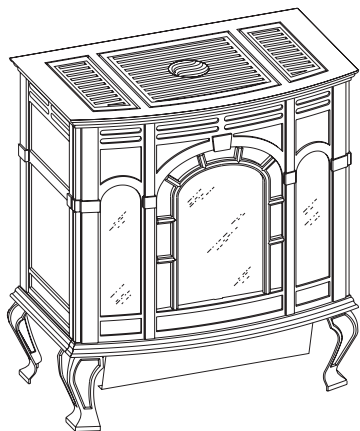




# INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

## The Classic Cast Iron Stoves



## CAST IRON

### DIRECT VENT FIREPLACE MODEL CIDV-30-20



We suggest 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.

**Installer:** Leave this manual with the appliance.  
**Consumer:** Retain this manual for future reference.

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

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

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

- 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.
  - 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.

**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.

Cet appareil peut être installé dans une maison préfabriquée (É.U. seulement) ou mobile déjà installée à demeure si les règlements locaux le permettent.

Cet appareil doit être utilisé uniquement avec les types de gaz indiqués sur la plaque signalétique. Ne pas l'utiliser avec d'autres gaz sauf si un kit de conversion certifié est installé.

**AVERTISSEMENT:** Quiconque ne respecte pas à la lettre les instructions dans le présent manuel risque de déclencher un incendie ou une explosion entraînant des dommages matériels, des lésions corporelles ou la perte de vies humaines.

**POUR VOTRE SÉCURITÉ:** Que faire si vous sentez une odeur de gaz:

- Ne pas tenter d'allumer d'appareil.
- Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous vous trouvez.
- Évacuez la pièce, le bâtiment ou la zone.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

**AVERTISSEMENT:** Une installation, un réglage, une modification, un entretien ou une maintenance incorrects peuvent entraîner des dommages matériels, des lésions corporelles ou la perte de vies humaines. Consulter le manuel des usagers fourni avec ce générateur d'air chaud.

# TABLE OF CONTENTS

SECTION	PAGE
Important Safety Information.....	3
Safety Information for Users of LP Gas.....	4
Requirements for Massachusetts.....	5
Introduction.....	6
Specifications.....	7
Gas Supply.....	8
Clearances.....	9-10
Appliance Hardware Package.....	10
Assembly of Stove Casting.....	11-13
Optional Stone Inlay Installation.....	14
Wire Channel Installation.....	14
DVKA-1 Vent Elbow Installation.....	15
Delayed Ignition Reset Switch.....	15
Venting Fireplace.....	16-17
Restrictor Plate Installation.....	17
Termination Clearances.....	18
Vent Clearances.....	19
Vent System Identification.....	20
Framing and Finishing.....	21-22
Horizontal Termination.....	22
Vertical Termination.....	23-24
Log Placement.....	24
Operating Guidelines.....	25
Lighting Instructions.....	26
Pilot Flame Characteristics.....	27
Main Burner Flame Characteristics.....	27-28
Wiring.....	28-29
Maintenance.....	30-31
Troubleshooting.....	32
How To Order Repair Parts.....	33
Parts List for CIDV-30-20.....	33
Parts View for CIDV-30-20.....	34
Parts List for Stove Casting.....	35
Parts View for Stove Casting.....	36
Optional Blower Installation Instructions.....	37-38
Service Notes.....	39

# IMPORTANT SAFETY INFORMATION

## THIS IS A HEATING APPLIANCE DO NOT OPERATE THIS APPLIANCE WITHOUT FRONT PANEL INSTALLED

- Due to high temperatures the appliance should be located out of traffic and away from furniture and draperies.
- Children and adults should be alerted to the hazards of high surface temperatures and should stay away to avoid burns or clothing ignition.
- Young children should be carefully supervised when they are in the same room as the appliance.
- Clothing or other flammable material should not be placed on or near the appliance.
- Surveiller les enfants. Garder les vêtements, les meubles, l'essence ou autres liquides à vapeur inflammables loin de l'appareil.
- Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the appliance.
- The glass front or any part removed for servicing the appliance must be replaced prior to operating the appliance. Work should be done by a qualified service person
- Keep burner and control compartment clean.
- Vent cap hot while furnace is in operation.
- Installation and repair should be done by a **QUALIFIED SERVICE PERSON**. The appliance should be inspected before use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.
- S'assurer que le brûleur et le compartiment des commandes sont propres. Voir les instructions d'installation et d'utilisation qui accompagnent l'appareil.
- **DO NOT** put anything around the furnace that will obstruct the flow of combustion and ventilation air.
- **DO** keep the appliance area clear and free from combustible material, gasoline and other flammable vapors and liquids.
- **DO** examine venting system periodically and replace damaged parts.
- **CAUTION:** The glass used in your heater is a special high temperature ceramic glass. If the glass is cracked or damaged in any way, it should be replaced only with a complete glass frame assembly from Empire. See parts list on Pages 33 and 35 for ordering.
- **DO** make a periodic visual check of pilot and burner. Clean and replace damaged parts.
- **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.
- Ne pas se servir de cet appareil s'il a été plongé dans l'eau, complètement ou en partie. Appeler un technicien qualifié pour inspecter l'appareil et remplacer toute partie du système de contrôle et toute commande qui ont été plongés dans l'eau.
- Under no circumstances should any solid fuels (wood, coal, paper or cardboard, etc.) be used in this appliance.
- **WARNING:** Any change to this appliance or its control can be dangerous. This is a heating appliance and any panel, door or guard removed for servicing an appliance must be replaced prior to operating the appliance.
- **WARNING:** Do not operate appliance with the glass front removed, cracked or broken. Replacement of the glass should be done by a licensed or qualified service person.
- **WARNING:** If not installed, operated and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or from fuel combustion which can cause death or serious illness.

# SAFETY INFORMATION FOR USERS OF LP-GAS

Propane (LP-Gas) is a flammable gas which can cause fires and explosions. In its natural state, propane is odorless and colorless. You may not know all the following safety precautions which can protect both you and your family from an accident. Read them carefully now, then review them point

by point with the members of your household. Someday when there may not be a minute to lose, everyone's safety will depend on knowing exactly what to do. If, after reading the following information, you feel you still need more information, please contact your gas supplier.

## LP-GAS WARNING ODOR

If a gas leak happens, you should be able to smell the gas because of the odorant put in the LP-Gas.

That's your signal to go into immediate action!

- Do not operate electric switches, light matches, use your phone. Do not do anything that could ignite the gas.
- Get everyone out of the building, vehicle, trailer, or area. Do that IMMEDIATELY.
- Close all gas tank or cylinder supply valves.
- LP-Gas is heavier than air and may settle in low areas such as basements. When you have reason to suspect a gas leak, keep out of basements and other low areas. Stay out until firefighters declare them to be safe.
- Use your neighbor's phone and call a trained LP-Gas service person and the fire department. Even though you may not continue to smell gas, do not turn on the gas again. Do not re-enter the building, vehicle, trailer, or area.
- **Finally**, let the service man and firefighters check for escaped gas. Have them air out the area before you return. Properly trained LP-Gas service people should repair the leak, then check and relight the gas appliance for you.

## NO ODOR DETECTED - ODOR FADE

Some people cannot smell well. Some people cannot smell the odor of the chemical put into the gas. You must find out if you can smell the odorant in propane. Smoking can decrease your ability to smell. Being around an odor for a time can affect your sensitivity or ability to detect that odor. Sometimes other odors in the area mask the gas odor. People may not smell the gas odor or their minds are on something else. Thinking about smelling a gas odor can make it easier to smell.

The odorant in LP-gas is colorless, and it can fade under some circumstances. For example, if there is an underground leak, the movement of the gas through soil can filter the odorant. Odorants in LP-Gas also are subject to oxidation. This fading can occur if

there is rust inside the storage tank or in iron gas pipes.

The odorant in escaped gas can adsorb or absorb onto or into walls, masonry and other materials and fabrics in a room. That will take some of the odorant out of the gas, reducing its odor intensity.

LP-Gas may stratify in a closed area, and the odor intensity could vary at different levels. Since it is heavier than air, there may be more odor at lower levels. Always be sensitive to the slightest gas odor. If you detect any odor, treat it as a serious leak. Immediately go into action as instructed earlier.

## SOME POINTS TO REMEMBER

- **Learn to recognize the odor of LP-gas.** Your local LP-Gas Dealer can give you a "Scratch and Sniff" pamphlet. Use it to find out what the propane odor smells like. If you suspect that your LP-Gas has a weak or abnormal odor, call your LP-Gas Dealer.
- If you are not qualified, do not light pilot lights, perform service, or make adjustments to appliances on the LP-Gas system. If you are qualified, consciously think about the odor of LP-Gas prior to and while lighting pilot lights or performing service or making adjustments.
- Sometimes a basement or a closed-up house has a musty smell that can cover up the LP-Gas odor. Do not try to light pilot lights, perform service, or make adjustments in an area where the conditions are such that you may not detect the odor if there has been a leak of LP-Gas.
- Odor fade, due to oxidation by rust or adsorption on walls of new cylinders and tanks, is possible. Therefore, people should be particularly alert and careful when new tanks or cylinders are placed in service. Odor fade can occur in new tanks, or reinstalled old tanks, if they are filled and allowed to set too long before refilling. Cylinders and tanks which have been out of service for a time may develop internal rust which will cause odor fade. If such conditions are suspected to exist, a periodic sniff test of the gas is advisable. **If you have any question about the gas odor, call your LP-gas dealer. A periodic sniff test of the LP-gas is a good safety measure under any condition.**
- If, at any time, you do not smell the LP-Gas odorant and you think you should, assume you have a leak. Then take the same immediate action recommended above for the occasion when you do detect the odorized LP-Gas.
- If you experience a complete "gas out," (the container is under no vapor pressure), turn the tank valve off immediately. If the container valve is left on, the container may draw in some air through openings such as pilot light orifices. If this occurs, some new internal rusting could occur. If the valve is left open, then treat the container as a new tank. Always be sure your container is under vapor pressure by turning it off at the container before it goes completely empty or having it refilled before it is completely empty.

# REQUIREMENTS FOR MASSACHUSETTS

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:

1. **INSTALLATION OF CARBON MONOXIDE DETECTORS.** At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas 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
  - a. 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.
  - b. 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.
2. **APPROVED CARBON MONOXIDE DETECTORS.** Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.
3. **SIGNAGE.** A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas 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”**.
4. **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.
  - (b) **EXEMPTIONS:** The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:
    1. The equipment listed in Chapter 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the Board; and
    2. Product Approved side wall 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.
  - (d) **MANUFACTURER REQUIREMENTS - 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:
    1. The referenced “special venting system” instructions shall be included with the appliance or equipment installation instructions; and
    2. The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instruction.
  - (e) 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.



# INTRODUCTION

## Instructions to Installer

1. Installer must leave instruction manual with owner after installation.
2. Installer must have owner fill out and mail warranty card supplied with appliance.
3. Installer should show owner how to start and operate appliance and thermostat.

This appliance is design certified in accordance with American National Standard/CSA Standard ANSI Z21.88/CSA 2.33 by the Canadian Standards Association as a Direct Vent Fireplace and should be installed according to these instructions.

The efficiency rating of this appliance is a product thermal efficiency rating determined under continuous operating conditions and was determined independently of any installed system.

**Any alteration of the original design, installed other than as shown in these instructions or use with a type of gas not shown on the rating plate is the responsibility of the person and company making the change.**

**Notice:** During initial firing of this unit, its paint will bake out and smoke will occur. To prevent triggering of smoke alarms, ventilate the room in which the unit is installed.

Appliance must not be connected to a chimney flue that is servicing a separate solid-fuel burning appliance.

Attention: All vent runs must have a minimum **VERTICAL** rise of two feet. If the vent run is directly behind the appliance, you must attach 36" snorkel Simpson Dura-Vent SD-981 or Selkirk 4DT-ST36 on the exterior of the building. See Venting Fireplace, page 16.

## Installation in Residential Garages

Gas utilization equipment in residential garages shall be installed so that all burners and burner ignition devices are located not less than 18" (457mm) above the floor.

Such equipment shall be located, or protected, so it is not subject to physical damage by a moving vehicle.

## Qualified Installing Agency

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. The term "qualified agency" means any individual, firm, corporation or company which either in person or through a representative is engaged in and is responsible for (a) the 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.

**State of Massachusetts:** The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

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\** *Canadian Installation Code, CAN/CGA B149.*

*\*Available from the American National Standards Institute, Inc., 11 West 42nd St., New York, NY 10036.*

Installer l'appareil selon les codes ou règlements locaux, ou, en l'absence de tels règlements, selon les Codes d'installation CAN/CGA-B149.

This model is a direct vent gas appliance and is designed to operate with all combustion air being siphoned from the outside of the building and all exhaust gases expelled to the outside of the building.

**Warning: This unit is not for use with solid fuel.**

## Pre-Installation Preparation

This direct vent gas fireplace and its components are tested and safe when installed in accordance with this Installation Manual. Report to your dealer any parts damaged in shipment, specifically check glass condition. Do not install unit with damaged, incomplete, or substitute parts. Read all instructions before starting installation and follow these instructions carefully during installation to insure maximum benefit and safety. Failure to follow them will void your warranty and may present a fire hazard.

The Empire Comfort System, Inc. warranty will be voided by, and Empire Comfort System, Inc. disclaims any responsibility for the following actions:

- Installation of any damaged fireplace or vent system component.
- Modification of the fireplace or direct vent system.
- Installation other than as instructed by Empire Comfort System, Inc.
- Improper positioning of the gas logs or the glass door.
- Installation and/or use of any component part not manufactured or approved by Empire Comfort System, Inc.

## High Altitude Installation

When installing this unit at an elevation above 2000 feet (in the United States) it may be necessary to decrease the input rating by changing the existing burner orifice to a smaller size. Generally, input should be reduced 4 percent for each 1000 feet above sea level. However, if the heating value of the gas has been reduced, this general rule may not apply. Check with local gas utility for proper orifice size identification.

APPLIES TO CANADIAN MODELS ONLY

Altitude: 0-4,500 feet (0-1370 m) without orifice change.

For high altitude installations consult the local gas distributor or the authority having jurisdiction for proper rating methods. If the installer must convert the unit to adjust for varying altitudes, the information sticker (illustrated below) must be filled out by the installer and adhered to the appliance at the time of conversion.

THE CONVERSION SHALL BE CARRIED OUT BY A MANUFACTURER'S AUTHORIZED REPRESENTATIVE IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER, PROVINCIAL OR TERRITORIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN/CGA-B141.1 OR CAN/CGA-B141.2 INSTALLATION CODES.

LA CONVERSION DOIT ÊTRE EFFECTUÉE CONFORMÉMENT AUX RÉGLEMENTATION PROVINCIAUX EN CAUSE ET AUX EXIGENCES DES CODES D'INSTALLATION CAN/CGA-B149.

This appliance has been converted for use at an altitude of

Orifice size \_\_\_\_\_ Manifold Pressure \_\_\_\_\_  
Input (Btu/h) \_\_\_\_\_ Fuel Type \_\_\_\_\_  
Date of Conversion \_\_\_\_\_ Converted by \_\_\_\_\_

Cet appareil a été converti au \_\_\_\_\_  
Injecteur \_\_\_\_\_  
Pression à la tubulure d'alimentation \_\_\_\_\_  
Débit calorifique \_\_\_\_\_

# SPECIFICATIONS

Model	CIDV-30	
Input BTU/HR (KW/H) Maximum	30,000 (8.7)	
BTU/HR (KW/H) Minimum	21,000 (6.2)	
Height	27 3/4" (704mm)	
Width	25 1/2" (647mm)	
Depth	23" (584mm)	
Gas Inlet (Pipe)	1/2" (13mm)	
Floor to top of collar on vertical position of Vent Elbow	27 5/8" (701mm)	
Floor to center of collar on horizontal position of Vent Elbow	24 3/32" (611mm)	
Floor to Center of 90° elbow with a 24" length of pipe (see Figure 5)	55 1/2" (1409mm)	
<b>Stove Casting (Must be ordered with Firebox.)</b>		
CIFB-1	Flat Black	
CIPB-1	Porcelain Black	
CIPG-1	Porcelain Green	
CIPS-1	Porcelain Sand	
CIPN-1	Porcelain Navy	
CIPR-1	Porcelain Red	
<b>Venting Accessories (Special Vent Kits - Simpson DuraVent Can be purchased from Empire Comfort Systems, Inc.)</b>		
DVKA-1	Direct-Vent Kit Adapter	
<b>DVKHP-1</b> (DVKH-1)	Direct-Vent Kit for Horizontal Run (Incl. adapter, SD-904B, SD-911B, SD-940, SD-942, SD-985, SD-990B)	
<b>DVKVP-1</b> (DVKV-1)	Direct-Vent Kit for Vertical Run (Incl. adapter, (2) SD-902B, SD-940, SD-943, SD-953, SD-963, SD-991)	
<b>Accessories</b>		
TMV	Millivolt Wall Thermostat - Reed Switch	
FRBC-1	Battery Operated Remote Control	
FRBTC-1	Battery Operated Remote Control w/Thermostat	
FREC-1	Electric Remote Control	
FWS-1	Wall Switch	
CIB-2	Automatic Blower	
<b>Stone Inlay Replaces Standard Gill Top</b>		
CII-2	Stone Inlay	Empress Green
CII-3	Stone Inlay	Hunan Jade
CII-4	Stone Inlay	Gray Botticino
CII-5	Stone Inlay	Azul
CII-6	Stone Inlay	Salome
CII-7	Stone Inlay	Black Swan

# GAS SUPPLY

Consult the current National Fuel Gas Code, ANSI Z223.1 CAN/CGA-B149 (.1 or .2) installation code.

### Recommended Gas Pipe Diameter

Pipe Length	Schedule 40 Pipe Inside Diameter		Tubing, Type L Outside Diameter	
	Nat.	L.P.	Nat.	L.P.
0-10 feet 0-3 meters	1/2"	3/8"	1/2"	3/8"
10-40 feet 4-12 meters	1/2"	1/2"	5/8"	1/2"
40-100 feet 13-30 meters	1/2"	1/2"	3/4"	1/2"
100-150 feet 31-46 meters	3/4"	1/2"	7/8"	3/4"

**Note:** Never use plastic pipe. Check to confirm whether your local codes allow copper tubing or galvanized.

**Note:** Since some municipalities have additional local codes, it is always best to consult your local authority and installation code.

The use of the following gas connectors is recommended:

- ANS Z21.24 Appliance Connectors of Corrugated Metal Tubing and Fittings
- ANS Z21.45 Assembled Flexible Appliance Connectors of Other Than All-Metal Construction

The above connectors may be used if acceptable by the authority having jurisdiction. The state of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.

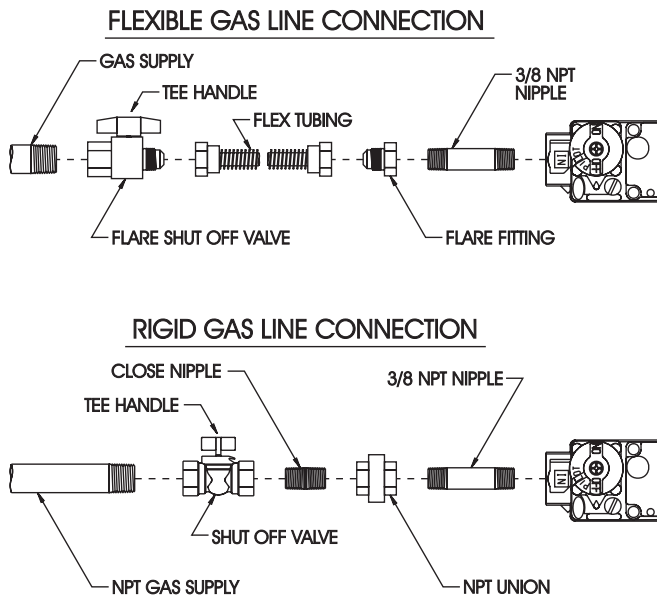


Figure 1

### Installing a New Main Gas Cock

Each appliance should have its own manual gas cock.

A manual main gas cock should be located in the vicinity of the unit. Where none exists, or where its size or location is not adequate, contact your local authorized installer for installation or relocation.

Compounds used on threaded joints of gas piping shall be resistant to the action of liquefied petroleum gases. The gas lines must be checked for leaks by the installer. This should be done with a soap solution watching for bubbles on all exposed connections, and if unexposed, a pressure test should be made.

**Never use an exposed flame to check for leaks. Appliance must be disconnected from piping at inlet of control valve and pipe capped or plugged for pressure test. Never pressure test with appliance connected; control valve will sustain damage!**

**NOTE:** The gas control is equipped with a captured screw type pressure test point, therefore it is not necessary to provide a 1/8" test point up stream of the control.

A gas valve and ground joint union should be installed in the gas line upstream of the gas control to aid in servicing. It is required by the National Fuel Gas Code that a drip line be installed near the gas inlet. This should consist of a vertical length of pipe tee connected into the gas line that is capped on the bottom in which condensation and foreign particles may collect.

When using copper or flex connector use only approved fittings. **Always provide a union** so that gas line can be easily disconnected for burner servicing.

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

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

**Attention!** If one of the procedures results in pressures in excess of 1/2 psig (14" w.c.) (3.5 kPa) on the fireplace gas valve, it will result in a hazardous condition.

### Checking Manifold Pressure

Both Propane and Natural gas valves have a built-in pressure regulator in the gas valve. Natural gas models will have a manifold pressure of approximately 3.5" w.c. (.871kPa) for maximum input or 1.7" w.c. (.423kPa) for minimum input at the valve outlet with the inlet pressure to the valve from a minimum of 5.0" w.c. (1.245kPa) for the purpose of input adjustment to a maximum of 10.5" (2.615kPa) w.c. Propane gas models will have a manifold pressure approximately 10.0" w.c. (2.49kPa) for maximum input or 5.9" w.c. (1.469kPa) for minimum input at the valve outlet with the inlet pressure to the valve from a minimum of 11.0" w.c. (2.739kPa) for the purpose of input adjustment to a maximum of 13.0" w.c. (3.237kPa).

A 1/8" (3mm) N.P.T. plugged tapping, accessible for test gauge connection, is located on the outlet side of the gas control.



# CLEARANCES

In selecting a location for installation, it is necessary to provide adequate accessibility clearances for servicing and proper operation.

## Locating and Venting the Direct Vent Fireplace

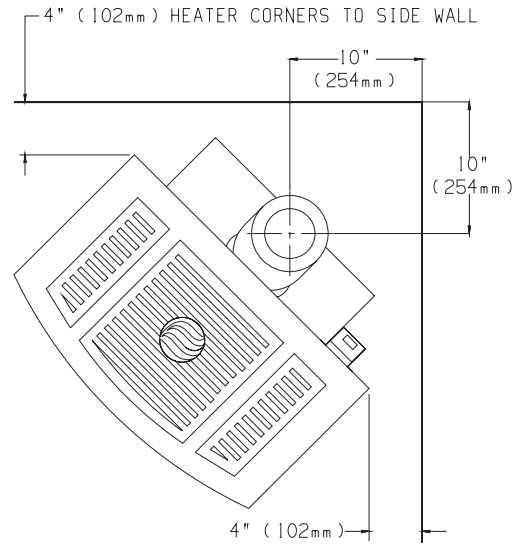
Clearances: When facing the front of the direct vent fireplace the minimum clearances to combustible construction (material) are the following:

Top of appliance (ceiling)	36 (inches)
Rear Wall	2 (inches)
Side Wall	6 (inches)
Heater Corners (45° angle) to Wall	4 (inches)
Floor	0 (inches)

## Installation on Rugs and Tile

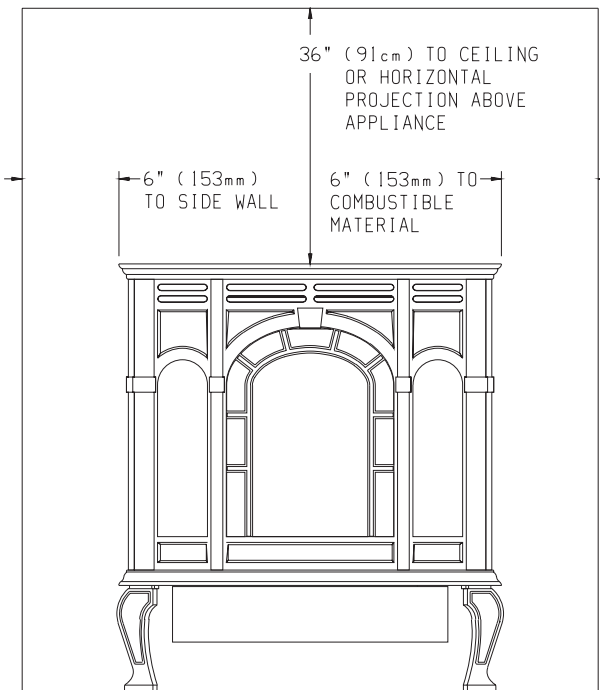
If this appliance is to be installed directly on carpeting, tile, or other combustible material, other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.

The base referred to above does not mean the fire-proof base as used on wood stoves. The protection is primarily for rugs that may be extremely thick and light-color tile that can discolor.

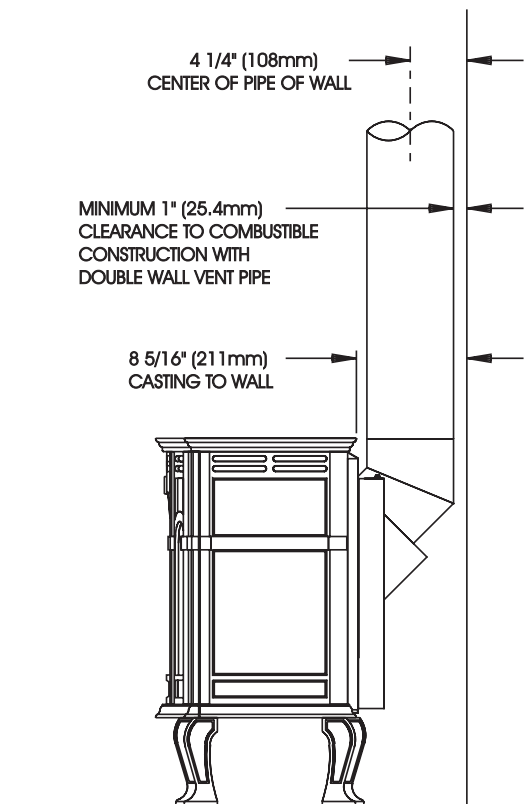


NOTE:  
HEATER INSTALLED AT 45° ANGLE IN CORNER

**Figure 3**



**Figure 2**



**Figure 4**

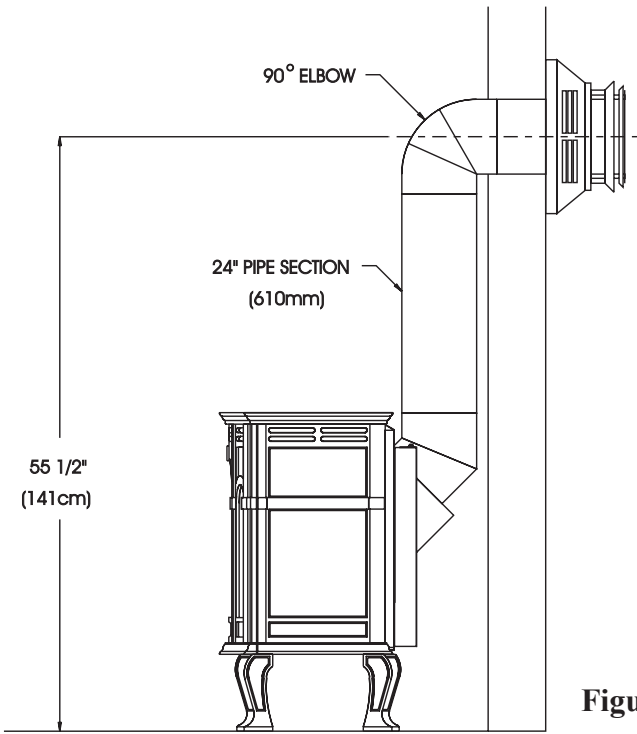


Figure 5

**Special Vent Systems**

The following vent systems are acceptable for use with the CIDV-30 fireplace:

Simpson DuraVent® GS 4" - 6 5/8"

\*Selkirk Direct-Temp® 4" - 6 5/8"

\* Can not be used in side wall horizontal vent installations in the State of Massachusetts.

## APPLIANCE HARDWARE PACKAGE


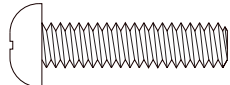

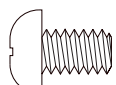

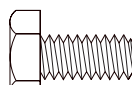

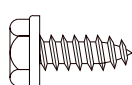
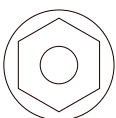

HARDWARE - FULL SIZE	
 	1/4-20 X 1" PHILLIPS HEAD BOLT (ZINC)
 	1/4-20 X 3/8" PHILLIPS HEAD BOLT (ZINC)
 	1/4-20 X 1/2" LEVELING BOLT (BLACK)
 	NO. 10 X 1/2" HEX WASHER HEAD SCREW (BLACK)
 	1/4-20 WASHER HEAD NUT (ZINC)

Figure 6

**Appliance Hardware Package Parts List**

Part Description	Part Number	Quantity Supplied
1/4-20 x 1" Phillips Head Bolt	R-3188	4
1/4-20 x 3/8" Phillips Head Bolt	R-3646	16
1/4-20 x 1/2" Leveling Bolt	R-3747	4
No. 10 x 1/2" Hex Washer Head Screw	R-2737	16
1/4-20 Washer Head Nut	R-3185	4
Leg Pad "A" (see Figure 7)	CI-008	2
Leg Pad "B" (See Figure 7)	CI-009	2
1-1/4" x 1/2" Retaining Tab (see Figure 9)	CI-007	4
1/4 x 9/32 Washer (Not Shown)	R-1150	8

# ASSEMBLY OF STOVE CASTING

## Assembly of Stove Casting

(Figures 7, 8, 9, 10, 11, 12 and 13)

**Attention:** Included in the hardware package are (8) 1/4" inside diameter washers. A 1/4" washer may be used with a 1/4-20 x 3/8" bolt when assembling the stove casting parts. If a bolt hole is not tapped deep enough for a tight fit between stove casting parts, the 1/4" washer can be used as a shim to provide a tight fit.

The 1/4" washers are not required for assembly of the stove casting if all the bolt holes are tapped to a proper depth.

Additional 1/4" washers are to be purchased locally.

1. Place porcelain casting pieces on a non-abrasive surface in order to protect the porcelain finish. The exterior of the porcelain casting pieces should be facing the non-abrasive surface.
2. The assembly of the casting is accomplished in 7 stages:
  - A. Attaching legs to the sides (Figure 7).
  - B. Attaching rear cover to sides (Figure 8).
  - C. Removing protective packaging from casting front and window (Figure 9).
  - D. Assembly of front by attaching retaining tabs and placing front on unit (Figure 10).
  - E. Inserting firebox into partially completed assembly (Figure 11 and Figure 12).
  - F. Attaching firebox to rear cover (Figure 13).
  - G. Placing top on unit.

## Detailed Instructions Follow

3. Refer to Figure 7, the leg pads will have the letter "A" and "B" stamped into the metal. Place leg pad "A" and leg pad "B" at the bottom of each casting side. Leg pad "A" attaches to the front of the casting side, right and to the rear of the casting side, left. Leg pad "B" attaches to the rear of the casting side, right and to the front of the casting side, left. Position the 3/4" flange on the leg pad against the (2) locator dimples on the casting side. The 3/4" flange must be facing upward, toward the top louver openings on the casting side. Attach the two **rear** leg pads to the casting sides with (2) 3/8" bolts. Attach but do not completely tighten the two **front** leg pads to the casting sides with (2) 3/8" bolts. **Attention:** The front leg pads can be adjusted to provide a snug fit between the casting front and the casting sides.
4. Attach (4) leveling bolts to the bottom of the (4) legs.
5. Align the 3/8" hole at the top of the leg with the 3/8" hole in the leg pad. **Attention:** For proper positioning of the leg to the leg pad the (2) 1-1/2" top edges of the leg must be placed flush and parallel to the (2) edges on the leg pad. Attach leg to leg pad by inserting (1) 1" bolt through the leg pad and into the leg, secure bolt with 1/4" nut.
6. Insert (2) 3/8" bolts into the (2) holes on the edges of the casting sides. The bolts should only be threaded half-way into the holes in order to allow for clearance when the casting back is attached to the casting sides.

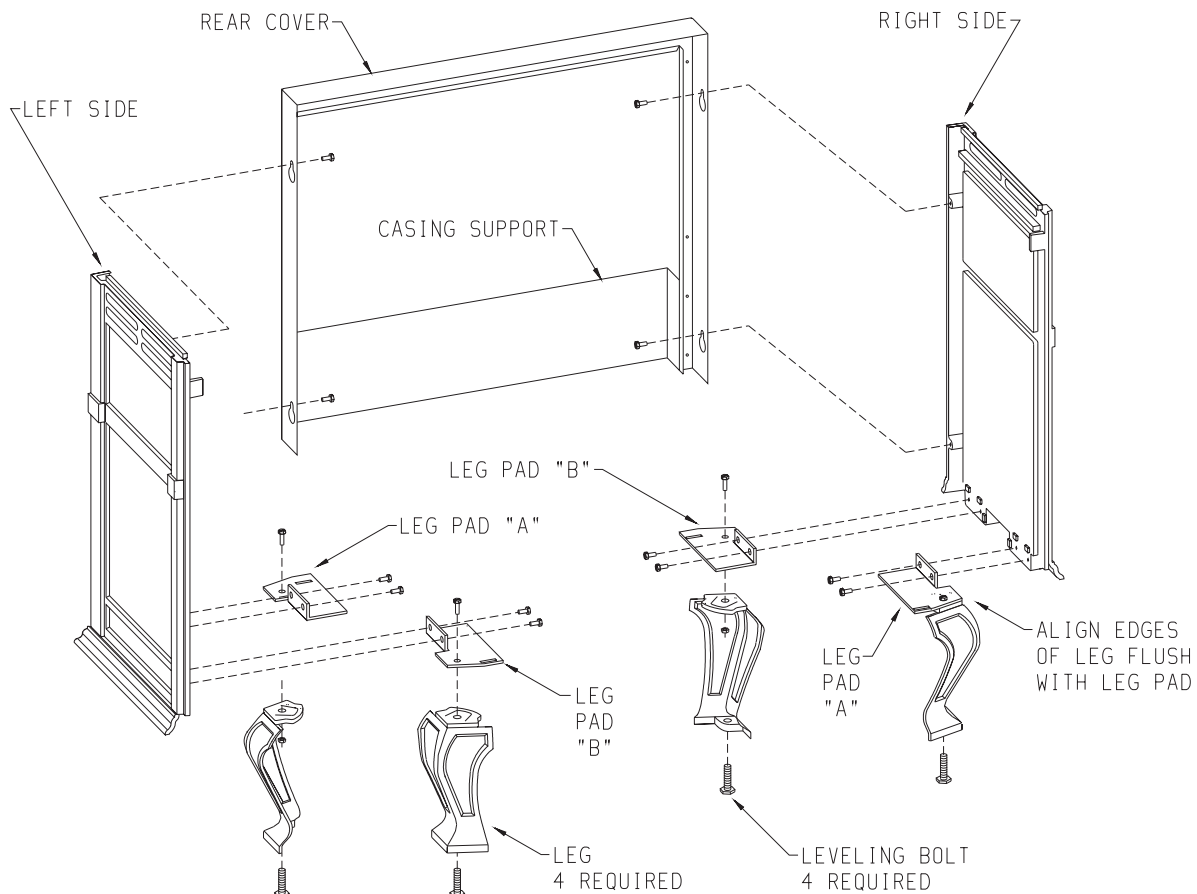
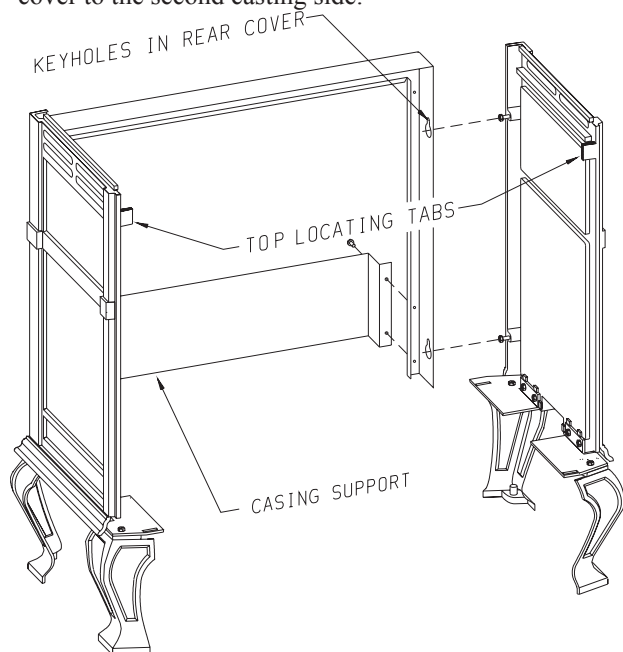


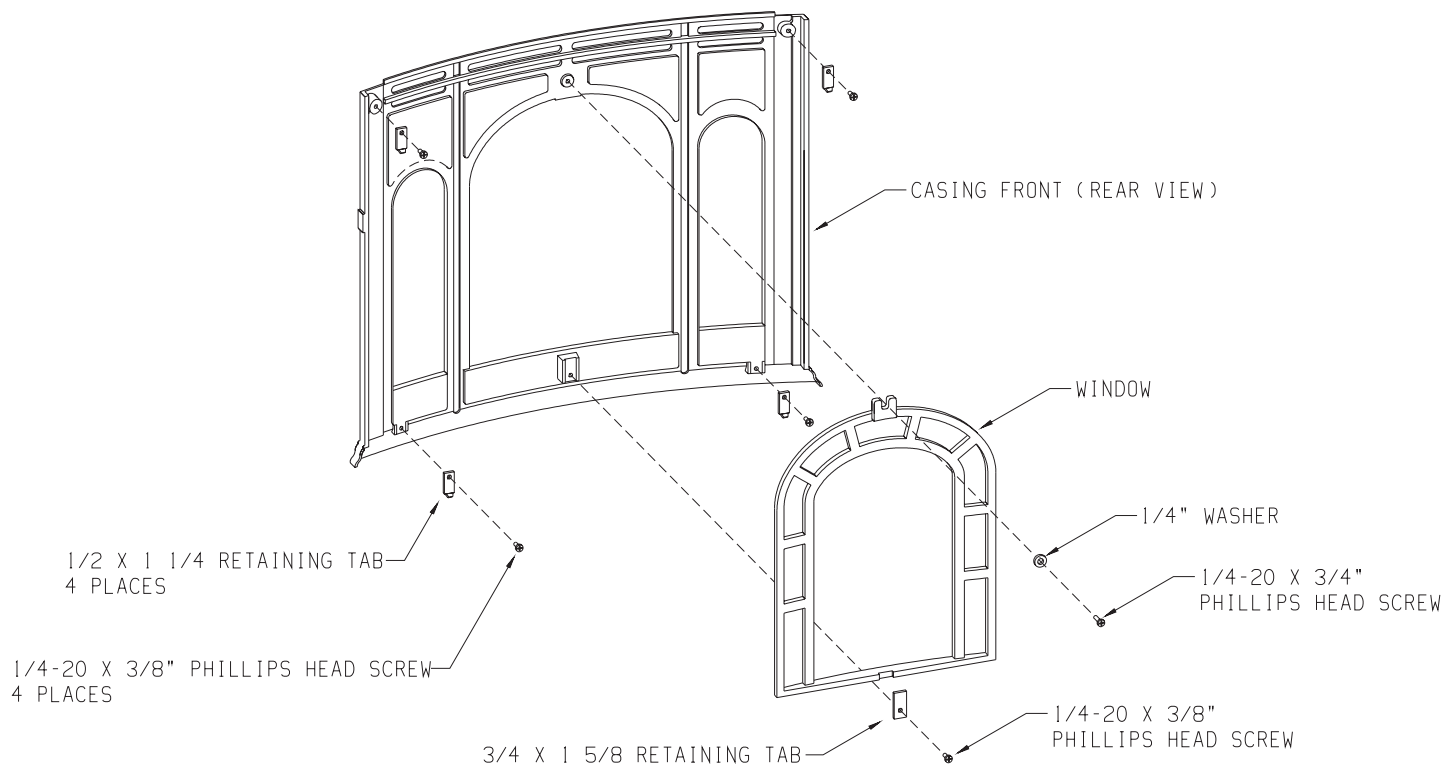
Figure 7

- Refer to Figure 8, attach casting support to rear cover with (4) 10 x 1/2" screws. The rear cover has (4) keyholes for attachment to the casting sides. Stand the casting sides on the floor with the (2) bolts attached half-way into the edges of the rear cover positioned at the rear. The large diameter holes in the keyholes of the rear cover will be toward the floor. Working with one casting side at a time, place the large diameter holes in the keyholes over and behind both of the bolts at the same time. Push downward on the rear cover to lock the keyholes into position behind the bolts. Finish tightening both bolts to secure rear cover to casting side. Repeat this procedure to secure rear cover to the second casting side.



**Figure 8**

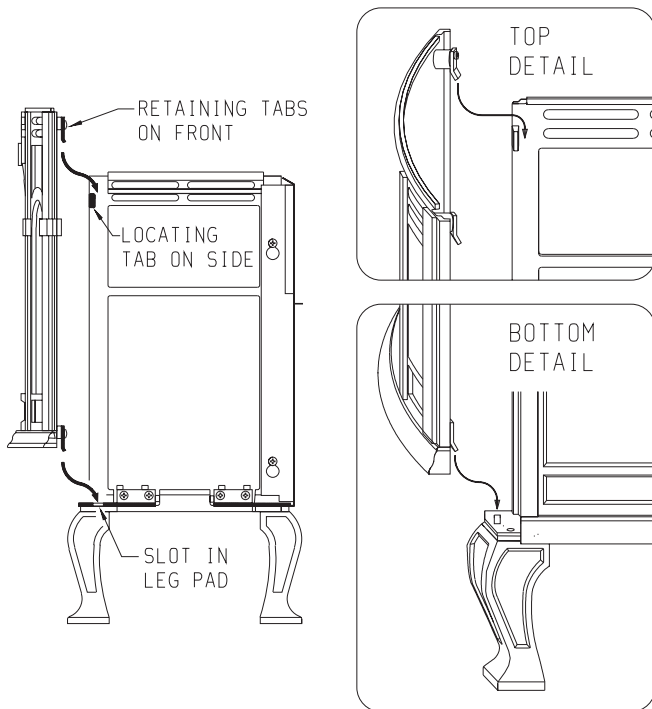
- Position the completed portion of the casting in the approximate location for installation as the completed assembly will be heavy.
- Refer to Figure 9, remove protective packing foam from casting front and window. Remove the (1) 3/4" bolt and (1) 1/4" washer from top of window. Remove (1) 3/8" bolt and 1 - 5/8" x 3/4" retaining tab from bottom of window. Remove the window from casting front. Remove the protective sheet of foam from the casting front. Place the window into the casting front. Attach the top of the window to the casting front with (1) 1/4" washer and (1) 3/4" bolt. Place the 1 - 5/8" x 3/4" retaining tab into the locator notch on the bottom of the casting front. Attach the bottom of the window to the casting front by inserting (1) 3/8" bolt through retaining tab and into locator notch.
- Refer to Figure 9, attach the (4) 1-1/4" x 1/2" retaining tabs to the casting front with (4) 3/8" bolts. The retaining tabs should be positioned downward.



**Figure 9**

## ASSEMBLY OF STOVE CASTING (continued)

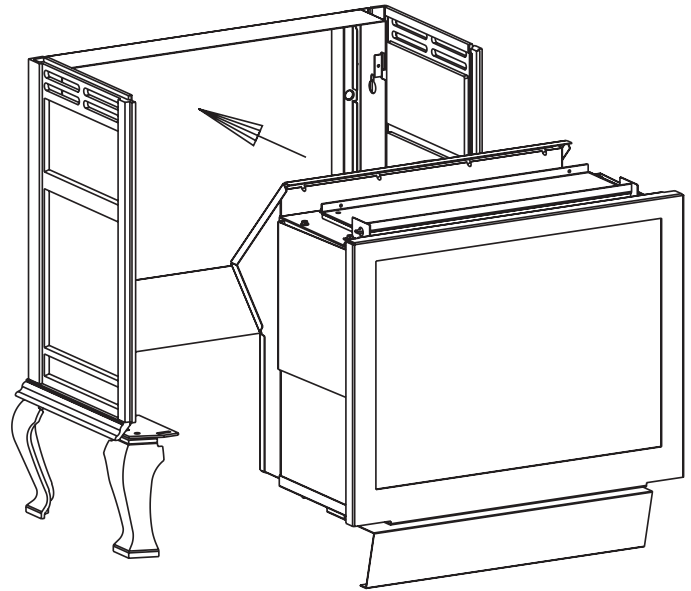
11. Refer to Figure 10, attach casting front to casting by using the (4) retaining tabs on the casting front. The (2) top, retaining tabs on the casting front will be placed behind the (2) top, locator tabs on the front of the casting sides. The (2) bottom, retaining tabs will be inserted into the (2) 9/16" slots on the front, leg pads. Place the top, retaining tabs behind the top, locator tabs as you pivot inward the bottom of the casting front in order to insert the bottom, retaining tabs into the slots.



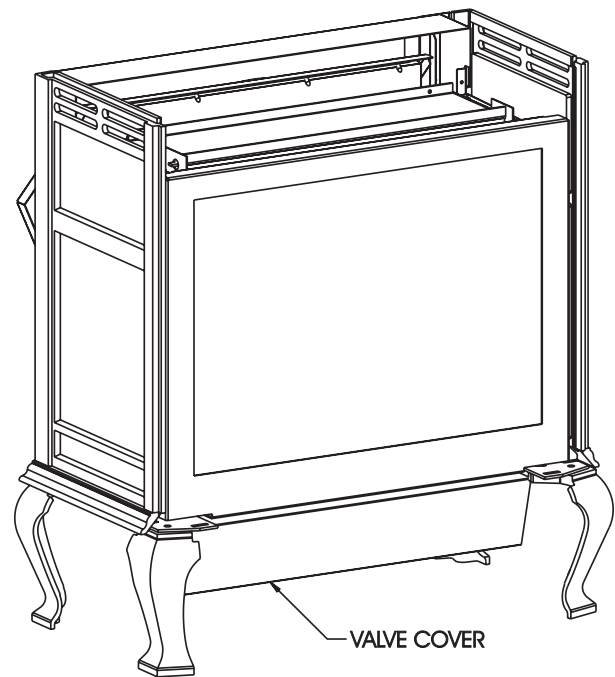
**Figure 10**

12. The following procedure will provide a snug fit between the casting front and the casting sides. Grasp the right, front leg, push inward on the leg in order to provide a snug fit between the casting front and the casting side. Continue to hold the right, front leg as you completely tighten the (2) 3/8" bolts that attach the leg pad to the right, casting side. Repeat procedure for left, front leg to achieve a snug fit between the casting front and the casting side.
13. Remove the casting front from the casting.
14. Refer to Figures 11 and 12, the appliance firebox can now be inserted into the casting. Center the firebox in the casting. **Attention:** Remove (1) Phillips-head screw in the top of the valve cover. The screw is used to secure the valve cover in place during shipping. The (1) Phillips-head screw can be discarded.
15. Refer to Figure 13, align (2) slotted clearance holes on upper mounting brackets with (2) screw holes on rear cover. Align (2) slotted clearance holes on casing support with (2) screw holes at bottom of air drop assembly. Attach firebox to rear cover and casing support with (4) 10 x 1/2" screws.
16. Attach casting front to outer casting as described in Step 11.

17. Place the casting top onto the outer casting. The casting top nests into the outer casting.
18. Insert center grill, left grill and right grill into casting top.



**Figure 11**



**Figure 12**

19. Level appliance by adjusting leveling bolts.
20. Assembly of stove casting is completed.



# OPTIONAL STONE INLAY INSTRUCTIONS

Whenever the standard grill top is replaced with a stone inlay you must install the top shield, which is provided with the stone inlay.

## Installation of Optional Stone Inlay

1. Remove left grill, center grill and right grill from casting top.
2. Remove casting top from casting.
3. Place the casting top on a non-abrasive surface in order to protect the porcelain finish. The exterior of the casting top should be facing the non-abrasive surface.
4. Attach 11 5/8" x 11 5/8" top shield to the interior of the casting top with (1) 3/8" bolt provided in hardware package.
5. Place the casting top onto the casting. The casting top nests into the casting.
6. Insert center stone inlay, left stone inlay and right stone inlay into casting top.
7. Installation of stone inlay is completed.

Stone Inlay Hardware Package Parts List

Part Description	Part Number	Quantity Supplied
11 5/8" x 11 5/8" Top Shield	CI-091	1
3/8" Bolt	R-3646	1

# WIRE CHANNEL INSTALLATION

The ON/OFF/REMOTE switch with harness is factory installed into the wire channel. After the firebox is installed into the casting the wire channel can be installed.

1. Attach channel divider to rear cover with (2) 10 x 1/2" screws.
2. Attach wire channel to channel divider with (2) 10 x 1/2" screws. The wires from ON/OFF/REMOTE switch will be routed within wire channel.
3. Attach the green (wire) female push-on to the TH terminal on gas valve.

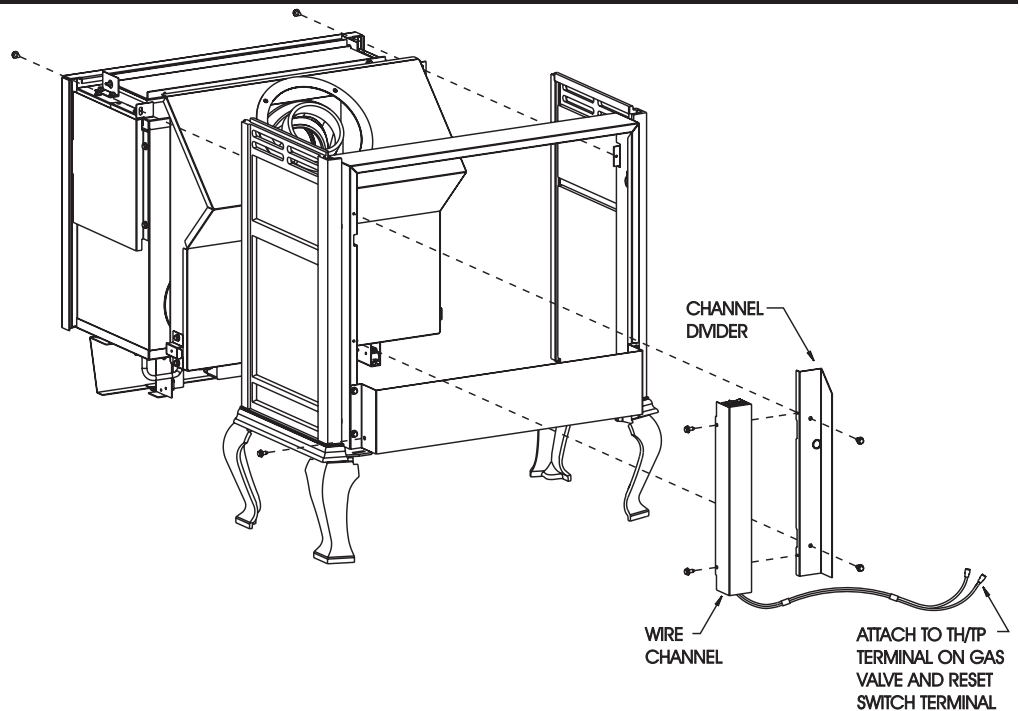


Figure 13

# DVKA-1 VENT ELBOW INSTALLATION

**Attention:** A tube of furnace cement is provided in the Owner's Envelope. Apply furnace cement to the top, exterior edge on the cast iron flue outlet.

Place the DVKA-1, vent elbow onto the flue outlet as you align the clearance holes on the vent elbow with the clearance holes on the vent elbow gasket.

Install the vent elbow onto the flue outlet with (4) hex-head screws provided in hardware package. The vent elbow can be installed in the vertical position or horizontal position. **All vent runs must have a minimum vertical rise of two feet.** If the vent elbow is installed in the horizontal position and the vent run is directly behind the fireplace, you must attach 36" snorkel Simpson Dura-Vent SD-981 or the Selkirk 4DT-ST36 on exterior of the structure.

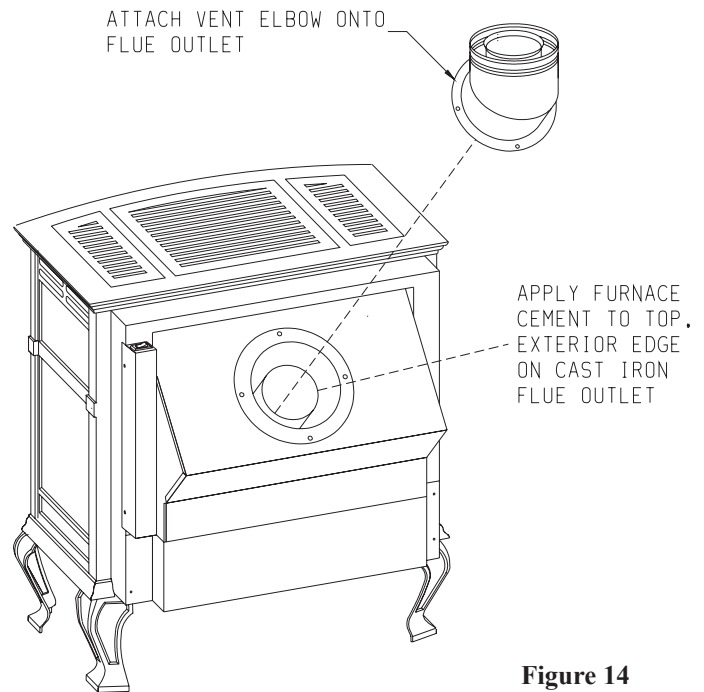


Figure 14

# DELAYED IGNITION RESET SWITCH

Attach black wire from REMOTE/OFF/ON switch to the front 1/4" male tab on the reset switch. Attachment of black wire onto the reset switch is done in conjunction with the preceding steps for **Wire Channel Installation**. Attach black wire on the back of the reset switch to the TH/TP terminal on gas valve.

The reset switch can be activated if the main burner has a delayed ignition. The right, relief door is connected by a metal wire to a cotter pin that is inserted into the reset switch. When a delayed ignition occurs the right, relief door pivots upward, the metal wire pulls the cotter pin out of the reset switch and the main burner is shut OFF.

**Whenever the delayed ignition reset switch is activated you must contact a qualified service person to determine the cause for the delayed ignition reset switch to be activated.**

Replacement of cotter pin into delayed ignition reset switch assembly by a qualified service person.

1. Lower valve cover.
2. The reset switch is located behind the left side of the valve cover.
3. Verify the metal cable with attached cotter pin has free movement.
4. Depress the metal lever arm located on the front of the reset switch.
5. With the metal lever arm depressed, insert cotter pin into the clearance hole on the right side of the bracket and into the clearance hole on the left side of the bracket.

Attention: The tip of the cotter pin must remain flat. The tip of the cotter pin must never be bent-over. If the tip of the cotter pin is bent-over it could prevent the delayed ignition reset switch from functioning during a delayed ignition.

6. Replacement of cotter pin into delayed ignition reset switch assembly is completed.

## Reassembly and Resealing Gas Accumulation Relief System (Relief Doors) and Combustion Chamber

Whenever the relief doors are pivoted open by a delayed ignition in the main burner, the relief door gaskets and combustion chamber must be examined by a qualified service person for damage. All damaged gaskets on the relief doors and combustion chamber must be replaced by a qualified service person. If damage occurs to the combustion chamber, it must be replaced by a qualified service person. Contact Empire Comfort Systems, Inc. for replacement parts.

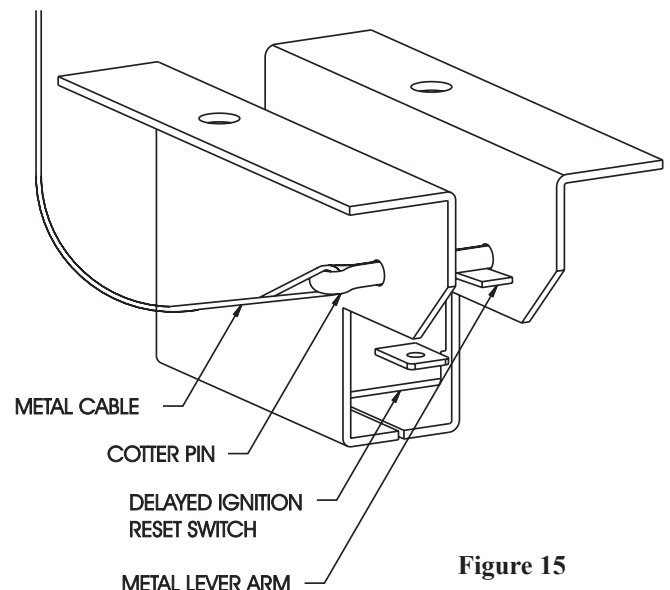
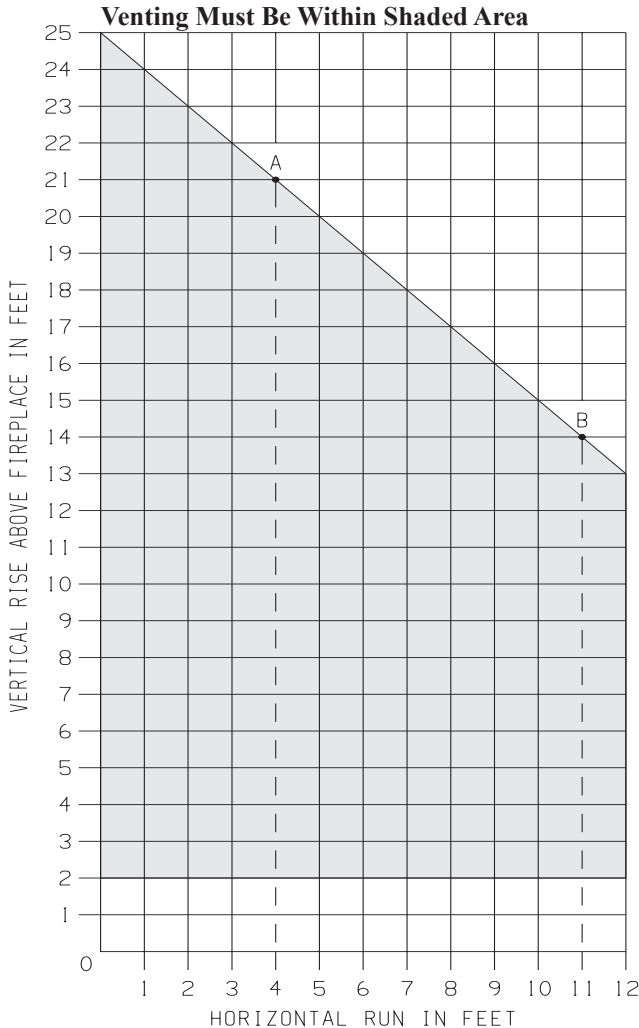


Figure 15

# VENTING FIREPLACE

## Venting Graph (Dimensions in Feet) (Figure 16)

1. Determine the height of the center of the termination. Using this dimension on the Venting Graph, locate the point it intersects with the slanted graph line, or the right edge of the graph.
2. From the point of this intersection, draw a vertical line to the bottom of the graph.
3. Adjust the indicated maximum dimension for additional elbows if necessary.
4. Position the unit so that maximum horizontal run is not exceeded.



**Figure 16**

## Venting Requirements (Figure 17)

Minimum vertical rise from appliance outlet = 24 inches (610mm).

**Attention:** All vent runs must have a minimum **VERTICAL** rise of two feet. If the vent run is directly behind the appliance, you must attach 36" Simpson Dura-Vent SD-981 or the Selkirk 4DT-ST36 on the exterior of the building.

Maximum vertical rise from appliance outlet = 25 feet (7.62m), the restrictor plate may be used above 10 feet.

Maximum horizontal run from appliance outlet = 12 feet (3.66m).

Maximum vertical rise and horizontal run is a combined total of 25 feet (7.62m).

Maximum elbows = (2) 90°, for the second elbow subtract 5 feet from a horizontal run.

### To Use the Vent Graph

#### EXAMPLE A:

If the vertical rise from the appliance outlet is 21 feet, the horizontal run to the outer wall flange of the vent termination must not exceed 4 feet with (1) 90° elbow.

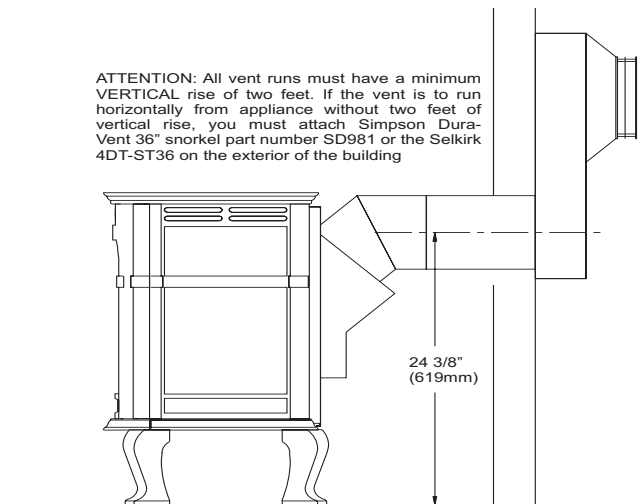
#### EXAMPLE B:

If the vertical rise from the appliance outlet is 14 feet, the horizontal run to the outer wall flange of the vent termination must not exceed 11 feet with (1) 90° elbow.

**SPECIAL NOTE:** For each 45 degree elbow installed in the horizontal run, the length of the horizontal run **MUST** be reduced by 18 inches (45cm). This does not apply if the 45 degree elbows are installed on the vertical rise of the vent system.

**Example:** According to the chart the maximum horizontal run is 12 feet and if two 45 degree elbows are required in the horizontal run it must be reduced to 9 feet.

The maximum number of 45 degree elbows permitted per side wall installation is two. These elbows can be installed in either the vertical rise or horizontal run.



**Figure 17**

## VENTING FIREPLACE (continued)

### Sidewall Venting

The maximum vertical and horizontal distances for one (1) 90° elbow are 25 feet and 12 feet, respectively. Vertical dimensions are based on top of fireplace to centerline of pipe. Horizontal dimensions are based on centerline of pipe to termination.

**CAUTION:** Total vertical run **MUST BE** completed before starting horizontal run. **Horizontal chimney run must slope upward (away from fireplace) 1/4" per foot and vent termination must be level.**

Under no circumstances should combustible materials (including siding) be closer than 2" from the top of the 6 5/8" pipe or closer than 1" on the side and bottom.

### Cutting the Hole (Figure 18)

After the appliance has been positioned in its permanent location, the hole through the exterior wall of the house can be cut. This hole needs to be 10" high x 10" wide square with its center line determined by the amount of vertical arise and horizontal run of the termination. When locating the hole it must be noted that the bottom of the cap must be 12" above the ground level, and top of the cap must be no less than 18" below a combustible projection, and no closer than 9" to any wall running parallel to vent termination.

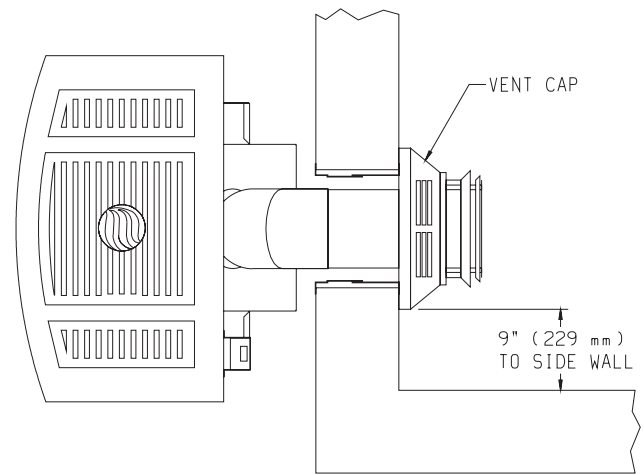


Figure 18

## RESTRICTOR PLATE INSTALLATION

The restrictor plate is to be used only in a completely vertical vent installation. The restrictor plate can be used when the vertical vent rise is between 10 feet and 25 feet.

In a vertical vent rise the rear (yellow) flame on the main burner can be reduced due to the drawing action from the flue exhaust pipe and the air inlet pipe. A decrease in the height or the appearance of the yellow flame may occur when the vertical vent rise is between 10 feet and 25 feet. To enhance the yellow flame on the main burner, the restrictor plate can be installed beneath the vent elbow on the appliance air drop.

Please use the following steps to install the restrictor plate.

1. If attached, remove the vent pipe from the vent elbow on the appliance.
2. Remove the vent elbow from the appliance air drop by removing (4) 1/2" hex-head screws from vent elbow.
3. Align clearance holes on restrictor plate with screw holes on appliance air drop. The gasket on the restrictor plate should be positioned upward when the restrictor plate is placed onto appliance air drop.
4. Align clearance holes on vent elbow with clearance holes on restrictor plate and screw holes on appliance air drop.
5. Attach vent elbow and restrictor plate to appliance air drop. Fasten (4) 1/2" hex-head screws from Step 2 through clearance holes on vent elbow and restrictor plate and into screw holes on appliance air drop.

Attention: Apply furnace cement to the top, exterior edge on the cast iron flue outlet.

6. Installation of restrictor plate is completed.

**Attention:** See Page 33 to order restrictor plate, part number CI-235.

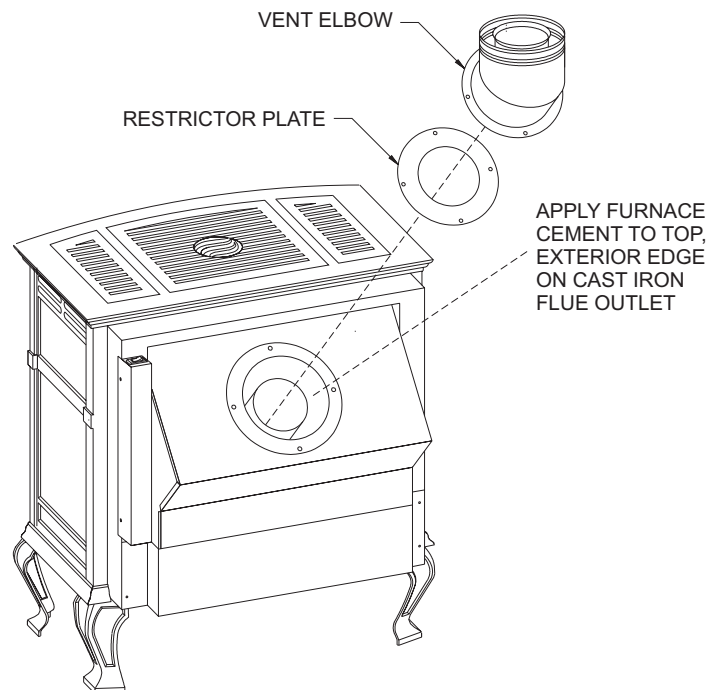


Figure 19

# TERMINATION CLEARANCES

Termination clearance for buildings with combustible and noncombustible exteriors.

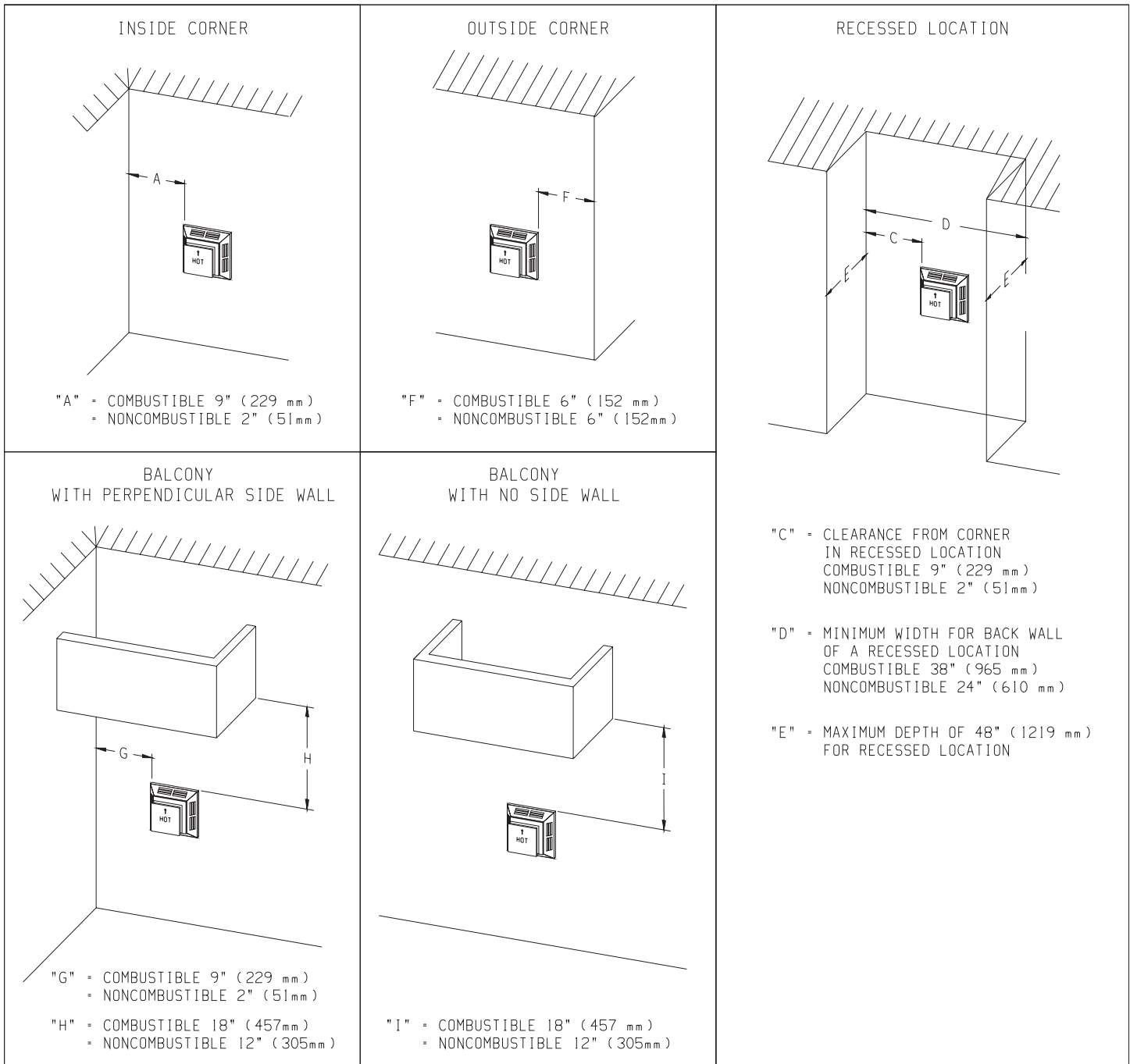


Figure 20

## Vertical Sidewall Installations

**Important!** Minimum clearance between vent pipes and combustible materials is one inch (1") (25mm) on, bottom and sides and (2") (51mm) on top.

**Important!** When vent termination exits through foundation less than 20" below siding outcrop, the vent pipe must flush up with the siding. SD985 termination cap must also be used.

## Information on Various Venting Routes and Components

**Important:** It is always best to locate the appliance in such a way that minimizes the number of offsets and horizontal vent length.

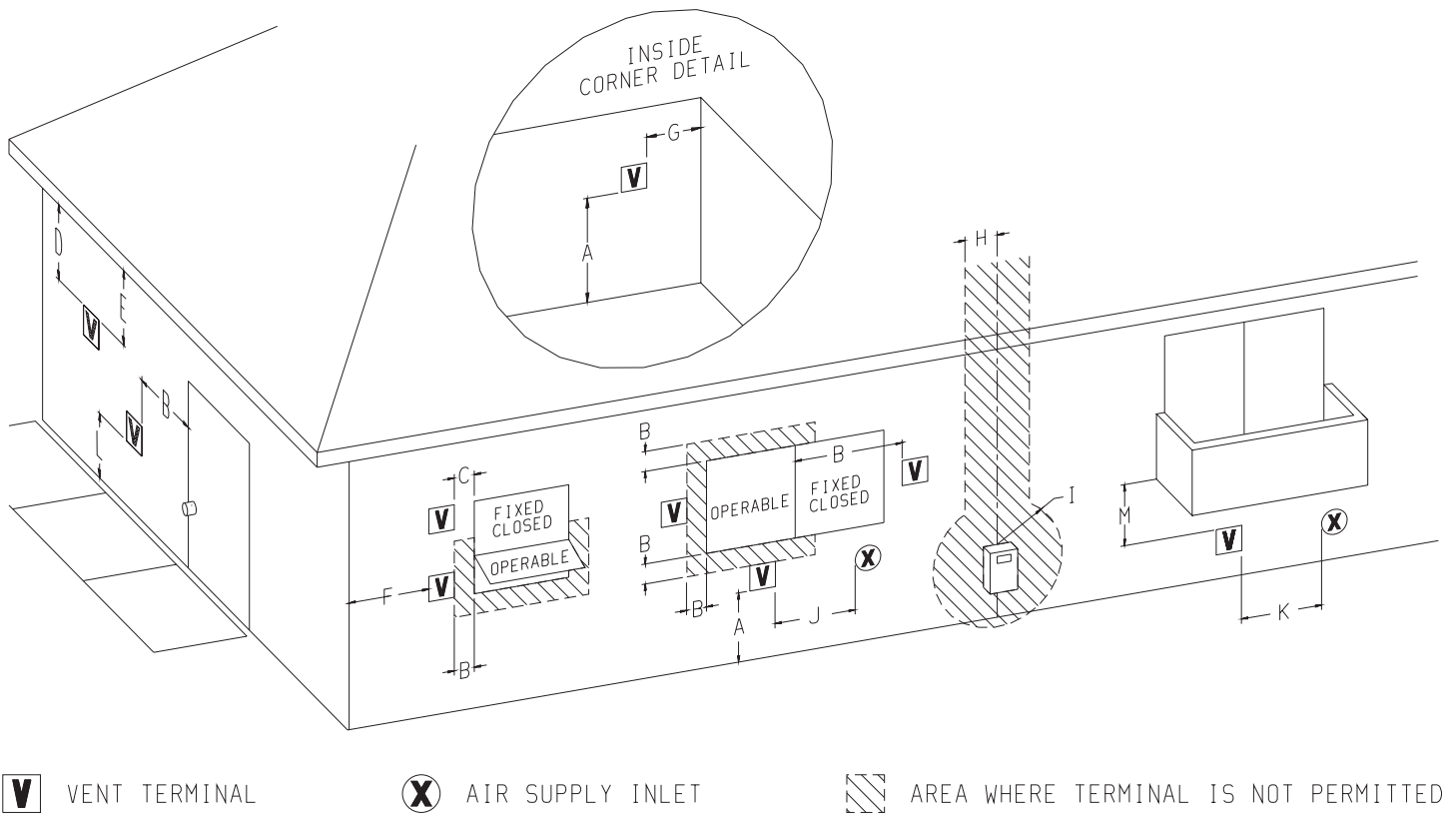
Since it is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.

The graph showing the relationship between vertical and horizontal side wall venting will help to determine the various vent lengths allowable.

The horizontal vent run refers to the total length of vent pipe from the vent elbow of the appliance to the face of the outer wall.



# VENT CLEARANCES



**Figure 21**

- V** VENT TERMINAL      **X** AIR SUPPLY INLET      [Hatched Box] AREA WHERE TERMINAL IS NOT PERMITTED
- A = \*Clearance above grade, veranda, porch, deck or balcony [\*12 inches (30cm) minimum]
- B = clearance to window or door that may be opened [\*9 inches (23cm) minimum for appliances < 50,000 Btuh (14.6kW)]
- C = clearance to permanently closed window [minimum 12 inches (30cm) recommended to prevent condensation on window]
- D = vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 24 inches (61cm) from the top of the terminal
- E = clearance to unventilated soffit [24 inches 61cm) minimum]
- F = clearance to outside corner [12 inches (30cm) minimum]
- G = clearance to inside corner [9 inches (22.5cm) minimum]
- H = \*not to be installed above a meter/regulator assembly within 3 feet (90cm) horizontally from the center-line of the regulator
- I = clearance to service regulator vent outlet [\*6 feet (1.8m) minimum]
- J = clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance [\*12 inches (30cm) minimum for appliances ≤ 100,000 Btuh (30 kW) 36 inches (90cm) minimum for appliances > 100,000 Btuh (30kW)]
- K = clearance to a mechanical air supply inlet [\* 6 feet (1.8m) minimum]
- L = †clearance above paved sidewalk or a paved driveway located on public property [\*7 feet (2.1m) minimum]
- M = clearance under veranda, porch, deck, or balcony [\*12 inches (30cm) minimum‡]
- † 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 of 2 sides beneath the floor\*
- \* as specified in CGA B149 Installations Codes or ANSI Z223.1. Note: Local Codes or Regulations may require different clearances.

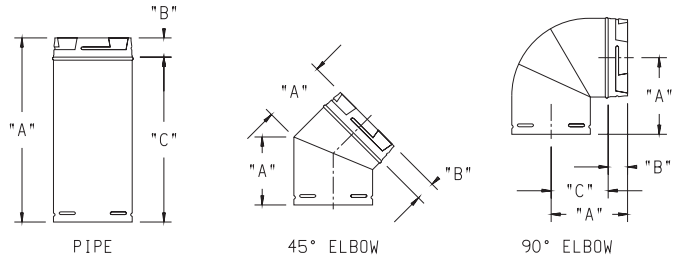
# VENT SYSTEM IDENTIFICATION

## Installing Vent Components (Figure 22 and Figure 23)

Begin the vent system installation by installing the first Simpson Duravent component, a straight pipe on the top of the appliance, or rotate the vent elbow to the horizontal position then add horizontal and vertical pipe lengths and then a horizontal or vertical termination kit. Elbows can be added where necessary. See Pages 15 through 17 for venting requirements.

Simpson Duravent vent system components lock into place by sliding the concentric pipe section with four (4) equally spaced interior beads onto the appliance collar or previously installed component end with four (4) equally spaced indented sections. When the internal beads of each starting 6-5/8 inch outer pipe line up, rotate pipe section clockwise 90° (approximately 3 inches). The vent pipe is now locked together.

Continue adding components per the pre-planned vent system configuration. Be certain that each succeeding vent component is securely fitted and locked into the preceding component in the vent system.



PART NAME	"A"	"B"	"C"
6" PIPE	6" (152mm)	1 1/2" (38mm)	4 1/2" (114mm)
9" PIPE	9" (229mm)	1 1/2" (38mm)	7 1/2" (191mm)
12" PIPE	12" (305mm)	1 1/2" (38mm)	10 1/2" (267mm)
24" PIPE	24" (610mm)	1 1/2" (38mm)	22 1/2" (572mm)
36" PIPE	36" (914mm)	1 1/2" (38mm)	34 1/2" (876mm)
48" PIPE	48" (122cm)	1 1/2" (38mm)	46 1/2" (118cm)
45° ELBOW	5 1/2" (140mm)	1 1/2" (38mm)	—
90° ELBOW	6 1/2" (165mm)	1 1/2" (38mm)	5" (127mm)

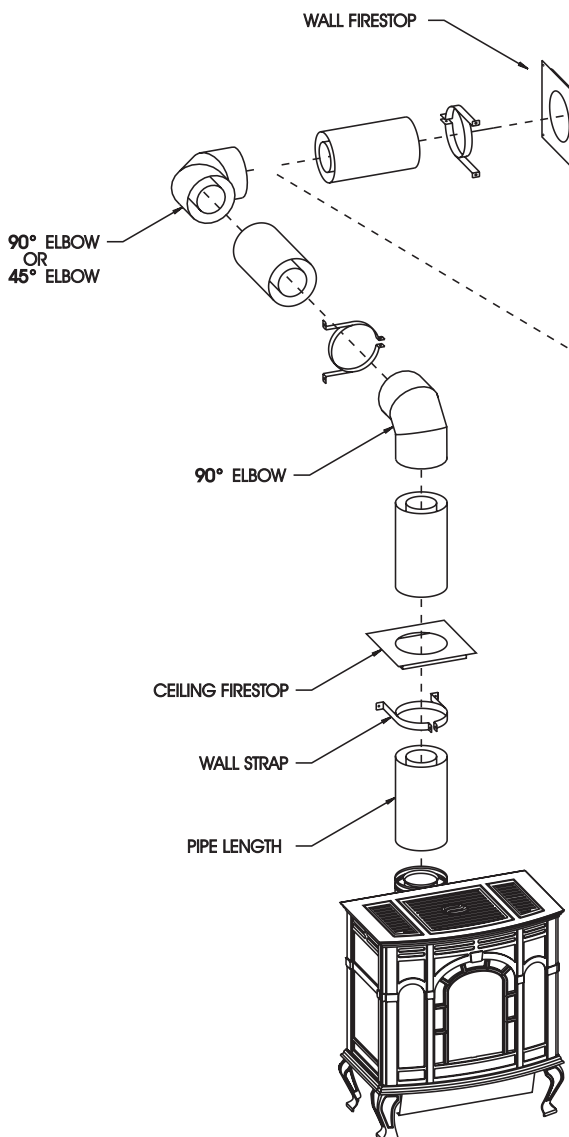
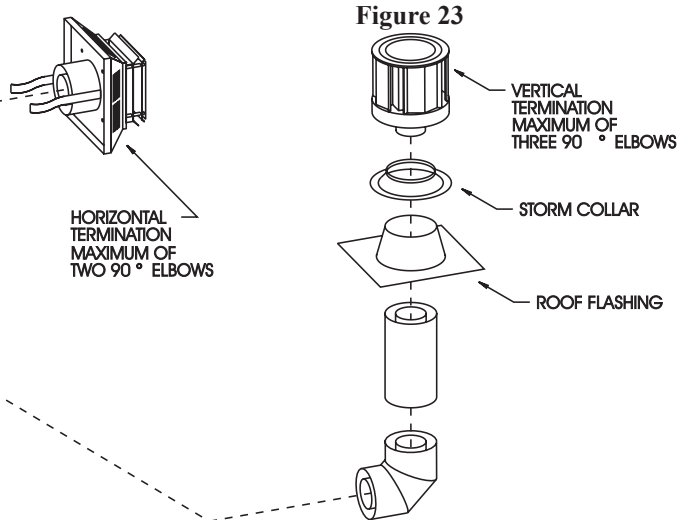


Figure 22

Figure 23



## Special Venting Components (Simpson Duravent)

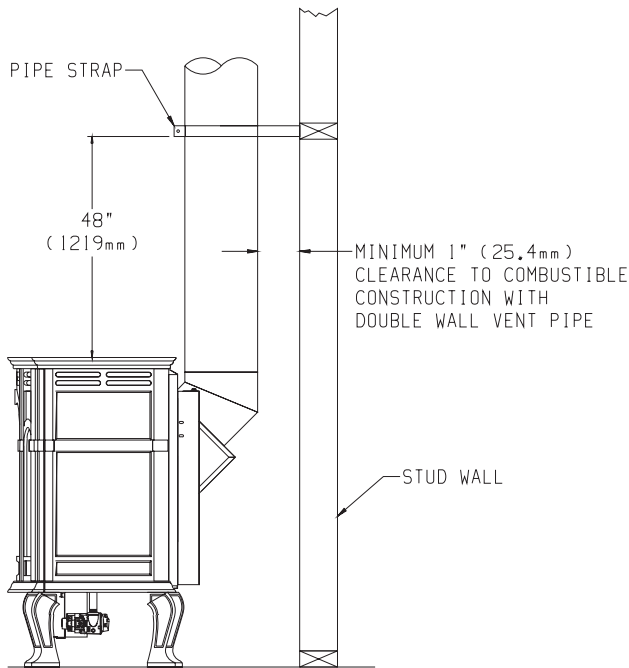
See Empire Comfort Systems, Inc. Retail Price List for Simpson Duravent part numbers and pricing.

# FRAMING AND FINISHING

## Installing Support Brackets (Figure 24)

A horizontal pipe support **MUST BE** used for each 3 feet of horizontal run. The pipe supports should be placed around 6-5/8 inch diameter pipe and nailed in place to framing members. There **MUST BE** a 2 inch clearance to combustibles above 6-5/8 inch diameter pipe and elbows and 1 inch clearance on both sides and bottom of 6-5/8 inch to combustibles on all horizontal pipe sections and elbows.

Vertical runs of this vent systems must be supported every 4 feet above the appliance flue outlet by wall brackets attached to the 6-5/8 inch vent pipe and secured with nails or screws to structural framing members.



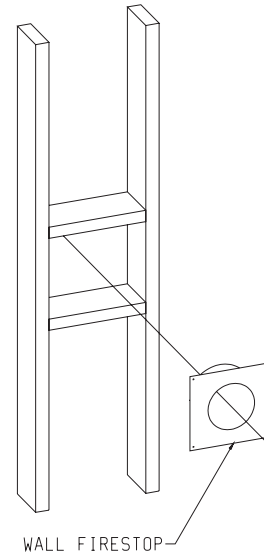
**Figure 24**

## Installing Firestops (Figures 25, 26, 27 and 28)

Firestops are required for safety whenever the vent system passes through an interior wall, an exterior wall, or a ceiling. These firestops act as a firebreak heat shield and as a means to insure that minimum clearances are maintained to the vent system.

Horizontal runs in the vent system which pass through either interior or exterior walls, require the use of wall firestops on both sides of the wall through which the vent passes.

Position the firestops on both sides of the 10 inch x 10 inch hole, previously cut. Secure with nails or screws. Continue the vent run through the firestops. (See Figure 25)



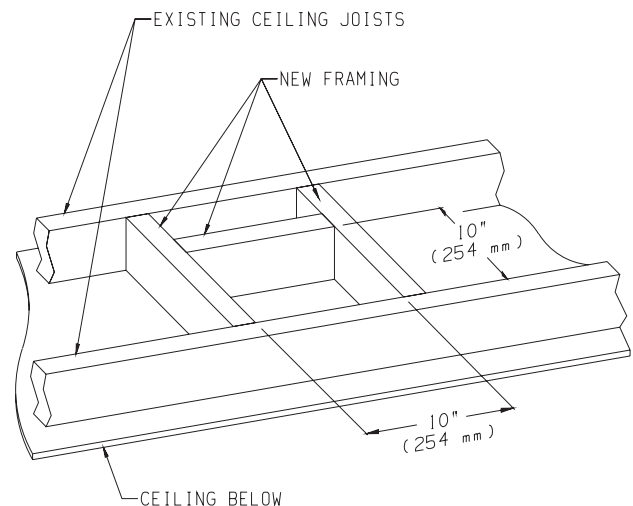
**Figure 25**

Vertical runs of this system which pass through ceilings require the use of **ONE (1)** ceiling firestop at the hole in each ceiling through which the vent passes.

Position a plumb bob directly over the center of the vertical vent component and mark the ceiling to establish the center point of the vent. Drill a hole or drive a nail through this center point and check the floor above for any obstructions such as wiring or plumbing runs. Reposition the appliance and vent system, if necessary, to accommodate ceiling joists and/or obstructions.

Cut a 10 inch x 10 inch hole through the ceiling, using the center point previously marked. Frame the hole with framing lumber the same size as the ceiling joists. (See Figure 26 ) If the area above the ceiling is **NOT** an attic, position and secure the ceiling firestop (SD-963) on the ceiling side of the previously cut and framed hole. (See Figure 27) If the area above the ceiling **IS** an attic, position and secure the firestop on top of the previously framed hole. (See Figure 28)

**NOTE:** Remove insulation from the framed area in the attic before installing the firestop and/or vent stop and/or vent pipes.



**Figure 26**

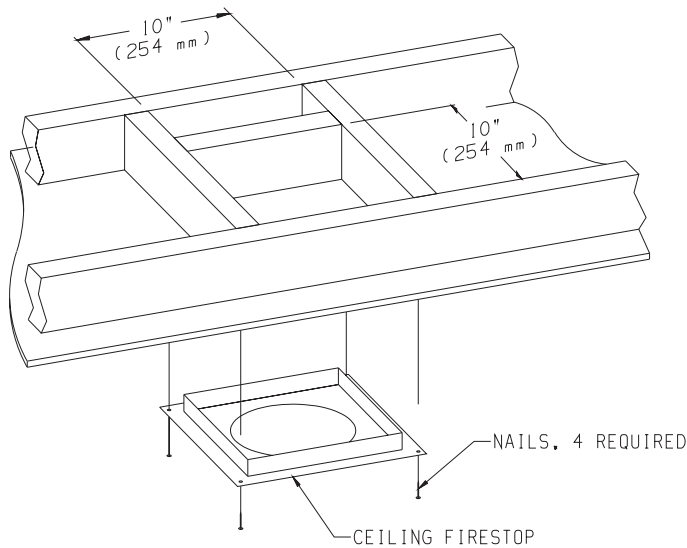


Figure 27

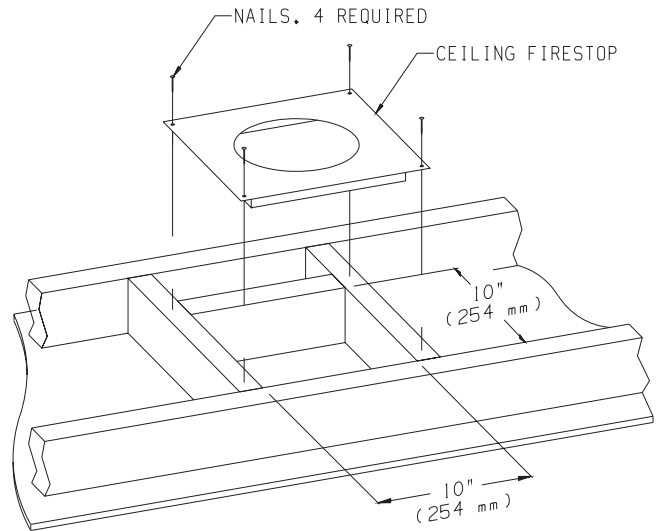


Figure 28

## HORIZONTAL TERMINATION

Attach and secure the termination to the last section of horizontal venting by rotating and interlocking the ends as previously described.

**NOTE:** Termination cap should pass through the wall firestop from the exterior of the building. Adjust the termination cap to its final exterior position on the building.

**WARNING: Termination cap must be positioned so that the arrow is pointing up.**

Using the termination cap in the center of the square hole, attach the termination cap with the four wood screws provided. Before attachment of the termination, run a bead of silicone sealant rated above 250°F on its outside edge too, so as to make a seal to that exterior wall.

**NOTE:** Wood screws can and should be replaced with appropriate fasteners for use on stucco, brick, concrete or other types of siding.

**CAUTION:** If exterior walls are finished with siding (vinyl, aluminum, etc.), it is necessary to install the vinyl siding shield (SD-950).

Vinyl siding shield (SD-950) will be installed between the vent termination and the exterior wall. (See Figure 29) This horizontal vent termination bolts onto the flat portion of the vinyl siding standoff, so an air space will exist between the wall and the termination cap.

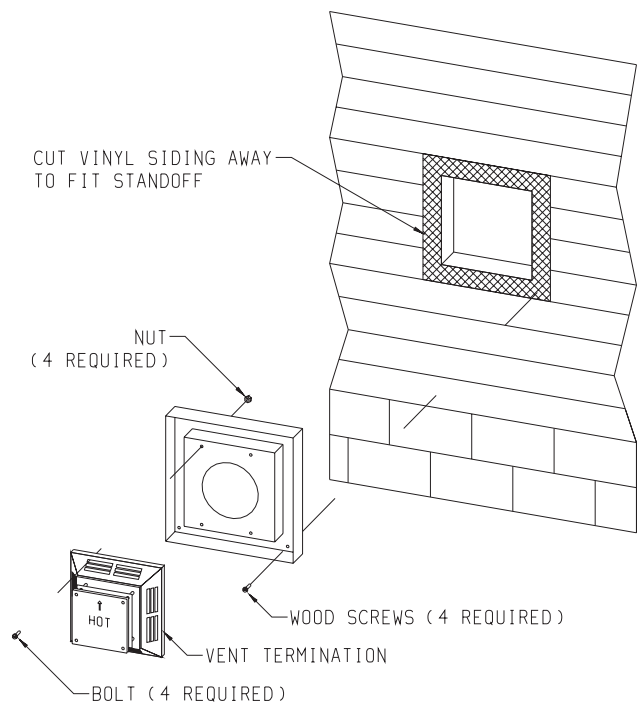


Figure 29

# VERTICAL TERMINATION

## Vertical Terminations (Figures 30, 31 and 32)

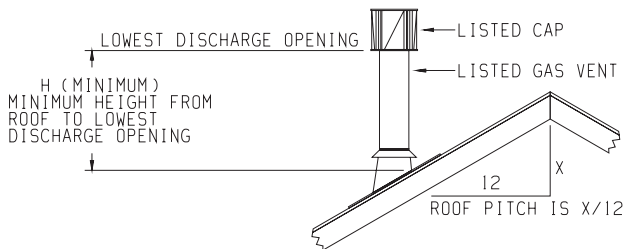
Locate and mark the center point of the venting pipe. Using a nail on the underside of the roof and drive this nail through this center point. Make the outline of the roof hole around this center point.

**NOTE:** Size of the roof hole dimensions depend on the pitch of the roof. There must be a 1 inch clearance (25mm) to the vertical pipe sections. This clearance is to all combustible material.

Cover the opening of the vent pipe and cut and frame the roof hole. Use framing lumber the same size as the roof rafters and install the frame securely. Flashing anchored to frame must withstand high winds. The storm collar is placed over this joint to make a watertight seal. Non-hardening sealant should be used to completely seal this flashing installation.

### Determining Minimum Vent Height Above the Roof.

**WARNING: Major U.S. building codes specify minimum chimney and/or vent height above the roof top. These minimum heights are necessary in the interest of safety. These specifications are summarized in Figure 30.**



ROOF PITCH	H (MINIMUM)	
	FEET	METER
FLAT TO 6/12	1.0	0.30
6/12 TO 7/12	1.25	0.38
OVER 7/12 TO 8/12	1.5	0.46
OVER 8/12 TO 9/12	2.0	0.61
OVER 9/12 TO 10/12	2.5	0.76
OVER 10/12 TO 11/12	3.25	0.99
OVER 11/12 TO 12/12	4.0	1.22
OVER 12/12 TO 14/12	5.0	1.52
OVER 14/12 TO 16/12	6.0	1.83
OVER 16/12 TO 18/12	7.0	2.13
OVER 18/12 TO 20/12	7.5	2.27
OVER 20/12 TO 21/12	8.0	2.44

Figure 30

Note that for steep roof pitches, the vent height must be increased. In high wind conditions, nearby trees, adjoining roof lines, steep pitched roofs, and other similar factors can result in poor draft, or down-drafting. In these cases, increasing the vent height may solve this problem.

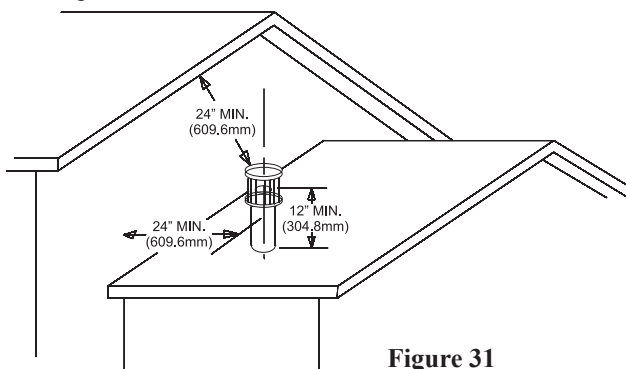


Figure 31

When terminating the vent cap near an exterior wall or overhang, maintain minimum clearances as shown in Figure 31.

### General Maintenance

Conduct an inspection of the venting system semi-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 immediately be replaced.
2. Remove the cap and shine a flashlight down the vent. Remove any bird nests or other foreign material.
3. Check for evidence of excessive condensate, such as water droplets forming in the inner liner and subsequently dripping out at joints. Continue condensate can cause corrosion of caps, pipe and fittings. It may be caused by having excessive lateral runs, too many elbows 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 and, consequently, loosened. Also, check mechanical supports, such as wall straps or plumbers' tape for rigidity.

Venting terminal shall not be recessed into a wall or siding.

A removable panel or other means must be provided in the enclosure for visual inspection of the flue connection.

### Installing the Vent System in a Chase

A chase is a vertical box like structure built to enclose the gas appliance and/or it's vent system. Vertical vent runs on the outside of a building may be, but are not required to be installed inside a chase.

When installing a direct vent gas appliance in a chase, it is always good building practice to insulate the chase as you would the outside wall of your home.

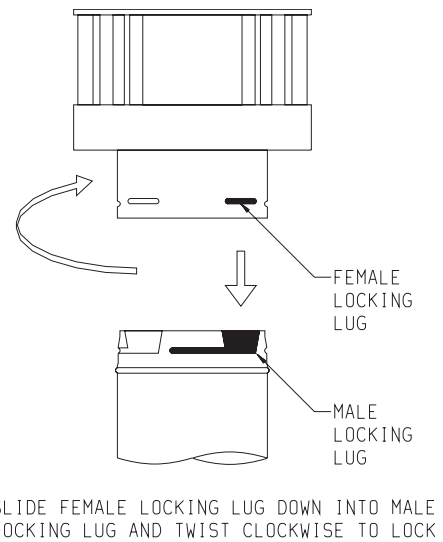


Figure 32

**CAUTION: Treatment of firestop spacers and construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Therefore, your local building codes must be checked to determine the requirements for these steps.**



**NOTE:** When installing this vent system in a chase, it is always good building practice to insulate the chase as you would the outside walls of your home. This is especially important for cold climate installations. Upon completion of building your chase framing, install the vent system by following the instructions in this manual. Remember to build the chase large enough so that minimum clearance of combustible materials (including insulation) to the vent system are maintained.

### Vertical Through the Roof Applications

Your Gas Fireplace has been approved for

- a) Vertical installations up to 25 feet in height.
- b) Two sets of 45 degree elbow offsets within these vertical installations. From 0 to a maximum of 8 feet a vent pipe can be used between elbows.
- c) Wall straps must be used to support offset pipe every 4 feet.

This applications will require that you first determine the roof pitch and use the appropriate venting components.

### Reassembly and Resealing Vent-Air Intake System

Attach vent elbow to appliance air drop with (4) 1/2" hex-head screws in either the vertical or horizontal position, replace horizontal and vertical pipe lengths, elbows and horizontal or vertical termination kit.

All vent system components lock into place by sliding the concentric pipe section with four (4) equally spaced interior beads onto the appliance collar or previously installed component end with four (4) equally spaced indented sections. When the internal beads of each starting 6-5/8 inch outer pipe line up, rotate pipe section clockwise 90° (approximately 3 inches). The vent pipe is now locked together.

Continue replacing components per the vent system configuration. Be certain that each succeeding vent component is securely fitted and locked into the preceding component in the vent system.

### Installing Support Brackets

A horizontal pipe support **MUST BE** used for each 3 feet of horizontal run. The pipe supports should be placed around 6-5/8 inch diameter pipe and nailed in place to framing members. There **MUST BE** a 2 inch clearance to combustibles above 6-5/8 inch diameter pipe and elbows and 1 inch clearance on both sides and bottom of 6-5/8 inch to combustibles on all horizontal pipe sections and elbows.

Vertical runs of this vent systems must be supported every 4 feet above the appliance flue outlet by wall brackets attached to the 6- 5/8 inch vent pipe and secured with nails or screws to structural framing members.

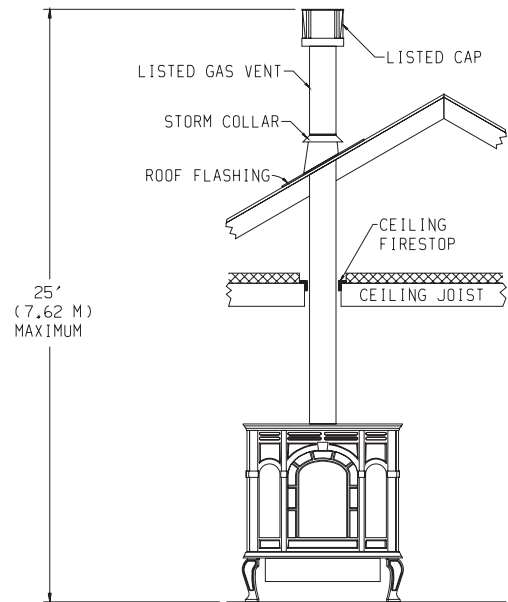


Figure 33

## LOG PLACEMENT

1. Lower valve cover on firebox.
2. Release two door latches at bottom of firebox.
3. Grasp bottom of glass frame, lift glass frame upward in order to release glass frame from lip on top of firebox.
4. Remove logs from interior of firebox. Remove all protective packaging from logs and interior of firebox.
5. Place front log onto two (2) front pins on inner bottom.
6. Place rear log onto two (2) pins on rear log support.
7. Place top log onto two (2) pins on rear log.
8. Align and place top of glass frame over lip on top of firebox. Grasp bottom of glass frame, push inward and place glass frame onto firebox.
9. Attach two door latches to bottom of firebox.
10. Log placement is completed.

Refer to Figure 34 for the following warning.

**Warning:** Failure to position the parts in accordance with this diagram or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.

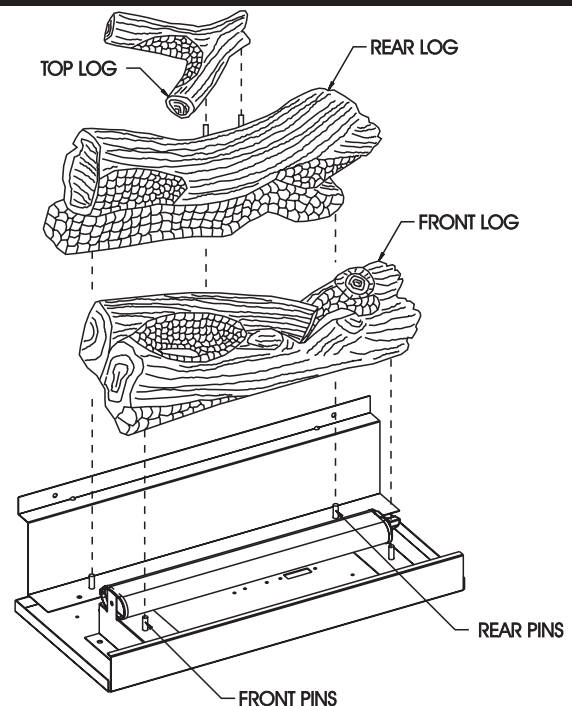


Figure 34

# OPERATING GUIDELINES

Before operating this heater, please review the safety warnings pages at the beginning of this manual and those precautions and warnings listed below.

1. Know what type of ignition system this model has (standing pilot) and follow the applicable SAFETY and LIGHTING instructions.
2. Check to ensure there are no gas leaks. If you are unsure, turn gas off to the heater and call a service person or your gas utility.

**CAUTION: Clothing or other flammable material should not be placed on or near the appliance.**

**WARNING: Children and adults should be alerted to the hazard of high surface temperature 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.**

3. Tampering is DANGEROUS and voids all warranties. Any component that is found to be faulty, must be replaced with an approved component.

## Initial Lighting (Figure 34)

Upon completing the gas line or turning the gas valve "ON" after it has been in the "OFF" position, a small amount of air will be in the lines. When first lighting the appliance, it will take a few minutes for the lines to purge themselves of this air. Once the purging is complete, the appliance will light and operate satisfactorily.

Subsequent lightings of the appliance will not require such purging if the gas valve is not turned to "OFF."

## Standing Pilot Operation

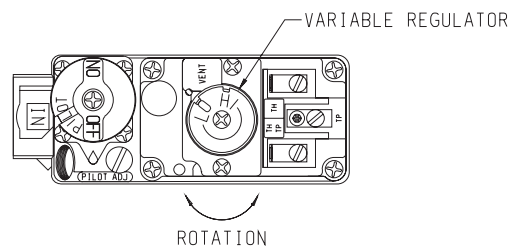
1. Follow the SAFETY and LIGHTING INSTRUCTIONS for standing pilot controls found in this manual and on labels found attached to the appliance.

**CAUTION: During the initial purging and subsequent lightings, never allow the gas valve control knob to remain depressed in the "pilot" position without pushing the piezo ignitor button at least once every second.**

2. During the heating season, leave the control valve knob in the "ON" position. This will allow the pilot flame to remain lit. Turn the burner flame on or off with the appliance ON/OFF rocker switch, wall switch, remote control kits or 750 millivolt wall thermostat.

**NOTE:** The gas control valve allows you to increase or decrease the height of the main burner flame. The control valve has a pressure regulator with a knob as shown in Figure 35. Rotate the knob clockwise to "HI" to increase the flame height and counterclockwise to "LO" to decrease the flame height.

3. When the heating season is over, turn the on/off switch to "OFF" and the control valve to "OFF". The system, including the pilot light, will be shut down.



**Figure 35**

## Maximum and Minimum Input

The gas valve on the appliance allows the input to adjust between a maximum input of 30,000 Btuh to a minimum input of 21,000 Btuh. Consumer be advised, the maximum input provides the greatest amount of yellow flame and ember flow on the log set. The minimum input substantially decreases the yellow flame and ember glow on the log set.


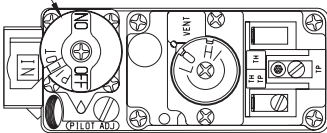


# LIGHTING INSTRUCTIONS

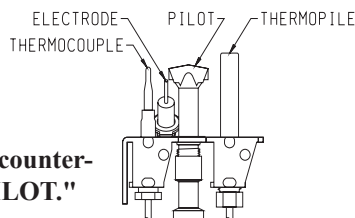
## FOR YOUR SAFETY READ BEFORE LIGHTING

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


- A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS**
- Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- C. 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, don't try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.
- D. 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.

## LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above.
  2. Set the thermostat to lowest setting.
  3. Turn off all electric power to the appliance (if applicable).
  4. Lower valve cover.
  5. Push in gas control knob slightly and turn clockwise  to "OFF".
- GAS CONTROL KNOB SHOWN IN "OFF" POSITION.
- 
6. Wait ten (10) 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 don't smell gas, go to the next step.
  7. Find pilot - The pilot is attached to the main burner behind the front log.
  8. Turn knob on gas control counterclockwise  to "PILOT."
  9. Push in gas control knob all the way and hold in. Repeatedly push the piezo ignitor button until pilot is lit. 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 9.
- If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
  - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
10. Turn gas control knob counterclockwise  to "ON".
  11. Raise valve cover.
  12. Turn on all electric power to the appliance (if applicable).
  13. Set thermostat to desired setting.



## TO TURN OFF GAS TO APPLIANCE

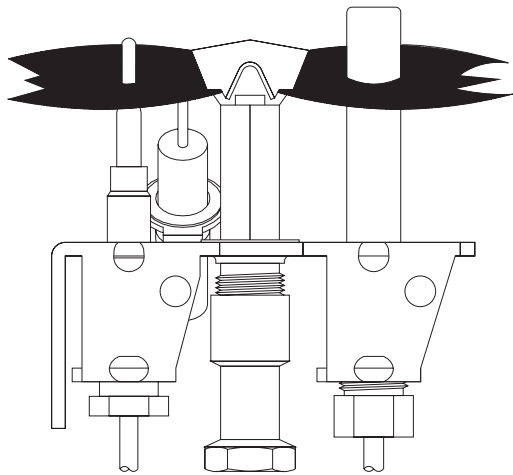
1. Set the thermostat to lowest setting.
2. Turn off all electric power to appliance if service is to be performed (if applicable).
3. Lower valve cover.
4. Push in gas control knob slightly and turn clockwise  to "OFF". Do not force.
5. Raise valve cover.

## PILOT FLAME CHARACTERISTICS

Figure 36 shows a correct pilot flame pattern. The correct flame will be blue and will extend beyond the thermocouple and thermopile. The flame will surround the thermocouple and thermopile just below the tip. A slight yellow flame may occur where the pilot flame and main burner flame meet. Figure 37 shows an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple or thermopile. This will cause the thermocouple or thermopile to cool. When the thermocouple cools, the heater will shut down.

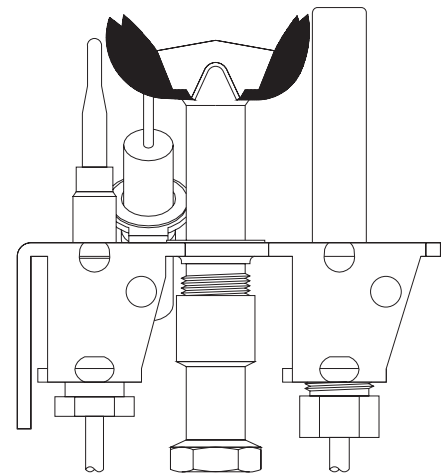
If pilot flame pattern is incorrect, as shown in Figure 37

- See Troubleshooting, page 32.



**Correct Pilot Flame Pattern**

**Figure 36**



**Incorrect Pilot Flame Pattern**

**Figure 37**

## MAIN BURNER FLAME CHARACTERISTICS

Figure 38 shows a correct main burner flame pattern. Figure 39 shows an incorrect main burner flame pattern.

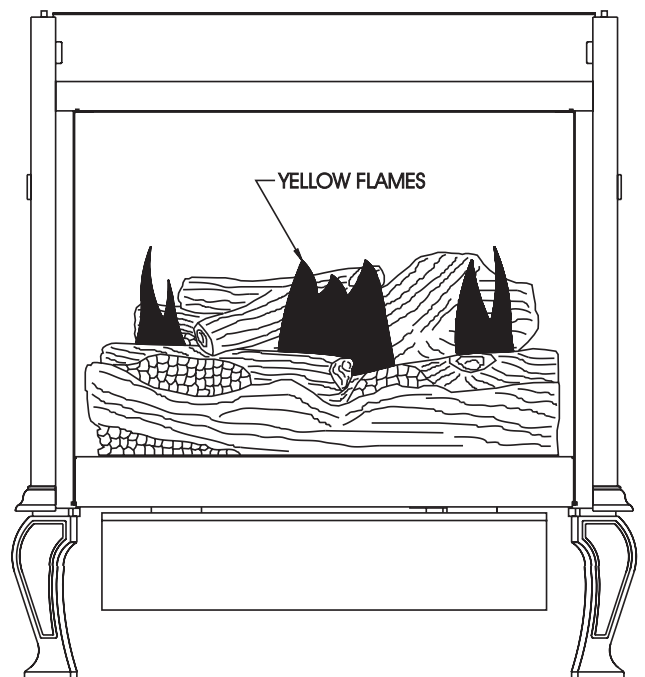
If main burner flame pattern is incorrect, as shown in Figure 39

- See Troubleshooting, page 32.

### **Cleaning and Maintenance / Main Burner**

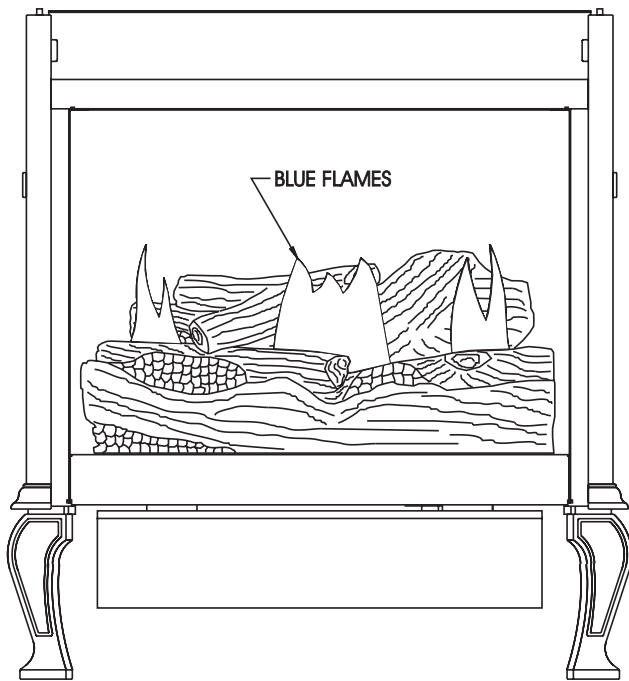
**Warning:** Turn off heater and let cool before cleaning.

After use, cleaning of the main burner may be required for the proper flame. The main burner may be cleaned by applying air pressure to the ports on the main burner.



**Correct Main Burner Flame**

**Figure 38**



**Incorrect Main Burner Flame**

**Figure 39**

### **Cleaning the Log Set and Firebox**

During the annual inspection and maintenance appointment, the service person should clean dust, lint, and any light accumulation from the logs and the firebox area. An extra-soft brush should be used on the logs as they are extremely fragile; a vacuum cleaner may be used on the firebox. If at any time the logs cannot be removed or installed without forcing, the cause must be found. The logs must never be forced.

**CAUTION:** The ceramic logs are durable when handled and installed properly. However, they are delicate and may be damaged easily if not handled with care. Handling damage to the ceramic logs is not covered by warranty.

**DO NOT HANDLE LOGS WHILE THEY ARE HOT. ALLOW PLENTY OF TIME FOR THE APPLIANCE TO COOL COMPLETELY BEFORE HANDLING.**

#### **PLEASE NOTE**

**It is normal for appliances fabricated of steel to give off some expansion and/or contraction noised during the start up or cool down cycle. Similar noises are found with your furnace heat exchanger or car engine.**

## **WIRING**

### **CIDV-30 ON/OFF/REMOTE Switch**

CIDV-30 is equipped with an ON/OFF/REMOTE switch which is located on the wire channel. A wire harness is attached to the ON/OFF/REMOTE switch. The red, black and green (wires) female push-ons attach to the ON/OFF/REMOTE switch. At the opposite end of the wire harness, the black and green (wires) female push-ons attach to the gas valve. An additional green wire and the red wire, which are stripped and bare, will attach to the 750 millivolt wall thermostat accessory, or, to one of the other accessories that can be purchased for use with your log set.

#### **Operation of ON/OFF/REMOTE Switch with no Accessories**

To ignite main burner, turn the control knob on the gas valve from the PILOT position to the ON position. Turn the ON/OFF/REMOTE switch from the OFF position to the ON position. The additional green wire and red wire, which are stripped and bare are not used.

#### **Operation of ON/OFF/REMOTE Switch with Accessories**

##### **750 Millivolt Wall Thermostat**

Connect the green and red, stripped and bare, wires on the ON/OFF/REMOTE switch wire harness to the wall thermostat. Turn the ON/OFF/REMOTE switch on the wire channel to the REMOTE position. Set the wall thermostat to the desired temperature.

It is important to use wire of a gauge proper for the length of the wire:

#### **RECOMMENDED WIRE GAUGES**

<b>Maximum Length</b>	<b>Wire Gauge</b>
1' to 10'	18
10' to 25'	16
25' to 35'	14

### **Wall Switch, FWS-1**

Connect the green and red, stripped and bare, wires on the ON/OFF/REMOTE switch wire harness to the wall switch. Turn the ON/OFF/REMOTE switch on the wire channel to the REMOTE position. Pivot the rocker switch on the FWS-1 to the ON position.

### **Battery Operated Remote Control, FRBC-1 and FRBTC-1**

Connect the green and red, stripped and bare, wires on the ON/OFF/REMOTE switch wire harness to the remote receiver that is a component in the FRBC-1 and FRBTC-1. Turn the ON/OFF/REMOTE switch on the wire channel to the REMOTE position. Follow instructions in the FRBC-1 and FRBTC-1 to complete installation.

**Note:** If batteries fail in FRBC-1 or FRBTC-1, and immediate heat is desired, turn the ON/OFF/REMOTE switch on wire channel from the REMOTE position to the ON position.

### **Electric (120 volt) Operated Remote Control, FREC-1**

Connect the green and red, stripped and bare, wires on the ON/OFF/REMOTE switch wire harness to the wires on remote receiver that is a component in the FREC-1. Turn the ON/OFF/REMOTE switch on the wire channel to the REMOTE position. Follow instructions in the FREC-1 to complete installation.

**Note:** If electric (120 volt) fails in FREC-1, and immediate heat is desired, turn the ON/OFF/REMOTE switch on wire channel from the REMOTE position to the ON position.

### **Wiring of ON/OFF/REMOTE Switch with 750 Millivolt Wall Thermostat Accessory and Another Accessory**

Connect the green and red, stripped and bare, wires on the ON/OFF/REMOTE switch wire harness to the 750 millivolt wall thermostat AND to the remote receiver that is a component in the FRBC-1, FREC-1 OR to the FWS-1, wall switch.



# WIRING (continued)

1. Connect (1) wire from the 750 millivolt wall thermostat and (1) wire from appropriate accessory to the GREEN, stripped and bare wire from the ON/OFF/REMOTE wire harness.
2. Connect (1) wire from the 750 millivolt wall thermostat and (1) wire from appropriate accessory to the RED, stripped and bare wire from the ON/OFF/REMOTE wire harness.

**Note:** When the appliance is in the MANUAL mode and the batteries fail in the FRBC-1 or if the electric (120 volt) fails in the FREC-1, and immediate heat is desired, turn the ON/OFF/REMOTE switch on wire channel from the REMOTE position to the ON position.

## Manual Operation

1. Turn ON/OFF/REMOTE switch on wire channel to REMOTE position.
2. Turn wall thermostat OFF.
3. Turn accessory, FRBC-1, FREC-1 or FWS-1, ON. Appliance is now in the manual mode. You must turn the appliance ON or OFF with appropriate accessory.

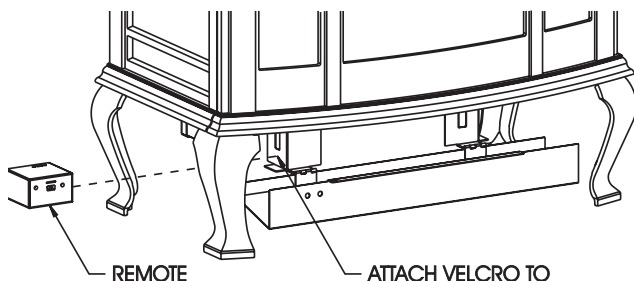
## Wall Thermostat Operation

1. Turn the ON/OFF/REMOTE switch on wire channel to REMOTE position.
2. Turn accessory, FRBC-1, FREC-1 or FWS-1, OFF.
3. Turn wall thermostat ON and set appropriate temperature. Wall thermostat will cycle the appliance ON and OFF.

## Installation of Remote Receiver (Figure 40)

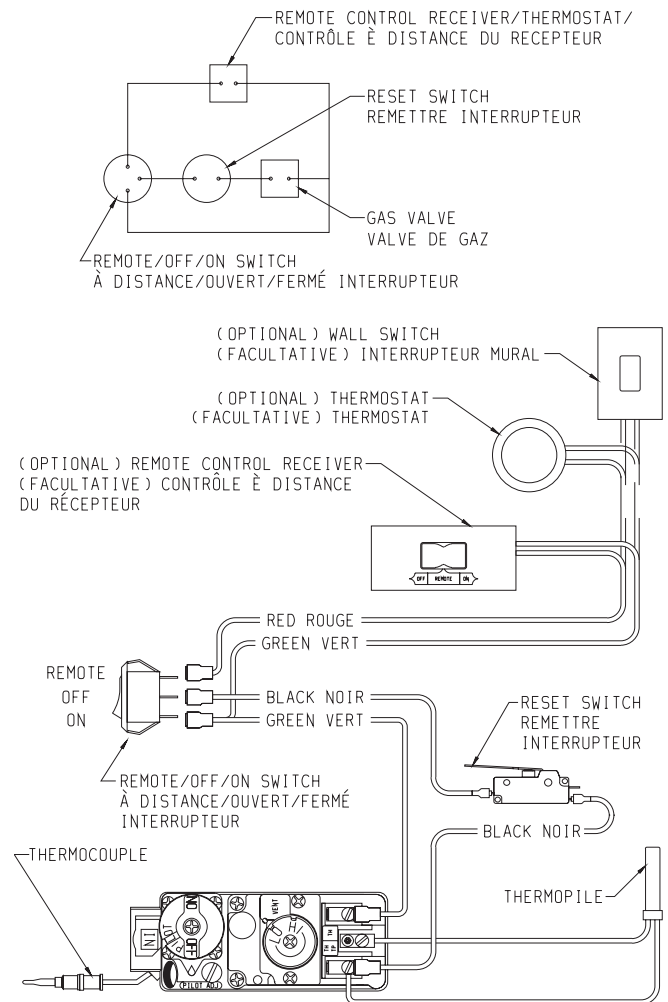
1. Attach, from left to right, the slide-on cover plate onto the remote receiver. **ON** will be to the top and **OFF** will be to the bottom on the slide-on cover plate.
2. Push the receiver slide button onto the receiver slide switch. Reverse installation of the slide button if it is off center.
3. Attach velcro loop on the left side of the valve cover support.
4. Attach velcro hook onto remote receiver. The word **TOP** on the remote receiver should be to the top when installed onto valve cover support.
5. Attach velcro hook on remote receiver onto velcro loop on valve cover support.

Refer to remote control installation and operating instructions for more details on remote control.



**Figure 40**

## Wiring Diagram (Figure 41)



IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THIS UNIT MUST BE REPLACED, IT MUST BE REPLACED WITH NO. 18, 150°C WIRE OR ITS EQUIVALENT.

**Figure 41**

# MAINTENANCE

A qualified service person recommended by your Empire dealer should conduct an annual inspection and maintenance of the appliance, its venting, and the installation to keep it running safely and efficiently. The following procedures should be performed only by a qualified service person. The gas supply should be turned off whenever a maintenance procedure is performed.

If the glass front, relief doors, or front access door are removed for servicing, they must be replaced prior to operating the appliance.

## Glass Cleaning

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-abrasive household cleaner and warm water (we recommend gas fireplace glass cleaner). We do not recommend using packaged spray type household glass cleaner. After that the glass should be cleaned two or three times during each heating season depending on the circumstances present.

## General Glass Information

Only glass approved for use in Empire Comfort Systems, Inc. fireplaces may be used for replacement. The glass replacement should be done by a licensed or qualified service person.

## WARNING:

1. The use of substitute glass will void all product warranties.
2. Care must be taken to avoid breakage of the glass.
3. Under no circumstances should this appliance be operated without the glass front or with a broken glass front. Replacement of the glass (with gasket) as supplied by the manufacturer should be done by a qualified service person.
4. Do not abuse the glass by striking or hitting the glass.

**WARNING:** Do not use abrasive cleaners on glass. Do not attempt to clean glass when glass is hot.

Failure to follow these warnings could cause a serious safety issue to the operator, such as fire or other serious conditions.

## Glass Assembly Replacement

1. Remove casting top from casting.
2. Remove casting front from casting.
3. Lower valve cover on firebox.
4. Release two door latches at bottom of firebox.
5. Grasp bottom of glass frame, lift glass frame upward in order to release glass frame from lip on top of firebox.
6. Place glass frame assembly on a non-abrasive surface. The exterior of the glass frame assembly should be facing the non-abrasive surface.
7. Insert a putty knife between glass and bottom corners on

frame. Carefully separate glass from frame.

8. Use putty knife to remove silicone and gasket material from frame. Surface of frame must be clean and dry.
9. At each corner of frame apply (2) three inch beads of high temperate (orange) silicone.
10. With thin gasket on glass facing silicone on frame, insert glass into frame. Carefully press the glass onto frame in order to have contact between glass and silicone.
11. Allow silicone to set-up for an adequate time
12. Align and place top of glass frame over lip on top of firebox. Grasp bottom of glass frame, push inward and place glass frame onto firebox.
13. Attach two door latches to bottom of firebox.
14. Replace casting front onto casting.
15. Replace casting top onto casting.
16. Replacement of glass assembly is completed.

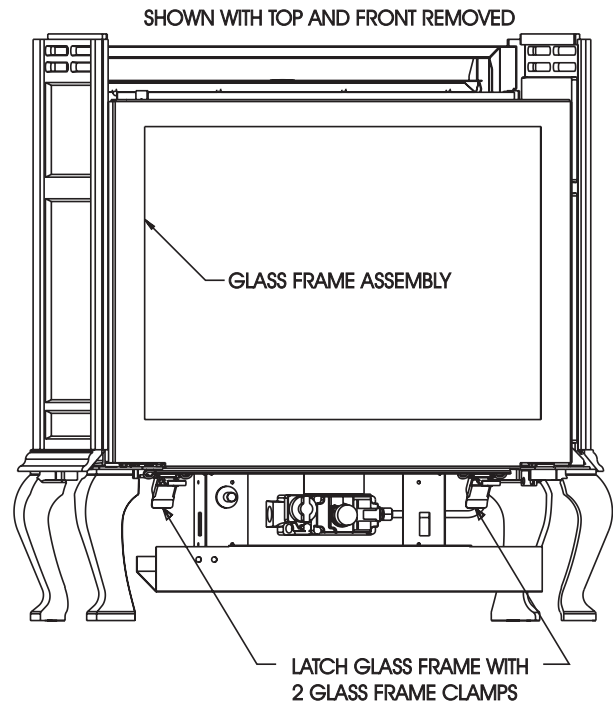


Figure 42

## MAINTENANCE (continued)

**IMPORTANT:** Turn off gas before servicing appliance. It is recommended that a competent service technician perform these check-ups at the beginning of each heating season.

- **DO NOT put anything around the heater that will obstruct the flow of combustion and ventilation air. See clearances.**
- **DO examine venting system periodically. Clean and replace damaged parts. Examinations should be made at the start of the heating season and also in mid heating season under average conditions.**
- **Clean Burner and Control Compartment**  
Keep the control compartment, logs, and burner areas surrounding the logs clean by vacuuming or brushing at least twice a year.

### Cleaning Procedure

1. Let the unit cool if it has been operating.
2. Shut off gas supply.
3. Lower valve cover on firebox.
4. Release two door latches at bottom of firebox.
5. Grasp bottom of glass frame, lift glass frame upward in order to release glass frame from lip on top of firebox.
6. Vacuum burner compartment especially around orifice/primary air openings.
7. Align and place top of glass frame over lip on top of firebox. Grasp bottom of glass frame, push inward and place glass frame onto firebox.
8. Attach two door latches to bottom of firebox.
9. Ignite pilot. (See **Lighting Instructions**, Page 26)
10. Operate the main burner and visually check to make sure the flame pattern appears similar to the pictorial illustration shown for **Main Burner Flame Characteristics**, Figure 38. If it appears abnormal call a service person.

# TROUBLESHOOTING

With proper installation and maintenance, your new Direct Vent Fireplace should provide years of trouble-free service. If you do experience a problem, refer to the Trouble Shooting Guide below. This guide will assist a qualified service person in the diagnosis of problems and the corrective action to be taken.

## 1. Spark ignitor will not light pilot after repeated depressing of piezo ignitor button.

- a. Defective ignitor (no spark at electrode) - Check for spark at electrode and pilot; if no spark and electrode wire is properly connected, replace ignitor.
- b. No gas or low gas pressure.
  - Check remote shut off valves from fireplace. Usually there is a valve near the main. There can be more than one (1) valve between the fireplace and main.
  - Low pressure can be caused by a variety of situations such as a bent line, too narrow diameter of pipe, or low line pressure. Consult with plumber of gas supplier.
- c. No LP in tank.
  - Check LP (propane) tank. Refill tank.

## 2. Pilot will not stay lit after carefully following lighting instructions.

- a. Defective thermocouple.
  - Check that pilot flame impinges on thermocouple. Clean and/or adjust pilot for maximum flame impingement.
  - Ensure that the thermocouple connection at the gas valve is fully inserted and tight (hand tight plus 1/4 turn) faulty thermopile if reading is below specified minimum.
  - Disconnect the thermocouple from the valve, place one millivolt meter lead wire on the tip of the thermocouple and the other meter lead wire on the thermocouple copper lead. Start the pilot and hold the valve knob in. If the millivolt reading is less than 15 mv, replace the thermocouple.
- b. Defective valve.
  - If thermocouple is producing more than 15 millivolts, replace faulty valve

## 3. Pilot burning, no gas to burner, valve knob "ON", on/off switch "ON."

- a. "On/Off" switch, wall switch, or wires defective.
  - Check "on/off" switch and wires for proper connections. Place jumper wires across terminal at switch - if burner comes on, replace defective switch. If OK, place jumper wires across switch wires at gas valve-if burner comes on, wires are faulty or connections are bad.
- b. Thermopile may not be generating sufficient millivoltage.
  - If the pilot flame is not close enough physically to the thermopile, adjust the pilot flame.
  - Be sure the wire connections from the thermopile at the gas valve terminals are tight and the thermopile is fully inserted into the pilot bracket.
  - Check the thermopile with a millivolt meter. Take the reading at TH-TP & TP terminals of the gas valve. The meter should read 325 millivolts minimum, while holding the valve knob depressed th the pilot position, with the pilot lit, and the ON/OFF switch in the OFF position. Replace the faulty thermopile if the reading is below the specified minimum.

-With the pilot in the ON position, disconnect the thermopile leads from the valve. Take a reading at the thermopile leads. The reading should be 325 millivolts minimum. Replace the thermopile if the reading is below the minimum.

- c. Defective valve.
  - Turn valve knob to "ON." Place ON/OFF switch to "ON." Check with millivolt meter at thermopile terminals. Millivolt meter should read greater than 100 M.V. If the reading is okay and the burner does not come, replace the gas valve.
- d. Plugged main burner orifice.
  - Check main burner orifice for blockage, clean main burner orifice.

## 4. Frequent pilot outage problem.

- a. Pilot flame may be too high or too low, or blowing (high), causing pilot safety to drop out.
  - Clean and adjust flame for maximum flame impingement on the thermocouple. Follow lighting instructions carefully.

## 5. The pilot and main burner extinguish while in operation.

- a. No LP (Propane) in tank.
  - Check LP (Propane) tank. Refill fuel tank.
- b. Inner vent pipe leaking exhaust gases back into system.
  - Check for leaks.
- c. Glass too loose, gasket leaks in corners after usage.
  - Be certain glass assembly is installed correctly and tighten corner.
- d. Horizontal vent improperly pitched.
  - The horizontal vent cap should slope down only enough to prevent any water from entering the unit. The maximum downwards slope is 1/4 inch.
- e. Bad thermopile or thermocouple.
  - Replace if necessary.
- f. Improper vent cap installation.
  - Check for proper installation and freedom from debris or blockage.

## 6. Glass soots.

- a. Flame impingement on logs.
  - Adjust the log set so that the flame does not excessively impinge on it.

## 7. Flame lifts off main burner.

- a. Insufficient oxygen being supplied.
  - Check to make sure vent cap is installed properly and free of debris. Make sure that vent system joints are tight and have no leaks.
  - Check to make sure that no material has been placed at the burner base.
  - Be sure glass is tightened properly on unit, particularly on top corners.

# HOW TO ORDER REPAIR PARTS

Parts can be ordered **only** through your **service person or dealer**. For best results, the **service person or dealer** should order parts through the distributor. Parts can be shipped directly to the **service person/dealer**.

All parts listed in the Parts List have a Part Number. When ordering parts, first obtain the Model Number from the name plate on your equipment. Then determine the Part Number (**not** the Index Number) and the Description of each part from the following appropriate illustration and list. Be sure to give all this information.

Heater Model Number \_\_\_\_\_ Heater Serial Number \_\_\_\_\_  
 Part Number \_\_\_\_\_ Part Description \_\_\_\_\_  
 Type of Gas (Propane or Natural) \_\_\_\_\_

Do not order bolts, screws, washers or nuts. They are standard hardware items and can be purchased at any local hardware store.

Shipments contingent upon strikes, fires and all causes beyond our control.

**Empire Comfort Systems, Inc.** Nine Eighteen Freeburg Ave. Belleville, Illinois 62222-0529

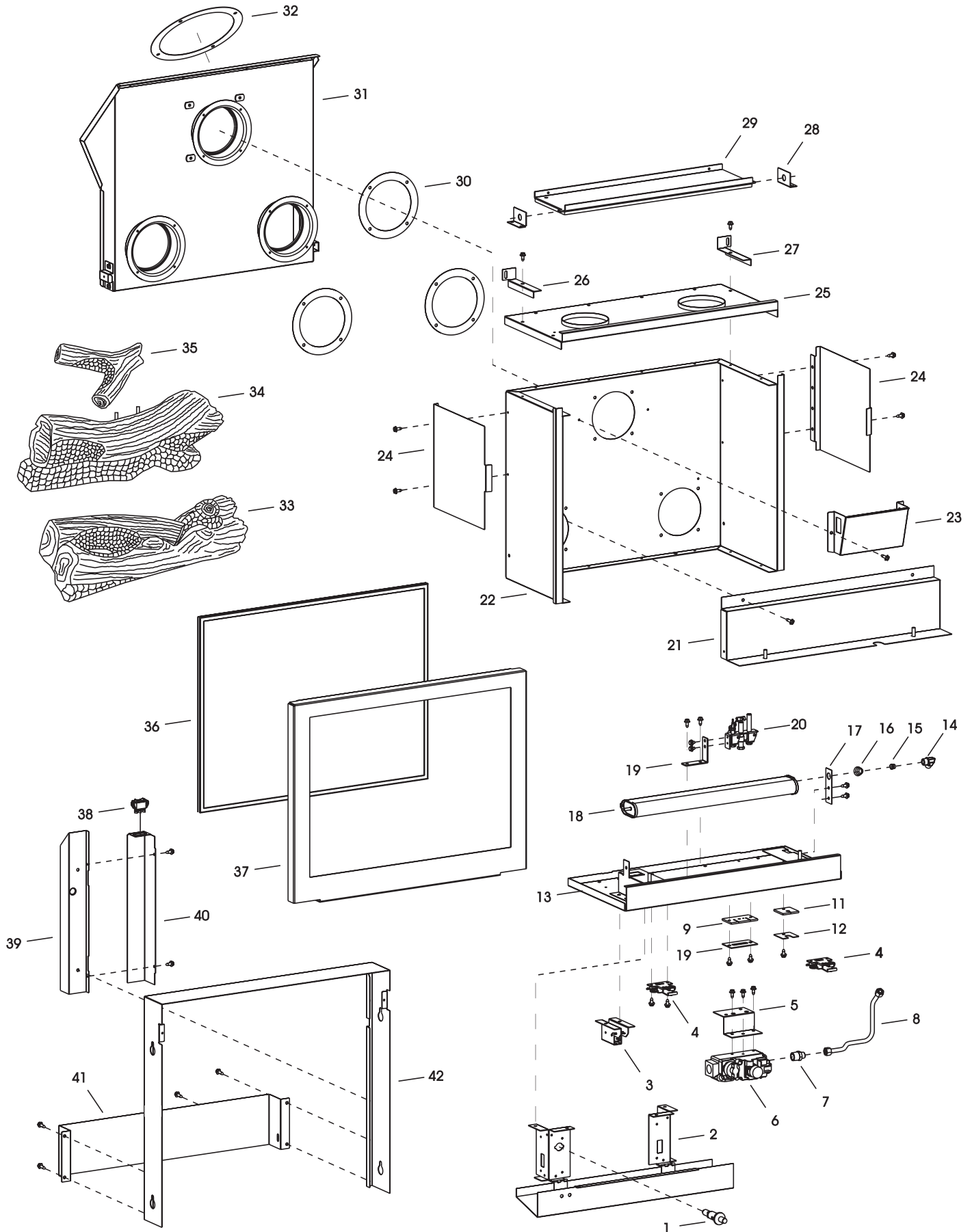
## PARTS LIST FOR CIDV-30-20

PLEASE NOTE: When ordering parts, it is very important that part number and description of part coincide.

Index No.	Part Number	Description	Index No.	Part Number	Description
1	R-2708	PIEZO IGNITOR	23	15503	FLUE RESTRICTOR
2	15516	VALVE COVER ASSEMBLY	24	15515	SIDE SHIELD
3	15623	DELAYED IGNITION RESET SWITCH ASSEMBLY	25	15625	INNER TOP
4	R-4053	DOOR LATCH	26	15511	MOUNTING BRACKET UPPER - LEFT
5	15490	VALVE BRACKET	27	15510	MOUNTING BRACKET UPPER - RIGHT
6	R-3318	GAS VALVE - NAT	28	CI-375	RELEIF DOOR BRACKET (2 REQ'D)
6	R-3319	GAS VALVE - LPG	29	CI-364	RELEIF DOOR ASSEMBLY
7	R-2423	BRASS MALE CONNECTOR	30	M-163	FLUE CONNECTOR TUBE GASKETS
8	15556	TUBING - VALVE TO BURNER	31	15612	AIR DROP ASSEMBLY
9	M-157	SEAL BRACKET GASKET	32	M-160	VENT ELBOW GASKET
10	DVF-039	SEAL BRACKET	33	R-7221	FRONT LOG
11	M-174	GAS LINE GASKET	34	R-7220	REAR LOG
12	11269	GAS LINE BRACKET	35	R-7222	TOP LOG
13	15611	INNER BOTTOM ASSEMBLY	36	15609	GLASS ASSEMBLY
14	P-253	ORIFICE FITTING	37	15502	GLASS FRAME
15	P-243	ORIFICE - NAT	38	R-3436	ON/OFF/REMOTE SWITCH
15	P-185	ORIFICE - LPG	39	CI-331	CHANNEL DIVIDER
16	R-3357	SPRING	40	CI-329	WIRE CHANNEL
17	15569	AIR SHUTTER - NAT	41	15501	CASING SUPPORT
17	15558	AIR SHUTTER - LPG	42	15497	REAR COVER
18	R-7106	BURNER	NS	R-7294	WIRE ASSEMBLY
19	15512	PILOT BRACKET	NS	CI-253	MAGNET ASSEMBLY
20	R-5143	PILOT ASSEMBLY - NAT	NS	15610	TUBING - VALVE TO PILOT
20	R-5144	PILOT ASSEMBLY - LPG	NS	CI-350	CABLE ASSEMBLY
21	15553	REAR LOG SUPPORT ASSEMBLY	NS	CI-235	RESTRICTOR PLATE
22	15482	INNER BODY			

**USE ONLY MANUFACTURER'S REPLACEMENT PARTS. USE OF ANY OTHER PARTS COULD CAUSE INJURY OR DEATH.**

# PARTS VIEW FOR CIDV-30-20





# PARTS LIST FOR STOVE CASTING

PLEASE NOTE: When ordering parts, it is very important that part number and description of part coincide.

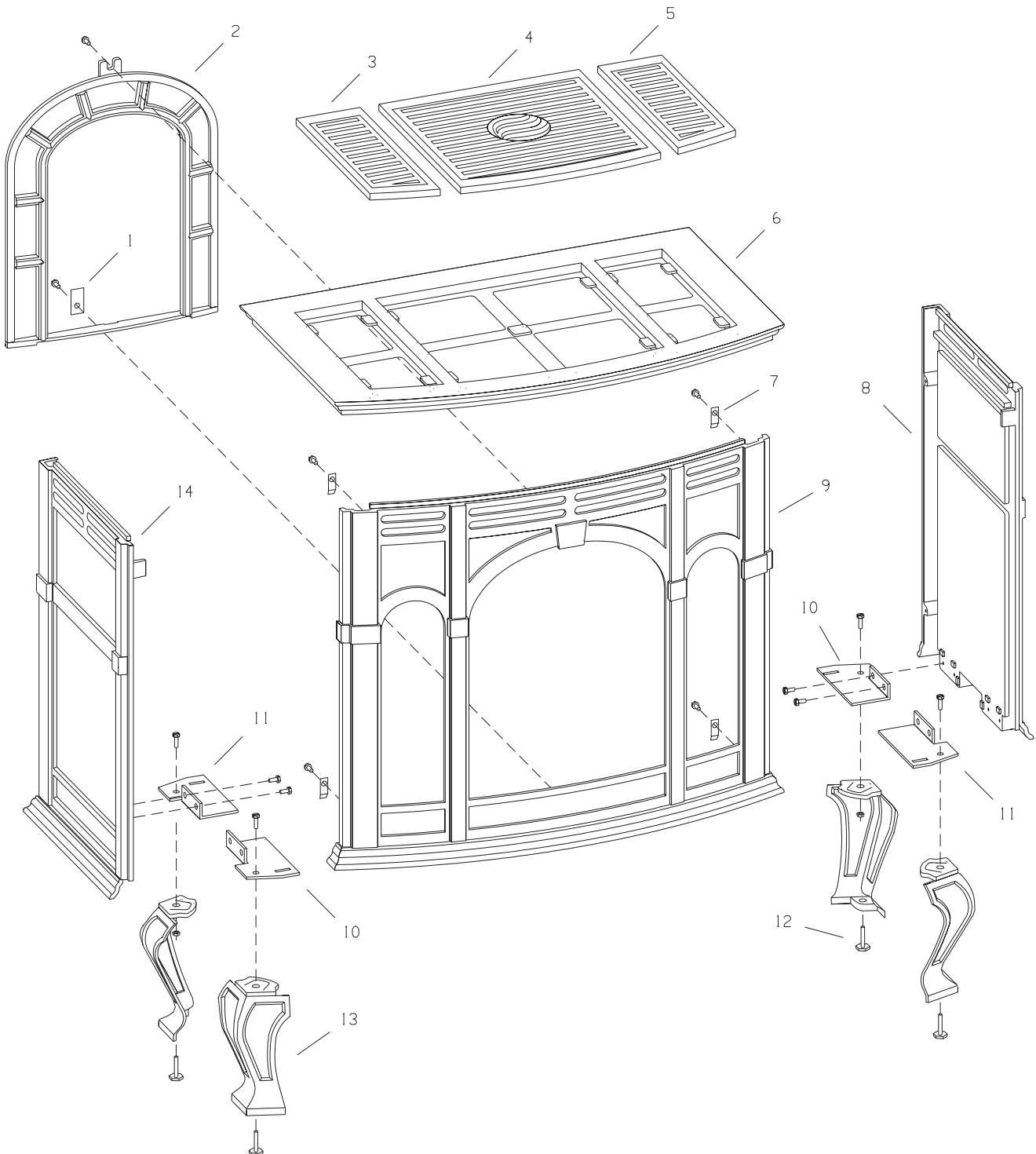
Index No.	Part Number	Description	Index No.	Part Number	Description
1	*CI-006	WINDOW RETAINING TAB	7	* CI-007	RETAINING TAB - 4 REQUIRED
2	R-3948	WINDOW (BLACK PAINT)	8	R-3946	SIDE - RIGHT (BLACK PAINT)
2	R-3688	WINDOW (BLACK ENAMEL)	8	R-3685	SIDE - RIGHT (BLACK ENAMEL)
2	R-3696	WINDOW (SAND ENAMEL)	8	R-3693	SIDE - RIGHT (SAND ENAMEL)
2	R-3704	WINDOW (GREEN ENAMEL)	8	R-3701	SIDE - RIGHT (GREEN ENAMEL)
2	R-3712	WINDOW (RED ENAMEL)	8	R-3709	SIDE - RIGHT (RED ENAMEL)
2	R-3720	WINDOW (NAVY ENAMEL)	8	R-3717	SIDE - RIGHT (NAVY ENAMEL)
3	R-3949	GRILL - LEFT (BLACK PAINT)	9	R-3947	FRONT (BLACK PAINT)
3	R-3726	GRILL - LEFT (BLACK ENAMEL)	9	R-3687	FRONT (BLACK ENAMEL)
3	R-3729	GRILL - LEFT (SAND ENAMEL)	9	R-3695	FRONT (SAND ENAMEL)
3	R-3732	GRILL - LEFT (GREEN ENAMEL)	9	R-3703	FRONT (GREEN ENAMEL)
3	R-3735	GRILL - LEFT (RED ENAMEL)	9	R-3711	FRONT (RED ENAMEL)
3	R-3738	GRILL - LEFT (NAVY ENAMEL)	9	R-3719	FRONT (NAVY ENAMEL)
4	R-3950	GRILL - CENTER (BLACK PAINT)	10	* CI-009	LEG PAD "B" - 2 REQUIRED
4	R-3727	GRILL - CENTER (BLACK ENAMEL)	11	* CI-008	LEG PAD "A" - 2 REQUIRED
4	R-3730	GRILL - CENTER (SAND ENAMEL)	12	* R-3747	LEVELING BOLT - 4 REQUIRED
4	R-3733	GRILL - CENTER (GREEN ENAMEL)	13	R-3952	LEG - 4 REQUIRED (BLACK PAINT)
4	R-3736	GRILL - CENTER (RED ENAMEL)	13	R-3742	LEG - 4 REQUIRED (BLACK ENAMEL)
4	R-3739	GRILL - CENTER (NAVY ENAMEL)	13	R-3743	LEG - 4 REQUIRED (SAND ENAMEL)
5	R-3951	GRILL - RIGHT (BLACK PAINT)	13	R-3744	LEG - 4 REQUIRED (GREEN ENAMEL)
5	R-3728	GRILL - RIGHT (BLACK ENAMEL)	13	R-3745	LEG - 4 REQUIRED (RED ENAMEL)
5	R-3731	GRILL - RIGHT (SAND ENAMEL)	13	R-3746	LEG - 4 REQUIRED (NAVY ENAMEL)
5	R-3734	GRILL - RIGHT (GREEN ENAMEL)	14	R-3945	SIDE - LEFT (BLACK PAINT)
5	R-3737	GRILL - RIGHT (RED ENAMEL)	14	R-3684	SIDE - LEFT (BLACK ENAMEL)
5	R-3740	GRILL - RIGHT (NAVY ENAMEL)	14	R-3692	SIDE - LEFT (SAND ENAMEL)
6	R-3944	TOP (BLACK PAINT)	14	R-3700	SIDE - LEFT (GREEN ENAMEL)
6	R-3683	TOP (BLACK ENAMEL)	14	R-3708	SIDE - LEFT (RED ENAMEL)
6	R-3691	TOP (SAND ENAMEL)	14	R-3716	SIDE - LEFT (NAVY ENAMEL)
6	R-3699	TOP (GREEN ENAMEL)	* PART IS NOT SUPPLIED WITH CASTING, IT IS INCLUDED IN THE FIREBOX HARDWARE PACKAGE		
6	R-3707	TOP (RED ENAMEL)			
6	R-3715	TOP (NAVY ENAMEL)			

# PARTS VIEW FOR STOVE CASTING

**Models: CIFB-1, CIPB-1, CIPG-1, CIPS-1, CIPN-1, CIPR-1**

## STOVE CASTING

MODELS: CIFB-1, CIPB-1, CIPG-1, CIPS-1, CIPN-1, CIPR-1



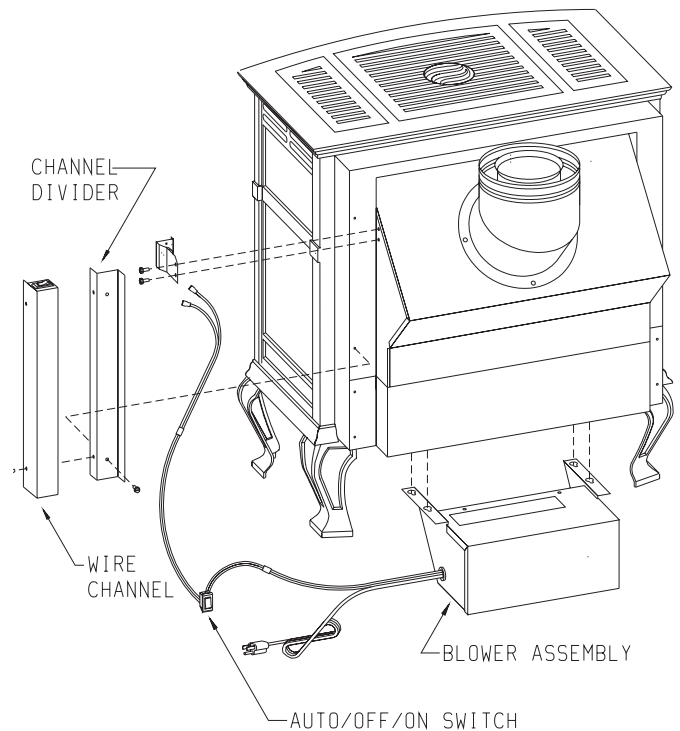
# OPTIONAL BLOWER INSTALLATION INSTRUCTIONS

## Installing Optional CIB-2 Blower

1. Loosen, but do not remove, (4) hex-head screws located on the exterior, bottom of the appliance.
2. Position the blower assembly at the rear of the appliance. The blower assembly has (4) keyholes for attachment to the exterior, bottom of the appliance.
3. Place the large diameter holes in the keyholes over and behind the (4) hex-head screws that were loosened in Step 1. Push inward on the blower assembly to lock the keyholes into position behind the screws. Tighten (4) hex-head screws to secure blower assembly to exterior, bottom of the appliance.
4. Remove wire channel from channel divider by removing (2) 10 x 1/2" screws. **Note:** If optional blower is being installed during initial installation of appliance, the wire channel will not be attached to rear cover. (Refer to **Wire Channel Installation**, Page 14)
5. Remove channel divider from rear cover by removing (2) 10 x 1/2" screws.
6. Attach fan control to OFFSET, fan control bracket (Part 9B, Page 38) with (2) 6 x 1/4" screws provided in hardware package.
7. Attach fan control with bracket onto air drop with (2) 10 x 1/2" screws provided in hardware package.
8. Route fan control wires through 1/2" extruded hole on channel divider. Attach fan control wires to fan control.
9. Attach channel divider with (2) 10 x 1/2" screws from Step 5.
10. Route wires from fan control and ON/OFF/REMOTE switch within wire channel.
11. Attach wire channel to channel divider with (2) 10 x 1/2" screws from Step 4. (Refer to **Wire Channel Installation**, Page 14)
12. Insert AUTO/OFF/ON switch into rectangular notch on valve bracket. Be sure to insert AUTO/OFF/ON switch with letters (words) upright. (See wiring diagram)
13. Attach 1/4" push-on terminal from blue wire on the fan control to the AUTO (top) tab on the switch.
14. Attach 1/4" push-on terminal from black wire to the OFF (middle) tab on the switch.
15. Attach 1/4" push-on terminal from white wire on the fan control to the ON (bottom) tab on the switch.
16. Installation of optional CIB-2 blower is completed.

## Fan Control

The fan control is a non-adjustable automatic type. The fan control will require between 5 and 10 minutes of main burner operation before the fan control "closes" and activates the blower. The blower will continue to run between 5 and 10 minutes after the main burner shuts off, before the fan control "opens" and deactivates the blower.



## Cleaning

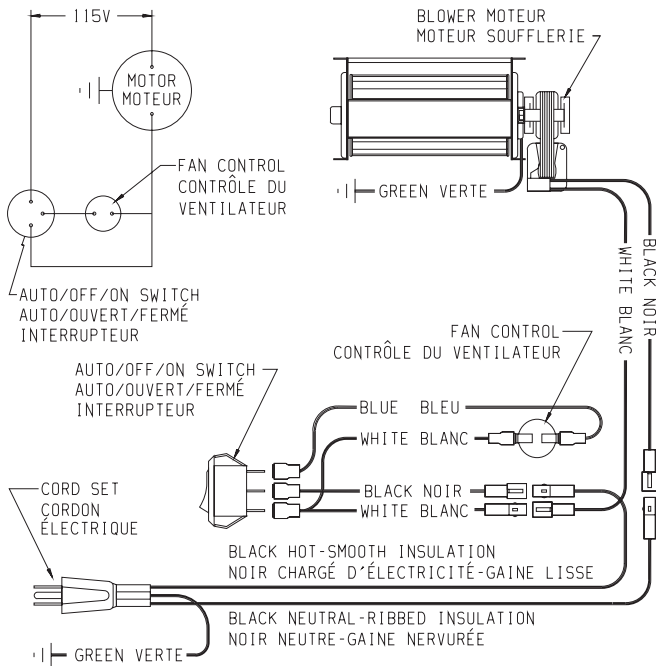
The blower wheel will collect lint and could require cleaning once a year. If the air output decreases or the noise level increases, it indicates a dirty wheel.

## Blower Motor

The blower motor does not have oiling holes. Do not attempt to oil blower motor.

## Wiring

The appliance, 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* or *Canadian Electrical Code, CSA C22.1*, if an external electrical source is utilized. **This appliance is equipped with a three-prong [grounding] plug for your protection against shock hazard and should be plugged directly into a properly grounded three-prong receptacle. Do not cut or remove the grounding prong from this plug.** For an ungrounded receptacle, an adapter, which has two prongs and a wire for grounding, can be purchased, plugged into the ungrounded receptacle and its wire connected to the receptacle mounting screws. With this wire completing the ground, the appliance cord plug can be plugged into the adapter and be electrically grounded.

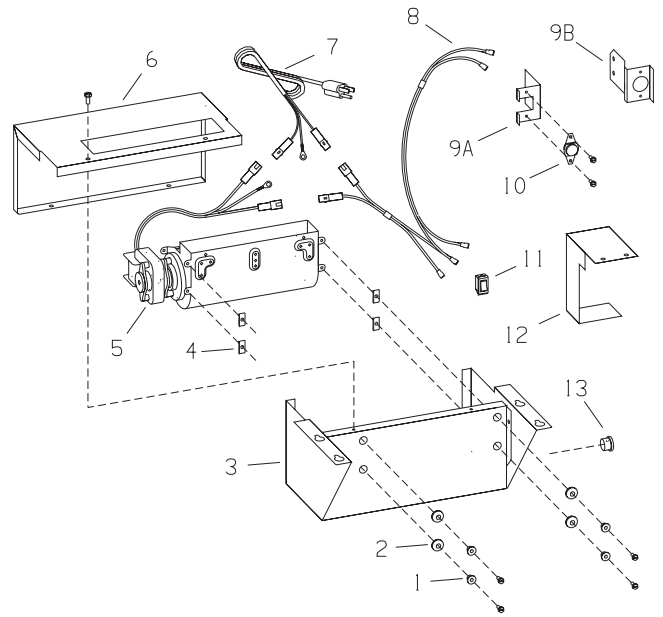


IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THIS UNIT MUST BE REPLACED, IT MUST BE REPLACED WITH NO. 18, 150°C WIRE OR ITS EQUIVALENT.

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

## WARNING:

**Unplugging of blower accessory will not stop the heater from cycling. To shut heater off: Turn temperature dial or thermostat to lowest setting. Turn knob on gas control to "OFF", depressing slightly. Do not force.**



PARTS LIST		
Index No.	Part No.	Description
1	R-1454	Brass Bushing (4 Required)
2	R-1499	Rubber Grommet (4 Required)
3	CI-002	Blower Housing
4	R-1517	Tinnerman Clip (4 Required)
5	R-2804-A	Blower Assembly
6	CI-003	Blower Housing Cover
7	R-2099	Cord Set
8	R-3767-A	Wire Harness
9A	CI-004	Fan Control Bracket (Use with CIBV-30 and CIVF-25)
9B	CI-325	Fan Control Bracket (Use with CIDV-30)
10	R-2503	Fan Control
11	R-2805	Auto/Off/On Switch
12	CI-220	Fan Control Shield (Use with CIVF-25)
13	R-1410	Bushing 7/8" Diameter





Empire Comfort Systems

Empire Comfort Systems, Inc.  
918 Freeburg Ave. Belleville, IL 62220  
PH: 618-233-7420 or 800-851-3153  
FAX: 618-233-7097 or 800-443-8648  
info@empirecomfort.com

[www.empirecomfort.com](http://www.empirecomfort.com)