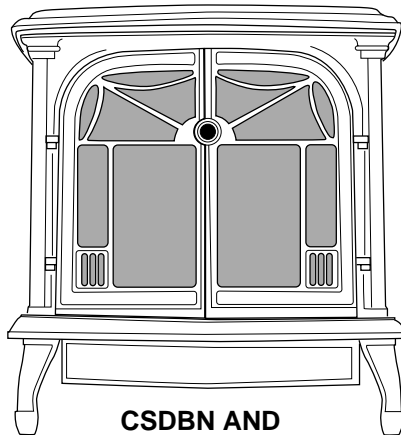


Comfort Glow[®]

CAST IRON STOVE AND DIRECT-VENT (FREESTANDING FIREPLACE HEATER) BURNER SYSTEM

OWNER'S OPERATION AND INSTALLATION MANUAL

For more information, visit www.desatech.com



CSDBN AND
CSDPBN STOVES

NATURAL GAS BURNER SYSTEM MODEL SDVBNC WITH PROPANE/LP GAS BURNER SYSTEM CONVERSION KIT REMOTE READY

IMPORTANT: This direct-vent burner system must be installed into approved Comfort Glow cast iron stove bodies, models CSDBN ONLY.

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury, or loss of life.

FOR YOUR SAFETY

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

FOR YOUR SAFETY

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.

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

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

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

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

Save this manual for future reference.

DESA

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SAFETY INFORMATION



WARNINGS

WARNING: This product contains and/or generates chemicals known to the State of California to cause cancer or birth defects, or other reproductive harm.

IMPORTANT: Read this owner's manual carefully and completely before trying to assemble, operate, or service this stove and burner system. Improper use of this stove and burner system can cause serious injury or death from burns, fire, explosions, electrical shock, and carbon monoxide poisoning.

DANGER: Carbon monoxide poisoning may lead to death!

This appliance complies with the current ANSI Z21.88 and CSA 2.33 as a Vented Gas Fireplace Heater and is listed and tested by the Canadian Standards Association to the above test standards. This stove with burner system is a vented product. This stove with burner system will not produce any gas leakage into your home if properly installed. This stove with burner system must be properly installed by a qualified service person. The glass door must be properly seated and sealed. If this unit is not properly installed by a qualified service person with glass door properly seated and sealed, gas leakage can occur.

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the stove may not have been installed properly. **Get fresh air at once!** Have stove inspected and serviced by a qualified service person. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

Natural and Propane/LP Gas: Natural and propane/LP gases are odorless. An odor-making agent is added to the gas. The odor helps you detect a gas leak. However, the odor added to the gas can fade. Gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this stove and burner system.

WARNING: Any change to this stove or burner system or its controls can be dangerous.

1. 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.
2. For propane/LP burner system, do not place propane/LP supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors. To prevent performance problems, do not use propane/LP fuel tank of less than 100 lbs. (45.36 kg) capacity (propane/LP units only).
3. If you smell gas
 - shut off gas supply
 - 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 you gas supplier, call the fire department.
4. Never install the stove
 - in a recreational vehicle
 - where curtains, furniture, clothing, or other flammable objects are less than 42" (106.63 cm) from the front, top, or sides of the stove
 - in high traffic areas
 - in windy or drafty areas
5. This stove reaches high temperatures. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Stove will remain hot for a time after shutdown. Allow surfaces to cool before touching.

For more information, visit www.desatech.com

SAFETY INFORMATION

Continued

6. Carefully supervise young children when they are in the room with stove.
7. Do not modify the burner or stove under any circumstances. Any parts removed for servicing must be replaced prior to operating stove or burner system.
8. Turn burner system off and let cool before servicing, installing, or repairing. Only a qualified service person should install, service, or repair the stove or burner system. Have burner system inspected annually by a qualified service person.
9. You must keep control compartments, burners, and circulating air passages clean. More frequent cleaning may be needed due to excessive lint and dust from carpeting, bedding material, pet hair, etc. Turn off the gas valve and pilot light before cleaning stove or burner system.
10. Have venting system inspected annually by a qualified service person. If needed, have venting system cleaned or repaired. See *Cleaning and Maintenance*, page 29.
11. Keep the area around your stove clear of combustible materials, gasoline, and other flammable vapor and liquids. Do not run burner system where these are used or stored. Do not place items such as clothing or decorations on or around stove.
12. Do not use this stove to cook food or burn paper or other objects.
13. Never place anything on top of stove.
14. Do not use any solid fuels (wood, coal, paper, cardboard, etc.) in this stove. Use only the gas type indicated on burner system nameplate.
15. This 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 the *Canadian Electrical Code, CSA C22.1*.
16. Do not obstruct the flow of combustion and ventilation air in any way. Provide adequate clearances around air openings into the combustion chamber along with adequate accessibility clearance for servicing and proper operation.
17. Do not install stove directly on carpeting, vinyl tile, or any combustible material other than wood. The stove must set on a metal or wood panel extending the full width and depth of the stove.
18. Do not use stove or burner system if any part has been exposed to or under water. Immediately call a qualified service person to arrange for replacement of the unit.
19. Do not operate burner system if any log is broken.
20. Do not use a blower insert, heat exchanger insert, or other accessory not approved for use with this stove.
21. Do not operate burner system with glass door removed, cracked, or broken.
22. Provide adequate clearances to air openings.

PRODUCT IDENTIFICATION

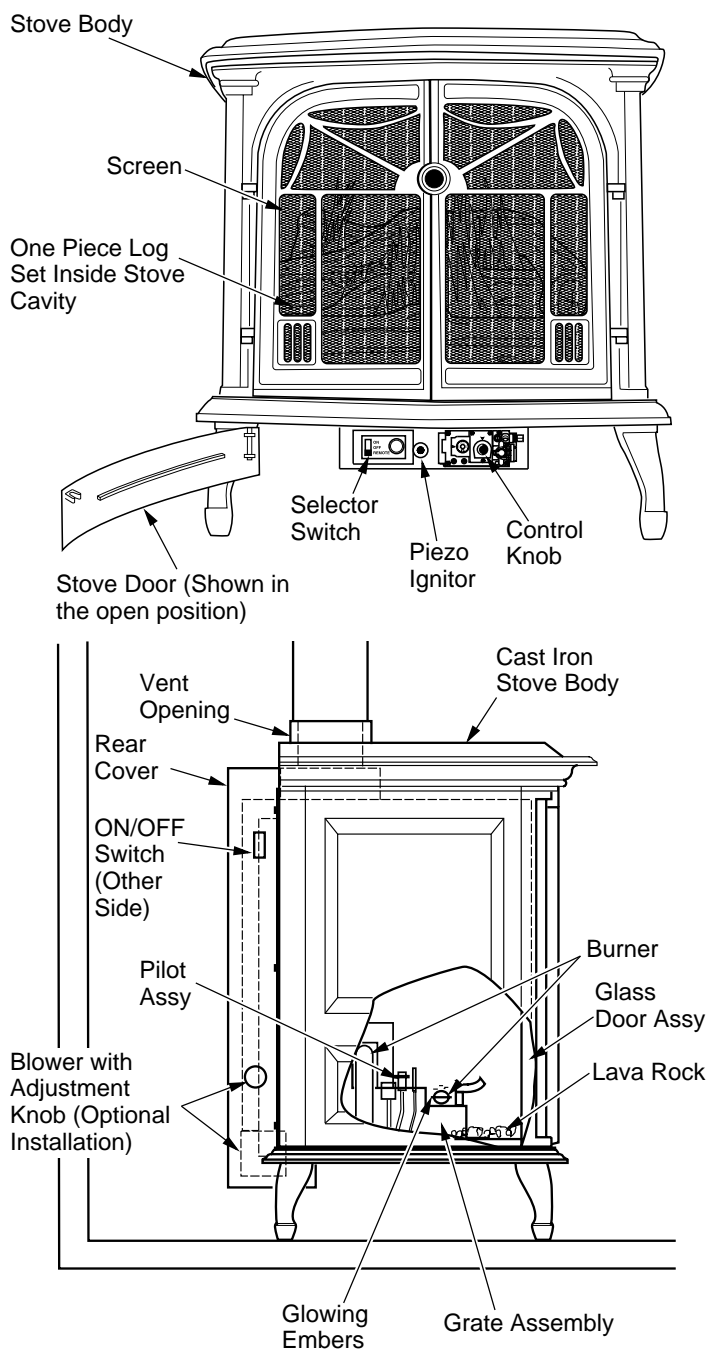


Figure 1 - Comfort Glow Direct-Vent Burner System Shown Installed in Approved Comfort Glow Cast Iron Stove Body (Models CSDBN and CSDPBN)

LOCAL CODES

Install and use stove and burner system with care. Follow all local codes. In the absence of local codes, use the current *National Fuel Gas Code ANSI Z223.1/NFPA 54** (USA) or the current *CSA-B149[.1 or .2] Installation Codes* (Canada).

*Available from:

American National Standards Institute, Inc.
 1430 Broadway
 New York, NY 10018

National Fire Protection Association, Inc.
 Batterymarch Park
 Quincy, MA 02269

PRODUCT FEATURES

OPERATION

This cast iron stove with burner system is clean burning and vents easily through outside walls or vertically using outside air for combustion. Heat is generated by both realistic flames and glowing embers. When used without the blower accessory, the stove with burner system requires no electricity making it ideal for emergency backup heat.

PIEZO IGNITOR

This burner system has a piezo ignitor. This system requires no matches, batteries, or other sources to light burner system.

GLOSSARY OF TERMS

Chase - A box-like enclosure to protect venting from the elements when the venting run is on the outside of a structure.

Mastic - A pliable sealant for use around the vent terminal.

Snorkel Termination - A box that raises the horizontal termination above ground level clearances.

Vent Termination - Mounted on an outside wall or roof to separate the inlet and outlet of the vent system and protect it from weather.

Vinyl Siding Standoff - A metal box that separates the vent cap from vinyl siding.

Wall Thimble/Firestop - A metal plate used to secure the vent pipe when it passes through a wall or ceiling.

PRE-INSTALLATION PREPARATION

⚠ WARNING: A qualified service person must install stove and burner system. Follow all local codes.

⚠ CAUTION: This stove creates warm air currents. These currents move heat to wall surfaces next to stove. Installing stove next to vinyl or cloth wall coverings or operating stove where impurities (such as, but not limited to, tobacco smoke, aromatic candles, cleaning fluids, oil or kerosene lamps, etc.) in the air exist, may discolor walls or cause odors.

LOCATION AND SPACE REQUIREMENTS

Determine the safest and most efficient location for your cast iron stove. Make sure that rafters and wall studs are not in the way of the venting system. Choose a location where the heat output is not affected by drafts, air conditioning ducts, windows, or doors. Figure 2 shows some common locations. Read all venting information in this manual. Be aware of all restrictions and precautions before deciding the exact location for your stove.

When deciding the location of your stove, follow these rules:

1. Do not connect this stove and burner system to a chimney flue serving a separate solid-fuel burning fireplace or appliance.
2. Due to high temperatures, do not locate this stove in high traffic areas or near furniture or draperies.

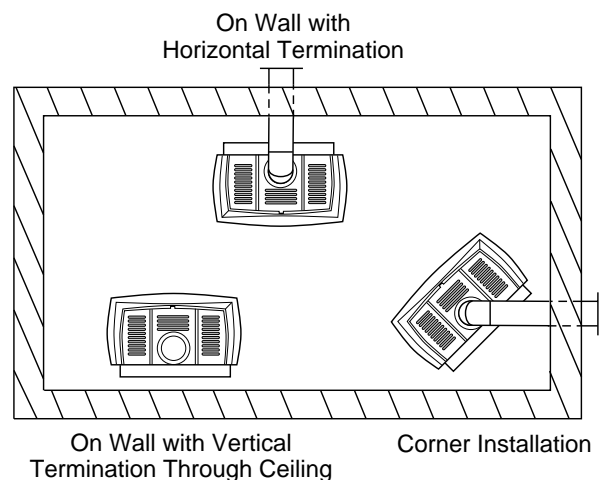


Figure 2 - Common Stove Locations

PRE-INSTALLATION PREPARATION

Continued

3. Proper clearances must be maintained, see Figures 3 and 4.
4. This stove is a freestanding unit designed to set directly on the floor. If your stove is to be installed directly on carpeting, vinyl tile, or any combustible material other than wood, it must be installed on a metal or wood panel extending the full width and depth of the stove. See Figure 5.

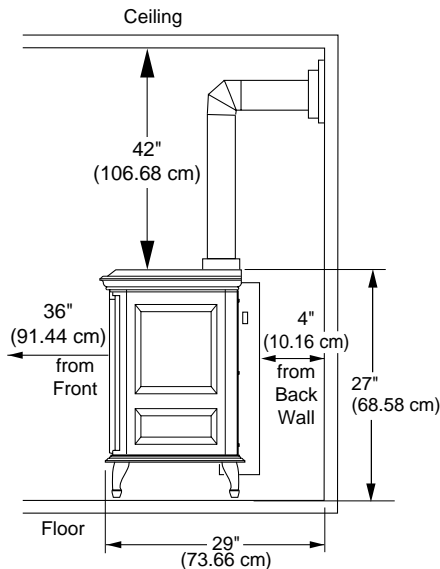


Figure 3 - Clearances for Standard Installation

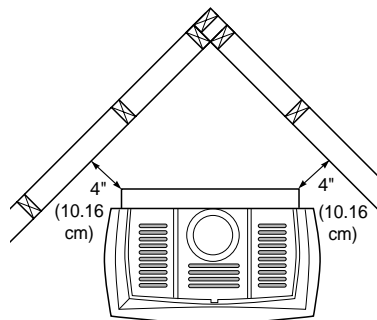
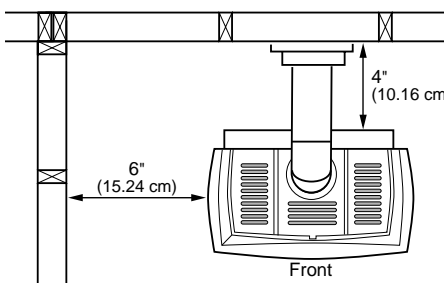


Figure 4 - Clearance for Corner Installation

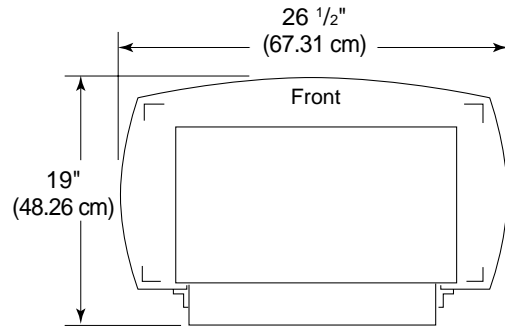


Figure 5 - Stove With Burner System Bottom Dimensions

STOVE AND BURNER SYSTEM ASSEMBLY

UNPACKING STOVE

1. Lift off corrugated box enclosing stove body crating.
2. Remove screws fastening back and top of wood frame enclosure. Two or more people must carefully lift stove up and out of wooden crate.
3. Remove plastic bag from stove body.
4. Remove bubble-wrapped log set from stove (Doors must be removed to do this step. See *Removing/Replacing Doors and Glass*, page 6). Remove all protective packaging applied for shipment.
5. Check all items for any shipping damage. If damaged, promptly inform dealer where you bought heater. Some fiber flakes may fall from logs. This is acceptable.
6. Locate the product identification label on the back panel (see Figure 6) and record the model number and 7 digit serial number in the space provided in the back of this owner's manual, and on the owner's registration form, page 39. Retain this operation and installation manual for future reference and warranty.
7. Place freestanding stove near desired location in room.

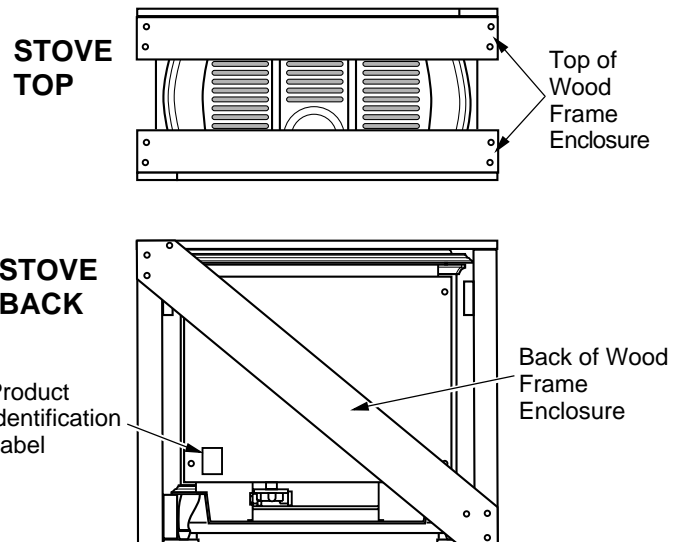


Figure 4 - Unpacking Stove from Wooden Shipping Enclosure

STOVE AND BURNER SYSTEM ASSEMBLY

Continued

REMOVING/REPLACING DOORS AND GLASS

You must remove doors and glass panel to install logs, lava rock, and ember material. To remove glass panel, you must first remove the door assembly on stove body.

CAUTION: Do not operate this burner system with a broken glass panel or without the door assembly securely in place. For replacement part information see *Replacement Parts*, page 33.

1. Lift middle grate and set aside (see Figure 7).
2. Remove two bolts from bottom of stove using an adjustable wrench or 10 mm socket and one bolt from the top of stove with an M6 allen wrench to remove door assembly (see Figure 7).
3. Remove the screws from the 2 tabs at the top of the glass panel while holding door securely keeping it from falling forward.
4. Grasp panel by both sides and ease it upward off of the lower bracket (see Figure 8)
5. To replace glass panel and door assembly, follow the above instructions in reverse.

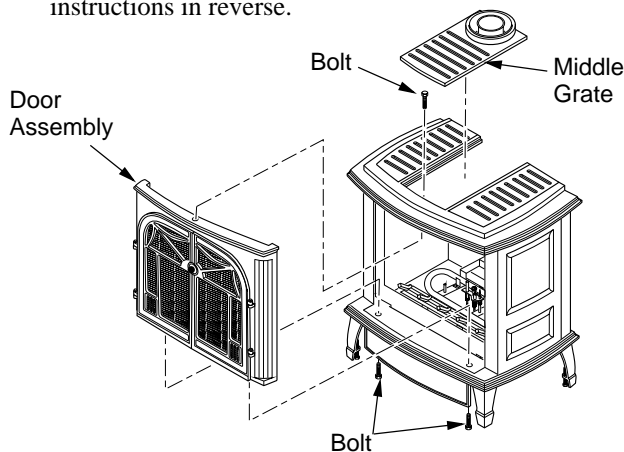


Figure 7 - Removing Door Assembly from Stove

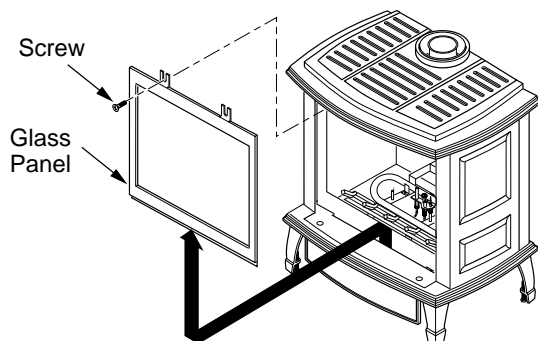


Figure 8 - Removing Glass Panel from Burner System

INSTALLING OPTIONAL BLOWER ACCESSORY

NOTICE: If installing blower in an existing stove burner system with gas connections, shut off gas supply and disconnect heater from gas supply. Contact a qualified service person to do this.

1. Using an adjustable wrench or 10 mm socket, remove 4 hex screws securing rear cover to back of stove body (see Figure 9).
2. Separate bottom cover from rear cover by loosening the 8 mounting screws (see Figure 9).
3. Align the holes in the top mounting tabs of blower with the holes in wall of rear cover. Using the 4 screws provided, mount blower and tighten screws securely (see Figure 10, page 7).

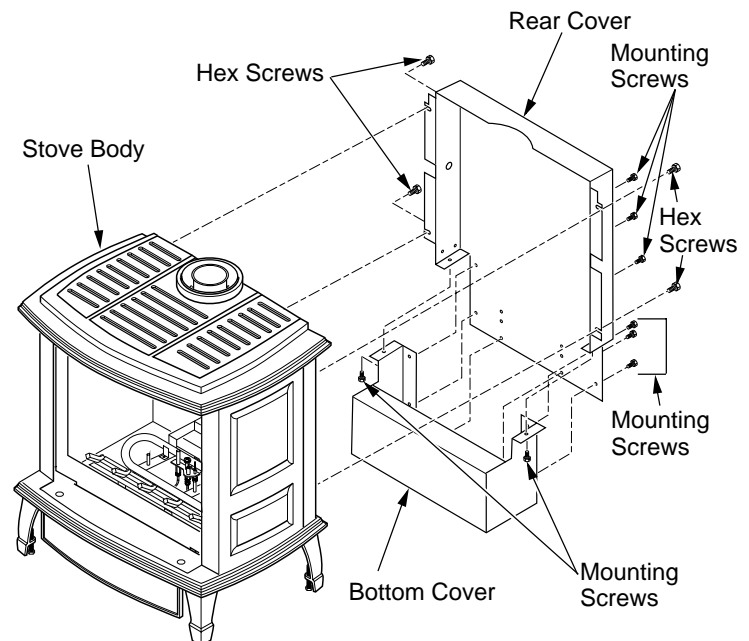


Figure 9 - Removing Rear Cover and Bottom Cover from Stove Body

For more information, visit www.desatech.com

STOVE AND BURNER SYSTEM ASSEMBLY

Continued

4. **Thermostat Blower Only:** Attach thermal switch and bracket to inside rear cover wall with two hex head screws provided as shown in Figure 10. After securing bracket to rear cover, carefully bend along existing bend line on bracket to almost a 90° angle (see Figure 10). This will allow thermal switch to be positioned against stove rear wall and sense temperature when in operating mode.
5. Place speed control on left inside of rear cover and push the plastic control shaft through opening (see Figure 10).
6. While supporting speed control, secure control shaft with lock nut with pliers clockwise until tight against the side of rear cover. Place control knob provided onto shaft.
7. Place the green ground wire between the bottom hole on the blower assembly and the hex screw and tighten (see Figure 11).
8. Connect the blue wire on the blower assembly to one side of the thermal switch (see Figure 11).
9. Connect the black wire to the other side of the thermal switch (see Figure 11).
10. Connect the white wire to the other terminal on the blower motor assembly (see Figure 11). Make sure the thermal switch has been properly installed to fit against back of fireplace insert after the rear cover assembly has been reinstalled.

11. Make sure all wire connections to terminals on blower motor and thermal switch are securely attached and that the screw retaining the green ground wire is tight.
12. Check to make sure that the power cord is completely clear of the blower wheel and that there are no foreign objects in blower wheel.
13. Peel off the backing paper and stick the supplied wiring diagram decal on the inside of rear cover as shown (see Figure 11).

⚠ WARNING: Never touch the blower wheel while in operation.

14. Reattach bottom cover to rear cover with 8 screws (see Figure 9, page 6). Make sure that you don't pinch any wires during reassembly. Route power cord through plastic bushing in bottom of rear cover.

⚠ WARNING: Failure to position the parts in accordance with supplied diagrams or failure to use only parts specifically approved with this heater may result in damage or personal injury.

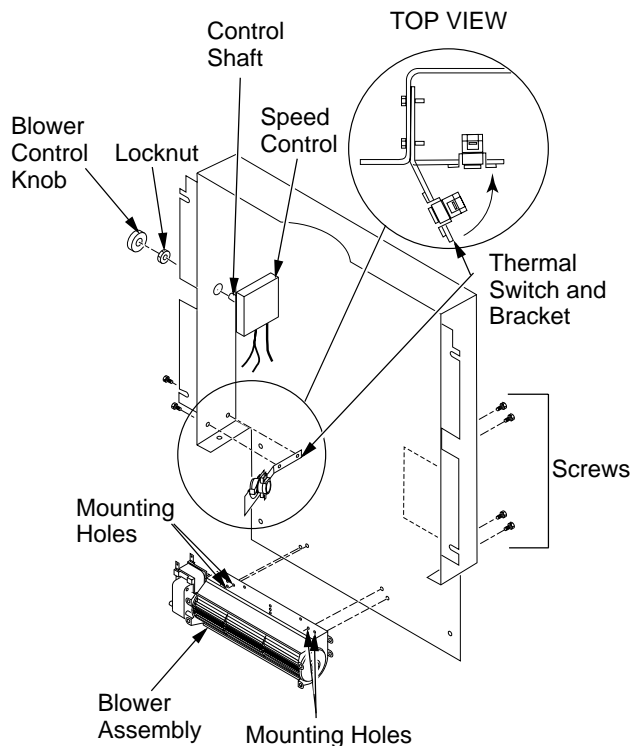


Figure 10 - Blower Assembly, Speed Control, and Thermal Switch Locations

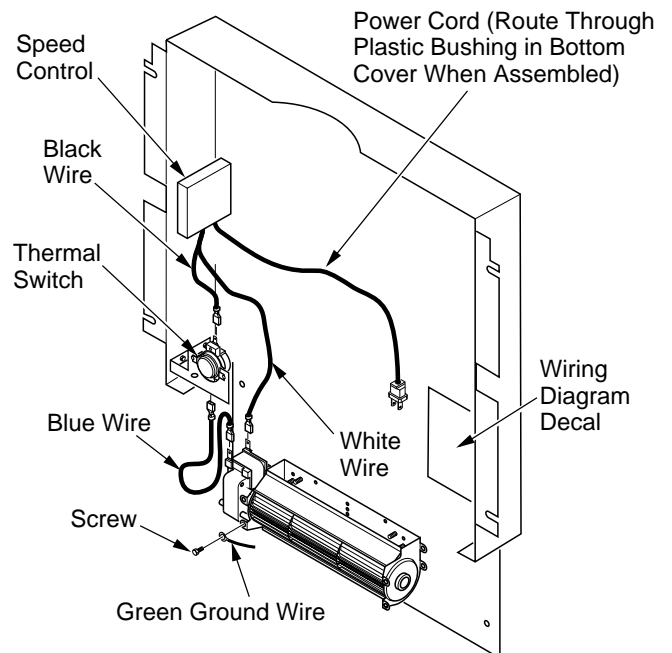


Figure 11 - Blower Wiring Layout (Thermostat Blower Shown)

STOVE AND BURNER SYSTEM ASSEMBLY

Continued

INSTALLING PROPANE/LP CONVERSION KIT

If your burner system is natural gas, do not install conversion kit. This kit is for users with propane/LP gas only.

Burner, Main Burner Orifice, and Pilot Orifice Conversion

1. Front door assembly and glass panel must be removed before installing conversion kit. See *Removing/Replacing Doors and Glass*, page 6.
2. Locate gas line connections and gas control valve inside firebox. Disconnect flare fitting connected to the brass elbow from the underside of stove insert. Use a 3/4" open end wrench on the flare fitting (see Figure 12).
3. Turn brass elbow and main burner orifice counterclockwise to remove from burner. The main burner orifice is threaded into the burner inlet. The brass elbow may have a slight resistance since the main burner orifice has been sealed with RTV silicone thread sealant. Use a 7/8" open end wrench or channel lock pliers for brass elbow and main burner orifice removal.
4. Remove existing main burner orifice from brass elbow and replace with main burner orifice supplied with conversion kit. **Note:** The new main burner orifice will have the number 151 stamped on it for identification purposes. Apply a small amount of thread sealant to the main burner orifice before tightening (see Figure 13). Sealant must be resistant to propane/LP gas.
5. Remove the burner (located inside combustion chamber) by loosening the two 5/16" hex mounting screws (see Figure 12). Lift burner up and out.
6. Convert the pilot burner by changing out the quick change orifice. **Note:** It is not necessary to remove the pilot gas tube for conversion. Using a 7/16" open end wrench, turn pilot target hex fitting counterclockwise and remove (see Figure 14).

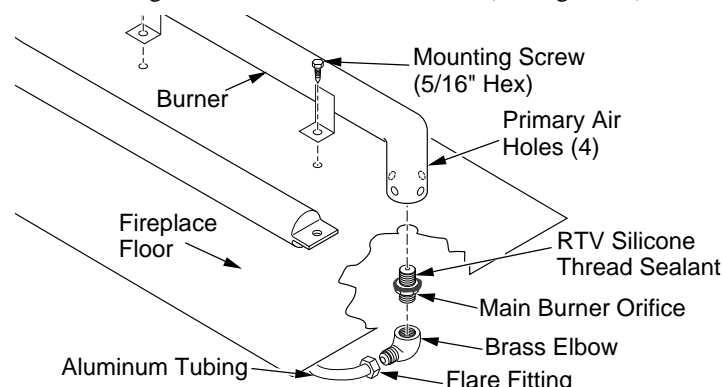


Figure 12 - Removing Main Burner Orifice, Brass Elbow, and Aluminum Tubing

7. Remove original pilot orifice using needlenose pliers or fingertips. Replace with the pilot orifice supplied with conversion kit. **Note:** The new pilot orifice has 014 LP stamped on it for identification purposes (see Figure 15).
8. Place open end of conversion pilot orifice into pilot barrel (see Figure 14).
IMPORTANT: Make sure the pilot orifice is properly mated and aligned inside pilot barrel.
9. Replace pilot target removed in step 5. Tighten pilot target hex fitting until the pilot target aligns with the thermocouple and thermopile (see Figure 16, page 9).
10. Replace original burner with burner supplied with conversion kit. The new burner for propane gas will have four (4) primary air holes near the burner inlet (see Figure 12). Attach with the two 5/16" hex mounting screws removed in step 4.
11. Attach main burner orifice and brass elbow assembly to burner. Place main burner orifice into threaded end of burner and turn clockwise to tighten (see Figure 12). Align the brass elbow with the flare fitting on the aluminum tubing.
12. Reconnect the aluminum tube/flare fitting onto the brass elbow (see Figure 12).
13. Reapply RTV silicone to seal area where orifice passes through the bottom combustion chamber (see Figure 12).

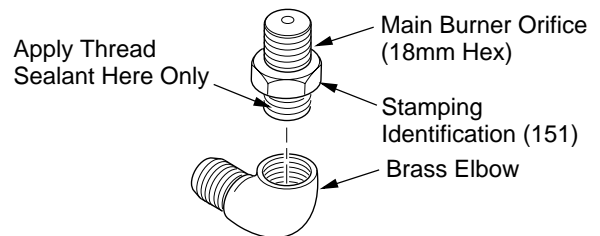


Figure 13 - Removing/Replacing Main Burner Orifice

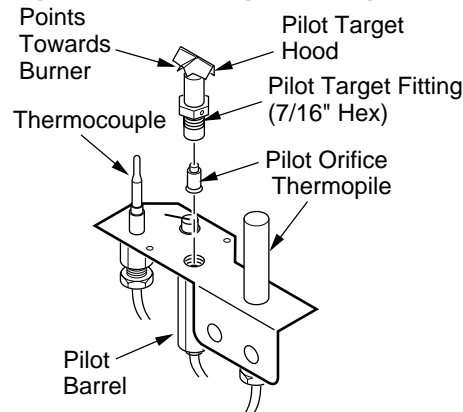


Figure 14 - Removing/Replacing Pilot Orifice

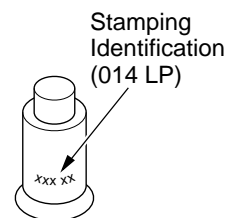


Figure 15 - Pilot Orifice Stamping Identification Location

For more information, visit www.desatech.com

STOVE AND BURNER SYSTEM ASSEMBLY

Continued

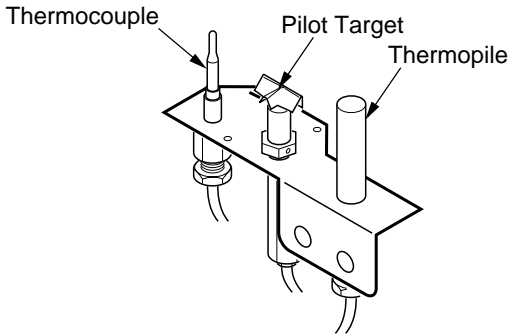


Figure 16 - Pilot Target Alignment

Gas Control Valve Conversion

If your burner system is natural gas, do not install conversion kit. This kit is for users with propane/LP gas only.

Convert the gas control valve from natural gas to propane/LP gas by swapping out the valve regulator portion of the gas valve.

1. Open bottom swing door on stove to allow access to gas control valve.
2. Using a phillips head screwdriver, remove the two mounting screws fastening the regulator assembly to the gas control valve (see Figure 17).
3. Remove regulator assembly and rubber gasket from control valve (see Figure 17).
4. Place rubber gasket supplied with regulator kit on gas control valve. Align two of the holes on the gasket with orientation pins on gas control valve.
IMPORTANT: Make sure gasket is properly seated and aligned on gas control valve.
5. Position regulator assembly supplied with conversion kit over rubber gasket on gas control valve. Align the notch in the regulator assembly with the pin on the gas control valve.
6. Attach regulator assembly to gas control valve using the two mounting screws removed in step 2. Tighten screws securely (approximately 25 in-lbs.) (see Figure 17).

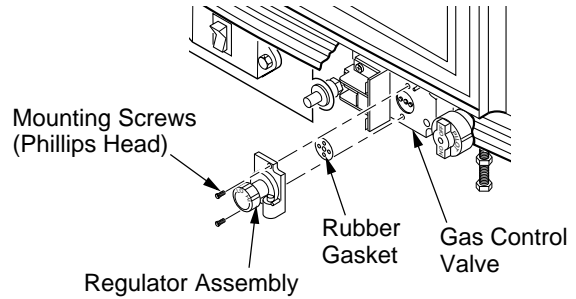


Figure 17 - Removing/Replacing Regulator Assembly and Rubber Gasket

Conversion Labeling and Placement

1. Apply the English and French conversion labels over the top of the existing certification labels (see Figure 18). Existing certification labels are located on the lighting instruction plate inside the gas valve compartment area. With permanent ink, print the previous model number on the label in the space provided (see Figure 19).
2. After filling in the data required on the conversion information label, affix it to the stove bottom next to the gas control valve. Make sure it is easily seen when the swing door is opened (see Figure 20).

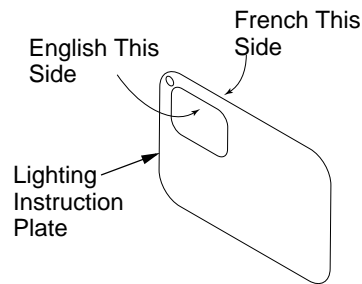


Figure 18 - Applying English and French Conversion Labels over Existing Certification Labels on Lighting Instruction Plate

DIRECT VENT DECORATIVE FIREPLACE

Conversion Kit Model _____

Type of Gas _____

Previous Model # _____

CONVERSION INFORMATION LABEL

This appliance was converted on _____ Day _____ Month _____ Year to _____ gas

with Kit No. _____

by _____

(name and address of organization making this conversion), which accepts the responsibility that this conversion has been properly made.

56060 106080-01

Figure 19 - Print Previous Model Number on Conversion Labels

Figure 20 - Conversion Information Label

STOVE AND BURNER SYSTEM ASSEMBLY

Continued

INSTALLING REAR COVER

1. Place rear cover behind stove body. Rear cover will rest on the bottom ledge of the stove body.
2. Place wire harness from ON/OFF switch under the cast of stove body.
3. Using hex screws provided, attach rear cover to back of stove body. See Figure 21. **IMPORTANT:** This rear cover must be securely in place before venting pipes are installed.
4. Open lower door panel. The valve is attached to the underside of the burner system assembly.
5. Connect one terminal of the wire from ON/OFF switch to the THTP terminal on the valve. Connect remaining wire terminal to the TH terminal on the valve. Make sure that the wire terminals are in the positions on the unit as pictured in Figure 22. If wires are not connected as shown, the ON/OFF switch will not work.
6. Move stove to desired installation location. See *Location and Space Requirements*, page 4 for proper installation. Refer to step 17 under *Safety Information*, page 3, for acceptable flooring types.
7. Connect or reconnect gas supply, see *Connecting Stove/Burner System to Gas Supply* on page 21.

WARNING: A qualified installer or service person must connect fireplace to gas supply. Follow all local codes.

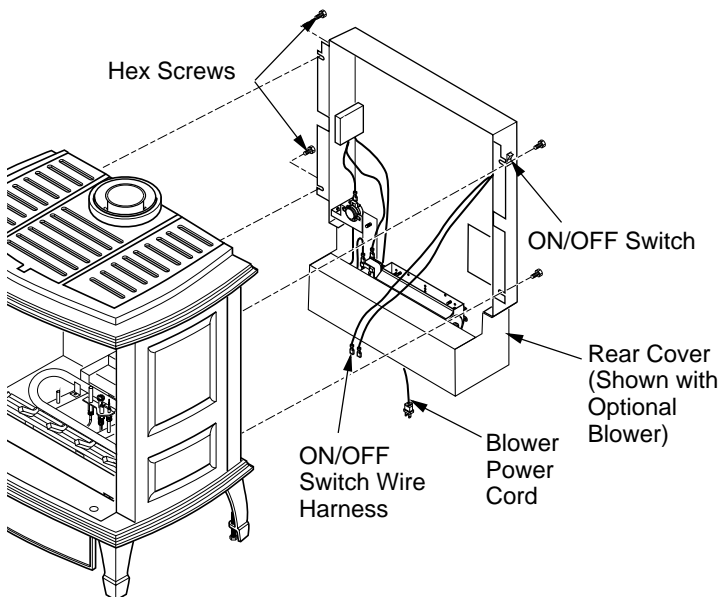


Figure 21 - Installing Rear Cover (Shown with Optional Blower Accessory)

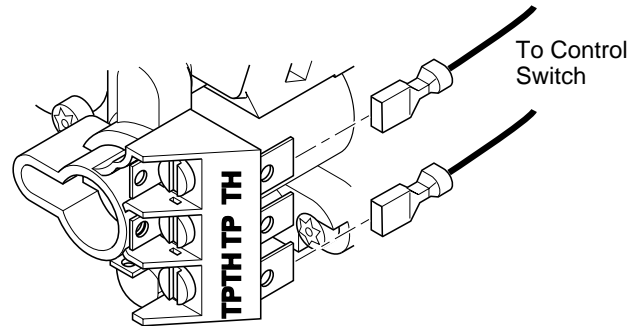


Figure 22 - Control Valve Terminals

GENERAL VENTING

Your stove with burner system is approved to be vented either through the side wall, or vertically using the following guidelines:

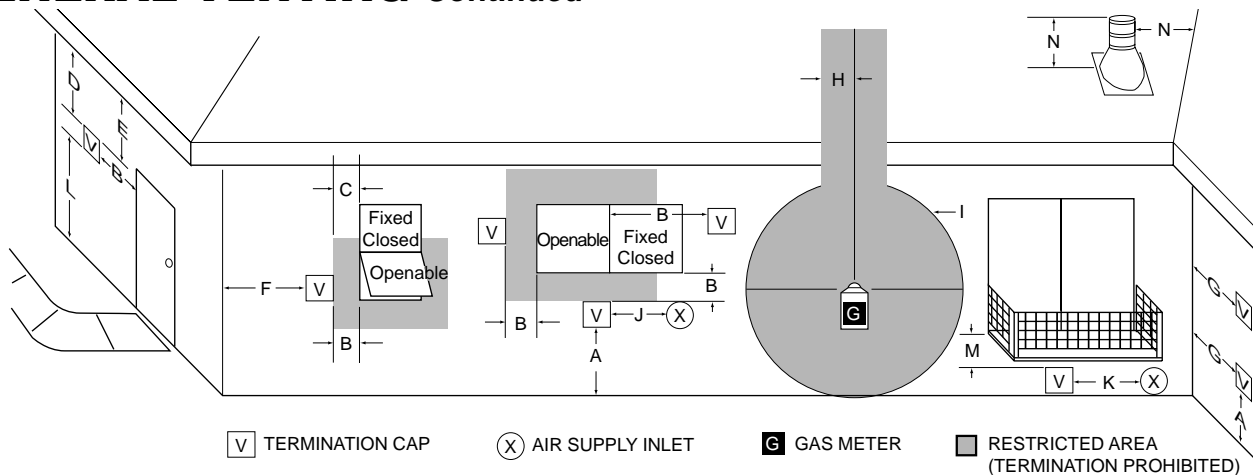
- Use only venting components or kits specifically approved for use with this stove and burner system (see *Parts Lists for Venting Kits and Components*, page 19).
- **IMPORTANT:** Do not mix venting components made by different manufacturers.
- Minimum clearance between vent pipes and combustible materials is 1" (2.5 cm), except where stated otherwise.
- Do not recess venting terminations into a wall or siding.
- Install horizontal venting with a 1/4" rise for every 12" of run toward the termination.
- You may paint the vent termination with 450°F (232°C) heat-resistant paint to coordinate with the exterior finish.
- There must not be any obstruction such as bushes, garden sheds, fences, decks, or utility buildings within 24" from the front of the termination cap.
- Do not locate termination cap where excessive snow or ice build up may occur. Be sure to clear vent termination area after snow falls to prevent accidental blockage of venting system. When using snow blowers, do not direct snow towards vent termination area.
- You must maintain minimum wall and ceiling clearances shown in Figures 3 and 4, page 5.
- If installing horizontal vent termination cap on an exterior wall with siding, you must use a vinyl siding standoff (see Figure 29, page 14).

LOCATION OF VENT TERMINATION

When locating vent termination, it is important to observe the minimum clearances shown in Figure 23, page 11.

*Check with local codes or with the current *CAN/CSA B149[.1 or .2] Installation Codes* for Canada or the USA *Installations* follow the current *National Fuel Gas Code, ANSI Z223.1/NFPA 54*.

GENERAL VENTING *Continued*



V TERMINATION CAP
 X AIR SUPPLY INLET
 G GAS METER
 RESTRICTED AREA (TERMINATION PROHIBITED)

- A = clearance above grade, veranda, porch, deck, or balcony [*12 inches (30.5cm) minimum]
- B = clearance to window or door that may be opened [12 inches (30.5cm) minimum]
- C = clearance to permanently closed window [minimum 12 inches (30.5cm) 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 center-line of the terminal [18 inches (45.7cm) minimum]
- E = clearance to unventilated soffit [12 inches (30.5cm) minimum]
- F = clearance to outside corner (see below)
- G = clearance to inside corner (see below)
- H = *not to be installed above a meter/regulator assembly within 36 inches (91.4cm) horizontally from the center-line of the regulator
- I = clearance to service regulator vent outlet [*72 inches (182.9cm) minimum]
- J = clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other fireplace [*12 inches (30.5cm) minimum]
- K = clearance to a mechanical air supply inlet [*72 inches (182.9cm) minimum]
- L = clearance above paved side-walk or a paved driveway located on public property [*84 inches (213.3cm) minimum]
- M = clearance under veranda, porch, deck [*12 inches (30.5cm) minimum]
- N = clearance above a roof shall extend a minimum of 24 inches (61cm) above the highest point when it passes through the roof surface and any other obstruction within a horizontal distance of 18 inches (45.7cm)

vent shall not terminate directly above a side-walk or paved driveway which is located between two single family dwellings and serves both dwellings*
 only permitted if veranda, porch, deck or balcony is fully open on a minimum of 2 sides beneath the floor*
 * as specified in CAN/CSA B149 (.1 or .2) Installation Codes (1991) for Canada and U.S.A.
 Note: Local codes or regulations may require different clearances

Termination Clearances for Buildings with Combustible and Noncombustible Exteriors

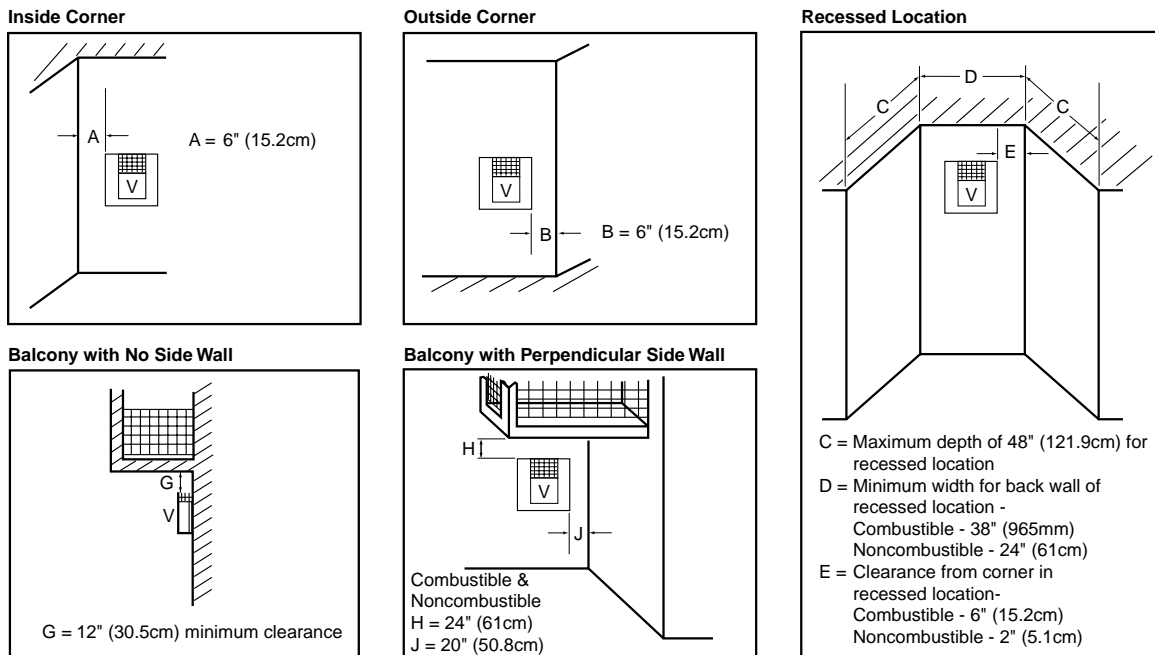


Figure 23 - Minimum Clearances for Vent Terminations

For more information, visit www.desatech.com



VENTING INSTALLATION

⚠ WARNING: Read all instructions completely and thoroughly before attempting installation. Failure to do so could result in serious injury, property damage or loss of life. Operation of improperly installed and maintained venting system could result in serious injury, property damage or loss of life.

⚠ WARNING: Seal all pipe to pipe connections. Seal only the outer pipe connections with high temperature silicone (600°F/316° C). Before joining elbows and pipes, apply a bead of high temperature silicone sealant (GE RTV 106/Loctite RTV 81585) to the male end of the elbow or pipe. High temperature silicone must also be used to reseal any connections after maintenance to venting system.

NOTICE: Do not seal termination cap to pipe. Cap must be removable for servicing vent system.

NOTICE: Failure to follow these instructions will void the warranty.

INSTALLATION PRECAUTIONS

Consult local building codes before beginning the installation. The installer must make sure to select the proper vent system for installation. Before installing vent kit, the installer must read this stove and burner system manual and vent kit instructions.

Only a qualified service person should install venting system. The installer must follow these safety rules:

- Wear gloves and safety glasses for protection
- Use extreme caution when using ladders or when on roof tops
- Be aware of electrical wiring locations in walls and ceilings

The following actions will void the warranty on your venting system:

- Installation of any damaged venting component
- Unauthorized modification of the venting system
- Installation of any component part not manufactured or approved by DESA
- Installation other than as instructed by these instructions

⚠ WARNING: This stove with burner system and vent assembly must be vented directly to the outside. The venting system must NEVER be attached to a chimney serving a separate solid fuel burning appliance. Each gas appliance must use a separate vent system. Do not use common vent systems.

⚠ WARNING: Horizontal sections of this vent system require a minimum clearance of 2" (5.08 cm) from the top of the pipe and 1" (2.54 cm) minimum to the sides and bottom. Vertical sections of this system require a minimum of 1" (2.54 cm) clearance to combustible materials on all sides of the pipe.

INSTALLATION PLANNING

There are two basic types of direct-vent installation:

- Horizontal Termination
- Vertical Termination

It is important to select the proper length of vent pipe for the type of termination you choose. It is also important to note the wall thickness.

For Horizontal Termination: Select the amount of vertical rise desired. The horizontal run of venting must have 1/4" (6.35 mm) rise for every 12" (0.3 m) of run towards the termination.

⚠ WARNING: Never run the vent pipe downward as this may cause excessive temperatures which could cause a fire.

You may use up to two 90° elbows on any single horizontal run of vent pipe in this configuration. See *Horizontal Termination Configurations* on page 15.

For Vertical Termination: Measure the distance from the burner system flue outlet to the ceiling. Add the ceiling thickness, the vertical rise in an attic or second story, and allow for sufficient vent height above the roofline. You may use one or two 90° elbows in this vent configuration. See *Vertical Termination Configurations* on pages 17 through 19.

Note: You may use two 45° elbows in place of a 90° elbow. You must follow rise to run ratios when using 45° elbows.

For two-story applications, firestops are required at each floor level (see Figure 35, page 16). If an offset is needed in the attic, additional pipe and elbows will be required.

You may use a chase with a vent termination with exposed pipe on the exterior of the house. See *Installing Vent System in a Chase*, page 13.

Your stove with direct-vent burner system has been tested for a maximum horizontal run of 20' (6 m) with 8' (2.4 m) vertical rise (see *Installation for Horizontal Termination*, pages 13 through 15). The maximum vertical run is 40' (12 m) (see *Installation for Vertical Termination*, pages 16 through 19).

It is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust. Certain limitations apply to vent configurations and must be strictly followed.

VENTING INSTALLATION

Continued

Installing Vent System in a Chase

A chase is a vertical box-like structure built to enclose venting that runs along the outside of a building. A chase is not required for such venting.

NOTICE: Treatment of firestops and construction of the chase may vary from building type to building type. These instructions are not substitutes for the requirements of local building codes. You must follow all local building codes.

Note: When installing in a chase, you should insulate the chase as you would the outside walls of your home. This is especially important in cold climates. Minimum air space clearance between vent pipes and combustible materials and/or insulation is 1" (2.54 cm).

INSTALLATION FOR HORIZONTAL TERMINATION

CAUTION: Horizontally terminated venting configurations require one foot of vertical rise from the 45° elbow before any horizontal run can be made. Failure to meet venting requirements may cause performance problems and possible damage to the fireplace.

1. Determine the route your horizontal venting will take. *Note:* The location of the horizontal vent termination on the exterior wall must meet all local and national building codes and must not be blocked or obstructed.

WARNING: Do not recess vent terminal into a wall or siding.

Snorkel terminations are available for terminations requiring a vertical rise on the exterior of the building (see Figures 24 and 25). Snorkel kit VKS-47-K is also available (see page 19). Follow the same installation procedures used for standard horizontal termination with the exception of the external wall firestop. The snorkel termination does not require the use of the external wall firestop. If installing the snorkel termination below grade (basement applications), you must provide proper drainage to prevent water from entering the snorkel termination (see Figure 25). Do not back fill around the snorkel termination.

2. Vent pipes and fittings have special twist-lock connections. Assemble the desired combination of pipe and elbows to the appliance adaptor with pipe seams oriented towards the wall or floor.

Twist-lock Procedure: The female ends of the pipes and fittings have four locking lugs (indentations). These lugs will slide straight into matching slots on the male ends of adjacent pipes and fittings. (All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 12.) Push the pipe sections together and twist one section clockwise approximately one-quarter turn until the sections are fully locked. See Figure 26. *Note:* Horizontal runs of vent must be supported every three feet. Use wall straps for this purpose.

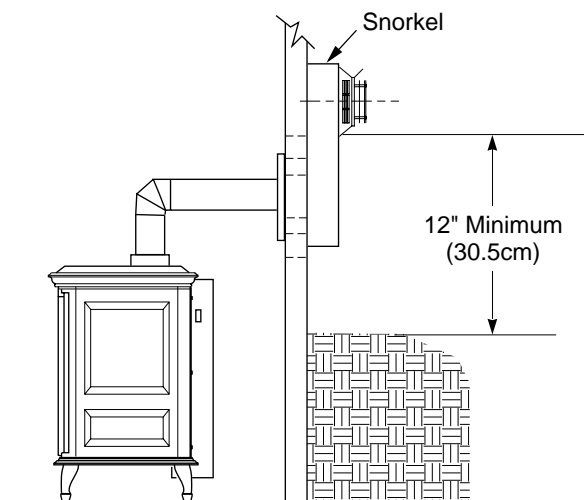


Figure 24 - Snorkel Termination

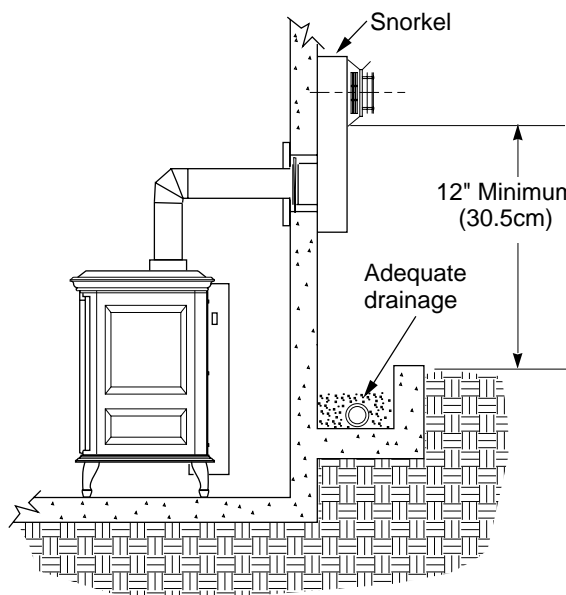


Figure 25 - Snorkel Termination with Drainage Pipe

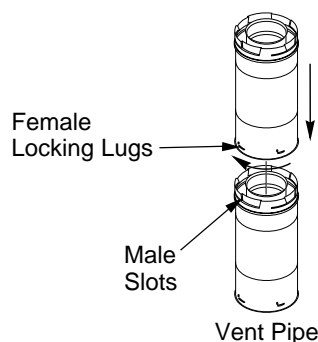


Figure 26 - Vent Pipe Connections

VENTING INSTALLATION

Continued

- Attach vent pipe assembly to the burner system. Set stove in front of its permanent location to insure minimum clearances. Mark the wall for a 10" (25.4 cm) square hole (for noncombustible material such as masonry block or concrete, a 7 1/2" [19.1 cm] diameter hole is acceptable). See Figure 25. The center of the hole should line up with the center-line of the horizontal rigid vent pipe. Cut a 10" x 10" (25.4 cm x 25.4 cm) square hole through combustible exterior wall (7 1/2" [19.1 cm] diameter hole if noncombustible). Frame as necessary (see Figure 27).
- Noncombustible Exterior Wall:** Apply a bead of non-hardening mastic around the outside edge of the vent cap. Position the vent cap in the center of the 7 1/2" (19.1 cm) hole on the exterior wall with the arrow on the vent cap pointing up. Attach the vent cap with four wood screws provided (see Figure 28). *Note:* Replace the wood screws with appropriate fasteners for stucco, brick, concrete, or other types of siding.
- Carefully move the fireplace with vent assembly attached toward the wall and insert the vent pipe into the horizontal termination. The pipe overlap should be a minimum of 1 1/4" (3.2 cm). Fasten all vent pipe connections (except vent cap) with screws provided.
- Combustible Exterior Wall Only:** Slide the wall firestop against the interior wall surface and attach with screws provided (see Figure 30).

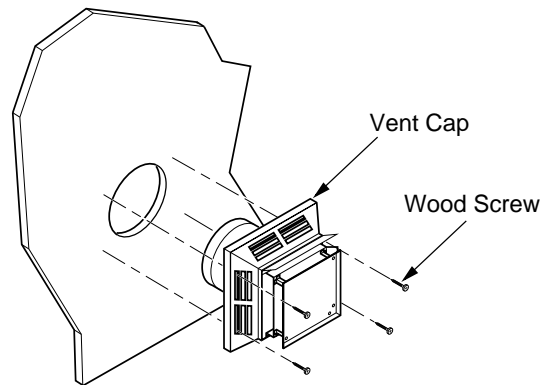


Figure 28 - Installing Horizontal Vent Cap (Noncombustible Exterior)

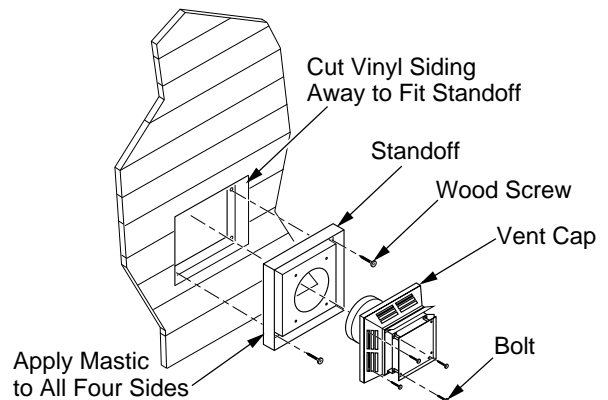


Figure 29 - Installing Vinyl Siding Standoff (Combustible Exterior Wall)

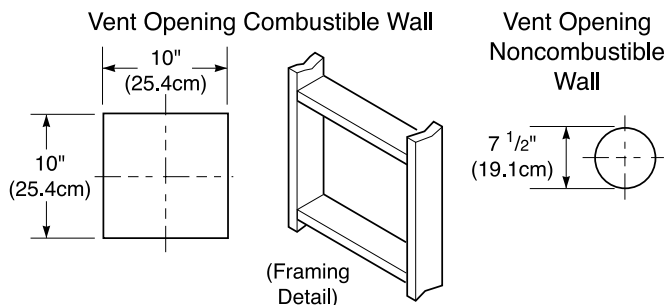


Figure 27 - Vent Opening Requirements

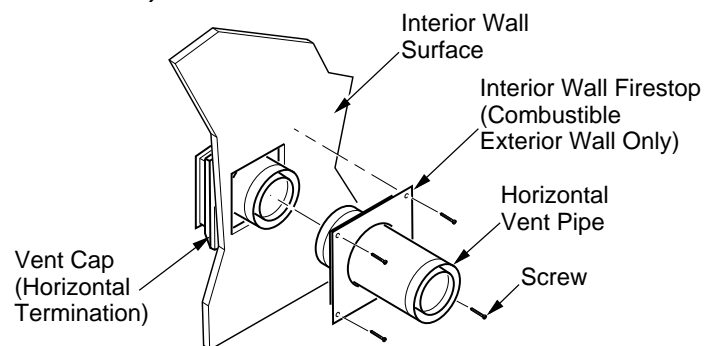


Figure 30 - Connecting Vent Cap with Horizontal Vent Pipe

⚠ WARNING: Do not recess vent termination in to any wall. This will cause a fire hazard.

Combustible Exterior Wall: For vinyl siding, stucco, or wood exteriors, a siding standoff must be installed between the vent cap and exterior wall. The siding standoff prevents excessive heat from damaging siding materials. Siding materials must be cut to accommodate standoff. Bolt the vent cap to the standoff. Apply non-hardening mastic around outside edge of the standoff. Position the standoff/cap assembly in the center of the 10" (25.4 cm) square hole and attach to exterior wall with wood screws provided (see Figure 29). The siding standoff must sit flush against the exterior fascia material.

- Combustible Exterior Wall Only:** Slide the interior wall firestop over the vent pipe before connecting the horizontal run to the vent cap (see Figure 30).

VENTING INSTALLATION

Continued

Horizontal Termination Configurations

Figures 31 through 33 show different configurations for venting with horizontal termination. Each figure includes a chart with vertical minimum/maximum and horizontal maximum dimensions which must be met. Seal all connections with high temperature silicone sealant (outer pipe only) as specified in the second warning statement on page 12. All horizontal piping runs require 1/4" (6.35 mm) rise per 12" (0.3 m) of horizontal run.

Horizontal Venting

Vertical (V)	Horizontal (H)
52" min. (1.32 m)	26" max. (.66 m)
63" min. (1.6 m)	49" max. (1.24 m)
86" min. (2.18 m)	96" max. (2.44 m)
91" min. (2.31 m)	20' max. (6.1 m)

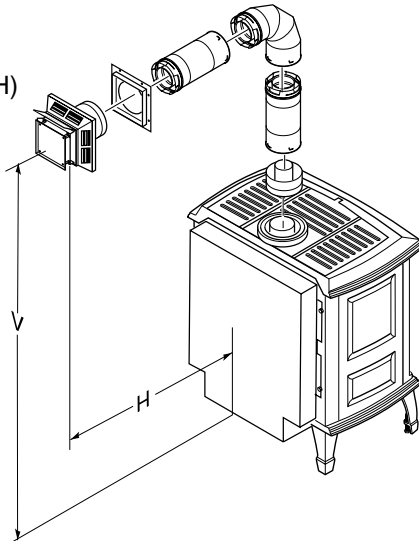


Figure 31 - Horizontal Termination Configuration for Venting Using One 90° Elbow

Venting with Two 90° Elbows

Vertical (V)	Horizontal (H ₁)	Horizontal (H ₁) + Horizontal (H ₂)
6' min. (1.83 m)	4' max. (1.22 m)	8' max. (2.44 m)
7' min. (2.13 m)	6' max. (1.83 m)	12' max. (3.66 m)
8' min. (2.44 m)	8' min. (2.44 m)	20' max. (6.1 m)
20' max. (6.1 m)	8' max. (2.44 m)	20' max. (6.1 m)

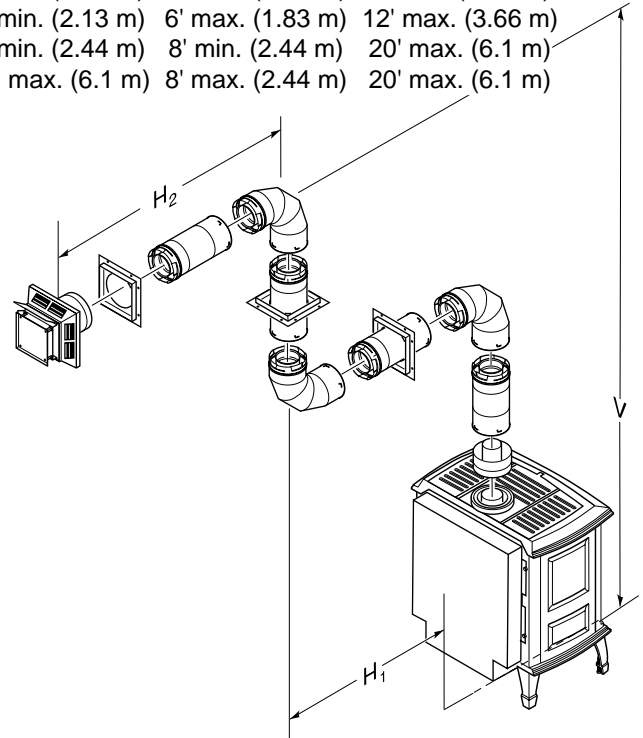
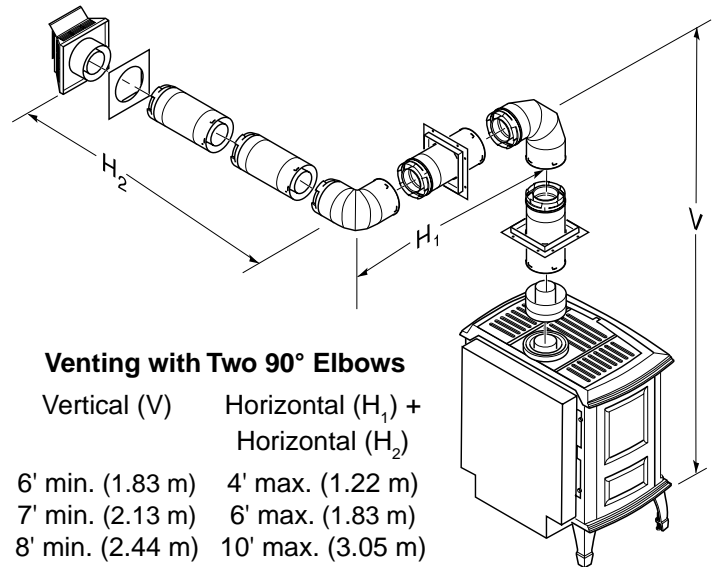


Figure 32 - Horizontal Termination Configuration for Venting Using Two 90° Elbows



Venting with Two 90° Elbows

Vertical (V)	Horizontal (H ₁) + Horizontal (H ₂)
6' min. (1.83 m)	4' max. (1.22 m)
7' min. (2.13 m)	6' max. (1.83 m)
8' min. (2.44 m)	10' max. (3.05 m)
20' max. (6.1 m)	12' max. (3.66 m)

Figure 33 - Horizontal Termination Configuration for Venting Using Two 90° Elbows with Termination at 90° with Stove

VENTING INSTALLATION

Continued

INSTALLATION FOR VERTICAL TERMINATION

NOTICE: Use rigid pipe only. Flex venting is not to be used with a vertical termination.

1. Determine the route your vertical venting will take. If ceiling joists, roof rafters, or other framing will obstruct the venting system, consider an offset (see Figure 34) to avoid cutting load bearing members. *Note:* Pay special attention to these installation instructions for required clearances (air space) to combustibles when passing through ceilings, walls, roofs, enclosures, attic rafters, etc. Do not pack air spaces with insulation. Also note maximum vertical rise of the venting system and any maximum horizontal offset limitations. Offsets must fall within the parameters shown in Figures 38 through 40, pages 17 and 18.
2. Set the stove in desired location. Drop a plumb line down from the ceiling to the position of the burner system exit flue. Mark the center point where the vent will penetrate the ceiling. Drill a small locating hole at this point.

Drop a plumb line from the inside of the roof to the locating hole in the ceiling. Mark the center point where the vent will penetrate the roof. Drill a small locating hole at this point.

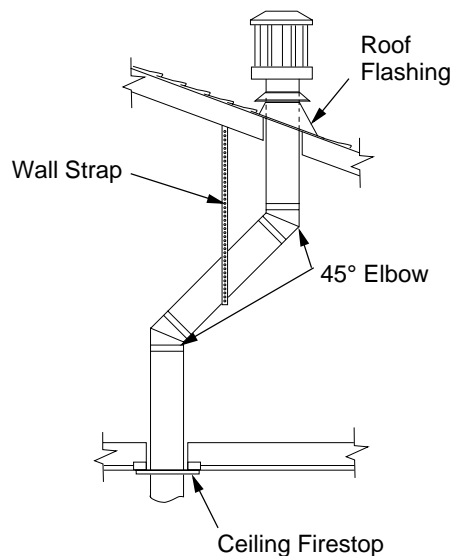


Figure 34 - Offset with Wall Strap and 45° Elbows

Flat Ceiling Installation

1. Cut a 10" (25.4 cm) square hole in the ceiling using the locating hole as a center point. The opening should be framed to 10" x 10" (25.4 cm x 25.4 cm) inside dimensions, as shown in Figure 27 on page 14 using framing lumber the same size as the ceiling joists. If the area above the ceiling is an insulated ceiling or a room, nail firestop from the top side. This prevents loose insulation from falling into the required clearance space. Otherwise, install firestop below the framed hole. The firestop should be installed with no less than three nails per side (see Figure 35).
2. Assemble the desired lengths of pipe and elbows necessary to reach from the burner system flue up through the firestop. All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 12. Be sure all pipe and elbow connections are fully twist-locked (see Figure 26, page 13).
3. Cut a hole in the roof using the locating hole as a center point. (Cover any exposed open vent pipes before cutting hole in roof.) The 10" x 10" (25.4 cm x 25.4 cm) hole must be measured on the horizontal; actual length may be larger depending on the pitch of the roof. There must be a 1" (2.54 cm) clearance from the vent pipe to combustible materials. Frame the opening as shown in Figure 27 on page 14.
4. Connect a section of pipe and extend up through the hole.

Note: If an offset is needed to avoid obstructions, you must support the vent pipe every 3 feet (0.91 m). Use wall straps for this purpose (see Figure 34). Whenever possible, use 45° elbows instead of 90° elbows. The 45° elbow offers less restriction to the flow of the flue gases and intake air.
5. Place the flashing over the pipe section(s) extending through the roof. Secure the base of the flashing to the roof and framing with roofing nails. Be sure roofing material overlaps the top edge of the flashing as shown in Figure 34. There must be a 1" (2.54 cm) clearance from the vent pipe to combustible materials.

If area above is a room, install firestop above framed hole.

If area above is not a room, install firestop below framed hole.

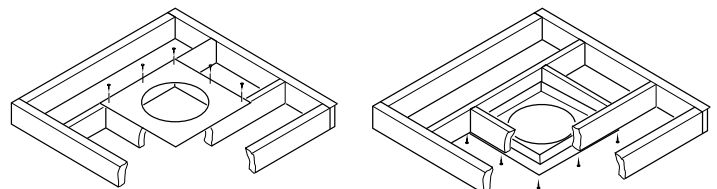


Figure 35 - Installing Firestop

VENTING INSTALLATION

Continued

- Continue to add pipe sections until the height of the vent cap meets the minimum building code requirements described in Figure 23 on page 11. *Note:* You must increase vent height for steep roof pitches. Nearby trees, adjoining rooflines, steep pitched roofs, and other similar factors may cause poor draft or down-drafting in high winds. Increasing the vent height may solve this problem.
- Twist-lock the vent cap onto the last section of vent pipe and seal outer pipe connection with high temperature silicone sealant as specified in the second warning statement on page 12.

Note: If the vent pipe passes through any occupied areas above the first floor, including storage spaces and closets, you must enclose pipe. You may frame and sheetrock the enclosure with standard construction material. Make sure and meet the minimum allowable clearances to combustibles. Do not fill any of the required air spaces with insulation.

Cathedral Ceiling Installation

- Remove shingles or other roof covering as necessary to cut the rectangular hole for the support box. Mark the outline of the cathedral ceiling support box on the roof sheathing using the locating hole as a center point.
- Cut the hole 1/8" (3.18 mm) larger than the support box outline (see Figure 36).
- Lower the support box through the hole in the roof until the bottom of the box extends at least 2" (5.08 cm) below the ceiling (see Figure 36). Align the support box vertically and horizontally using a level. Temporarily tack the support box in place through the inside walls and into the roof sheathing.
- Using tin snips, cut the support box from the top corners down to the roofline and fold the resulting flaps over the roof sheathing (see Figure 37). Apply a bead of nonhardening mastic around the top edges of the support box to make a seal between the box and the roof. Nail in place with roofing nails. Remove any combustible material that might be inside of the support box.
- Complete the cathedral ceiling installation by following the same procedures outlined in steps 2 through 7 for *Flat Ceiling Installation*, starting page 16.

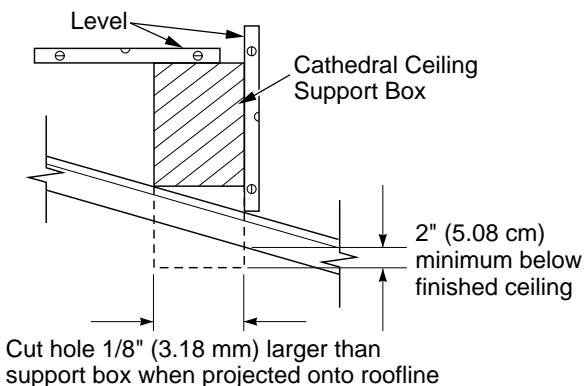


Figure 36 - Cathedral Ceiling Support Box Installation

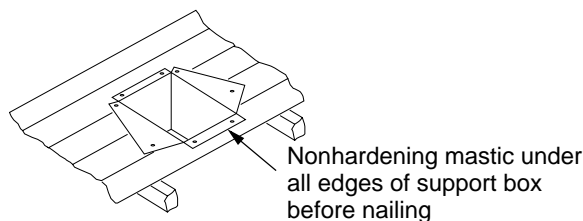


Figure 37 - Installed Cathedral Ceiling Support Box

Vertical Termination Configurations

Figure 38 through 41 show four different configurations for vertical termination. All connections must be sealed with high temperature silicone sealant as specified in the second warning statement on page 12.

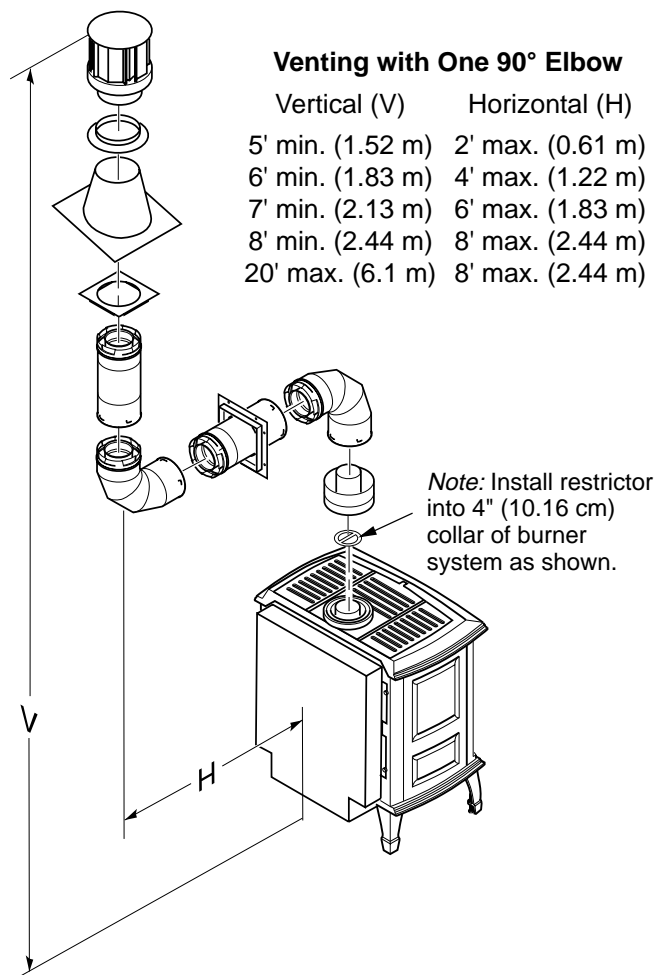


Figure 38 - Vertical Venting Configuration Using One 90° Elbow

VENTING INSTALLATION

Continued

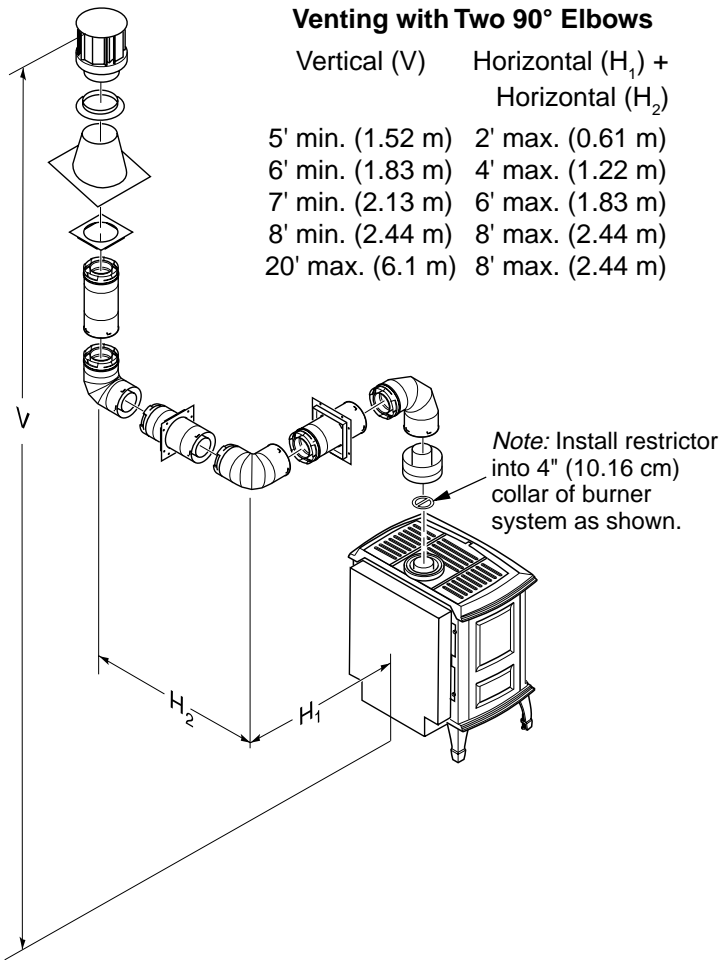


Figure 39 - Vertical Venting Configuration Using Two 90° Elbows with Two Horizontal Runs

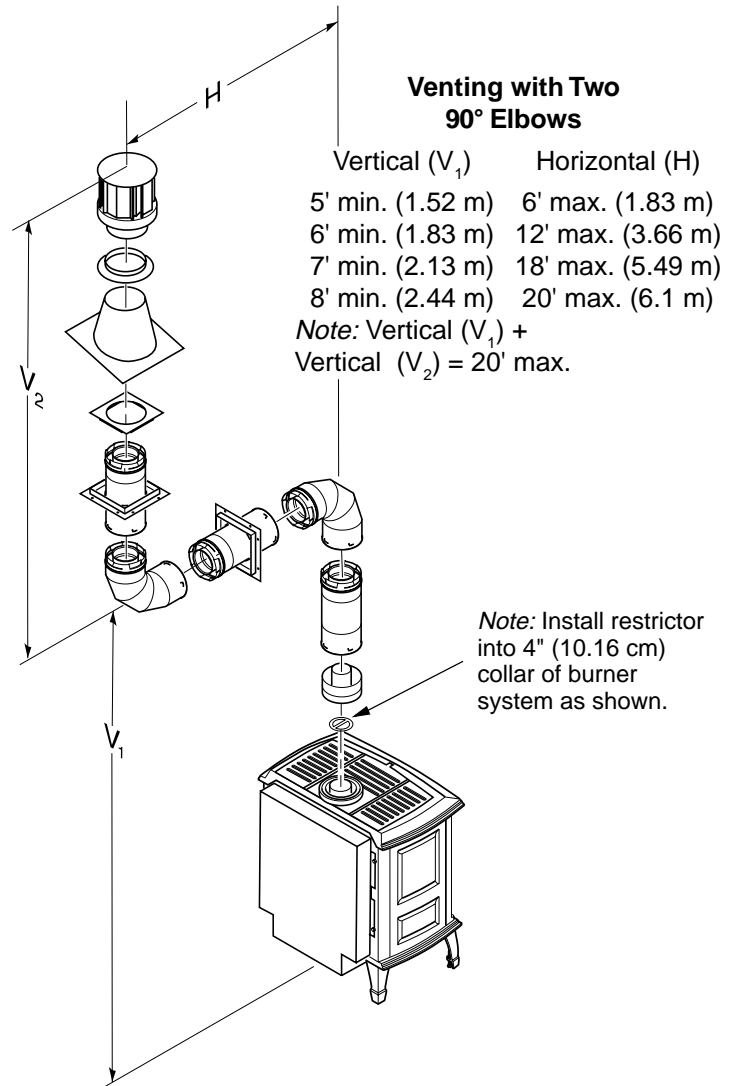


Figure 40 - Vertical Venting Configuration Using Two 90° Elbows

VENTING INSTALLATION

Continued

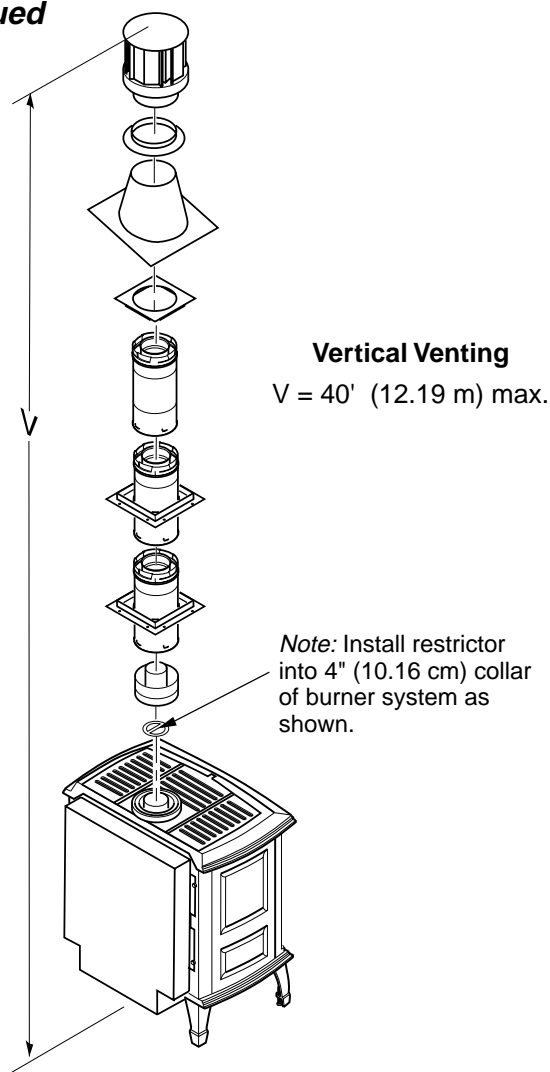


Figure 41 - Vertical Venting Configuration With No Horizontal Run

HIGH ALTITUDE INSTALLATION

Your cast iron stove and direct-vent burner system has been CSA tested and approved for operation at altitudes in the USA from 0-2000 ft. (0-609 m) and in Canada from 0-4500 ft. (0-1.37 km)

When installing this stove at an elevation above 2000 feet (in the USA), you may need to decrease the input rating by changing the existing burner orifice to a smaller size. Reduce input 4% for each 1000 feet (304.8 m) above sea level. Check with your local gas company for proper orifice size identification and proper orifice for your location..

When installing this stove at an elevation above 4500 feet (1.37 km) (in Canada), check with local authorities.

For assistance with any high altitude installation contact DESA's Technical Service Department at 1-866-672-6040.

PARTS LISTS FOR VENTING KITS AND COMPONENTS

Number	Description
VKG-47-K	Ground Floor Vent Kit, Black Includes: Horizontal Square Termination, 90° Elbow, 7"-12" (17.78 cm - 0.3 m) Adjustable Coaxial Pipe, 6" (15.24 cm) Pipe Adaptor, 12" (0.3 m) Coaxial Pipe, Wall Firestop, Decorative Trim Plate and 18 Screws
VKB-47-K	Basement Vent Kit Includes: Horizontal Square Termination, 90° Elbow, 7"-12" (17.78 cm - 0.3 m) Adjustable Coaxial Pipe, 6" (15.24 cm) Pipe Adaptor, 4' (1.22 m) Coaxial Pipe, Wall Firestop, Decorative Trim Plate and 18 Screws
VKS-47-K	Snorkel Vent Kit Includes: 36" (0.91 m) Snorkel Termination, 90° Elbow, 7"-12" (17.78 cm - 0.3 m) Adjustable Coaxial Pipe, 6" (15.24 cm) Pipe Adaptor, 4' (1.22 m) Coaxial Pipe, Wall Firestop, Decorative Trim Plate and 18 Screws
VKR-47-K	Roof Vent Kit Includes: Vertical High Wind Termination, Flue Restrictor, 7"-12" (17.78 cm - 0.3 m) Adjustable Coaxial Pipe, 6" (15.24 cm) Pipe Adaptor, 12" (0.3 m) Coaxial Pipe, 4' (1.22 m) Coaxial Pipe, Firestop Decorative Trim Plate, Roof Flashing, Storm Collar and 18 Screws
P-47-12-K	12" (0.3 m) Black Coaxial Pipe (1 pk)
P-47-24-K	24" (0.61 m) Black Coaxial Pipe (1 pk)
P-47-48-K	48" (1.22 m) Black Coaxial Pipe (1 pk)
PA47-712-K	7"-12" (17.78 cm - 0.3 m) Black Coaxial Pipe (1 pk)
P-47-6-K	6" (15.24 cm) Black Coaxial Pipe (1 pk)
E47-90-K	90° Elbow (1 pk)
E47-45-K	45° Elbow (1 pk)
PA-47-6-K	6" (15.24 cm) Adaptor Collar, Black (1 pk)
WS-47	Wall Strap (1 pk)
SC-47	Storm Collar (1 pk)
VT-47	Vertical Round Termination (1 pk)
WF-47	Wall Firestop (1 pk)
VR-47	Vertical Restrictor (1 pk)
FP-47	Firestop Plate (1 pk)
HTS-47	Horizontal Square Termination (1 pk)
CS-47	Cathedral Ceiling Support Box (1 pk)
RF-47-6	Roof Flashing 0 to 6/12 Pitch (1 pk)
RF-47-12	Roof Flashing 6/12 to 12/12 Pitch (1 pk)
S-47	Vinyl Siding Standoff (1 pk)
TP-47	Trim Plate, Black (1 pk)
HT-47	Horizontal Round Termination (1 pk)
ST-47-14	14" (0.36 m) Snorkel Termination (1 pk)
ST-47-36	36" (0.91 m) Snorkel Termination (1 pk)

STOVE AND BURNER SYSTEM INSTALLATION

CHECK GAS TYPE

Use proper gas type for the burner system unit you are installing. If you have conflicting gas types, do not install burner system. See dealer where you purchased the stove and burner system for proper burner system according to your gas type. Conversion kits are also available for these models, see *Accessories* on page 38.

INSTALLING GAS PIPING TO STOVE/BURNER SYSTEM LOCATION

WARNING: A qualified installer or service person must connect burner system to gas supply. Follow all local codes.

CAUTION: For propane/LP units, never connect burner system directly to the propane/LP supply. This burner system requires an external regulator (not supplied). Install the external regulator between the burner system and propane/LP supply.

Installation Items Needed

Before installing stove and burner system, make sure you have the items listed below.

- external regulator (supplied by installer)
- piping (check local codes)
- sealant (resistant to propane/LP gas)
- equipment shutoff valve *
- test gauge connection *
- sediment trap
- tee joint
- pipe wrench
- approved flexible gas line with gas connector (if allowed by local codes) (not provided)

* A CSA design-certified equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the CSA design-certified equipment shutoff valve from your dealer.

For propane/LP connections only, the installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 14 inches of water. If you do not reduce incoming gas pressure, burner system regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 42. Pointing the vent down protects it from freezing rain or sleet.

CAUTION: Use only new, black iron or steel pipe. Internally-tinned copper tubing may be used in certain areas. Check your local codes. Use pipe of 1/2" (12.7 mm) diameter or greater to allow proper gas volume to burner system. If pipe is too small, undue loss of volume will occur.

Installation must include an equipment shutoff valve, union, and plugged 1/8" NPT tap. Locate NPT tap within reach for test gauge hook up. NPT tap must be upstream from burner system (see Figure 43).

IMPORTANT: Install main gas valve (equipment shutoff valve) in an accessible location. The main gas valve is for turning on and shutting off the gas to the appliance.

Check your building codes for any special requirements for locating equipment shutoff valve to stoves.

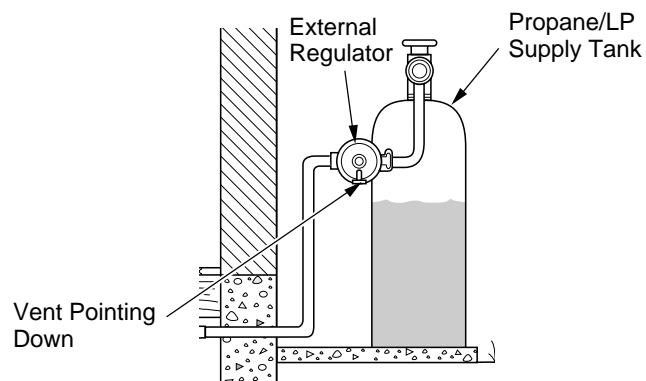


Figure 42 - External Regulator with Vent Pointing Down (Propane/LP Only)

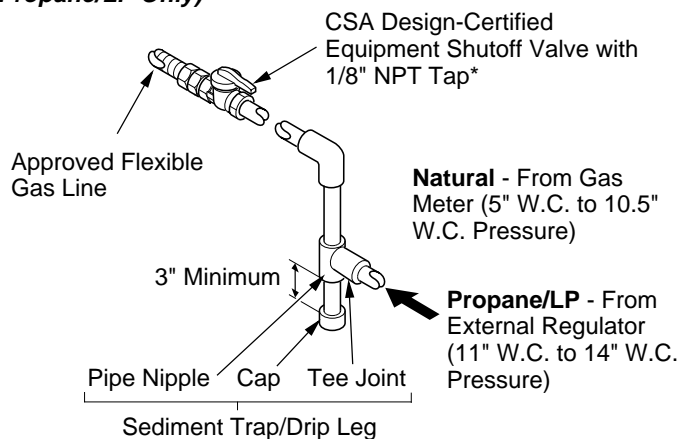


Figure 43 - Gas Connection

* The CSA design-certified equipment shutoff valve may be supplied with the appliance or you can purchase it from your dealer.

STOVE AND BURNER SYSTEM INSTALLATION

Continued

Apply pipe joint sealant lightly to male NPT threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged burner system valves.

⚠ WARNING: Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.

We recommend that you install a sediment trap/drip leg in supply line as shown in Figure 43, page 20. Locate sediment trap/drip leg where it is within reach for cleaning. Install in piping system between fuel supply and burner system. Locate sediment trap/drip leg where trapped matter is not likely to freeze. A sediment trap traps moisture and contaminants. This keeps them from going into burner system gas controls. If sediment trap/drip leg is not installed or is installed wrong, burner system may not run properly.

CONNECTING STOVE/BURNER SYSTEM TO GAS SUPPLY

Installation Items Needed

- 5/16" hex socket wrench or nut-driver
 - sealant (resistant to propane/LP gas, not provided)
1. Open lower door panel.
 2. Route flexible gas line (provided by installer, see Figure 44) from equipment shutoff valve to burner system. Route flexible gas supply line and attach to valve.
 3. Check all gas connections for leaks. See *Checking Gas Connections*, column 2.

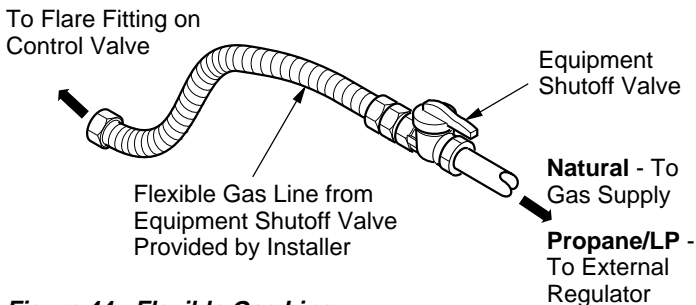


Figure 44 - Flexible Gas Line

CHECKING GAS CONNECTIONS

⚠ WARNING: Test all gas piping and connections for leaks after installing or servicing. Correct all leaks at once.

⚠ WARNING: Never use an open flame to check for a leak. Apply noncorrosive leak detection solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.

Pressure Testing Gas Supply Piping System

Test Pressures In Excess Of 1/2 PSIG (3.5 kPa)

1. Disconnect appliance with its appliance main gas valve (control valve) and equipment shutoff valve from gas supply piping systems. Pressures in excess of 1/2 psig (3.5 kPa) will damage burner system gas regulator.
2. Cap off open end of gas pipe where equipment shutoff valve was connected.
3. Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas burner system or opening main gas valve located on or near gas meter for natural gas burner system, or using compressed air.
4. Check all joints of gas supply piping system. Apply noncorrosive leak detection solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.
5. Reconnect burner system and equipment shutoff valve to gas supply. Check reconnected fittings for leaks.

Test Pressures Equal To or Less Than 1/2 PSIG (3.5 kPa)

1. Close equipment shutoff valve (see Figure 45).
2. Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas burner system or opening main gas valve located on or near gas meter for natural gas burner system, or using compressed air.

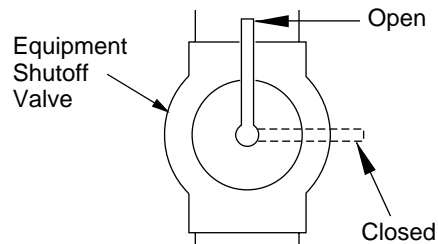


Figure 45 - Equipment Shutoff Valve

STOVE AND BURNER SYSTEM INSTALLATION

Continued

3. Check all joints from propane/LP supply tank or gas meter to equipment shutoff valve (see Figure 46 for propane/LP or Figure 47 for natural). Apply noncorrosive leak test solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.

Pressure Testing Burner System Gas Connections

1. Open equipment shutoff valve (see Figure 45, page 21).
2. Open propane/LP supply tank valve for propane/LP burner system or main gas valve located on or near gas meter for natural gas burner system.
3. Make sure control knob of burner system is in the OFF position.
4. Check all joints from equipment shutoff valve to thermostatic gas valve (see Figure 46 for propane/LP or Figure 47 for natural). Apply noncorrosive leak detection solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.
5. Light burner system (see *Operating Stove with Burner System*, pages 25 through 28). Check all other internal joints for leaks.
6. Turn off burner system (see *To Turn Off Gas to Appliance*, page 26).

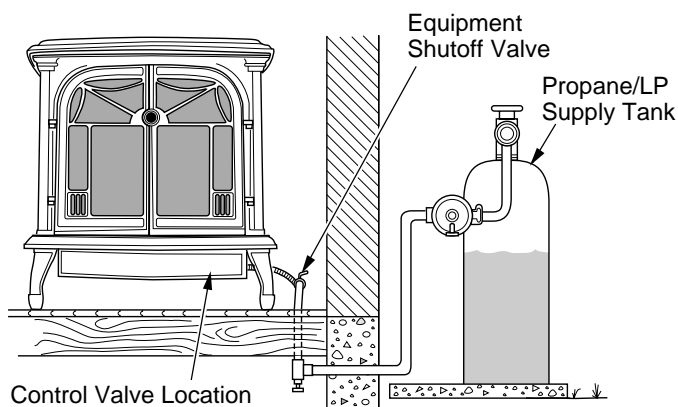


Figure 46 - Checking Gas Joints for Propane/LP Gas Burner System

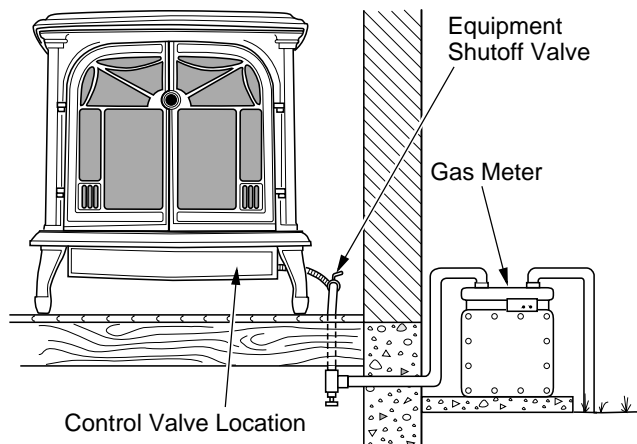


Figure 47 - Checking Gas Joints for Natural Gas Burner System

INSTALLING OPTIONAL WALL MOUNT SWITCH - GWMS2

1. Connect one terminal of 25 ft. wire for the wall switch to the TPTH terminal on the valve. Connect remaining wire terminal to the TH terminal on the valve. Make sure that the wire terminals are in the positions on the unit as pictured in Figure 48. If wires are not connected as shown the switch will not work.
2. Route the 25 ft. wire through openings provided on the sides of the burner system to a convenient location to mount your switch.
3. Connect one bare wire end to each of the terminals of the GWMS2 wall switch.
4. Install the wall switch and cover in the wall.

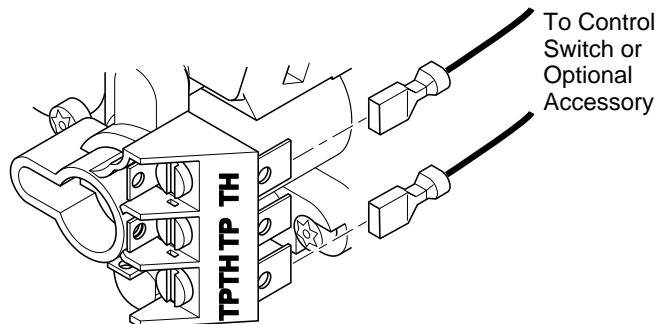


Figure 48 - Control Valve Terminals

STOVE AND BURNER SYSTEM INSTALLATION

Continued

INSTALLING OPTIONAL WALL MOUNTED THERMOSTAT - GWMT1

⚠ WARNING: Installation must be done by a qualified installer familiar with low voltage wiring procedures.

⚠ WARNING: Do not connect this thermostat to any electrical source! Electrical shock and/or fire hazard will occur.

1. Open lower door panel. The valve is attached to the underside of the burner system assembly.
2. Disconnect from the valve the wires running from the ON/OFF switch.
3. Connect one terminal of the wire for the wall thermostat to the THTP terminal on the valve. Connect remaining wire terminal to the TH terminal on the valve. Make sure that the wire terminals are in the positions on the unit as pictured in Figure 48, page 22. If wires are not connected as shown the thermostat will not work.
4. Route the wire to a convenient location to mount your thermostat (no outside wall). **IMPORTANT:** The wire must not exceed 25 feet in length. The thermostat should be mounted 54" above the floor in a location where there is good air circulation. Avoid heat sources such as lamps, direct sunlight, fireplace, or heat and air conditioning ducts.
5. Gently remove the cover of the thermostat from the base. Grasp the sides of the cover firmly and pull to separate from the base.
6. Feed the electrical wires through the rectangular slots (from the back) on each side of the base (see Figure 49).

⚠ WARNING: Do not connect this thermostat to a power source. Electrical shock and/or fire hazard will occur.

7. Connect one bare wire end to each terminal ("W" and "R") of the thermostat base (see Figure 50).
8. Install the base to the wall with screws provided with thermostat.
9. Move the temperature adjustment back and forth to insure the bimetal is free from restrictions.
10. Replace the cover onto the base. (Upon installation, the thermostat must be allowed to stabilize at room temperature for a minimum of 30 minutes for proper operation.)

11. Set the temperature adjustment to the desired setting. This thermostat has been electronically calibrated at the factory. No adjustment or leveling is necessary.

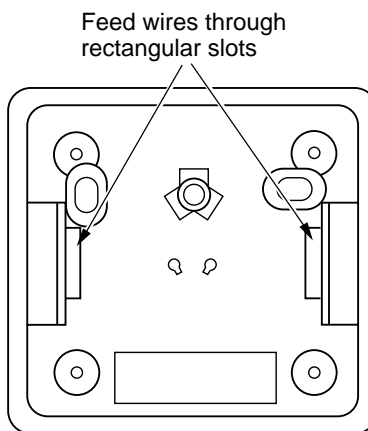


Figure 49 - Back View of Thermostat Base

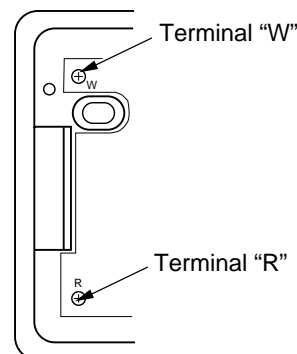


Figure 50 - Thermostat Base Terminal "W" and "R"

INSTALLING OPTIONAL WIRELESS HAND-HELD REMOTE CONTROL ACCESSORIES - GHRCB AND GHRCTB SERIES

NOTICE: Use only alkaline batteries (not included).

Installing Remote Receiver and 9-volt Alkaline Battery

1. Open bottom door on stove body.
2. Disconnect wires from THTP and TH on control valve that lead to the switch (see Figure 48, page 22). Discard switch plate, screws, and nuts.
3. Install 9-volt battery (not included) into receiver battery clip and connect to terminals (see Figure 51).

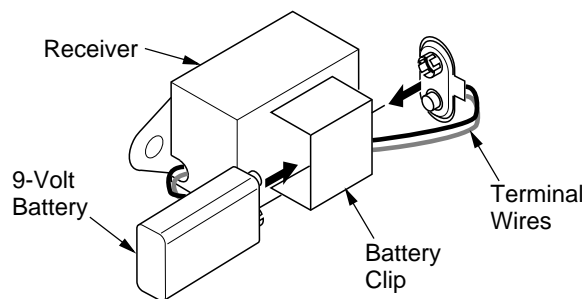


Figure 51 - Installing Battery in Receiver

STOVE AND BURNER SYSTEM INSTALLATION

Continued

- Place receiver into valve bracket and align holes (see Figure 52).
- Use push-in fasteners included with receiver to secure to bracket.
- Connect the wires from the receiver to the valve at TH and THTP (see Figure 48, page 22).

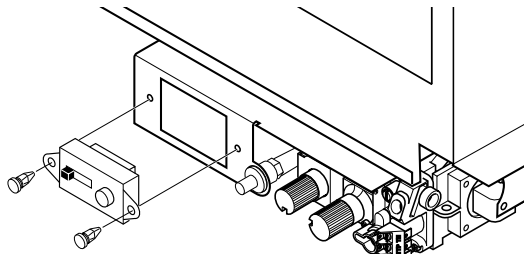


Figure 52 - Installing Remote Receiver

Installing 9-Volt Alkaline Battery in Hand-Held Remote Control Unit

- Remove battery cover on back of remote control unit
- Attach terminal wires to a 9-volt battery (not included). Place battery into the battery housing.
- Replace battery cover onto remote control unit.

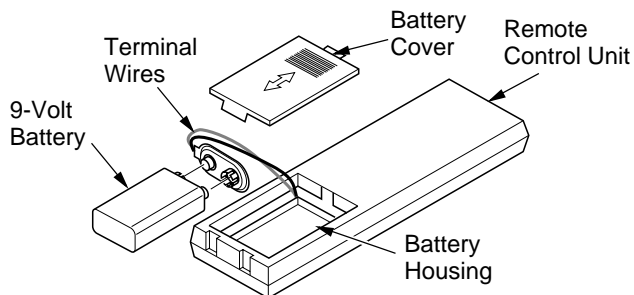


Figure 53 - Installing Battery in Hand-Held Remote Control Unit (GHRCB Series)

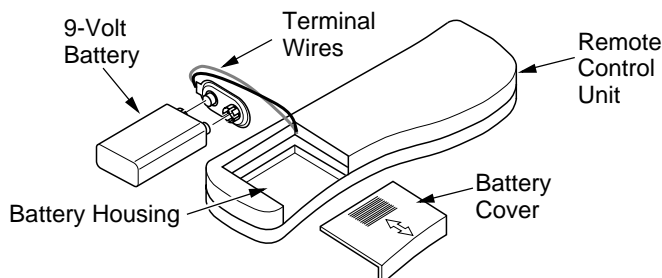


Figure 54 - Installing Battery in Hand-Held Remote Control Unit (GHRCTB Series)

INSTALLING LOGS, LAVA ROCK AND GLOWING EMBERS

⚠ WARNING: Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this burner system may result in property damage or personal injury.

You must remove glass door and front panel to install logs, lava rock, and ember material. See *Removing/Replacing Glass Door*, page 6.

It is very important to install these logs exactly as instructed in Figures 55 through 58. Do not modify logs. Only use logs supplied with freestanding burner system. Do not use if any log(s) are broken (see *Replacement Parts*, page 33).

- Remove glass door. See *Removing/Replacing Glass Door*, page 6.
- Place log #1 (back log) on top of grate. Make sure the notches in the bottom of the log fit over the grate (see Figure 55).
- Rest log #2 (large front log) on the pins on the front part of the grate (see Figure 56).
- Place log #3 (crossover log) onto the rear and front logs. Make sure it is seated properly into the notch on the front log and over the raised triangular portion of the rear log as shown in Figure 57, page 25.
- Place log #4 (small log) onto the front left part of the grate making sure the notches fits over the prong of the grate. See Figure 58, page 25.

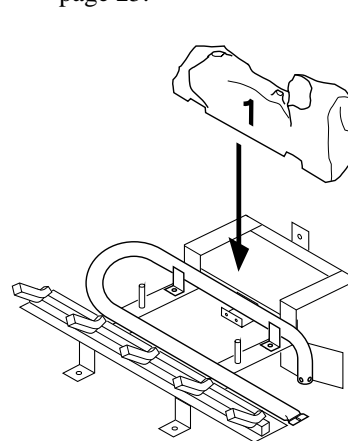


Figure 55 - Installing Log No. 1

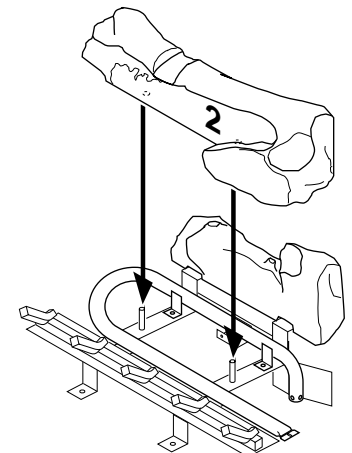


Figure 56 - Installing Log No. 2

STOVE AND BURNER SYSTEM INSTALLATION

Continued

- Lava rock may be placed along sides and front inside burner system bottom. This may not be visible when you have replaced the front of the stove. It is not necessary to use all of the lava rock provided.

NOTICE: Do not put lava rock on burner or under burner. Placing lava rock on burner could cause performance problems.

- Pull ember material apart into pieces no larger than a dime. Place these pieces loosely and sparingly directly onto the exposed section of the front burner and along the space between the burner and grate prongs (see Figure 59). This will create the glowing ember appearance as the flame touches the ember material. Do not block air slots by using too much ember material in one area. It is not necessary to use all of the ember material provided.
- Replace the glass door and stove front. See *Removing/Replacing Glass Door*, page 6.

WARNING: The glass door must be securely in place before running this burner system. Do not run this burner system if glass is missing or broken.

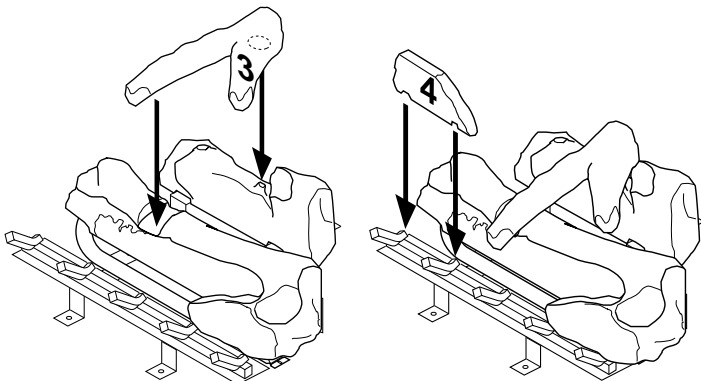


Figure 57 - Installing Log No. 3 Figure 58 - Installing Log No. 4

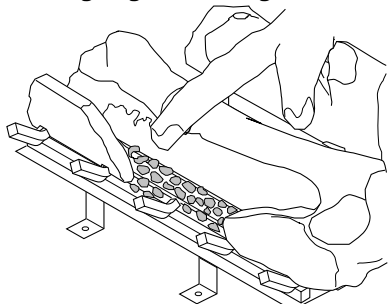


Figure 59 - Placing Ember Material on Burner

OPERATING STOVE WITH BURNER SYSTEM

**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.


- This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.
- 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 electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- 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.
- 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


- STOP!** Read the safety information above.
- Turn ON/OFF switch, located on side of rear cover, to "OFF".
- Open lower door panel.
- Turn off all electric power to the burner system.
- Push in gas control knob slightly and turn clockwise to "OFF".
- Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, **STOP!** Follow "B" in the safety information above. If you don't smell gas, go to the next step.
- The pilot is located by the main burner and should not require accessing for lighting.
- Turn gas control knob counterclockwise to "PILOT".

OPERATING STOVE WITH BURNER SYSTEM

Continued


9. Push in gas control knob all the way and hold. Immediately light the pilot by repeatedly depressing the piezo spark ignitor until a flame appears. Continue to hold for about one (1) minute after the pilot is lit. Release gas control knob and it will pop back. Pilot should remain lit. If it goes out, repeat steps 5 through 8, page 25.
 - If gas control 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. Turn on all electric power to the burner system.
12. Turn the ON/OFF switch to ON position.
13. This valve is equipped with a HI/LO feature. Set burner system input as desired.
14. Close lower panel.

TO TURN OFF GAS TO APPLIANCE

1. Turn ON/OFF switch, located on side of rear cover, to "OFF".
- 2a. Open lower door panel.
- 2b. If Using Optional Hand-Held Remote: Set selector switch, located on side of rear cover, in the OFF position to prevent draining battery.
3. Turn off all electrical power to the appliance if service is to be performed.
4. Push in gas control knob slightly and turn clockwise  to "OFF".
5. Close lower panel.

Shutting Off Burners Only (pilot stays lit)

You may shut off the burners and keep the pilot lit by doing one of the following:

1. Turn gas control knob clockwise  to the PILOT position.
2. Set selector switch in the OFF position.

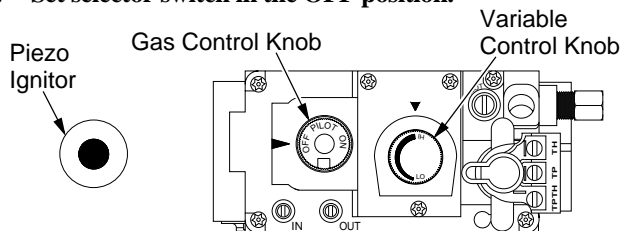


Figure 60 - Control Valve

MANUAL LIGHTING PROCEDURE

1. Remove glass door (see *Removing/Replacing Glass Door*, page 6).
2. Follow steps 1 through 8 under *Lighting Instructions*, page 25.
3. Depress gas control knob and light pilot with match.
4. Keep gas control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release gas control knob. Now follow steps 10 through 14 under *Lighting Instructions*, column 1.
5. Replace glass door (see *Removing/Replacing Glass Door*, page 6).

OPTIONAL HAND-HELD REMOTE OPERATION

Note: All remote control accessories must be purchased separately (see *Accessories*, page 38). Follow instructions included with the remote control.

NOTICE: You must light the pilot before using the hand-held remote control unit. See *Lighting Instructions* on page 25.

1. After lighting, let pilot flame burn for about one minute. Turn control knob to ON position. Adjust flame adjustment knob anywhere between HI and LO. Slide the selector switch to the REMOTE position (see Figure 61). **Note:** The burner may light if hand-held remote was on when selector switch was last turned off. You can now turn the burner on and off with the hand-held remote control unit.

IMPORTANT: Do not leave the selector switch in the REMOTE or ON position when the pilot is not lit. This will drain the battery.

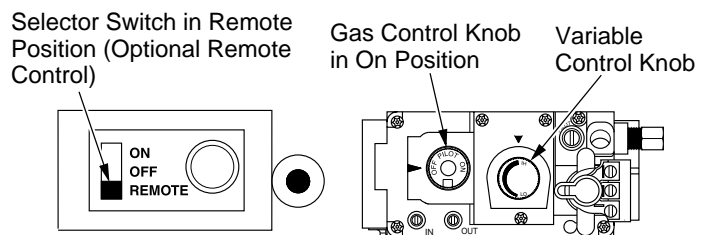


Figure 61 - Setting the Selector Switch, Gas Control Knob, and Variable Control Knob for Remote Operation

OPERATING STOVE WITH BURNER SYSTEM

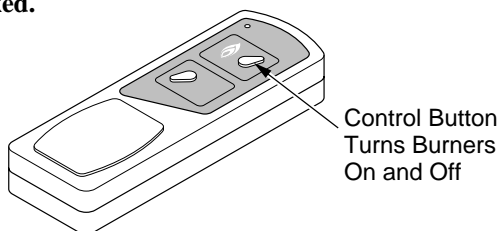
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ON/OFF SERIES (MODEL GHRCB)

Hold the control button on the hand-held remote until burner turns on. Hold the control button again until burner turns off (see Figure 62).

TO LOCK press both buttons on hand-held remote control until light stops flashing. Hand-held remote control is now locked. If the fire is on it will be turned off automatically. In the locked state, the light will not light up when any button is pressed.

TO UNLOCK press both buttons together on hand-held remote control until the light stops flashing. The hand-held remote is now unlocked.



Control Button Turns Burners On and Off

Figure 62 - On/Off Hand-Held Remote Control Unit (GHRCB)

THERMOSTAT SERIES (MODEL GHRCTB)

The hand-held remote can be operated using either the manual mode (MANU) or thermostatic mode (AUTO) (see Figure 63). To select Fahrenheit/Centigrade mode display, carefully press the °C/°F mode button with the end of a paper clip or similar blunt object.

Manual Mode

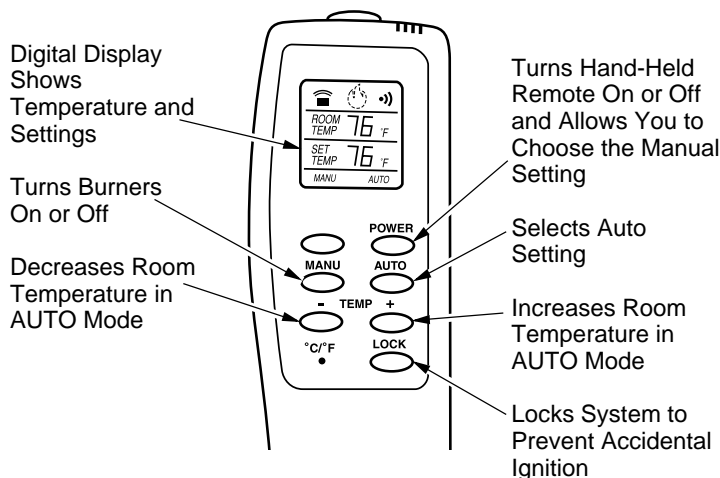
1. Press the POWER and LOCK buttons together to turn on the hand-held remote control.
2. Press the MANU button to turn on the fireplace.
3. Press the POWER and LOCK buttons together to turn off the fireplace.

Auto (Thermostatic) Mode

1. Press the POWER and LOCK buttons together to turn on the hand-held remote control.
2. Press AUTO button to select this mode.
3. Set the desired room temperature by pressing the TEMP + or - buttons.
4. Press the POWER and LOCK buttons together to turn off the fireplace

Note: Do not leave the hand-held remote in the AUTO mode close to the fireplace. The radiant heat from the fireplace will turn off the fireplace. Ideally, place the hand-held remote in the center of the room facing towards the fireplace.

Note: Do not hold the hand-held remote for a long time. Body temperature will affect its operation in the AUTO mode.



Digital Display Shows Temperature and Settings

Turns Burners On or Off

Decreases Room Temperature in AUTO Mode

Turns Hand-Held Remote On or Off and Allows You to Choose the Manual Setting

Selects Auto Setting

Increases Room Temperature in AUTO Mode

Locks System to Prevent Accidental Ignition

Figure 63 - Thermostat Hand-Held Remote Control Unit (GHRCTB)

Safety Features

When away from home for an extended period of time or as a child safety feature to prevent accidental ignition of the fireplace, the receiver ON/OFF/REMOTE switch should be in the OFF position.

Auto Shutoff Feature

1. If the average room temperature exceeds 82 degrees Fahrenheit (28 degrees Centigrade), the hand-held remote control will perform a safety override and shut the fireplace off. This feature is not available in the MANU mode.
2. The receiver continuously receives signals from the hand-held remote to control the room temperature. If the hand-held remote is misplaced, obstructed, or for any reason cannot transmit to the receiver, the receiver will shut off the fireplace after 8 minutes.

Key Pad Lock Feature

This feature allows the user to lock/unlock the keypad on the hand-held remote in the MANU or AUTO mode to prevent inadvertent operation (i.e. children operating the hand-held remote control, etc.). The keypad is locked in either on or off. Press the POWER and LOCK buttons together to turn the unit on or off.

OPERATING STOVE WITH BURNER SYSTEM

Continued

OPERATING OPTIONAL BLOWER ACCESSORY

Blower controls are located on left side of rear cover (when standing in front of stove).

The CDA3620TB thermostatically-controlled blower has an ON setting and an OFF setting. The blower will only run when the switch is in the ON position. In the OFF position, the blower will not operate.

If you are using CDA3620TB blower with optional thermostat (wall mount or remote control) for the burner system, your burner system and blower will not turn on and off at the same time. The burner system may run for several minutes before the blower turns on. After the burner system modulates to the pilot position, the blower will continue to run. The blower will shut off after the burner system temperature decreases.

The blower helps distribute heated air from the burner system. Periodically check the air passageways of the burner system and remove any dust, dirt, or other obstructions that will hinder the flow of air.

OPERATING OPTIONAL GWMT1 WALL MOUNTED THERMOSTAT

WARNING: Do not connect the thermostat to a power source. Electrical shock and/or a fire hazard will occur.

Light the burner system as instructed in *Lighting Instructions* on page 25. Set wall thermostat to desired temperature.

This thermostat has been electronically calibrated at the factory and requires no adjustment or leveling.

Upon installation, the thermostat must be allowed to stabilize at room temperature for a minimum of 30 minutes for proper operation.

To turn the burner system off, adjust thermostat to the lowest setting and turn the gas control knob back to PILOT. The pilot will remain lit.

IMPORTANT: To turn the pilot off, turn the gas control knob on the burner system to the OFF position.

INSPECTING BURNERS

Check pilot flame pattern and burner flame patterns often.

PILOT ASSEMBLY

The pilot assembly is factory preset for the proper flame height. Alterations may have occurred during shipping and handling. Call a qualified service person to readjust the pilot if necessary.

The height of the thermopile must be $3/8"$ (9.5 mm) to $1/2"$ (12.7 mm) above the pilot flame as shown in Figure 64. The thermocouple must be at a height of about $1/8"$ (3.2 mm) above the pilot flame. The flame from the pilot burner must extend beyond both the thermocouple and thermopile.

If your pilot assembly does not meet these requirements:

- turn burner system off (see *To Turn Off Gas to Appliance*, page 26)
- see *Troubleshooting*, pages 30 through 32

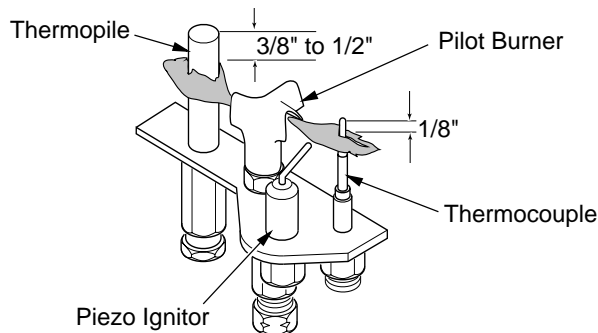


Figure 64 - Pilot Assembly

BURNER FLAME PATTERN

Burner flames will be steady; not lifting or floating. Flame patterns will be different from unit to unit and will vary depending on installation type and weather conditions.

If the vent configuration is installed incorrectly, the flames will lift or "ghost". This can be dangerous. Inspect the flames after installation to ensure proper installation and performance.

Figure 64 shows a typical flame pattern. If burner flame pattern differs from that described:

- turn burner system off (see *To Turn Off Gas to Appliance*, page 26)
- see *Troubleshooting*, pages 30 through 32

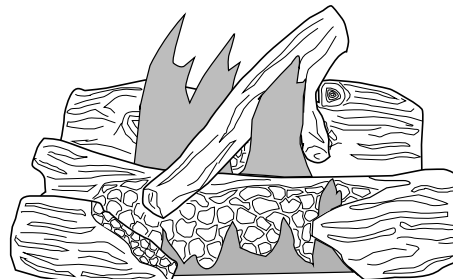


Figure 65 - Typical Flame Pattern

CLEANING AND MAINTENANCE

⚠ WARNING: Turn off burner system and let cool before cleaning.

⚠ CAUTION: You must keep control areas, burners, and circulating air passageways of burner system and stove clean. Inspect these areas of burner system and stove before each use. Have burner system and stove inspected yearly by a qualified service person. Burner system and stove may need more frequent cleaning due to excessive lint from carpeting, bedding material, pet hair, etc.

⚠ WARNING: Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.

GLASS DOOR

⚠ WARNING: Handle glass door panel with care. Do not strike, slam, or otherwise abuse glass. Do not operate burner system with the glass door removed, cracked, or broken.

⚠ WARNING: Do not use abrasive cleaners as this may damage glass. Use a nonabrasive household glass cleaner to clean glass. Do not clean glass when hot.

Glass must be cleaned periodically. During start-up it is normal for condensation to form on the inside of the glass causing lint, dust, and other airborne particles to cling to the glass surface. During initial startup a slight film may form on the glass due to paint curing. The glass should be cleaned several times with a non-ammonia, non-abrasive household cleaner and warm water after the first two weeks of operation. Thereafter, clean the glass two or three times during each heating season, depending on the usage and circumstances present. Refer to *Removing/Replacing Glass Door* on page 6 of this manual when removing glass door for cleaning.

⚠ WARNING: Only parts supplied by the manufacturer should be used when replacing broken or damaged glass door panel (see *Replacement Parts*, page 33). This glass door panel is a complete unit. No substitute materials may be used.

⚠ CAUTION: Wear gloves and safety glasses while handling or removing broken glass. Do not remove if glass is hot. Keep children and pets away from glass.

If glass has been broken, carefully remove glass door (see *Removing/Replacing Glass Door*, page 6). Vacuum all glass pieces with a shop vac.

⚠ CAUTION: Do not vacuum if pieces are hot.

Use only the ceramic glass door replacement intended for this burner system (see *Replacement Parts*, page 33 for detail on ordering). No substitutions may be made. See *Removing/Replacing Glass Door*, page 6 for instructions for replacing glass door.

⚠ WARNING: Do not operate burner system with the glass door removed, cracked, or broken.

PILOT AND BURNERS

- Remove ember material before cleaning burners and replace when cleaning is complete.
- Burner and controls should be cleaned with compressed air to remove dust, dirt, or lint.
- Use a vacuum cleaner or small, soft bristled brush to remove excess dust, dirt, or lint.

LOGS

- If you remove logs for cleaning, refer to *Installing Logs, Lava Rock, and Glowing Embers*, page 24, to properly replace logs.
- Use a vacuum cleaner to remove any carbon buildup on logs.
- Replace log(s) if broken. See *Replacement Parts* on page 33.
- Replace ember material periodically as needed. See *Replacement Parts* on page 33.

VENTING SYSTEM

Conduct annual inspection of the venting system following these guidelines:

1. Check areas of venting system that are exposed to the weather for corrosion (rust spots or streaks and, in extreme cases, holes). Have these items replaced immediately by a qualified service person.
2. Remove the vent cap and shine a flashlight into the vent. Remove any foreign material.
3. Check for evidence of excessive condensation. Continuous condensation can cause corrosion of caps, pipes, and fittings and can be caused by having excessive lateral runs, too many elbows, or exterior portions of the system being exposed to cold weather.
4. Inspect joints to verify that no pipe section or fitting has been disturbed and loosened. Check mechanical supports such as wall straps for rigidity.

TROUBLESHOOTING

Note: For additional help, visit DESA's technical service web site at www.desatech.com.

Note: All troubleshooting items are listed in order of operation.

⚠ WARNING: Turn off burner system and let cool before servicing. Only a qualified service person should service and repair burner system or stove.

⚠ CAUTION: Never use a wire, needle, or similar object to clean pilot. This can damage pilot unit.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
When ignitor button is pressed, there is no spark at pilot	<ol style="list-style-type: none"> 1. Ignitor electrode not connected to ignitor cable 2. Ignitor cable pinched or wet 3. Piezo ignitor nut is loose 4. Broken ignitor cable 5. Bad piezo ignitor 6. Ignitor electrode broken 7. Ignitor electrode positioned wrong 	<ol style="list-style-type: none"> 1. Reconnect ignitor cable 2. Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry 3. Tighten nut holding piezo ignitor. Nut is located behind the mounting bracket 4. Replace ignitor cable 5. Replace piezo ignitor 6. Replace pilot assembly 7. Replace pilot assembly
When ignitor button is pressed, there is spark at pilot but no ignition	<ol style="list-style-type: none"> 1. Gas supply turned off or equipment shutoff valve closed 2. Gas control knob not in PILOT position 3. Gas control knob not pressed in while in PILOT position 4. Air in gas lines when installed 5. Depleted gas supply (propane/LP only) 6. Pilot is clogged 7. Gas regulator setting is not correct 	<ol style="list-style-type: none"> 1. Turn on gas supply or open equipment shutoff valve 2. Turn gas control knob to PILOT position 3. Press in gas control knob while in PILOT position 4. Continue holding down gas control knob. Repeat igniting operation until air is removed 5. Contact local propane/LP gas company 6. Clean pilot (see <i>Cleaning and Maintenance</i>, page 29) or replace pilot assembly 7. Replace gas control
Pilot lights but flame goes out when control knob is released	<ol style="list-style-type: none"> 1. Gas control knob not fully pressed in 2. Gas control knob not pressed in long enough 3. Equipment shutoff valve not fully open 4. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by one or both of the following: <ol style="list-style-type: none"> A) Low gas pressure B) Dirty or partially clogged pilot 5. Thermocouple connection loose at control valve 6. Thermocouple damaged 7. Control valve damaged 	<ol style="list-style-type: none"> 1. Press in gas control knob fully 2. After pilot lights, keep gas control knob pressed in 30 seconds 3. Fully open equipment shutoff valve 4. A) Contact local gas company <ol style="list-style-type: none"> B) Clean pilot (see <i>Cleaning and Maintenance</i>, page 29) or replace pilot assembly 5. Hand tighten until snug, then tighten 1/4 turn more 6. Replace pilot assembly 7. Replace control valve

TROUBLESHOOTING

Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Burner does not light after pilot is lit	<ol style="list-style-type: none"> 1. Burner orifice clogged 2. Inlet gas pressure is too low 3. Thermopile leads disconnected or improperly connected 4. Thermopile is defective 5. Gas valve is defective 	<ol style="list-style-type: none"> 1. Clean burner (see <i>Cleaning and Maintenance</i>, page 29) or replace burner orifice 2. Contact local propane/LP or natural gas company 3. Reconnect leads (see <i>Wiring Diagram</i>, page 33) 4. Replace thermopile 5. Replace gas valve
Delayed ignition burner	<ol style="list-style-type: none"> 1. Manifold pressure is too low 2. Burner porting or orifice clogged 	<ol style="list-style-type: none"> 1. Contact local propane/LP or natural gas company 2. Clean burner (see <i>Cleaning and Maintenance</i>, page 29) or replace burner orifice
Burner backfiring during combustion	<ol style="list-style-type: none"> 1. Burner orifice is clogged or damaged 2. Damaged burner 3. Gas regulator defective 	<ol style="list-style-type: none"> 1. Clean burner (see <i>Cleaning and Maintenance</i>, page 29) or replace burner orifice 2. Replace damaged burner 3. Replace gas control
Slight smoke or odor during initial operation	<ol style="list-style-type: none"> 1. Residues from manufacturing processes and logs curing 	<ol style="list-style-type: none"> 1. Problem will stop after a few hours of operation
Burner system produces a whistling noise when burner is lit	<ol style="list-style-type: none"> 1. Turning gas control knob to HI position when burner is cold 2. Air in gas line 3. Dirty or partially clogged burner orifice 	<ol style="list-style-type: none"> 1. Turn gas control knob to LO position and let warm up for a minute 2. Operate burner until air is removed from line. Have gas line checked by local propane/LP or natural gas company 3. Clean burner (see <i>Cleaning and Maintenance</i>, page 29) or replace burner orifice
Glass soots	<ol style="list-style-type: none"> 1. Flame impingement on logs 2. Debris around burner air mixer 3. Improper vent configuration 	<ol style="list-style-type: none"> 1. Adjust the log set so that the flame does not excessively impinge on it 2. Inspect the opening at the base of the burner to see that it is NOT packed with any type of material 3. Follow venting configuration instructions in owner's manual
Burner system produces a clicking/ticking noise just after burners are lit or shut off	<ol style="list-style-type: none"> 1. Metal expanding while heating or contracting while cooling 	<ol style="list-style-type: none"> 1. This is common. If noise is excessive, contact qualified service person
Remote does not function	<ol style="list-style-type: none"> 1. Battery is not installed or battery power is low 	<ol style="list-style-type: none"> 1. Replace 9-volt batteries in receiver and remote control

TROUBLESHOOTING

Continued

- ⚠ WARNING: If you smell gas**
- Shut off gas supply.
 - 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.

IMPORTANT: Operating burner system where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors. These odors will disappear over time.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Burner system produces unwanted odors	1. Gas leak. See Warning statement above	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , pages 21 and 22)
Burner system shuts off in use	1. High or gusting winds 2. Low line pressure 3. Pilot is partially clogged 4. Inner vent pipe leaking exhaust gasses into system 5. Glass too loose and air tight gasket leaks in corners after usage 6. Bad thermopile or thermocouple 7. Improper vent cap installation	1. Burner system has been tested for up to 40mph winds. However, extreme conditions may occur. See <i>Lighting Instructions</i> on pages 25 and 26 2. Contact local propane/LP or natural gas company 3. Clean pilot (see <i>Cleaning and Maintenance</i> , page 29) 4. Locate and correct all leaks in venting pipe 5. Tighten glass door 6. Replace faulty component 7. Check for proper installation and freedom from debris or blockage
Gas odor even when control knob is in OFF position	1. Gas leak. See Warning statement above 2. Control valve defective	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , pages 21 and 22) 2. Replace control valve
Gas odor during combustion	1. Gas leak. See Warning statement above	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , pages 21 and 22)
Dark residue on logs or inside of burner system	1. Improper log placement 2. Air holes at burner inlet blocked 3. Burner flame holes blocked 4. Improper vent configuration	1. Properly locate logs (see <i>Installing Logs, Lava Rock, and Glowing Embers</i> , page 24) 2. Clean out air holes at burner inlets. Periodically repeat as needed 3. Remove blockage 4. Follow vent configuration instructions in owner's manual

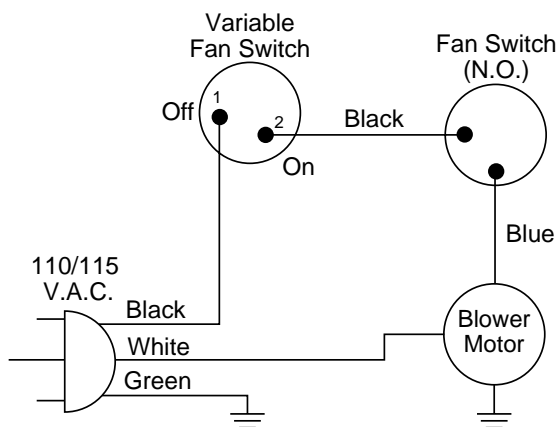
SPECIFICATIONS

	SDVBNC	SDVBNC with Propane/LP Conversion
		15,400 Btu/hr
Gas Type	Natural	Propane/LP
Ignition	Piezo	Piezo
Manifold Pressure	3.5" (8.9 cm) w.c.	10.0" (25.4 cm) w.c.
Minimum Inlet Supply Pressure	4.5" (11.3 cm) w.c.	11.0" (27.9 cm) w.c.
Thermal Efficiency	70%	70%
Dimension, Inches/mm (HxWxD) Stove and Burner System*	26 1/2" x 28 1/4" x 19" 67.3 x 71.8 x 48.3 cm	26 1/2" x 28 1/4" x 19" 67.3 x 71.8 x 48.3 cm
Weight, lbs/kg Stove and Crate Burner System Shipping	195 lbs/88.5 kg 70 lbs/31.8 kg 265 lbs/120.2 kg	195 lbs/88.5 kg 70 lbs/31.8 kg 265 lbs/120.2 kg

* When installed in a model CSDBN series cast iron stove body.

WIRING DIAGRAM

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



REPLACEMENT PARTS

Note: Use only original replacement parts. This will protect your warranty coverage for parts replaced under warranty.

PARTS UNDER WARRANTY

Contact authorized dealers of this product. If they can not supply original replacement part(s), call DESA's Technical Service Department at 1-866-672-6040.

When calling DESA, have ready

- your name
- your address
- model and serial numbers of your burner system and stove
- how burner system or stove was malfunctioning
- type of gas used (propane/LP or natural gas)
- purchase date

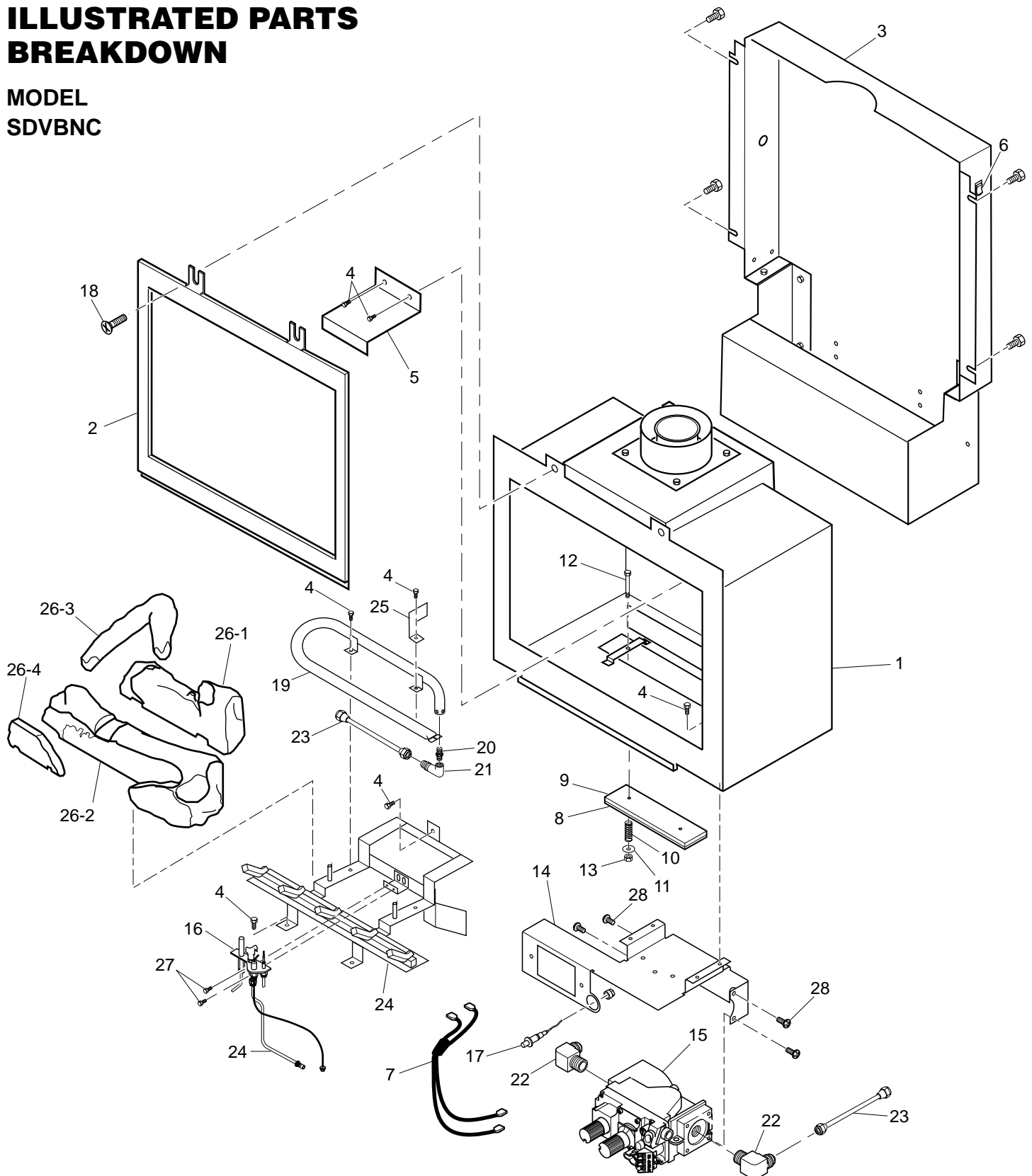
Usually, we will ask you to return the part to the factory.

PARTS NOT UNDER WARRANTY

Contact authorized dealers of this product. If they can not supply original replacement part(s), call DESA at 1-866-672-6040 for referral information.

When calling DESA, have ready

- model number of your burner system and stove
- the replacement part number

ILLUSTRATED PARTS
BREAKDOWNMODEL
SDVBNCFor more information, visit www.desatech.com

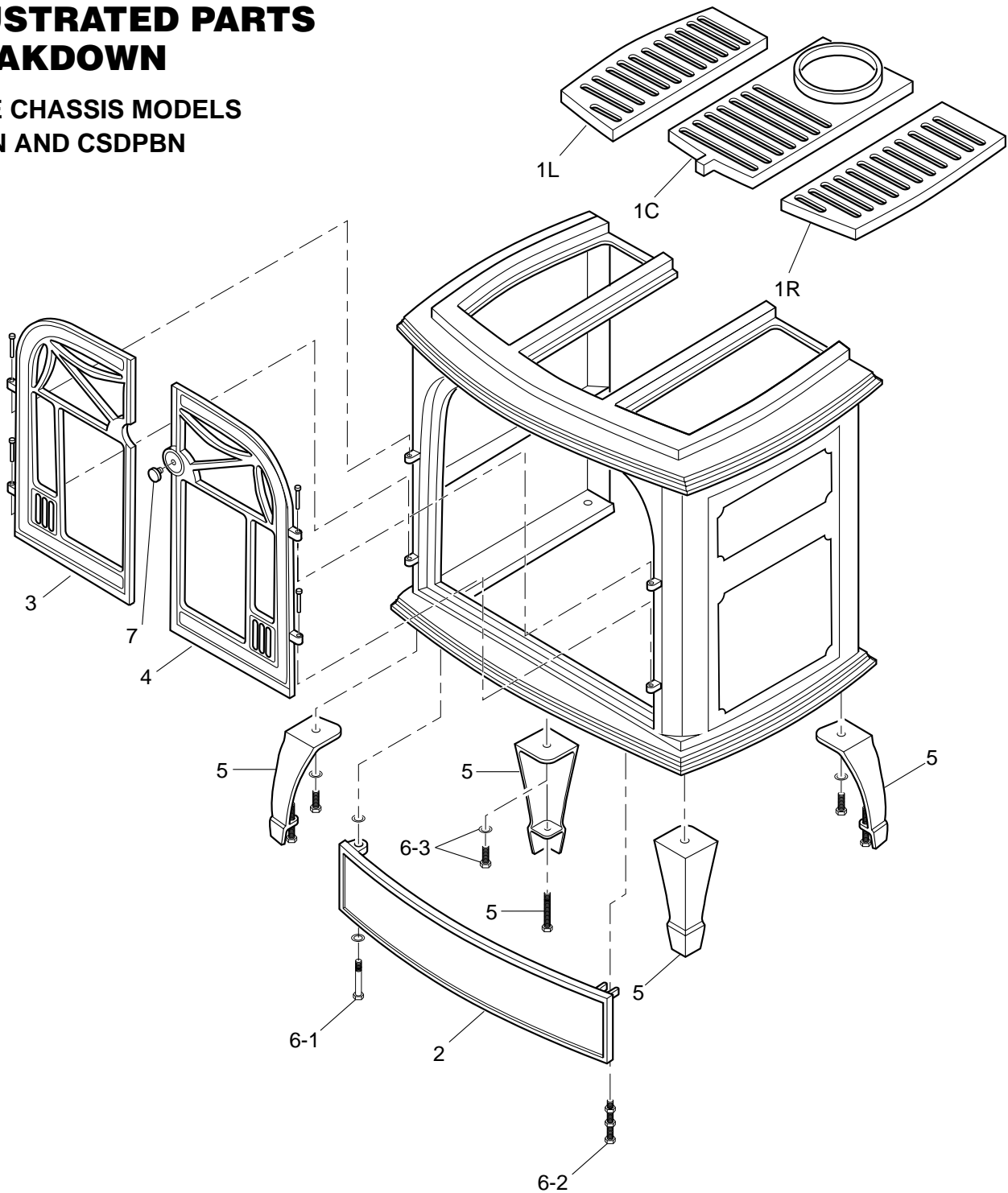
PARTS LIST

MODEL SDVBNC

This list contains replaceable parts used in your burner system. When ordering parts, follow the instructions listed under *Replacement Parts* on page 33 of this manual.

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	**	Firebox Assembly	1
2	105775-17	Glass Door	1
3	106831-01	Rear Cover	1
4	M11084-46	Screw, Hex	11
5	107191-01	Baffle	1
6	099998-01	On/Off Switch	1
7	103284-07	Wire Harness	1
8	104491-01	Relief Cover	1
9	104518-01	Relief Cover Gasket	1
10	104527-01	Relief Spring	2
11	104528-01	Relief Washer	2
12	H5C4-20B	Hex Head Cap Screw	2
13	NTC-4C	Locknut	2
14	105468-02	Valve Bracket	1
15	14389	Valve, Natural Gas	1
16	14561	Pilot Assembly, Natural Gas	1
17	102445-01	Ignitor, Piezo	1
18	11200	Screw	2
19	106036-01	Burner, Natural Gas	1
20	104506-16	Orifice, Natural Gas	1
21	14528	Brass Elbow	1
22	901056-01	Brass Elbow	2
23	101628-04	Flex Tubing	2
24	106794-01	Grate Assembly	1
25	105325-01	Air Deflector	1
26	105491-01	Log Set	1
26-1	105774-01	Rear Log	1
26-2	105774-02	Log	1
26-3	105774-03	Crossover Log	1
26-4	105774-04	Log Piece	1
27	098304-03	Screw	2
28	11107	Screw	4
PARTS AVAILABLE - NOT SHOWN			
	GA6060	Lava Rock	1
	14250	Ember Material	1
	M11084-26	Hex Screw for Blower Bracket	4
	PCDM-S	Natural to Propane Conversion Kit	1

** Not a field replaceable part.

**ILLUSTRATED PARTS
BREAKDOWN**STOVE CHASSIS MODELS
CSDBN AND CSDPBN

PARTS LIST

STOVE CHASSIS

This list contains replaceable parts used in your stove. When ordering parts, follow the instructions listed under *Replacement Parts* on page 33 of this manual.

KEY NO.	PART NUMBER		DESCRIPTION	QTY.
	CSDBN	CSDPBN		
1L	111698-01	111698-02	Top Grate - Left	1
1C	111698-10	111698-24	Top Grate - Center	1
1R	111698-04	111698-05	Top Grate - Right	1
2	111698-11	111698-12	Bottom Door	1
3	111698-14	111698-15	Left Stove Door	1
4	111698-17	111698-18	Right Stove Door	1
5	111698-20	111698-21	Leg	4
6	111764-01	111764-01	Hardware Kit	1
6-1	*	*	Door Hinge Step Bolt With Shoulder 1 Per Unit) With Two M8 Washers	1
6-2	*	*	Door Catch Bolt M8 x 1.25 - 55mm Long With Two M8 Hex Nuts	1
6-3	*	*	Leg Attachment Bolt M10 x 1.5 - 40mm Long	4
7	111698-23	111698-23	Door Knob	1
PARTS AVAILABLE — NOT SHOWN				
	104108-08	—	Touch-up Spray Paint 12 oz Can, Black	1

* Included In Hardware Kit

TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact DESA's Technical Service Department at 1-866-672-6040. When calling, please have your model and serial numbers of your heater ready.

You can also visit DESA's technical service web site at www.desatech.com.

SERVICE HINTS

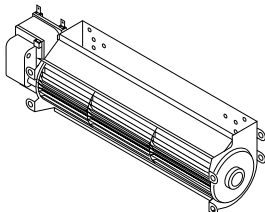
When Gas Pressure Is Too Low

- pilot will not stay lit
- burners will have delayed ignition
- burner system will not produce specified heat
- propane/LP gas supply might be low (propane/LP units only)

If you feel your gas pressure is too low, contact your local natural or propane/LP gas supplier.

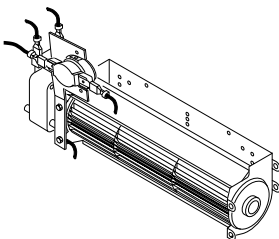
ACCESSORIES

Purchase these stove and burner system accessories from your local dealer. If they can not supply these accessories, call DESA's Sales Department at 1-866-672-6040 for information. You can also write to the address listed on the back page of this manual.



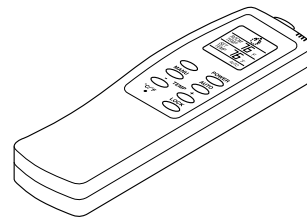
MANUAL BLOWER KIT - GA3750A

For all models. Provides better heat distribution. Blower turns off and on manually. Complete installation and operation instructions included in this manual.



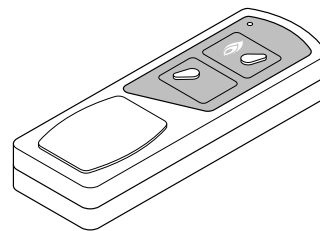
THERMOSTATICALLY- CONTROLLED BLOWER KIT - CDA3620TB

For all models. Provides better heat distribution. Blower turns off and on automatically, as needed. Complete installation and operation instructions included in this manual.



RECEIVER AND HAND-HELD THERMOSTAT REMOTE CONTROL KIT - GHRCTB

For all Remote-Ready Models. Allows the fireplace to be operated in a manually or thermostatically controlled mode. You can turn the fireplace on and off without ever leaving the comfort of your easy chair.



RECEIVER AND HAND-HELD REMOTE CONTROL KIT - GHRCB

For all Remote-Ready Models. Allows the fireplace to be turned on and off by using a hand-held remote control.

WALL MOUNTED THERMOSTAT CONTROL KIT - GWMT1 (Not Shown)

For all models. Allows easy wall access to the operation of your burner system. This will allow you thermostatic control with the convenience of a wall switch.

WALL MOUNTED ON/OFF SWITCH - GWMS2 (Not Shown)

For all models. Allows burner system to be turned on and off with a wall switch.

OWNER'S REGISTRATION FORM

In order to provide better customer service for this and future purchases, we recommend that you register your product with us. You can register online at www.desatech.com. If access to our website is not available to you, please complete this Owner's Registration Form and mail to the address on the back of this owner's manual. Please provide the following product information:

Brand: _____ (Comfort Glow, Vanguard, etc.)
 Model: _____ (EFP33PR, VTGH33NR, etc.)
 Date Purchased: _____ *Note: Keep receipt for warranty verification.*
 Serial Number: _____ 7 or 9 digit number located on product or identification tag.
 First Name: _____ Last Name: _____
 Address: _____
 City: _____ State: _____ Zip: _____ Country: _____
 Home Phone: _____ - _____
 E-Mail: _____

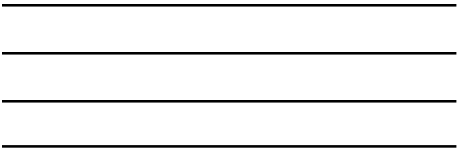
Please answer the following questions to register your product with DESA:

1. Where will the product be used?
 Living/Family Room Office/Warehouse Utility Shed/Outbuilding Garage Bedroom Bathroom Other
2. If you bought this product yourself, did you plan to purchase this type of product before going into the store? Yes No
3. Who selected the product? Male Female Both
4. What is the population of your area? Under 10,000 10,000 to 25,000 25,000 to 50,000 50,000 to 100,000
 100,000 to 250,000 Over 250,000
5. What is your primary source of heat? Propane (LP Gas) Fuel Oil Wood Natural Gas Electric Other
6. How was the product installed? Professional Installer Self Other
7. Cost of product excluding sales tax? \$ _____
8. Cost to install product? \$ _____
9. Type of store where product was purchased? Hardware Propane Dealer Natural Gas/Utility Co. Home Center/Builder's Supply
 Fireplace or Hearth Shop Farm Store Other
10. What motivated you to buy this product? Sudden Cold Weather Replace Older Model D.I.Y. Home Project
 Emergency Back-Up Heat Heater was on Sale Energy Savings/High Efficiency Construction Project Other
11. How did you learn about this product brand? Advertising Relative or Friend Store Display Other _____
12. Level of Education of Purchaser: Some High School Completed High School Completed College Completed Graduate School
13. Age of Purchaser: Under 20 20 - 29 30 - 39 40 - 49 50 - 59 60 or Over
14. Buyer's total annual household income: Under \$15,000 \$15,000 to \$19,999 \$20,000 to \$34,999 \$35,000 to \$49,999
 \$50,000 to \$74,999 \$75,000 to \$99,999 \$100,000 and Over
15. Store where product was purchased:
 Name: _____
 City: _____ State: _____

16. In choosing this product, how important were the following:

	Not Important	Somewhat Important	Very Important
Availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Brand Name	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Overall Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Heat Output	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Made in USA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Warranty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Value for Price	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Prior Brand Experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Controls Location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thermostat, Remote, or Manual Operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ease of Operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Special Features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Salesperson's Recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Friend/Relative's Recommendation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Portability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quiet Operation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

TAPE



Postage
Required



2701 Industrial Drive
P.O. Box 90004
Bowling Green, KY 42102-9004

TAPE

WARRANTY INFORMATION

KEEP THIS WARRANTY

Burner System Model No. _____
Serial No. _____
Date Purchased _____

Cast Stove Model No. _____
Serial No. _____
Date Purchased _____

Always specify model and serial numbers when communicating with the factory.

We reserve the right to amend these specifications at any time without notice. The only warranty applicable is our standard written warranty. We make no other warranty, expressed or implied.

DESA LIMITED WARRANTY DIRECT-VENT BURNER SYSTEM AND STOVE CHASSIS

DESA warrants this product to be free from defects in materials and components for two (2) years from the date of first purchase, provided that the product has been properly installed, operated and maintained in accordance with all applicable instructions. To make a claim under this warranty the Bill of Sale or cancelled check must be presented.

This warranty is extended only to the original retail purchaser. This warranty covers the cost of part(s) required to restore this stove and burner system to proper operating condition and an allowance for labor when provided by a DESA Authorized Service Center. Warranty part(s) MUST be obtained through authorized dealers of this product and/or DESA who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The stove and burner system MUST be installed by a qualified installer in accordance with all local codes and instructions furnished with the unit.

This warranty does not apply to parts that are not in original condition because of normal wear and tear, or parts that fail or become damaged as a result of misuse, accidents, lack of proper maintenance or defects caused by improper installation. Travel, diagnostic cost, labor, transportation and any and all such other costs related to repairing a defective stove and burner system will be the responsibility of the owner.

TO THE FULL EXTENT ALLOWED BY THE LAW OF THE JURISDICTION THAT GOVERNS THE SALE OF THE PRODUCT; THIS EXPRESS WARRANTY EXCLUDES ANY AND ALL OTHER EXPRESSED WARRANTIES AND LIMITS THE DURATION OF ANY AND ALL IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE TO TWO (2) YEARS ON ALL COMPONENTS FROM THE DATE OF FIRST PURCHASE; AND DESA'S LIABILITY IS HEREBY LIMITED TO THE PURCHASE PRICE OF THE PRODUCT AND DESA SHALL NOT BE LIABLE FOR ANY OTHER DAMAGES WHATSOEVER INCLUDING INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.

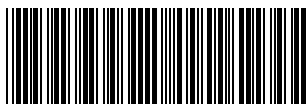
Some states do not allow a limitation on how long an implied warranty lasts or an exclusion or limitation of incidental or consequential damages, so the above limitation on implied warranties, or exclusion or limitation on damages may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that vary from state to state.

For information about this warranty write:



2701 Industrial Drive
P.O. Box 90004
Bowling Green, KY 42102-9004
www.desatech.com



111739 01

NOT A UPC

111739-01
Rev. A
06/03

For more information, visit www.desatech.com