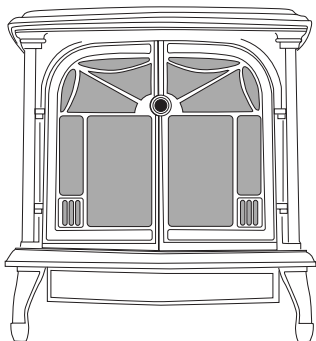




FMI PRODUCTS, LLC

**CAST IRON STOVE AND DIRECT VENT (FREESTANDING
FIREPLACE HEATER) BURNER SYSTEM
OWNER'S OPERATION AND INSTALLATION MANUAL**



IMPORTANT: This direct vent burner system must be installed into approved FMI PRODUCTS, LLC cast iron stove bodies, models CISB, CISNI, CISAW AND CISAS only. See page 4 of this manual.

**NATURAL GAS BURNER SYSTEM SDVBND
PROPANE/LP GAS BURNER SYSTEM SDVBPD, REMOTE READY**

⚠ 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.

- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- **WHAT TO DO IF YOU SMELL GAS**
 - Do not try to light any appliance.
 - Do not touch any electrical switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
 - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

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

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SAFETY

⚠ 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.

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

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

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

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

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

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

⚠ DANGER: Carbon monoxide poisoning may lead to death!

This appliance complies with the current ANSI Z21.88 as a Vented Gas Fireplace Heater and is listed and tested by the PFS Corporation 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 unit 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 burner system may not be working properly. **Get fresh air at once!** Have burner system serviced. 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.


SAFETY


Continued

Propane/LP and Natural Gas: Propane/LP and natural gas 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 with burner system.

 **WARNING: Any change to this stove or burner system or its controls can be dangerous. Do not modify this stove with burner system under any circumstances. Any parts removed for servicing must be replaced prior to operating burner system.**

 **WARNING: Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this stove.**

 **WARNING: 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.**

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

Do not place clothing or other flammable material on or near the stove. Never place any objects on the appliance.

Do not use this stove to cook food or burn paper or other flammable material.

This stove reaches high temperatures. Keep children and adults away from hot surface to avoid burns or clothing ignition. Stove will remain hot for a time after shutdown. Allow surface to cool before touching.

Carefully supervise young children when they are in the room with stove

Keep the area around your stove clear of combustible materials, gasoline and other flammable vapor or liquids. Do not run burner system where these are used or stored.

1. 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 lb. capacity.
2. 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.
3. Never install the stove
 - in a recreational vehicle
 - in windy or drafty areas where curtains or other combustible (flammable) objects are less than 42" from front, top, or sides of stove with burner system
 - in high traffic areas
4. Turn burner system off and let cool before servicing, installing or repairing. Only a qualified service person should install, service or repair this stove with burner system. Have stove with burner system inspected annually by a qualified service person.

SAFETY *Continued*

5. 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, etc. Turn off the gas valve and pilot light before cleaning stove or burner system.
6. Have venting system inspected annually by a qualified service person. If needed, have venting system cleaned or repaired. See *Cleaning and Maintenance*, page 34.
7. Do not use any solid fuels (wood, coal, paper, cardboard, etc.) in this burner system. Use only the gas type indicated on burner system nameplate.
8. 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*.
9. Do not use stove or burner system if any part has been exposed to or under water.
10. Do not operate burner system if any log is broken.
11. Do not operate burner system with glass door removed, cracked or broken.
12. 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.
13. Do not install stove with burner system 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.
14. This stove must be properly connected to a vent system. This stove is equipped with a vent safety shutoff system.

LOCAL CODES

Install and use stove and burner system with care. Follow all local codes. In the absence to local codes, use the current *National Fuel Gas Code ANSI Z223.1/NFPA 54**.

*Available from:

American National Standards Institute, Inc.
1430 Broadway
New York, NY 10018
National Fire Protection Association, Inc.
Batterymarch Park
Quincy, MA 02269

PRODUCT IDENTIFICATION

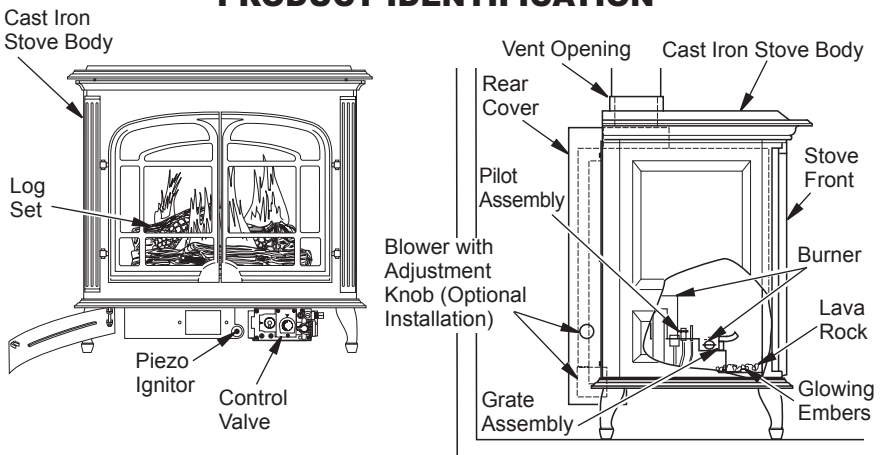


Figure 1 - FMI PRODUCTS, LLC Direct Vent Burner System Shown Installed in Approved FMI PRODUCTS, LLC Cast Iron Stove Body (Oxford™ Model Shown)

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.

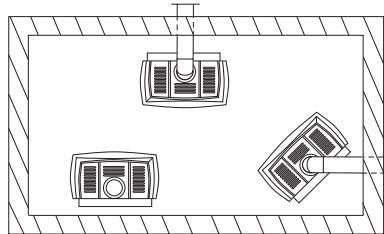
PREINSTALLATION PREPARATION

WARNING: A qualified installer or 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 with burner system 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.

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, page 6.

On Wall with Horizontal Termination



On Wall with Vertical Termination Through Ceiling

Corner Installation with Horizontal Termination

Figure 2 - Common Stove Locations

LOCATION AND SPACE REQUIREMENTS

Determine the safest and most efficient location for your FMI PRODUCTS, LLC 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. Be aware of all restrictions and precautions before deciding the exact location for your stove.

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

- Do not connect this stove and burner system to a chimney flue serving a separate solid-fuel burning stove or appliance.
- Due to high temperatures, do not locate this stove in high traffic areas, or near furniture or draperies.
- Proper clearances must be maintained. See Figure 3 and Figure 4, page 6.
- This stove is a freestanding unit designed to set

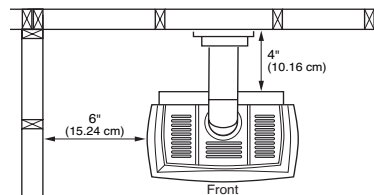
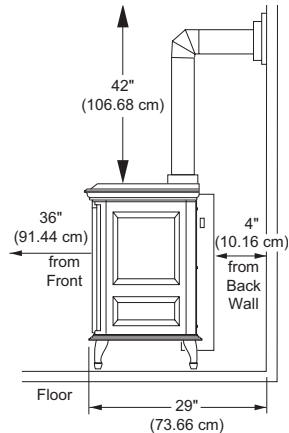


Figure 3 - Clearances for Standard Installation

PREINSTALLATION PREPARATION

Continued

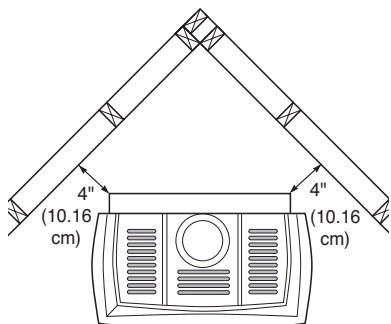


Figure 4 - Clearance for Corner Installation

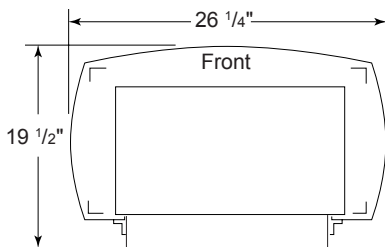


Figure 5 - Stove With Burner System Bottom Dimensions

UNPACKING

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 back panel from stove (see Figure 6). Use an adjustable wrench or a 10 mm socket. Remove 4 bolts and washers. Keep bolts and washers to reattach back panel later.
5. Remove bubble-wrapped log set, rod and screen from stove. Remove all protective packaging applied for shipment.
6. Check heater for any shipping damage. If heater is damaged call FMI PRODUCTS, LLC at 1-866-328-4537 for replacement parts before returning to dealer. Some fiber flakes may fall from logs. This is acceptable.
7. Place freestanding stove near desired location in room.

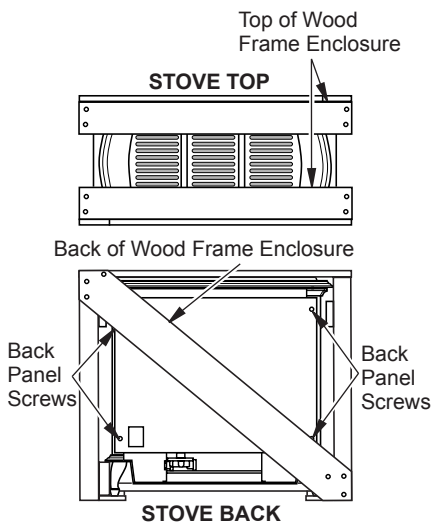


Figure 6 - Unpacking Stove from Wooden Shipping Enclosure

BURNER SYSTEM ASSEMBLY

INSTALLING DIRECT VENT BURNER SYSTEM INTO STOVE BODY

1. Carefully lift burner system and place into stove body from the rear of stove (Figure 7).
2. Discard center grate top of stove and replace with center grate top provided with Cast Iron Stove Body.

INSTALLING REAR COVER

1. Place rear cover behind stove body. Rear cover will rest on the bottom ledge of the stove body.
2. Using hex screws provided, attach rear cover to back of stove body. See Figure 8. **IMPORTANT:** This rear cover must be securely in place before venting pipes are installed.

BURNER SYSTEM ASSEMBLY

Continued

3. Open lower door panel. The valve is attached to the underside of the burner system assembly.
4. Connect or reconnect gas supply, see [Connecting Stove/Burner System to Gas Supply](#) on page 20.

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

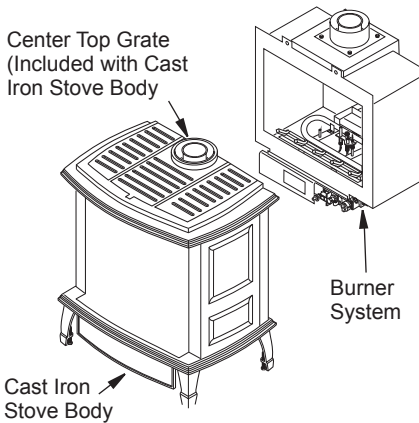


Figure 7 - Installing Burner System Into Cast Iron Stove Body

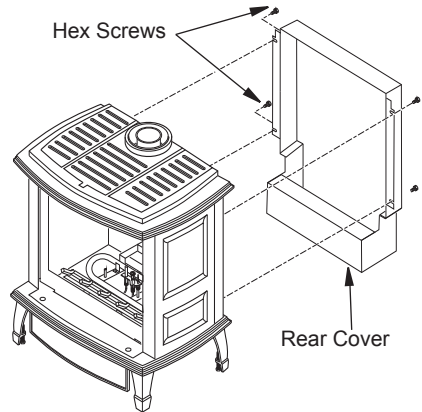


Figure 8 - Attaching Rear Cover and Bottom Cover from Stove Body

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 18).

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.

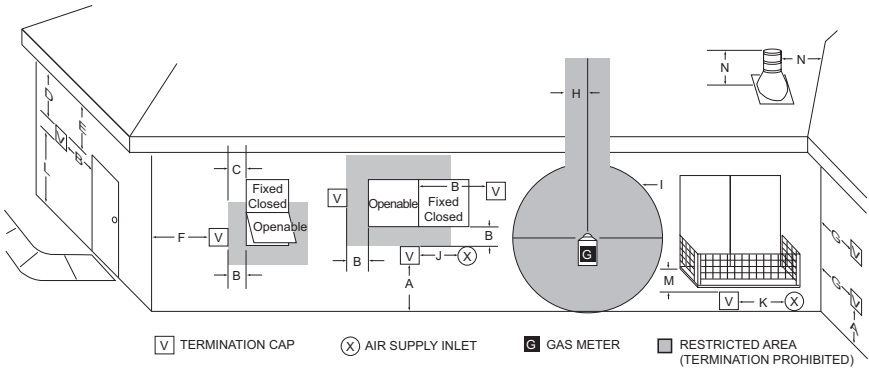
- Do not locate termination cap where excessive snow or ice build up may occur. Be sure to clear vent termination area after snow falls to prevent accidental blockage of venting system. When using snow blowers, do not direct snow towards vent termination area.
- You must maintain minimum wall and ceiling clearances shown in Figures 5 and 6, page 5.
- If installing horizontal vent termination cap on an exterior wall with siding, you must use a vinyl siding standoff (see Figure 26, page 16).

LOCATION OF VENT TERMINATION

When locating vent termination, it is important to observe the minimum clearances shown in Figure 9, page 8.

*Check with local codes or with the current *National Fuel Gas Code, ANSI Z223.1/NFPA 54*.

GENERAL VENTING



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

- A = clearance above grade, veranda, porch, deck, or balcony [12" (30.5 cm) minimum]
 - B = clearance to window or door that may be opened [12" (30.5 cm) minimum]
 - C = clearance to permanently closed window [minimum 12" (30.5 cm) recommended to prevent condensation on window]
 - D = vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 24" (61cm) from the center-line of the terminal [18" (45.7 cm) minimum]
 - E = clearance to unventilated soffit [12" (30.5 cm) 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" (91.4 cm) horizontally from the center-line of the regulator
 - I = clearance to service regulator vent outlet [72" (182.9 cm) minimum]
 - J = clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other fireplace [12" (30.5 cm) minimum]
 - K = clearance to a mechanical air supply inlet [72" (182.9 cm) minimum]
 - L = ‡ clearance above paved side-walk or a paved driveway located on public property [84" (213.3 cm) minimum]
 - M = clearance under veranda, porch, deck [12" (30.5 cm) minimum ‡]
 - N = clearance above a roof shall extend a minimum of 24" (61 cm) above the highest point when it passes through the roof surface and any other obstruction within a horizontal distance of 18" (45.7 cm)
- † 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

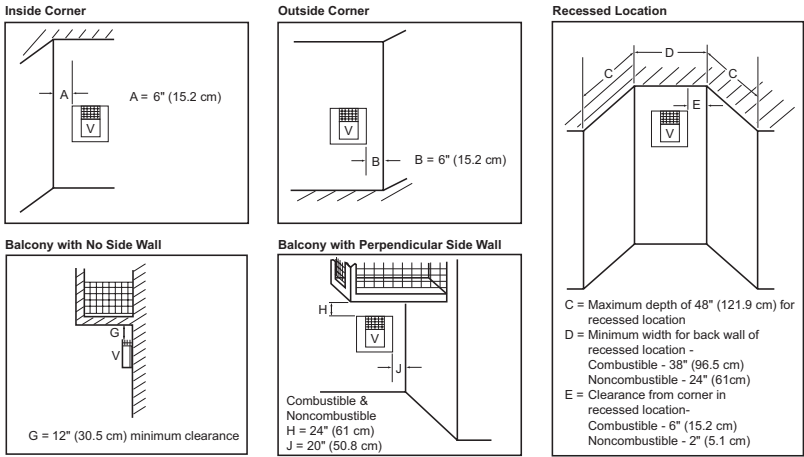


Figure 9 - Minimum Clearances for Vent Terminations

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.

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.

⚠ WARNING: This gas 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.

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

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.

- 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 FMI PRODUCTS, LLC
- Installation other than as instructed by these instructions

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" rise for every 12" 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*, and Figures 17 and 19 on page 12 and 13.

VENTING INSTALLATION

Continued

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 up to three 90° elbows, depending on venting configuration. See *Vertical Termination Configurations* on page 15.

Note: You may use up to 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 21, page 12). 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*, below.

Your stove with direct-vent burner system has been tested for a maximum horizontal run of 20' with 8' vertical rise (see *Installation for Horizontal Termination*, column 2). The maximum vertical run is 40' (see *Installation for Vertical Termination*, page 13).

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.

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".

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 Figure 10 and Figure 11, page 11). Snorkel kit VKS-47-K is also available (see page 22). 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

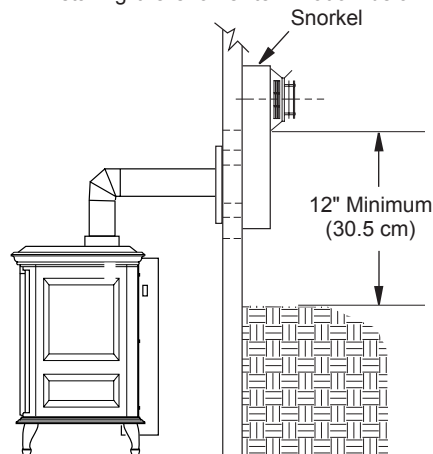


Figure 10 - Snorkel Termination

VENTING INSTALLATION

Continued

grade (basement applications), you must provide proper drainage to prevent water from entering the snorkel termination (see Figure 11). 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 pipes and fittings have 4 locking lugs (indentations). These lugs will slide straight into matching slots on the male ends of adjacent pipes and fittings. Push pipe sections together and twist one section clockwise approximately one-quarter turn until the sections are fully locked (see Figure 12). *Note: Horizontal runs of vent must be supported every 3 feet. Use wall straps for this purpose.*

3. Attach vent pipe assembly to the burner system. Set stove in front of it's 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 accept-

able). See Figure 13. The center of hole should line up with the center line of the horizontal rigid vent pipe. Cut a 10"x10" (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 13).

4. **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 14, page 12). *Note: Replace the wood screws with appropriate fasteners for stucco, brick, concrete, or other types of siding.*

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

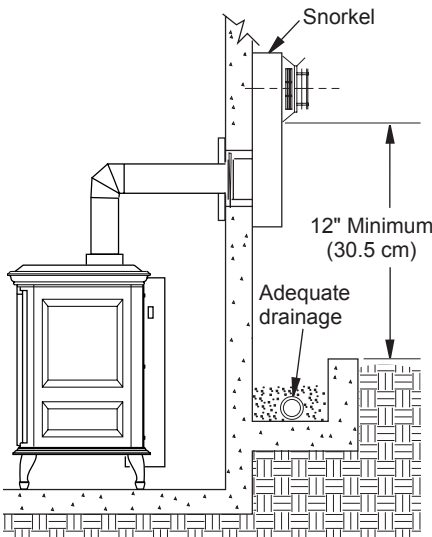


Figure 11 - Snorkel Termination with Drainage Pipe

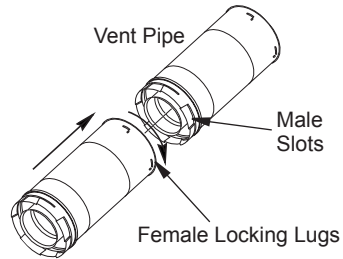


Figure 12 - Vent Pipe Connections

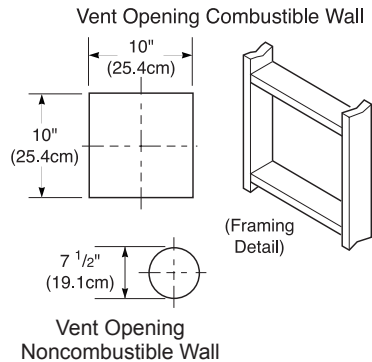


Figure 13 - Vent Opening Requirements

VENTING INSTALLATION

Continued

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 vent cap to the standoff. Apply non-hardening mastic around outside edge of standoff. Position 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 15). The siding standoff must sit flush against the exterior fascia material.

5. **Connecting Vent Cap With Horizontal Vent Pipe:** Slide interior wall firestop over vent pipe before connecting horizontal run to the vent cap (see Figure 16).

Carefully move fireplace with vent assembly attached toward the wall and insert 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.

Slide wall firestop against interior wall surface and attach with screws provided (see Figure 16).

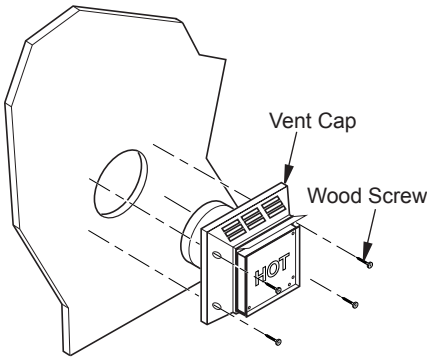


Figure 14 - Installing Horizontal Vent Cap (Noncombustible Exterior)

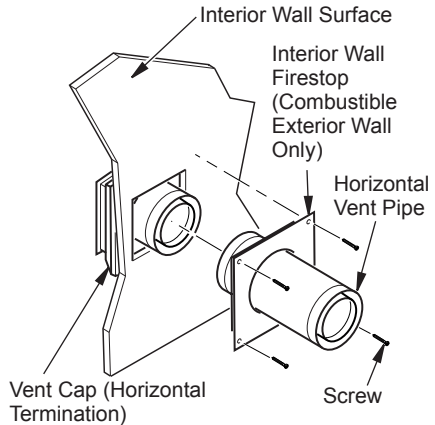


Figure 16 - Connecting Vent Cap with Horizontal Vent Pipe

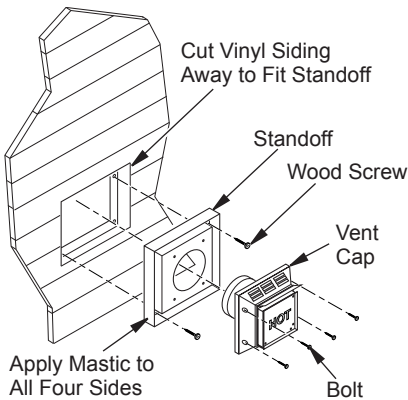


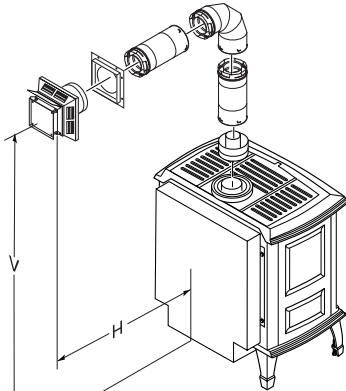
Figure 15 - Installing Vinyl Siding Standoff (Combustible Exterior Wall)

Horizontal Termination Configurations

Figures 17 through 19 (starting on page 13) 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. All horizontal piping runs require 1/4" rise per 12" of horizontal run.

VENTING INSTALLATION

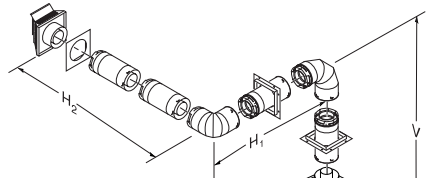
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Horizontal Termination

Vertical (V)	Horizontal (H)
52" min.	26" max.
63" min.	49" max.
86" min.	96" max.
91" min.	20' max.

Figure 17 - Horizontal Termination Configuration for Venting Using One 90° Elbow



Venting with Two 90° Elbows
Vertical (V) Horizontal (H1) + Horizontal (H2)

6' min.	4' max.
7' min.	6' max.
8' min.	10' max.
20' max.	12' max.

Figure 19 - Horizontal Termination Configuration for Venting Using Two 90° Elbows with Termination at 90° with Stove

INSTALLATION FOR VERTICAL TERMINATION

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

Venting with Three 90° Elbows

Vertical (V)	Horizontal (H1)	Horizontal (H1) + Horizontal (H2)
6' min.	4' max.	8' max.
7' min.	6' max.	12' max.
8' min.	8' min.	20' max.
20' max.	8' max.	20' max.

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 20) to avoid cutting load bearing members.

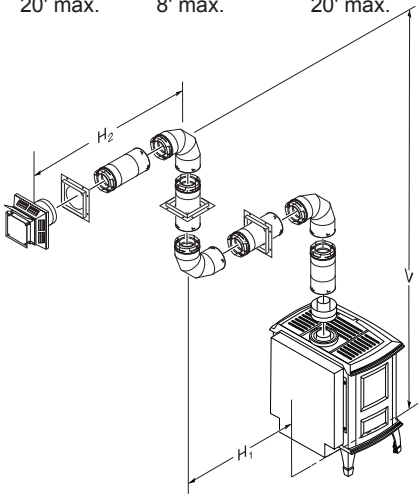


Figure 18 - Horizontal Termination Configuration for Venting Using Three 90° Elbows

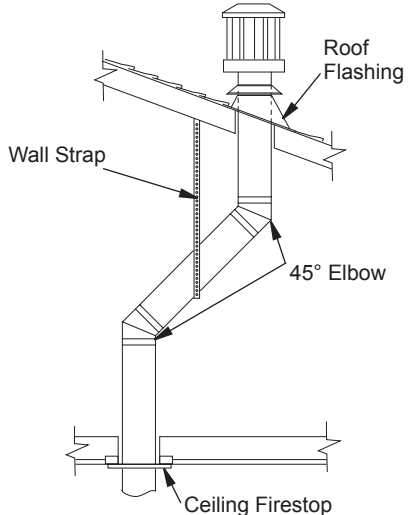


Figure 20 - Offset with Wall Strap and 45° Elbows

VENTING INSTALLATION

Continued

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 24 through 26, pages 15 and 16.

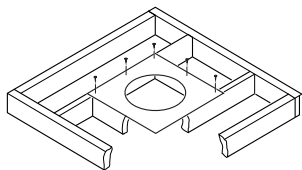
2. Set stove in desired location. Drop a plumb line down from the ceiling to the position of burner system exit flue. Mark center point where vent will penetrate ceiling. Drill a small locating hole at this point.

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

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"x10" (25.4 cm x 25.4 cm) inside dimensions, as shown in Figure 13 on page 11 using framing lumber the same size as the ceiling joists. If the area above the ceiling is an insulated ceiling or and attic, nail firestop from the top side. This prevents loose insulation from falling into the required clearance space. If the area above the ceiling is a living space,

If area above is an attic, install firestop above framed hole.



If area above is a living space, install firestop below framed hole.

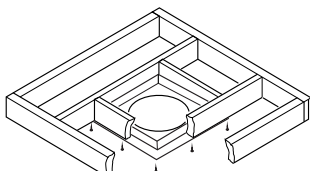


Figure 32 - Installing Firestop

install firestop below the framed hole. The firestop should be installed with no less than 3 nails per side (see Figure 21).

2. Assemble desired lengths of pipe and elbows necessary to reach from the burner system flue up through the firestop. Be sure all pipe and elbow connections are fully twist-locked (see Figure 12, page 11).
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"x10" (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" clearance from the vent pipe to combustible materials. Frame opening as shown in Figure 13 on page 11.
4. Connect a section of pipe and extend up through the hole. *Note: If an offset is needed to avoid obstructions, you must support vent pipe every 3 feet. Use wall straps for this purpose (see Figure 20, page 13). Whenever possible, use 45° elbows instead of 90° elbows. The 45° elbow offers less restriction to the flow of flue gases and intake air.*
5. Place flashing over pipe section(s) extending through the roof. Secure base of flashing to roof and framing with roofing nails. Be sure roofing material overlaps the top edge of the flashing as shown in Figure 20, page 13. There must be a 1" clearance from vent pipe to combustible materials.
6. Continue to add pipe sections until the height of the vent cap meets the minimum building code requirements described in Figure 9 on page 8. *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.*
7. Twist-lock vent cap onto the last section of vent pipe.

VENTING INSTALLATION

Continued

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 required air spaces with insulation.

Cathedral Ceiling Installation

1. 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 roof sheathing using locating hole as a center point.
2. Cut the hole 1/8" larger than the support box outline (see Figure 22).
3. Lower support box through the hole in roof until bottom of box extends at least 2" below the ceiling (see Figure 22). Align support box vertically and horizontally using a level. Temporarily tack support box in place through inside walls and into roof sheathing.
4. Using tin snips, cut support box from top corners down to roofline and fold resulting flaps over roof sheathing (see Figure 23). Apply a bead of nonhardening mastic around top edges of support box to make a seal between box and roof. Nail in place with roofing nails. Remove any combustible material that might be inside of support box.
5. Complete cathedral ceiling installation by following the same procedures outlined in

steps 2 through 7 for Flat Ceiling Installation, page 14.

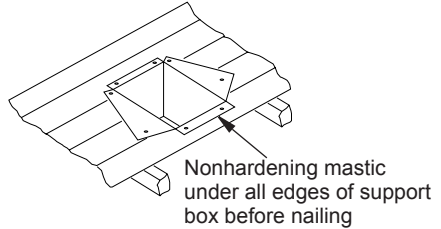


Figure 23 - Installed Cathedral Ceiling Support Box

Vertical Termination Configurations

Figure 24 through 27 show four different configurations for vertical termination.

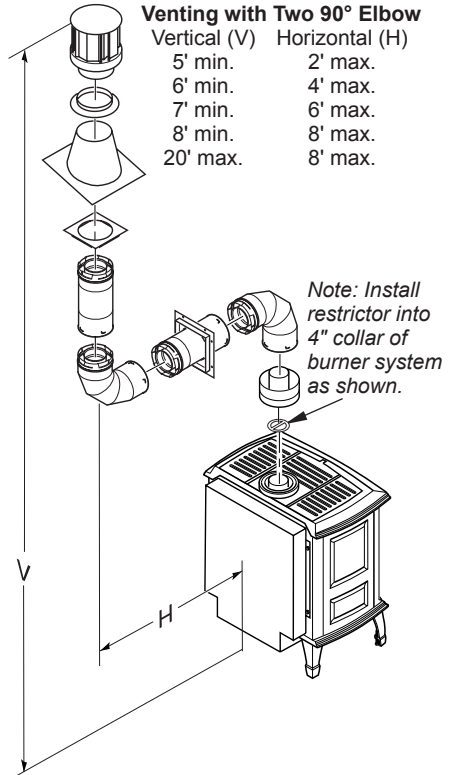
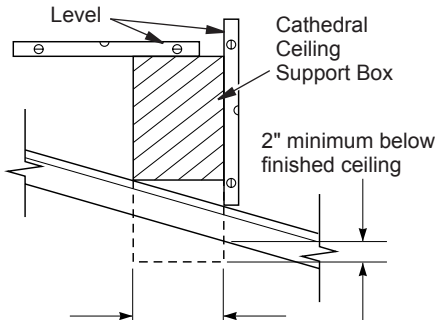


Figure 24 - Vertical Venting Configuration Using Two 90° Elbow



Cut hole 1/8" larger than support box when projected onto roofline

Figure 22 - Cathedral Ceiling Support Box Installation

VENTING INSTALLATION

Continued

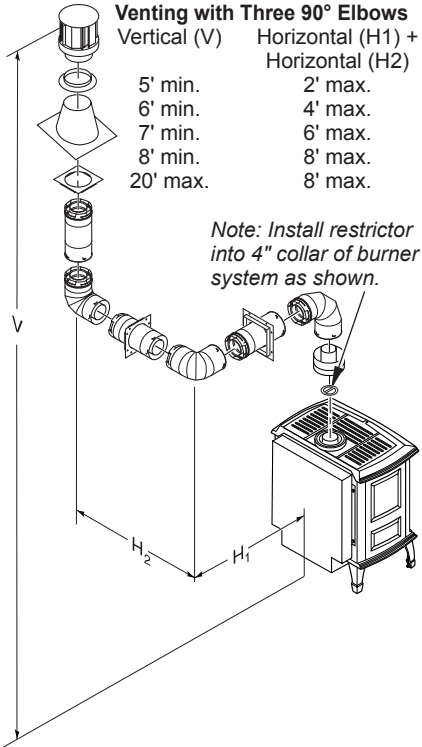


Figure 25 - Vertical Venting Configuration Using Three 90° Elbows with Two Horizontal Runs

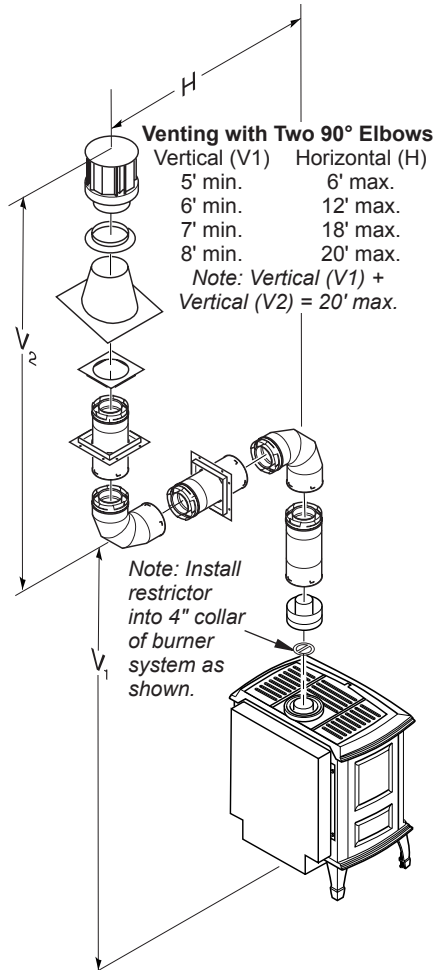


Figure 26 - Vertical Venting Configuration Using Two 90° Elbows

VENTING INSTALLATION

Continued

HIGH ALTITUDE INSTALLATION

Your cast iron stove and direct-vent burner system has been tested and approved for operation at altitudes from 0-2000 ft.

When installing this stove at an elevation above 2000 feet, 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 above sea level. Check with your local gas company for proper orifice size identification and proper orifice for your location.

For assistance with any high altitude installation contact FMI PRODUCTS, LLC at 1-866-328-4537.

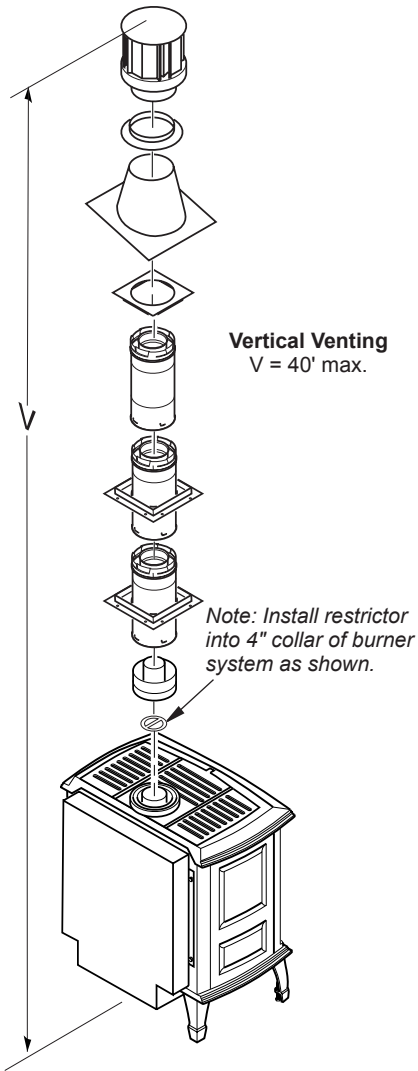


Figure 27 - Vertical Venting Configuration With No Horizontal Run

VENTING INSTALLATION

Continued

PARTS LISTS FOR VENTING KITS AND COMPONENTS

Number	Description	Number	Description	
VKG-47-K	Ground Floor Vent Kit, Black Includes: Horizontal Square Termination, 90° Elbow, 7"-12" Adjustable Coaxial Pipe, 6" Pipe Adaptor, 12" Coaxial Pipe, Wall Firestop, Decorative Trim Plate and 18 Screws	P-47-12-K	12" Black Coaxial Pipe (1 pk)	
		P-47-24-K	24" Black Coaxial Pipe (1 pk)	
		P-47-48-K	48" Black Coaxial Pipe (1 pk)	
		PA47-712-K	7"-12" Black Coaxial Pipe (1 pk)	
		P-47-6-K	6" Black Coaxial Pipe (1 pk)	
		E47-90-K	90° Elbow (1 pk)	
		E47-45-K	45° Elbow (1 pk)	
		PA-47-6-K	6" Adaptor Collar, Black (1 pk)	
VKB-47-K		Basement Vent Kit Includes: Horizontal Square Termination, 90° Elbow, 7"-12" Adjustable Coaxial Pipe, 6" Pipe Adaptor, 4' Coaxial Pipe, Wall Firestop, Decorative Trim Plate and 18 Screws	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)	
VKS-47-K	Snorkel Vent Kit Includes: 36" Snorkel Termination, 90° Elbow, 7"-12" Adjustable Coaxial Pipe, 6" Pipe Adaptor, 4' Coaxial Pipe, Wall Firestop, Decorative Trim Plate and 18 Screws	HTS-47	Horizontal Square Termination (1 pk)	
		CS-47	Cathedral Ceiling Support Box (1 pk)	
VKR-47-K		Roof Vent Kit Includes: Vertical High Wind Termination, Flue Restrictor, 7"-12" Adjustable Coaxial Pipe, 6" Pipe Adaptor, 12" Coaxial Pipe, 4' Coaxial Pipe, Firestop Decorative Trim Plate, Roof Flashing, Storm Collar and 18 Screws	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" Snorkel Termination (1 pk)	
	ST-47-36		36" Snorkel Termination (1 pk)	

INSTALLATION

NOTICE: This burner system is intended for use as supplemental heat. Use this burner system along with your primary heating system. Do not install this stove and burner system as your primary heat source. If you have a central heating system, you may run system's circulating blower while using heater. This will help circulate the heat throughout the house. In the event of a power outage, you can use this burner system as your primary heat source.

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 35.

IMPORTANT: If installing gas conversion kit, do so at this time. Be sure to follow all installation instructions included with conversion kit.

INSTALLING GAS PIPING TO STOVE 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)

* An equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the 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" of water. If you do not reduce incoming gas pressure, heater regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 28. 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" diameter or greater to allow proper gas volume to burner system. If pipe is too small, undue loss of volume will occur.

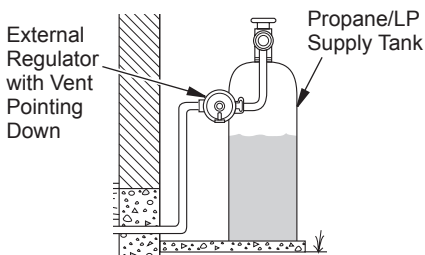


Figure 28 - External Regulator with Vent Pointing Down (Propane/LP Only)

INSTALLATION

Continued

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 29).

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

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 29. 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.

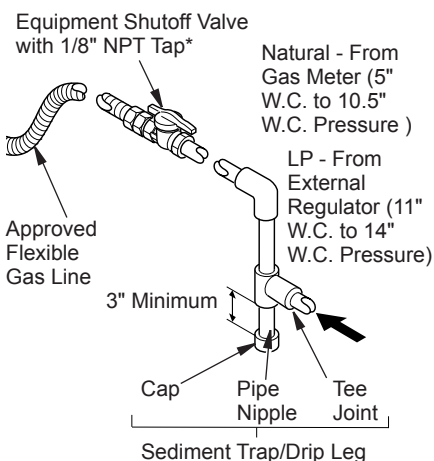


Figure 29 - Gas Connection

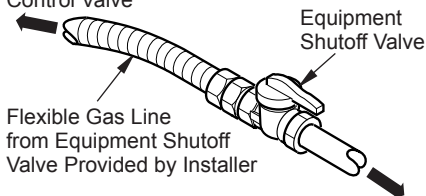
* The equipment shutoff valve may be supplied with the appliance or you can purchase it from your dealer.

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) from equipment shutoff valve to burner system (see Figure 30). Route flexible gas supply line and attach to valve.
 3. Check all gas connections for leaks. See Checking Gas Connections.

To Flare Fitting on Control Valve



To Gas Supply (Natural) To External Regulator (Propane/LP)

Figure 30 - Flexible Gas Line

CHECKING GAS CONNECTIONS

⚠ WARNING: Test all gas piping and connections, internal and external to unit, 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 test 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.

INSTALLATION

Continued

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 test 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.
5. Light burner system (see *Lighting Instructions*, page 26). Check all other internal joints for leaks.
6. Turn off burner system (see *To Turn Off Gas to Appliance*, page 27).

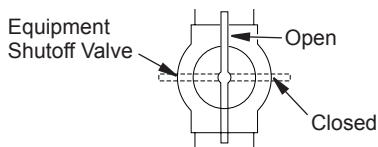


Figure 31 - Equipment Shutoff Valve

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

1. Close equipment shutoff valve (see Figure 31).
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.
3. Check all joints from propane/LP supply tank or gas meter to equipment shutoff valve (see Figure 32 for propane/LP or Figure 33 for natural gas). Apply noncorrosive leak test solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.

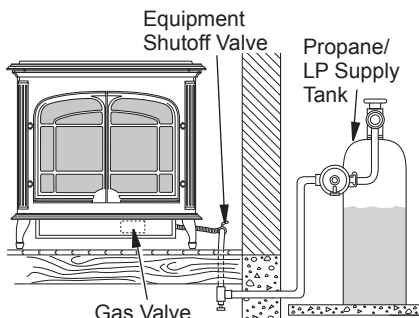


Figure 32 - Checking Gas Joints for Propane/LP Gas Burner System

PRESSURE TESTING BURNER SYSTEM GAS CONNECTIONS

1. Open equipment shutoff valve (see Figure 31).
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 thermostat gas valve (see Figure 32 for propane/LP or Figure 33 for natural). Apply commercial leak test solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.

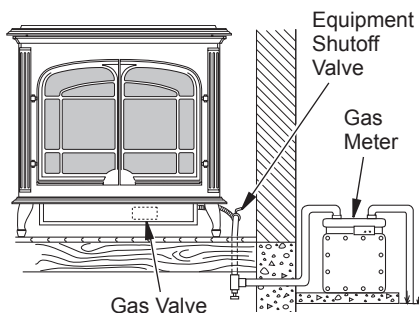


Figure 33 - Checking Gas Joints for Natural Gas Burner System

INSTALLATION

Continued

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 34. 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.

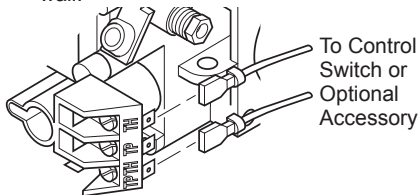


Figure 34 - Control Valve Terminals

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

positions on the unit as pictured in Figure 45. 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 cover of the thermostat from the base. Grasp sides of cover firmly and pull to separate from base.
6. Feed electrical wires through the rectangular slots (from the back) on each side of the base (see Figure 35).
7. Connect one bare wire end to each terminal ("W" and "R") of the thermostat base (see Figure 36).

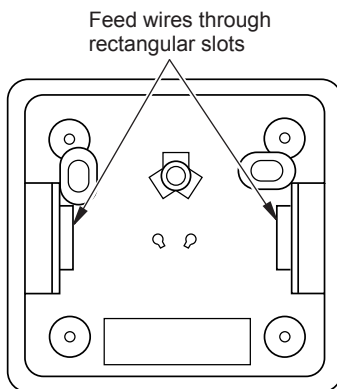


Figure 35 - Back View of Thermostat Base

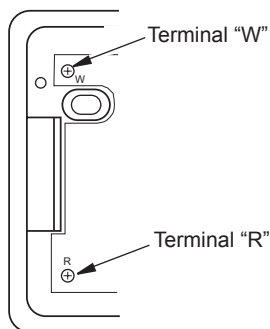


Figure 36 - Thermostat Base Terminal "W" and "R"

INSTALLATION

Continued

8. Install base to the wall with screws provided with thermostat.
9. Move temperature adjustment back and forth to insure the bi-metal is free from restrictions.
10. Replace cover onto base. (Upon installation, thermostat must be allowed to stabilize at room temperature for a minimum of 30 minutes for proper operation.)
11. Set temperature adjustment to the desired setting. This thermostat has been electronically calibrated at the factory. No adjustment or leveling is necessary.

REMOVING/REPLACING GLASS DOOR

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

CAUTION: Do not operate this burner system with a broken glass door panel or without the glass door panel securely in place. For replacement part information see [Replacement Parts](#), page 35.

1. If stove front panel is still installed, remove 2 bolts from bottom of stove and one from the top of stove to remove front panel (see Figure 37). For the Oxford stove the middle grate will need to be removed to remove the top bolt.
2. Remove screws from 2 tabs at top of glass door while holding door securely keeping it from falling forward (see Figure 38).
3. Grasp door by both sides and ease it upward off of lower bracket (see Figure 38).
4. To replace glass door, follow the above instructions in reverse.

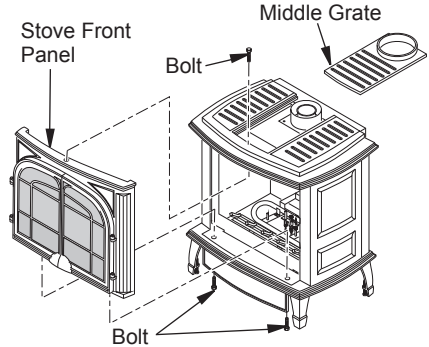


Figure 37 - Removing Front Panel from Stove (Oxford™ Model Shown)

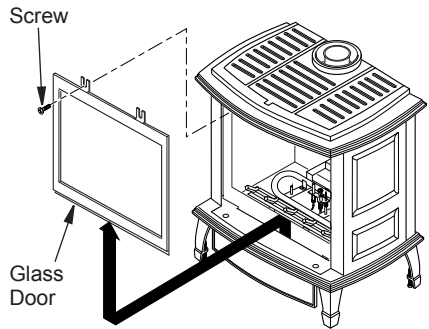


Figure 38 - Removing Glass Door from Burner System

INSTALLATION

Continued

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.

It is very important to install these logs exactly as instructed in Figures 39 through 43. 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 35).

1. Remove glass door. See *Removing/Replacing Glass Door*, page 23.
2. Place log #1 (back log) on top of grate. Make sure notches in the bottom of log fit over the grate (see Figure 39).
3. Rest log #2 (large front log) on the pins on the front part of grate (see Figure 40).
4. Place log #3 (crossover log) onto rear and front logs. Make sure it is seated properly into notch on front log and over the raised triangular portion of rear log as shown in Figure 41, page 25.

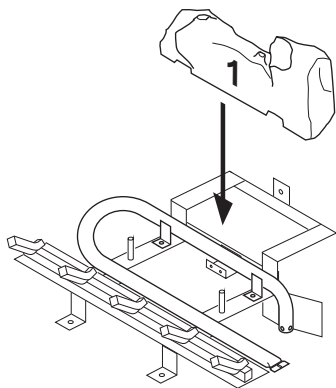


Figure 39 - Installing Log No. 1

5. Place log #4 (small log) onto front left part of grate making sure the notches fits over the prong of the grate. See Figure 42, page 25.
6. 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 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.

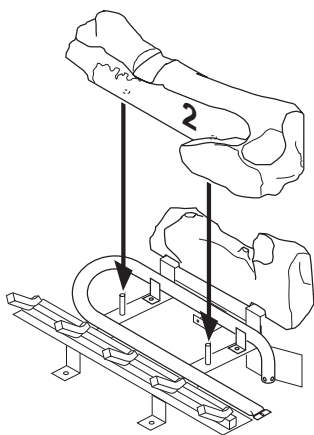


Figure 40 - Installing Log No. 2

INSTALLATION

Continued

7. Pull ember material apart into pieces no larger than a dime. Place these pieces loosely and sparingly directly onto the exposed section of front burner and along space between burner and grate prongs (see Figure 43). 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.
8. Replace glass door and stove front. See [Removing/Replacing Glass Door](#), page 23.

⚠ 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.

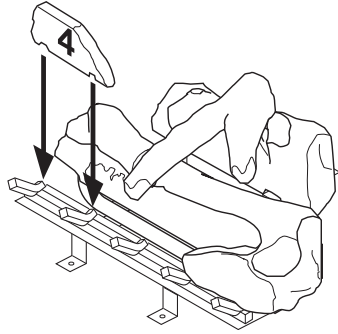


Figure 42 - Installing Log No. 4

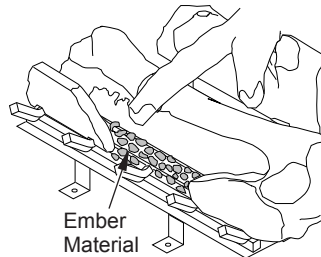


Figure 43 - Placing Ember Material on Burner

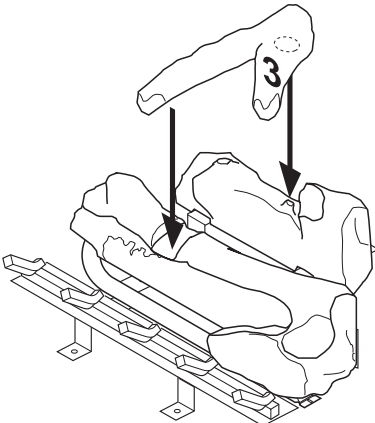


Figure 41 - Installing Log No. 3

OPERATION

FOR YOUR SAFETY READ BEFORE LIGHTING

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

A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.

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


WHAT TO DO IF YOU SMELL GAS




- Do not try to light any appliance.
- Do not touch any 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.

C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it, call a qualified service technician. Force or attempted repair may result in a fire or explosion.

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

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above.
2. Set ON/OFF switch located on rear cover to OFF.
3. Open lower panel.
4. Turn off all electric power to the burner system.
5. Push in gas control knob slightly and turn clockwise  to OFF.

6. 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, column 1. If you don't smell gas, go to the next step.
7. The pilot is located by the main burner and should not require accessing for lighting.
8. Turn knob on gas control counterclockwise  to PILOT.
9. Push in control knob all the way and hold. Immediately light the pilot by repeatedly pressing the piezo spark ignitor until a flame appears. Continue to hold for about one (1) minute after the pilot is lit. Release knob and it will pop back. Pilot should remain lit. If it goes out, repeat steps 5 through 8.
 - If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
 - If 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 counterclockwise  to ON.
11. Turn on all electric power to the burner system.
12. Turn the ON/OFF switch to ON position.
13. Close lower panel.
14. To leave pilot lit and shut off burners only, turn control knob clockwise  to the PILOT position or set selector switch in the OFF position.

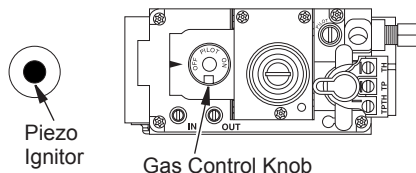



Figure 44 - Control Valve

OPERATION

Continued

TO TURN OFF GAS TO APPLIANCE

1. Set ON/OFF switch located on rear cover to OFF.
- 2a. Open lower panel.
- 2b. **If Using Optional Hand-Held Remote:** Set selector switch 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.
6. Close equipment shutoff valve (see Figure 31, page 21).

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.

Selector Switch in Remote Position (Optional Remote Control)

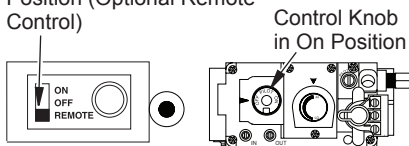


Figure 45 - Setting the Selector Switch, Control Knob, and Flame Adjustment Knob for Remote Operation

MANUAL LIGHTING PROCEDURE

1. Remove glass door (see *Removing/Replacing Glass Door*, page 23).
2. Follow steps 1 through 8 under *Lighting Instructions*, page 26.
3. Press control knob and light pilot with match.
4. Keep control knob pressed in for 30 seconds after lighting pilot. After 30 seconds, release control knob. Now follow steps 10 through 13 of *Lighting Instructions*, page 26.
5. Replace glass door (see *Removing/Replacing Glass Door*, page 23).

OPTIONAL REMOTE OPERATION

*Note: All remote control accessories must be purchased separately (see *Accessories*, page 35). Follow instructions included with the remote control.*

NOTICE: You must light the pilot before using the hand-held remote control unit. See *Lighting Instructions*, page 30.

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 45).

Note: The burner may light if hand-held remote was on when selector switch was last

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 30. 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 control knob on the heater 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 $\frac{3}{8}$ " to $\frac{1}{2}$ " above the pilot flame as shown in Figure 46. The flame from the pilot burner must extend beyond the thermopile.

If your pilot assembly does not meet these requirements:

- turn burner system off (see [To Turn Off Gas to Appliance](#), page 27)
- see [Troubleshooting](#), page 30

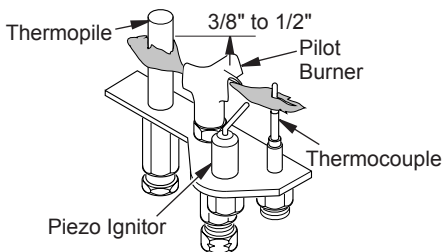


Figure 46 - Pilot Assembly

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 47 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 27)
- see [Troubleshooting](#), page 30

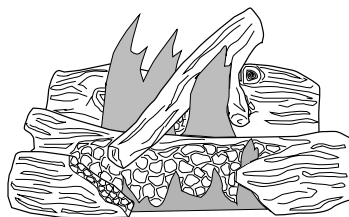


Figure 47 - Typical Flame Pattern

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 stove with burner system clean. Inspect these areas of stove and burner system before each use. Have burner system inspected yearly by a qualified service person. Burner system may need more frequent cleaning due to excessive lint from carpeting, bedding material, pet hair, etc.

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 non-abrasive household glass cleaner to clean glass. Do not clean glass when hot.

CLEANING AND MAINTENANCE

Continued


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 start-up 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 23 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 35). 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 23). Vacuum all glass pieces with a shop vac.

Use only the ceramic glass door replacement intended for this burner system (see [Replacement Parts](#), page 35 for details on ordering). No substitutions may be made. See [Removing/Replacing Glass Door](#), page 23 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 build-up on logs.
- Replace log(s) if broken. See [Replacement Parts](#) on page 35.
- Replace ember material periodically as needed. See [Replacement Parts](#) on page 35.

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

⚠ WARNING: Turn off heater and let cool before servicing. Only a qualified service person should service and repair heater.

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

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

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. Control knob not in PILOT position. 3. Control knob not pressed in while in PILOT position. 4. Air in gas lines when installed. 5. Depleted gas supply (propane/LP models 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 control knob to PILOT position. 3. Press in control knob while in PILOT position. 4. Continue holding down 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 28) or replace pilot assembly. 7. Replace gas control.

TROUBLESHOOTING

Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Pilot lights but flame goes out when control knob is released.	<ol style="list-style-type: none"> 1. Control knob not fully pressed in. 2. 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: 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 control knob fully 2. After pilot lights, keep control knob pressed in 30 seconds 3. Fully open equipment shutoff valve 4. A) Contact local gas company. B) Clean pilot (see <i>Cleaning and Maintenance</i>, page 28) or replace pilot assembly. 5. Hand tighten until snug, then tighten 1/4 turn more. 6. Replace pilot assembly. 7. Replace control valve.
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. 	<ol style="list-style-type: none"> 1. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice. 2. Contact local propane/LP or natural gas company. 3. Reconnect leads (see <i>Wiring Diagram</i>, page 38). 4. Replace thermopile.
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 28) 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 28) 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.
Heater produces a whistling noise when burner is lit.	<ol style="list-style-type: none"> 1. Air in gas line. 2. Dirty or partially clogged burner orifice. 	<ol style="list-style-type: none"> 1. Operate burner until air is removed from line. Have gas line checked by local propane/LP or natural gas company. 2. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice.

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
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 on pages 12 thru 16.
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 normal. 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.
Burner system produces unwanted odors.	<ol style="list-style-type: none"> 1. Gas leak. See Warning statement above. 	<ol style="list-style-type: none"> 1. Locate and correct all leaks (see <i>Checking Gas Connections</i>, page 20).
Burner system shuts off in use.	<ol style="list-style-type: none"> 1. High or gusting winds. 2. Low line pressure. 3. Pilot is partially clogged. 4. Glass too loose and air tight gasket leaks in corners after usage. 5. Bad thermopile. 6. Improper vent cap installation. 	<ol style="list-style-type: none"> 1. Burner system has been tested for up to 40 mph winds. However, extreme conditions may occur. See <i>Lighting Instructions</i>, page 26. 2. Contact local propane/LP or natural gas company. 3. Clean pilot (see <i>Cleaning and Maintenance</i>, page 28). 4. Tighten glass. 5. Replace faulty component. 6. Check for proper installation and freedom from debris or blockage.

TROUBLESHOOTING

Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Gas odoreven when control knob is in OFF position.	1. Gas leak. See Warning statement, page 37. 2. Control valve defective.	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , page 20). 2. Replace control valve.
Gas odor during combustion.	1. Gas leak. See Warning statement, page 37	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , page 20).
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 or replace burner. 4. Follow venting configuration instructions on pages 12 thru 16.

SPECIFICATIONS

SDVBND

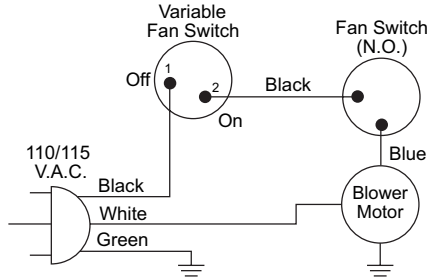
- Rating: 21,000-30,000 Btu/Hr
- Gas Type: Natural Gas
- Manifold Pressure: 3.5" W.C.
- Minimum Inlet Supply Pressure: 5" W.C.
- Dimensions, (HxWxD):
27" x 21 1/2" x 18" (68.6 x 54.6 x 45.7 cm)

SDVBPD

- Rating: 20,000-28,000 Btu/Hr
- Gas Type: Propane/LP Gas
- Manifold Pressure: 10" W.C.
- Minimum Inlet Supply Pressure: 11" W.C.
- Dimensions, (HxWxD):
27" x 21 1/2" x 18" (68.6 x 54.6 x 45.7 cm)

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.



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)

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

TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact FMI PRODUCTS, LLC at 1-866-328-4537. When calling please have your model and serial numbers of your heater ready.

You can also visit our web site at www.fmiproducts.com.

REPLACEMENT PARTS

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

Contact authorized dealers of this product. If they can't supply original replacement part(s), call FMI PRODUCTS, LLC at 1-866-328-4537.

When calling, have ready:

- your name
- your address
- model and serial numbers of your heater
- how heater was malfunctioning
- purchase date

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

ACCESSORIES

Purchase these accessories from your local dealer. If they can not supply these accessories call FMI PRODUCTS, LLC at 1-866-328-4537 for information. You can also write to the address listed on the back page of this manual.



RECEIVER AND HAND-HELD THERMOSTAT REMOTE CONTROL KIT - TLCR

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

WALL MOUNTED THERMOSTAT CONTROL KIT - GWMT1

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

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



RECEIVER AND HAND-HELD REMOTE CONTROL KIT - MLCR

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

NCBV-PS CONVERSION KIT

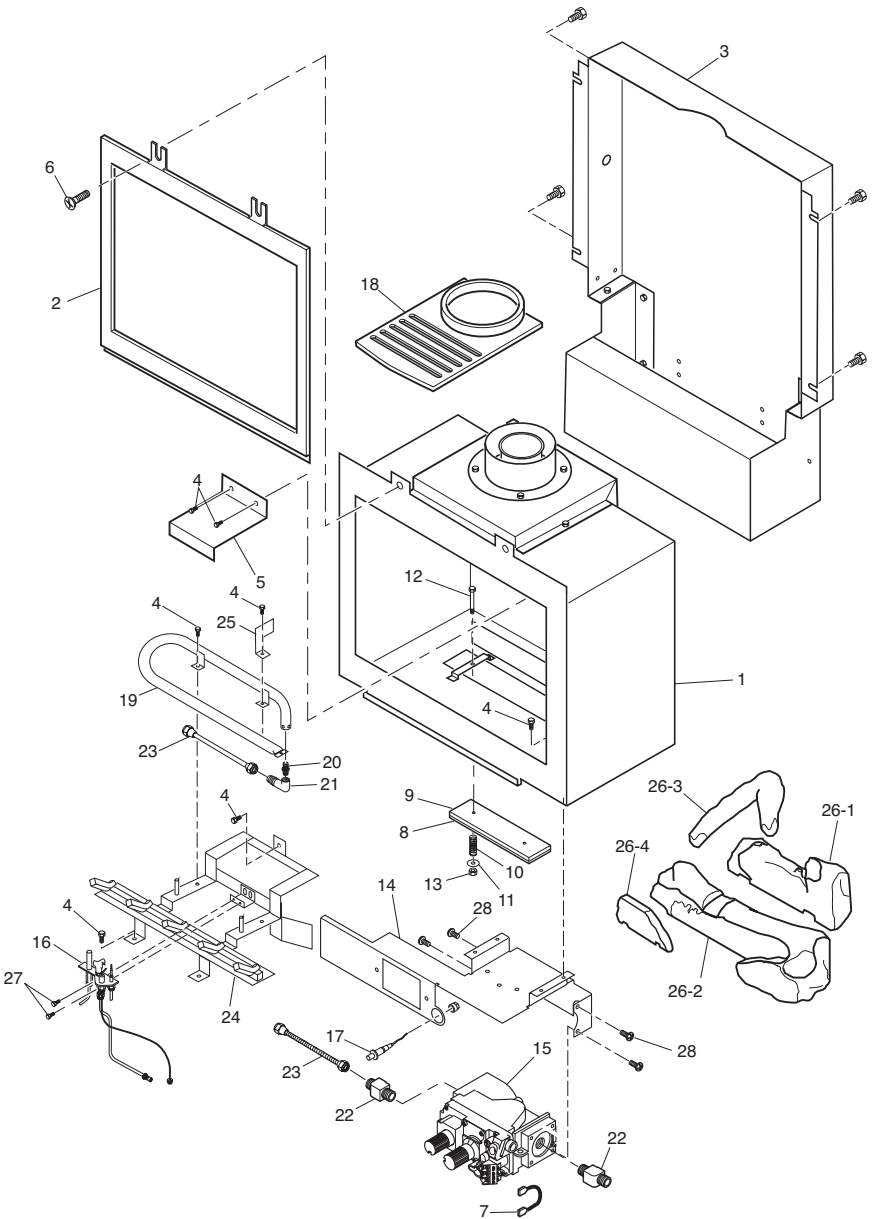
For propane/LP gas models. Allows burner system to be converted from propane/LP gas to natural gas.

PCBV-NS CONVERSION KIT

For natural gas models. Allows burner system to be converted from natural gas to propane/LP gas.

PARTS

MODELS SDVBND AND SDVBPD



PARTS

MODELS SDVBND AND SDVBPD

This list contains replaceable parts used in your burner system. When ordering parts, follow the instructions listed under *Replacement Parts* on page 35 of this manual.

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	**	Firebox Assembly	1
2	105795-01	Glass Door Assembly	1
3	106831-01	Rear Cover	1
4	11166	Screw, Hex	19
5	107191-01	Baffle	1
6	11196	Screw	2
7	103284-07	Wire Assembly	1
8	26810	Relief Cover	1
9	16550	Relief Cover Gasket	1
10	17373	Relief Spring	2
11	11233	Relief Washer	2
12	11200	Hex Head Cap Screw	2
13	11235	Locknut	2
14	105468-02	Valve Bracket	1
15	14389	Valve, Natural	1
	14390	Valve, Propane/LP	1
16	14561	Pilot Assembly, Natural	1
	14562	Pilot Assembly, Propane/LP	1
17	097159-04	Ignitor, Piezo	1
18	107014-01	Center Cast Stove Top Grate	1
19	14597	Burner, Natural	1
	14598	Burner, Propane/LP	1
20	104506-16	Orifice, Natural	1
	104506-17	Orifice, Propane/LP	1
21	14499	Brass Elbow	1
22	14264	Brass Fitting	2
23	101628-04	Flex Tubing	2
24	106794-01	Grate Assembly	1
25	27113	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	11102	Screw	2
28	11107	Screw	4
PARTS AVAILABLE - NOT SHOWN			
	GA6060	Lava Rock	1
	26839	Ember Material Bag	1

** Not a field replaceable part.

WARRANTY

KEEP THIS WARRANTY

Model (located on product or identification tag) _____

Serial No. (located on product or identification tag) _____

Date Purchased _____

Keep receipt for warranty verification.

FMI PRODUCTS, LLC LIMITED WARRANTIES

New Products

Standard Warranty: FMI PRODUCTS, LLC warrants this new product and any parts thereof to be free from defects in material and workmanship for a period of four (4) years from the date of first purchase from an authorized dealer provided the product has been installed, maintained and operated in accordance with FMI PRODUCTS, LLC's warnings and instructions.

For products purchased for commercial, industrial or rental usage, this warranty is limited to 90 days from the date of first purchase.

Factory Reconditioned Products

Limited Warranty: FMI PRODUCTS, LLC warrants factory reconditioned products and any parts thereof to be free from defects in material and workmanship for 30 days from the date of first purchase from an authorized dealer provided the product has been installed, maintained and operated in accordance with FMI PRODUCTS, LLC's warnings and instructions.

Terms Common to All Warranties

The following terms apply to all of the above warranties:

Always specify model number and serial number when contacting the manufacturer. To make a claim under this warranty the bill of sale or other proof of purchase must be presented.

This warranty is extended only to the original retail purchaser when purchased from an authorized dealer, and only when installed by a qualified installer in accordance with all local codes and instructions furnished with this product.

This warranty covers the cost of part(s) required to restore this product to proper operating condition and an allowance for labor when provided by a FMI PRODUCTS, LLC Authorized Service Center or a provider approved by FMI PRODUCTS, LLC. Warranty parts must be obtained through authorized dealers of this product and/or FMI PRODUCTS, LLC who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty.

Travel, handling, transportation, diagnostic, material, labor and incidental costs associated with warranty repairs, unless expressly covered by this warranty, are not reimbursable under this warranty and are the responsibility of the owner.

Excluded from this warranty are products or parts that fail or become damaged due to misuse, accidents, improper installation, lack of proper maintenance, tampering, or alteration(s).

This is FMI PRODUCTS, LLC's exclusive warranty, and to the full extent allowed by law; this express warranty excludes any and all other warranties, express or implied, written or verbal and limits the duration of any and all implied warranties, including warranties of merchantability and fitness for a particular purpose to four (4) years on new products and 30 days on factory reconditioned products from the date of first purchase. FMI PRODUCTS, LLC makes no other warranties regarding this product.

FMI PRODUCTS, LLC's liability is limited to the purchase price of the product, and FMI PRODUCTS, LLC shall not be liable for any other damages whatsoever under any circumstances including indirect, incidental, or consequential damages.

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

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

For information about this warranty contact:


FMI PRODUCTS, LLC
2701 S. Harbor Blvd.
Santa Ana, CA 92704
1-866-328-4538
www.fmiproducts.com

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