

**This is a decorative product and is not intended to be used as a heating appliance.**

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



**TOWN & COUNTRY**  
L U X U R Y F I R E P L A C E S

**HELIFIRE 360**  
**DIRECT VENTED**  
**DECORATIVE GAS APPLIANCE**  
**INSTALLATION AND OPERATING**  
**INSTRUCTIONS**

**WARNING:** If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

**FOR YOUR SAFETY**

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

**WHAT TO DO IF YOU SMELL GAS**

- Do not try to light any appliance.
- Do not touch any electrical switch.
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier call the fire department.

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

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

This appliance is suitable for installation in a bedroom or bed sitting room.



**SERIAL #**

**MODEL: HELIFIRE 360**  
**SERIES: A**



Visit [www.townandcountryfireplaces.com](http://www.townandcountryfireplaces.com) for the most recent version of this manual


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# DANGER

**HOT GLASS WILL CAUSE  
BURNS.**



**DO NOT TOUCH GLASS UNTIL  
COOLED.**

**NEVER ALLOW CHILDREN TO  
TOUCH GLASS.**


## Caution

This appliance and its individual shut off valve must be disconnected from gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

This appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

Note: When lit for the first time, the appliance will emit a slight odour for a couple of hours. This is due to the curing of paints, sealants and lubricants used in the manufacturing process. This condition is temporary. Open doors and windows to ventilate area. Smoke and fumes caused by the curing process may cause discomfort to some individuals.

Do not use the fire feature if any part has been under water. Immediately call a qualified service technician to inspect the fire feature and to replace any part of the control system and any gas control which has been under water.



**WARNING:** This product can expose you to chemicals including ceramic fibers, which are known to the State of California to cause cancer, and carbon monoxide, which is known to the State of California to cause birth defects or other reproductive harm.

For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

This warning is applicable to all **Pacific Energy Fireplace Products**



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

## Safety

Due to high temperatures, this gas appliance should be located out of traffic and away from furniture and draperies.

Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.

Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children, and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at-risk individuals in the house. To restrict access to a fireplace or stove, install an adjustable safety gate to keep toddlers, young children, and other at-risk individuals out of the room and away from hot surfaces. Clothing or other flammable material should not be placed on or near the appliance.

Any grill, panel or door removed for servicing the unit must be replaced prior to operating. Failure to do so may create a hazardous condition.

Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.

It is our policy that no responsibility is assumed by the Company or by any of its employees or representatives for any damages caused by an inoperable, inadequate, or unsafe condition which is the result, either directly or indirectly, of any improper operation or installation procedures.

This appliance must not be connected to a chimney flue serving a separate solid fuel burning appliance.

# Important Note for the Commonwealth of Massachusetts

From Massachusetts Rules and Regulations 248 CMR 5.08:

- (a) For all side wall horizontally vented gas fuelled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied.
1. **INSTALLATION OF CARBON MONOXIDE DETECTORS.** At the time of installation of the side wall horizontal vented gas fuelled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed, in addition, the installing plumber or gas fitter shall observe that a battery operated or hard-wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fuelled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard-wired carbon monoxide detectors.
    - a. In the event that the side wall horizontally vented gas fuelled equipment is installed in a crawl space or an attic, the hard-wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.
    - b. In the event that the requirements of this subdivision cannot be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.
  2. **APPROVED CARBON MONOXIDE DETECTORS.** Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed as IAS certified.
  3. **SIGNAGE.** A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fuelled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, "GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS"
  4. **INSPECTION.** The state or local gas inspector of the side wall horizontally vented gas fuelled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.089(2) (a) 1 through 4.
- (b) **EXEMPTIONS.** The following equipment is exempt from 248 CMR 5.089(2)(a) 1 through 4.
1. The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and
  2. Product Approved side wall horizontal vented gas fuelled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.
- (c) **MANUFACTURER REQUIREMENTS – GAS EQUIPMENT VENTING SYSTEM PROVIDED.** When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:
1. Detailed instructions for the installation of the venting system design or the venting system components; and
  2. A complete parts list for the venting system design or venting system.
- (d) **MANUFACTURER REQUIREMENTS – GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED.** When the manufacturer of a Product Approved side wall horizontally vented gas fuelled equipment does not provide the parts for venting the fuel gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer.
1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
  2. The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.
- (e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fuelled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

## Congratulations on your purchase of a Town & Country HeliFire 360 Feature

Your zero-clearance HeliFire 360 fire feature has been professionally installed by:

Dealer name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

If you discover any problems with your HeliFire 360 fire feature contact your dealer immediately to have the unit repaired.

**Caution:** Do not attempt to repair the HeliFire 360 fire feature because you may cause injury to yourself or others, and risk causing damage to the unit.

Before operating your HeliFire 360 fire feature carefully read this manual and pay close attention to all Safety Warnings. The manual contains important information on the unit's safe operation and maintenance.

## HeliFire 360 Specifications

### HeliFire 360 multi orientational helical flame fire feature.

- 22,000 BTU/hr input (fixed input) Natural Gas.
- 16,500 BTU/hr input (fixed input) Liquid Propane Gas
- Natural gas or Liquid Propane Gas.
- 24VAC honeywell direct ignition valve system.
- Power vented only. Either flush mounted power vent (TCVT.PVFMMA) or Surface mounted power vent (TCVT.PVSMA) must be used. Vent extension kit (TCVT.PVEXTA) contains 2 lengths of 25 foot flexible venting pipe plus adaptors. All of the above items are sold separately.
- Maximum combustion air intake venting length is 50' and maximum flue venting length is 50'.
- 4" collinear flex venting (1/4" clearance required).
- Multi exhaust position venting adaptors (1 position intake, 3 position exhaust).
- HeliFire 360 unit is all 304 stainless steel construction.
- Zero clearance unit (non-combustible board not required).
- One sided and two sided (see through) units available.
- Units fit within a 2" x 6" stud wall.
- Outdoor flashing option.

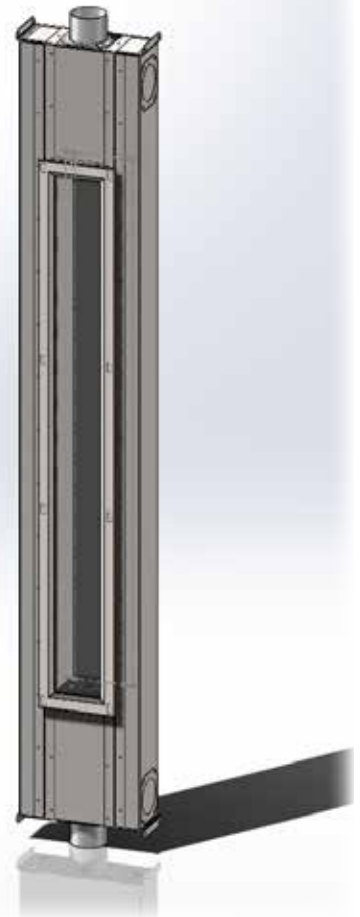


Figure 1: HeliFire 360.

# Fire Feature Dimensions

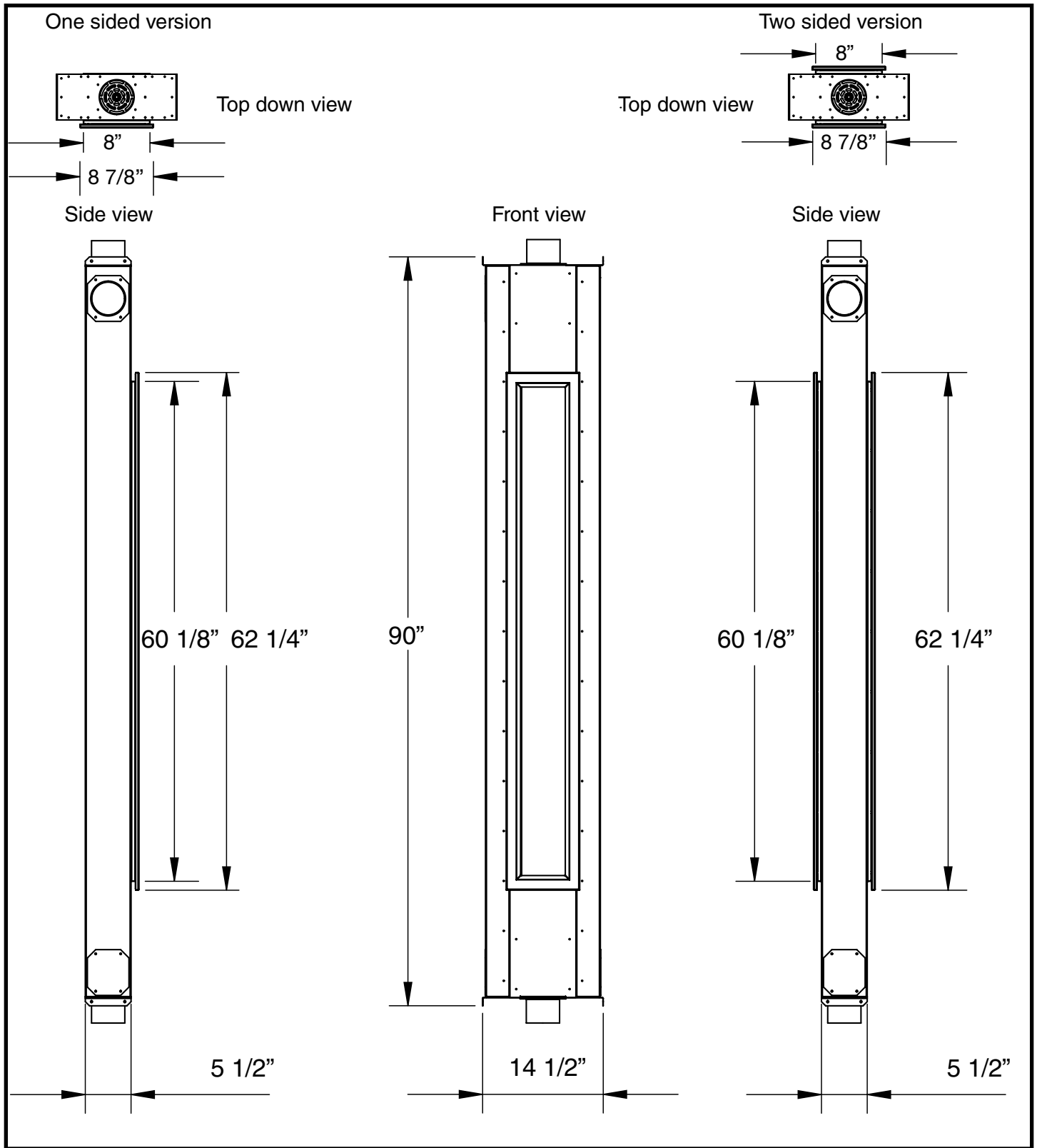


Figure 2: HeliFire 360 dimensions.



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## Installation Requirements

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The HeliFire 360 installation and venting must conform to the current CAN/CGA-B149 installation code (in Canada) or the current National Fuel Gas Code, ANSI Z223.1 (in the USA), and approved per local codes. Only qualified (licensed or trained) personnel should install this product.

In the state of Massachusetts, only a licensed Plumber and Gas Fitter may install this product.

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## Manufactured (Mobile) Homes

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In some jurisdictions, the HeliFire 360 may be installed in Manufactured Homes after the “first sale”. Consult local codes for approval. The Fire feature must be fastened in place.

Install in accordance with the current standard Mobile Homes, CAN/CSA Z240 MH (in CANADA), and the Manufacturer’s Home Construction and Safety Standard, Title 24 CFR, Part 3280 or the current Standard for Fire Safety Criteria for Manufactured Home Installations, Sites and Communities ANSI/NFPA 501A (in the USA).

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## Door Frame Removal/Installation

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Warning: Turn off the HeliFire 360, and allow ample time for the unit to cool before proceeding.

Caution: The tempered glass is very fragile, and should be handled with care.

The HeliFire 360 door comes with a silicone seal and metal frame pre-assembled for easy mounting.

To replace a damaged door:

1. Remove the decorative trim from its magnetic holder.
2. Remove all 18 bolts from the door frame using the provided 5/32 Allen key. Be aware that the last bolt to come out will allow the door frame to fall and keeping control of the door frame is crucial at this point.
3. Remove broken glass (if any) from the inside of the HeliFire 360.
4. Carefully position the replacement door frame against the HeliFire 360 and align the bolt holes.
5. Insert one bolt and then a second bolt on the opposite side of the frame in order to stabilize the frame. Tighten them only finger tight at this point.
6. Insert the remaining bolts into the door frame. Tighten them only finger tight at this point.
7. Using the provided 5/32 Allen key (do not use a power driver), tighten the bolts so that the door frame silicone seal is slightly compressed against the HeliFire 360 (about 1 1/2 turns past finger tight). Visually inspect the door frame upon completion.
8. Return the decorative trim to its place on the HeliFire 360.

## First Fire

When lit for the first time, the fire feature may emit a slight odor for a couple of hours. This is due to the curing of paints, sealants and lubricants used in the manufacturing process. This condition is temporary. Open doors and windows to ventilate area. Odors caused by the curing process may cause discomfort to some individuals. It is normal for fireplaces fabricated of steel to give off some expansion and/or contraction noises during the start up or cool down cycle. Similar noises are heard from your furnace, heat exchanger or cook stove oven.

## Special Operator Note

**NOTE: Fire feature may take up to 30 seconds to ignite each time the "ON" button has been selected**

## Locating the HeliFire 360

In planning for the installation of the HeliFire 360, it is necessary to determine where the unit is to be installed, location of vent system and where gas supply piping may be plumbed. Various types of installations are possible, such as, a peninsula wall, island, and between two interior walls.

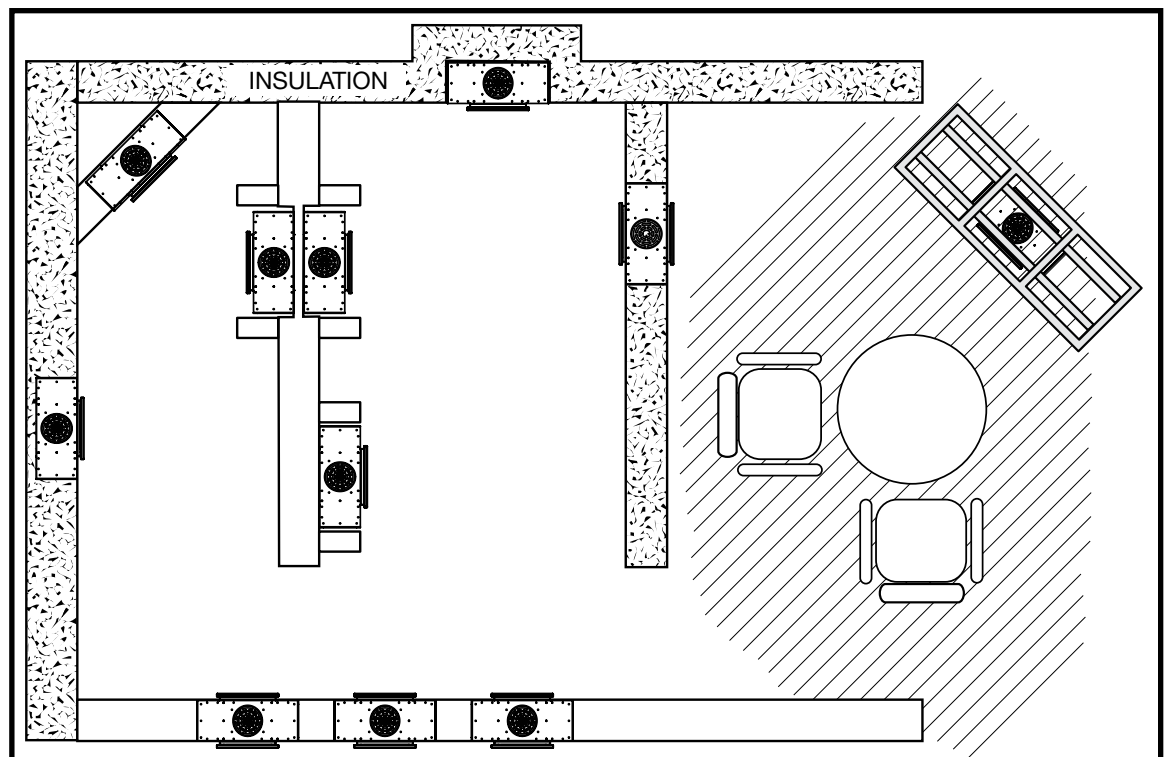


Figure 3: Locating the HeliFire 360.



## HeliFire 360 Orientation

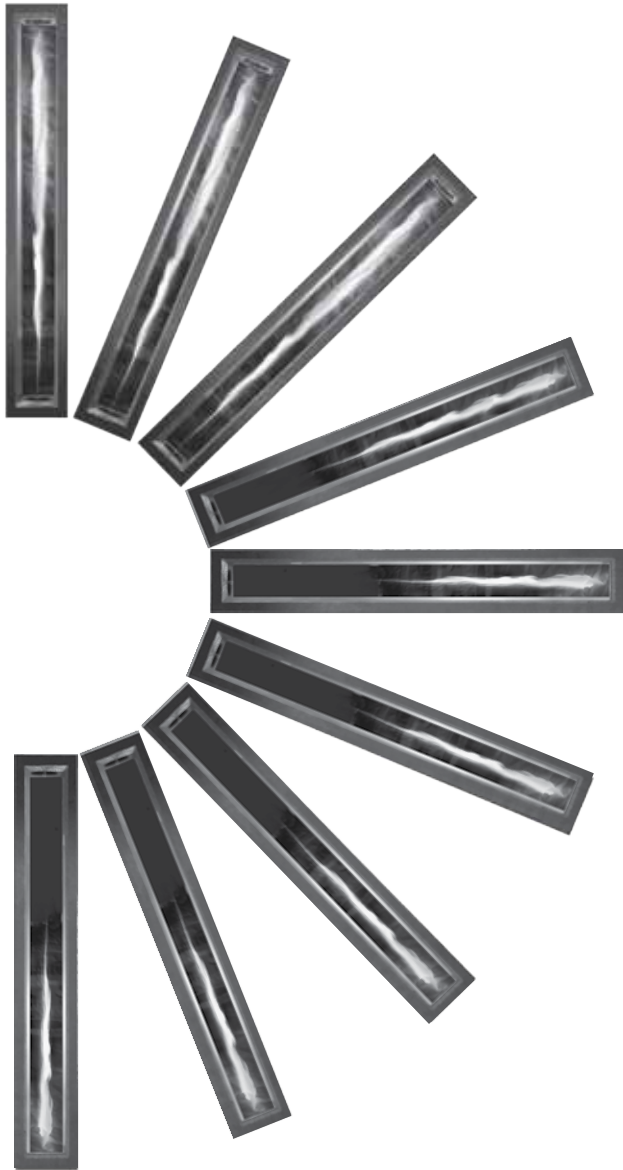


Figure 4: Orientation options.

**For best flame appearance, orient the unit so that the flame is pointing downward.**

The HeliFire 360 is unique in that it can be oriented in any position but must be mounted so that the glass door is in a vertical plane. The exception being that the HeliFire 360 cannot be installed flat in a floor or ceiling. The following should be considered before deciding on a final position.

- **Vent exhaust pipe and air intake pipe routing.**
- **Power vent terminal location.**

**Flame length may vary by up to 30% due to vent length and especially orientation.**

The unit can be covered with 1/2 inch sheetrock (drywall) up to the perimeter flange behind the window frame. Additional facing material may come to within 1/8 inch of the decorative trim.

**Additional facing material must not interfere with glass frame access.**

### **SPECIAL CONDENSATION NOTE:**

**If insulating the exhaust vent in an attic or crawl space, rockwool must be wrapped around the vent to prevent condensation. Regular insulation can be wrapped around the air intake vent in areas such as attics or crawl spaces**

### **NOTE:**

**The chase must be properly sealed at the ceiling level or between floors in a multilevel installation. This is for fire-stop purposes. See local building codes.**

### **Additional framing components**

#### **Engineered Stud Brackets**

Engineered stud brackets for 2x6 studs are used to guide the flexible venting from the fire feature venting collar to the power venting exhaust. See “Engineered Stud Brackets” on page 30 for details.

#### **Vent Standoffs**

Vent standoffs are used to maintain a 1/4 inch space between combustible surfaces and the exhaust portion of the flexible venting material. The flexible venting material may come into direct contact with non-combustible material such as rock wool or cement board. See “Vent Standoffs” on page 27 for details.

#### **Firestops**

Use a firestop whenever penetrating a floor or ceiling.

### Eight foot wall installation options

The HeliFire 360 can be installed in a number of different positions and into varying wall heights of 8 feet and higher.

For a vertical installation in an 8 foot wall, it is recommended that the unit be framed into a stud space of 22 1/2 inches. Positioning blocks made of 2 x 6 framing pieces can be used to secure the unit in this space. This wider space will allow for easier access to both electrical and gas connection access covers.

**Important note prior to framing and finishing in this unit.**

**Before framing in and / or finishing in the unit, see "Sealing electrical ports" on page 23 for instructions on applying latex silicone sealant in the electrical ports.**

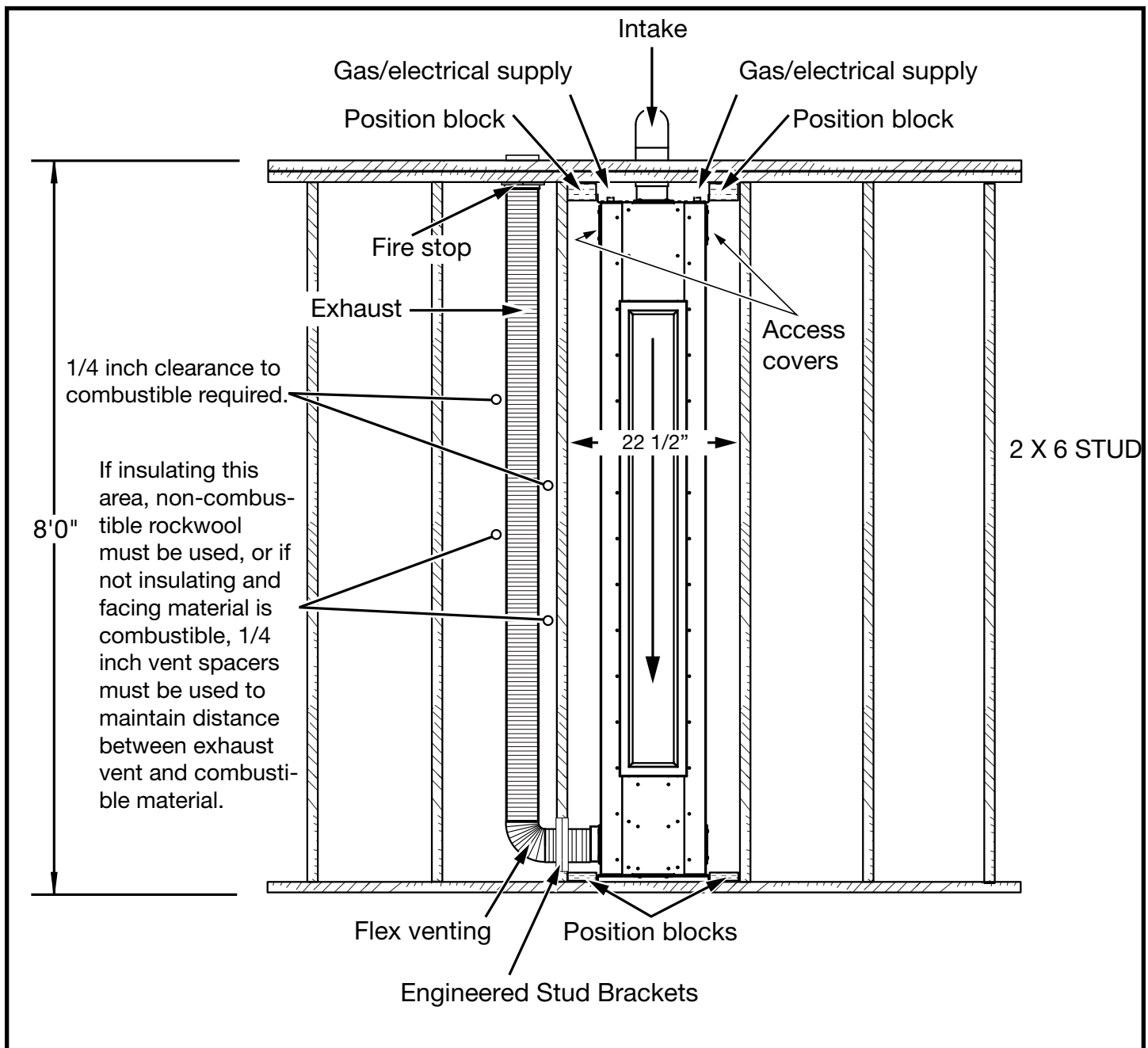


Figure 5: 8 foot ceiling install example.

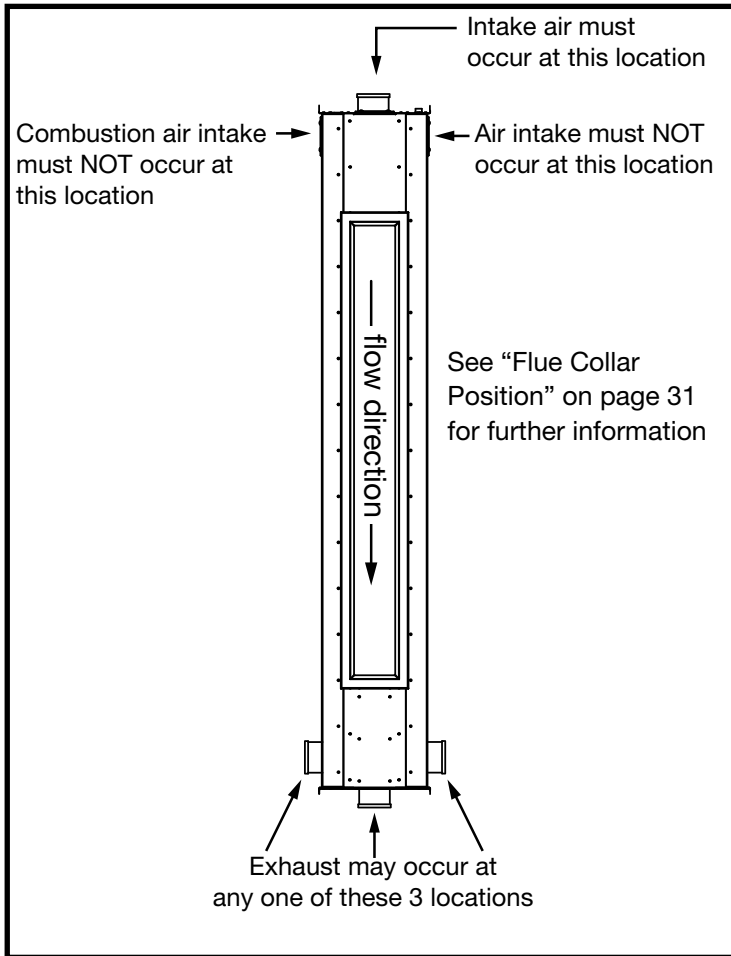


Figure 6: Air intake and exhaust locations.

### Air intake and exhaust

The combustion air intake location is restricted to one location only. The air must enter the HeliFire 360 via the end of the unit (Figure 6). The cover plates on the sides of the unit at the air intake location house the gas shut off handle on one side, and electrical wiring on the other side.

Combustion air exhaust location options include 3 possibilities as shown in the same illustration. Only one of the option can be used while the two unused options must be blocked with the two cover plates.

If insulating, rockwool must be used to insulate the exhaust vent while regular insulation can be used for the air intake.

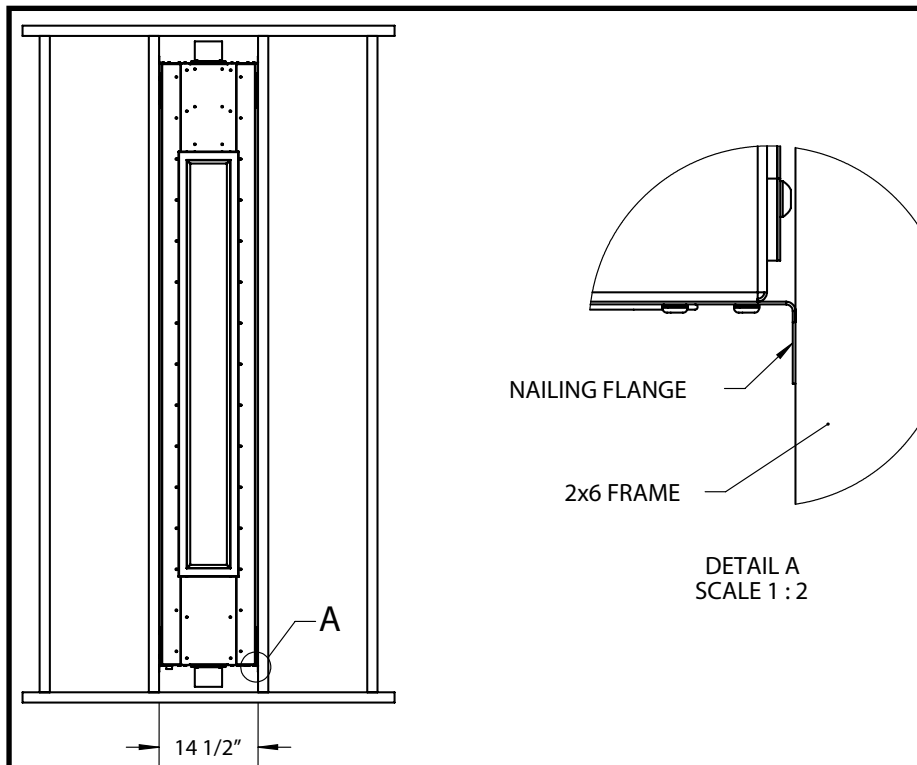
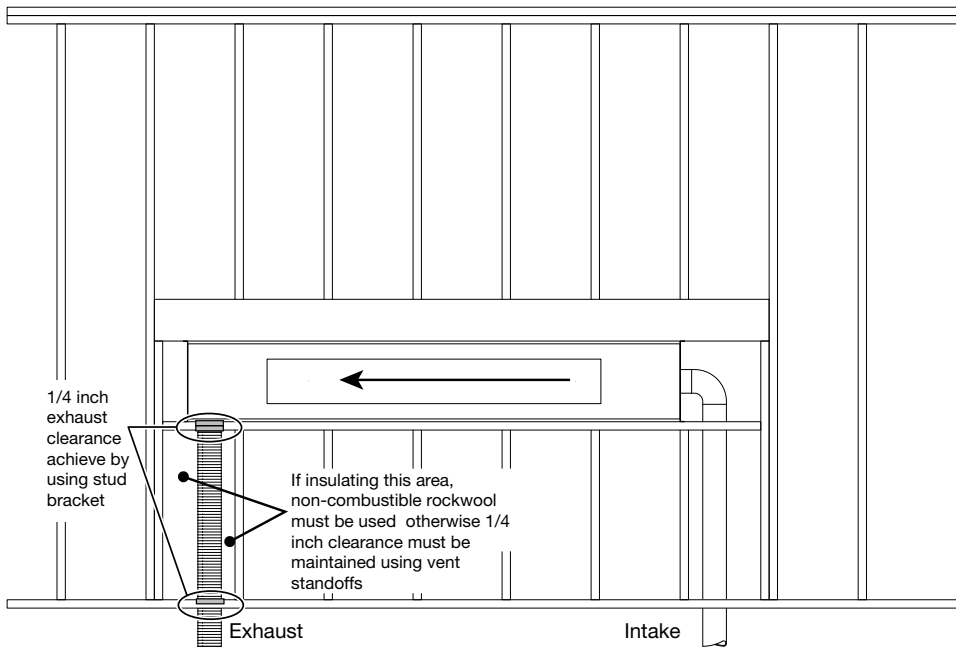


Figure 7: Nailing flange detail.

### Chase Insulation

When installing the HeliFire 360 against a non-insulated exterior wall or chase, it is permissible to insulate any gap between the HeliFire 360 and the adjacent studs to same degree as other exterior walls. Spray insulation may be used right up to the sides of the HeliFire 360 except over the venting. If insulating around venting, non-combustible rock wool insulation must be used. Cover the insulation and plastic vapour barrier with a solid surface, such as dry wall (sheet rock). Consult local building codes.

# Framing Options



The HeliFire 360 is unique in that it can be oriented in any position but must be mounted so that the glass door is in a vertical plane. The exception being that the HeliFire 360 cannot be installed flat in a floor or ceiling. The following should be considered before deciding on a final position.

**Exhaust vent pipe requires a minimum 1/4 inch clearance to combustible materials.**

Figure 8: Horizontal framing option with vent through floor.

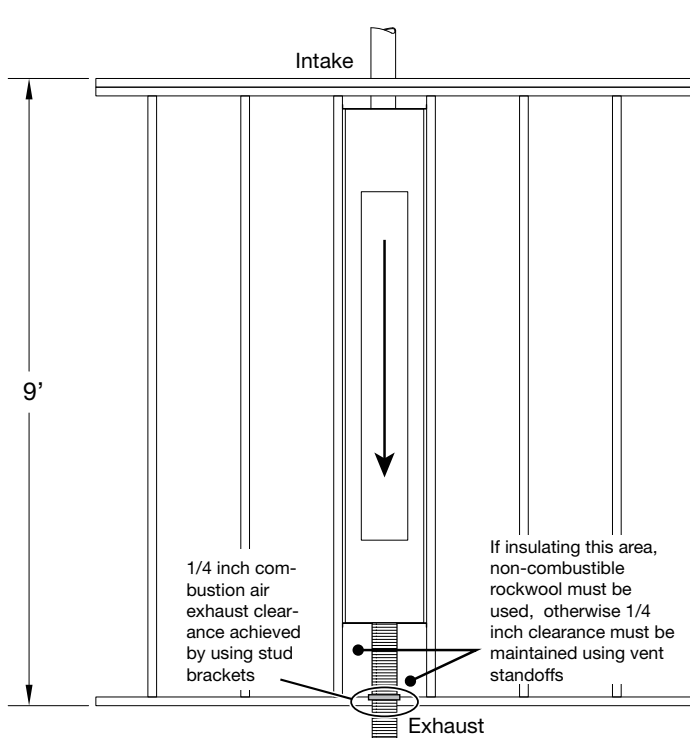


Figure 9: Through floor 9 foot ceiling framing option with flame traveling downward.

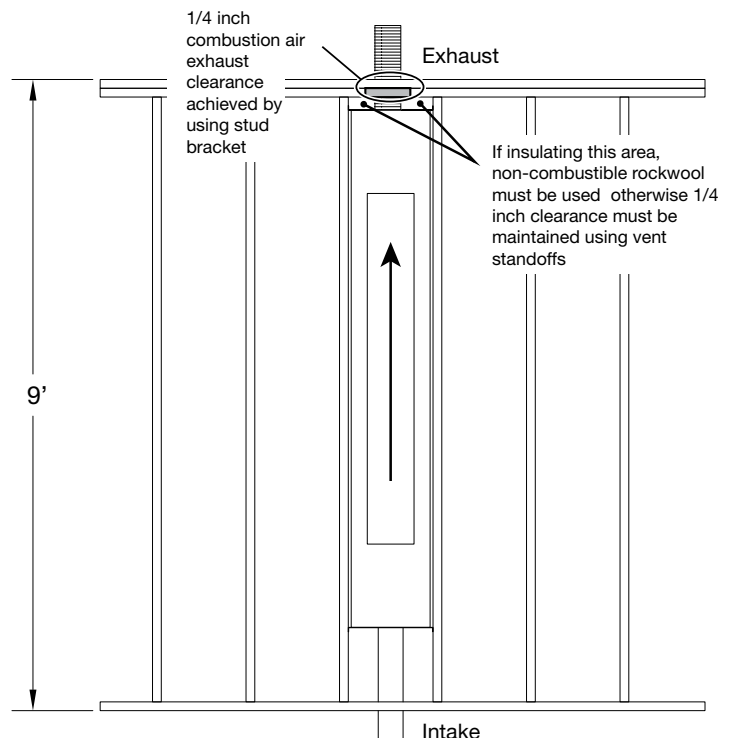


Figure 10: Through floor 9 foot ceiling framing option with flame traveling upward.

**When using outdoor flashing**

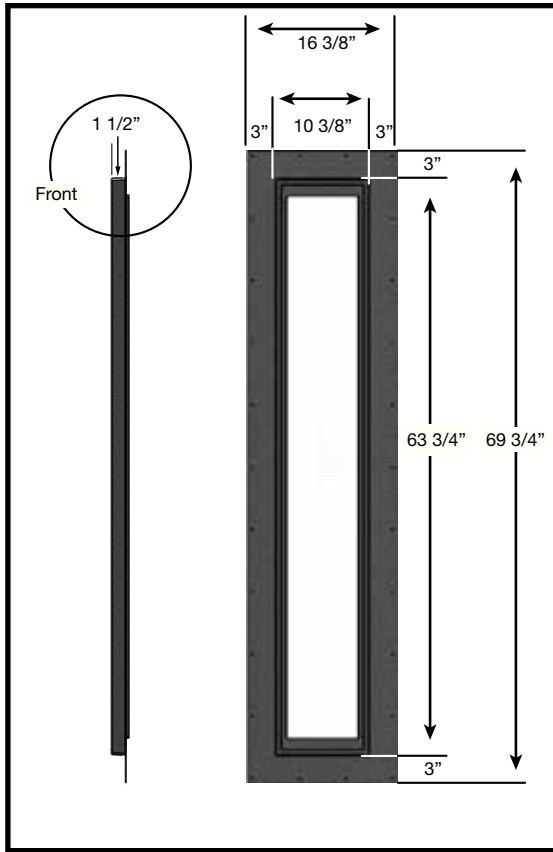


Figure 11: Outdoor flashing.

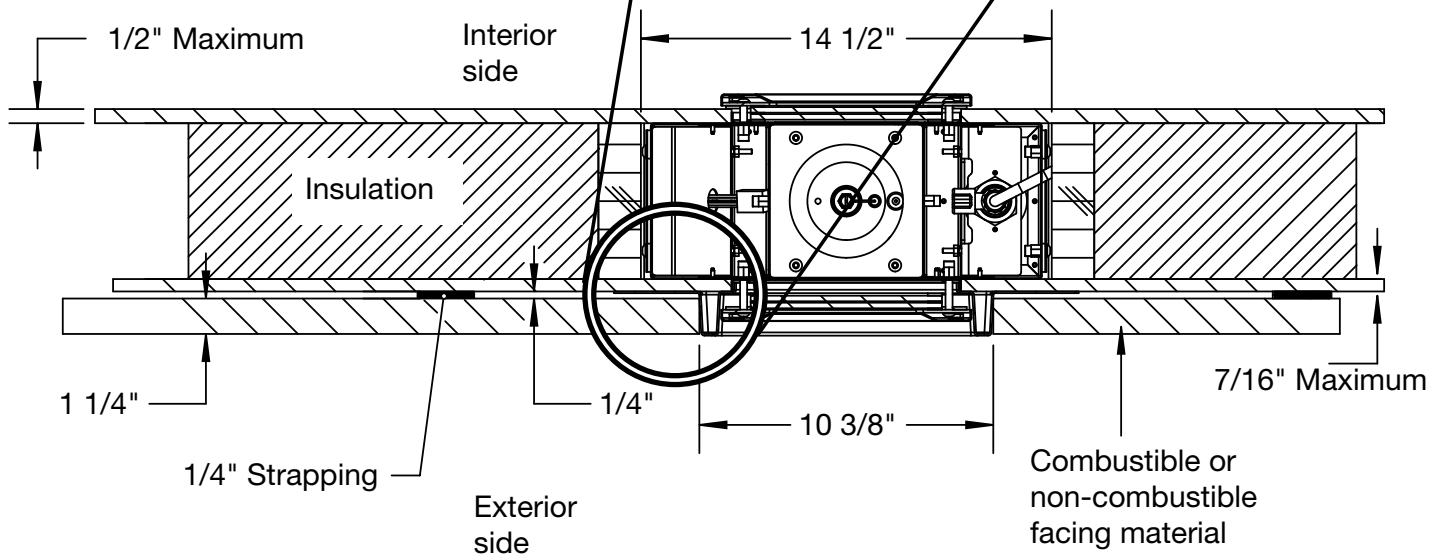
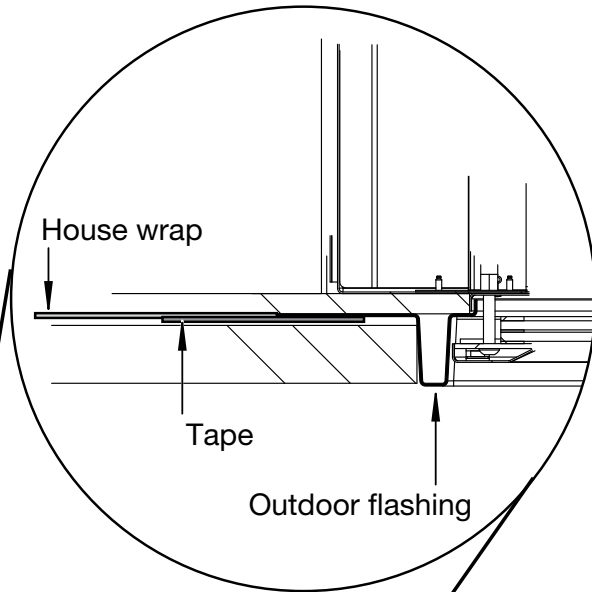


Figure 12: HeliFire 360 cross section view.

When installing the HeliFire 360 outdoors, the outdoor flashing must be used. 7/16" thick sheathing must be used under the flashing (Figure 11).  
**Do not fasten the sheathing to the face of the unit.**



## Gas Supply

Servicing of the HeliFire 360 can be performed from the side of the unit by removing the access panel from the unit. Caution: The gas line should be installed by a qualified service person in accordance with all building codes. This section is intended as a guide for qualified technicians installing this unit. Consult local and/or national building codes before proceeding.

- Gas supply line connection is located on the rear of the HeliFire 360. Gas connection accepts a 1/2" NPT fitting. Correct gas line diameter must be used to assure proper operation and pressure.
- The HeliFire 360 input pressure rating is shown on the table on page 17.

NOTE: A sediment trap, as per national fuel gas code, must be installed in the gas supply line no more than 6 feet from the gas control valve to minimize the possibility of any loose scale or dirt within the gas supply line from entering the control valve.

## Gas Connection

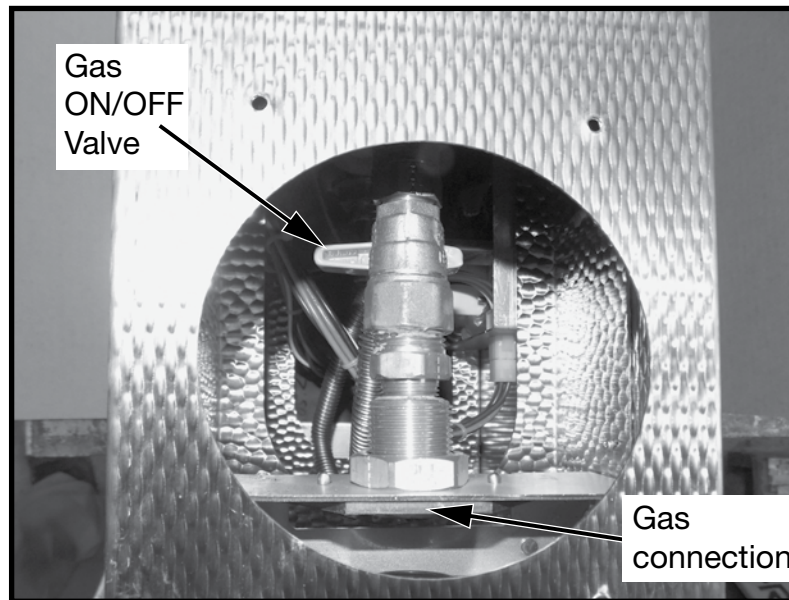


Figure 13: Gas on-off valve.

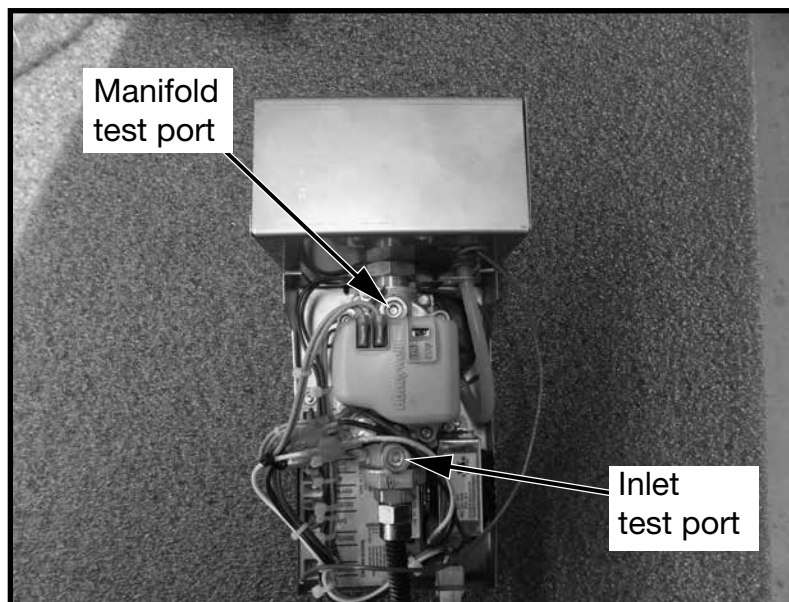


Figure 14: Gas valve testing ports.

## Gas Pressure Testing Procedure

Note: Verify gas pressures with the HeliFire 360. Inlet pressure can be tested elsewhere along the gas line leading to the HeliFire 360. The instructions below are intended to test the **manifold gas pressure**. Manifold gas pressure must be tested with the HeliFire 360 “ON” and before finishing material blocks off the access port site.

1. Begin with the ON/OFF wall switch turned to the off position. Turn off the gas supply from inside the HeliFire 360. To do this, the gas assembly needs to be pulled out of the HeliFire 360 body before being able to access the gas shut off valve. The gas assembly is moved in toward the fire box section of the body. An attached flexible hose allows the gas assembly to remain connected to the gas supply. Refer to instructions in Removing the Burner Control / Valve assembly on page 18.
2. Locate the gas valve testing point located behind the “Pressure Port Access” label as shown in Figure 15. Behind the label is a hole in which a brass testing extension can be inserted (Figure 14). After locating manifold test port, loosen and remove the screw within the port using a 3/16 Allen wrench.
3. Attach a pressure gauge to the test port using an extension test fitting. Attach a flexible hose to the barbed end of the fitting. Attach the other end of the flexible hose to the gas pressure gauge.
4. Since the glass door has had to be removed for this test, the vacuum switch will need to be bypassed. Remove the two purple wires from the vacuum switch.
5. Turn the HeliFire 360 gas valve to the ON position. Then, turn on the HeliFire 360 at the wall switch. Then, connect the two purple wires to each other thereby by-passing the vacuum switch, and wait while the pre-purge procedure finishes (about 10 seconds). This will be followed by ignition and lighting of the HeliFire 360. At this time, the manifold pressure can be read from the pressure gauge display.
6. After testing is complete, turn off the HeliFire 360 at the wall switch, turn off the gas supply, and remove the pressure gauges. Re-tighten the screws in the test ports using Thread Sealant. Re-attach the two purple wires to the vacuum switch. Apply a new and included label over the access hole and continue with installation.

**Note:**

Once gas pressure check is completed, the access port will be covered up with finishing material which means that if the gas pressure check is to be repeated at any time in the future, the finishing material will need to be removed.

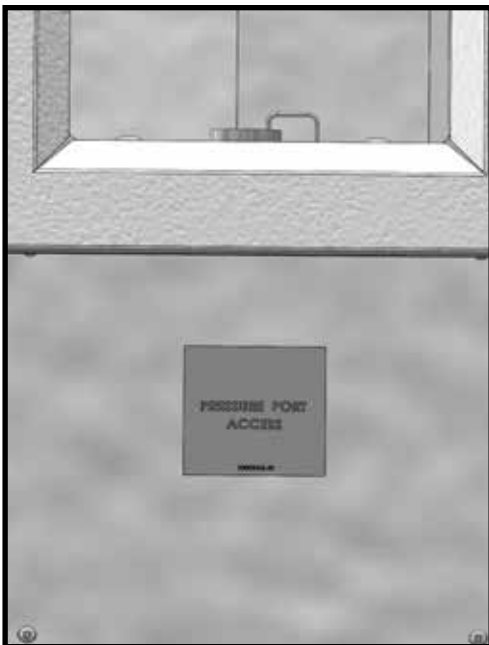


Figure 15: Pressure test port location.

## Gas Pressure Check

**Note:** To test the gas pressure, turn off the gas supply before removing the plug from the supply pressure test port or manifold pressure test port. Verify gas pressures with the HeliFire 360 lit.

<u>Gas pressure requirements</u>			<u>Helifire360</u>			
<u>Input Pressure</u>	Natural Gas / Propane Gas		<u>Gas</u>	<u>Orifice</u>	<u>Output</u>	<u>P.4.1</u>
Minimum	5.0" WC	11.0" WC	NG	"NK"	22,000 btu/hr	16.8%
Maximum	13.9" WC	13.9" WC	LPG	"LK"	16,500 btu/hr	13.7%
<u>Manifold Pressure</u>						
High	3.5" WC	10.0" WC				

Figure 16: HeliFire 360 gas requirements.

## Burner and Igniter

The burner/igniter assembly consists of four main components: the valve fitting, the orifice, the outer burner tube with its sintered bronze insert and the spark igniter collar. The the orifice has a compression rings which keep the orifice in place while in an upside-down position.

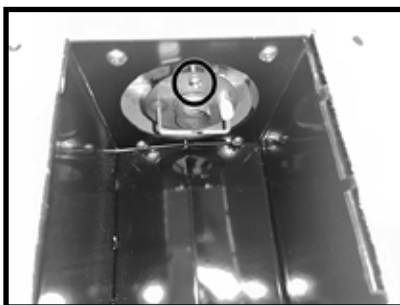


Figure 17: Venturi Screw.

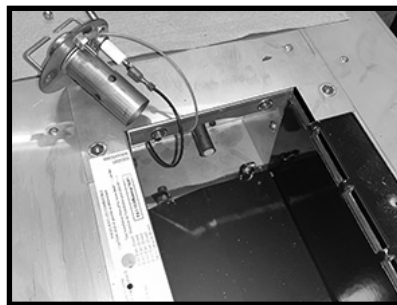


Figure 18: Removing spark igniter collar.



Figure 19: Spark igniter with its ignition wire and ground wire..

### Accessing / replacing the orifice

1. Remove the screw holding the Spark Ignitor Collar in place (Figure 17), note of the hole location. Remove the spark igniter collar by pulling upward on the outside disk a short distance (Figure 18) and disconnect the ignition wire from the igniter (Figure 19).

2. Remove the outer burner tube with its sintered bronze insert by gently pulling it off of the orifice and its compression ring.

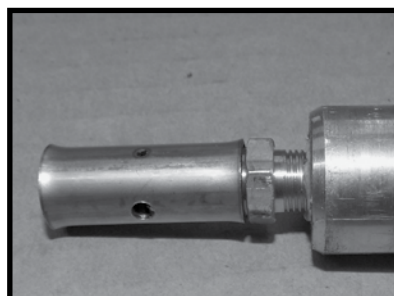


Figure 20: Outer burner tube fully seated.

3. Use a 1/2 inch socket wrench to remove the orifice.

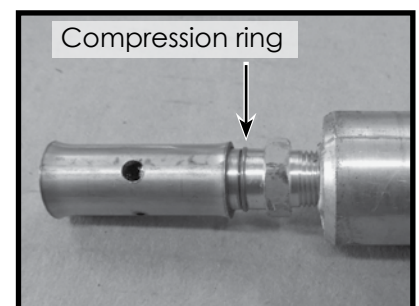


Figure 21: Outer burner tube not fully seated.

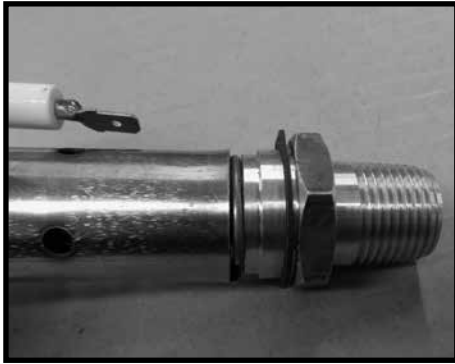


Figure 22: Spark igniter not fully seated over compression ring.

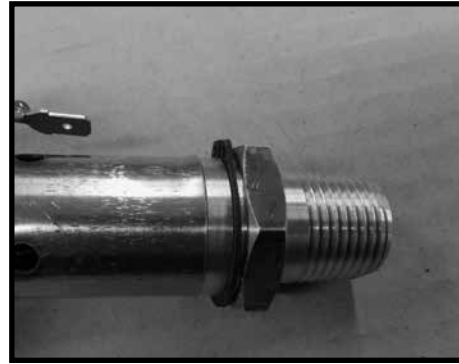


Figure 23: Spark igniter fully seated over compression ring.

### Removing the Burner Control / Valve assembly on a see through unit.



Figure 24: Removing burner cover plate.



Figure 25: Releasing gas valve assembly from main body.

1. Turn off the electrical power supply at the main breaker.
2. Turn off the gas supply to the HeliFire 360.
3. Remove the decorative trim to expose the 18 bolts which fasten the glass door to the HeliFire 360.
4. Remove the glass door. (Glass doors on both sides of the unit may be removed for convenience).
5. Remove burner / igniter assembly as described on page 17.
6. Remove the burner cover plate (Figure 24).
7. Remove two 5/32 inch Allen screws which attach the gas valve assembly to the HeliFire 360 body (Figure 25).
8. Gently pull the gas valve assembly inward toward the firebox cavity so that the electrical connector and the gas connector are exposed.
9. Disconnect Molex connector to the gas valve assembly (Figure 26).



10. Disconnect the gas line to the gas valve assembly using a 3/4 inch wrench (Figure 27).

11. The gas valve assembly can now be removed from the HeliFire 360 body.

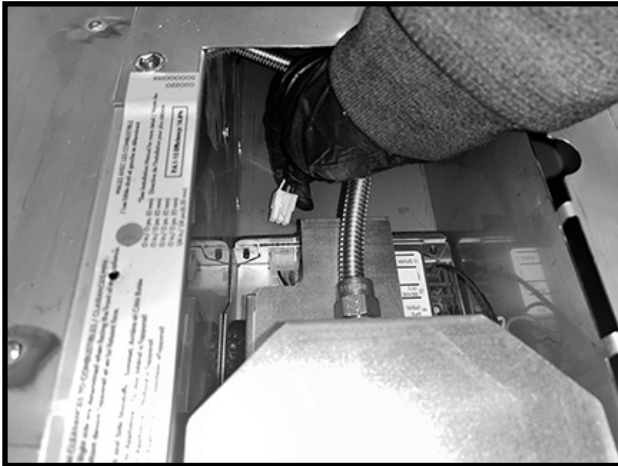


Figure 26: Disconnecting 24VDC to gas valve assy.

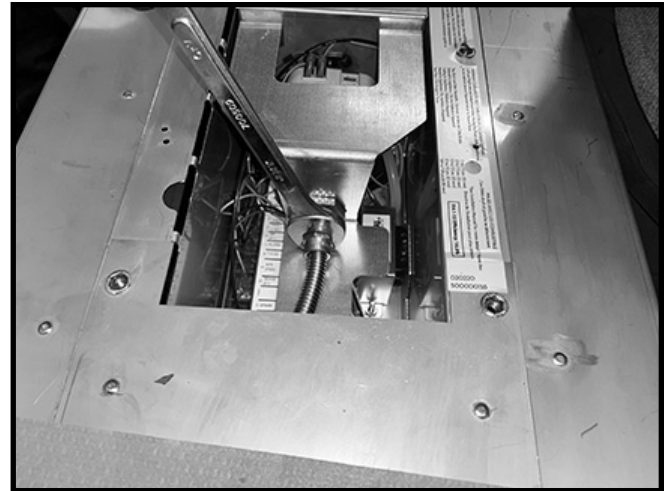


Figure 27: Removing gas line.



Figure 28: Removing gas valve assy.



Figure 29: Gas valve assy.

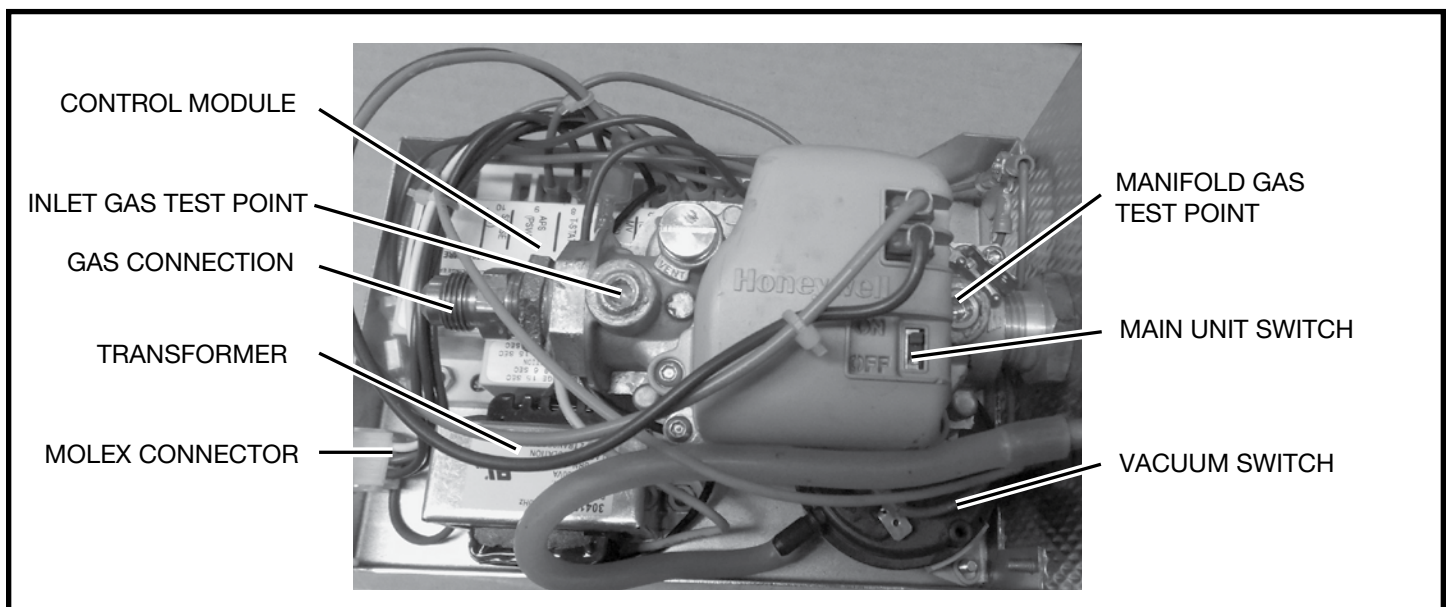


Figure 30: Gas valve assy.

## Installers Information

### Removing the Burner Control / Valve assembly on a single window unit.

1. Turn off the electrical supply at the main breaker.
2. Turn off the gas supply to the HeliFire 360.
3. Remove the decorative window trim to expose the 18 bolts which fasten the glass door to the HeliFire 360.
4. Remove the glass door.
5. Remove burner / igniter assembly as described on page 17.
6. Note: The rear decorative porcelain panel has a bow built into it which will restrict the gas valve assembly from being removed, therefore the side and rear decorative porcelain panels must be completely removed.
7. Remove the screws holding the door lip trim to the unit. (Figure 31).

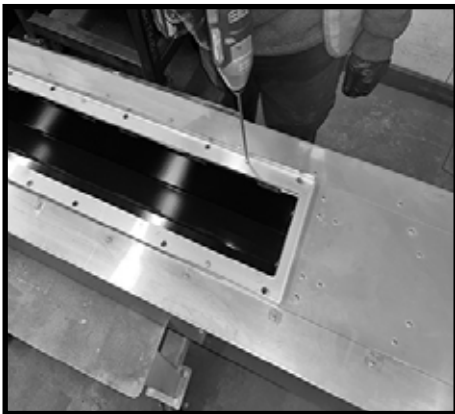


Figure 31: Door Lip Trim



Figure 32: End cover plates.

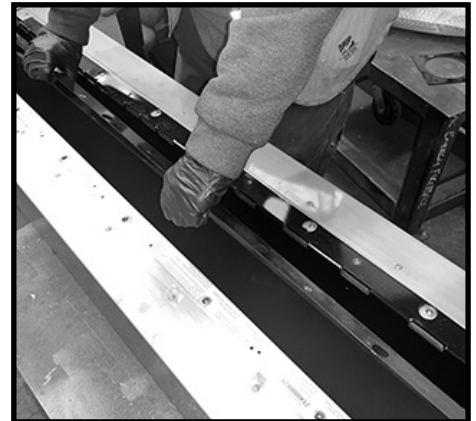


Figure 33: Removing first side panel.

8. Remove burner end and exhaust end cover plate screws using a 5/16 Allen key (Figure 32)
9. Once both end covers are removed, the porcelain piece on the rating label side can be removed. Tilt the top edge away from the rating label and gently lift the piece out of the unit (Figure 33).
10. Gently tilt the rear porcelain panel up and remove from the unit (Figure 34).
11. Tilt the top edge of the remaining side panel away from the side and lift gently out of the unit (Figure 35)
12. Remove the two 5/16 Allen screws which secures the gas valve assembly to the body of the HeliFire 360. The entire gas valve assembly can be slid in towards the firebox cavity (Figure 36).



Figure 34: Removing rear decorative plate.



Figure 35: Remove last side panel.



Figure 36: Remove screws in control assembly.



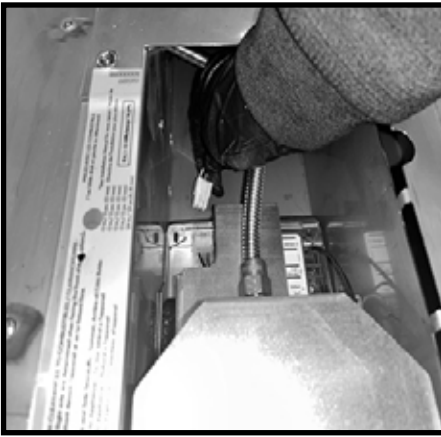


Figure 37: Disconnect electrical connector.

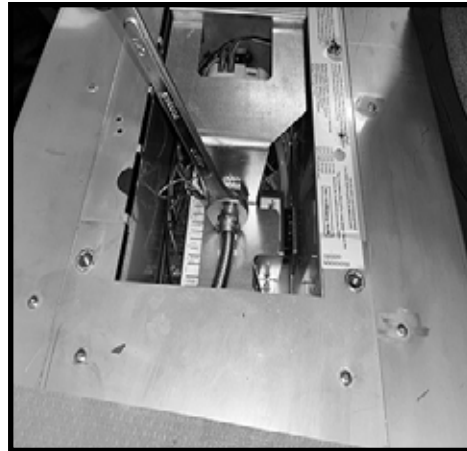


Figure 38: Removing gas connection.

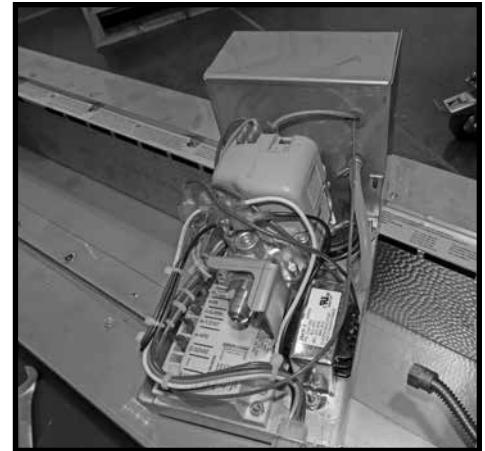


Figure 39: Gas valve assembly removed.

13. Reach in to disconnect the electrical connector (Figure 37).
14. Disconnect the gas connector at the base of the flexible line using a 3/4 inch wrench (Figure 38).
15. The gas valve assembly can now be removed from the HeliFire 360 (Figure 39).

### Reinstalling the Burner Control / Valve assembly on a single window unit.

Reinstalling the gas valve assembly is the reverse of removing it.

1. Place the gas valve assembly into the firebox cavity and slide it in far enough so that the gas and electrical connectors can be re-attached (Figure 38 and Figure 37).
2. Slide the gas valve assembly back into place and secure using two 5/16 Allen screws (Figure 36).
3. Carefully replace the double flanged decorative porcelain panel into the unit then the rear decorative porcelain panel by engaging the tabs into the slots (Figure 40 and Figure 41). Lay the panel down and ensure the holes for the end covers line up.



Figure 40: Reinstall double flanged panel.



Figure 41: Align tabs w/slots and install rear panel.

## Installers Information

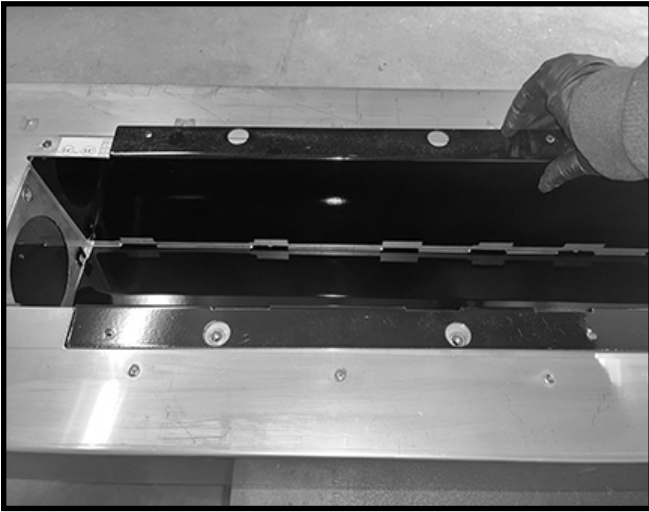


Figure 42: Reinstall porcelain panel.

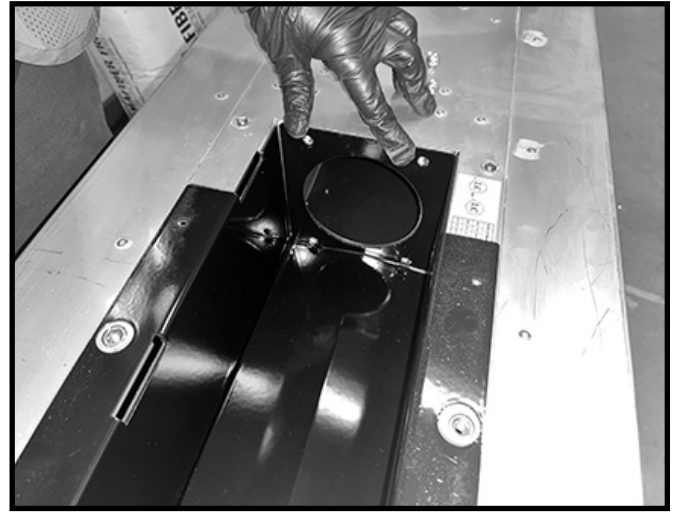


Figure 43: Reinstall end plates.

4. Reinstall the decorative porcelain panel on the rating label side (Figure 42).
5. Reinstall the decorative porcelain end cover plates. (Figure 43)
6. Ensure that the curved edges of the end covers are placed against the rear plate (Figure 44).
7. Reinstall the door lip trim, glass door and the outer decorative trim.
8. Turn on the electrical and gas supply.

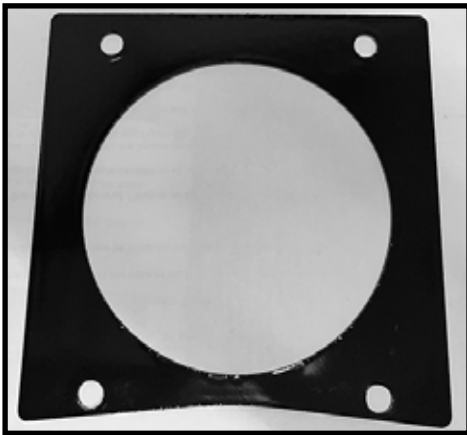


Figure 44: Curvature of end cover plate.

# Electrical Connection

## HeliFire 360 electrical connection

The HeliFire 360 requires unswitched electrical power supply. The fire feature including its power vent are rated at 115 Volts, 60 Hz, 2.48 amps.

- Connect electrical power supply to the black and white wires inside the electrical connections compartment as shown in Figure 45.
- Connect the ground wire to the green wire inside the compartment (Figure 45).
- Connect the Town and Country On/Off wall switch (supplied) to the two brown wires.

## Power vent electrical connection

- Connect the black wire from the power vent to the grey wire inside the electrical connection compartment.
- Connect the white wire from the power vent to the white wire inside the compartment.
- Connect the ground wire to the green wire inside the compartment.

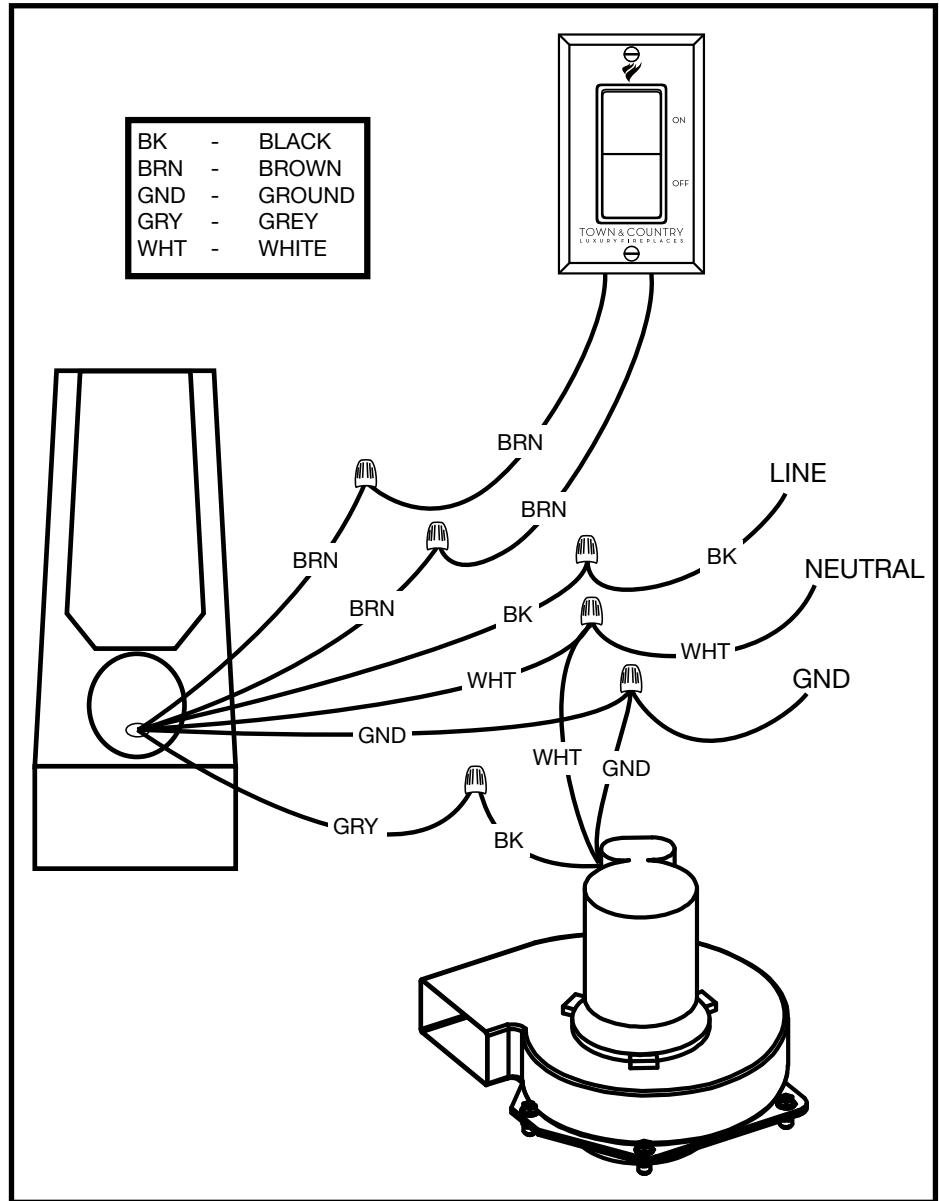


Figure 45: Wiring instructions.

## Sealing electrical ports

Once the wiring has been fed through the 3 electrical ports (Figure 46), and before the unit has been framed in and/or finished, fill the ports with standard latex silicone to create an air and gas tight seal.

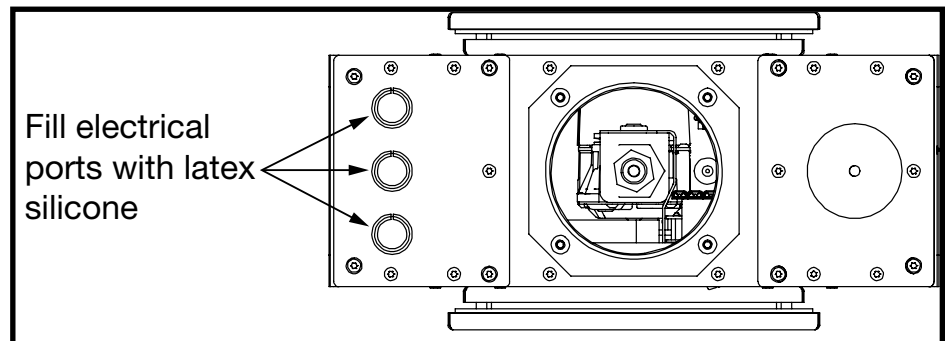


Figure 46: Electrical ports.

## Installers Information

### Wall Switch

The HeliFire 360 is controlled by a standard wall switch which should be installed by an electrician.

While the wall switch is included with the HeliFire 360, the wiring for the wall switch is not included .

In Canada, a thermostat can be used for installations in a bed room or a bed sitting room.

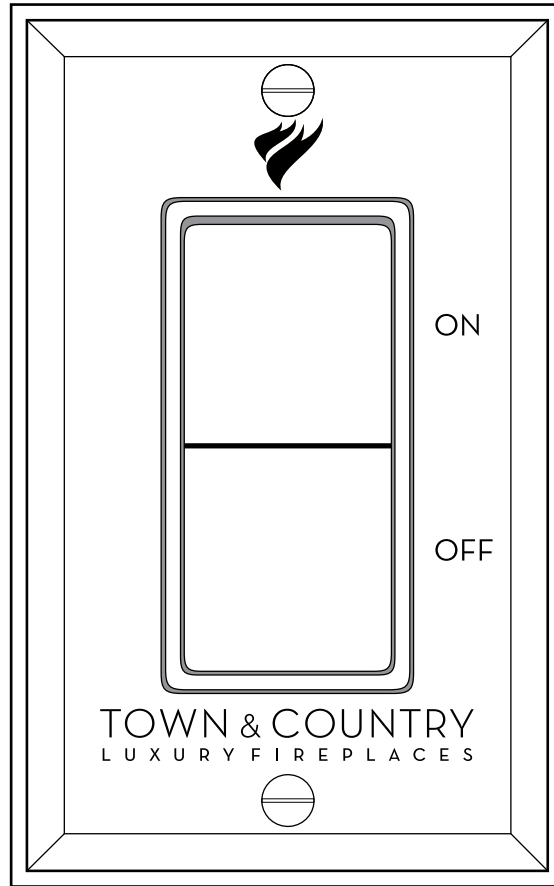


Figure 47: HeliFire 360 wall switch.

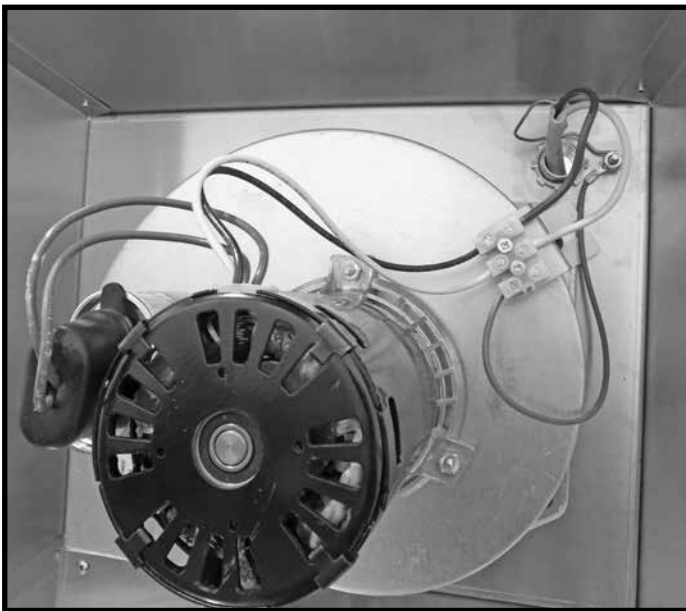


Figure 48: Surface mount wiring.

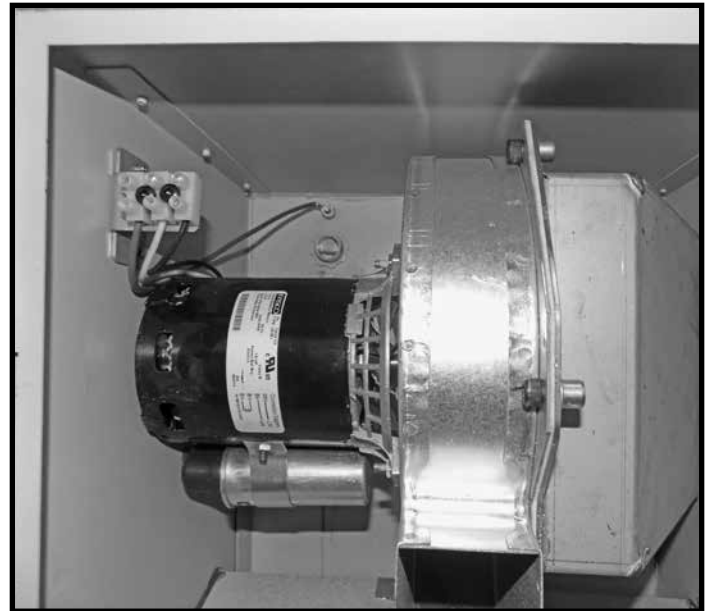


Figure 49: Flush mount wiring.

# Electrical Diagram

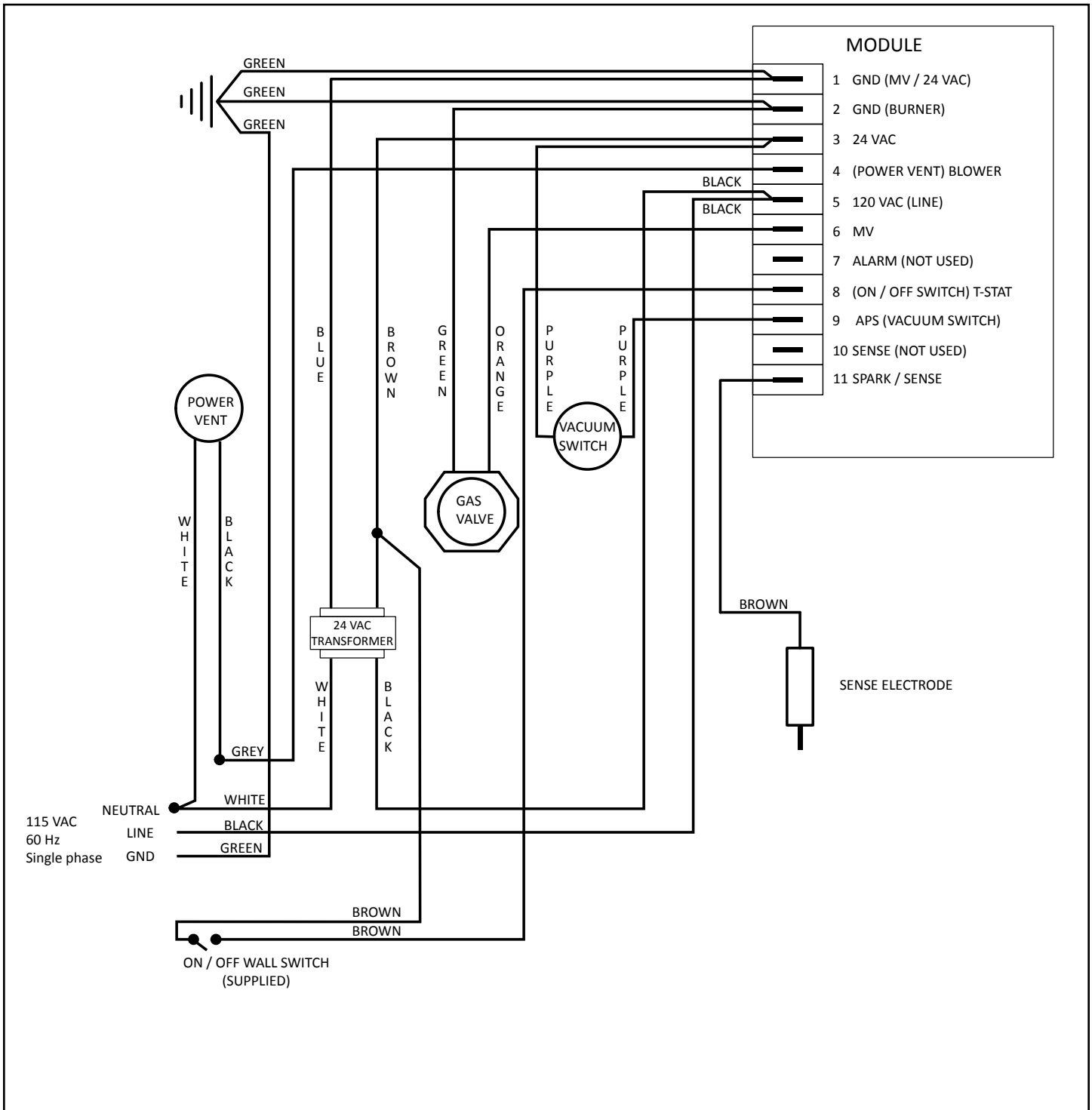


Figure 50: HeliFire 360 wiring diagram.

# Venting Requirements

## Determine which Power Vent Kit is being used

The HeliFire 360 must use one of the following Power Vent Kits:

SURFACE MOUNT POWER VENT KIT .....SKU# 22270002

FLUSH MOUNT POWER VENT KIT .....SKU# 22270001

**Maximum flue outlet pipe length is 50 feet and the maximum combustion air inlet pipe is 50 feet. Only venting material supplied by Town & Country must be used.**

## Exterior wall opening:

Determine the exact position of the HeliFire 360 so that the venting pipe is centered between two building framing members. Consult your local building codes prior to proceeding.

**IMPORTANT:** When locating the opening, it should be noted that venting terminal clearances must be maintained. See “Vent Terminal Minimum Clearances” & “Power Venting Clearances” on page 32 for proper clearances.

**Note:** When using a surface mount power vent on a flat roof, the power vent must be attached atop an elevated platform in order to keep it clear of snow and water accumulations. Use only pipe supplied with the power vent kits and extension kits.

## NOTE

If using the Surface mount power vent, the exhaust outlet must be positioned so that it is lower than the side of the vent indicated by the arrow. This is to prevent rain from entering the outlet. The outlet must have a clearance of 36 inches in front of it before the exhaust comes into contact with any material.

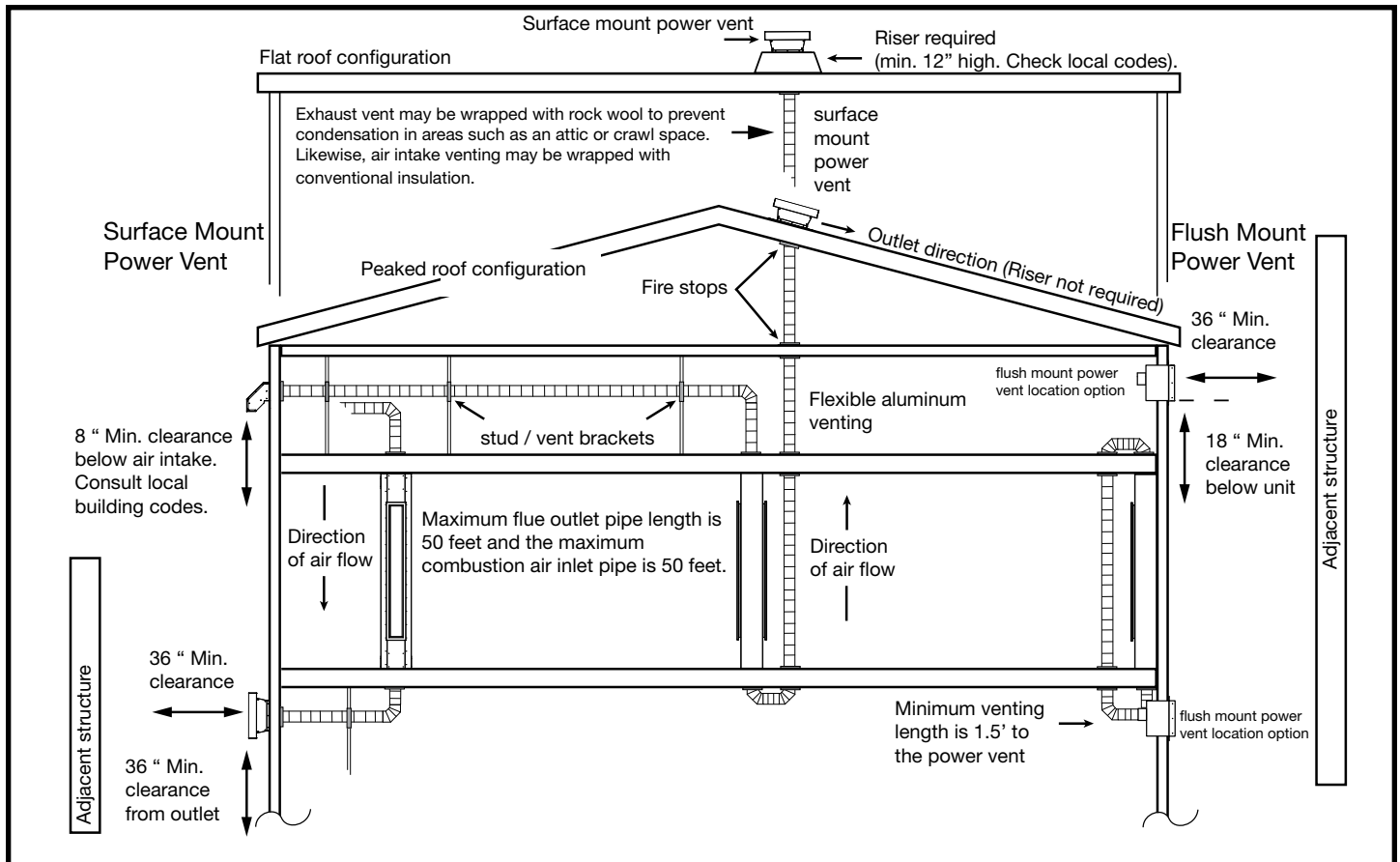


Figure 51: HeliFire 360 Venting configurations.



## Vent Standoffs

A 1/4 inch space is required between the exhaust flue vent and any combustible surface. Engineered stud brackets (Figure 62 and Figure 63) are used to support both studs and the vent as it passes through the studs.

Vent standoffs (Figure 52 & Figure 53) are used to maintain a 1/4 inch space between combustible surfaces and the flexible exhaust vent. The exhaust vent may come into direct contact with non-combustible material such as rockwool or cement board.

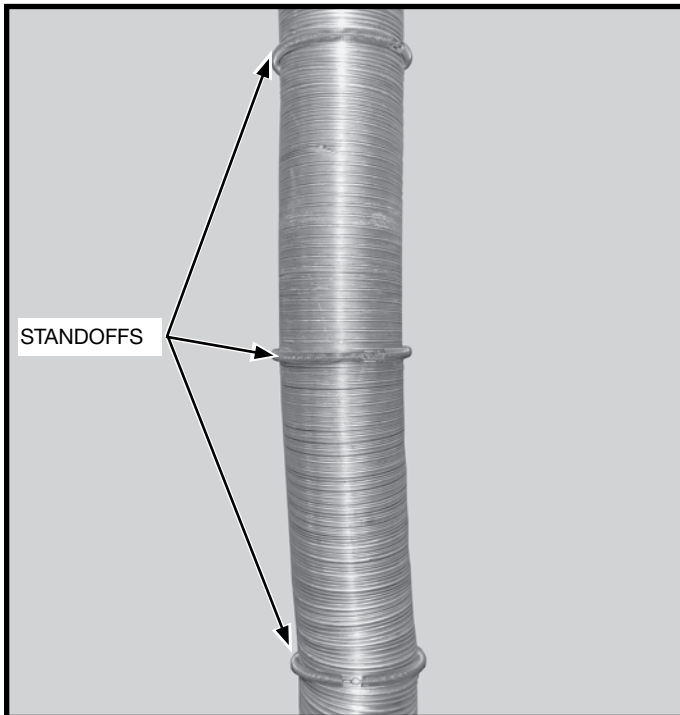


Figure 52: Vent standoffs example.

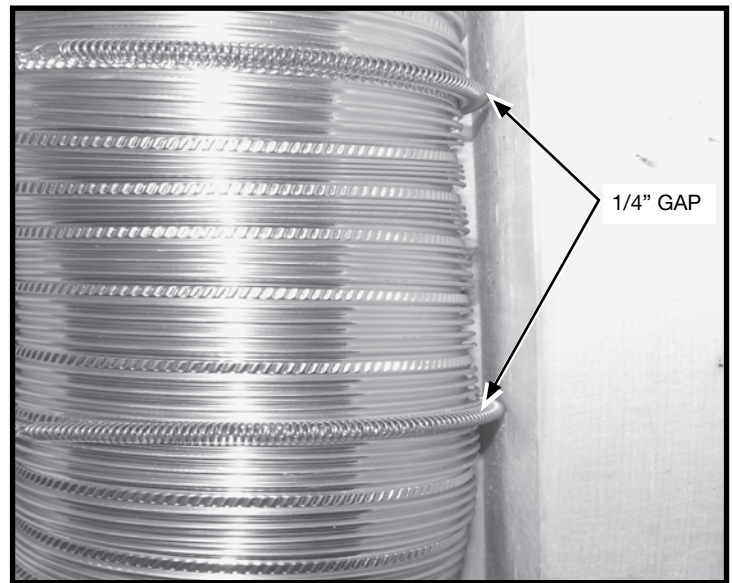


Figure 53: Gap created by standoff.

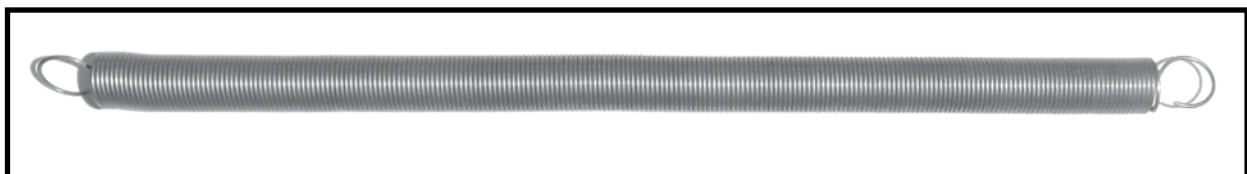


Figure 54: Vent stand-off.

### NOTE

**20 vent standoffs come with the surface mounted power vent kit and the Flush mount vent kit. Use as many standoffs as necessary to maintain a 1/4 inch clearance between the flexible vent and any combustible material throughout the length of the exhaust portion of the flexible vent. If additional standoffs are required, packages of 20 can be ordered through a Town & Country Retailer.**

## Surface Mount Power Vent

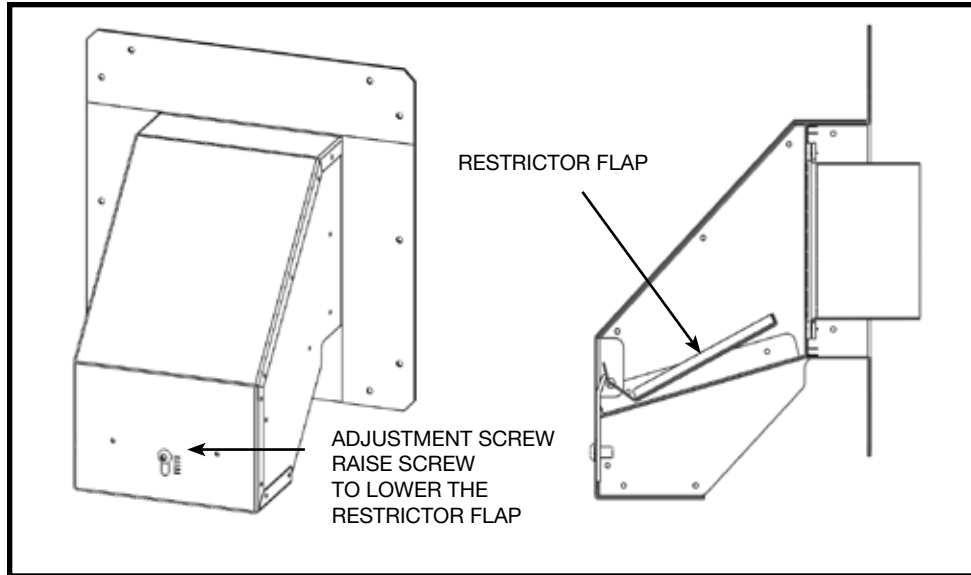


Figure 55: HeliFire 360 inlet vent box.

### Combustion Air Intake Restrictor

The air intake restrictor regulates the incoming air flow in order to achieve the desired flame appearance. The desired flame appearance is one in which the flame extends to fill the length of the firebox (approx. 55"). The position of the restrictor corresponds to the length of venting between the air intake and the firebox. More airflow will be required as the length of venting is increased (to a maximum of 50') and less airflow will be required if the venting length is shorter. The installer must keep in mind that too much air flow will make it difficult for the gas in the firebox to be ignited and remain lit, while not enough airflow will produce a shorter, weaker appearance.

To adjust the airflow:

1. With the HeliFire 360 lit, observe the length of the flame. If flame is too short, allow more airflow to enter the venting by loosening the adjustment screw at the front of the intake venting and move the screw downwards in its slot before tightening the screw up. This will open the restrictor. Conversely, if the HeliFire 360 has difficulty lighting or staying lit because of a short venting distance, loosen the adjustment screw and move the screw upwards in its slot. This will reduce the airflow by closing the restrictor.
2. Observe the flame again. As these adjustments are guidelines, it may be necessary for the installer to repeat the cycle of observation and adjustment.

Note: The HeliFire 360 combustion air inlet box is used only with the Surface mount power vent unit. The Flush mount power vent unit has its' air intake built into it.

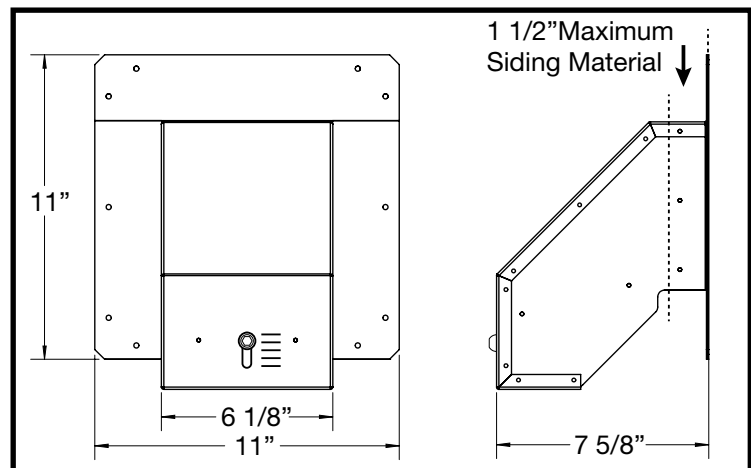


Figure 56: HeliFire 360 inlet vent box dimensions.

**Surface Mount Power Vent  
(Vertical or horizontal termination).**

Use the Surface mount power vent unit (Figure 57) if the power vent is to be located on the roof of a structure (Figure 51). The Surface mount power vent unit can also be used on a wall. The Surface mount power vent unit must use the HeliFire 360 inlet vent box.

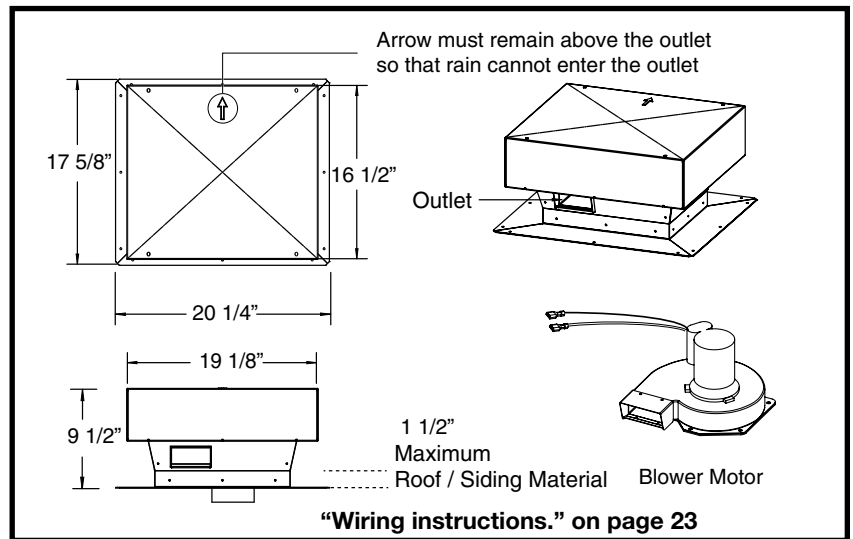


Figure 57: Surface mount power vent detail.

**Flush Mount Power Vent (Horizontal termination only)**

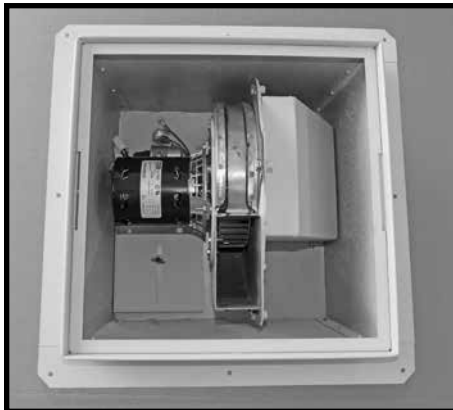


Figure 58: Flush mount power vent detail.

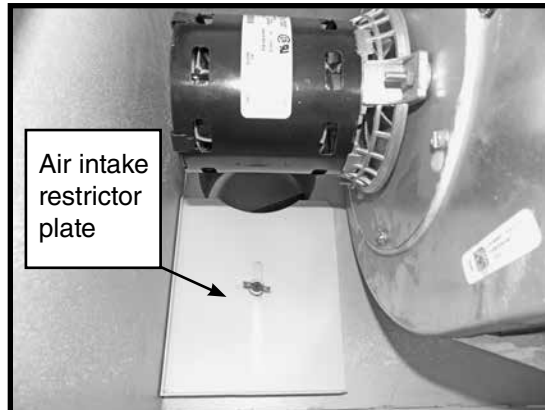


Figure 59: Flush mount inlet restrictor plate.



Figure 60: Flush mount front cover.

Use the Flush mount power vent on outside vertical walls only. The Flush mount power vent box contains both the exhaust fan which is pulling air from the HeliFire 360, and the air inlet and restrictor which regulates the proper air flow into the HeliFire 360. For a description of how the air intake restrictor plate works, “Combustion Air Intake Restrictor” on page 28.

**Flush Mount Framing Note:**

Cut and frame a 12 5/16” by 12 5/16” opening.

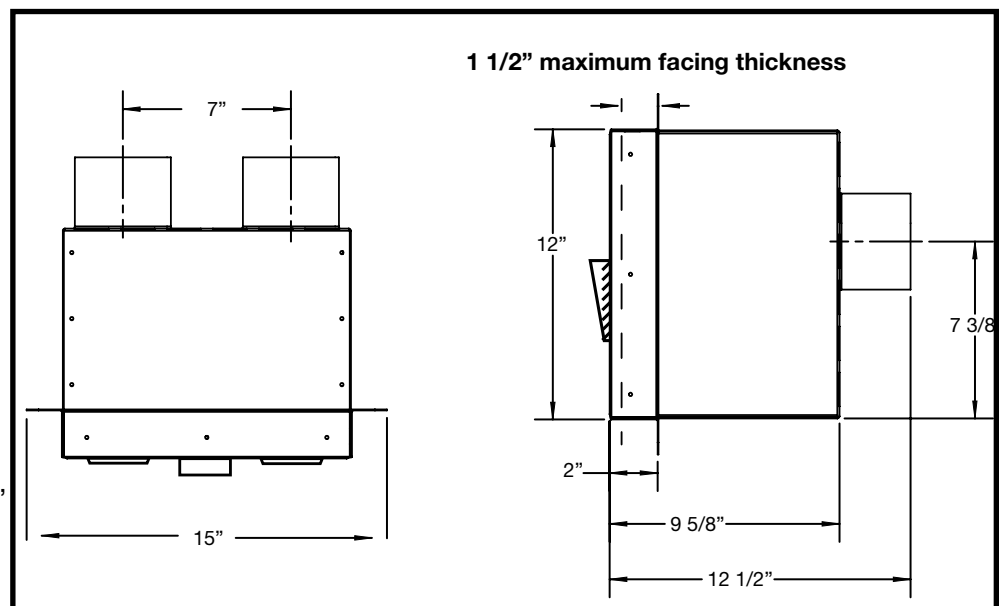


Figure 61: Flush mount power vent dimensions.

### Engineered Stud Brackets

Stud brackets for 2x6 studs are used to guide the flexible venting from the fire feature venting collar to the power venting exhaust. Use stud brackets to maintain the structural integrity of the studs and to keep the venting from unnecessary movement. These brackets can also be used to guide the venting through a floor or ceiling. To install, cut out a 4 5/8" section from a stud and fasten two brackets to each stud. The HeliFire 360 comes with 4 pairs of brackets. Additional brackets can be ordered.

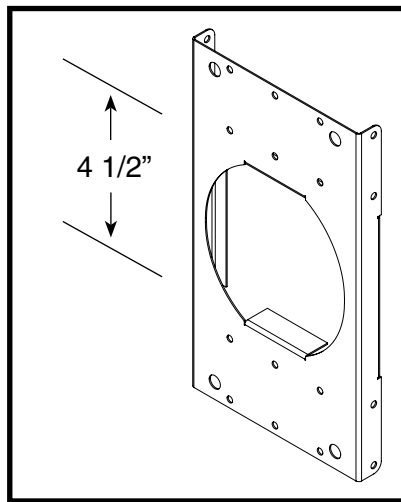


Figure 62: Engineered stud brackets.

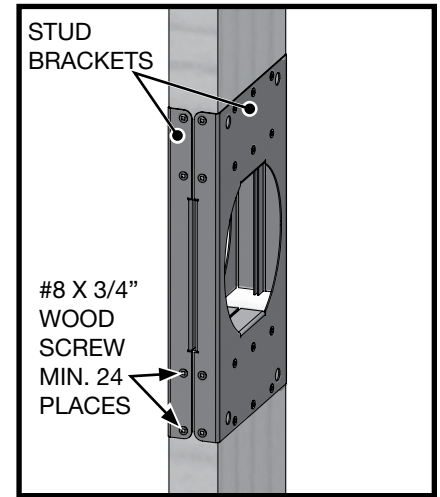


Figure 63: Engineered stud brackets on a 2 X 6.

## NOTE

**4 pair of engineered stud brackets come with the surface mounted power vent kit and the Flush mount vent kit. Use as many brackets as is necessary to maintain a 1/4 inch clearance between the flexible vent and any combustible material throughout the length of the exhaust portion of the flexible vent. If additional stud brackets are required, packages of 4 pair can be ordered through a Town & Country Retailer.**

**Consult local building codes for specific requirements.**

### Venting through combustible ceiling or floor

Fire stops can be used to support and guide the flexible venting material through combustible ceiling or floor surfaces.

### Power venting - flexible venting connection

Use supplied hose clamps to secure the flexible venting to the power venting collar. For additional security, apply at least one self tapping screw through vacant screw slots on the band. This will ensure that the venting never works its way off of the collar.

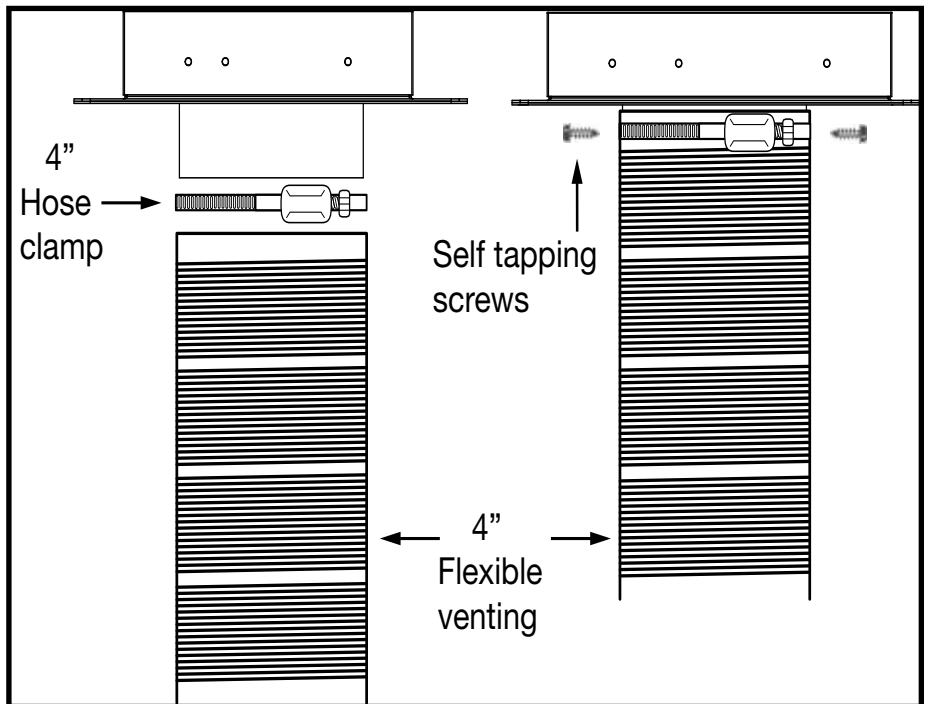


Figure 64: Power vent and Intake vent connection.

## Flue Collar Position

The HeliFire 360 is shipped with the flue collar attached to the end of the unit (Figure 65). The flue collar can be relocated to either side of the unit.

To change exhaust vent position:

1. Remove the flue collar from the exhaust end of the HeliFire 360.
2. Remove the cover plate from the desired side of the HeliFire 360 and secure the flue collar to that opening.
3. Secure the left over cover plate to the exposed opening.

Note: The combustion air intake collar is located at the opposite end of the HeliFire 360 body and cannot be relocated.

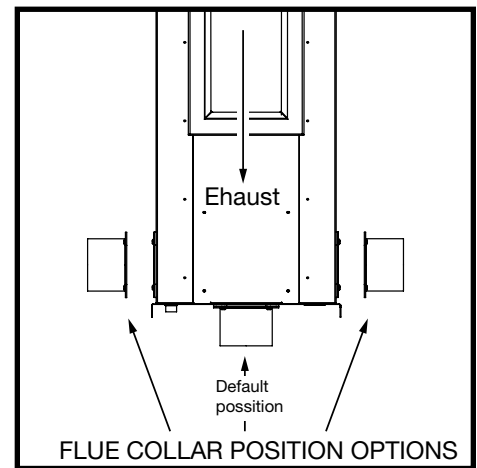


Figure 65: Exhaust position options.

## Ceiling or Floor Firestop

Where the exhaust vent pipe passes through a ceiling or floor, a firestop must be used to maintain a seal and proper clearances.

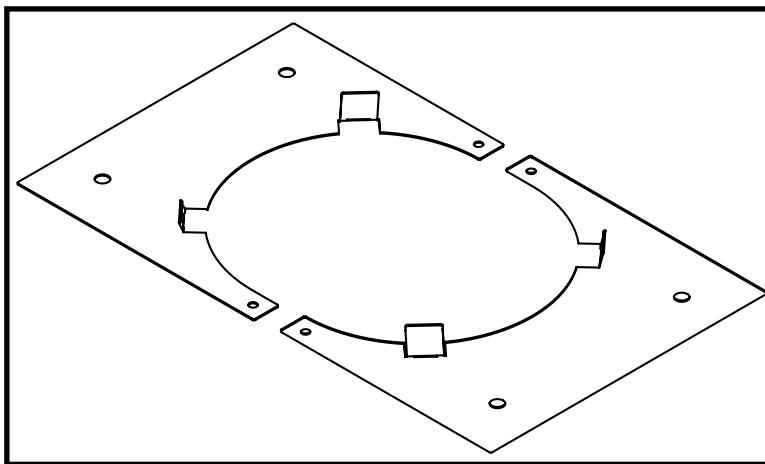


Figure 66: HeliFire 360 Firestops.

### NOTE

1 pair of Firestop come with the surface mounted power vent kit and the Flush mount vent kit. Use as many firestops as is necessary to maintain a 1/4 inch clearance between the flexible vent and any combustible material throughout the length of the exhaust portion of the flexible vent. If additional firestops are required, packages of 2 pair can be ordered through a Town & Country Retailer - See "Parts Diagram" on page 34.

# Vent Terminal Minimum Clearances

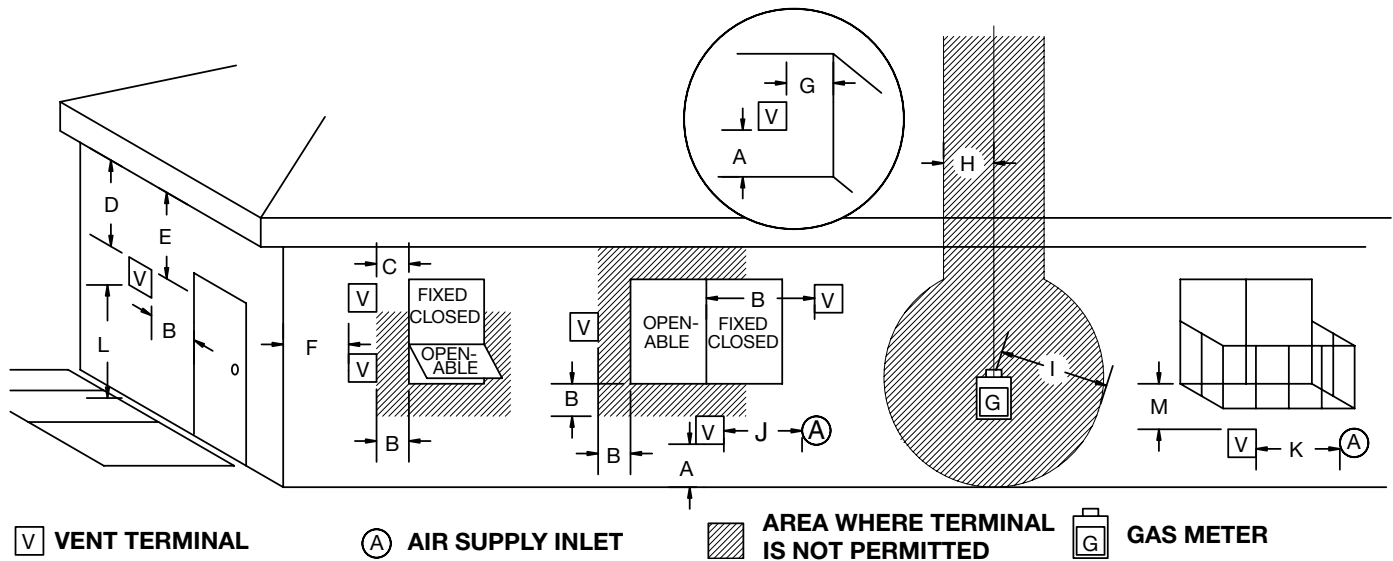


Figure 67: Vent terminal minimum clearances.

A=	See bottom of page	Clearances above grade, veranda, porch, deck, or balcony. (See "Power Venting Clearances" for flush mount rule.
B=	18 in. (45 cm) min. 36 in (91 cm) min.	Flush mount power vent clearance to window or door that may be opened. Surface mount power vent clearance to window or door that may be opened (See Figure 68).
C=	12 inches (30 cm) min.	Clearance to permanently closed window recommended to preventing condensation on window.
D=	0 inches (0 cm) min.	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2 feet (60 cm) from the edge of the terminal.
E=	0 inches (0 cm) min.	Clearance to unventilated soffit.
F=	6 inches (15 cm) min.	Clearance to outside corner.
G=	6 inches (15 cm) min.	Clearance to inside corner.
H=	3 feet (90 cm) min.	*Not to be installed above a meter/regulator assembly within 3 feet (90 cm) horizontally from the center-line of the regulator.
I=	6 feet (1.8 m) min.	Clearance to service regulator venting outlet.
J=	18 in. (45 cm) min. 36 in (91 cm) min.	Flush mount power vent clearance to non mechanical air supply inlet to building or the combustion air inlet to any other appliance. Surface mount power clearance to non mechanical air supply inlet to building or the combustion air inlet to any other appliance.
K=	6 feet (1.8 m) min.	Clearance to a mechanical air supply inlet.
L=	*7 feet (2.1 m) min.	^ Clearance above paved side-walk or a paved driveway located on public property.
M=	**0 inches (0 cm) min	Clearance under veranda, porch, deck, or balcony.

^ a venting shall not terminate directly above a side-walk 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 of 2 sides beneath the floor\*  
 \* as specified in CAN/CSA B149.1 Installation Codes, Note: local Codes or Regulation may require different clearances  
 \* for U.S.A. Installations follow the current National Fuel Gas Code, NFPA54/ANSI Z223.1

## Power Venting Clearances

**Surface mount** power venting outlet must have a minimum of 36 inches clearance between the front of the outlet and any other material.

**Flush mount** power venting must have a minimum of 18 inches clear below the bottom of the power vent, and **36 inches clearance in front of power vent.**

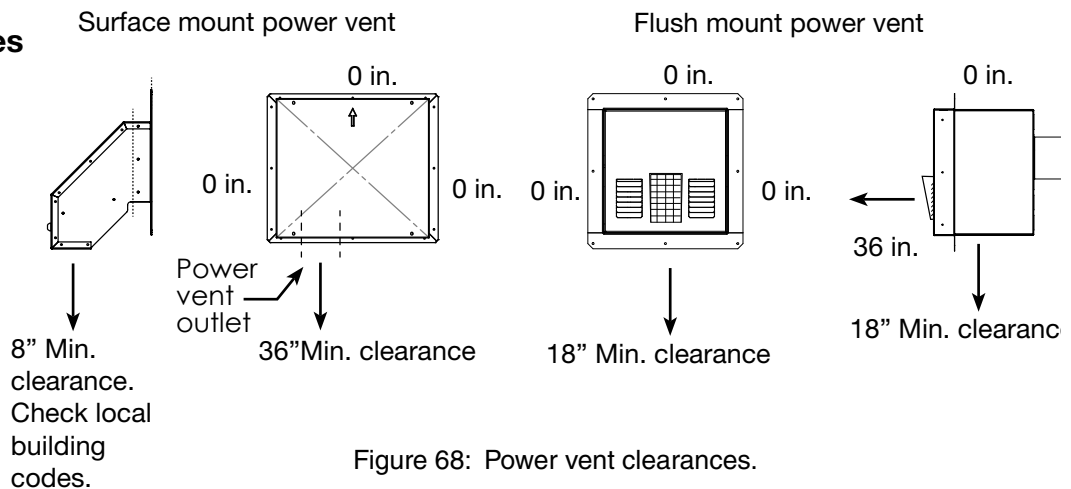


Figure 68: Power vent clearances.



# Maintenance

**CAUTION:**

Turn off gas and electrical power supply (if applicable) and allow ample time for unit to cool before servicing appliance. It is recommended that the fire feature and its venting be inspected at least once a year by a qualified service person.

**Glass Panel:**

**Warning: Do not operate fire feature with glass panel removed, cracked or broken. Replacement of the glass panel should be done by a licensed or qualified service person.**

Do not strike or otherwise impact the glass in anyway that may cause it to break. If the glass becomes cracked or broken it must be replaced before using the fire feature. Replacement glass can be obtained from your nearest Town & Country Fireplaces™ dealer. Refer to “Door Frame Removal/Installation” on page 7 for instructions.

**Annual Inspection:**

- a) Remove glass panel and inspect the Burner and Igniter for soot build up. If excessive build up of soot is present, have a qualified service person inspect and adjust the unit for proper combustion.
- b) Check that the venting pipe and venting terminal are open and free from blockage or debris. If the venting is disassembled for cleaning, it must be properly assembled and re-sealed.
- c) Check glass panel gasket, replace if necessary. It is important that the glass seal be maintained in good condition.

**Note:** The appliance area must be kept clear and free from combustible materials, gasoline and other flammable vapours and liquids.

**Periodically:**

- a) Viewing glass may be cleaned as necessary with fireplace glass cleaner.
- b) Exterior finish may be cleaned with mild soap and water.

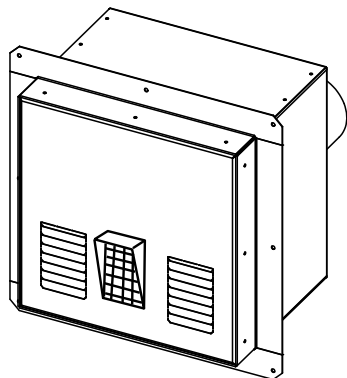
**CAUTION:**

Do not use abrasive cleaners on glass or any other part of the fire feature.

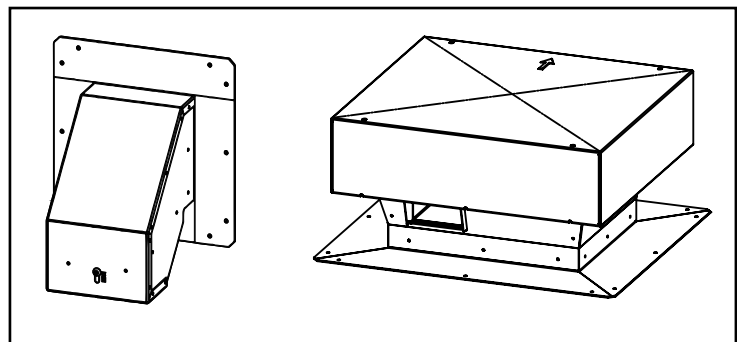
Do not clean glass when hot.

# Parts Diagram

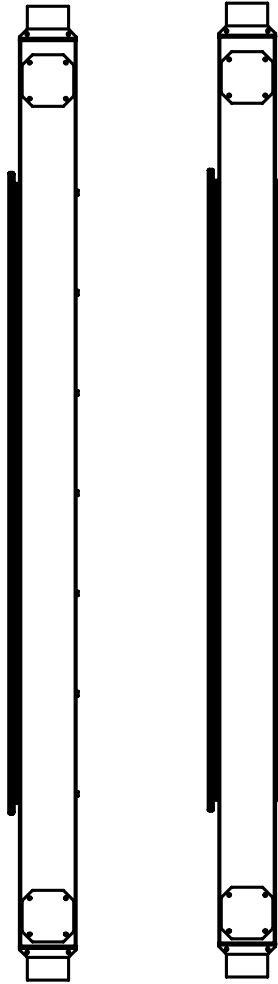
Part	Part number
Body (Single sided) .....	22030001
See through body.....	22030002
HeliFire 360 flashing kit .....	22220001
Control assy .....	80000540
Burner assy .....	80001211
Door assy .....	80001238
Door trim assy .....	80001239
Surface mount power vent kit .....	22270002
	Includes 2 x 25' - 4 inch aluminum flex pipe Includes 4 pairs of stud brackets
Flush mount power vent kit.....	22270001
	Includes 2 x 25' - 4" aluminum flex pipe Includes 4 pairs of stud brackets
Vent extension kit .....	2220008
	4" aluminum flex pipe 2-25' sections
Stud bracket kit (4 pair).....	22490004
HeliFire 360 Firestops (2 pair).....	80000575
Vent standoffs (20 pce).....	80001410



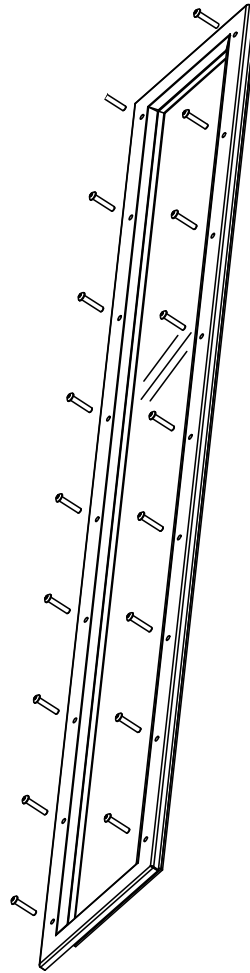
Flush mount power vent kit.



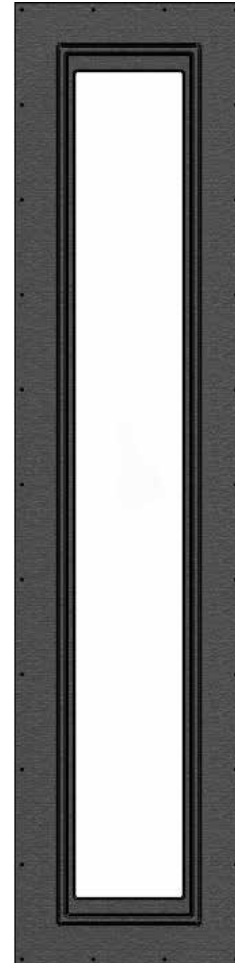
Surface mount power vent kit.



Single sided Body  
& See thru body.



Door Assy.



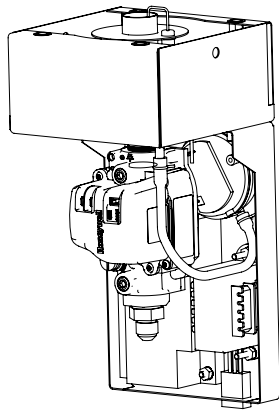
HeliFire 360  
flashing kit.



Door trim  
assy.

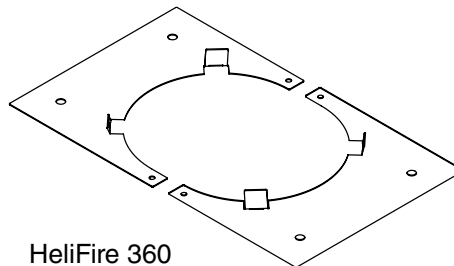


Vent standoffs  
20 pieces

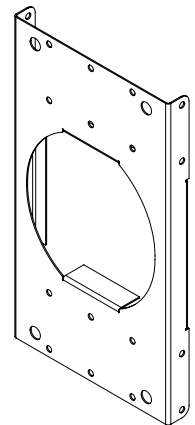


Gas valve  
control assy.

Burner assy.



HeliFire 360  
Fire stops



Engineered stud brackets - 4 pair

# Lighting Instructions

## FOR YOUR SAFETY READ BEFORE LIGHTING

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

A. **BEFORE LIGHTING** smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

### WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbour's phone. Follow the supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

B. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance & to replace any part of the control system & any gas control which has been under water.

## LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above on this label.
2. Move switch to "ON" position (unit will purge for 10 seconds).
3. The appliance will try igniting 3 times. If the appliance fails to ignite, the control will lock out.
4. Call your service technician or retailer to rectify the issue.

## TO TURN OFF GAS APPLIANCE

1. Move switch to the "OFF" position (unit will post-purge for 15 seconds).
2. Turn off all electrical power to the appliance if service is to be performed or for extended shutdown.

**CAUTION:** Hot while in operation. Do not touch. Severe burns may result. Keep children, clothing, furniture, gasoline and other liquids having flammable vapours away. Keep burner and control compartments clean. See installation and operating instructions accompanying the appliance.

**ATTENTION:** L'appareil est chaud lorsqu'il fonctionne. Ne pas toucher l'appareil. Risque de brûlures graves. Surveiller les enfants. Garder les vêtements, le meubles, l'essence ou autres liquides produisant des vapeurs inflammables loin de l'appareil. S'assurer que le brûleur et le compartiment des commandes sont propres. Voir les instructions d'installation et d'utilisation qui accompagnent l'appareil.

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HELI-FIRE









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For technical support, please contact your retailer.

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