

# Installation & Operating Manual

## Installation and Appliance Setup - Care and Operation

**INSTALLER:** Leave this manual with party responsible for use and operation.

**OWNER:** Retain this manual for future reference.

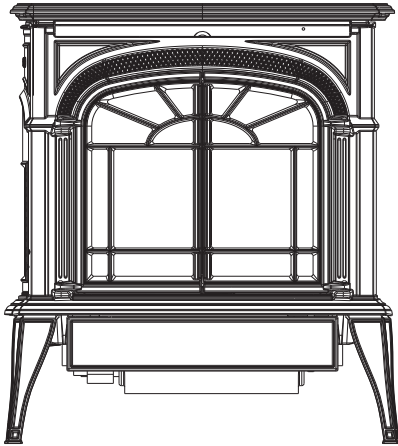
Call your dealer for questions on Installation, Operation, or Service.

**NOTICE:** SAVE THESE INSTRUCTIONS

**VERMONT**  
CASTINGS

### Intrepid® Direct Vent Gas Heater

Model: INDVRCBSB, INDVRBSSB,  
INDVRBMSB, INDVRBDSB



Installation and service of this appliance should be performed by qualified personnel. Hearth & Home Technologies recommends HHT Factory Trained or NFI certified professionals.



### **WARNING**

#### FIRE OR EXPLOSION HAZARD

Failure to follow safety warnings exactly could result in serious injury, death or property damage.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **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.
  - Leave the building immediately.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.



### **DANGER**



**HOT GLASS WILL  
CAUSE BURNS.**

**DO NOT TOUCH GLASS  
UNTIL COOLED.**

**NEVER ALLOW CHILDREN  
TO TOUCH GLASS.**

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

20306543

Thank you and congratulations on your purchase of a Vermont Castings stove.

**PLEASE READ THE INSTALLATION & OPERATING INSTRUCTIONS BEFORE USING APPLIANCE.**

**IMPORTANT: Read all instructions and warnings carefully before starting installation. Failure to follow these instructions may result in a possible fire hazard and will void the warranty.**

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## Installation & Operating Instructions

The Intrepid Direct Vent room Heater, Model INDVR is a vented gas appliances listed to ANSI Standard Z21.88-2005 and CSA-2.33-2005 for Vented Room Heaters, and CSA 2.17-M91, Gas-Fired Appliances For Use at High Altitudes.

The installation of the Intrepid Direct Vent Room Heater must conform with local codes, or in the absence of local codes, with National Fuel Gas Code, ANSI Z223.1/NFPA 54 — latest edition and CSA B-149.1 (EXCEPTION: Do not derate this appliance for altitude. Maintain the manifold pressure at 3.5" w.c. for Natural Gas and 10" w.c. for LP gas at maximum input.) Refer to page 8 (RF only).

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.

**Installation and replacement of gas piping, gas utilization equipment or accessories, and repair and servicing of equipment shall be performed only by a qualified agency, preferably NFI or WETT (Canada) certified. The term "qualified agency" means any individual, firm, corporation, or company that either in person or through a representative is engaged in and is responsible for (a) installation or replacement of gas piping, or (b), the connection, installation, repair, or servicing of equipment, who is experienced in such work, familiar with all precautions required, and has complied with all the requirements of the authority having jurisdiction.**

**The Intrepid Direct Vent Room Heater should be inspected before use and at least annually by a qualified service agency. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean.**

The Intrepid Direct Vent Room Heater and the individual shut-off valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

The Intrepid Direct Vent Room Heater must be isolated from the gas supply piping system by closing the individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig.

An accessible tap is located above the pilot/on-off knob for checking the inlet pressure.

'Direct Vent' describes a sealed combustion system in which incoming outside air for combustion and outgoing exhaust enter and exit through two separate concentric passages within the same sealed vent system. The system does not use room air to support combustion. The Direct Vent system permits the gas appliance to be vented directly to the outside atmosphere through the side of the house or vertically through the roof.

This appliance is approved for bedroom installations in the U.S. and Canada.

This appliance may be installed in an aftermarket\* manufactured (mobile) home, where not prohibited by state or local codes.



### WARNING

**WARNING: Operation of this heater when not connected to a properly installed and maintained venting system can result in carbon monoxide (CO) poisoning and possible death.**

The Intrepid Direct Vent Room Heater, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the National Electrical Code ANSI/NFPA 70, (latest edition), or of the current Canadian Electrical Code C22.1.

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



### WARNING

**This appliance is hot while in operation. Keep children, clothing, and furniture away. Contact may cause burns or ignition of combustible materials.**

**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. Clothing or other flammable materials should not be placed on or near the appliance.**

**Any safety screen, glass or guard removed for servicing an appliance must be replaced prior to operating the appliance.**

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

**The flow of combustion and ventilation air must not be obstructed. The installation must include adequate accessibility and clearance for servicing and proper operation.**

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

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

**Do not burn wood, trash or any other material for which this appliance was not designed. This appliance is designed to burn either natural gas or propane only.**

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



### CAUTION

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

**Verify proper operation after servicing.**

**\* Aftermarket: Completion of sale, nor for purpose of resale, from the manufacturer.**

**Intrepid  
Direct Vent / Rear Vent  
Certified to:**

**ANSI Z21.88-2014 / CSA Z2.33-2014  
Vented Gas Fireplace Heaters**

**Proposition 65 Warning:** Fuels used in gas, woodburning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

California Health & Safety Code Sec. 25249.6

## Requirements for the Commonwealth of Massachusetts

All gas fitting and installation of this heater shall only be done by a licensed gas fitter or licensed plumber.

For all side wall horizontally vented gas fueled 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:

### Installation of Carbon Monoxide Detectors

At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a 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 horizontally vented gas fueled 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.

In the event that the side wall horizontally vented gas fueled 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.

In the event that the requirements of this subdivision can not 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.

### Approved Carbon Monoxide Detectors

Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and ANSI/UL 2034 listed and IAS certified.

### 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 fueled 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"**.

### Inspection

The state or local gas inspector of the side wall horizontally vented gas fueled 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 5.08(2)(a)1 through 4.

## Exemptions

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

- 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
- Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

## 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:

- Detailed instructions for the installation of the venting system design or the venting system components; and
- A complete parts list for the venting system design or venting system.

### Gas Equipment Venting System NOT Provided

When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:

- The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
- 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.

A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled 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.

## California safety information



### WARNING

This product and the fuels used to operate this product (liquid propane or natural gas), and the products of combustion of such fuels, can expose you to chemicals including benzene, which is known to the State of California to cause cancer and reproductive harm. For more information go to: [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

Stove Dimensions

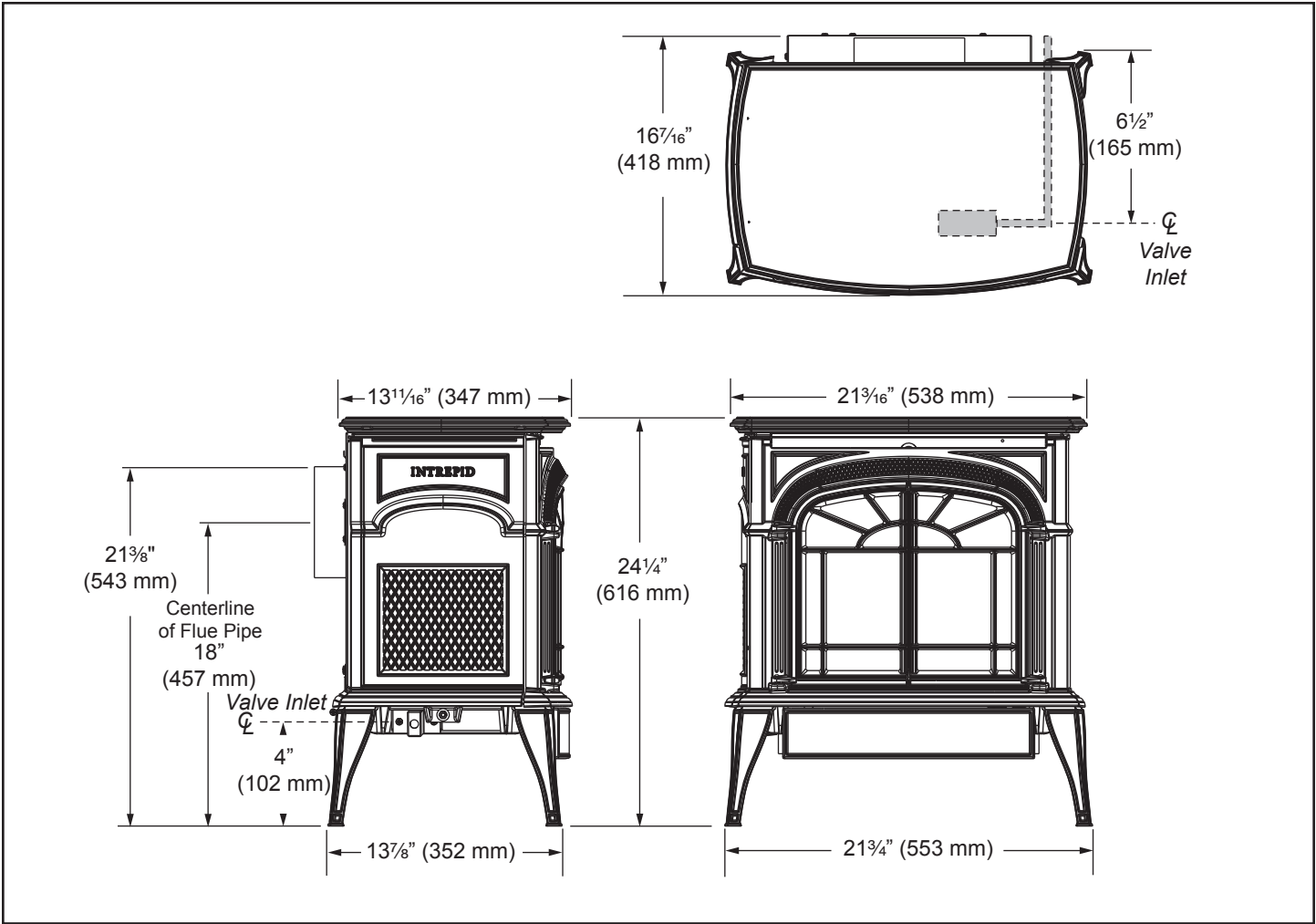


Figure 1 - Intrepid dimensions.

## Installation Requirements

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54 - latest edition. (EXCEPTION: Do not derate this appliance for altitude. Maintain the manifold pressure at 3.5" w.c. for Natural Gas, and 10" w.c. for Propane).

In Canada, installation must be in accordance with the current CSA B-149.1 Installation Codes and/or local codes.

The installation should be done by a qualified service person who is familiar with the building codes and installation techniques appropriate for your area to accomplish a safe and effective installation.

Your dealer or your local gas supplier will be able to refer a qualified service person.



### WARNING

Due to high temperatures, the heater should be located out of traffic and away from furniture and draperies.

The surface of the Heater is hot when it is in use. Young children should be watched carefully when they are in the same room when the Heater is in use, and they should be taught to avoid the hot surface. Keep any objects that can burn well away from the Heater, and observe the recommended clearances that follow.



### WARNING

**Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier.**

#### In choosing a location for the stove, consider:

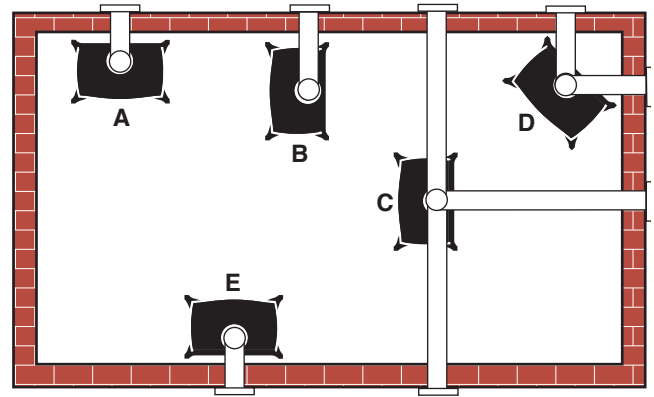
- The location of outside walls;
- Where additional heat is needed;
- Where family members gather most often;
- The vent system requirements.

**NOTE:** We do not recommend the use of wallpaper next to this stove. Over time, radiant heat may cause the wallpaper to shrink, or may adversely affect the binders in the wallpaper adhesive.

**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 for use only 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.**

\* Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

#### Direct Vent System Only



A. Flat on corner wall

D. Cross Corner

B. Room Divider

E. Flat on wall

C. Island

**Figure 2** - Possible stove locations.

## Clearance Requirements

### Minimum Clearances to Combustible Materials

Measure side clearances as shown in Figures 3, 4 and 5 from the outer edge of the cast iron stove top. Measure rear clearances from the outermost surface of the steel rear skirt.

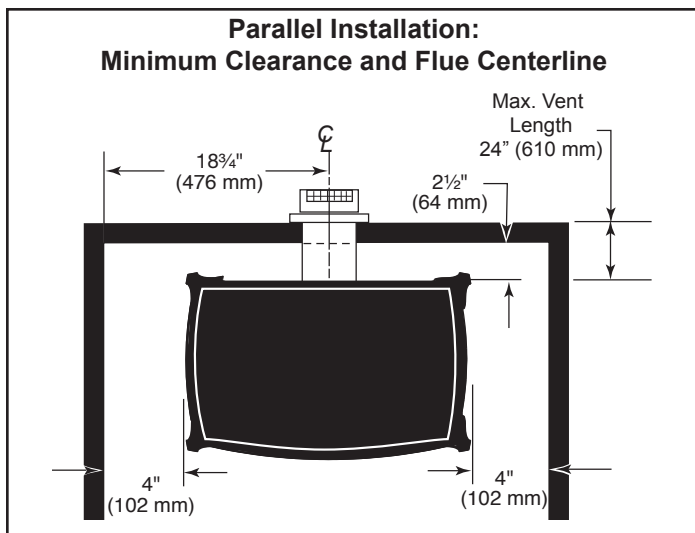
The Radiance heater is approved for installation into an alcove constructed of combustible materials to the dimensions and clearances shown on the next page.

The same clearances apply in a standard parallel installation.

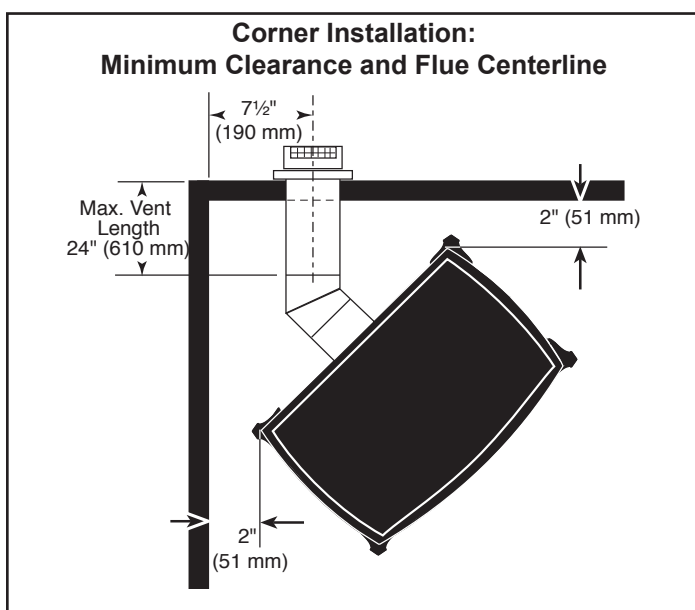


### WARNING

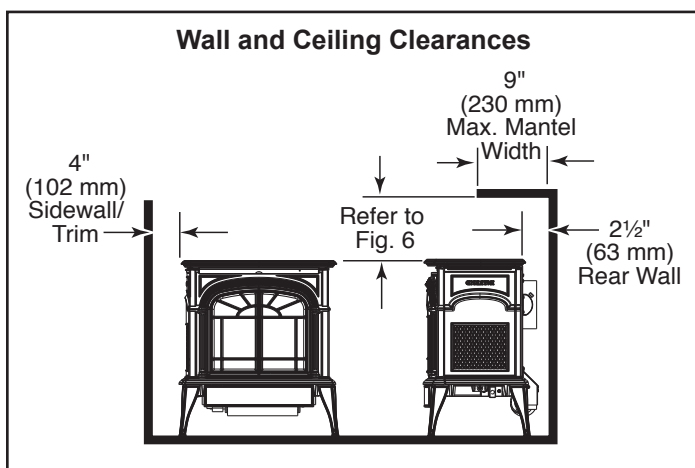
- Always maintain required clearances (air spaces) to nearby combustibles to prevent fire hazard. Do not fill air spaces with insulation. All venting components must maintain a 1" (25 mm) clearance to combustible materials. The gas appliance and vent system must be vented directly to the outside of the building and never be attached to a chimney serving a separate solid fuel or gas-burning appliance.
- Refer to the manufacturer's instructions included with the venting system for complete installation procedures.



**Figure 3** - Parallel Installation, minimum back and side clearance.



**Figure 4** - Corner installation, minimum corner clearance and flue centerline.



**Figure 5** - Alcove and ceiling clearances.

Mantel Clearances	
A (Maximum)	B (Minimum)
9" (230 mm)	10-1/2" (270 mm)
7-1/2" (190 mm)	9" (230 mm)
6" (152 mm)	7-1/2" (190 mm)
4-1/2" (114 mm)	6" (152 mm)
3" (76 mm)	4-1/2" (114 mm)
1-1/2" (38 mm)	3" (76 mm)
A = Depth of Mantel and/or Top Trim B = Height from Top of Heater	

**Figure 6** - Mantel / top trim clearances.

### Hearth Requirements

The Intrepid Heater must be installed on rigid flooring. When the heater is installed directly on any combustible surface other than wood flooring, a metal or wood panel extending the full width and depth of the unit must be used as the hearth. There are no other hearth requirements.

Gas Specifications				
Model	Fuel	Gas Control	Max. Input BTU/h	Min. Input BTU/h
INDVR Series	Nat	Millivolt	17,500	12,500
INDVR Series	LP	Millivolt	16,000	12,000

Air Shutter Setting Minimum injector air inlet opening		
Model	Natural Gas	LP (Propane)
INDVR Series	1/2 Open	1/2 Open

Gas Inlet and Manifold Pressures		
	Natural Gas	LP (Propane)
Inlet Minimum	5.5" W.C.	11.0" W.C.
Inlet Maximum	14.0" W.C.	14.0" W.C.
Manifold Pressure	3.5" W.C.	10" W.C.

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54 - latest edition. (EXCEPTION: Do not derate this appliance for altitude. Maintain the manifold pressure at 3.5" w.c. for Natural Gas and 10" w.c. for Propane.)

#### High Elevations

Input ratings are shown in BTU per hour and are certified without deration for elevations up to 4,500 feet (1,370m) above sea level.

For elevations above 4,500 feet (1,370m) in USA, installations must be in accordance with the current ANSI Z223.1/NFPA 54 and/or local codes having jurisdiction.

In Canada, please consult provincial and/or local authorities having jurisdiction for installations at elevations above 4,500 feet (1,370m).



#### WARNING

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

## Horizontal Termination

Except for straight-through the wall vent installations.

The vent must rise vertically a minimum of 24" (610 mm) after the first elbow directly off the back of the unit, before the next elbow. The horizontal run may extend up to 20' (6 m) and include a vertical rise of up to 40' (12 m), Figure 7. Horizontal termination must also meet the criteria shown in Figures 11 and 12.

- Approved vent systems must terminate above and including the heavy line in Figure 7.
- Two 45° elbows may be substituted for each single 90° elbow.
- With a rise between 2' - 5', one 90° or two 45° elbows may be used (Excluding the first elbow directly off the back of the unit).

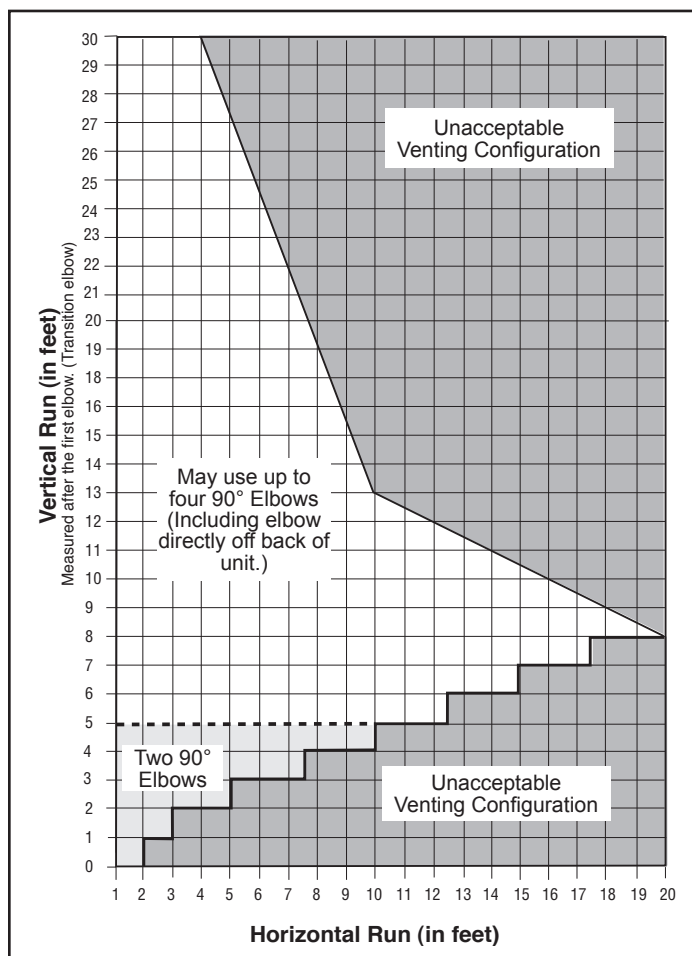


Figure 7 - Horizontal vent termination window.

## Vertical Termination

A vertical vent system must terminate no less than 8' (2.44 m) and no more than 40' (12 m) above the appliance flue collar. There is a restrictor plate installed in the stove from the factory. A extra vent restrictor plate (included in the manual bag) can be added within the venting to reduce draft in a high draft situation. Fine tune adjustments can be made to compensate for draft characteristics that could interfere with proper flame height and operation. A vertically terminated vent system must also conform to the following criteria:

- No more than three 90° elbows may be used.
- Two 45° elbows may be substituted for one 90° elbow. No more than six elbows may be used.
- Vent must rise a minimum of 2 feet before offset is used.
- Termination height must conform to roof clearance as specified in Figure 9.

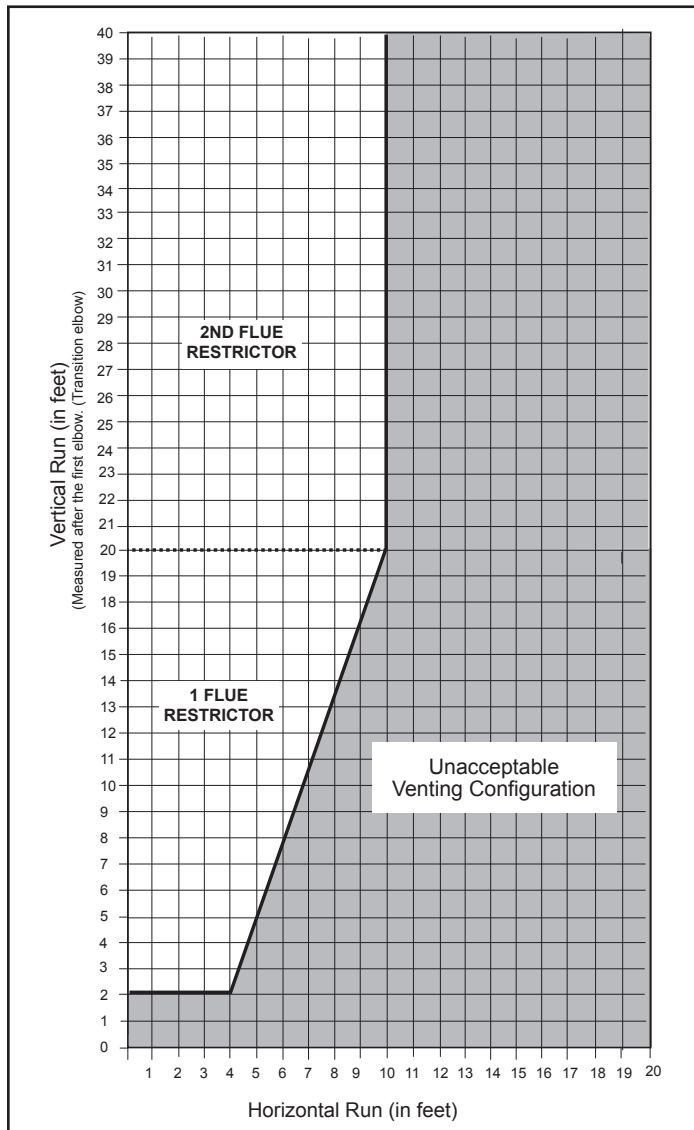


Figure 8 - Vertical vent termination window.

## Vent Termination Clearances

When planning the installation, consider the location of the vent terminal and clearances. Some of the most common clearances to keep in mind are shown in Figure 11.

**Important: All vent clearances must be maintained. Check your vent termination clearances against Figures 9 and 10.**

The vent should be placed so that people cannot be burned by accidentally touching the vent surfaces when the stove is operating.

The vent termination should be located where it cannot be damaged by such things as automobile doors, lawn mowers or snowblowers and it should be located away from areas where it could become blocked by snow, etc.

Some considerations are:

- Obstructions or impediments to venting.
- Nearby combustible materials that could come into contact with combustion exhaust gases.
- Other nearby openings {within 9" (230 mm)} through which exhaust gas could reenter the building.
- All vegetation within 3' (914 mm) that may interfere with the draft.

Other factors that influence where the installation will be sited include the location of outside walls, where additional heat may be desired in the home, where the family members gather most regularly, and perhaps most importantly, the distance limitations of the venting system.

### IMPORTANT

- The horizontal termination must not be recessed into the exterior wall or siding.
- Horizontal vent runs must be level toward the vent termination.
- Clearances around the vent termination must be maintained.

Your stove is approved to be vented either through the side wall, or vertical through the roof.

- **Vermont Castings does not require any opening for inspection of vent pipe.**
- **Only venting components specifically approved and labelled for this stove may be used.**
- **Minimum clearances between vent pipes and combustible materials is one (1") inch (25mm), except where stated otherwise.**
- Venting terminals shall not be recessed into a wall or siding.
- Horizontal venting must be installed on a level plane without an inclining or declining slope.

There must not be any obstruction such as bushes, garden sheds, fences, decks or utility buildings within 24" from the front of the termination hood.

Do not locate termination hood where excessive snow or ice build up may occur. Be sure to check vent termination area after snow falls, and clear to prevent accidental blockage of venting system. When using snow blowers, make sure snow is not directed towards vent termination area.

### Location of Vent Termination

It is imperative the vent termination be located observing the minimum clearances as shown in Figure 10.

## Termination Location & Clearances

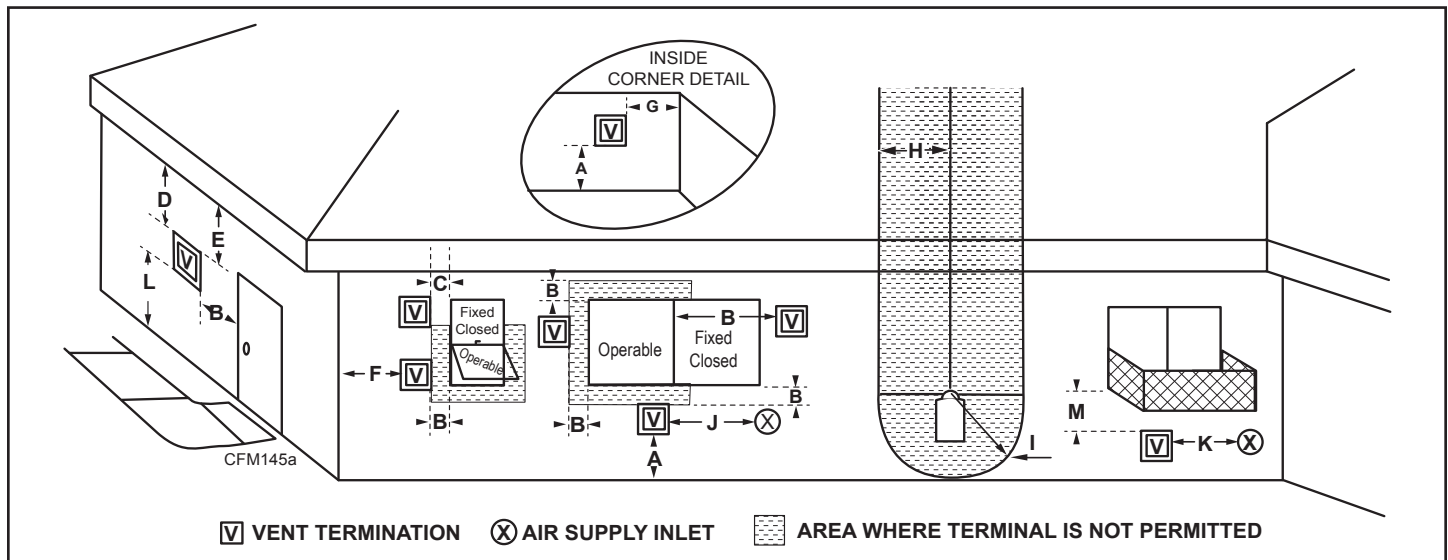


Figure 9 - Termination Locations

		CANADIAN INSTALLATIONS <sup>1</sup>	US INSTALLATIONS <sup>2</sup>
A	Clearance above grade, veranda, porch, deck or balcony	12" (30cm)	12" (30cm)
B	Clearance to window or door that may be opened	6" (15cm) for appliances <10,000 BTU/h (3kW) 12" (30cm) for appliances >10,000 BTU/h (3kW) and <100,000 BTU/h (30kW) 36" (91cm) for appliances >100,000 BTU/h (30kW)	6" (15cm) for appliances <10,000 BTU/h (3kW) 9" (23cm) for appliances >10,000 BTU/h (3kW) and <50,000 BTU/h (15kW) 12" (30cm) for appliances >50,000 BTU/h (15kW)
C	Clearance to permanently closed window	12" (305mm) recommended to prevent window condensation	12" (305mm) recommended to prevent window condensation
D	Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2' (610 mm) from the center line of the terminal	18" (458mm)	18" (458mm)
E	Clearance to unventilated soffit	12" (305mm)	12" (305mm)
F	Clearance to outside corner	see next page	see next page
G	Clearance to inside corner	see next page	see next page
H	Clearance to each inside of center line extended above meter/regulator assembly	3' (91cm) within a height of 15' (5m) above the meter/regulator assembly	3' (91cm) within a height of 15' (5m) above the meter/regulator assembly
I	Clearance to service regulator vent outlet	3' (91cm)	3' (91cm)
J	Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance	6" (15cm) for appliances <10,000 BTU/h (3kW) 12" (30cm) for appliances >10,000 BTU/h (3kW) and <100,000 BTU/h (30kW) 36" (91cm) for appliances >100,000 BTU/h (30kW)	6" (15cm) for appliances <10,000 BTU/h (3kW) 9" (23cm) for appliances >10,000 BTU/h (3kW) and <50,000 BTU/h (15kW) 12" (30cm) for appliances >50,000 BTU/h (15kW)
K	Clearance to mechanical air supply inlet	6' (1.83m)	3' (91cm) above if within 10' (3m) horizontally
L	Clearance above paved sidewalk or paved driveway located on public property	7' (2.13m) <sup>†</sup>	7' (2.13m) <sup>†</sup>
M	Clearance under veranda, porch, deck or balcony	12" (30cm) <sup>‡</sup>	12" (30cm) <sup>‡</sup>

1 In accordance with the current CSA-B149 Installation Codes

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

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

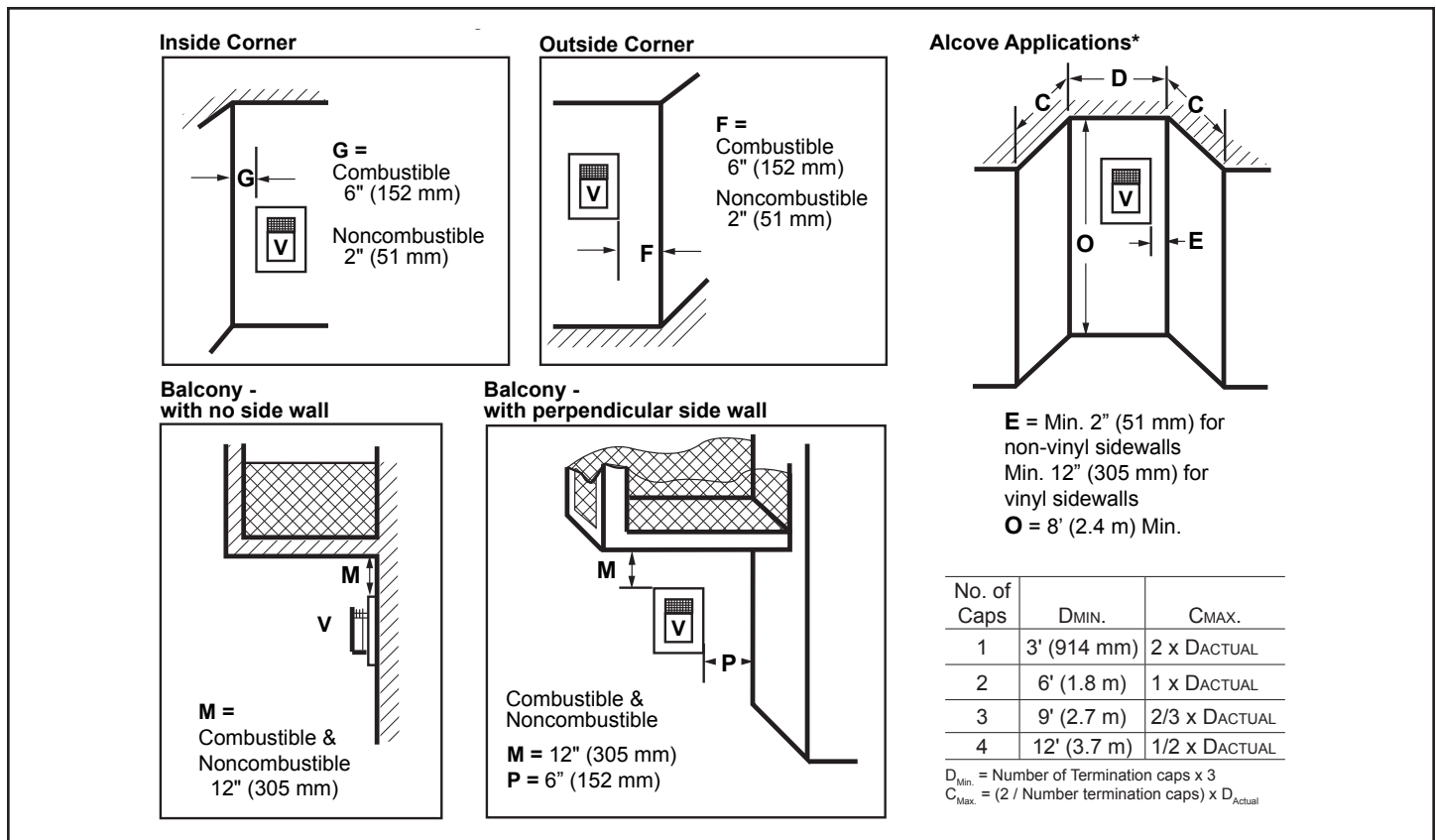
‡ Only permitted if veranda, porch, deck or balcony is fully open on a minimum 2 sides beneath the floor.

### NOTE:

- Local codes or regulations may require different clearances.
- The special venting system used on Direct Vent Fireplaces are certified as part of the appliance, with clearances tested and approved by the listing agency.
- Vermont Castings assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

## Termination Location & Clearances (Cont)

Termination clearances for buildings with combustible and non-combustible exteriors.



**Figure 10** - Termination clearances.

**\*NOTE:** Termination in an alcove space (spaces open only on one side and with an overhang) is permitted with the dimensions specified for vinyl or non-vinyl siding and soffits.

1. There must be a 3' (914 mm) minimum between termination caps.
2. All mechanical air intakes within 10' (1 m) of a termination cap must be a minimum of 3' (914 mm) below the termination cap
3. All gravity air intakes within 3' (914 mm) of a termination cap must be a minimum of 1' (305 mm) below the termination cap.

## Installation

### Unpack the Stove

Using a 1/2" wrench remove the (4) lag bolts installed through the shipping brackets and into the skid. Using a 7/16" wrench loosen the (4) bolts where the shipping brackets meet the base of the unit. Once loosened, tilt the unit slightly and remove the (2) front bolts, washers and shipping brackets. Use the (4) 1/4-20 x 1" Bolts and 1/4" washers supplied in the manual bag to install the legs where the brackets were once installed. Repeat previous step to install the rear legs.



### CAUTION

Porcelain enameled surfaces are fragile. Handle porcelain enameled castings tenderly. Familiarize yourself with the assembly steps before you begin and proceed with deliberation and care. If possible, have assistance available.

Place enameled castings on a soft, cushioned surface until you are ready to assemble.

Avoid contact between the castings and other hard surfaces or objects.

**NOTE: Verify the two relief doors (located on top of the firebox) are properly seated on the gasket. The doors sit flush on the gasket, and should lift easily from the seal around the opening.**

**If you are installing the fan, install it before completing the stove venting.**

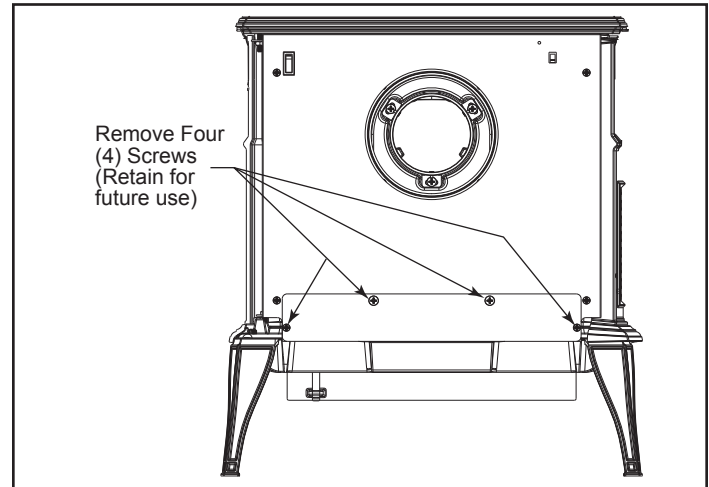
**If you are not installing a fan, proceed to the appropriate vent assembly section.**

### Install Optional Fan Kit FK20-VC

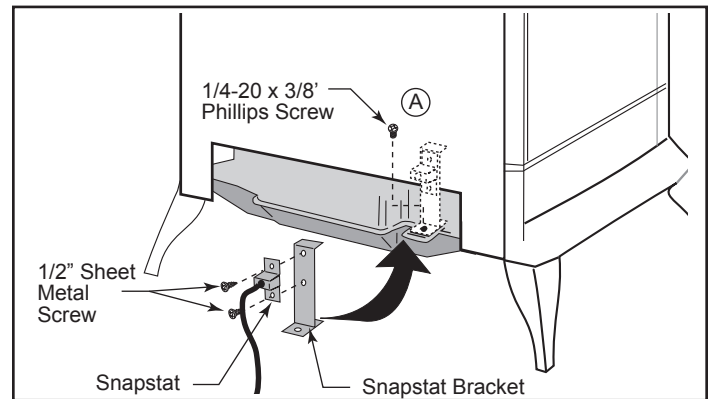
#### Fan Kit Contents:

- #10 x 1/2" phillips screws, 2
  - Control Knob
  - Retaining Nut
  - Snapstat Bracket
  - Blower Assembly w/ Rheostat Control & Snapstat
1. Remove the rear fan cover by removing the four (4) screws holding the cover in place on the rear shroud, Figure 11. Retain the screws for future use.
  2. Attach the Snapstat to the bracket using two (2) #10 x 1/2" Phillips screws, Figure 12.
  3. Locate and remove the 1/4-20 x 3/8" hex head bolt installed in the hole in the right rear ledge of the firebox. (A, Figure 14) Use that bolt to secure the snapstat bracket to the firebox. The mounting hole is slotted to allow you to adjust the bracket so the snapstat head makes contact with the firebox surface, Figure 12.

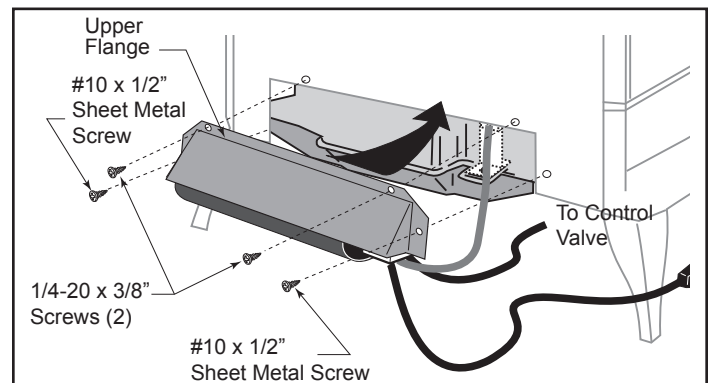
4. Attach the fan to the firebox by reusing the two (2) pan head 1/4-20 screws on the top edge and the two (2) #10 x 1/2" sheet metal screws on the side edges, Figure 13.
5. The rheostat control switch attaches to the control panel plate provided on the front of the stove.



**Figure 11** - Remove four (4) screws holding rear fan cover in place. Retain for future use.

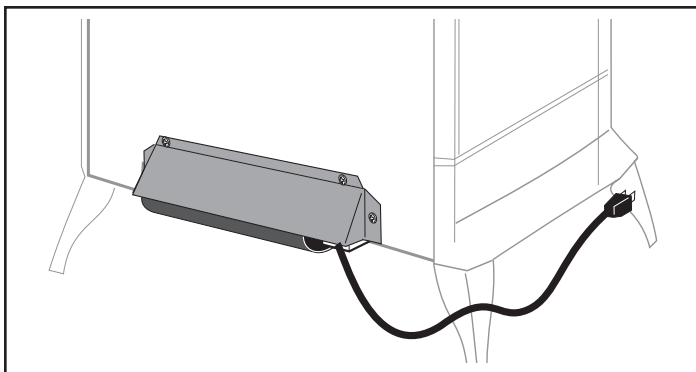


**Figure 12** - Attach snapstat.



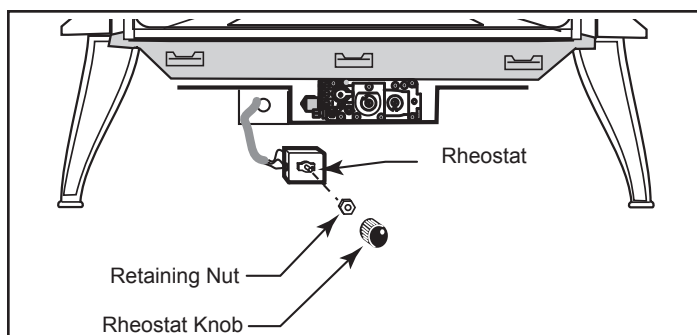
**Figure 13** - Use screws removed earlier to attach fan kit to firebox.

- Insert the switch box shaft through the hole in the back of the left side of the panel, aligning the locator pin with the smaller hole in the panel, Figure 15.
- Attach the retaining nut to the switch control shaft to secure it to the plate.



**Figure 14** - Correct position of fan skirt installation.

- Attach the control knob to the rheostat shaft.
- Use the wire tie to secure the fan and rheostat wire harnesses together to the tubing under the **bottom of the unit**.



**Figure 15** - Attach rheostat to bracket.

## Approved Vent System Components

The heater must be vented to the outdoors through an adjacent exterior wall or through the roof. The venting system must be comprised of the appropriate listed venting components specified on this page. These parts are available from DuraVent Corporation or your Vermont Castings Dealer.

See Figure 4 for dimensions relevant to the standard minimum-vent kits.

### HHT Components\*

Stove Adapter Kit (Includes 30' of 4" Flex, adapters, wall thimble, masonry and ZC flashing, 991DA Cap and Fasteners)	LINK-STOVE
Trapezoid Termination Kit (3-1/8" - 4-3/4")	SLP-TRAP1
Trapezoid Termination Kit (5-1/4" - 9-1/4")	SLP-TRAP2
Rear Vent Termination Kit	SLP-RVTK
Vertical Termination cap – High Wind (includes storm collar)	SLP-TVHW
Decorative Wall Thimble Cover	SLP-WT-BK
Decorative ceiling firestop – black	SLP-DCF-BK
Cathedral ceiling support – black	SLP-CCS-BK
4" (100mm) pipe length – black	SLP4-BK
6" (150mm) pipe length – black	SLP6-BK
12" Pipe length-black	SLP12-BK
24" Pipe length-black	SLP24-BK
36" (915mm) pipe length – black	SLP36-BK
48" Pipe length-black	SLP48-BK
3" - 6" (75 – 150mm) telescoping pipe extension – black	SLP6A-BK
3" - 12" telescoping pipe extension-black	SLP12A-BK
45 degree elbow-black	SLP45-BK
90 degree elbow-black	SLP90-BK
SL Snorkel Cap (Includes 1 pair of firestops)	SLK-SNKD

## DuraVent Components

Starter Pipe Assembly (incl. inner & outer sections)	46DVA-ADP
90° Elbow, Blk.	46DVA-E90B*
45° Elbow, Gal.	46DVA-E45
6" Straight, Blk.	46DVA-06B*
9" Straight, Blk.	46DVA-09B
11" – 14 5/8" Adjustable Straight Section	46DVA-08AB
12" Straight	46DVA-12
24" Straight	46DVA-24B*
36" Straight	46DVA-36B
48" Straight	46DVA-48
Horizontal Vent Cap	46DVA-HC*
Wall Plate	46DVA-DC
Vinyl Siding Shield	46DVA-VSS
Snorkel Termination – 14"	46DVA-SNK14
Snorkel Termination – 36"	46DVA-SNK30
Wall Strap	46DVA-WS
Cathedral Ceiling Support Box	46DVA-CS
Storm Collar	46DVA-SC
Firestop Spacer	46DVA-FS
Flashing 0/12 - 6/12	46DVA-F6
Flashing 6/12 - 12/12	46DVA-F12
Wall Thimble	46DVA-WT
Wall Thimble Cover (Brass)	3PVP-TKV
Wall Firestop	46DVA-WFS
Attic Installation Shield	46DVA-IS
Co-Linear Vent Adapter	46DVA-GCL
Steel Chimney Conv. Kit A (6-5/8" - 8-5/8")	46DVA-KCA
Steel Chimney Conv. Kit B (6-5/8" - 10-1/2")	46DVA-KCB
Steel Chimney Conv. Kit C (6-5/8" – 13")	46DVA-KCC
Masonry Chimney Conversion Kit	46DVA-KMC
Vertical Termination Cap (High Wind)	46DVA-VCH
Vertical Termination Cap (Low Profile)	46DVA-VC
All DuraVent Straight vent pipe sections have a net length 1-1/2" (37mm) less than the nominal dimension; i.e., a 6" (152 mm) Straight pipe section has an effective length of 4-1/2" (115 mm).	

## Venting System Assembly

### General Information

The Intrepid is approved for installation only with the components listed on previous page. Follow these and the vent component instructions exactly.

**For U.S. installations:** The venting system must conform with local codes and/or the current National Fuel Gas Code, ANSI Z223.1/NFPA 54

**For Canadian installations:** The venting system must conform to the current CSA B149.1 installation code.

### Options

HHT offers a complete line of component parts for both horizontal and vertical installation. Many items are offered in decorative black as well as galvanized finish. The galvanized pipe and fittings may be used for concealed locations such as attics, or spaces where corrosion is a factor, such as above the roofline. Decorative black painted sections are recommended for use on visible interior runs. Snorkel Terminations are available for applications which may require vertical rise on the building exterior.

### Planning Your Installation

There are two basic types of installations:

Horizontal Termination, Figures 16 and 17.

Vertical Terminations, Figure 18.

When planning your installation, it will be necessary to select the proper length of vent pipe for your particular requirement. For horizontal installations, check these instructions to determine the minimum clearance from the rear of the appliance to the wall. It is also important to note the wall thickness. Select the amount of vertical rise desired or required, for "vertical-to-horizontal" installations (verify that it is within the minimum and maximum limits. To determine the length of vent pipe required for vertical installations, measure the distance from the appliance flue outlet to the ceiling, the ceiling thickness, the vertical rise in an attic or second story, and allow for sufficient vent height above the roofline. For multi-story applications, firestops are required at each floor/ceiling level. If an offset is needed in the attic, additional pipe and elbows will be required.

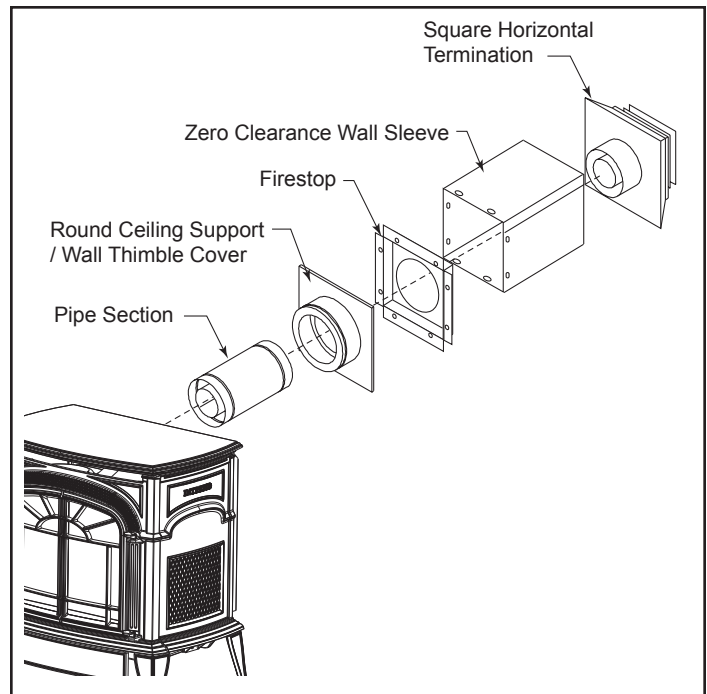


Figure 16

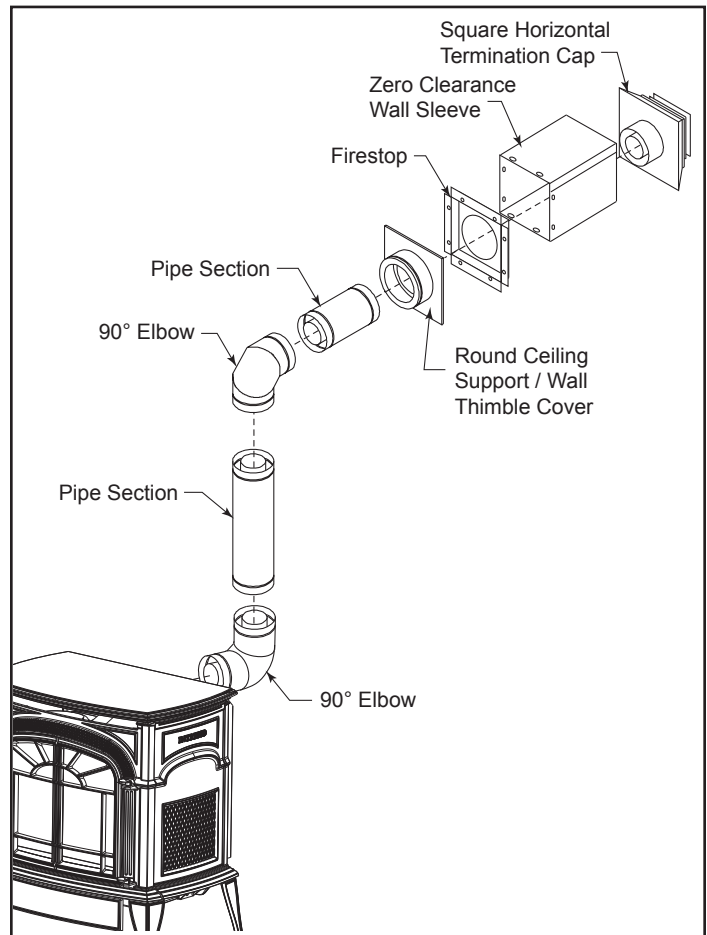


Figure 17

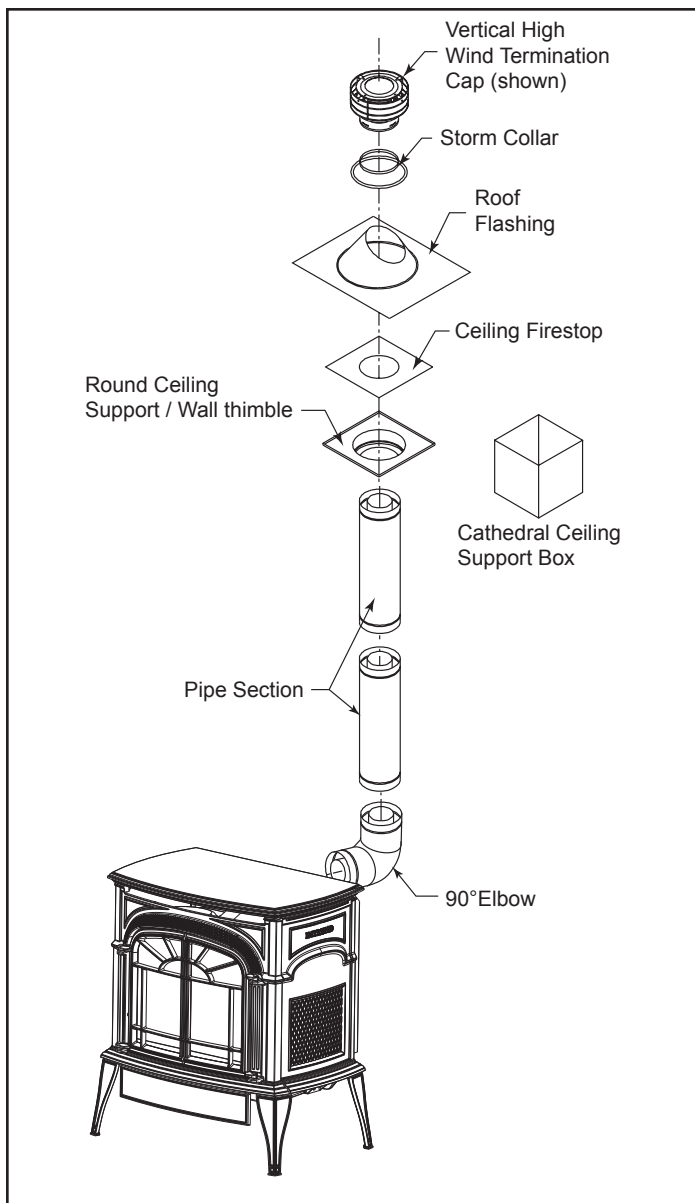


Figure 18

## Rear Vent

Use components listed under "**Approved Vent System Components**" under 'Basic Straight through-the-Wall Installation' for an installation where the heater is parallel to the wall and the vent system extends straight back through that wall.

1. Locate the vent opening on the wall. Refer to Figures 18 & 19 to determine the top of the opening centerline. It may be necessary to first position the stove and measure to find the hole location. Depending on whether the wall is made of combustible materials, cut the opening to the size shown in Figure 19. Combustible wall openings must be framed as shown in Figure 19.
2. Measure the wall thickness and cut the zero clearance sleeve sections to proper length (MAXIMUM 12"). Assemble the sleeve with the #8 sheet metal screws supplied. Attach the firestop plate to the sleeve end with the holes, Figure 20. **NOTE:** The zero clearance sleeve is required in combustible walls only.

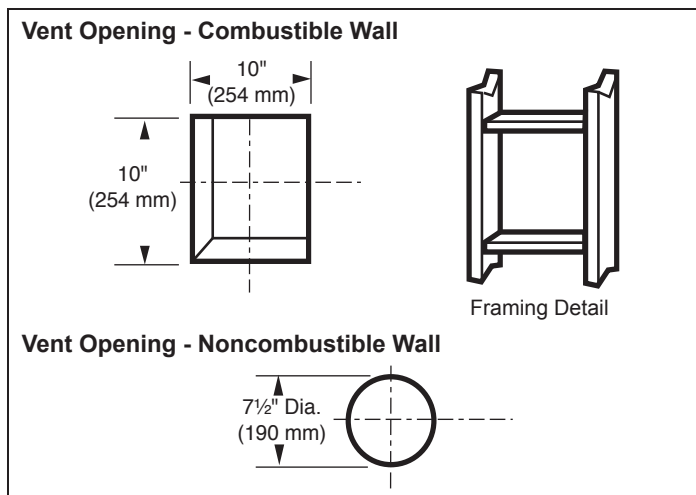


Figure 19 - Locate vent opening. **NOTE: Zero clearance sleeve is required for combustible wall installations.**

3. Install the Wall Firestop/Sleeve assembly into the wall cutout and fasten the firestop to the wall cutout framing members, Figure 21.

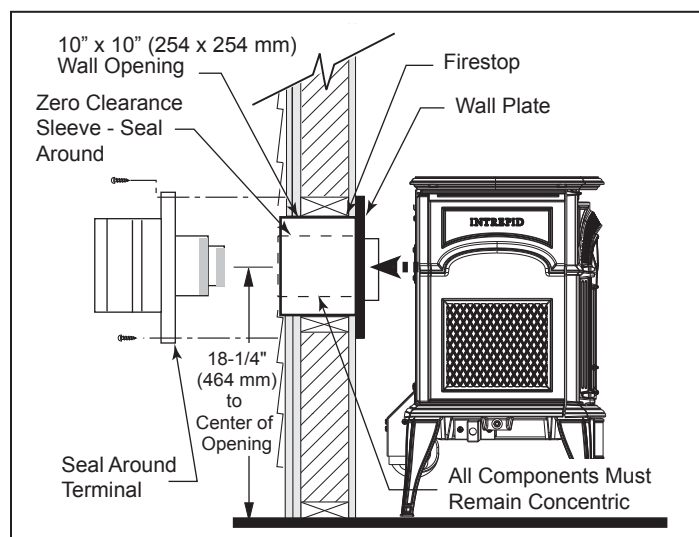


Figure 20 - Intrepid minimum horizontal rear vent installation.

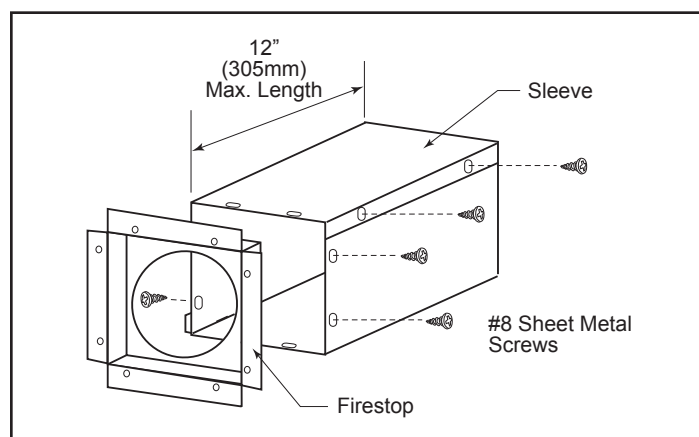


Figure 21 - Assemble the wall sleeve and firestop.

4. Slip the wall cover over the interior end of the horizontal pipe and install into the zero clearance sleeve. Seal the joint inside the wall plate if needed to keep cold air from being drawn into the home.
5. Install the vent terminal, Figure 20. Guide the inner and outer vent termination collars into the adjacent pipes. Double check that the vent pipes overlap the collars by 2". Fasten the termination to the outside wall with the screws provided, and caulk the joint with weatherproof sealant.
6. Use wall straps to support vertical pipe runs at 4' (1219 mm) intervals.

## Horizontal Installation

**Step 1** - Set the gas appliance in its desired location. Check to determine if wall studs or roof rafters are in the way once the venting system is attached. If this is the case, you may want to adjust the location of the appliance.

**Step 2** - DirectVent Pro pipe and fittings are designed with special twist-lock connections. To connect the venting system to the appliance flue outlet, a twist-lock appliance adaptor is built into the appliance at the factory. Assemble the desired combinations of black pipe sections and elbows to the appliance adapter with pipe seams oriented towards the wall or floor, as much out of view as possible, Figure 22.

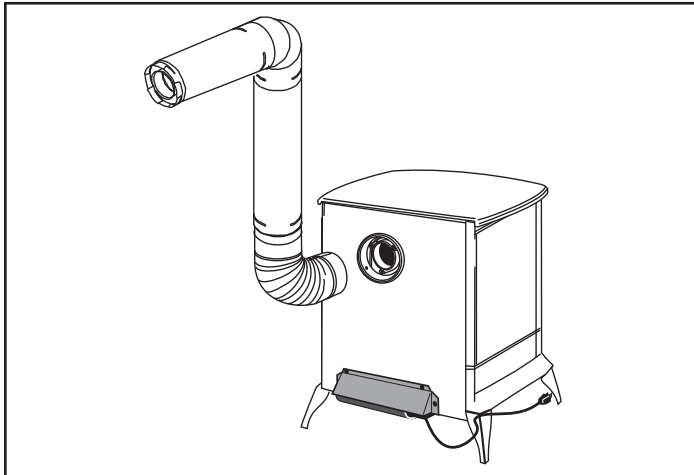


Figure 22

### NOTES:

1. Twist-lock procedure: Line up locking lugs on male and female ends of pipe sections. Insert the male end of pipe into the female end until the locking lugs are covered. Twist the female end clockwise an eighth of a turn to lock sections together, Figure 23. Screws are not required to secure the joint, but are acceptable provided they do not penetrate the inner wall of the vent pipe.

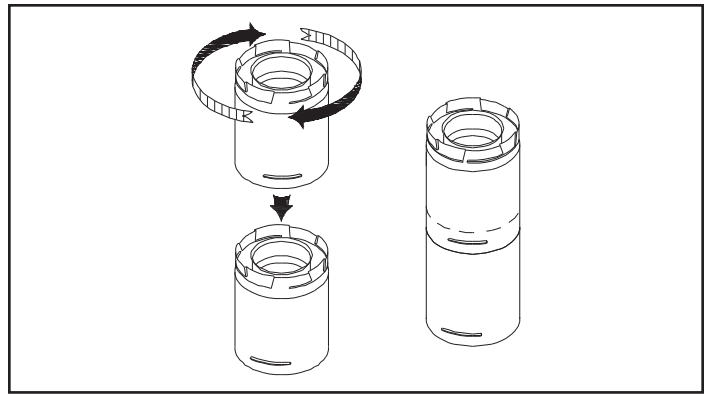


Figure 23

2. Horizontal vent runs of vent pipe must be supported to prevent any downward sags. Horizontal pipe sections should be supported at least every 4' (1.2 m). Wall straps can be used for this purpose. Alternatively, plumbers tape or other suitable noncombustible material can be used to support the vent pipe.

3. DirectVent Pro venting requires no sealant.

**Step 3** - With the appliance adapter and pipe section attached, slide the stove into its correct location. Mark the wall for a square hole that measures 10" x 10" (254 x 254 mm). The centerline of the pipe should line up with the center of the square hole, Figure 24. Cut and frame the square hole in the exterior wall where the vent will be terminated. If the wall being penetrated is constructed of noncombustible material only, i.e. masonry block, brick or concrete only, a hole with zero clearance is acceptable.

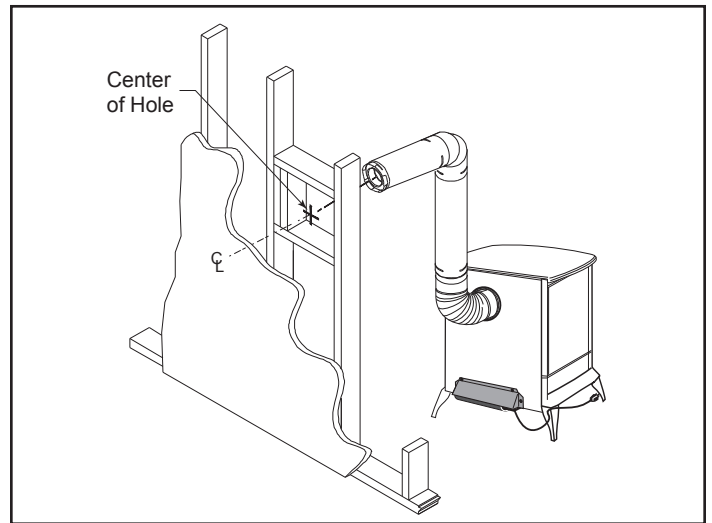


Figure 24

### NOTES:

1. The horizontal run of venting must be level, or have a 1/4" (6 mm) rise for every 1' (305 mm) of run toward the termination. Never allow the vent to run downward. A downward slope can trap heat and become a possible fire hazard.

- The location of the horizontal vent termination on an exterior wall must meet all local and national building codes, and must not be easily blocked or obstructed. Refer to "**Vent Termination Clearances**" for proper Termination Clearances.

For installations requiring a vertical rise on the exterior of the building, 14" (356 mm) and 36" (914 mm) tall snorkel terminations are available, Figure 25. Follow the same installation procedures as used for standard horizontal terminations. If the snorkel termination must be installed below grade level, (i.e. basement application), proper drainage must be provided to prevent water from entering the snorkel termination, Figure 26. Do not attempt to enclose the snorkel within the wall or any other type of enclosure.

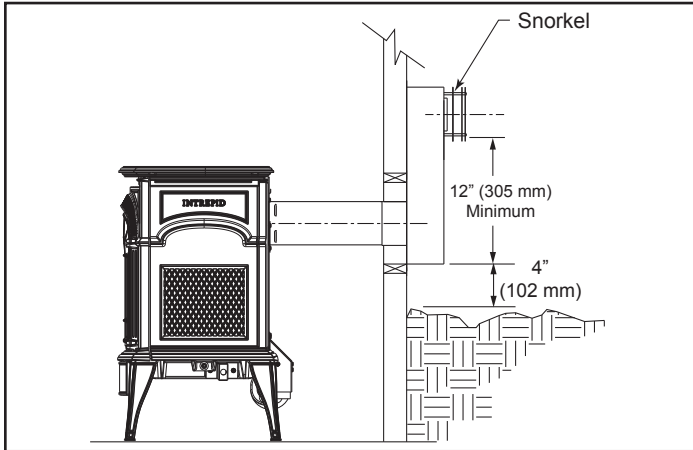


Figure 25

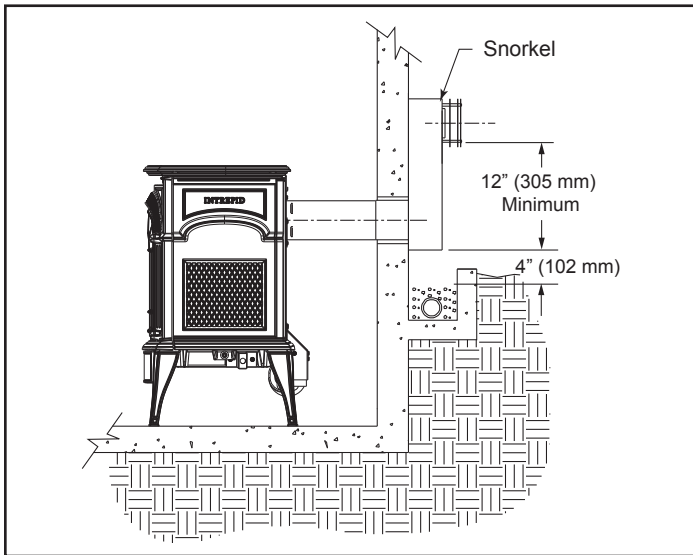


Figure 26

**Step 4** - Position the horizontal termination cap in the center of the square framed hole, and attach to the exterior wall with the four (4) wood screws provided. Before attaching the vent termination cap to the exterior wall, run a bead of non-hardening silicone sealant around the outside edges to make a seal between the cap and the wall. The arrow on the vent cap should be pointing up. Ensure proper clearances to combustible materials are maintained, Figure 27.

## NOTES:

- The four (4) wood screws provided should be replaced with appropriate fasteners for use on brick, block, concrete or other types of sidings.
- For buildings with vinyl siding or stucco, another component must be used between the horizontal termination cap and the wall surface. The vinyl siding standoff

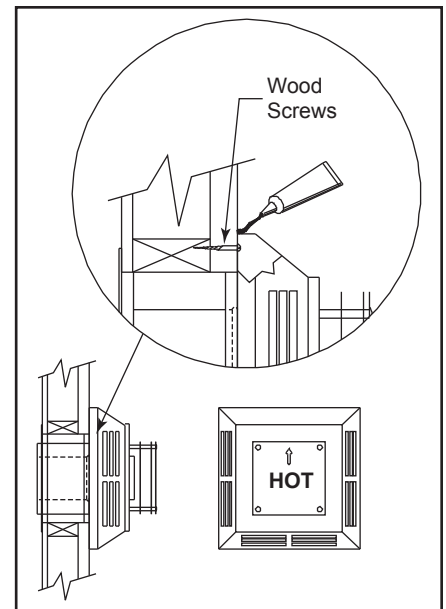


Figure 27

prevents excessive heat from possibly melting the vinyl siding material. Vinyl siding standoffs are not required with snorkels. For vinyl wall installations a 4-piece vinyl siding standoff should be assembled and installed between the horizontal termination cap and the exterior wall, Figure 28. The vinyl should be cut away to the outer edges of the assembled standoff.

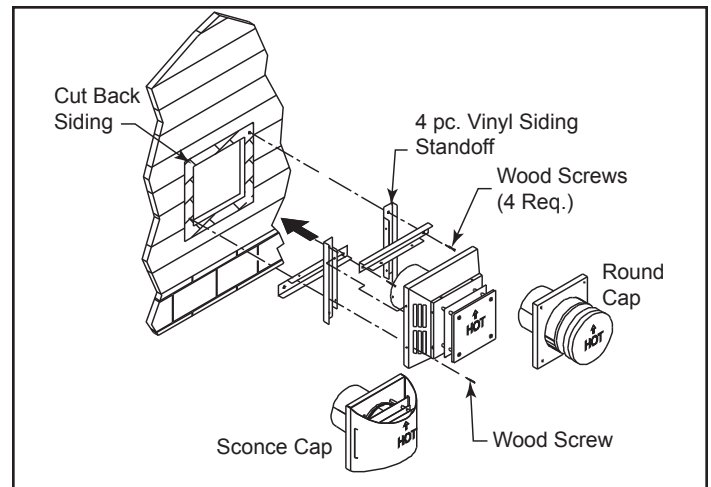


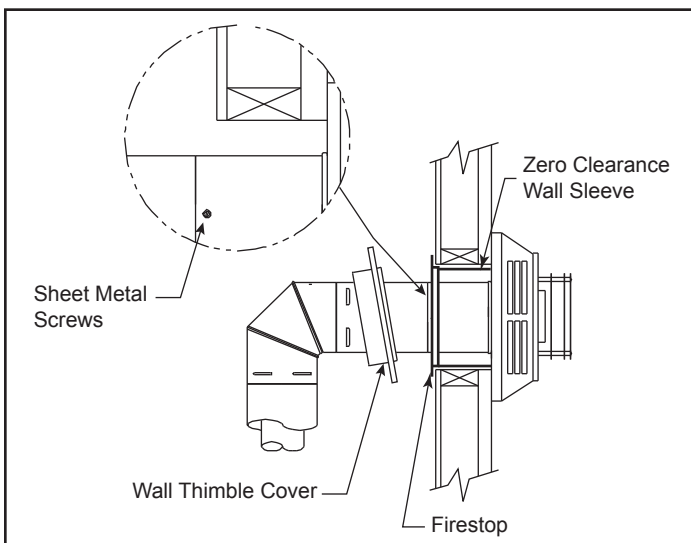
Figure 28

**IMPORTANT:** You must attach the four (4) pieces of the new vinyl siding standoff to the horizontal termination cap in specific order to ensure a weather tight fit. Loosely assemble the four parts, in order, around the base of the horizontal termination cap. Place the first of four pieces along the upper edge of the cap, then using two (2) screws per side, secure each piece to the pre-drilled holes along both sides of the cap, finally, attach the final piece to the bottom edge of the cap. Tighten all screws and mount cap, with all four (4) pieces attached, directly onto the wall with the four (4) 2-1/2" (64 mm) screws provided, Figure 28.

3. When penetrating through stucco wall, install the counter flashing. The counter flashing allows stucco, or other materials, to be finished directly to the sides of the termination cap. First attach the counter flashing to the base of the horizontal termination cap with the small screws provided, then mount entire assembly onto the wall with the four (4) 2-1/2" (64 mm) wood screws provided.
4. If the optional copper version of the horizontal termination cap is installed, use an appropriate noncombustible material to avoid direct contact between the galvanized and copper metals to prevent possible galvanic reaction.

**Step 5** - Before connecting your horizontal pipe sections to the horizontal termination cap, slide the wall thimble cover over the pipe section nearest the interior side of wall, Figure 29.

**Step 6** - Slide the appliance and vent assembly towards the wall, carefully inserting the pipe section into the cap assembly. It is important the pipe section extends into the back of the termination cap with a minimum overlap of 1-1/4" (32 mm). Use the two (2) sheet metal screws provided to secure the pipe section to the back of the termination cap. The wall thimble cover will cover the screw heads, Figure 29.

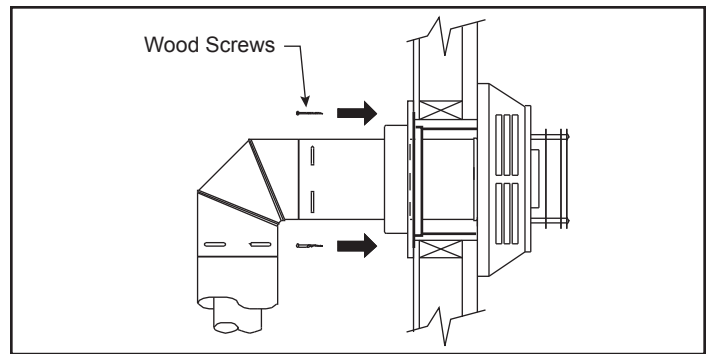


**Figure 29**

**Step 7** - Slide the wall thimble cover up to the wall surface and attach to the wall with screws provided, Figure 30. Apply optional decorative brass trim to wall thimble cover if desired.

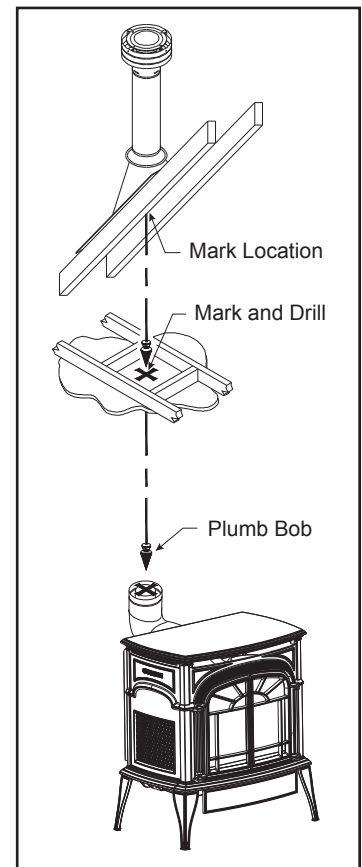
## Vertical Installation

**Step 1** - Check these installation instructions for required clearances (air spaces) to combustibles when passing through ceilings, walls, roofs, enclosures, attic rafters or other nearby combustible surfaces. Do not pack air spaces with insulation. Check these instructions for maximum vertical rise of the venting system and any maximum horizontal offset limitations.



**Figure 30**

**Step 2** - Set the gas appliance in the desired location. Drop a plumb bob down from the ceiling to the position of the appliance flue exit, and mark the location where the vent will penetrate the ceiling. Drill a small hole at this point. Next, drop a plumb bob from the roof to the hole previously drilled in the ceiling, and mark the spot where the vent will penetrate the roof, Figure 31. Determine if ceiling joists, roof rafters, framing or other materials will obstruct the venting system. You may wish to relocate the appliance or to offset, to avoid cutting load-bearing members.



**Figure 31**

**Step 3** - To install the round ceiling support/wall thimble cover in a flat ceiling, cut a 10" x 10" (254 x 254 mm) square hole in the ceiling (unless otherwise specified) centered on the hole drilled in Step 2. Frame the hole as shown in Figure 32.

**Step 4** - If the twist-lock appliance adapter has not been installed on the stove, do so now.

**Step 5** - Assemble the desired pipe sections and elbows necessary to reach from the appliance adapter up through the round ceiling cover or support box. Ensure that all pipe and elbow connections are in their fully twist-locked position.

**Step 6** - Cut a hole in the roof centered on the small drill hole placed in the roof in Step 2. The opening should be of sufficient size to meet the minimum requirements for clearance to combustibles, as specified.

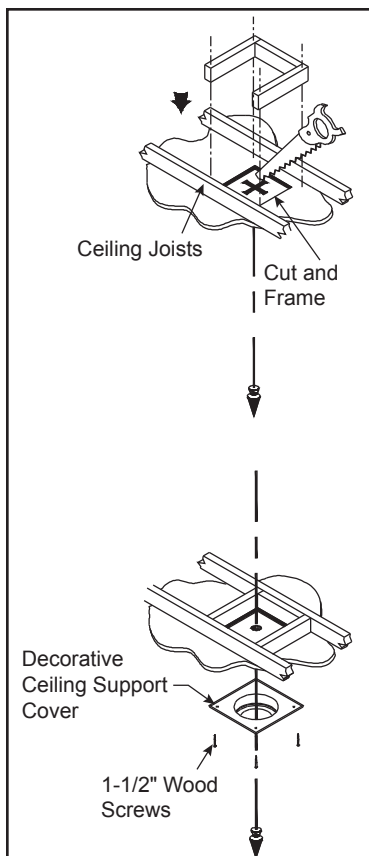


Figure 32

Continue to assemble pipe sections and elbows as necessary to reach up through the roofline. Galvanized pipe and elbows may be utilized in the attic, as well as above the roofline. The galvanized finish is desirable above the roofline, due to higher corrosion resistance.

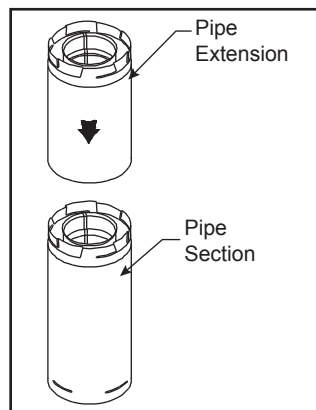


Figure 33

#### NOTES:

1. If exact lengths or distances must be met between elbow offsets or elsewhere, use the pipe extensions to adjust onto standard pipe sections, Figure 33.
2. If an offset is necessary in the attic to avoid obstructions, it is important to support the vent pipe in order to avoid excessive stress on the elbows. Wall straps or plumber tape may be used for this purpose, Figure 34.
3. Wherever possible, use 45° elbows instead of 90° elbows. The 45° elbow offers less restriction to the flow of flue gases and intake air.

**Step 7** - Slip the roof flashing over the pipe section(s) protruding through the roof. Use a non-hardening sealant between the roof flashing and the roofing to prevent water leakage. Secure the base of the roof flashing to the roof with roofing nails.

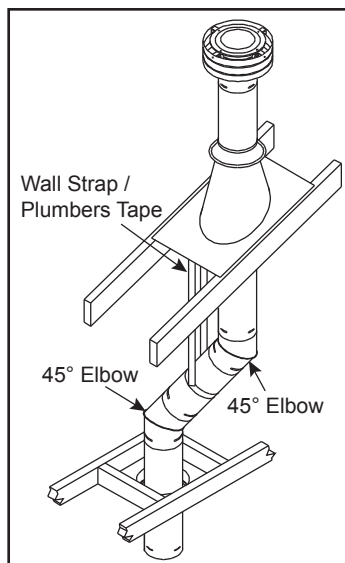


Figure 34

Ensure the roofing material overlaps the top edge of the roof flashing, Figure 36. Verify that you have at least the minimum clearances to combustibles at the roofline and in the attic.

**Step 8** - Continue to add pipe sections until the height of the system (before adding the cap) meets the minimum building codes requirements as described in Table 2, Figure 35. Note that for steep roof pitches, the vent height must be increased. In high wind conditions, nearby trees, adjoining rooflines, steep pitched roofs and other similar factors can result in poor draft, or down drafting.

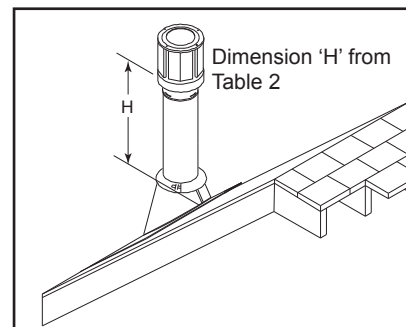


Figure 35

Table 2

Roof Pitch	Minimum Height
Flat 7/12	1' (914 mm)
Over 7/12 to 8/12	1' 6" (457 mm)
Over 8/12 to 9/12	2' (610 mm)
Over 9/12 to 10/12	2' 6" (762 mm)
Over 10/12 to 11/12	3' 3" (990 mm)
Over 11/12 to 12/12	4' (1.2 m)
Over 12/12 to 14/12	5' (1.5 m)
Over 14/12 to 16/12	6' (1.8 m)
Over 16/12 to 18/12	7' (2.1 m)
Over 18/12 to 20/12	7' 3" (2.3 m)
Over 20/12 to 21/12	8' (2.4 m)

In these cases, increasing the vent height or switching to the high wind termination cap may help to solve the problem.

**Step 9** - Slip the storm collar over the pipe section, and push it down to the top of the roof flashing, Figure 36. Use non-hardening sealant between the storm collar and the pipe section

**Step 10** - Holding the bottom of the termination cap only, twist lock the cap onto the last pipe section protruding above the roofline.

#### NOTES:

1. For multi-story vertical installations, a ceiling firestop is required at the second floor, and any subsequent floors, Figure 37. Cut and frame a 9" x 9" (229 mm x 229 mm) square opening for installation of the ceiling firestop.
2. If vent passes through any occupied areas above the first floor, including closets and storage spaces, it must be enclosed. The enclosure may be framed and covered with sheet rock with standard construction materials, but required clearances to combustibles must be maintained.

Consult these installation instructions for the minimum allowable clearances between the outside of the vent pipe and the combustible surfaces of the enclosure. Do not fill required air spaces with insulation.

3. If venting system passes through an attic space an attic insulation shield must be installed to prevent contact between pipe sections and the insulation. Nail the base to floor of attic and adjust shield for appropriate insulation level, then attach the collar at the top of assembly, Figure 37. For vaulted ceilings, the attic insulation shield cannot be installed. To prevent building insulation and other debris from entering the support box or contacting the pipe, a chase enclosure can be constructed around the support box. Ensure proper clearance to combustibles are maintained.

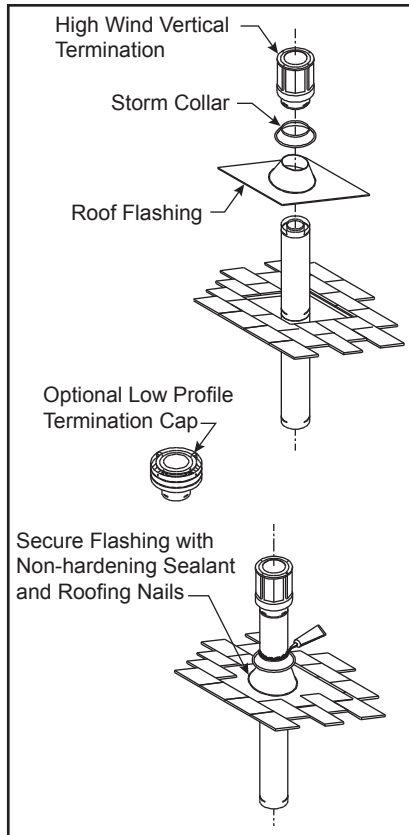


Figure 36

## Cathedral Ceiling Installation

**Step 1** - Follow installation Step 1 and 2 under Vertical Termination.

**Step 2** - Using the plumb bob, mark the centerline of the venting system on the ceiling and drill a small hole through the ceiling and roof at this point. From the roof, locate the drill hole and mark the outline of the Cathedral Ceiling Support Box.

**Step 3** - Remove shingles or other roof covering as necessary to cut the rectangular hole for the support box. Cut the hole 1/8" (3 mm) larger than the support box outline.

**Step 4** - Lower the support box through the hole in the roof until each side of the bottom of the support box protrudes at least 2" (51 mm) below the ceiling, Figure 38. Align the support box both vertically and horizontally with a level. Temporarily tack the support box in place through the inside walls and into the roof sheathing.

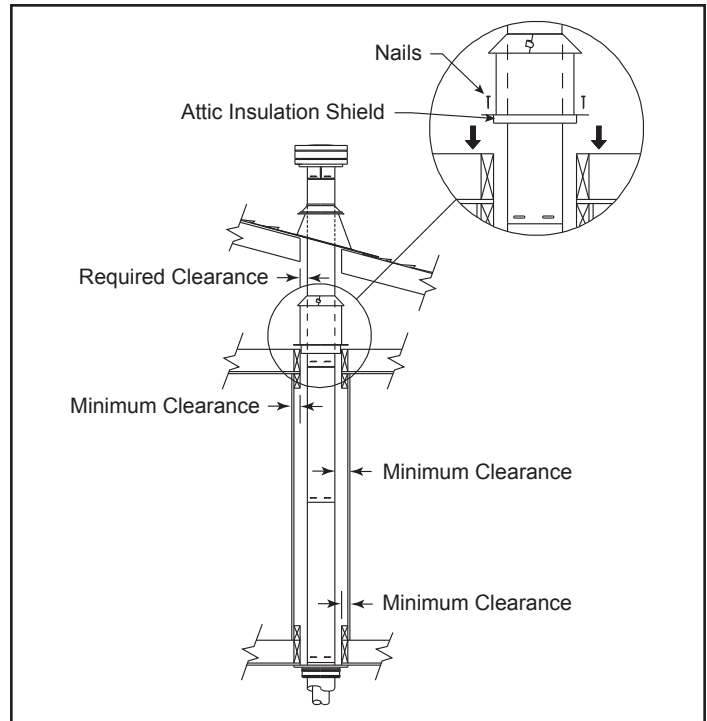


Figure 37

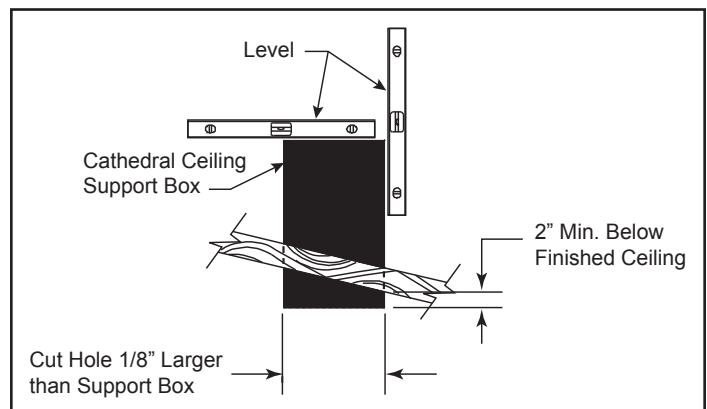
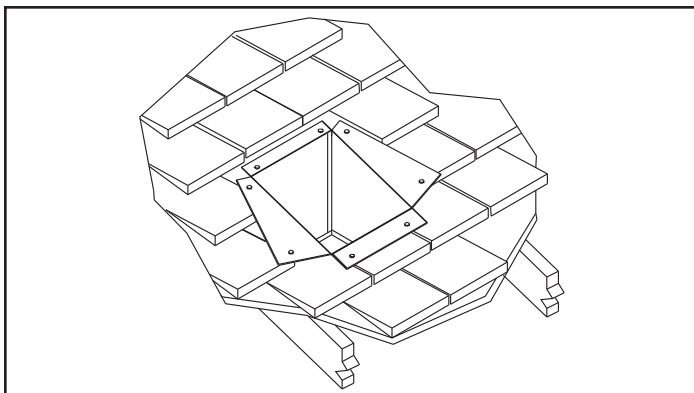


Figure 38

**Step 5** - Using tin snips, cut the support box from the top corners down to the roofline, and fold the resulting flaps over the roof sheathing. The flaps may be trimmed as needed, Figure 39. Before nailing it to the roof, run a bead of non-hardening sealant around the support box to make a seal between the support box and the roof. Clean out any combustible material from inside the support box.

**Step 6** - Follow Steps 4 and 5 of the Vertical Installation instructions.

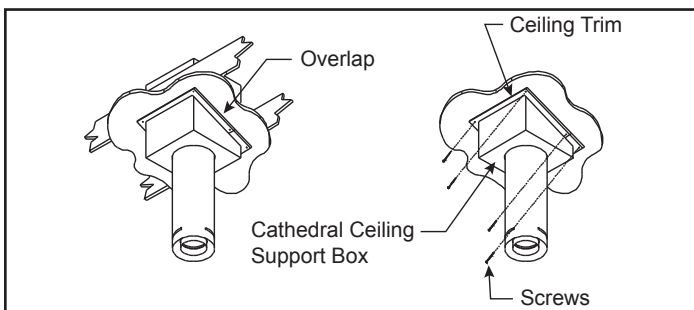
**Step 7** - Place the support clamp (provided with the support box) inside the support box (at the bottom), and secure to the pipe section. The clamp allows the support box to support the weight of the pipe sections. Continue to add pipe sections until you are above the roofline.



**Figure 39**

**Step 8** - Follow Steps 7 through 10 of the Vertical Installation instructions

**Step 9** - Install the black trim collar around the outside of the Cathedral ceiling support box. The two pieces of the trim collar slide over one another to allow for easy adjustment around the support box. Using the six (6) screws provided, secure the four corners and the overlapping sections of the trim collar to the underside of ceiling. You may want to predrill the holes for the overlapped sections for ease of installation, Figure 40.



**Figure 40**

## General Maintenance

Conduct an inspection of the venting system annually. Recommended areas to inspect are as follows:

1. Check areas of the venting system which are exposed to the elements for corrosion. These will appear as rust spots or streaks, and in extreme cases, holes. These components should be immediately replaced.
2. Remove the vertical terminations cap and shine a flashlight down the vent. Remove any bird nests, or other foreign material.
3. Check for evidence of excessive condensation, such as water droplets forming in the inner liner, and subsequently dripping out at joints. Continuous condensate can cause corrosion of caps, pipe and fittings. It may be caused by having excessive lateral runs, too many elbow and exterior portions of the system being exposed to cold weather.

4. Inspect joints to verify that no pipe sections or fittings have been disturbed or loosened. Also check mechanical supports such as wall straps or plumbers tape for rigidity.

## Supplemental Canadian Instructions

When installing DirectVent Pro on appliances in Canada, a 2-piece decorative wall thimble is required in order to comply with IR #39, Figure 16 and 18. Install galvanized exterior wall thimble plate on exterior of building and black decorative wall thimble plate on the interior side of wall. Install wall thimble centered through a square framed opening in wall. Be sure to maintain all minimum clearances. When installing DirectVent Pro vertically through floors, a ceiling firestop is required at every floor/ceiling level.

## Vertical Through Existing Chimney

The heater must be vented to the outdoors through an existing masonry or prefabricated fireplace chimney system through the roof.

The heater is approved to be vented to the outdoors through any solid-fuel fireplace chimney that has been constructed or installed in accordance with the national, Provincial/State and local building codes and is constructed of noncombustible materials.

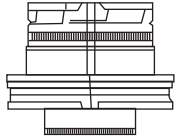
## Converting a Class-A Metal Chimney or Masonry Chimney to a Direct Vent System

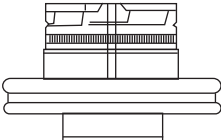
### Application

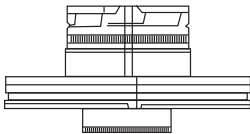
These instructions apply to the DuraVent Direct Vent Conversion kits for factory-built Class-A metal chimneys and masonry chimneys. These venting systems, in combination with the gas appliance, have been tested and listed by a major testing agency such as UL, AGA, Omni or Warnock Hersey. Check the manufacturer's rating plate and instruction manual to confirm that a DuraVent Direct Vent Chimney Conversion system is approved for use on the brand name appliance you have selected.

### IMPORTANT

**Read all instructions carefully before starting the installation. Failure to follow these instructions may create a fire or other safety hazard, and will void the warranty. Be sure to check the appliance manufacturer's installation instructions for specific venting and clearance to combustible requirements, which may vary from one appliance to another.**

Use Conversion Kit A (#0931) for the following chimney.	
	6" ID Metalbestos
	6" ID Security Chimney
	6" ID Jackes - Evans
	6" ID Hart & Cooley
	6" ID Pro Jet

Use Conversion Kit B (#0932) for the following chimney:	
	6" ID DuraVent
	7" & 8" ID Metalbestos
	7" ID Security Chimney
	7" & 8" ID Jackes - Evans
	7" & 8" ID Hart & Cooley
	7" & 8" ID Pro Jet
	6" & 7" ID Metal -Fab
	6" & 7" ID American Metals

Use Conversion Kit C (#0933) for the following chimney:	
	7" & 8" ID DuraVent
	8" ID Air Jet
	8" ID Metal Fab
	8" ID American Metals

	<b>0909B</b>
--	--------------

## Installation Precautions

The DuraVent Direct Vent System is an engineered product that has been designed and tested for use with an approved list of direct vent gas appliances. The DuraVent warranty will be voided, and serious fire, health or other safety hazards may result from any of the following actions:

- Installation of any damaged Direct Vent component.
- Unauthorized modification of the Direct Vent System.
- Installation of any component part not manufactured or approved by DuraVent.
- Installation other than as instructed by DuraVent and the appliance manufacturer.

Consult your local building codes before beginning the installation. Have the existing installation inspected by a qualified chimney sweep or professional installer, prior to converting to direct vent. The existing chimney system must be in serviceable condition, and functionally sound.

**The direct vent conversion described herein applies only to factory-built metal ceiling-supported type systems and masonry through-the-wall type systems. NOTE: You cannot install a Conversion Kit in a through-the-wall type factory-built metal chimney.**

## General Installation

Two different types of direct vent conversion systems are described here. One is through an existing factory-built metal chimney going through the ceiling. The other is through the wall of an existing masonry chimney. Follow the appropriate directions for your situation.

A typical direct vent conversion of a factory-built metal chimney is shown in Figure 41. The concept of the direct vent conversion is to connect an adapter to an Underwriters Laboratories listed 4" diameter aluminum flex pipe (DuraVent's DuraFlex is an example of a UL listed flex pipe). The flex is then passed down through the center of the existing metal chimney system. Three sizes of termination caps are available which should fit most sizes and makes of metal chimney systems. The Retro Connector (909B) is then attached to the bottom of the flex pipe. Both the cap adapter and retro connector are attached to the existing chimney with sheet metal screws. The appliance is then connected to the chimney with appropriate black direct vent pipe and an adjustable length section.

A typical conversion of an existing masonry chimney is shown in Figure 43. For installation through the wall of an existing masonry chimney, a cap adapter (985K) and flashing are used at the top of the masonry chimney. The 4" aluminum liner is connected to the adapter and is passed down the chimney and out through the masonry wall. This is attached to the retro connector (909B) which is in turn, attached to the masonry wall and is then connected to the direct vent pipe leading to the appliance.

## Converting a Factory-Built Metal Chimney

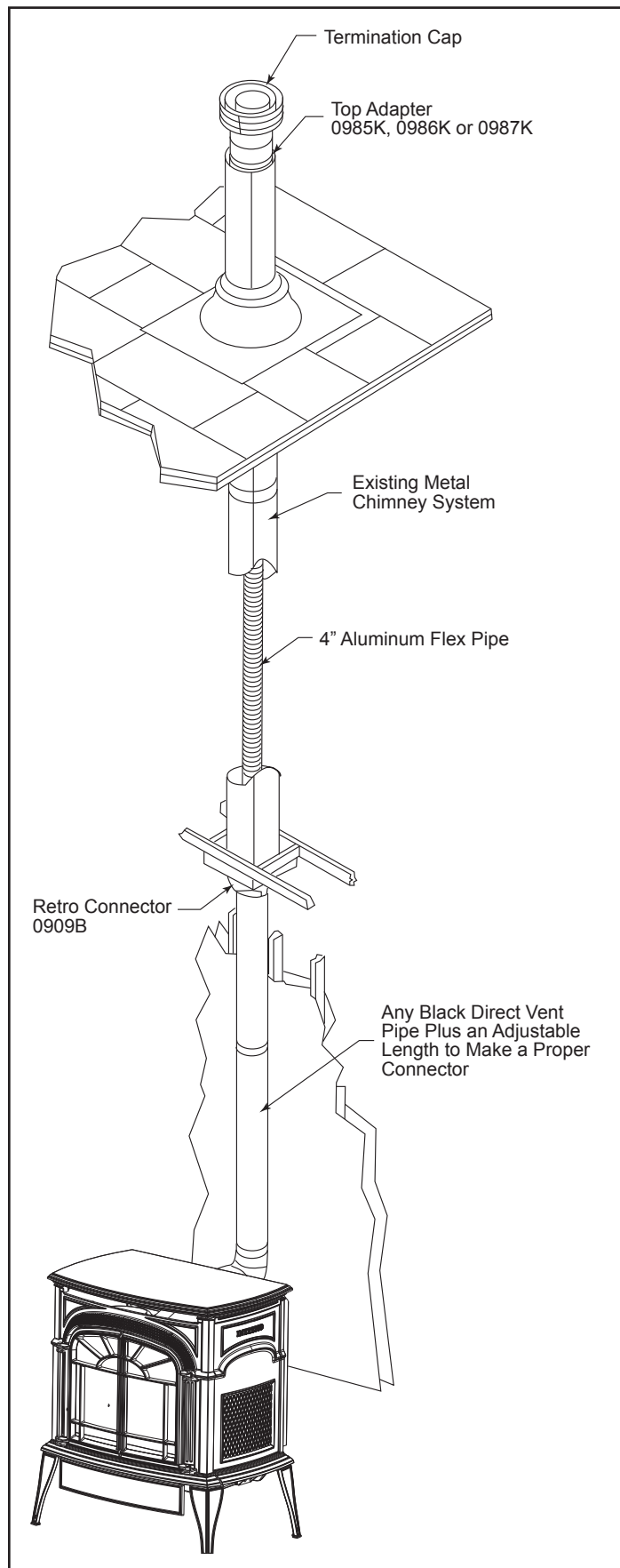


Figure 41

## Co-Linear Insert

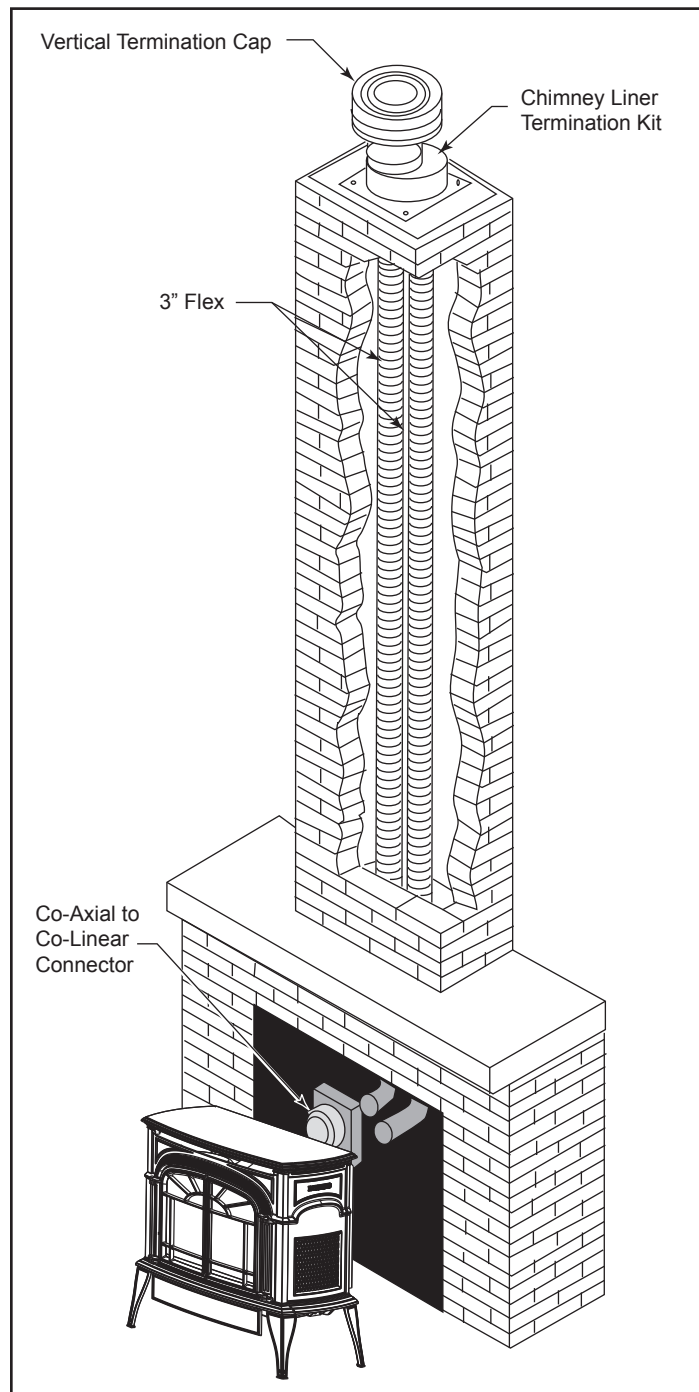


Figure 42

## Converting a Masonry Chimney

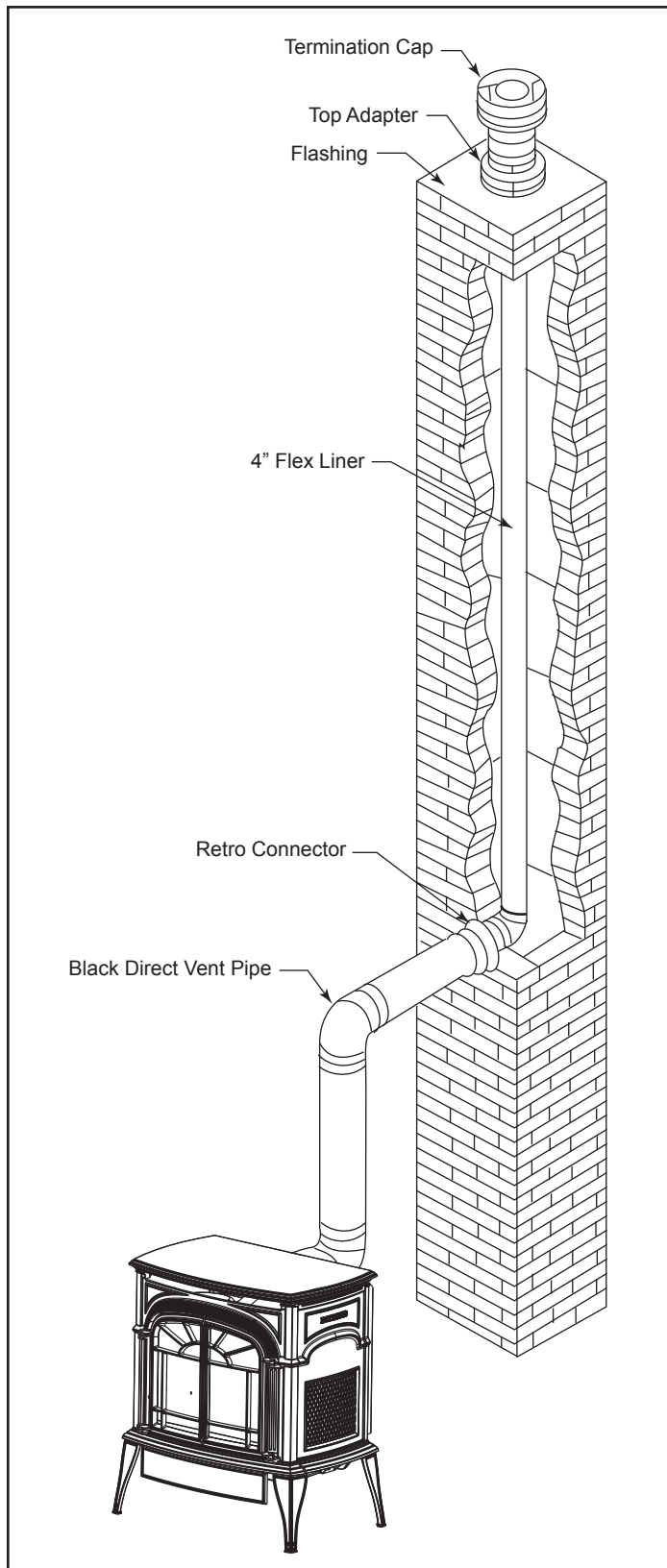


Figure 43

## Installation Instructions for Converting a Factory-Built Metal Chimney

1. Remove the existing chimney cap.
2. Measure the distance from the top end of the chimney to the bottom of the ceiling support box, add 3" to this measurement and cut a section of 4" flex pipe to that length (the flex should already be extended to its nominal length).
3. Connect the end of the flex pipe section to the underside of the cap adapter you have selected using three (3) sheet metal screws, Figure 44.

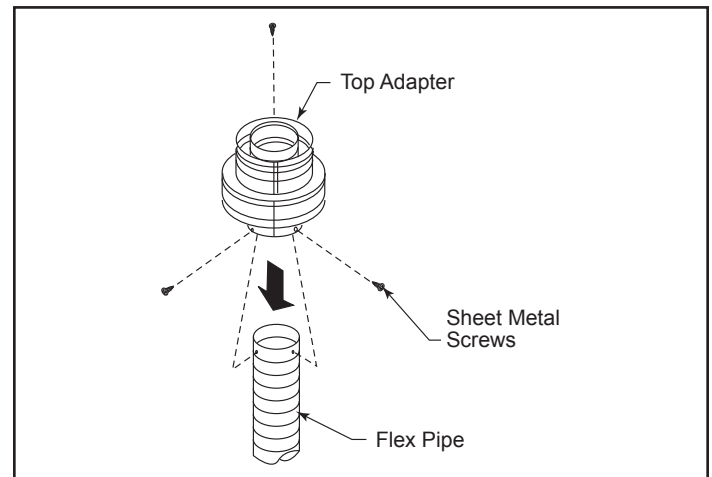


Figure 44

4. Pass the flex pipe down through the center of the chimney system, and center the adapter on the top of the chimney pipe. Drill four (4) 1/8" diameter holes through the adapter and into the chimney top. Insure that you are in fact, drilling into the metal on the chimney. Twist-lock the termination cap (980, 991 or 930) onto the adapter, Figures 45 and 46.

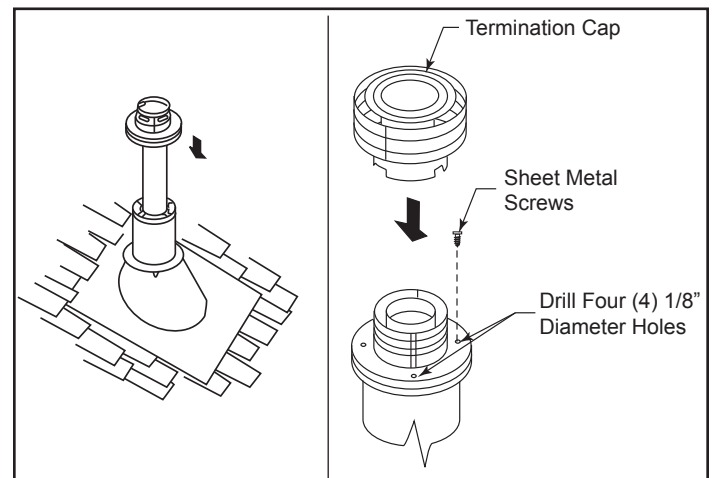
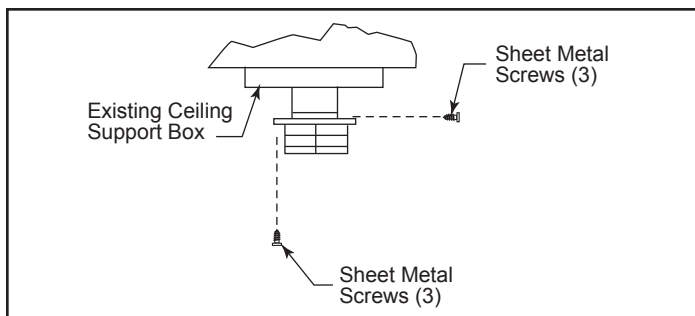


Figure 45

Figure 46

5. Pull the flex pipe down through the ceiling support box, until it protrudes approximately 3" (76 mm). Connect the flex pipe to the retro connector by slipping it into the 4-3/4" (121 mm) diameter sleeve on the top side of the connector. Use three (3) sheet metal screws to assemble these two parts.



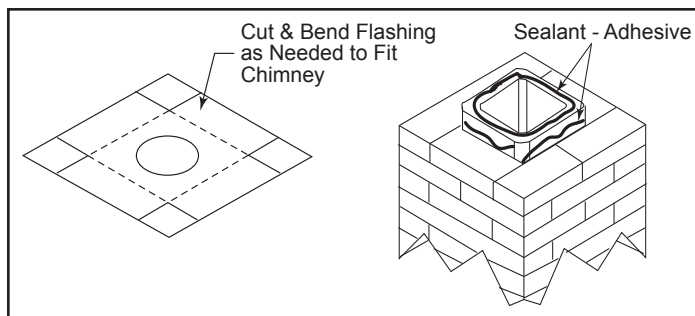
**Figure 47**

6. Push the flex pipe back up into the ceiling support box, center the retro connector and attach it to the support box or decorative sleeve for double wall solid packed pipe, with the sheet metal screws furnished. The holes in the retro connector are pre-punched, Figure 47.
7. The connection between the appliance and the retro connector may be completed with sections of black direct vent pipe, together with an adjustable length.

## Installation Instructions for Converting a Masonry Chimney

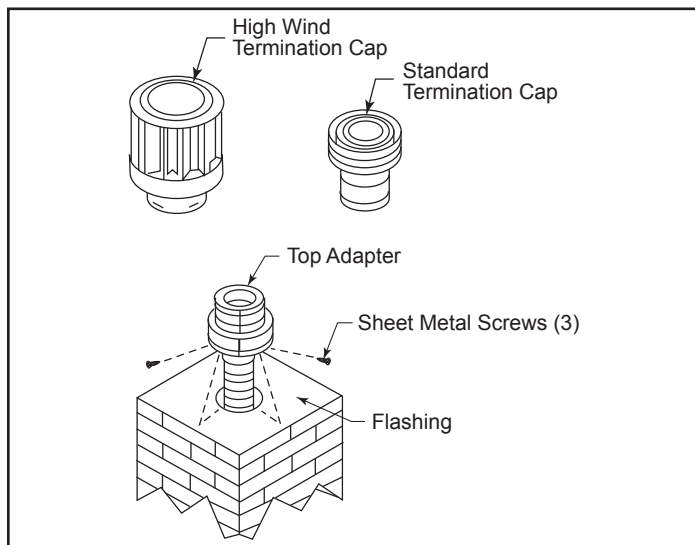
**IMPORTANT:** The existing masonry flue opening need to have an area of at least 35 square inches (226 square mm) to insure proper intake/exhaust flow.

1. Before cutting any holes, assemble the desired sections of black direct vent pipe to determine the center of the masonry penetration.
2. Once the center point of the penetration has been determined, cut a 6" (152 mm) diameter hole in the masonry. Be careful, if the hole is too large, the retro connector might not mount properly. If the hole is too small, then the appliance might starve for intake air. If there is a frame wall in front of the masonry wall, cut and frame a 10" (254 mm) clear square opening in the wall (centered around the 6" (152 mm) masonry opening). If there is sheet rock only (no studs) in front of the masonry, the 10" (254 mm) clear opening is still needed, but does not need to be framed. This allows the retro connector to mount directly on the masonry and provide clearance to the combustibles, Figure 52.
3. Secure the flashing (705C) to the top of the masonry chimney using a bead of non-hardening sealant-adhesive. If the flashing is larger than the top of the chimney, then cut and fold flashing as needed to fit chimney, Figure 48.
4. To determine the length of flex required, measure from 3" (76 mm) above the top of the flashing down to the level of the opening. Add to this measurement the distance from the center of the chimney to out through the wall. Cut a piece of 4" (102 mm) flex to this length (the flex should already be extended to its nominal length).
5. Connect the 4" flex liner to the cap adapter (985K) using three sheet metal screws, Figure 44.



**Figure 48**

6. Feed the 4" flex liner through the flashing into the chimney. Continue to feed the liner out through the opening in the masonry wall.
7. Secure the cap adapter to the flashing. Use three (3) sheet metal screws through the side of the adapter into the flange on the flashing as shown in Figure 49. Twist-lock the termination cap (980,991, 930) on to the cap adapter.



**Figure 49**

8. Attach the flex to the retro connector. Use three sheet metal screws to attach the flex liner to the connector, Figure 50. Mount the retro connector to the masonry wall using masonry bolts. Re-drill larger holes on connector as needed. Be careful to insure that the connector is centered in the opening and the mounting holes line up with the masonry wall.
9. Slide the wall thimble cover (940) over the retro connector and secure the with masonry bolts as shown in Figure 51. If you have a framed wall in front of the masonry, use wood screws to mount the wall thimble cover to the framed wall, over the retro connector and the 10" (254 mm) square framed opening as shown in Figure 52. If needed, add a section of direct vent pipe to the retro connector in order to extend through the opening in the wall thimble cover.

10. The connection between the appliance and the retro connector may be completed with the section of black direct vent pipe, together with an adjustable length pipe section.

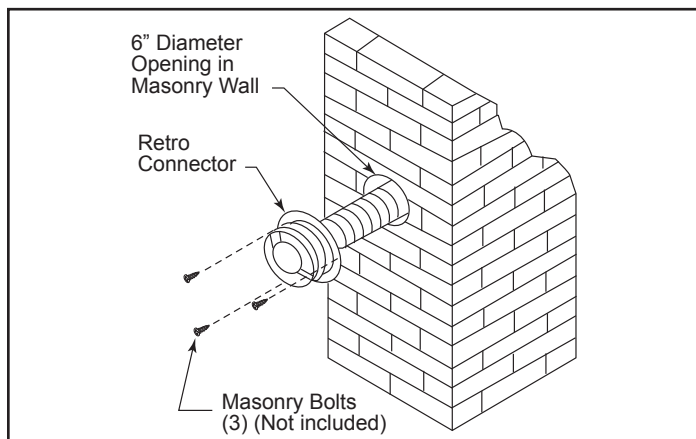


Figure 50

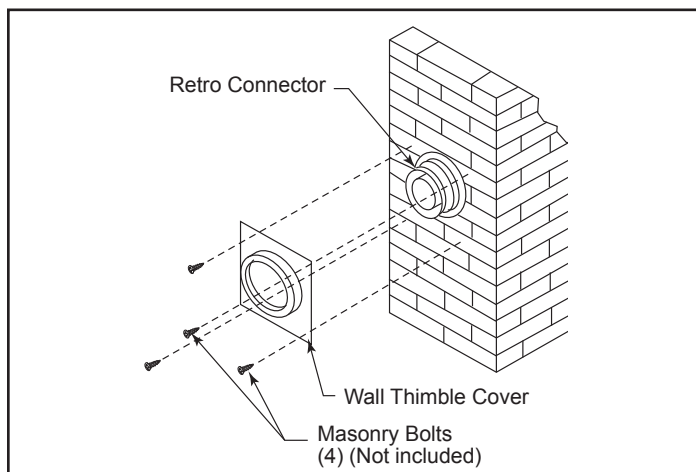


Figure 51

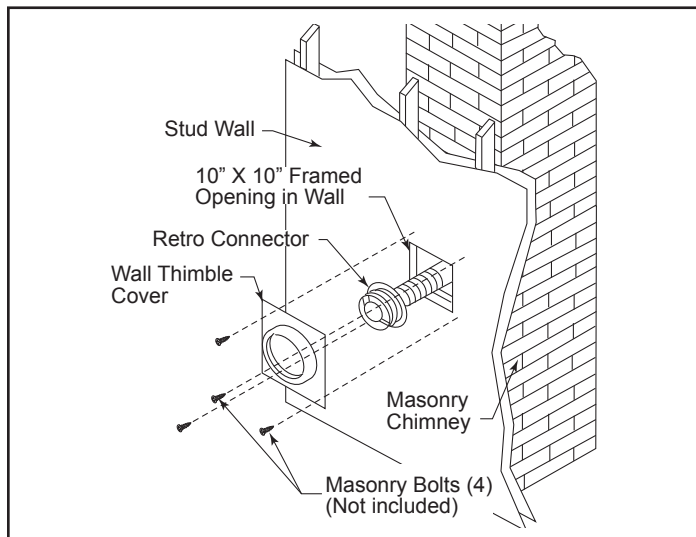


Figure 52

## Connect the Gas Supply Line

Check the rating plate attached by a steel cable to the firebox, to confirm that you have the appropriate firebox for the type of fuel to be used. The Intrepid may be converted from one gas to another using the appropriate Fuel Conversion Kit listed on page 42.

### CAUTION

**This appliance should only be connected by a qualified gas technician. Test to confirm manifold pressures as specified below.**

**The Intrepid Heater and the individual shutoff valves must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).**

**The Intrepid Heater must be isolated from the gas supply piping system by closing the individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2 psig.**

**There must be a gas shutoff between the stove and the supply.**

**In order to connect Natural Gas, use a fitting with 3/8" NPT nipple on the valve side and 1/2" natural gas supply line with a minimum input of 21,000 BTUs at a minimum inlet pressure of 5.5" w.c.**

**In order to connect Propane, use a fitting with 3/8" NPT nipple on the valve side and 1/2" propane gas supply line with a minimum input of 21,000 BTUs at a minimum inlet pressure of 11.0" w.c.**

**In the U.S.:** Gas connection should be made in accordance with current National Fuel Gas Code, ANSI Z223.1/NFPA 54. Since some municipalities have additional local codes, be sure to consult your local authority.

**In Canada:** consult the local authority and CSA-B149.1 installation code.

Connect the gas supply and test for leaks. Use a mild soap and water solution applied with a brush no larger than 1" (25 mm). Never apply soap and water solution with a spray bottle. Do not use an open flame for leak testing.

Burner Information

The appliance must only use the gas specified on the rating plate, unless converted using a Vermont Castings Fuel Conversion Kit. Conversion instructions are provided with each kit.

**THIS APPLIANCE SHOULD BE CONNECTED TO THE GAS SUPPLY ONLY BY A QUALIFIED GAS SERVICE TECHNICIAN. FOLLOW ALL LOCAL CODES. THERE MUST BE A GAS SHUT-OFF BETWEEN THE STOVE AND THE SUPPLY.**

Complete the Assembly

- Open the swiveling latches (cams) on the top left and right corners of the glass frame.
- Position the glass and frame against the firebox by placing the bottom edge on the brackets on the bottom face of the firebox.
- Swing the assembly against the firebox, and close the latches firmly against the pins protruding from the firebox top.

Install ON/OFF Switch

The switch assembly parts are found in the parts bag.

1. Apply wiring harness to the ON/OFF switch terminals then insert into cut out on switch housing. The ON/OFF switch will ‘snap’ into the cutout, Figure 53.
2. Run wires through cut out in side of shroud, under bottom of rear shroud to valve.
3. Using supplied #10 x 1/2” screws, attach switch housing over cut out opening in rear shroud.
4. Attach wires to valve terminals, Figure 54.

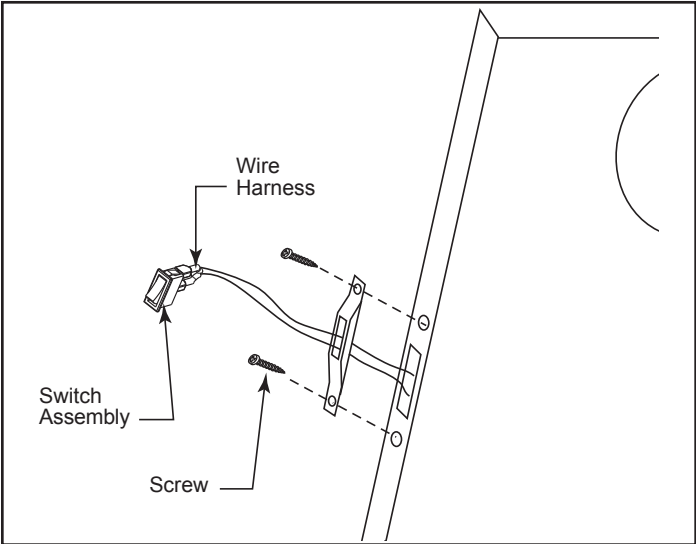


Figure 53 - Attach switch assembly to rear shroud.

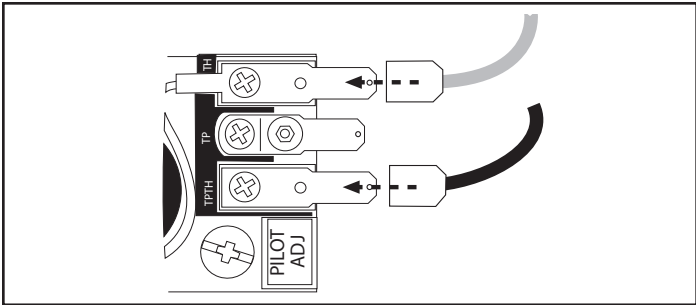


Figure 54 - Attach switch wires to valve.

Install the Front Plate

Grasp the Front Plate and lift it into position, engaging the two steel tabs at the upper corners behind the adjacent bosses in the Side Plates, Figure 55. Seat the Front against the Sides so that the tabs at the bottom lip engage with the notches in the edge of the stove base.

When properly installed, the bottom of the Front Plate cannot be pulled away from the sides without also lifting it up.

If you are installing optional Warming Shelves, do so now, according to the instructions supplied with that kit.

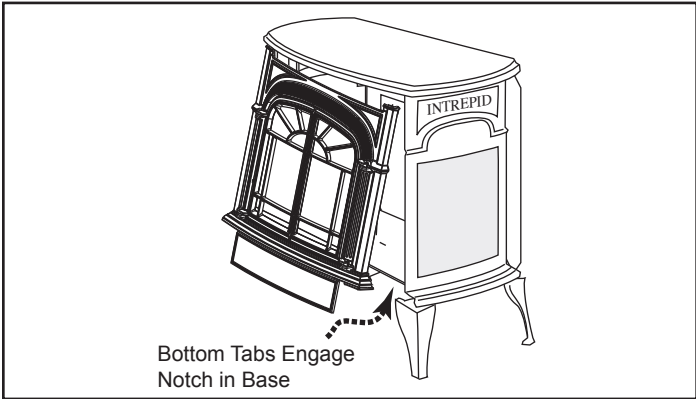


Figure 55 - Install stove front.

Thermostat Connection (Optional) R Models Only

Use only a thermostat rated for 500 - 750 millivolts.

Check the table below for the appropriate gauge thermostat wire to use for the length of lead required in your installation.

Thermostat Wire / Gauge	Maximum Run
18	40 Feet
20	25 Feet
22	16 Feet

1. Install the wall thermostat in the desired location and run the wires to the stove location. Terminate these leads with 1/4” female connectors.
2. Connect the thermostat wires to the valve, Figure 54)

**This completes assembly of the Intrepid stove.**

## Install the Log Set

Remove the logs from their packaging and inspect each piece for damage. **DO NOT INSTALL DAMAGED LOGS.**



### CAUTION

Before installation, inspect ember bed burner for damage. **Do not use** ember bed if damaged or cracked. **NOTE:** Small, shallow surface cracks are acceptable.

1. Install the rear log by matching the notch on the bottom left of the log on the raised notch on back left side of the ember bed. Cutout on bottom right side is clearance for pilot assembly, Figure 56. Gently push right side of log back until it contacts thermopile on pilot assembly.

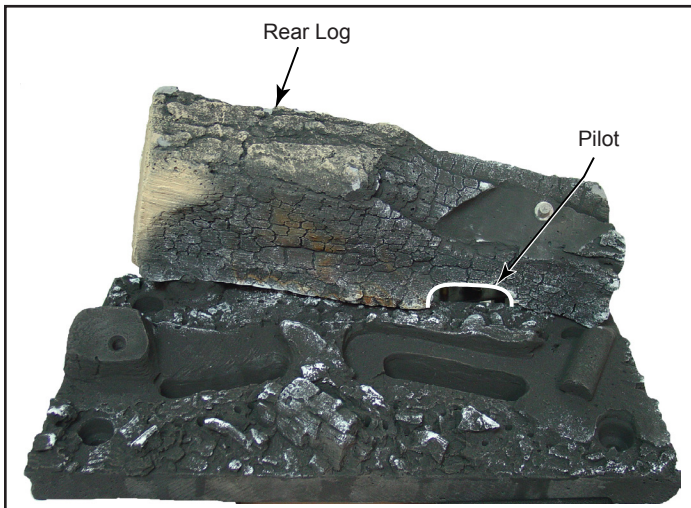


Figure 56

2. Place the left front log on the pin locator on ember bed. Position the log over the air inlet hole and on notched out portion of ember bed, Figure 58.
3. Place front right log on ember bed by mating notch on bottom of log with raised notch on ember bed. Position over the air inlet hole and on notched out portion of ember bed, Figure 58.

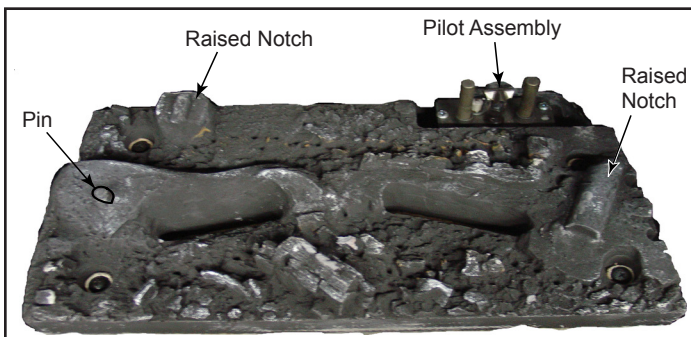


Figure 57

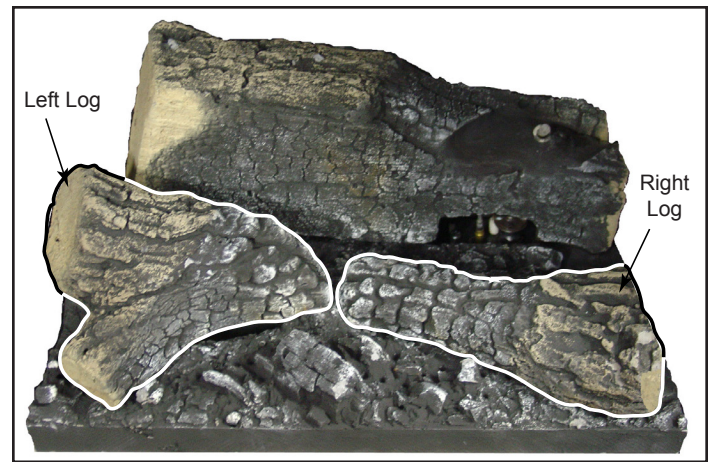


Figure 58

4. Install top log by mating hole on bottom of log with locating pin on top right side of rear log, Figure 59. Position log so it is angled down toward the area where the front two logs meet.

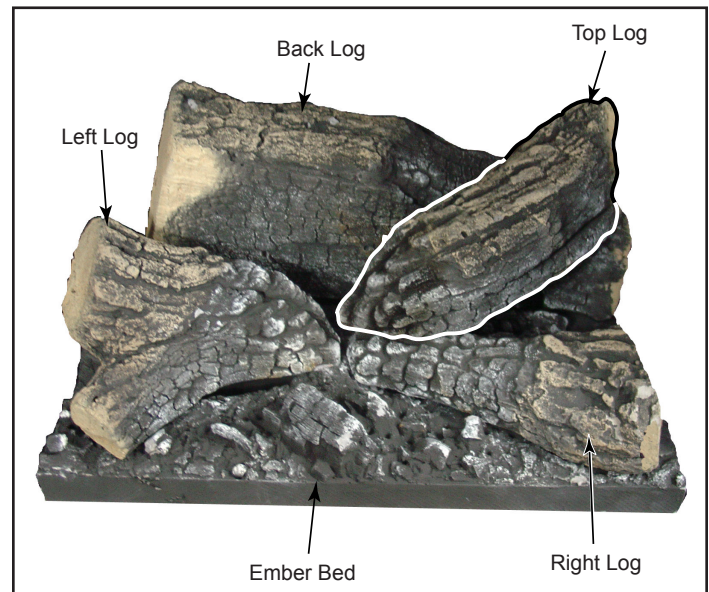


Figure 59



## Safety Barrier Installation Instructions

**NOTE:** A barrier designed to reduce the risk of burns from the hot viewing glass is provided with this appliance and shall be installed for the protection of children and other at risk individuals. If the barrier becomes damaged, the barrier shall be replaced with the manufacturer's barrier for this appliance.\* Any safety screen, guard, or barrier removed for servicing the appliance must be replaced prior to operating the appliance.

\* See parts list for model number.

The safety barrier has been designed to work with the doors open or closed.

1. Remove screen from packaging.
2. Align screen on stove front and adjust spring fingers as needed. Press into place until spring fingers engage. Figure 60
3. Press the screen against the stove snapping the two spring fingers until the screen fits securely in place.

**NOTICE:** It is the responsibility of the installer to ensure the barrier is affixed to the stove at the time of installation. The barrier is designed to be installed with the doors open or closed.



# DANGER



**HOT GLASS WILL CAUSE BURNS.**

**DO NOT TOUCH GLASS UNTIL COOLED.**

**NEVER ALLOW CHILDREN TO TOUCH GLASS.**

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

20306543



## WARNING

**The safety screen barrier must be installed after the glass front is in place. It is NOT a replacement for the glass and the unit must NOT be operated without the glass in place.**

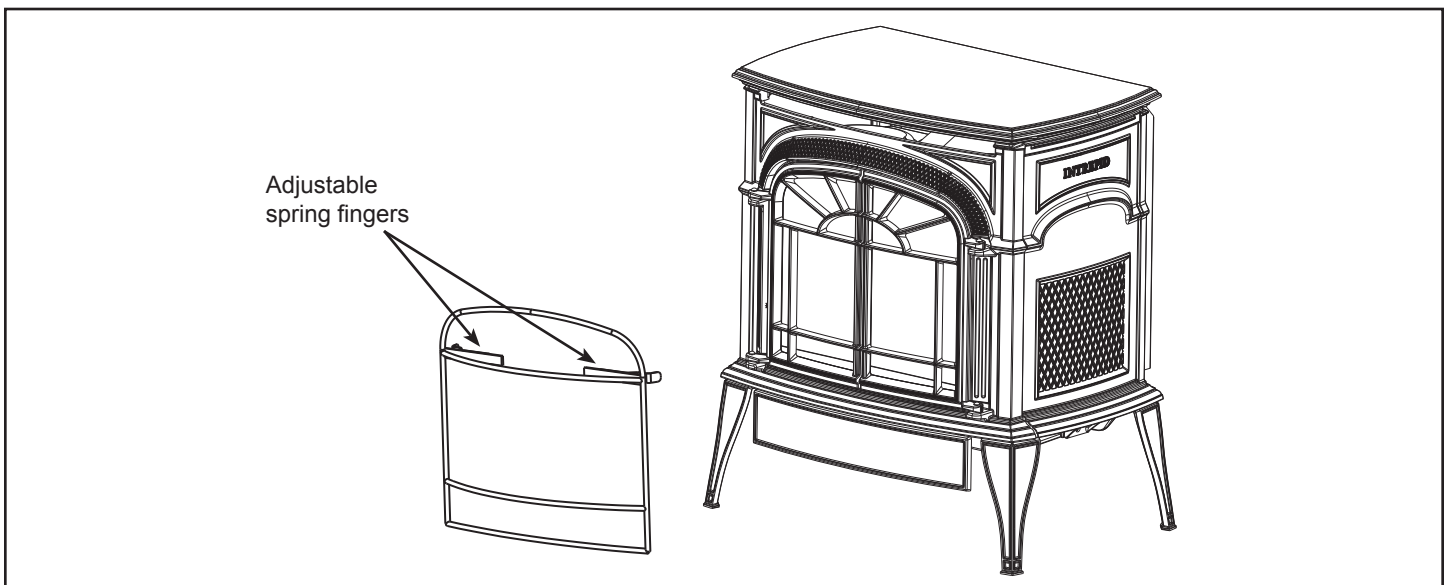


Figure 60 - Safety Barrier Installation

## Operation

The Intrepid is operated with the operable door front plate in place with the doors open or closed. To open the front doors, pull either door toward you.

### Your First Fire

Read these instructions carefully and familiarize yourself with the burner controls shown in Figure 61. Locate the pilot assembly, Figure 62. Follow the lighting instructions on exactly.

During the first fire, it is not unusual to smell some odor associated with new logs, paint and metal being heated. Odors should dissipate within a few hours. You can open a window to provide fresh air to alleviate the condition.

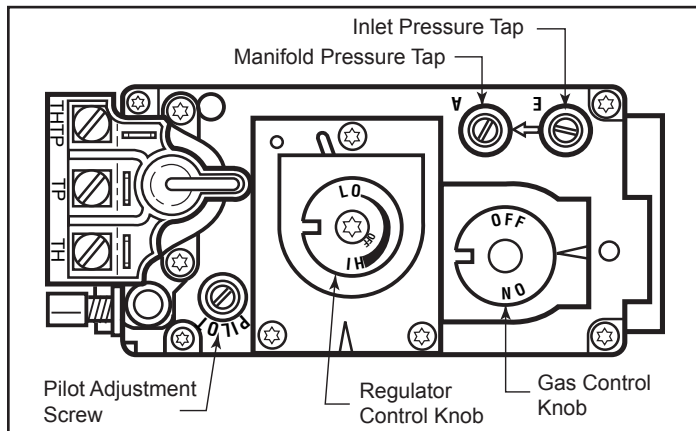


Figure 61 - NOVA SIT valve control.

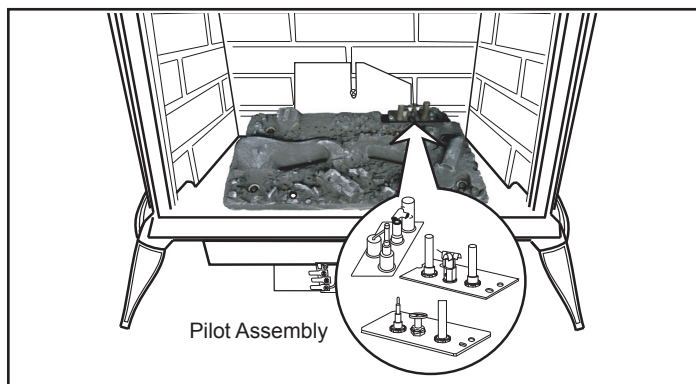


Figure 62 - Pilot Assembly location.

### Pilot and Burner Inspection

Each time you light your heater check that the pilot flame and burner flame pattern are as shown in Figure 64. If flame patterns are incorrect, turn the heater off. Contact your dealer or a qualified gas technician for assistance. Do not operate the heater until the pilot flame is correct.

### Flame & Temperature Adjustment

For stoves equipped with HI/LO valves, flame adjustment is accomplished by rotating the HI/LO adjustment knob located near the center of the gas control valve, Figure 63.

## Flame Characteristics

It is important to periodically perform a visual check of the pilot and the burner flames. Compare them to Figure 66. If any of the flames appear abnormal call a service person.

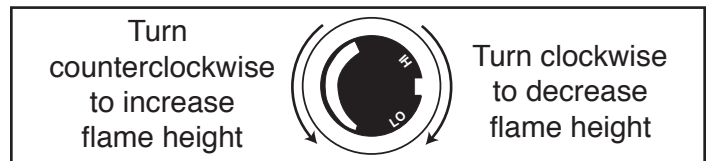


Figure 63 - Flame adjustment knob for SIT valve.

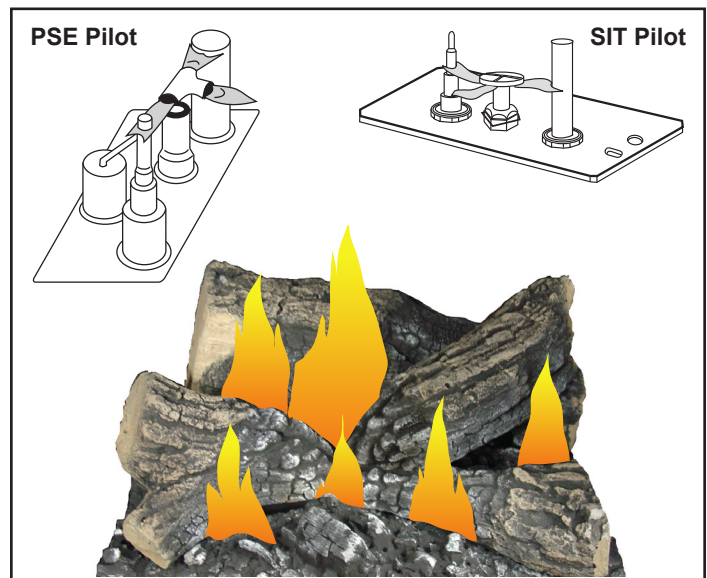


Figure 64 - Correct pilot and burner flame patterns.

### Extension Knobs

On/Off and Hi/Lo control knob extensions have been included in the finish bag. These may be installed on the appropriate knob by aligning the notch on the existing knob (Figure 61) with the tab on the inside of the extension knob (Figure 65) Push the extension knob as far as it will go onto the existing knob.

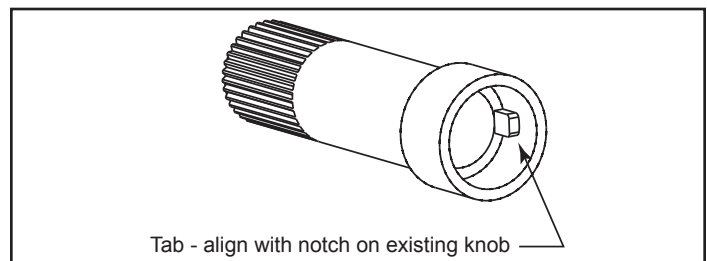


Figure 65 - Extension knob.



# Lighting and Operating Instructions

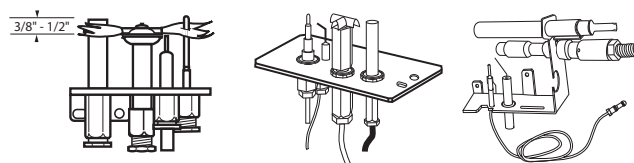
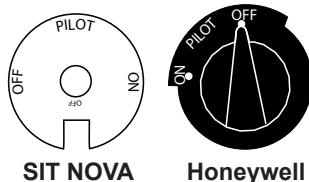
## FOR YOUR SAFETY READ BEFORE LIGHTING

**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. This heater has a pilot which must be lit manually. When lighting the pilot follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the heater 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 fireplace
  - Do not touch any electric switch
  - Do not use any phone in your building
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the Fire Department
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it, call a qualified service technician. Applying force or any attempted repair may result in a fire or explosion.
- D. Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.

## Lighting Instructions

1. **STOP!** Read the safety information above.
2. Turn off all electrical power to the fireplace.
3. Turn the On/Off switch to "OFF" position, set the remote to OFF or set thermostat to lowest level.
4. Open control access panel.
5. Push in gas control knob slightly and turn clockwise  to "OFF".
6. Remove glass door before lighting pilot. (See Glass Frame Removal section).
7. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
8. Visibly locate pilot by the main burner.
9. Turn knob on gas control counterclockwise  to "PILOT".
10. Push the control knob all the way in and hold. Immediately light the pilot by repeatedly depressing the piezo spark ignitor until a flame appears. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 8.
  - If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
  - If after several tries, the pilot will not stay lit, turn the gas control knob to "OFF" and call your service technician or gas supplier.
11. Replace glass door.
12. Turn gas control knob to "ON" position.
13. Turn the On/Off switch to "ON" position or set thermostat to desired setting.
14. Turn on all electrical power to the fireplace.



## To Turn Off Gas To Heater

1. Turn the On/Off switch to Off position or set the thermostat to lowest setting.
2. Turn off all electric power to the fireplace if service is to be performed.
3. Open control access panel.
4. Push in gas control knob slightly and turn clockwise  to "OFF". Do not force.
5. Close control access panel.

# Troubleshooting the Gas Control System

## SIT NOVA 820 MILLIVOLT VALVE

**NOTE:** Before trouble shooting the gas control system, be sure external gas shut off is in the “On” position.

Symptoms	Possible Causes	Corrective Action
1. Spark ignitor will not light	A. Defective or misaligned electrode at pilot	Using a match, light pilot. If pilot lights, turn off pilot and push the red button again. If pilot will not light - check gap at electrode and pilot-should be 1/8” to have a strong spark.
	B. Defective ignitor (Push Button)	With the control knob in the pilot position, push the control knob all the way and hold. Check for spark at electrode and pilot. If no spark to pilot, and electrode wire is properly connected, replace the battery in the ignitor module and try again. Refer to Maintenance Section. If the problem still exists, replace the ignitor module box.
2. Pilot will not stay lit after carefully following lighting instructions	A. Defective pilot generator thermocouple), remote wall switch	Check pilot flame. Must impinge on thermocouple/thermopile. NOTE: This pilot burner assembly utilizes both a thermocouple and a thermopile. The thermocouple operates the main valve operation (On and Off). Clean and or adjust pilot for maximum flame impingement on thermopile and thermocouple.
	B. Defective automatic valve	Turn valve knob to “Pilot”. Maintain flow to pilot; millivolt meter should read greater than 10mV. If the reading is okay and the pilot does not stay on, replace the gas valve. NOTE: An interrupter block (not supplied) must be used to conduct this test.
3. Pilot burning, no gas to main burner	A. Wall switch or wires defective	Check wall switch and wires for proper connections. Jumper wire across terminals at wall switch, if burner comes on, replace defective wall switch.. If okay, jumper wires across wall switch wires at valve, if burner comes on, wires are faulty or connections are bad.
	B. Thermopile may not be generating sufficient millivoltage	1. Be sure wire connections form thermopile at gas valve terminals are tight and thermopile is fully inserted into pilot bracket. 2. One of the wall switch wires may be grounded. Remove wall switch wires form valve terminals if pilot now stays lit, trace wall switch wiring for ground. May be grounded to fireplace or gas supply. 3. Check thermopile with millivolt meter. Take reading at thermopile terminals of gas valve. Should read 250-300 millivolts (minimum 150) while holding valve knob depressed in pilot position and wall switch “Off”. Replace faulty thermopile if reading is below specified minimum.
	C. Plugged burner orifice	Check burner orifices for debris and remove.
	D. Defective automatic valve operator	Turn valve knob to “On”, place wall switch to “On” millivolt meter should read greater than 150mV. If the reading is okay and the burner does not come on, replace the gas valve.
4. Frequent pilot outage problem	A. Pilot flame may be too low or blowing (high) causing the pilot safety to drop out	Clean and/or adjust pilot flame for maximum flame impingement on thermopile and thermocouple.
	B. Possible blockage of the vent terminal	Check the vent terminal for blockage (recycling the flue gases).

## Fuel Conversion Instructions

### WARNING

This conversion kit shall be installed by a qualified service agency in accordance with the manufacturer's instructions and all applicable codes and requirements of the authority having jurisdiction. If the information in these instructions is not followed exactly, a fire, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency is responsible for the proper installation of this kit. The installation is not proper and complete until the operation of the converted appliance is checked as specified in the manufacturer's instructions supplied with the kit.

### CAUTION

The gas supply shall be shut off prior to disconnecting the electrical power, before proceeding with the conversion.

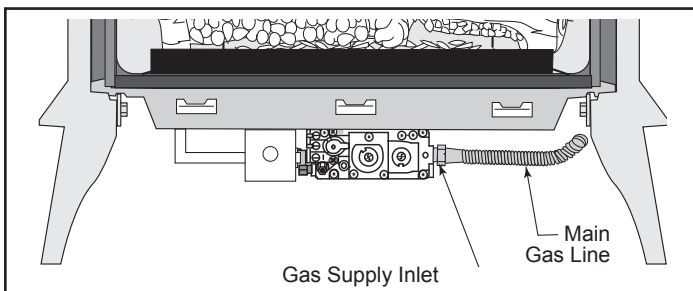


Figure 66 - Attach the gas line to the right side of the valve.

### Conversion Precautions

Before proceeding, turn control knob on valve to OFF and turn gas supply OFF. Turn OFF any electricity that may be going to the appliance.

### Conversion Procedure

1. Remove stove front. Lift stove front up and then swing bottom out and away to disengage from the stove body, Figure 80.
2. Swing open the swiveling latches at the top left and right corners of the glass frame, Figure 81.
3. Pull the top edge of the glass and frame assembly away from the firebox face. Place the assembly out of the way on a flat, padded surface such as a counter protected by a towel.
4. Remove the logset from the firebox.

### Valve Conversion

1. Turn control knob to the OFF position, and shut off the gas supply to the valve.
2. Allow the valve to cool to room temperature.
3. Remove the black protection cap by hand, Figure 67.

4. Insert a 5/32" or 4 mm Allen wrench into the hexagonal key-way of the screw (Figure 68), rotate it counterclockwise until it is free and extract it.
5. Check that the screw is clean and if necessary remove dirt.
6. Flip the screw, Figure 69.
7. Using the Allen wrench as shown in Figure 70, rotate the screw clockwise and tighten until snug.

### WARNING

Do not overtighten the screw. Recommended to grip the wrench by the short side.

8. Verify that if the conversion is from NG to LP, the screw must be reassembled with the red o-ring visible, Figure 71.
9. Replace the black protection cap.

### WARNING

Check that also the pilot and main burner injectors are appropriate for the gas type.

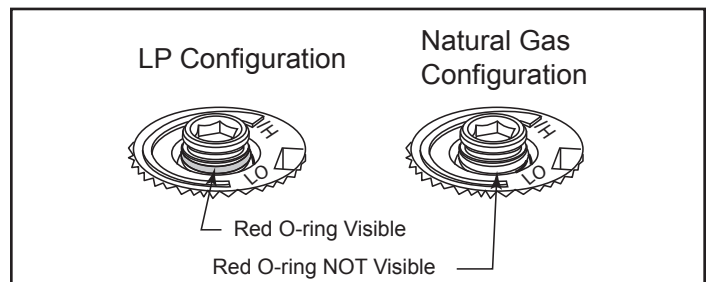
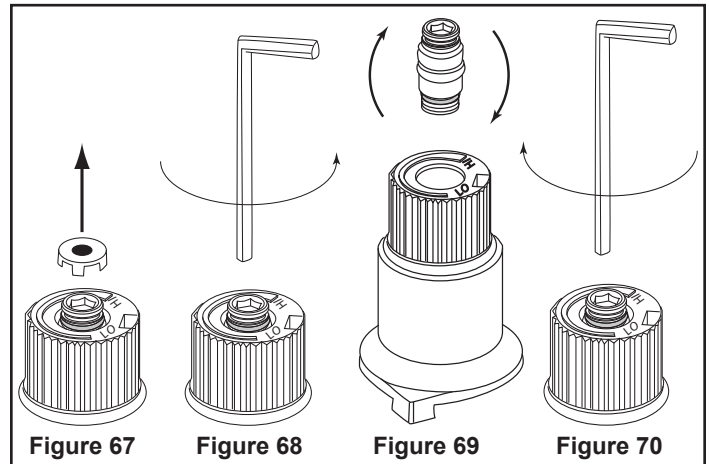


Figure 71

## Pilot Orifice Conversion

1. Locate pilot, Figure 72.
2. Replace pilot orifice.

### Pilot Type 1

- Remove pilot hood by lifting up, Figure 73. Do not remove snap ring to remove pilot hood. **NOTE:** It is not necessary to remove the pilot tube for conversion.
- Remove pilot orifice with Allen wrench, Figure 74.
- Install the conversion orifice.
- Reinstall pilot hood. Be sure to align hood with index tab.

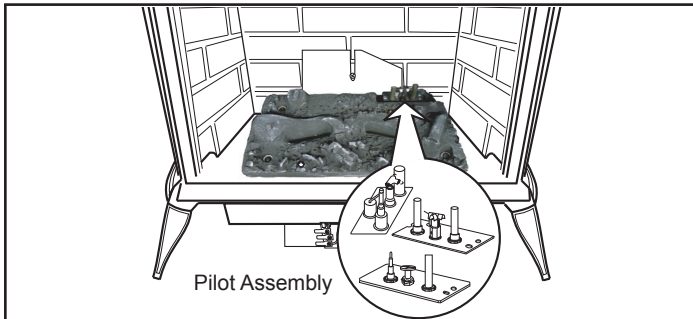


Figure 72 - Pilot Assembly location.

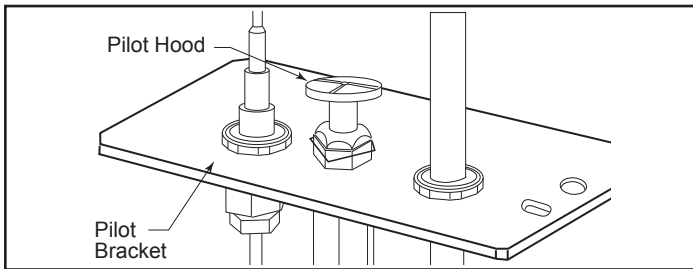


Figure 73 - Remove pilot hood.

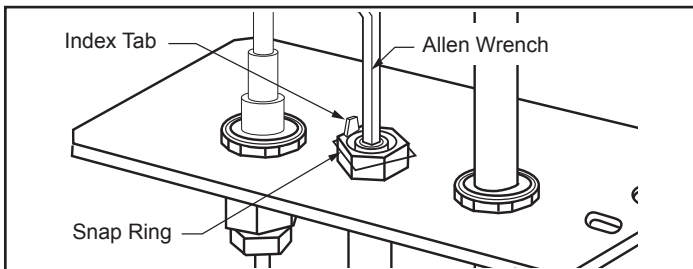


Figure 74 - Remove pilot orifice.

### Pilot type 2

- Loosen pilot hood turning counterclockwise using a 7/16" wrench, Figure 75. **NOTE:** You may use penetrating oil to prevent pilot hood threads from seizing up.
- Remove pilot orifice with needle nose pliers, Figure 76. **NOTE:** Use a wrench to hold pilot tube in place while removing the orifice.
- Install the conversion orifice.
- Reinstall pilot hood and tighten until mark on pilot hood aligns with mark on pilot bracket.

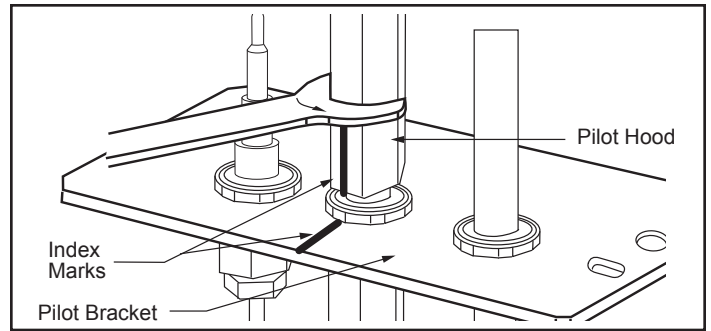


Figure 75 - Remove pilot hood. (Your pilot may have a different appearance.)

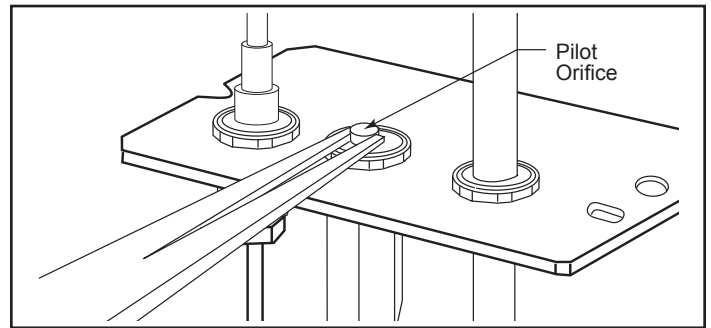


Figure 76 - Remove pilot orifice.

## Burner Orifice Conversion

1. Remove three (3) 3/8" nuts on bottom side of burner pan, Figure 77.
2. Carefully remove ember bed by tilting the right side up and lifting out toward the right side of the unit, Figure 78.

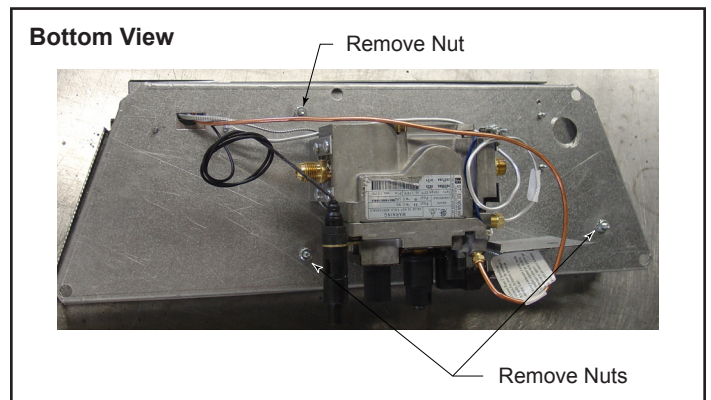
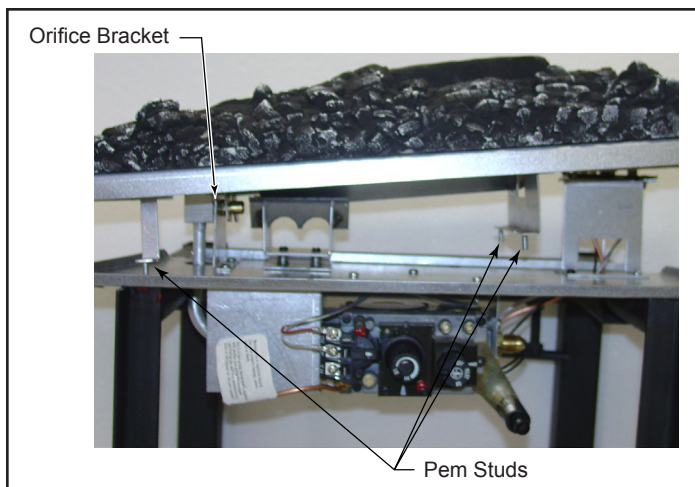
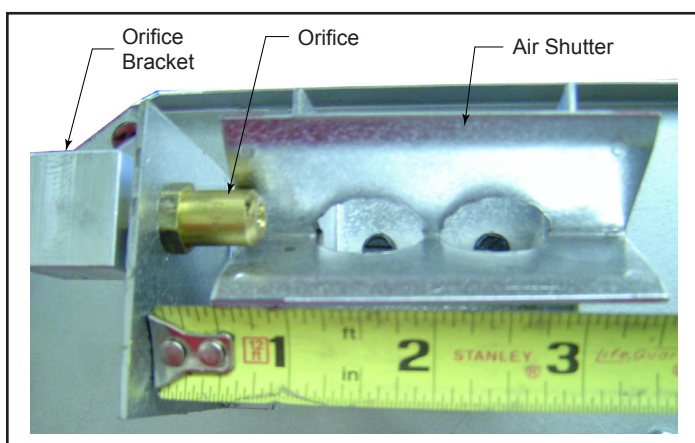


Figure 77 - Remove three (3) nuts securing ember bed in place.

3. Remove injector orifice from left burner bracket with a 1/2" wrench.
4. Install conversion orifice. Refer to Table 3 located on the next page.
5. The air shutter is factory set and should not need adjusted. The air shutter opening may be verified by measuring as shown in Figure 79.



**Figure 78** - Tilt ember bed slightly to correctly place on venturi and air shutter.



**Figure 79** - The air shutter setting is 1/2" (13 mm) from the orifice bracket to the edge of the air shutter.

## All Models

1. Replace burner making sure venturi on bottom of ember bed aligns with orifice and is seated properly on air shutter assembly, Figure 78. Make sure burner is slid into place at a slight angle and opposite to how it was removed. When burner is slid into place, the three (3) pem studs should slide down through clearance holes into the bottom of the control panel.
2. Thread and tighten 3/8" nuts back onto pem studs on underneath side of control panel, reversing Step 1 shown in Figure 77.
3. Reinstall logs as per instructions provided in this manual.
4. Place conversion label on valve.
5. Replace glass, stove front and safety barrier.
6. Restore gas to system and relight appliance according to Lighting Instructions provided in this manual.
7. Leak check the system using a gas leak detector solution.
8. Relight the main burner in both the "HI" and "LO" positions to verify proper burner ignition and operation.

Conversion is complete.

Table 3 - Injector Orifice Size Matrix				
Conversion to LP				
			Input (BTU/h)	
Kit #	Orifice	Part #	Minimum	Maximum
20012921	#56 (.0465")	30000336	12,000	16,000
Conversion to Natural Gas				
			Input (BTU/h)	
Kit #	Orifice	Part #	Minimum	Maximum
20012910	#49 (.073")	4604-317	12,500	17,500

## Maintenance

Your Intrepid Gas Heater will provide years of service with minimal upkeep. The following procedures will help ensure that your stove continues to function properly.

### Annual System Inspection

Have the entire heater and venting system inspected annually by a qualified gas technician. Replace any worn or broken parts.

### Logset and Burner Cleaning and Inspection

Cleanliness is critical to the proper function of the heater. The logset and burner must all be kept free of dust and unobstructed by debris. Inspect these areas before each use and clean as necessary.

1. Turn the burner OFF and let the heater cool completely before cleaning.
2. Remove the safety barrier and lift the stove front up, then swing the bottom out to disengage it from the heater shell, Figure 82.
3. Carefully remove the glass and frame assembly and place it out of the way on a flat, padded surface such as a counter protected by a towel.
4. Carefully inspect the Logs for damage. Contact your local dealer if any damage is evident. **DO NOT OPERATE THE HEATER WITH DAMAGED LOGS.**
5. Use a soft bristled brush to sweep dust or debris from the Logs, Pilot and Burner. Use care as the logs are fragile and susceptible to damage.
6. Replace the glass panel and frame assembly.
7. Replace the Stove Front.

### Care of Cast Iron

An occasional dusting with a dry rag will help keep the painted surfaces looking new. Use high-temperature stove paints, available through your local dealer, to touch-up areas as needed. Clean areas to be painted with a wire brush and be sure to cover the logs, burner and valve assembly, glass and frame assembly. Apply the paint sparingly; two light coats of paint will give better results than a single heavy coat.

Clean porcelain enamel surfaces with a soft, damp cloth. Do not use abrasive cleaning agents. If necessary, use only a cleaning agent formulated especially for use on porcelain enamel surfaces.



### CAUTION

**TURN THE PILOT OFF BEFORE PAINTING. ALLOW THE HEATER TO COOL COMPLETELY BEFORE PAINTING.**



## DANGER



**HOT GLASS WILL CAUSE BURNS.**

**DO NOT TOUCH GLASS UNTIL COOLED.**

**NEVER ALLOW CHILDREN TO TOUCH GLASS.**

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

20306543

### Cleaning the Glass



### WARNING

**Let the glass cool completely before attempting to clean.**

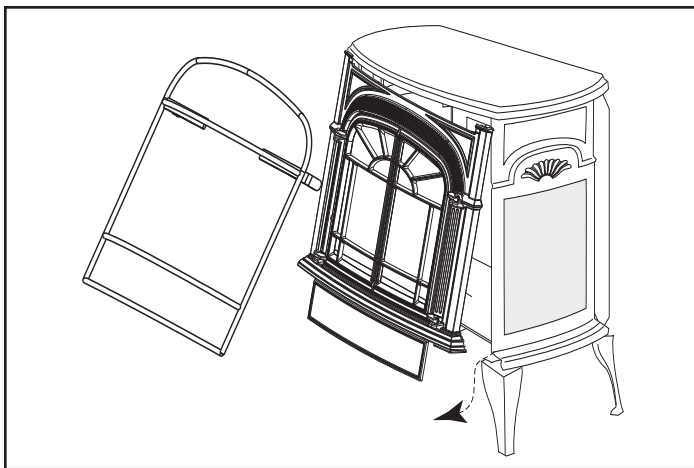
It will be necessary to clean the glass periodically. During start-up, condensation, which is normal, forms on the inside of the glass and causes lint, dust and other airborne particles to cling to the glass surface. Also initial paint curing may deposit a slight film on the glass. It is therefore recommended that the glass be cleaned two or three times with a non-ammonia household cleaner and warm water (we recommend gas fireplace glass cleaner). After that the glass should be cleaned two or three times during each heating season depending on the circumstances present.

**Clean glass after first two weeks of operation.**

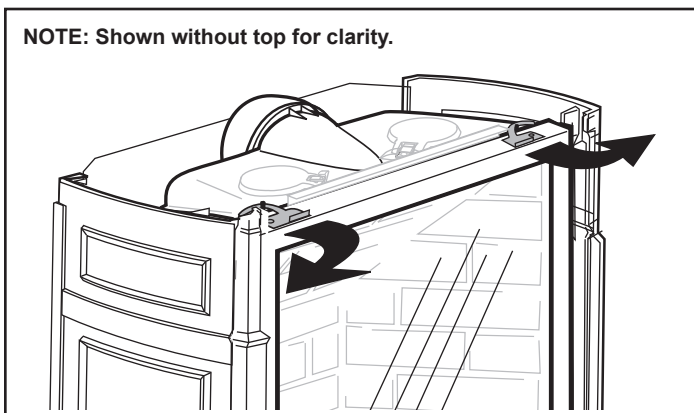
### Glass Replacement

Replace glass only with Vermont Castings approved parts. Refer to Figures 80 and 81 for removal of the damaged glass frame.

1. Remove the safety barrier by pulling gently on the edges until the spring fingers release.
2. Open the swiveling latches (cams) on the top left and right corners of the glass frame, Figure 80.
3. Position the glass and frame against the firebox by placing the bottom edge on the brackets on the bottom face of the firebox.
4. Swing the assembly against the firebox, and close the latches firmly against the pins protruding from the firebox top.



**Figure 80** - Remove the safety barrier and stove front.



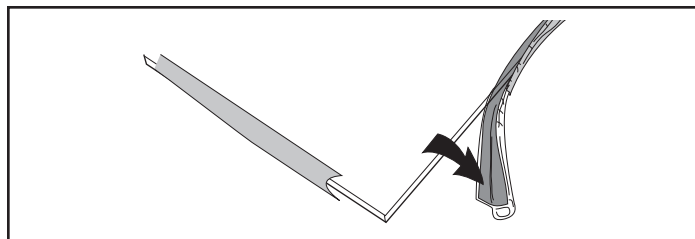
**Figure 81** - Release the latches to release the glass frame.

## Gasket Replacement

The Intrepid Gas Heater uses a 'tadpole' type gasket to seal between the glass panel and the frame. In time, this gasket can become brittle and compressed and should be replaced. New gasket is available from your dealer.

Shut off the gas supply and allow the stove to cool. Wear safety goggles and a dust mask.

1. Remove the Front, Glass Frame and Glass Panel, Figures 79 and 80. Remove the old gasket. Use a razor blade to separate the glass and gasket from the frame, and to clean the glass of any remaining cement or bits of gasket. Use a cold chisel if necessary.
2. Determine the correct length of gasket by laying it out around the edge of the glass. Allow an extra 1 - 2" (25-50 mm). Mark the spot to be cut. Use a utility knife.
3. Starting on a long edge, remove about 6" of the protective paper strip and apply the flat adhesive face of the gasket around the outside-facing edge of the panel. Continue around the panel, applying about 6" at a time and being careful to not stretch the material. Do not overlap the gasket ends, Figure 82.



**Figure 82** - Wrap the gasket material around the outside edge of the glass.

4. Apply a thin bead of high temperature silicone rubber sealant along the inside corner of the glass frame, all around the perimeter. Place the flat gasketed side of the glass panel back into the steel frame. Pinch the rounded inside-facing gasket material to bulk it up.
5. Replace the glass frame and front panel as previously described.

## Inspect the Vent System Annually

Have the vent system inspected annually by a qualified technician. Shut off the main gas supply before inspecting the system. Both the inner exhaust pipe and the outer combustion supply pipe must be checked to confirm that they are unblocked and in good condition.

## Check the Gas Flame Regularly

To ensure the stove is operating properly, check the flames periodically to confirm they match, Figure 66. The flames will be blue during the first 15-20 minutes of operation, and will gradually turn to yellow after that.

Do not use your stove if the flame pattern differs from that shown here. Contact your Vermont Castings dealer or a qualified technician for help.

## Stove Disassembly

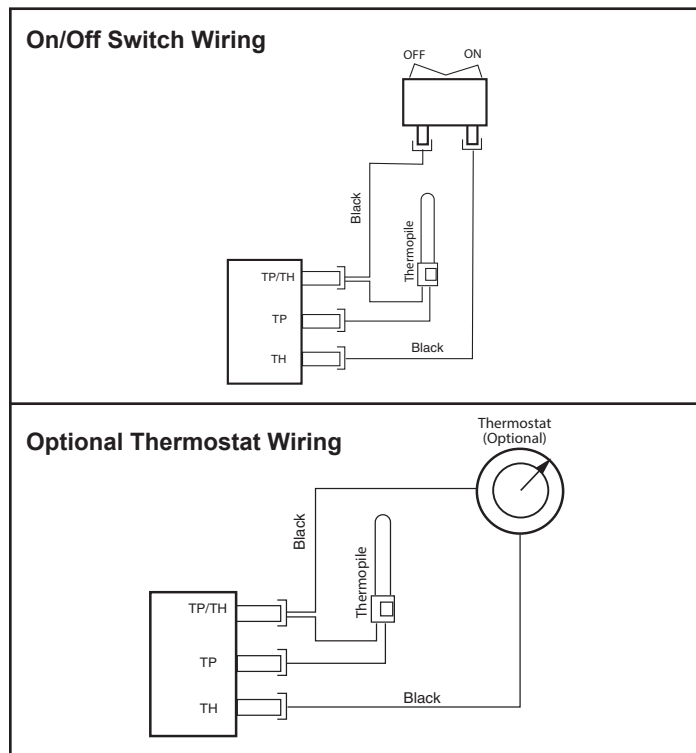
If there is ever a need to remove the firebox assembly from the stove shell, support the firebox with solid stands about 6" (152 mm) tall under the left and right outer edges of the firebox base. Do not set the firebox assembly directly on the floor; this can damage the control valve and/or the gas lines from the valve to the firebox.

Before removing the firebox from the shell, disconnect the on/off switch wires from the valve. If the assembly includes the optional fan, disconnect the fan rheostat. If the installation includes a wall thermostat, disconnect the thermostat leads from valve.

Disconnection and reconnection to the gas line should only be done by a qualified gas service technician.

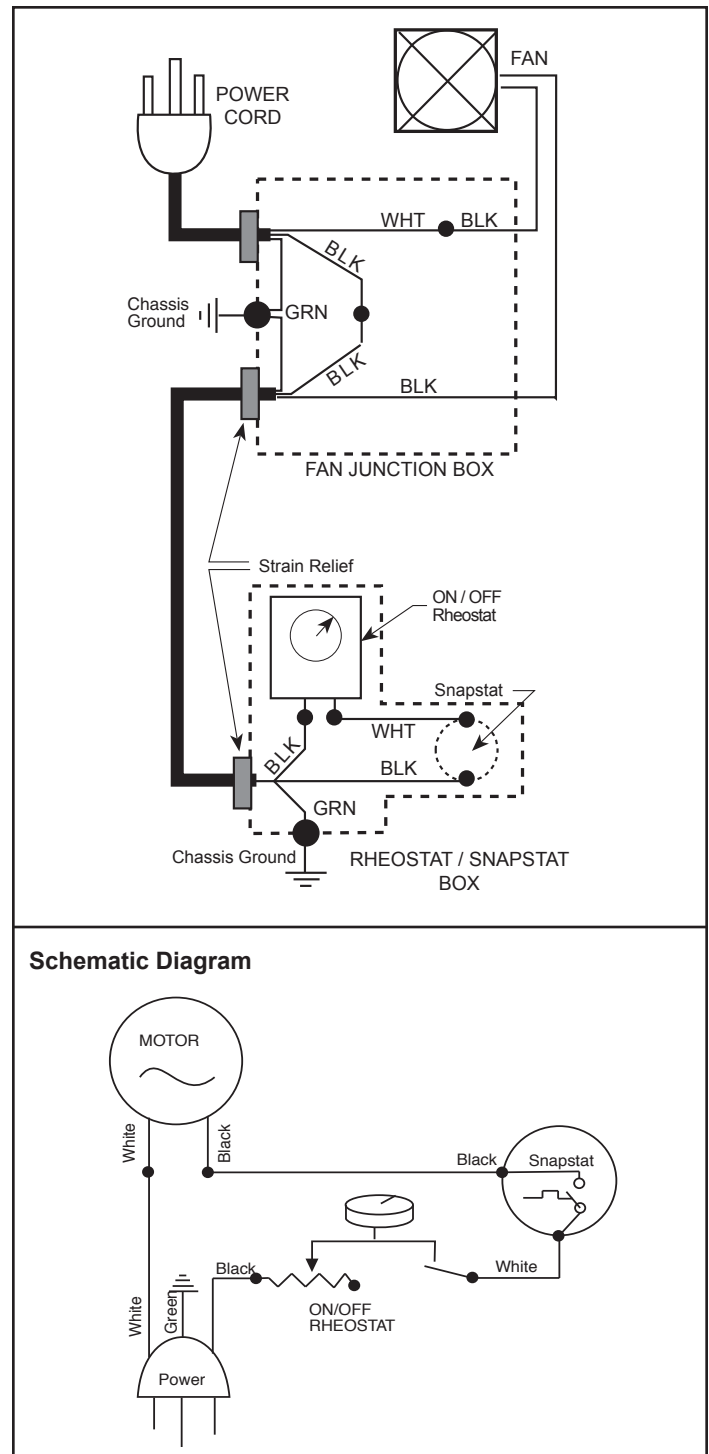
Upon re-installation, the vent system must be sealed to the firebox as discussed in the venting section. Also be sure the logs are placed in the firebox correctly, Figures 56 thru 49.

## Wiring Diagrams



**Figure 83** - On/off switch and optional thermostat circuit.

**NOTE:** IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THE APPLIANCE, MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE SF-2, 200°C WIRE OR ITS EQUIVALENT.



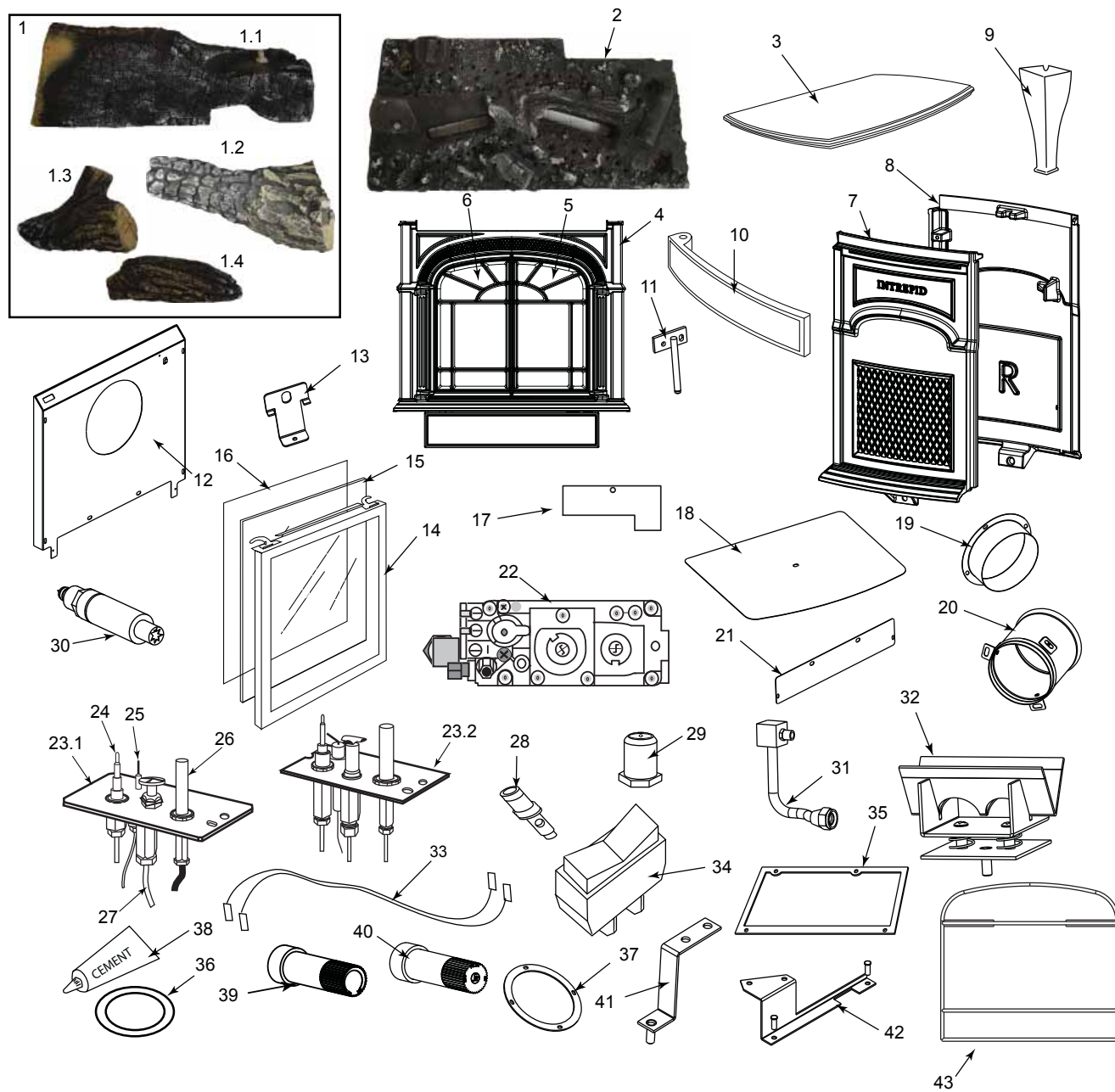
**Figure 84** - Fan circuit.

INDVRCBSB (Classic Black)

INDVRBDSB (Bordeaux)

INDVRBMSB (Majolica Brown)

INDVRBSSB (Biscuit)



Part number list on following page.

12/18

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Log Set, Complete		20012552	
1.1	Log, Rear		20013111	
1.2	Log, Right		20012549	
1.3	Log, Left		20013112	
1.4	Log, Top		20013113	
2	Ember Bed Assembly		20012906	Y
3	Top	Classic Black	30003930A	
		Biscuit	30004239	
		Bordeaux	30006762	
		Brown Majolica	30004921	
4	Front, Operable Door	Classic Black	30003931A	
		Biscuit	30004240	
		Bordeaux	30006763	
		Brown Majolica	30004922	
5	Door, Right	Classic Black	30003933A	
		Biscuit	30004242	
		Bordeaux	30006765	
		Brown Majolica	30004925	
6	Door, Left	Classic Black	30003932A	
		Biscuit	30004241	
		Bordeaux	30006764	
		Brown Majolica	30004924	
7	End, Left	Classic Black	30003934A	
		Biscuit	30004237	
		Bordeaux	30006760	
		Brown Majolica	30004919	
8	End, Right	Classic Black	30003935A	
		Biscuit	30004238	
		Bordeaux	30006761	
		Brown Majolica	30004920	
9	Leg	Classic Black	1306333A	
		Biscuit	30003182	
		Bordeaux	30006716	
		Brown Majolica	30004830	
10	Door, Control		30003945A	
11	Hinge, Control Door		1601670	
12	Rear Shroud Assembly		30004132	

Additional service parts on following page

IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



**Stocked  
at Depot**

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
13	Clip, Rear Shroud		30004002	
14	Glass Frame		30004068	
15	Glass		30004067	Y
16	Gasket, Glass	Medium Knit, 10 FT	1203702K	
17	Restrictor Plate		4604-114	
18	Heat Shield Top		30004128	
19	Collar, Duravent		30004131	
20	Starter, 4 Inch		30004130	Y
21	Fan Cover Shroud		30004014	
22	Valve, Nova SIT 820.852		20012218	Y
23.1	Pilot Assembly, 3 Way	N/DV RN 0.199.706	SRV10002264	Y
		N/DV RP 0.199.703	SRV10002265	Y
23.2	Pilot, PSE	NA175	20001115A	Y
		LP175	20001116A	Y
24	Thermocouple		SRV24D0808	Y
25	Electrode Ignitor w/Cable SIT24		10001297	Y
26	Thermopile, 18" RS		SRV26D0566	Y
27	Tubing, Pilot w/Fitting 1/8 x 24"		26D0665	Y
28	Pilot Orifice #62, Top Convertible	NG	529-512	
	Pilot Orifice #35, Top Convertible	LP	SRV200-2630	Y
29	Orifice Hood, #49/.073	NG	SRV4604-317	
	Orifice Hood, #56/.0465	LP	30000336	
30	Ignitor Piezo w/Nut, SIT		057958A	Y
31	Manifold Assembly		20012553	Y
32	Air Shutter Assembly		20012517	
33	Wiring Harness		10002582	Y
34	Trim On/Off Switch		30000874	Y
35	Gasket, Control Plate		30004200	
36	Gasket, HE Door		1203687A	Y
37	Gasket, Flue Collar		30004021	Y
38	Gasket Cement		1206122	Y
	Magnet, Door	Use common super glue or silicone to attach	1408818	
39	Knob Extension, Hi/Lo		43D0095A	
40	Knob Extension, On/Off		43D0094A	
41	Tie Bracket Assembly		20012514	
42	Right Burner Support Assembly		20012909K	

Additional service parts on following page

**IMPORTANT: THIS IS DATED INFORMATION.** Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



## Stocked at Depot

[illegible]

## Optional Accessories

### Fan Kits:

#### FK20-VC Fan

The fan helps distribute heated air from within the firebox out into the room. The fan is controlled by a snapstat that turns power on and off as the firebox temperature rises above and falls below a preset temperature. A rheostat provides for variable fan speeds.

#### Specifications

115 Volt / 60Hz / .75 Amps

#### Maintenance

The fan itself does not require regular maintenance, however, periodic cleaning of the fan and the surrounding area is required.

#### Installation

Refer to page 13 for installation instructions.

### Remote Controls

The remote control allows you to turn the heater on or off from anywhere in the room. Refer to page 39 for wiring diagrams. These remote controls are for use on RN/RP model stoves.

#### Model Functions Controlled

RCMT Soft-touch hand-held On/Off remote

RCST Hand-held thermostat remote

TSMT Touch screen hand-held On/Off remote with large backlit LCD screen

TSST Touch screen hand-held thermostat remote with large backlit LCD screen

### Warming Shelf

Warming shelves add versatility to your stove; they can be used to keep foods warm at mealtime.

Model	Color
0098	Classic Black
1373	Brown Majolica
1376	Biscuit
1380	Bordeaux

The shelf installation is completed in three stages. First attach the shelf loosely to the stove, leaving the screws loose enough to allow final adjustments. Then, position the shelf and adjust the brackets so the shelf fits correctly. Finally, tighten the screws.

Refer to the instructions included with each warming shelf for complete installation procedures.

## Hearth & Home Technologies LIMITED LIFETIME WARRANTY

Hearth & Home Technologies, on behalf of its hearth brands (“HHT”), extends the following warranty for HHT gas, wood, pellet and electric hearth appliances that are purchased from an HHT authorized dealer.

### **WARRANTY COVERAGE:**

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

### **WARRANTY PERIOD:**

Warranty coverage for consumers begins at the date of installation. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/distributor, whichever occurs earlier. However, the warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term “Limited Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood and pellet appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Components Covered
1 Year		X	X	X	X	x	All parts and material except as covered by Conditions, Exclusions, and Limitations listed
2 years			X	X			Igniters, auger motors, electronic components, and glass
		X	X	X			Factory-installed blowers
				X			Molded refractory panels
		X					Ignition Modules
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years	1 year	X					Vent Free burners, Vent Free ceramic fiber logs, Aluminized Burners
			X	X			Castings and Baffles
6 years	3 years			X			Catalyst - limitations listed
7 years	3 years		X	X			Manifold tubes, HHT chimney and termination
10 years	1 year	X					Burners, logs and refractory
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, Grate and Stainless Steel Burners, FlexBurn® System (engine, inner cover, access cover and fireback)
90 Days		X	X	X	X	X	All replacement parts beyond warranty period

### **WARRANTY CONDITIONS:**

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- This warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the appliance resides.
- Contact your installing dealer for warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.
- Limited Catalyst Warranty
  - o For wood burning products containing a catalyst, the catalyst will be warranted for a six-year period as follows: if the original catalyst or a replacement catalyst proves defective or ceases to maintain 70% of its particulate emission reduction activity (as measured by an approved testing procedure) within 36 months from the purchase date, the catalyst will be replaced for free.
  - o From 37 to 72 months a pro-rated credit will be allowed against a replacement catalyst and labor credit necessary to install the replacement catalyst. The proration rate is as follows:

Amount of Time Since Purchase	Credit Towards Replacement Cost
0 - 36 Months	100%
37 - 48 Months	30%
49 - 60 Months	20%
61 - 72 Months	10%

- o Any replacement catalyst will be warranted under the terms of the catalyst warranty for the remaining term of the original warranty. The purchaser must provide the name, address, and telephone number of the location where the product is installed, proof of original purchase date, date of failure, and any relevant information regarding the failure of the catalyst.

### **WARRANTY EXCLUSIONS:**

This warranty does not cover the following:

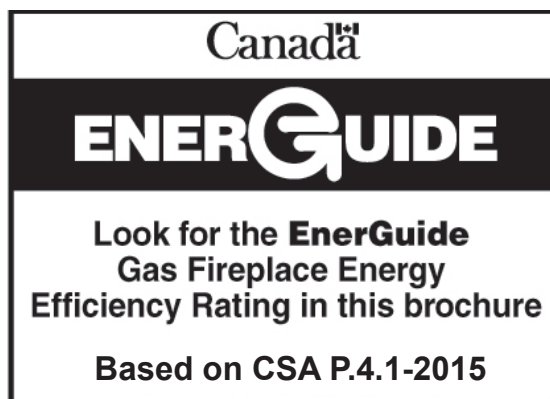
- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT's obligation under this warranty does not extend to the appliance's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to the appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

**This warranty is void if:**

- The appliance has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

**LIMITATIONS OF LIABILITY**

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.



Efficiency Ratings		
Model	EnerGuide Ratings Fireplace Efficiency (%)	D.O.E (AFUE%)
INDVR	64.0	76.5

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

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352 Mountain House Road • Halifax, Pa 17032  
[www.vermontcastings.com](http://www.vermontcastings.com)