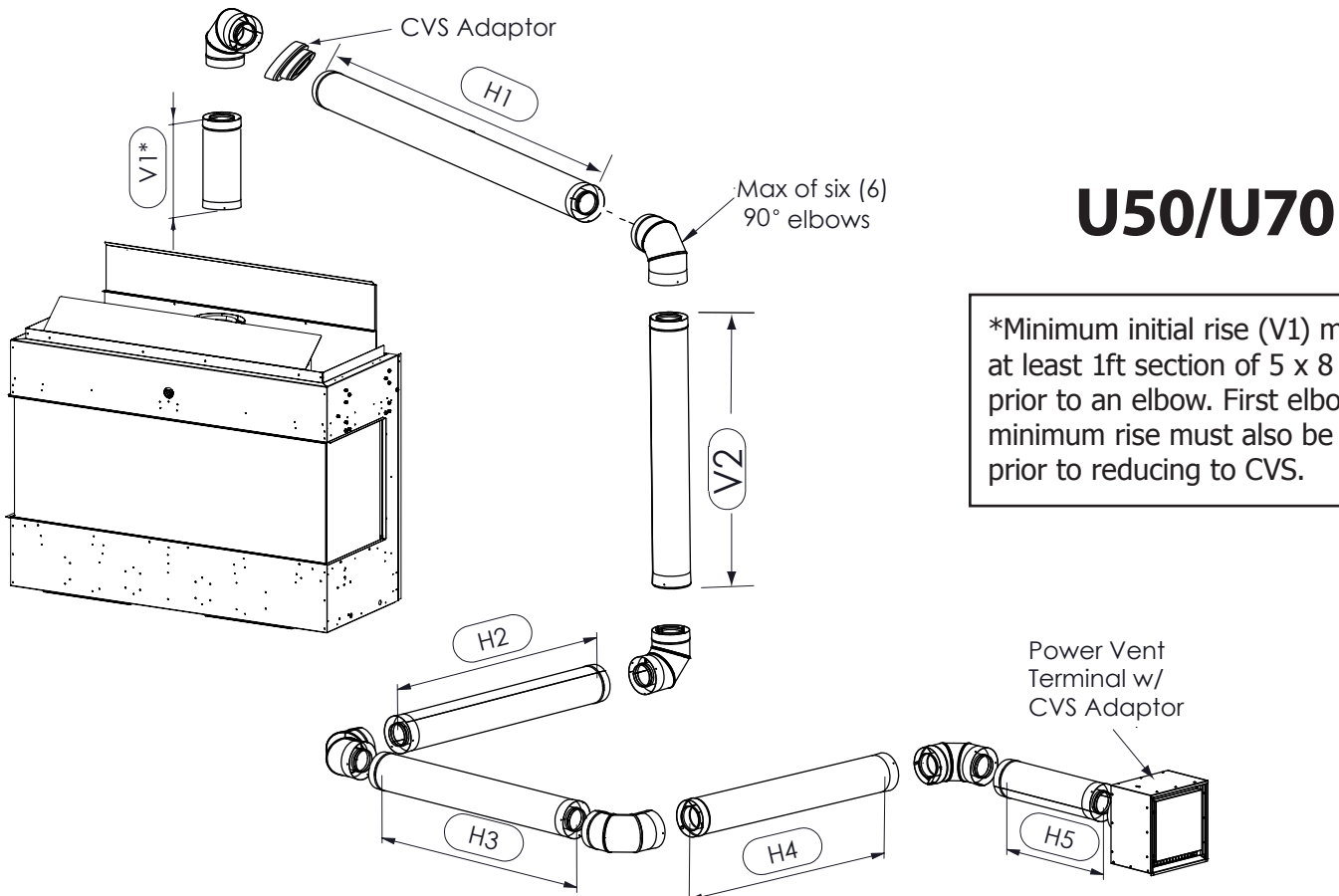
- **Venting Clearances:** 1" (25 mm) clearance to combustibles must be maintained around any vertical vent pipe. Around a horizontal vent pipe, the clearance to combustibles should be 2" (51 mm) above and 1" (25 mm) on the sides and bottom. When combustible materials are directly above a 90° elbow, 3"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



U30

***No initial rise (V1) required prior to an elbow or reducing to CVS on **U30** only**

Figure 2: U30 Power Venting



U50/U70

***Minimum initial rise (V1) must be at least 1ft section of 5 x 8 venting prior to an elbow. First elbow after minimum rise must also be 5 x 8 size prior to reducing to CVS.**

Figure 3: U50 / U70 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. Figure 4 below shows how to install the disks required for the U30 & U50. Figure 5 below shows how to install the baffle required for the U70. Refer to the fireplace's manual for instructions regarding the restrictor adjustment.

Table 3: Restrictor Settings

Power Vent Restrictor Chart				
	Model			
	U30	U50	U70	
20				
25				
30				
35				
40				
45				
50				
55				
60	U30 Disk	U50 Disk	U70 Baffle	
65	+	+	+	
70	Setting 6	Setting 6	Setting 6	
75				
80				
85				
90				
95				
100				
105				
110				

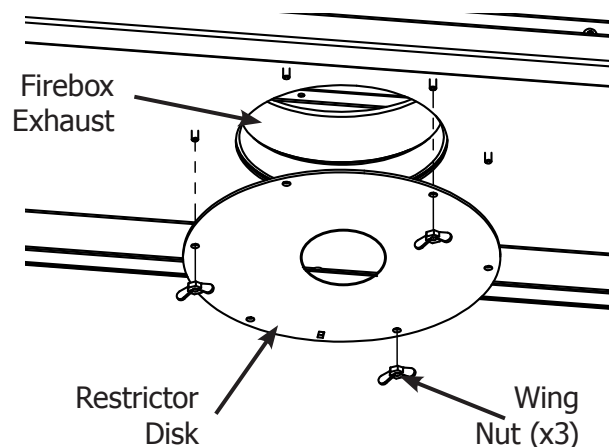


Figure 4: U30 / U50 Disk Installation

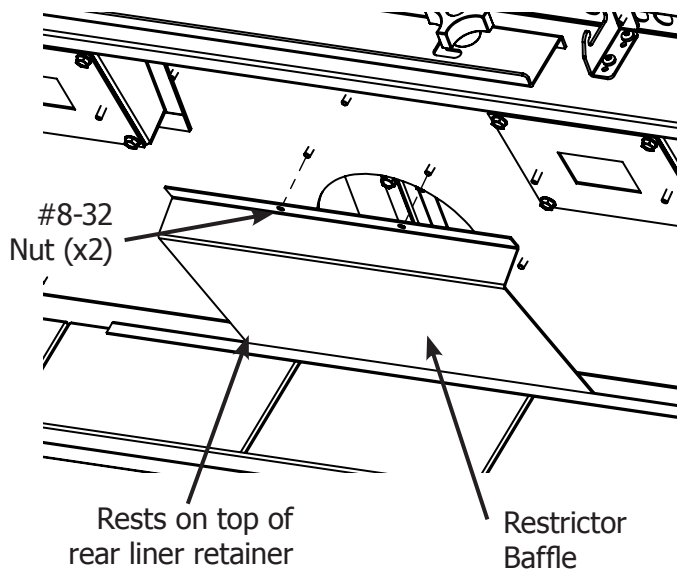


Figure 5: U70 Baffle Installation

When using Propane (LP) - If desired, further restriction may be added to the fireplace to improve the flame appearance. This is done by installing the venturi box cover plate supplied along with the fireplace's manuals. Refer to the fireplace installation guide for instructions regarding burner removal in order to access the open side of the venturi box to install the cover plate. The venturi will still need to be correctly set.

Note - This cover plate is already installed on Natural Gas (NG) models.

Figure 6: Vent Termination Restrictions

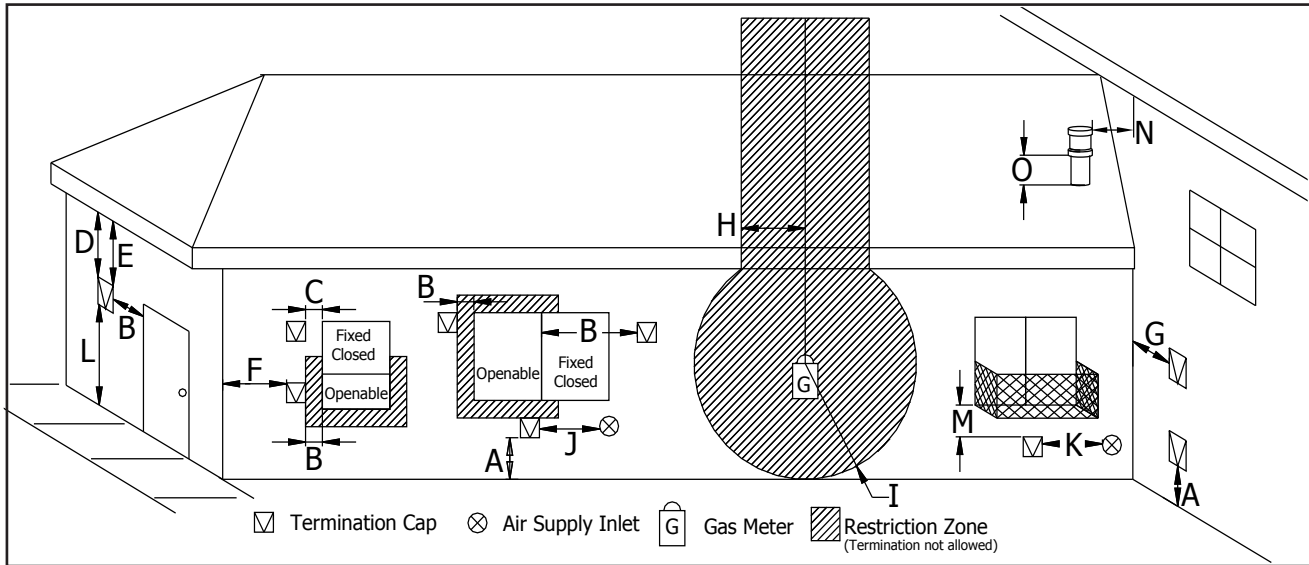


Table 4: Vent Termination Clearances

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) ^t	7 ft (2.13 m) ^{*t}	Clearance above paved sidewalk or paved driveway located on public property.
M	0 in (0 cm) ⁺		Clearance under verandah, porch, deck, or balcony.
N	12 in (30 cm)*		Clearance horizontally to any surface (such as an exterior wall) for vertical terminations.
O	12 in (30 cm)		Clearance above roof line for vertical terminations.

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.

^t 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 Figure 6 & Table 4 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 19" (483mm) tall by 14 5/8" (371mm) wide for the exterior thimble as shown in Figure 7.

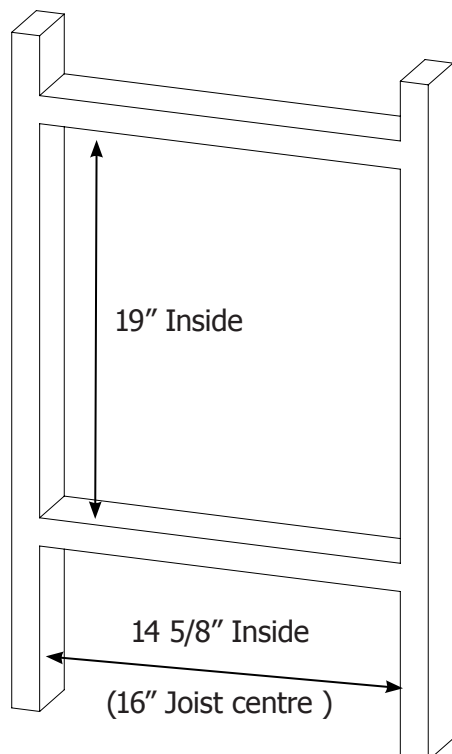


Figure 7: Power Vent Framing Dimensions

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.

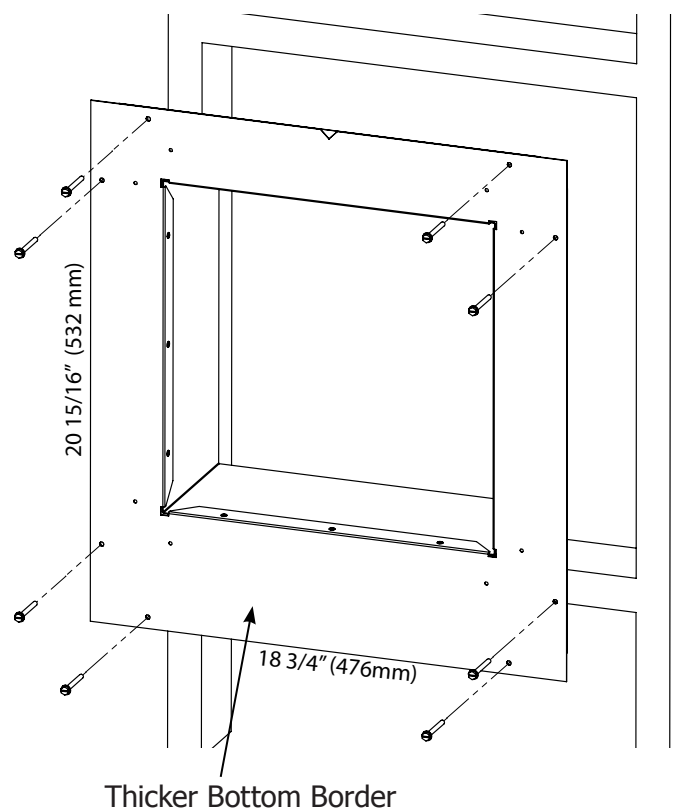


Figure 8: Exterior Thimble Installation

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.

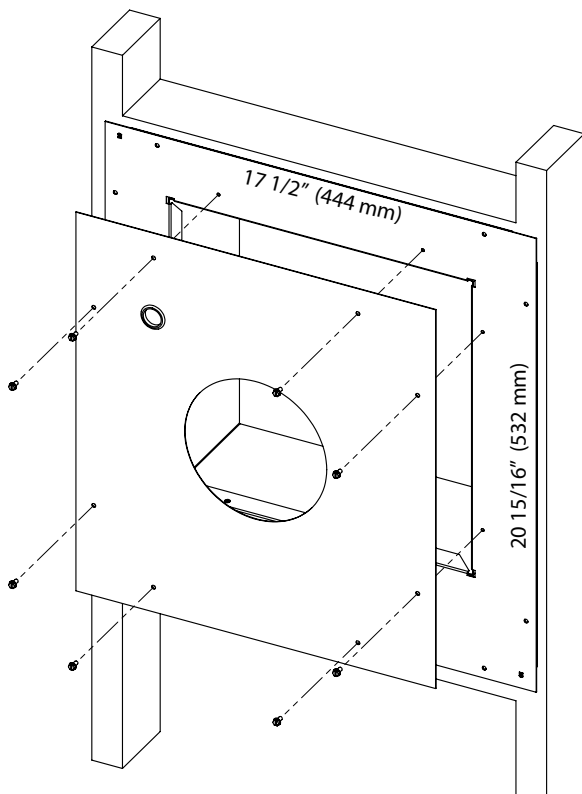


Figure 9: Inner wall plate installed

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.

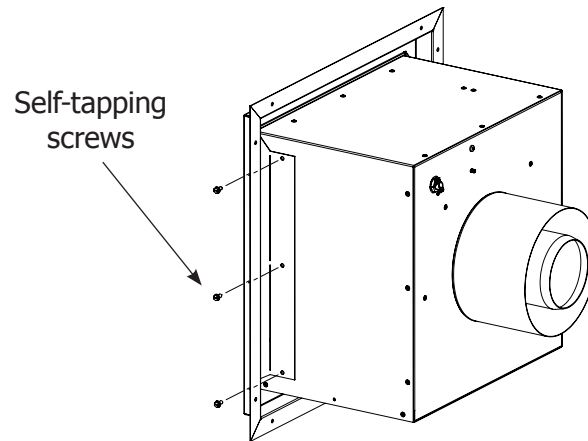


Figure 10: Finishing face installed

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\"

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.

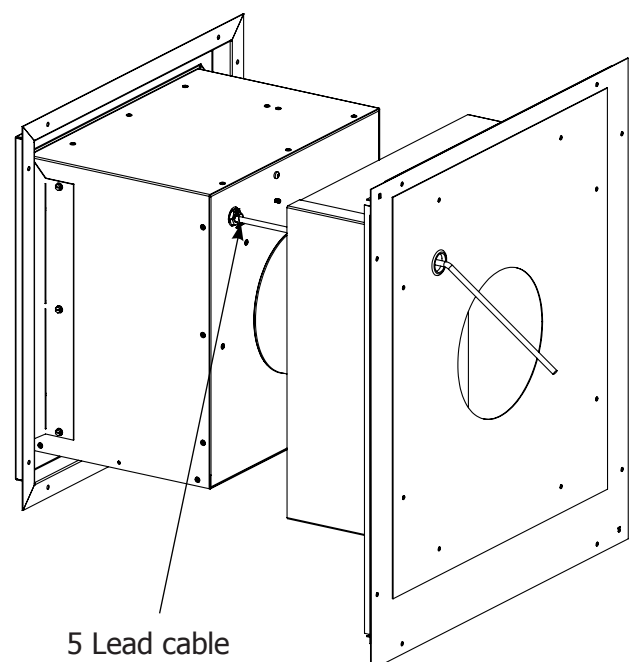


Figure 11: Cable Routing

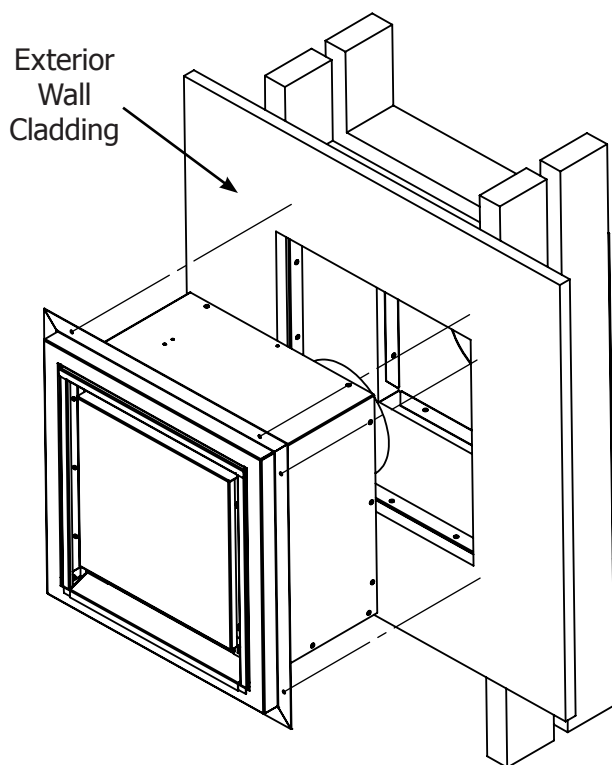


Figure 12: Power vent terminal installation

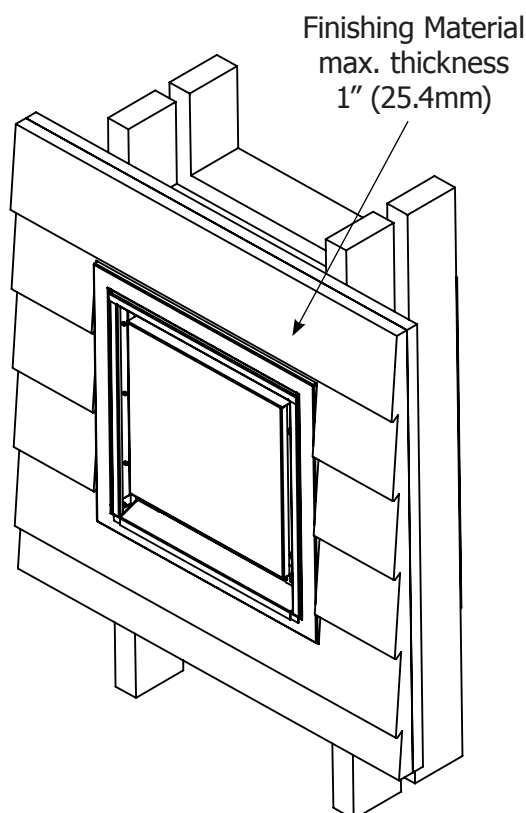


Figure 14: Finishing Material

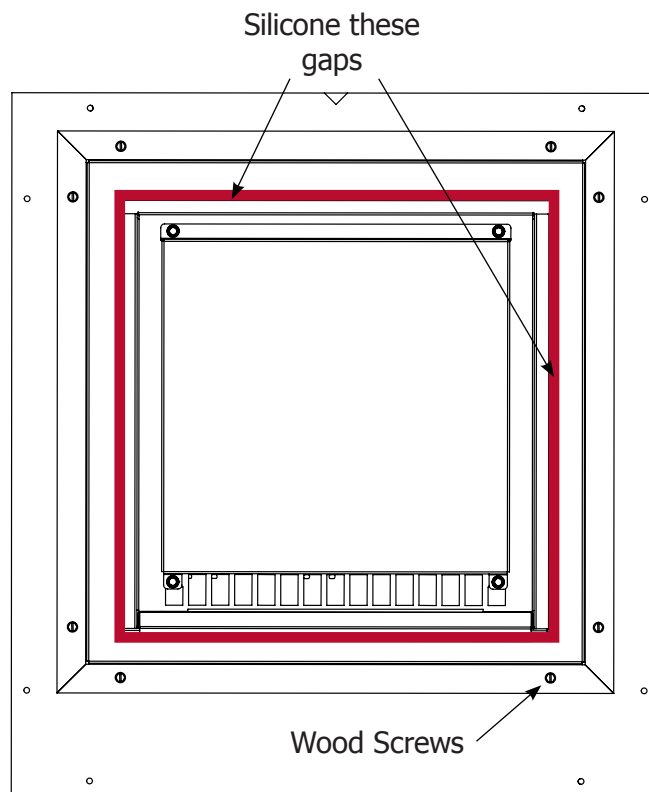


Figure 13: Silicone locations

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.

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).

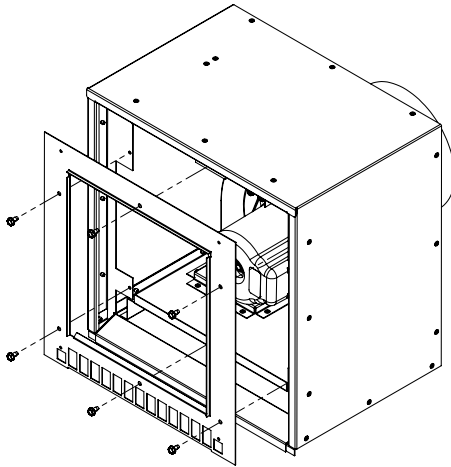


Figure 16: Mid plate removal

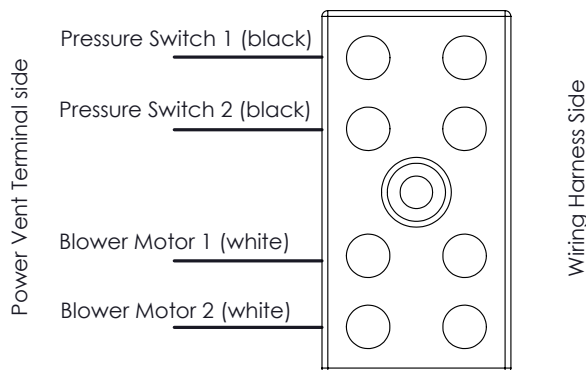


Figure 17: Power Vent electrical termination block wiring

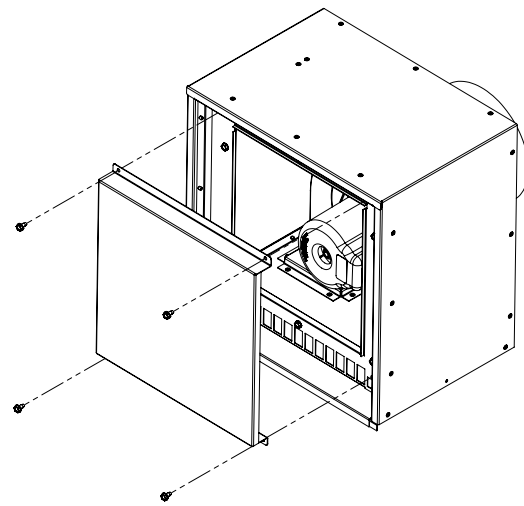


Figure 15: Front cover removal

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.

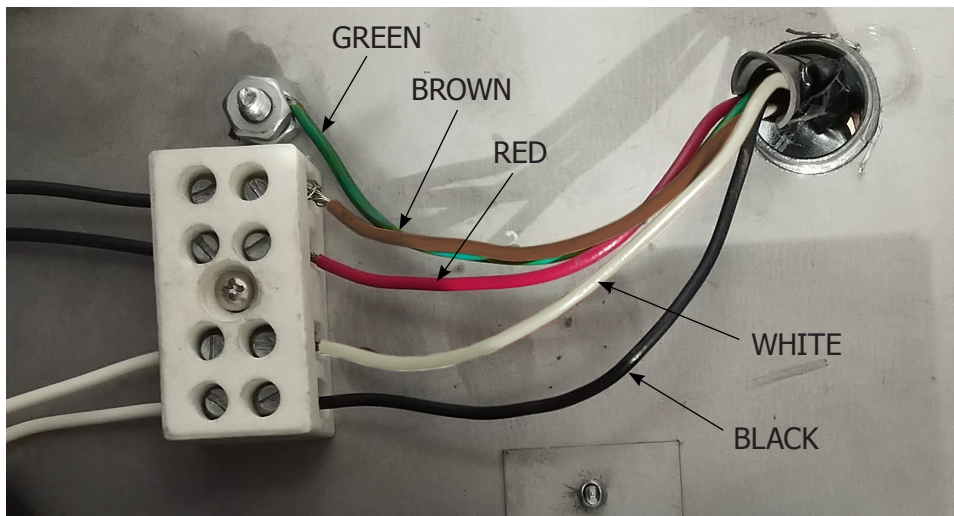
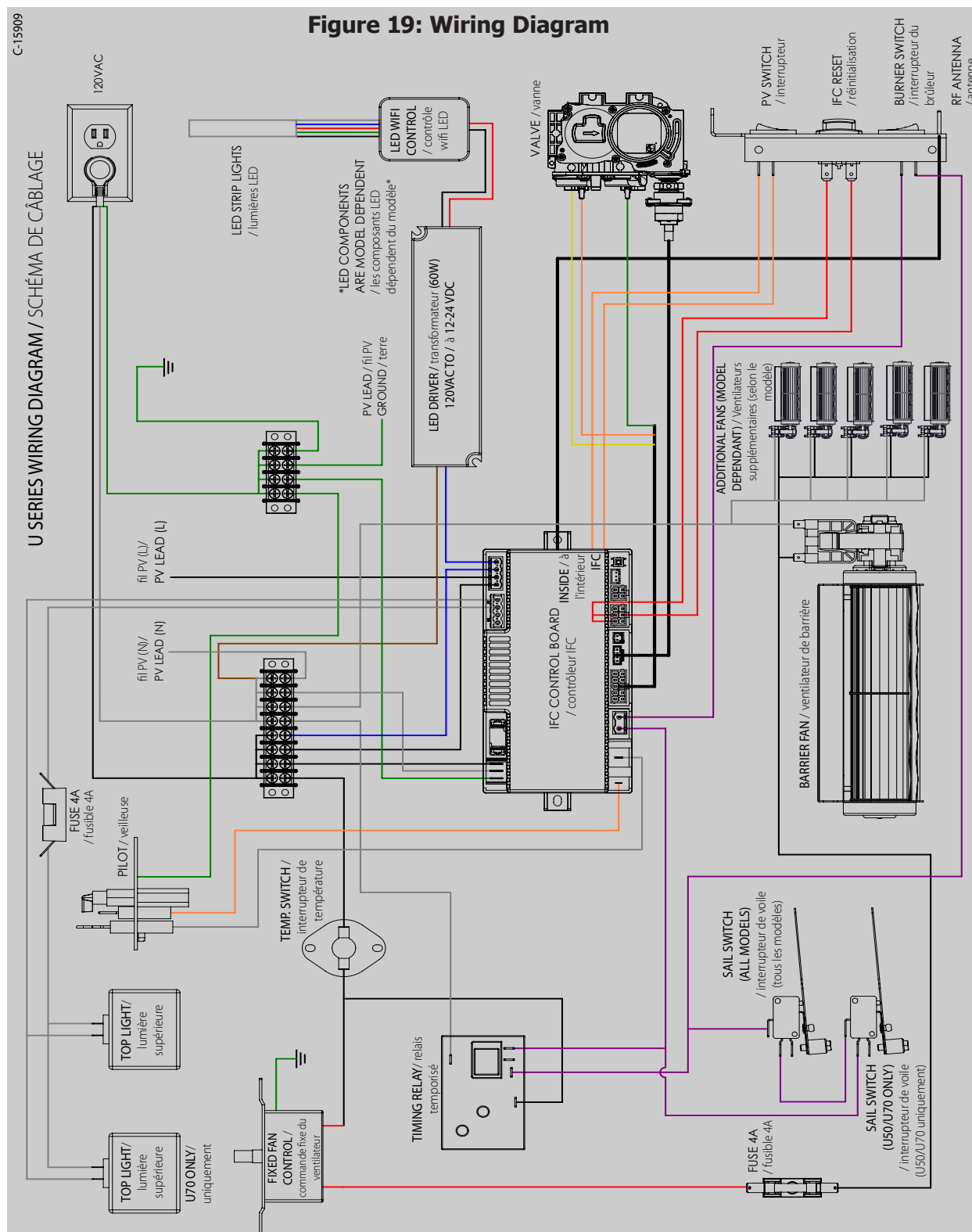


Figure 18: Power vent cable installed

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.



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.

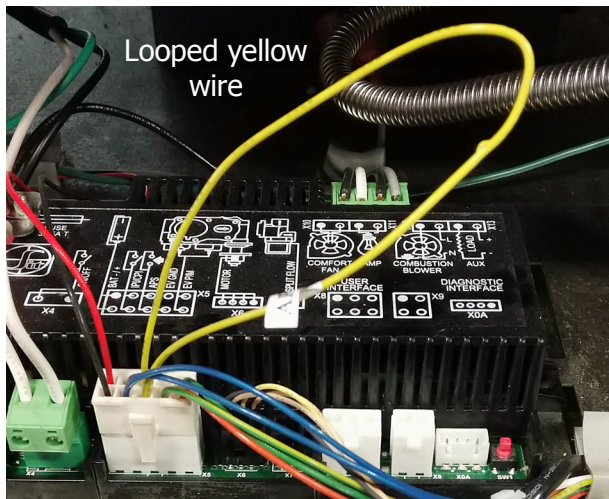


Figure 20: Location of the pressure switch wire

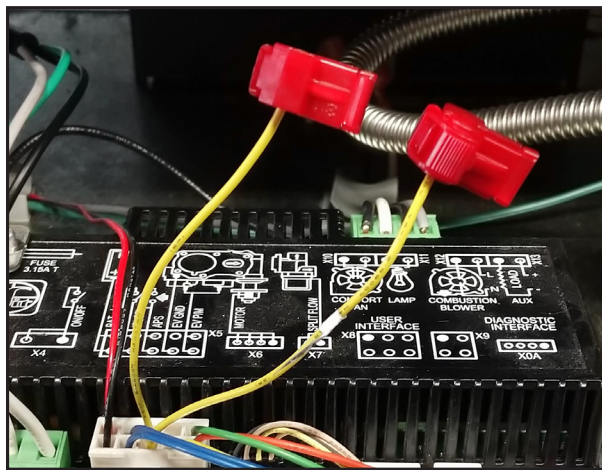


Figure 21: Pressure switch wire taps attached

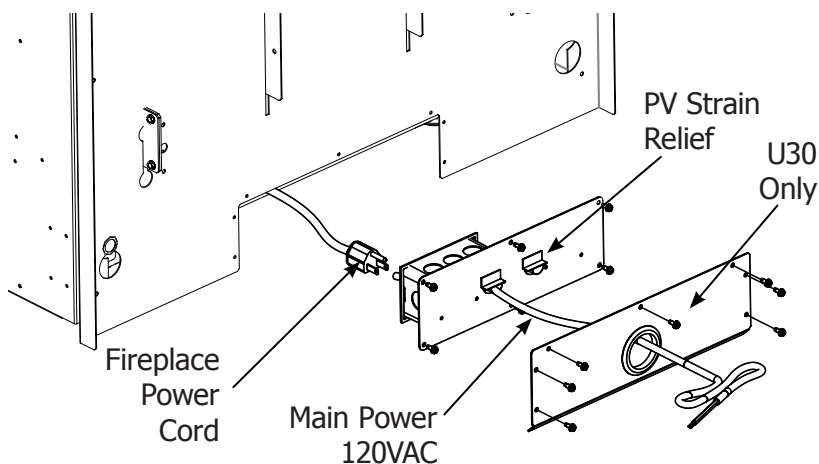


Figure 22: Power Vent Cable Strain Relief

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 20. 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 21. 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 at the bottom of cabinet back and route the supplied 5-wire cable through it (Figure 22). Feed enough cable through to reach the IFC then tighten the strain relief.

Note - U30 models have an additional cover plate with a large grommet in the middle that will need to be removed to access the strain relief (Figure 22).

3. Connecting the 5-Wire Cable - Refer to the wiring diagram (Figure 19) 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 on the 4 position busbar behind the IFC. Connect the GREEN cable lead to it.

PRESSURE SWITCH - Connect the remaining RED and BROWN cable leads to the wire taps installed in 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.**

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 at the front right corner of the cabinet (Figure 23). The far left 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 **●** symbol is down. To clarify:

▬ symbol down = Direct Vent (DV) mode

● 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.

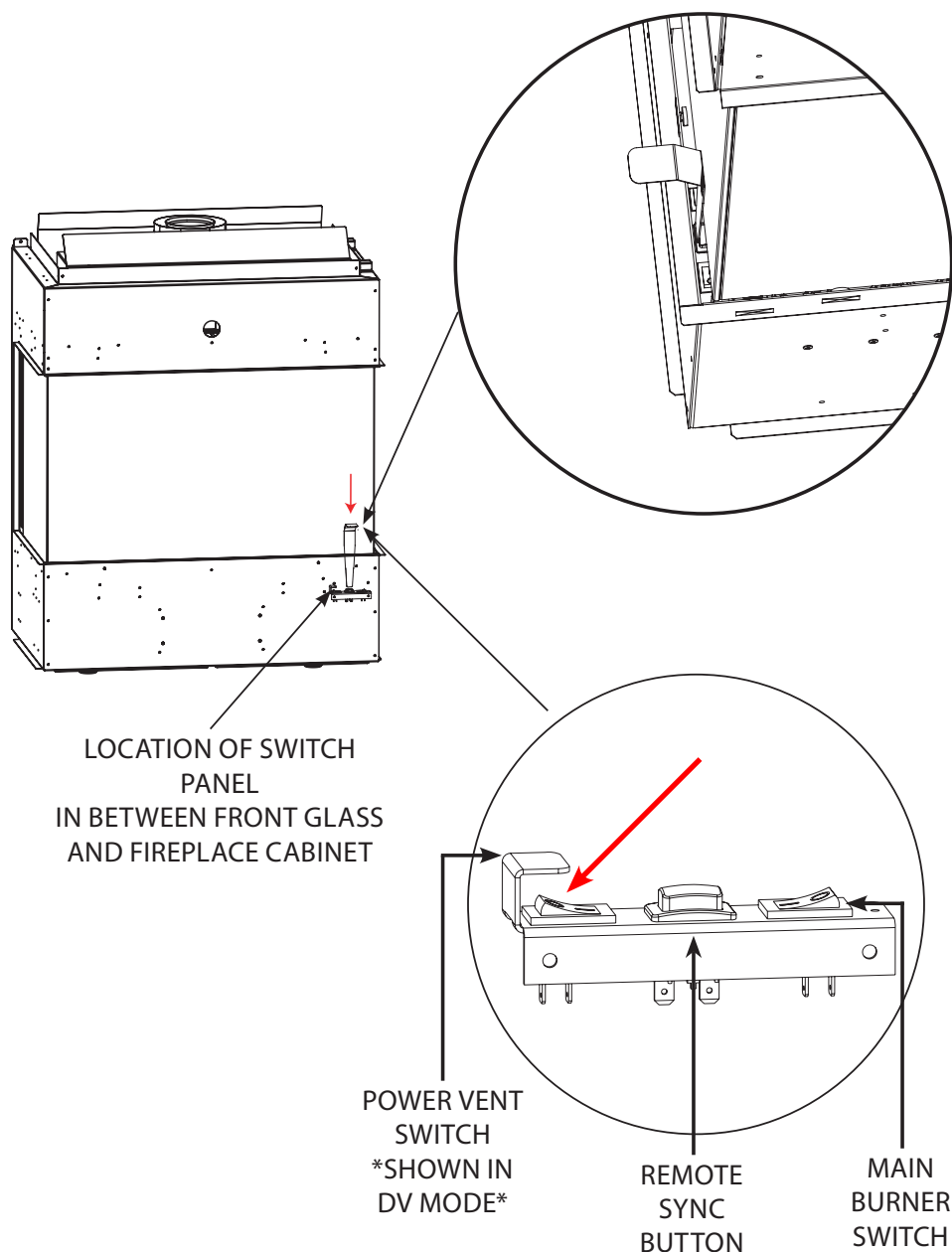
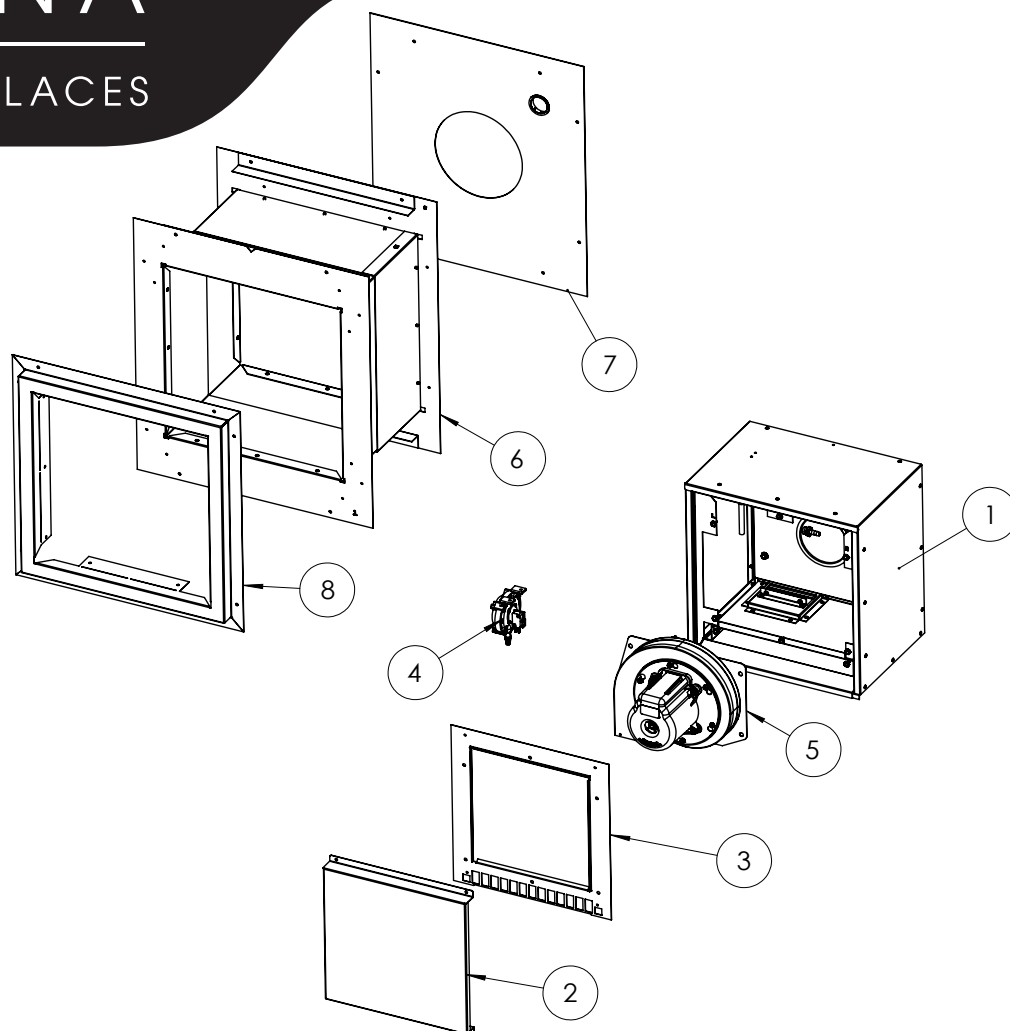


Figure 23: Fireplace Switch Panel

Problem	Possible Cause	Solution
Power vent blower doesn't turn on.	Incorrect Wiring	- 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	- Confirm blower is operational by wiring it to a direct 120VAC power source outside of IFC circuit. - Replace blower.
	IFC	- 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	- 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	- 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	Confirm the green valve wire was not disconnected during PV installation.
	Vent Restriction	The fireplace is not restricted enough. Increase the restrictor setting/size as needed.
Flames are very low on HIGH.	Venturi Setting	Venturi is set too open, adjust it closed accordingly
	Vent Restriction	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	Venturi is set incorrectly, adjust it accordingly.
	Vent Restriction	The fireplace is over restricted for the vent run. Reduce the restrictor setting/size as needed.
Power vent blower runs post shutdown.	Normal Operation	- 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	Power Head Complete Assembly	50-3763
2	PV Front Cover	50-3764
3	PV Mid Plate	50-3765
4	PV Vacuum Switch	50-3766
5	PV Blower Motor	50-3767
6	PV Framing Thimble Assembly	50-3768
7	PV Framing Thimble - Inner Wall Cover	50-3769
8	PV Finishing Face	50-3770
-	U30 PV Disk	50-3952
-	U50 PV Disk	50-3968
-	U70 PV Baffle	50-3953
-	WiFi ready Proflame 2 IFC (0.584.665)	50-3887
-	Urbana Power Vent Owner's Manual	50-3954

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