

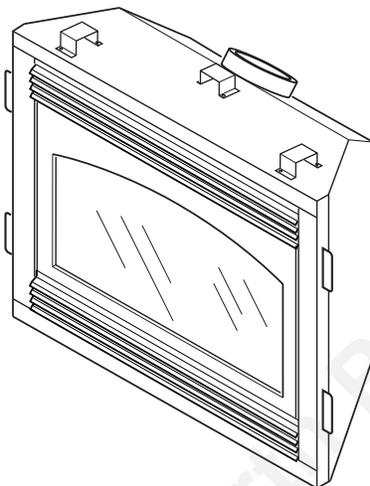
VANGUARD®

DIRECT-VENT FIREPLACE

OWNER'S OPERATION AND INSTALLATION MANUAL

This fireplace meets the construction and safety standards of H.U.D. for application in mobile homes when installed according to these instructions.

This appliance is shipped ready for natural gas installation. The propane/LP conversion parts are included.



MBDV37 AND MBDV41

FOR YOUR SAFETY

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

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

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

WARNING: This direct-vent gas fireplace series is intended for use with Natural or Propane/LP gas only. Do not attempt to burn any solid fuels in these appliances.

CHECK LOCAL CODES PRIOR TO INSTALLATION

This appliance may be installed as an OEM installation in a manufactured (mobile) home and must be installed in accordance with the manufacturer's instructions and the Manufactured Home Construction and Safety Standard, *Title 24 CFR, Part 3280* in the United States or the Mobile Home Standard, *CAN/CSA Z240 MH Series*, in Canada.

This appliance is only for use with the type of gas indicated on the rating plate. A conversion kit is supplied with the appliance.

Save this manual for future reference.

VANGUARD®

DIRECT-VENT FIREPLACE

SAFETY INFORMATION

WARNINGS

IMPORTANT: Read this owner's manual carefully and completely before trying to assemble, operate, or service this fireplace. Improper use of this fireplace 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 fireplace is a vented product. This fireplace will not produce any gas leakage into your home if properly installed. This fireplace 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 fireplace may not have been installed properly. **Get fresh air at once!** Have fireplace 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.

Propane/LP gas and natural gas are both odorless. An odor-making agent is added to each of these gases. The odor helps you detect a gas leak. However, the odor added to these gases 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 fireplace.

 WARNING: Any change to this fireplace or its controls can be dangerous.

1. Models MBDV37 and MBDV41 use a millivolt gas control valve and a millivolt ignition system. The fireplace includes a manual variable blower and an ON/OFF hand-held remote control.
2. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is convertible. The standard factory setup is for natural gas. See *Installation Instructions for Conversion Natural to Propane/LP*, pages 29 and 30.
3. For propane/LP fireplace, 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. capacity.
4. 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.
5. Never install the fireplace
 - in a recreational vehicle
 - where curtains, furniture, clothing, or other flammable objects are less than 42" from the front, top, or sides of the fireplace
 - in high traffic areas
 - in windy or drafty areas
6. This fireplace reaches high temperatures. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Fireplace will remain hot for a time after shutdown. Allow surfaces to cool before touching.
7. Carefully supervise young children when they are in the room with fireplace.
8. Do not modify this fireplace under any circumstances. Any parts removed for servicing must be replaced prior to operating fireplace.
9. Turn fireplace off and let cool before servicing, installing, or repairing. Only a qualified service person should install, service, or repair this fireplace. Have fireplace inspected annually by a qualified service person.
10. 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 fireplace.
11. Have venting system inspected annually by a qualified service person. If needed, have venting system cleaned or repaired. See *Cleaning and Maintenance*, page 28.
12. Keep the area around your fireplace clear of combustible materials, gasoline, and other flammable vapor and liquids. Do not run fireplace where these are used or stored. Do not place items such as clothing or decorations on or around fireplace.
13. Do not use this fireplace to cook food or burn paper or other objects.
14. Do not use any solid fuels (wood, coal, paper, cardboard, etc.) in this fireplace. Use only the gas type indicated on fireplace 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, ANS/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 fireplace directly on carpeting, vinyl tile, or any combustible material other than wood. The fireplace must set on a metal or wood panel extending the full width and depth of the fireplace.
18. Do not use fireplace 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 fireplace if any log is broken.
20. Do not use a blower insert, heat exchanger insert, or other accessory not approved for use with this fireplace.
21. Do not operate fireplace with glass door removed, cracked, or broken.

OWNER'S MANUAL

LOCAL CODES

Install and use fireplace with care. Follow all local codes. In the absence of local codes, use the current *National Fuel Gas Code, ANS Z223.1*, also known as NFPA 54* (USA) or the current *CAN/CGA-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 direct-vent fireplace 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 fireplace requires no electricity making it ideal for emergency backup heat.

PIEZO IGNITOR

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

GLOSSARY OF TERMS

Chase - A boxlike 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 Terminal - 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.

PRODUCT IDENTIFICATION

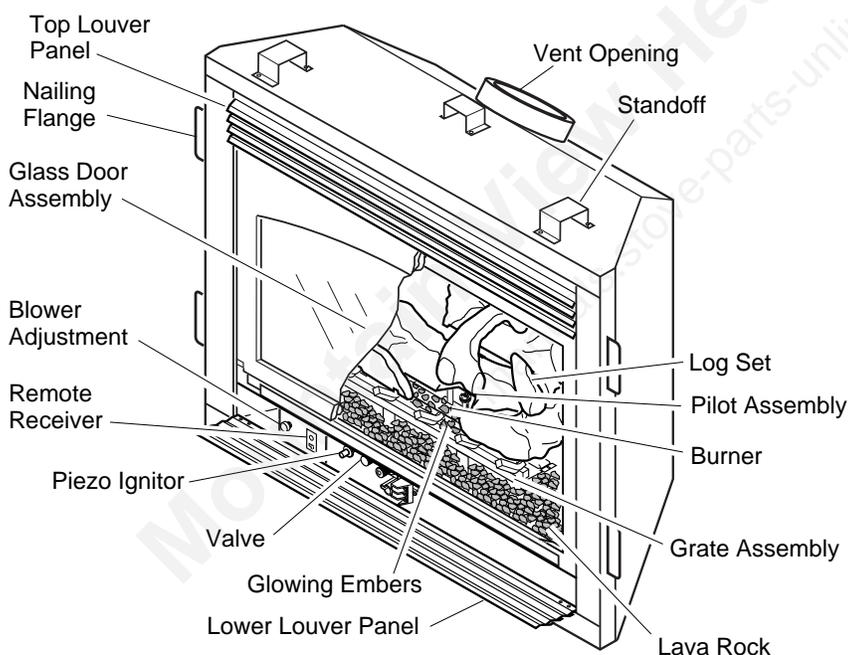


Figure 1 - Direct-Vent Fireplace

VANGUARD®

DIRECT-VENT FIREPLACE

PRE-INSTALLATION PREPARATION

LOCATION AND SPACE REQUIREMENTS

Determine the safest and most efficient location for your Vanguard direct-vent fireplace. 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 fireplace.

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

1. Do not connect this fireplace to a chimney flue serving a separate solid-fuel burning fireplace or appliance.
2. Due to high temperatures, do not locate this fireplace in high traffic areas or near furniture or draperies.
3. Proper clearances must be maintained.
4. If your fireplace 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 fireplace. See Figure 4.

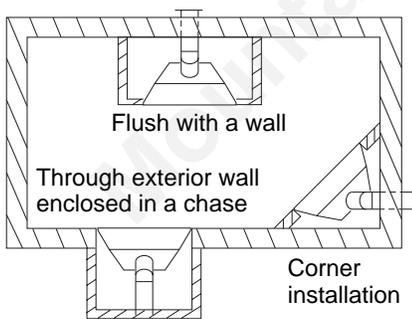
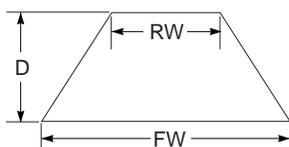


Figure 2 - Common Fireplace Locations



Fireplace size	D	FW	RW
37"	18 1/2"	37"	14"
41"	18 1/2"	41"	18"

Figure 3 - Fireplace Bottom Dimensions

CLEARANCES

Minimum clearances to combustibles for the fireplace are as follows:

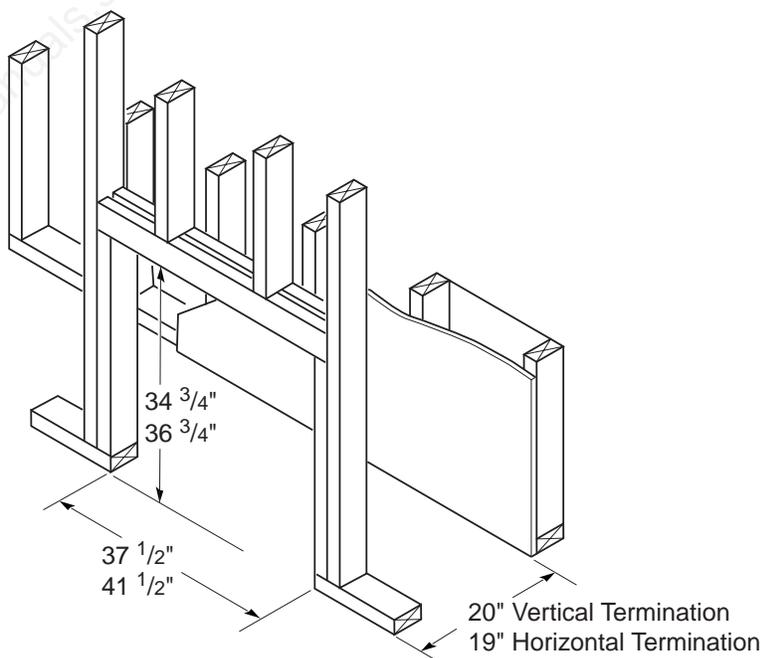
Back, and sides	0"/mm
Perpendicular walls	6" (152mm)
Floor	0"/mm
Ceiling to louver opening	42" (1067mm)
Front	36" (914mm)
Top of Standoffs	0"/mm

See *General Venting* on pages 5 and 6 for specific venting clearances.

FRAMING AND FINISHING

Figures 4 and 5 show typical framing of this fireplace. Figure 6 on page 5 shows framing for corner installation. All minimum clearances must be met. Do not install fireplace directly on carpeting, vinyl tile, or any combustible material other than wood. The fireplace must set on a metal or wood panel extending the full width and depth of the fireplace.

See *Accessories* on page 38 for mantel kits available for this fireplace. If you are using a separate combustible mantel piece, refer to Figure 7 on page 5 for proper installation height. You can install noncombustible mantels at any height above the fireplace.



Note: Where two numbers are given the top number is exclusive to the 37" Fireplace and the bottom number is exclusive to the 41" Fireplace

Figure 4 - Framing Clearances for Installation Against an Exterior Wall

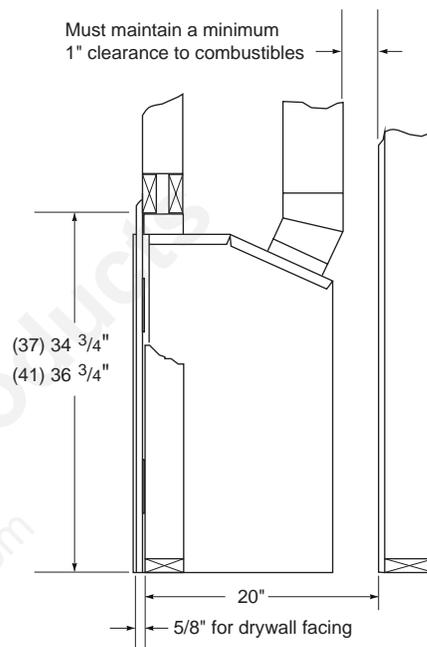
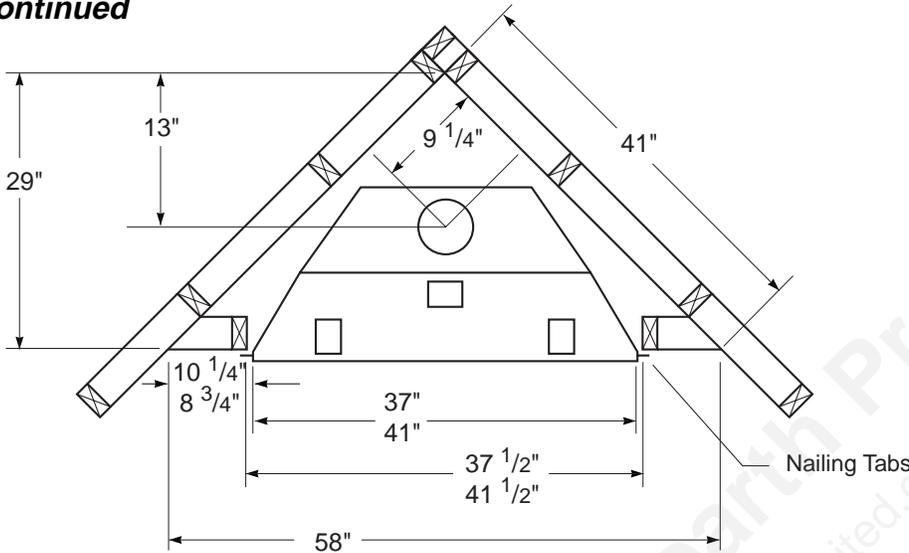


Figure 5 - Framing Clearances for Typical Fireplace Installation

OWNER'S MANUAL

PRE-INSTALLATION PREPARATION

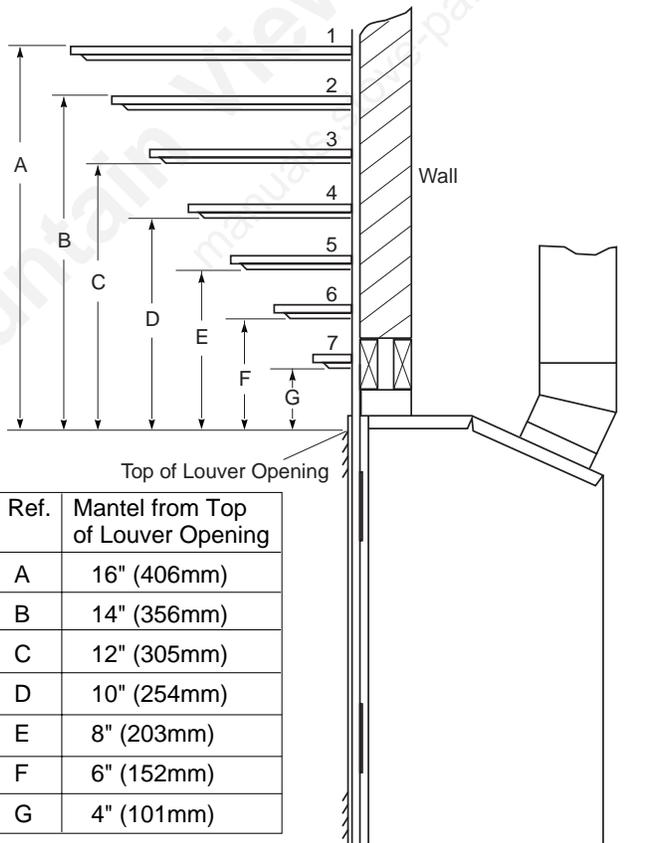
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Note: Where two numbers are given the top number is exclusive to the 37" Fireplace and the bottom number is exclusive to the 41" Fireplace

Figure 6 - Framing Clearances for Corner Installation

Note: There must be a minimum clearance of 18" above top of louver opening when installing a television or entertainment center above the fireplace.



Ref.	Mantel Depth	Ref.	Mantel from Top of Louver Opening
1	14" (356mm)	A	16" (406mm)
2	12" (305mm)	B	14" (356mm)
3	10" (254mm)	C	12" (305mm)
4	8" (203mm)	D	10" (254mm)
5	6" (152mm)	E	8" (203mm)
6	4" (101mm)	F	6" (152mm)
7	2" (51mm)	G	4" (101mm)

Figure 7 - Clearances for Combustible Mantels

GENERAL VENTING

Note: Terminations are not designed for installation prior to transportation.

These models are approved for use with Simpson Dura-Vent 6 5/8" direct-vent pipe components and terminations as well as both flex and rigid Vanguard vent components.

Your fireplace is approved to be vented either through the side wall, or vertically using the following guidelines:

- Only use Vanguard or Simpson Dura-Vent GS venting components or kits specifically approved for this fireplace.
- Minimum clearance between vent pipes and combustible materials is 1" (25 mm), except where stated otherwise.
- Combustible material may be flush with the top front of fireplace with a maximum thickness of 3/4".
- Do not recess venting terminals 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 terminal 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.

LOCATION OF VENT TERMINATION

When locating vent termination, it is important to observe the minimum clearances shown in Figure 8, page 6. You will avoid extra framing by positioning your fireplace against an already existing framing member. The sides of the fireplace may be positioned directly against combustible walls.

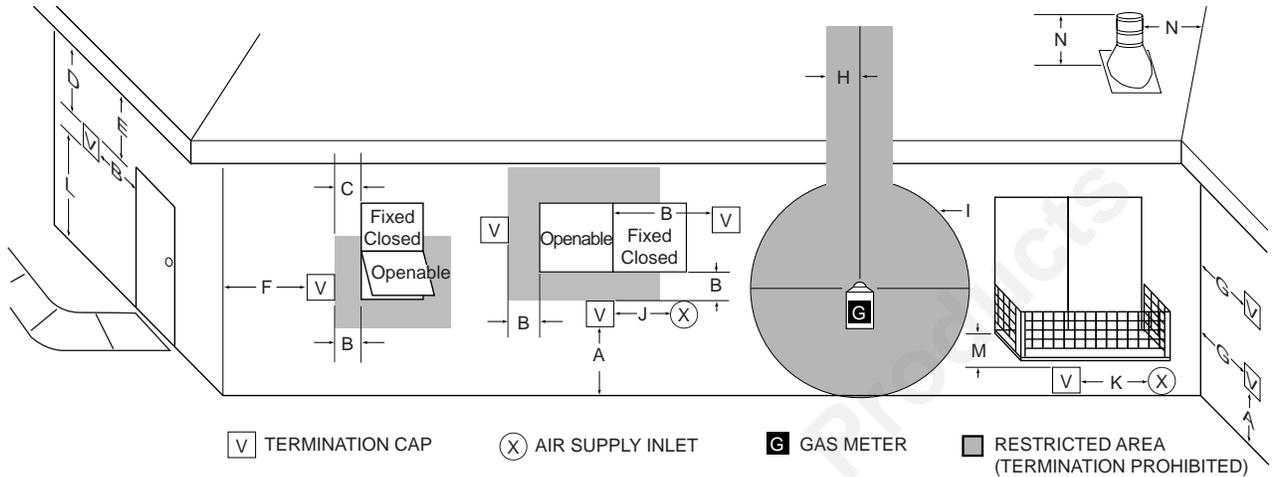
*Check with local codes or with the current CAN/CGA B149[.1 or .2] Installation Codes for Canada or the USA Installations follow the current National Fuel Gas Code, ANS Z223.1, also known as NFPA 54.

Continued

VANGUARD®

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GENERAL VENTING *Continued*



- A = clearance above grade, veranda, porch, deck, or balcony [*12 inches (305mm) minimum]
- B = clearance to window or door that may be opened [12 inches (305mm) minimum]
- C = clearance to permanently closed window [minimum 12 inches (305mm) recommended to prevent condensation on window]
- D = vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 24 inches (610mm) from the center-line of the terminal [18 inches (457mm) minimum]
- E = clearance to unventilated soffit [12 inches (305mm) 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 (914mm) horizontally from the center-line of the regulator
- I = clearance to service regulator vent outlet [*72 inches (1829mm) minimum]
- J = clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other fireplace [*12 inches (305mm) minimum]
- K = clearance to a mechanical air supply inlet [*72 inches (1829mm) minimum]
- L = † clearance above paved side-walk or a paved driveway located on public property [*84 inches (2133mm) minimum]
- M = clearance under veranda, porch, deck [*12 inches (305mm) minimum ‡]
- N = clearance above a roof shall extend a minimum of 24 inches (610mm) above the highest point when it passes through the roof surface and any other obstruction within a horizontal distance of 18 inches (457mm)

† 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/SGA B149 (.1 or .2) Installation Codes (1991) for Canada or for U.S.A. installation follow the current *National Fuel Gas Code, ANS Z223.1*

Note: Local codes or regulations may require different clearances

Termination Clearances for Buildings with Combustible and Noncombustible Exteriors

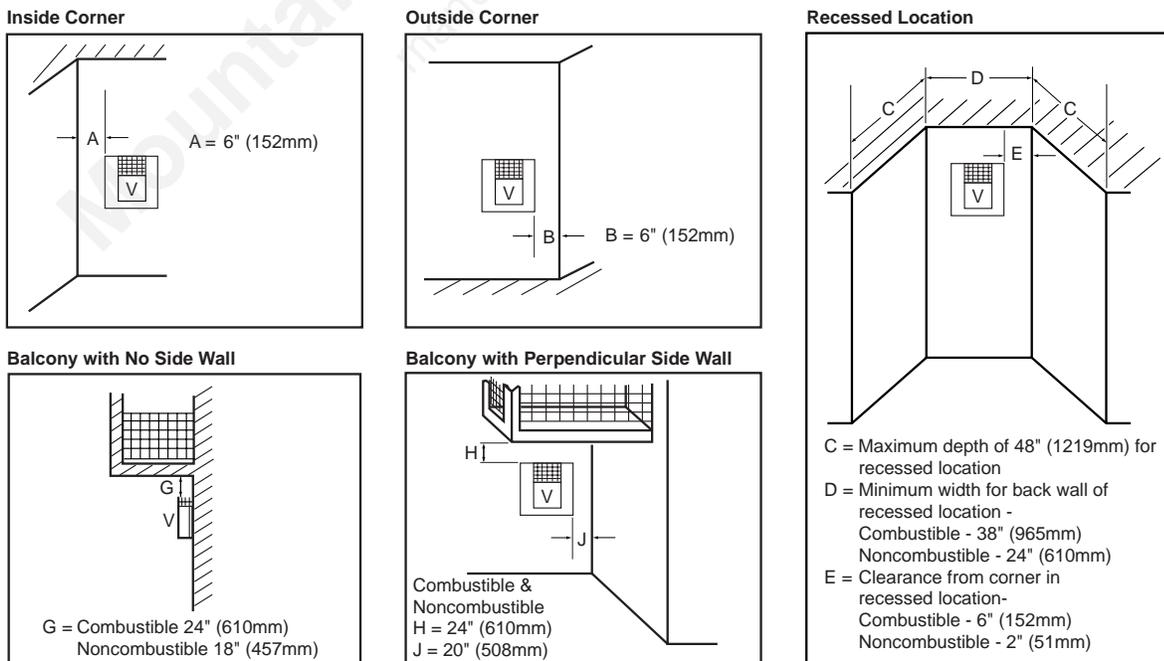


Figure 8 - Minimum Clearances for Vent Terminations

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.

⚠ WARNING: Seal all vent 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 (GERTV106/Loctite RTV81585) to the male end of the elbow or pipe. High temperature silicone must also be used to re-seal any connections after maintenance to venting 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 fireplace 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 International
- Installation other than as instructed by these instructions

⚠ WARNING: This gas fireplace 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" 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 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.

A MDVGFK ground floor horizontal vent kit is specifically designed for common horizontal installations in manufactured (mobile) homes. Additional horizontal installations are described on pages 10 and 11. All vent kits and components are listed on pages 15 and 16.

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

You may use one or two 90° elbows in this vent configuration. See *Horizontal Termination Configurations* on pages 10 and 11.

For Vertical Termination: Measure the distance from the fireplace 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 13 and 14.

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

The MDV9K 9' vertical vent kit is specifically designed for common vertical installations in manufactured (mobile) homes. Additional vertical installations are described on pages 13 and 14. All vent kits and components are listed on pages 15 and 16.

For two-story applications, firestops are required at each floor level. 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 8.

Your Vanguard direct-vent fireplace has been tested for a minimum 3' rise with a maximum 10" wall thickness. The maximum horizontal run is 20' with 8' vertical rise (see *Installation for Horizontal Termination*, pages 8 and 9). The maximum vertical run is 30' (see *Installation for Vertical Termination*, pages 12 and 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.

Continued

VANGUARD®

DIRECT-VENT FIREPLACE

VENTING INSTALLATION

Continued

Installing Vent System in a Chase

A chase is a vertical boxlike 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 clearance between vent pipes and combustible materials such as insulation is 1".

After framing the chase (see *Framing and Finishing* on pages 4 and 5) install the vent system by following the installation instructions.

INSTALLATION FOR HORIZONTAL TERMINATION

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 easily 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 9 and 10). Snorkel kit SVK is also available (see page 15). Follow the same installation procedures as used for standard horizontal terminations. If installing the snorkel termination below grade (basement applications), you must provide proper drainage to prevent water from entering the snorkel termination (see Figure 10). Do not back fill around the snorkel termination.

2. Rigid 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 on page 7.) Push the pipe sections together and twist one section clockwise approxi-

mately one-quarter turn until the sections are fully locked. See Figure 11. *Note:* Horizontal runs of vent must be supported every three feet. Use wall straps for this purpose.

Flexible vent pipe must be installed with spacer springs every 12". See Figure 11. All connections must be clamped tightly and sealed with high temperature silicone sealant as specified in the second warning on page 7.

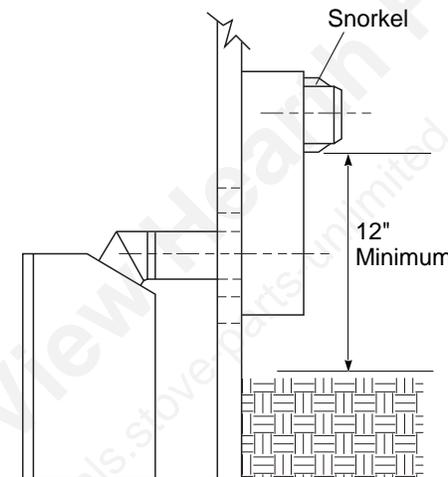


Figure 9 - Snorkel Termination

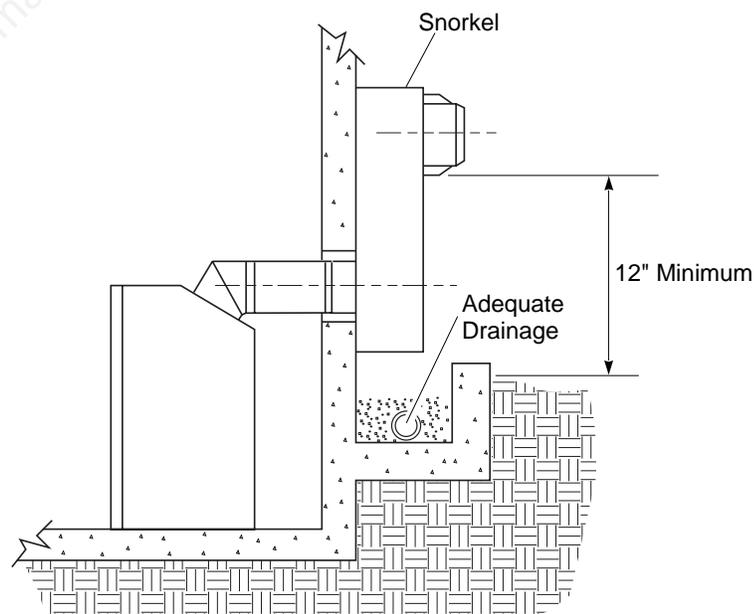


Figure 10 - Snorkel Termination with Drainage Pipe

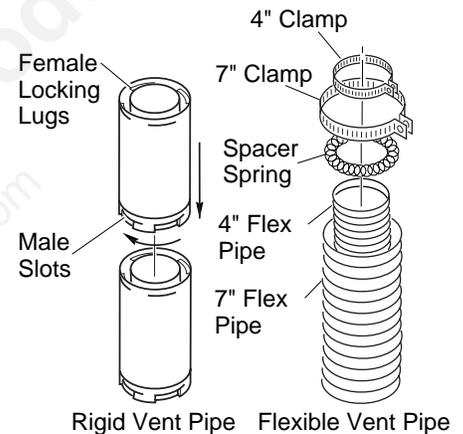


Figure 11 - Vent Pipe Connections

VENTING INSTALLATION *Continued*

- Attach vent pipe assembly to the fireplace. Set fireplace in front of its permanent location to insure minimum clearances. Mark the wall for a 10" square hole (for noncombustible material such as masonry block or concrete, a 7 1/2" diameter hole is acceptable). See Figure 12. The center of the hole should line up with the center-line of the horizontal rigid vent pipe. Cut a 10"x10" (254mm x 254mm) square hole through combustible exterior wall (7 1/2" [190mm] diameter hole if noncombustible). Frame as necessary (see Figure 12).

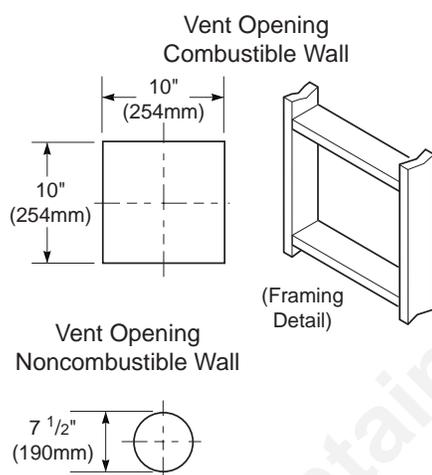


Figure 12 - Vent Opening Requirements

- 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" or 10" hole on the exterior wall with the arrow on the vent cap pointing up. Insure proper clearance of 1" to combustibles is maintained. Attach the vent cap with four wood screws supplied (see Figure 13). **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.

For vinyl siding use vinyl siding stand-offs between vent cap and exterior wall. The vinyl siding standoff prevents excessive heat from melting the vinyl siding material. Bolt the vent cap to the standoff. Apply non-hardening mastic around outside edge of the standoff instead of the vent cap assembly. Use wood screws provided to attach the standoff. See Figure 14.

- Slide the wall thimble over the vent pipe before connecting the horizontal run to the vent cap (see Figure 15).

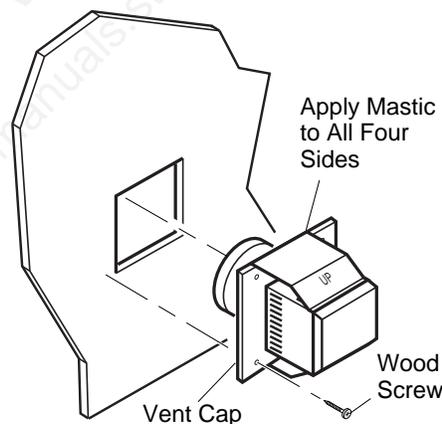


Figure 13 - Installing Horizontal Vent Cap

- 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". Apply silicone to the outer pipe connection. Fasten all vent connections with screws provided. Refer to *Fireplace Installation* on page 16 for instructions on securing unit to framing or floor.
- Slide the wall thimble against the interior wall surface and attach with screws provided (see Figure 15).

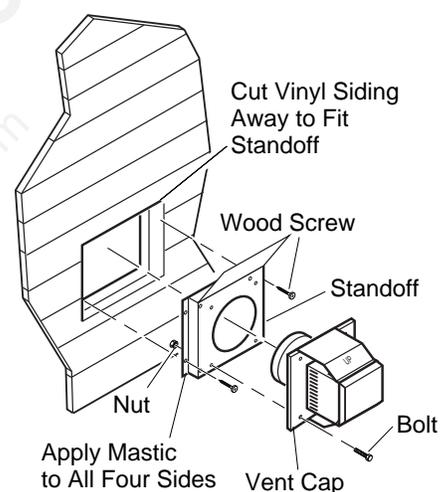


Figure 14 - Installing Vinyl Siding Standoff

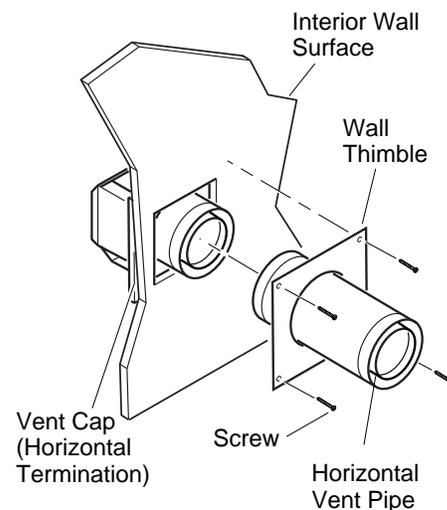


Figure 15 - Connecting Vent Cap with Horizontal Vent Pipe

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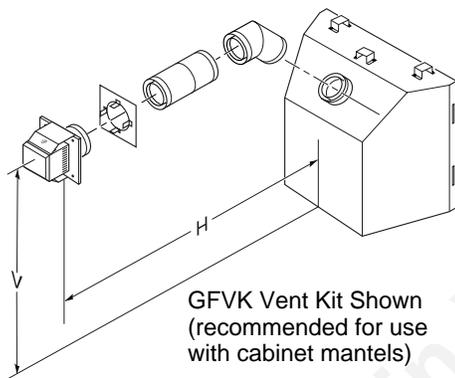
DIRECT-VENT FIREPLACE

VENTING INSTALLATION

Continued

Horizontal Termination Configurations

Figures 16 through 20 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 7. All horizontal terminations require 1/4" rise per 12" of horizontal run.



Horizontal Venting

Vertical (V)	Horizontal (H)
37" min.	17" max.

Figure 16 - Horizontal Termination Configuration for Rigid Venting

Horizontal Venting

Vertical (V)	Horizontal (H)
44" min.	29" max.
(30° and 90° only, no vertical pipe)	
55" min.	41" max.
(30° elbow, 1' vertical pipe, 90° elbow)	
67" min.	60" max.
79" min.	84" max.
96" min.	20' max.

Note: This configuration for use with corner installation.

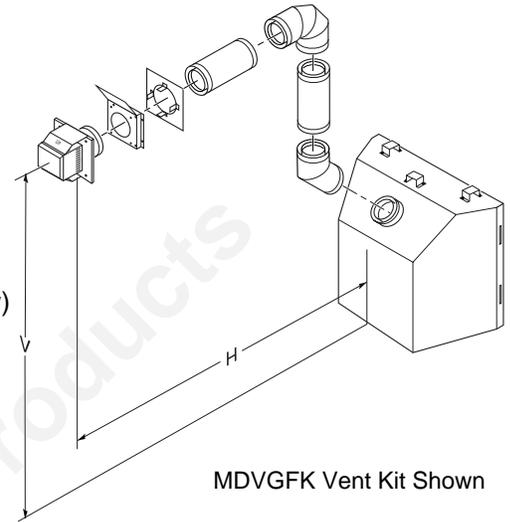


Figure 17 - Horizontal Termination Configuration for Rigid Venting Using One 90° Elbow

Horizontal Venting

See information in Figure 17 for Vertical (V) and Horizontal (H) maximums and minimums. The same amounts apply for flexible venting.

Note: Figure 16 applies to rigid venting only.

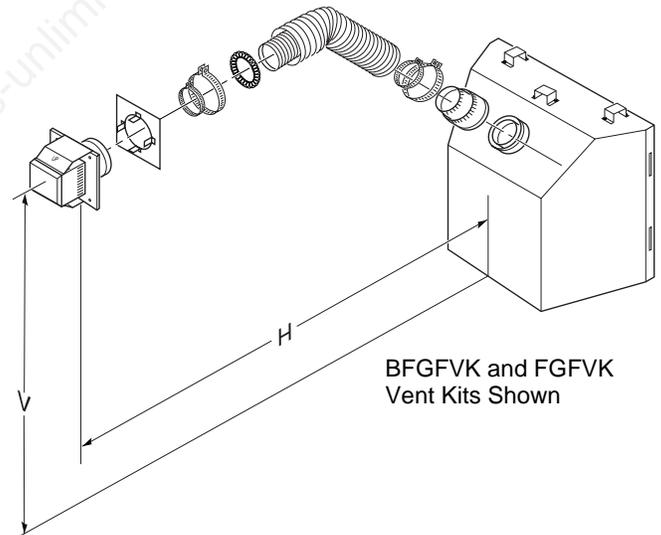


Figure 18 - Horizontal Termination Using Flexible Venting

VENTING INSTALLATION

Continued

Venting with Two 90° Elbows

Vertical (V)	Horizontal (H ₁)	Horizontal (H ₁) + Horizontal (H ₂)
5' min.	2' max.	6' max.
6' min.	4' max.	12' max.
7' min.	6' max.	18' max.
8' min.	8' min.	20' max.
20' max.	8' max.	20' max.

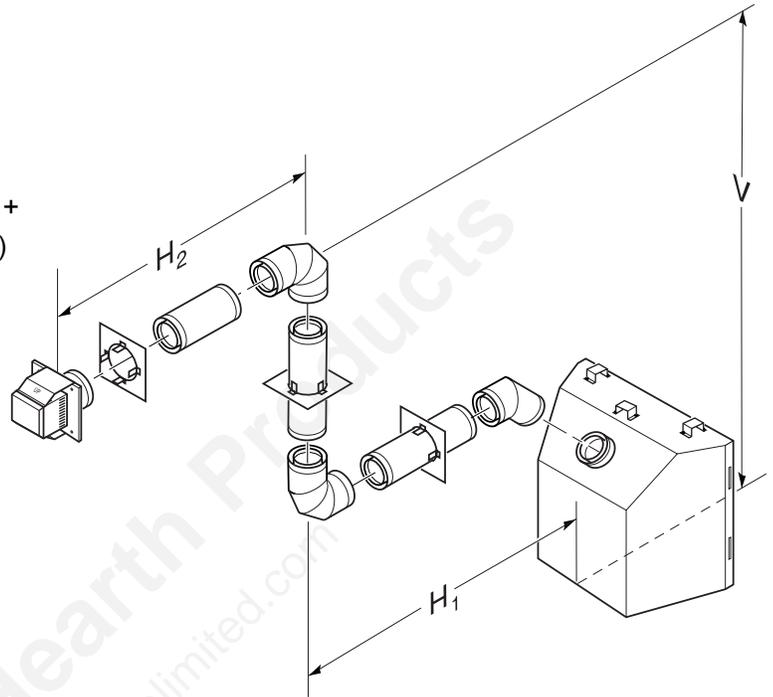


Figure 19 - Horizontal Termination Configuration for Rigid Venting Using Two 90° Elbows

Venting with Two 90° Elbows

Vertical (V)	Horizontal (H ₁) + Horizontal (H ₂)
5' min.	6' max.
6' min.	12' max.
7' min.	18' max.
8' min.	20' max.
20' max.	20' max.

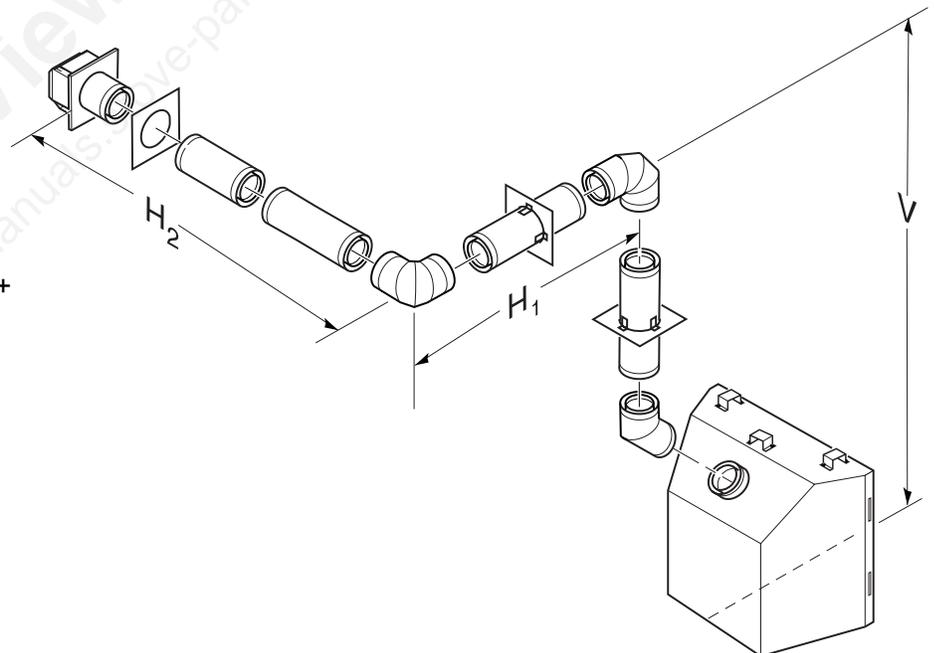


Figure 20 - Horizontal Termination Configuration for Rigid Venting Using Two 90° Elbows with Termination at 90° with Fireplace

Continued

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DIRECT-VENT FIREPLACE

VENTING INSTALLATION

Continued

INSTALLATION FOR VERTICAL TERMINATION

- 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 21) to avoid cutting loadbearing 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 Figure 8 on page 6.
- Set the fireplace in desired location. Drop a plumb line down from the ceiling to the position of the fireplace 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.

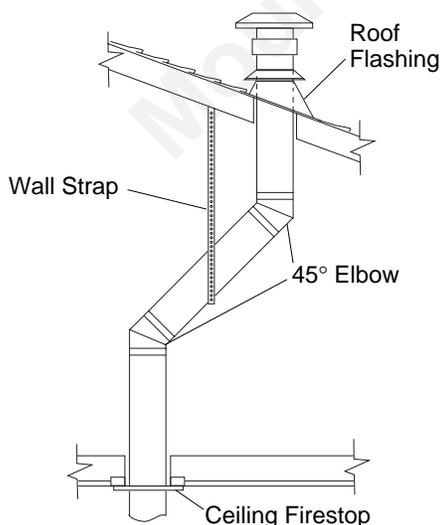
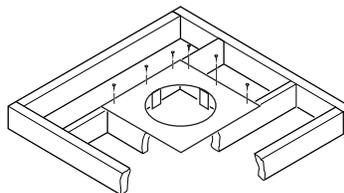


Figure 21 - Offset with Wall Strap and 45° Elbows

Flat Ceiling Installation

- Cut a 10" square hole in the ceiling using the locating hole as a center point. The opening should be framed to 10"x10" (254mm x 254mm) inside dimensions, as shown in Figure 12 on page 9 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 22).
- Assemble the desired lengths of pipe and elbows necessary to reach from the fireplace flue up through the firestop. All connections must be sealed with high temperature silicone sealant as specified in the second warning on page 7. Be sure all pipe and elbow connections are fully twist-locked (see Figure 11, page 8).
- 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" 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 the opening as shown in Figure 12 on page 9.
- Connect a section of pipe and extend up through the hole.

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



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

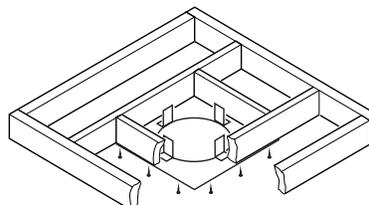


Figure 22 - Installing Firestop

Note: If an offset is needed to avoid obstructions, you must support the vent pipe every 3 feet. Use wall straps for this purpose (see Figure 21). 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.

- 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 21. There must be a 1" clearance from the vent pipe to combustible materials. When installing the flashing on a metal roof we require that putty tape is used between the flashing and the roof. The flashing must be secured to the roof using #8 x 3/4" screws and then sealed with roof coating to prevent leakage through the screw holes. A roof coating must also be applied around the perimeter to provide a proper seal.
- Continue to add pipe sections until the height of the vent cap meets the minimum building code requirements described in Figure 8 on page 6. **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 on page 7.

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.

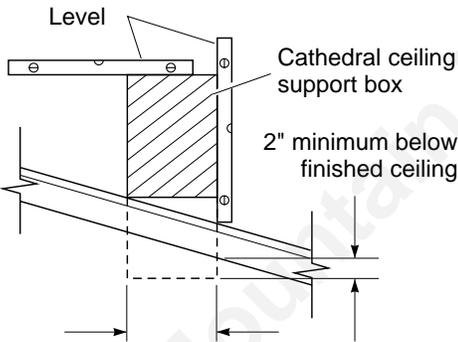
Cathedral Ceiling Installation

- 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" larger than the support box outline (see Figure 23, page 13).

VENTING INSTALLATION

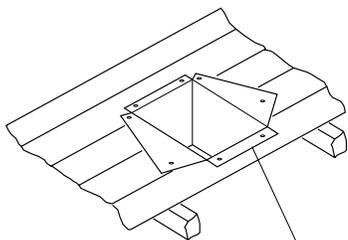
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- Lower the support box through the hole in the roof until the bottom of the box extends at least 2" below the ceiling (see Figure 23). Align the support box vertically and horizontally using a level. Temporarily tack the support box in place through 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 24). Apply a bead of non-hardening 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*, page 12.



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

Figure 23 - Cathedral Ceiling Support Box Installation



Non-hardening Mastic under all edges of support box before nailing

Figure 24 - Installed Cathedral Ceiling Support Box

Vertical Termination Configurations

Figures 25 through 28 show four different configurations for vertical termination. All connections must be sealed with high temperature silicone sealant as specified in the second warning on page 7.

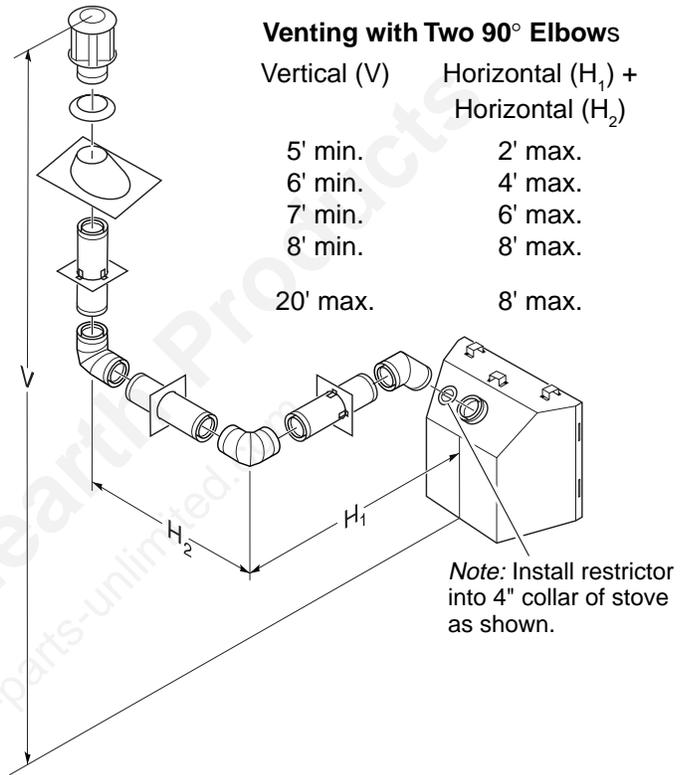


Figure 25 - Vertical Rigid Venting Configuration Using Two 90° Elbows with Two Horizontal Runs

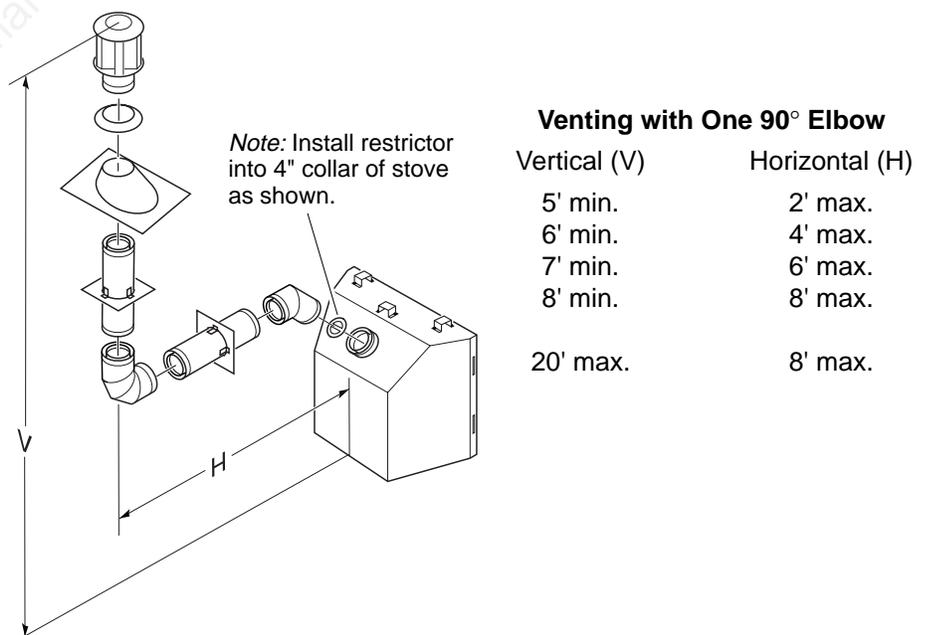


Figure 26 - Vertical Rigid Venting Configuration Using One 90° Elbow

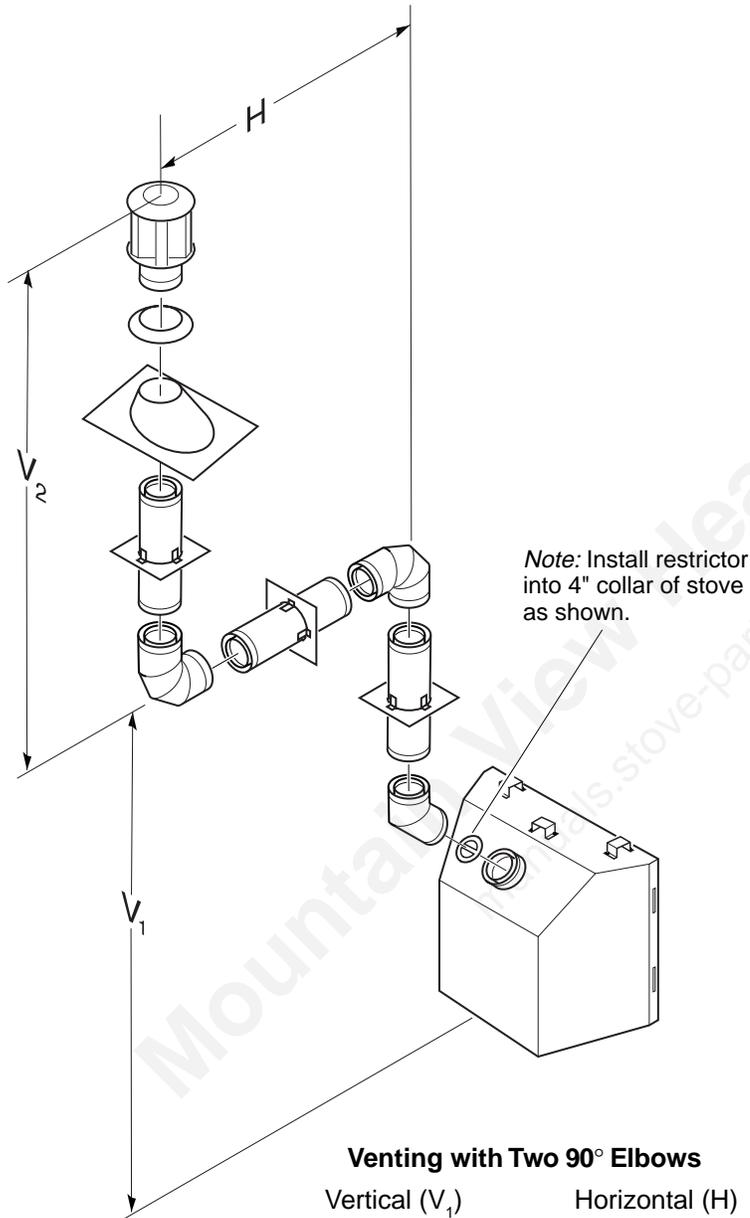
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VENTING INSTALLATION

Continued

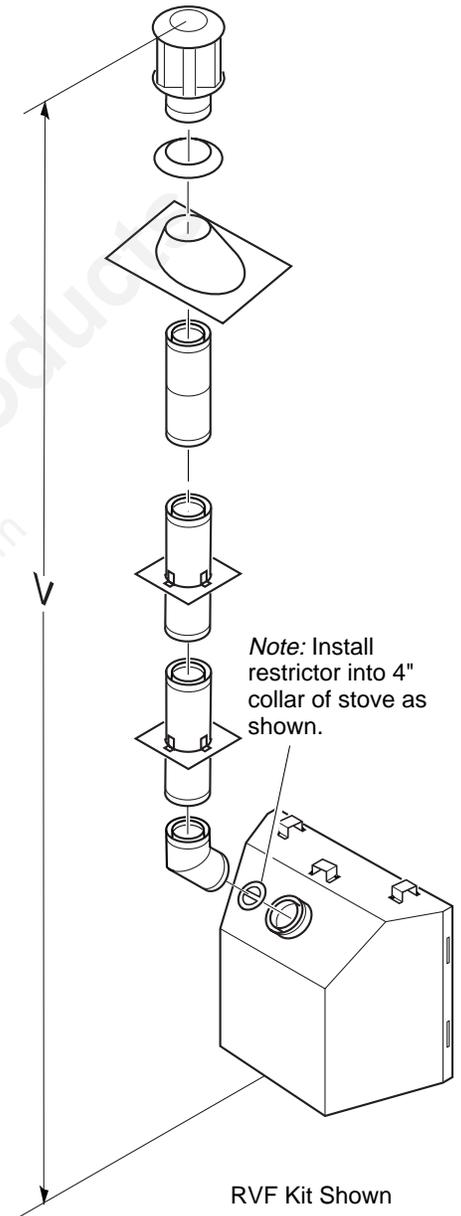


Venting with Two 90° Elbows

Vertical (V ₁)	Horizontal (H)
5' min.	6' max.
6' min.	12' max.
7' min.	18' max.
8' min.	20' max.

Note: Vertical (V₁) +
Vertical (V₂) = 20' max.

Figure 27 - Vertical Rigid Venting Configuration Using Two 90° Elbows



Vertical Venting

V = 40' max.

Figure 28 - Vertical Rigid Venting Configuration With No Horizontal Run

OWNER'S MANUAL

VENTING INSTALLATION

Continued

HIGH ALTITUDE INSTALLATION

Your Vanguard direct-vent fireplace has been AGA tested and approved for elevations from 0-2000 feet and CGA certified for elevations from 0-4500 feet.

When installing this fireplace 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 above sea level. Check with your local gas company for proper orifice size identification.

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

Consult your local gas company to help determine the proper orifice for your location.

For assistance with any high altitude installation contact DESA International's Technical Service Department at 1-800-DESA-LOG (1-800-337-2564).

PARTS LISTS FOR VENTING KITS AND COMPONENTS

Note: Terminations are not designed for installation prior to transportation.

Vanguard Rigid Venting

Number	Description
MDV9K	9' Vertical Vent Kit Includes one each: 48" Pipe, 36" Pipe, 24" Pipe, 30° Elbow, Firestop, Roof Flashing, Storm Collar, Flue Restrictor Disc, and Vertical Termination Cap
MDVGFK	Ground Floor Horizontal Vent Kit (Allows horizontal installations that run 49.5" min. vertically and 15" horizontally from the back of the fireplace to the outside wall.) Includes one each: 12" Pipe, 7"-12" Adjustable Pipe, 30° Elbow, 90° Elbow, Firestop, Vinyl Stand-off, and Horizontal Termination Cap
BGFVK	Basic Ground Floor Rigid Vent Kit Includes: 7" x 60° Elbow, Extended Adjustable Horizontal Termination, Wall Thimble and 14 Screws

Vanguard Rigid Venting (Cont.)

Number	Description
GFVK	Ground Floor Rigid Vent Kit Includes: 7" x 60° Elbow, 7" Adjustable Galvanized Coaxial Pipe (7-12"), Wall Thimble, Horizontal Termination, RTV Silicone and 16 Screws
BVK	Basement Rigid Vent Kit Includes: 7" x 30° Elbow, 7" x 4' Galvanized Pipe, 7" x 90° Elbow, 7" Adjustable Galvanized Pipe (7-12"), Wall Thimble, Horizontal Termination, RTV Silicone and 20 Screws
CVK	Corner Vent Kit Includes: 7" x 30° Elbow, 7" x 90° Elbow, 7" Adjustable Galvanized Pipe (7-12"), 6" Pipe, Wall Thimble, Horizontal Termination, RTV Silicone and 20 Screws
SVK	Snorkel Rigid Vent Kit Includes: 7" x 30° Elbow, 7" x 4' Galvanized Pipe, 7" x 90° Elbow, 7" Adjustable Galvanized Pipe (7-12"), Wall Thimble, 36" Snorkel Termination, RTV Silicone and 28 Screws
RVF	Roof Rigid Vent Kit Includes: Flue Restrictor, Storm Collar, 7" x 30° Elbow, 7" x 4' Galvanized Pipe, 7" x 2' Galvanized Pipe, 7" Adjustable Galvanized Pipe (7-12"), Firestop Support, Roof Flashing, RTV Silicone, Vertical Termination, and 26 screws
D1000	7" x 12" Galvanized Coaxial Pipe (6 pcs.)
D1010	7" x 24" Galvanized Coaxial Pipe (6 pcs.)
D1020	7" x 48" Galvanized Coaxial Pipe (6 pcs.)
D1030	7" Adjustable (7-12") Galvanized Coaxial Pipe (6 pcs.)
D1050	7" x 6" Galvanized Coaxial Pipe (6 pcs.)
D2000	7" x 90° Elbow (6 pcs.)
D2010	7" x 45° Elbow (6 pcs.)
D2020	7" x 30° Elbow (6 pcs.)

Vanguard Rigid Venting (Cont.)

Number	Description
D2030	7" x 60° Elbow (6 pcs.)
D2060	7" x 45° Starter Elbow
D3000	Wall Strap/Offset Support (6 pcs.)
D3010	Storm Collar (6 pcs.)
D3020	Wall Thimble (6 pcs.)
D3050	Vertical Restrictor (6 pcs.)
D3060	Ceiling Firestop/Support (6 pcs.)
D3070	Rectangular Horizontal Rigid Vent Termination Cap
D3071	Adjustable Horizontal Rigid Vent Termination Cap
D3090	Cathedral Ceiling Support Box
D4000	Roof Flashing 6/12-9/12
D4010	Roof Flashing 9/12-12/12
D4020	Flex Connector (6 pcs.)
D4030	Flex Wall Thimble (6 pcs.)
D4040	4" Hose Clamp (6 pcs.)
D4050	7" Hose Clamp (6 pcs.)
D5000	Wood/Vinyl Siding Standoff (6 pcs.)

Vanguard Flexible Venting

Number	Description
BFGFVK	Basic Flex Ground Floor Vent Kit Includes: Flex Adapter, 7" x 2' Flexible Pipe, 4" x 2' Flexible Pipe, Wall Thimble, Horizontal Termination, (2) Spacer Springs, (2) 4" Hose Clamps, (2) 7" Hose Clamps, and 10 Screws
FGFVK	Flex Ground Floor Vent Kit Includes: Flex Adapter, 7" x 4' Flexible Pipe, 4" x 4' Flexible Pipe, Wall Thimble, Horizontal Termination, (4) Spacer Springs, (2) 4" Hose Clamps, (2) 7" Hose Clamps, RTV Silicone, and 10 Screws
D1040	7" x 25' Coaxial Flex Pipe with Spacer Springs
D3080	Rectangular Horizontal Flex Termination Cap

Continued

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DIRECT-VENT FIREPLACE

VENTING INSTALLATION

Continued

SIMPSON DURA-VENT GS

4" x 6 5/8"

Number Description

Available from DESA International:

SD2040 Simpson Dura-Vent GS
30° Elbow (6 pcs.)

SD2050 Simpson Dura-Vent GS
60° Elbow (6 pcs.)

Available from Simpson Dura-Vent
Only:

- 902 7" x 48" Pipe
- 903 7" x 36" Pipe
- 904 7" x 24" Pipe
- 906 7" x 12" Pipe
- 907 7" x 9" Pipe
- 908 7" x 6" Pipe
- 911 7" Adjustable (11"-14 5/8") Pipe
- 940 Wall Thimble
- 941 Cathedral Ceiling Support Box
- 943 Roof Flashing 0/12-6/12
- 943S Roof Flashing 7/12-12/12
- 945 7" x 45° Elbow
- 950 Vinyl Siding Standoff
- 953 Storm Collar
- 963 Ceiling Firestop
- 981 36" Snorkel Termination
- 984 Horizontal Termination Vent Cap
- 988 Wall Strap
- 990 7" x 90° Elbow
- 991 Vertical High Wind Termination

FIREPLACE INSTALLATION

NOTICE: This heater is intended for use as supplemental heat. Use this heater along with your primary heating system. Do not install this heater 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 heater as your primary heat source.

WARNING: A qualified service person must install fireplace. Follow all local codes.

CAUTION: This fireplace creates warm air currents. These currents move heat to wall surfaces next to fireplace. Installing fireplace next to vinyl or cloth wall coverings or operating fireplace where impurities (such as tobacco smoke, aromatic candles, cleaning fluids, oil or kerosene lamps, etc.) in the air exist, may discolor walls.

Note: Your fireplace is designed to be used in zero clearance installations. Wall or framing material can be placed directly against any exterior surface on the rear, sides, or top of your fireplace, except where standoff spacers are integrally attached. If standoff spacers are attached to your fireplace, these spacers can be placed directly against wall or framing material. See framing details on pages 4 and 5.

Place the fireplace into position and shim with noncombustible material if needed. Nail the side flanges to the framing to secure the unit in place. There are two floor brackets included with each unit. Use these as an alternative method of securing the fireplace.

IMPORTANT: Make sure fireplace is level before securing. If fireplace is not level it will not work properly.

CHECK GAS TYPE

Use proper gas type for the fireplace unit you are installing. If you have conflicting gas types, do not install fireplace. See dealer where you purchased the fireplace for proper fireplace according to your gas type.

ELECTRICAL HOOKUP FOR BLOWER ACCESSORY

Before blower accessory can be operated, it must be properly connected to a standard 120 VAC power source. Refer to *Wiring Diagram* on page 35.

An outlet box with two receptacles has been supplied for your convenience, located on the lower right side of the appliance (see Figure 29).

CAUTION: Due to high temperatures, make sure no wires are touching the bottom of the firebox.

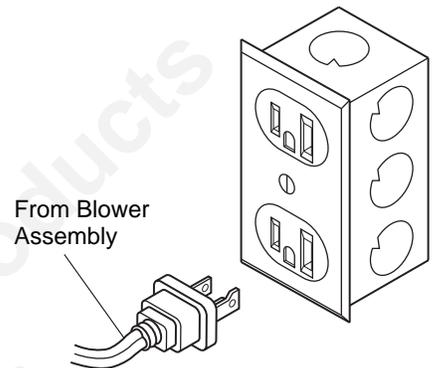
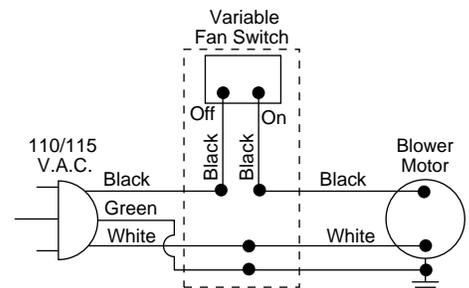


Figure 29 - Connecting Blower Accessory to Power Supply

WARNING: Never attempt to service heater while it is plugged in, operating, or hot. Burns and electrical shock could result. Only a qualified service person should service or repair heater.

If any of the original wire as supplied with the appliance must be replaced, it must be replaced with 105°C wire or it's equivalent.

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



120 Vac. 60 Hz. . 78 Amps

Figure 30 - Blower Assembly Wiring Diagram

FIREPLACE INSTALLATION

Continued

BLOWER ASSEMBLY AND OPERATION

Note: The blower is preinstalled in this fireplace. Verify blower assembly placement was not altered during shipping and speed control is mounted to bracket.

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

Installing GA3700 Blower (Some Models Have Blower Assembly Preinstalled)

IMPORTANT: For clarity, gas valve assembly and grate/burner assembly are not shown in Figures 31 through 33. They will, however, be in your fireplace when you are installing the blower. Also for clarity the firebox is shown with dotted lines.

1. Open lower louver panel or remove for easier access.
2. Place the blower against the lower rear wall of firebox outer wrapper with the exhaust port directed upward. Align the holes in the top mounting tabs of blower with holes in wall of wrapper (see Figure 31). Using the two screws provided, mount blower and tighten screws securely.
3. Be sure to securely attach all wire terminals to terminals on blower motor and that the screw retaining the green ground wire is tight.
4. Remove screws securing the plate containing the ON/OFF switch to the bottom of the firebox and set aside.
5. Place speed control against back of this plate and push the plastic control shaft through opening (see Figure 32).
6. While supporting speed control, secure control shaft with lock nut by pushing and turning lock nut with pliers clockwise until tight against the plate. Place control knob provided onto shaft (see Figure 32).

7. Replace plate containing switches and tighten screws securely.
8. Plug in blower power cord.
 - a. **If your fireplace system is installed as a freestanding unit with an accessory mantel,** determine whether the power cord will exit the left side or the right side of the firebox. Install one plastic bushing provided into the 1 1/2" hole in the outer casing through which the power cord will exit. Install the second plastic bushing provided into the floor support bracket if exiting through the right side (see Figure 33). Route power cord through (both) plastic bushing(s) and plug the power cord into a properly grounded 3-prong wall receptacle near the firebox.
 - b. **If your fireplace system installation is recessed and/or pre-wired,** a qualified installer must make all electrical connections for the outlet kit included with the fireplace.

9. Check to make sure that the power cord is completely clear of the blower wheel and that there are no other foreign objects in blower wheel. Turn blower on and check for operation. Turn blower off by rotating knob fully counterclockwise before continuing.

WARNING: Never touch the blower wheel while in operation.

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.

10. Connect or reconnect gas supply to fireplace per *Connecting Fireplace to Gas Supply* on page 20 of this manual.

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

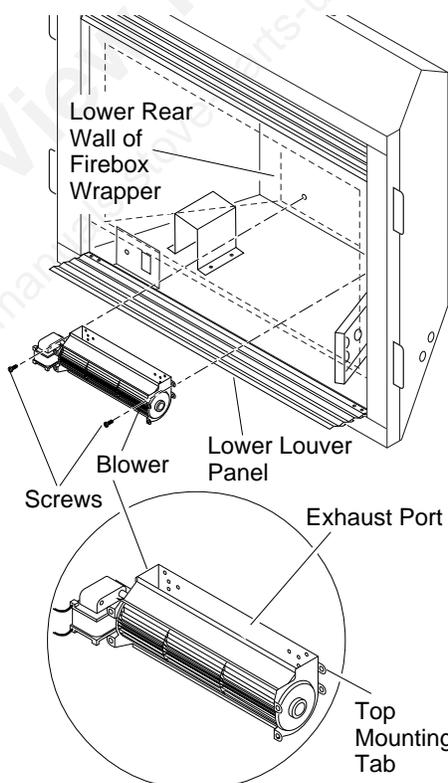


Figure 31 - Mounting Blower to Firebox

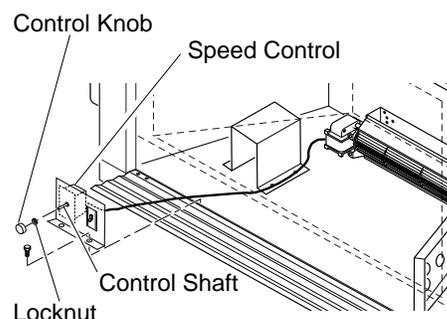


Figure 32 - Attaching Speed Control to Firebox

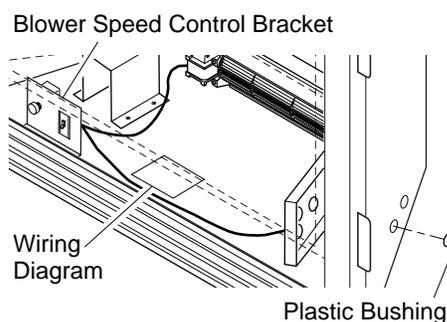


Figure 33 - Installing Plastic Bushing

Continued

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FIREPLACE INSTALLATION

Continued

WALL SWITCH INSTALLATION

Since the fireplaces use a valve that operates on millivolt current generated by the pilot, a wall switch (not included) may be used to activate the gas control valve without the use of normal household electricity. A hand-held, ON/OFF remote control is standard with this unit. Wall switch is optional. If the wall switch is installed, the hand-held, ON/OFF remote cannot be used.

1. To remove the louvers, simultaneously pull both top end spring latches towards the center of the appliance until they are disengaged from locating holes. Repeat for bottom end spring latches and pull outward. Reverse the procedure to install louvers back onto the appliance (see Figure 34).
2. Connect the 18 ga. wires from wall switch (not included) to the gas control valve and microswitch, as shown in Figure 35.

⚠ WARNING: Do not wire remote wall switch to main power supply (Standard 120v household current).

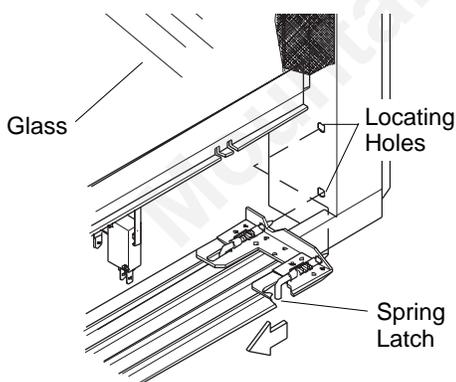


Figure 34 - Removing Louver

WIRELESS HAND-HELD REMOTE CONTROL (GHRC SERIES) INSTALLATION

Note: If using the wireless hand-held remote control, the wall switch is no longer operational.

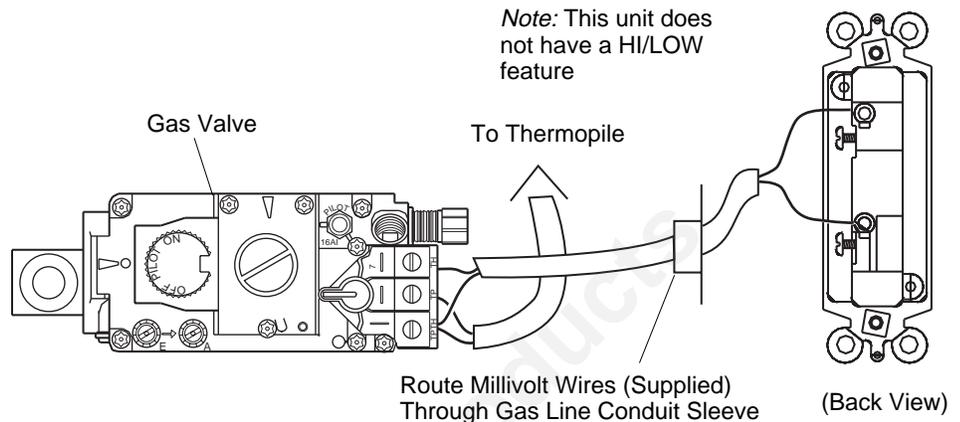


Figure 35 - Wall Switch Wiring Diagram

Note: If any of the original wire supplied must be replaced, use type 18 AWG-105 degree C (25 feet length MAXIMUM) or equivalent.

NOTICE: Only use alkaline batteries (not included, requires 2).

Installing Receiver

Note: Receiver is preinstalled.

1. Remove access panel from lower front face of firebox. Lift straight up on access panel until it stops. Pull bottom of access panel forward, then down.
2. Disconnect wall switch wires from TH and TPTH terminals on control valve (see Figure 35).
3. Install remote receiver unit onto mounting bracket using the two plastic mounting clips (see Figure 36).
4. Connect wires to control valve. Connect white wire to terminal TH. Connect red wire to terminal TPTH.
5. Locate the battery clip mounted on the back of the receiver (see Figure 37).
6. Slide 9-volt battery (not included) through the clip.
7. Attach the terminal wires to the battery (see Figure 37).

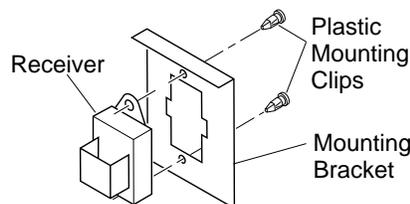


Figure 36 - Installing Remote Receiver (Shown from Rear of Mounting Bracket)

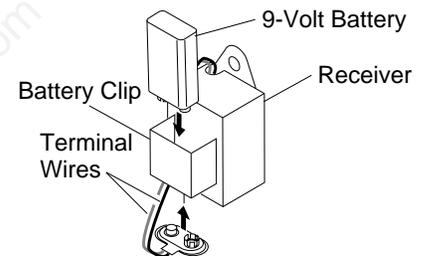


Figure 37 - Installing Battery in Receiver

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

1. Remove battery cover on back of remote control unit.
2. Attach terminal wires to the battery (not included). Place battery into the battery housing.
3. Replace battery cover onto remote control unit.

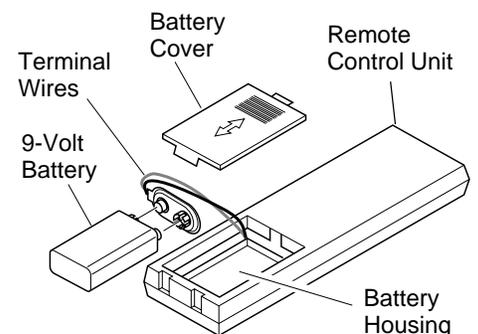


Figure 38 - Installing Battery in Hand-Held Remote Control Unit

FIREPLACE INSTALLATION

Continued

INSTALLING GAS PIPING TO FIREPLACE LOCATION

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

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

Installation Items Needed

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

For propane/LP connection 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, heater regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 39. 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 fireplace. If pipe is too small, undue loss of pressure 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 fireplace (see Figure 40).

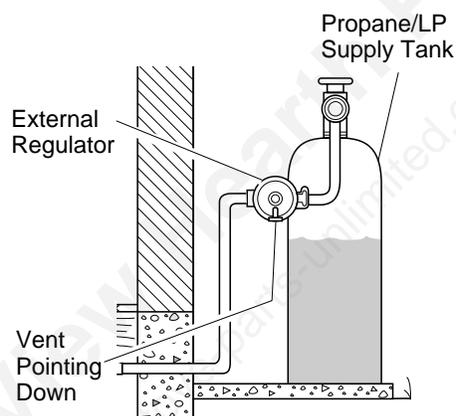


Figure 39 - External Regulator with Vent Pointing Down (Propane/LP Only)

CSA/AGA Design-Certified Equipment Shutoff Valve with 1/8" NPT Tap*

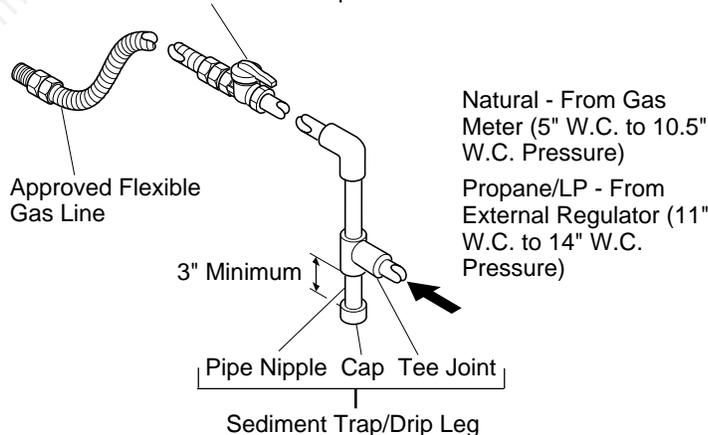


Figure 40 - Gas Connection

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

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 fireplaces.

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

⚠ CAUTION: 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 40. Locate sediment trap/drip leg where it is within reach for cleaning. Install in piping system between fuel supply and heater. 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 fireplace gas controls. If sediment trap/drip leg is not installed or is installed wrong, fireplace may not run properly.

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FIREPLACE INSTALLATION

Continued

CONNECTING FIREPLACE 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 louver door panel by gently pulling forward.
 2. Route flexible gas line (provided by installer) from equipment shutoff valve to fireplace. Route flexible gas supply line through one of the access holes on side of fireplace or through knockout hole on firebox bottom.
 3. Attach a 45° flare union gas connector to flexible gas line from gas supply (see Figure 41). Connect flare union to flexible gas line attached to gas regulator of fireplace (see Figure 41).
 4. Check all gas connections for leaks. See *Checking Gas Connections*.

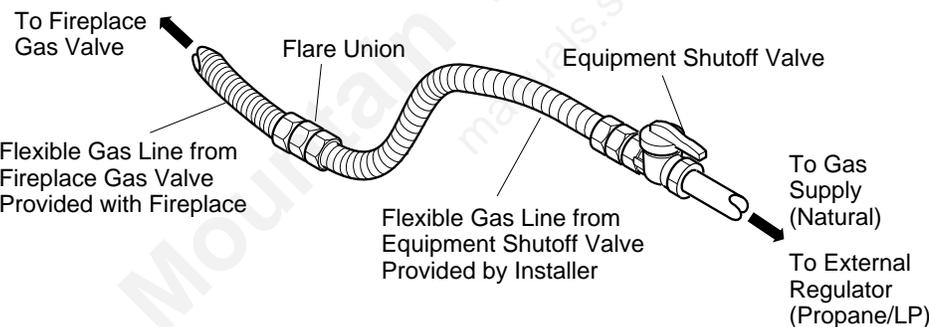


Figure 42 - Millivolt Control Valve

GAS SUPPLY TESTING

Note: This section is intended as a guide for qualified service technicians installing gas to the appliance.

CAUTION: Do not connect appliance before pressure testing gas piping. Damage to the gas valve may result and an unsafe condition may be caused.

The gas control valve is secured underneath the firebox with two brackets fastened to the firebox bottom. Two pressure taps are provided on the gas control valve for a pressure gauge connection (see Figure 42).

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 commercial 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 fireplace and its individual equipment shutoff valve from gas supply piping system. Pressures in excess of 1/2 psig (3.5 kPa) will damage fireplace 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 fireplace or opening main gas valve located on or near gas meter for natural gas fireplace, or using compressed air.
4. Check all joints of gas supply piping system. Apply commercial leak test solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.
5. Reconnect fireplace and equipment shutoff valve to gas supply. Check reconnected fittings for leaks.

Figure 41 - Attaching Flexible Gas Lines Together

MODEL NO.	GAS RATING			
	MBDV37		MBDV41	
TYPE OF GAS	NATURAL	PROPANE/LP	NATURAL	PROPANE/LP
Max. Input Rating:	22,000 Btu/hr	20,000 Btu/hr	24,000 Btu/hr	22,000 Btu/hr
Orifice Size (0-4,500 Ft.):	#43	#55	#42	#54
Manifold Pressure:	3.5 in. W.C.	10.0 in. W.C.	3.5 in. W.C.	10.0 in. W.C.
**Minimum Supply Pressure:	4.5 in. W.C.	11.0 in. W.C.	4.5 in. W.C.	11.0 in. W.C.
**Maximum Supply Pressure:	10.5 in. W.C.	13.0 in. W.C.	10.5 in. W.C.	13.0 in. W.C.

** For the purpose of input adjustment.

FIREPLACE INSTALLATION *Continued*

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

1. Close equipment shutoff valve (see Figure 43).
2. Pressurize supply piping system by either opening propane/LP supply tank valve for propane/LP gas fireplace or opening main gas valve located on or near gas meter for natural gas fireplace, or using compressed air.
3. Check all joints from propane/LP supply tank or gas meter to equipment shutoff valve (see Figure 44 for propane/LP or Figure 45 for natural). Apply commercial leak test solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.

Pressure Testing Fireplace Gas Connections

1. Open equipment shutoff valve (see Figure 43).
2. Open propane/LP supply tank valve for propane/LP fireplace or main gas valve located on or near gas meter for natural gas fireplace.
3. Make sure control knob of fireplace is in the OFF position.
4. Check all joints from equipment shutoff valve to thermostat gas valve (see Figure 44 for propane/LP or Figure 45 for natural). Apply commercial leak test solution to all gas joints. Bubbles forming show a leak. Correct all leaks at once.
5. Light fireplace (see *Operating Fireplace*, pages 26 and 27). Check all other internal joints for leaks.
6. Turn off fireplace (see *To Turn Off Gas to Appliance*, page 26).

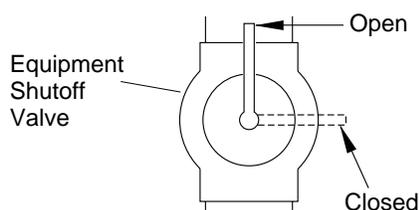


Figure 43 - Equipment Shutoff Valve

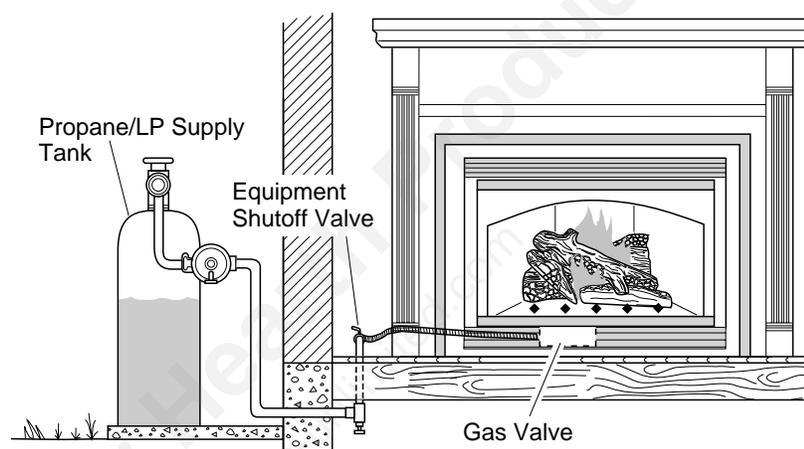


Figure 44 - Checking Gas Joints for Propane/LP Gas Fireplace

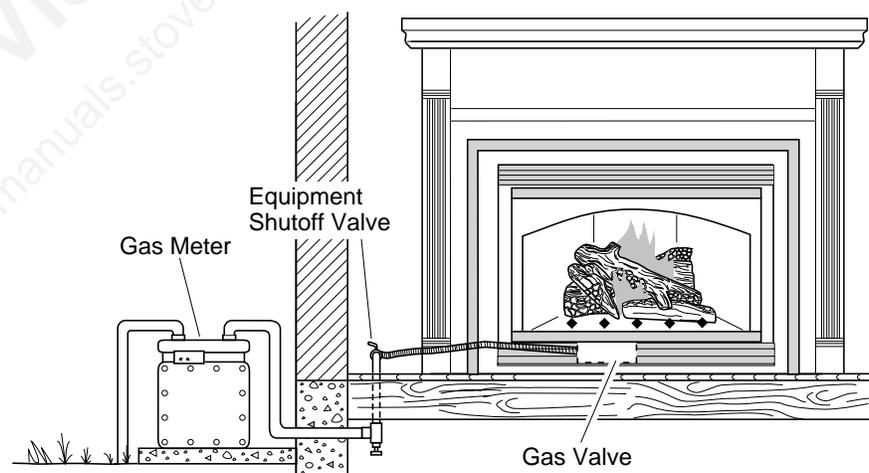


Figure 45 - Checking Gas Joints for Natural Gas Fireplace

Continued

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FIREPLACE INSTALLATION

Continued

REMOVING/REPLACING GLASS DOOR

You must remove glass door to install optional brick liners, logs, lava rock, and ember material.

CAUTION: Do not operate this fireplace with a broken glass door panel. Do not operate this fireplace without the glass door panel securely in place. For replacement part information see *Replacement Parts*, page 35.

1. Remove the upper louver panel by lifting upward and out (see Figure 46).
2. Remove the screws from the three tabs at the top of the glass door while holding door securely keeping it from falling forward.
3. Grasp door by both sides and ease it upward off of the lower bracket (see Figure 47).
4. To replace glass door, follow the above instructions in reverse.

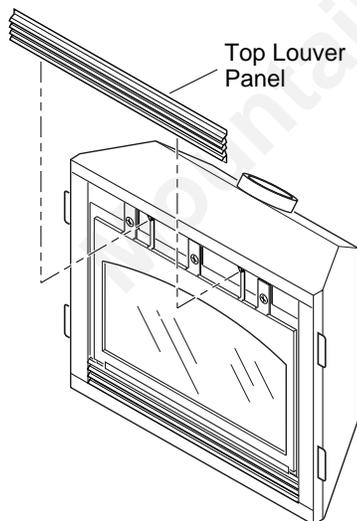


Figure 46 - Removing Top Louver Panel

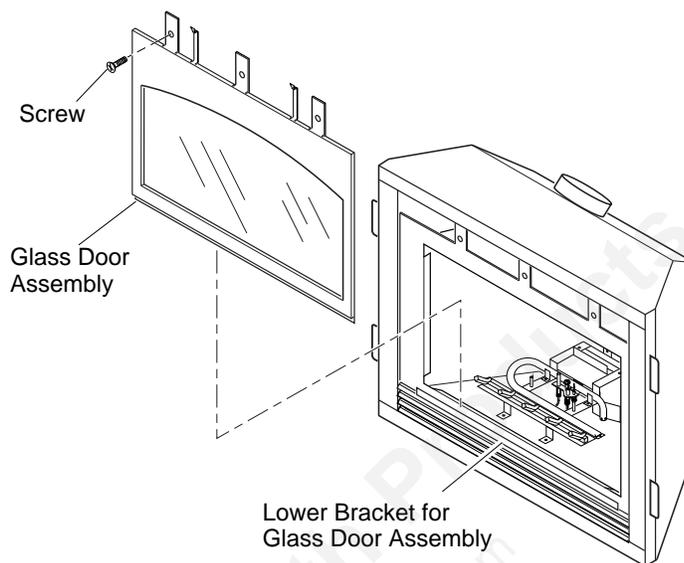


Figure 47 - Removing/Replacing Glass Door

FIREPLACE INSTALLATION

Continued

INSTALLING OPTIONAL BRICK LINER D8037A/D8041

⚠ WARNING: If fireplace has been running, turn off and unplug fireplace. Let cool before installing brick liner.

This brick liner kit is optional. You may purchase brick liner from your local dealer or see *Accessories*, page 38.

⚠ CAUTION: Always handle brick panels with two hands. Do not force brick panels into place. Excessive force will break brick panels.

1. Remove glass door. See *Removing/Replacing Glass Door*, page 22.
2. If installing brick liner in new fireplace, go to step 3. If installing brick liner in an existing fireplace, carefully remove logs, lava rock, and ember material.
3. Install left side brick panel first by sliding it between the grate and the side of the firebox (see Figure 48).
4. Slide the left retainer bracket against the left side brick panel. Loosely secure the bracket screw. This secures the left side brick panel.
5. Install the right brick panel using the same method described in step 3.
6. Slide the right retainer bracket against the right side brick panel. Loosely secure the bracket screw. This secures the right side brick panel.
7. Install rear brick panel. Rest bottom edge of panel on back edge of grate (see Figure 49).
8. Loosely secure retainer brackets to grate. Brackets are adjustable left to right to allow proper placement of panel. These will hold rear panel in place.
9. Tighten all bracket screws.
10. Follow instructions on page 24 to install logs, lava rock, and ember material.
11. Replace glass door (see page 22).

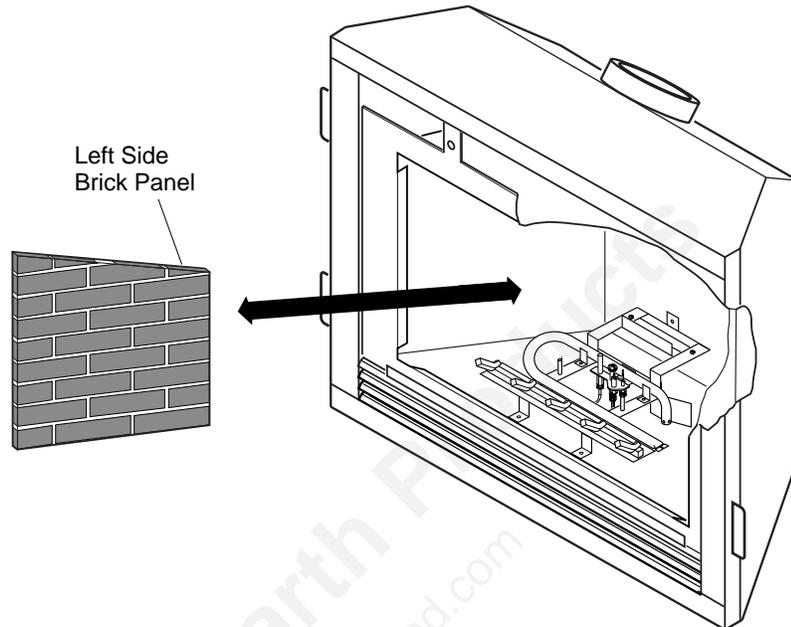


Figure 48 - Installing Left Side Brick Panel

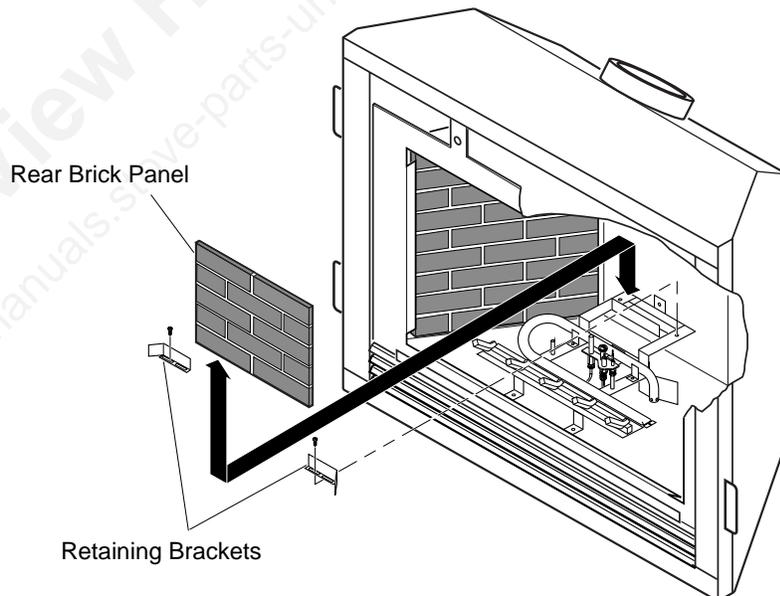


Figure 49 - Installing Rear Brick Panel and Retainer Brackets

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FIREPLACE 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 heater may result in property damage or personal injury.

Each log is marked with a number. These numbers will help you identify the log when installing. It is very important to install these logs exactly as instructed. Do not modify logs. Only use logs supplied with fireplace.

Remove glass door. See *Removing/Replacing Glass Door*, page 22. Install logs according to instructions for fireplace model numbers.

Fireplace Models MBDV37 and MBDV41

1. 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 50).
2. Rest log #2 (large front log) on the pins on the front part of the grate (see Figure 51).
3. Place log #3 ("C"-shaped crossover log) onto the rear and front logs. Make sure it is seated properly on the smooth surface on the front log and on the pin on the back log as shown in Figure 52.
4. Place log #4 (small, round log) on the pin on the right side of front log as shown in Figure 53
5. Place log #5 (small log) onto the front left part of the grate making sure the notches fit over the prongs of the grate (and hole over pin on 41" set). See Figure 54.
6. Place lava rock along sides and front of firebox bottom in areas that are visible only. 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.

7. 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 55). 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 the glass door. See *Removing/Replacing Glass Door*, page 22.

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

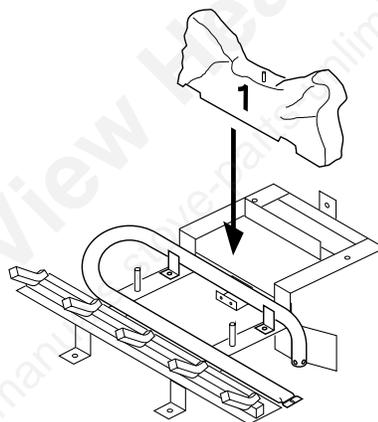


Figure 50 - Installing Log No. 1

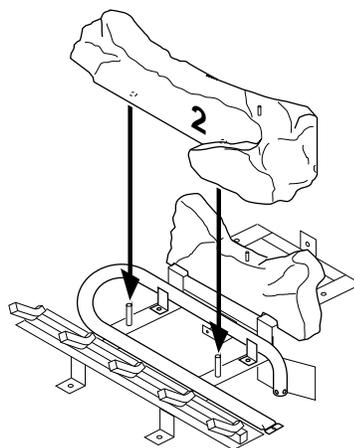


Figure 51 - Installing Log No. 2

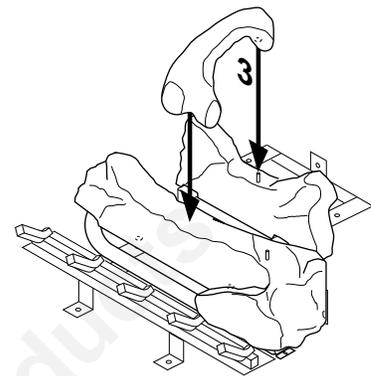


Figure 52 - Installing Log No. 3

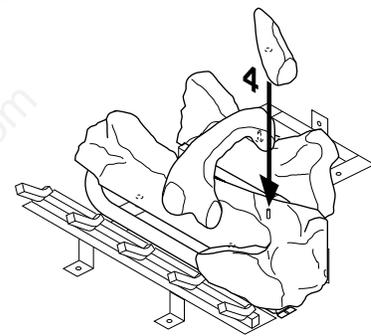


Figure 53 - Installing Log No. 4

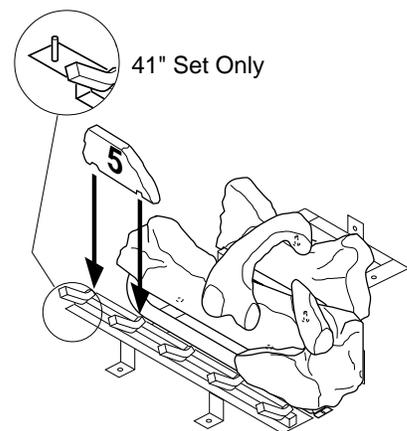


Figure 54 - Installing Log No. 5

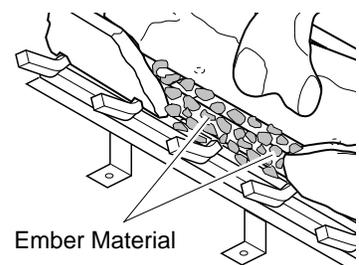


Figure 55 - Placing Ember Material on Burner

OWNER'S MANUAL

OPERATING GUIDELINES AND MAINTENANCE INSTRUCTIONS

When lit for the first time, the appliance may emit a slight odor for about 16 - 24 hours. This is normal and is due to the "curing" of the logs and the "burn-in" of internal paints and lubricants used in the manufacturing process. Keep compartments, logs, burners, and area surrounding the logs clean by vacuuming or brushing at least twice a year. Temporary removal of the log set may ease the cleaning of the burner and pilot assembly. In cleaning, take care not to alter the pilot or burner location. Be sure appliance is cool before each maintenance session.

CAUTION: The appliance and logs can get very hot - Handle only when cool.

WARNING: Turn off gas and wall switch before servicing appliance. Any safety screen or guard removed for servicing the appliance must be replaced prior to operating the appliance.

Any household glass cleaner may be used to clean the glass panel. Do not use abrasive cleaners as this may damage the glass. Clean glass only when cool.

WARNING: Do not operate appliance with panel(s) and glass removed, cracked, or broken. Replacement of the panel(s) should be done by a licensed, qualified service person.

WARNING: Make certain wires and gas lines are not touching the underside of the firebox.

CAUTION: If the glass breaks, be cautious of fragments on the floor. Keep children away from the area. Do not operate the unit. Use proper safety gloves to remove the broken glass door. Discard safely. A glass door kit can be ordered through your local distributor. Do not substitute other material for the glass.

WARNING: Children and adults should be alerted to the hazards of high surface temperatures, and to stay away from the appliance to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the same room as the appliance.

WARNING: Have a qualified service agency periodically inspect the vent system at the start of each heating season, for any obstruction which may hinder its normal operation. Never obstruct the flow of combustion and ventilation air. Keep the front of the appliance clear of all obstacles and materials.

WARNING: Do not abuse, strike, or slam the glass doors.

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

For further operating guidelines, contact your authorized dealer.

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DIRECT-VENT FIREPLACE

OPERATING FIREPLACE

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 in column one.
2. Turn off all electric power to the fireplace.
3. Open lower louver panel.
4. Push in gas control knob slightly and turn clockwise ↷ to "OFF".
5. 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 in column one. If you don't smell gas, go to the next step.
6. The pilot is located by the main burner and should not require accessing for lighting.
7. Turn gas control knob counterclockwise ↶ to "PILOT".
8. 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.
 - 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.
9. Turn gas control knob counterclockwise ↶ to "ON".
10. Turn on all electric power to the fireplace (remote control or wall switch).
11. Close lower louver panel.

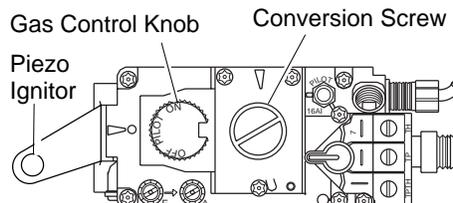


Figure 56 - Control Valve

TO TURN OFF GAS TO APPLIANCE

1. Turn off remote control or wall switch.
2. Turn off all electrical power to the appliance if service is to be performed.
3. Open lower louver panel.
4. Push in gas control knob slightly and turn clockwise ↷ to "OFF".
5. Close lower louver 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 if using the remote control.

Note: It is recommended that the gas control knob be turned to the OFF position when fireplace will not be used for extended periods of time.

MANUAL LIGHTING PROCEDURE

1. Remove glass door (see *Removing/Replacing Glass Door*, page 22).
2. Follow steps 1 through 8 under *Lighting Instructions*.
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 9 through 11, column 2.
5. Replace glass door (see *Removing/Replacing Glass Door*, page 22).

Continued

OWNER'S MANUAL

OPERATING FIREPLACE

Continued

REMOTE OPERATION

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 26.

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

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

IMPORTANT: Be sure to press the ON/OFF button on the hand-held remote control unit for up to 3 seconds to assure proper operation.

2. Press the ON/OFF button to turn the burners on and off. When turning burners off, the pilot will remain lit. **IMPORTANT:** To turn the pilot off, manually turn the gas control knob on the heater to the OFF position.

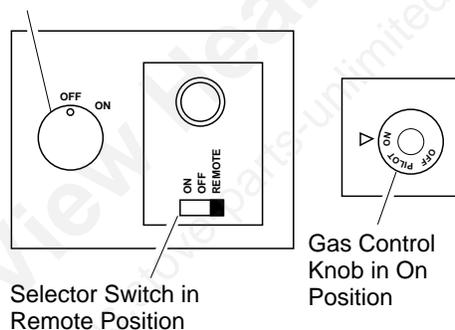
OPERATING BLOWER

Locate the blower controls by opening the lower louver panel on the fireplace. Blower controls are located on the left side of the switch bracket to the left just inside the louver panel.

The GA3700 manual 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.

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

Blower Control Knob



Selector Switch in Remote Position

Gas Control Knob in On Position

Figure 57 - Setting the Selector Switch and Gas Control Knob for Remote Operation

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 $3/8"$ to $1/2"$ above the pilot flame as shown in Figure 58. The thermocouple must be at a height of about $1/8"$ 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 fireplace off (see *To Turn Off Gas to Appliance*, page 26)
- see *Troubleshooting*, pages 31 through 34

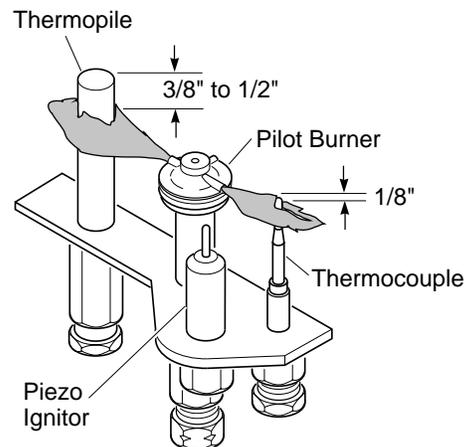


Figure 58 - Pilot Assembly

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.

Continued

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INSPECTING BURNERS

Continued

Figure 59 shows a typical flame pattern for MBDV37 and MBDV41.

If burner flame pattern differs from that described:

- turn fireplace off (see *To Turn Off Gas to Appliance*, page 26)
- see *Troubleshooting*, pages 31 through 34

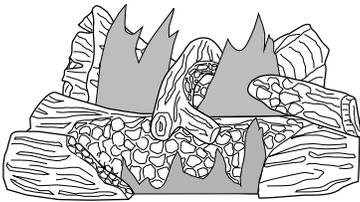


Figure 59 - Typical Flame Pattern for MBDV37 and MBDV41

CLEANING AND MAINTENANCE

WARNING: Turn off fireplace and let cool before cleaning.

CAUTION: You must keep control areas, burners, and circulating air passageways of fireplace clean. Inspect these areas of fireplace before each use. Have fireplace inspected yearly by a qualified service person. Fireplace 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 fireplace 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 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 22 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 22). Vacuum all glass pieces with a shop vac.

CAUTION: Do not vacuum if pieces are hot.

Use only the glass door replacement intended for this fireplace (see *Replacement Parts*, page 35 for detail on ordering). No substitutions may be made. See *Removing/Replacing Glass Door*, page 22 for instructions for replacing glass door.

WARNING: Do not operate fireplace 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.

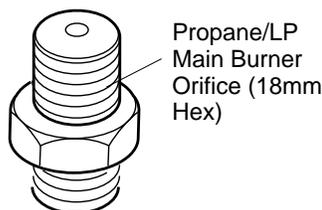
INSTALLATION INSTRUCTIONS FOR CONVERSION NATURAL TO PROPANE/LP

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

BEFORE YOU BEGIN

The conversion parts are packaged with the fireplace. Please check the contents before beginning this conversion. Each model includes a brass main burner orifice and a smaller sized pilot orifice (see Figure 60).

Before proceeding, make sure the gas control valve is in the "OFF" position, all electrical power to the appliance is OFF, and the appliance is cool to the touch.



Propane/LP Main Burner Orifice (18mm Hex)

Note:
For Model MBDV37 - #55 Drill Size (Stamped with #132 for Identification)
For Model MBDV41 - #54 Drill Size (Stamped with #139 for Identification)



Note: The pilot orifice has the number 30 stamped on it for identification purposes (Both Models).

Figure 60 - Main Burner Orifice and Pilot Orifice

BURNER AIR SHUTTER ADJUSTMENT, MAIN BURNER ORIFICE, AND PILOT ORIFICE CONVERSION

1. Remove the upper louver panel and glass door (see *Removing/Replacing Glass Door*, page 22).
2. Carefully remove the log set and ember material from around the burner and place them outside the fireplace (see *Installing Logs, Lava Rock and Glowing Embers*, page 24).
3. Open lower louver panel. This allows access below firebox to gas line connections and gas control valve.
4. Disconnect flare fitting connected to the brass elbow inside the bottom control compartment area. Use a 3/4" open end wrench on the flare fitting (see Figure 61).

5. Turn brass elbow and main burner orifice counterclockwise to remove from burner. The orifice is threaded into the burner inlet. The elbow may have a slight resistance since the orifice has been sealed with RTV silicone. Use a 7/8" open end wrench or channel lock pliers for elbow and orifice removal.
6. Remove existing main burner orifice from brass elbow and replace with main burner orifice supplied with the fireplace. **Note:** The new main burner orifice for propane/LP will have the number 132 (Model MBDV37 only) or the number 139 (Model MBDV41 only) stamped on it for identification purposes. Apply a small amount of thread sealant to the orifice before tightening (see Figure 62, page 30). Sealant must be resistant to Propane/LP gas.

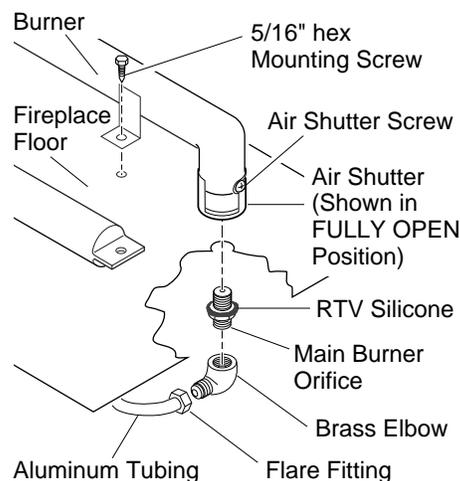


Figure 61 - Removing/Replacing Main Burner Orifice, Brass Elbow, and Aluminum Tubing

Continued

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INSTALLATION INSTRUCTIONS FOR CONVERSION NATURAL TO PROPANE/LP

Continued

- Remove the burner by loosening the two 5/16" hex mounting screws (see Figure 62). Lift burner up and out.
- Convert the pilot burner by changing out the pilot orifice. Remove the compression nut and compression sleeve from the pilot. Remove the pilot orifice from inside the pilot barrel (see Figure 63). Replace with the pilot orifice supplied with the fireplace. **Note:** The new pilot orifice has the number 30 stamped on it for identification purposes.
- Place open end of pilot orifice on top of compression sleeve and carefully slide up inside pilot burner. Tighten compression nut (see Figure 63). **IMPORTANT:** Be careful not to bend or kink aluminum tubing during conversion. Make sure the compression sleeve and pilot orifice are properly mated and aligned before retightening the compression nut.

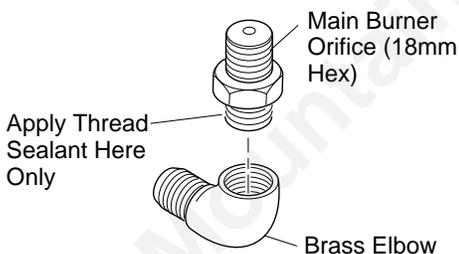


Figure 62 - Removing/Replacing Main Burner Orifice

- Adjust air shutter setting on main burner. Loosen air shutter screw and rotate air shutter to FULLY OPEN position (see Figure 61, page 29). Tighten shutter screw. Place burner back into position. Attach with the two 5/16" hex mounting screws removed in step 5.
- 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 61, page 29). Align the brass elbow with the flare fitting on the aluminum tubing.
- Reconnect the aluminum tube flare fitting onto the brass elbow (see Figure 61, page 29).
- Reapply RTV silicone to seal area where orifice passes through the bottom combustion chamber (see Figure 61, page 29).

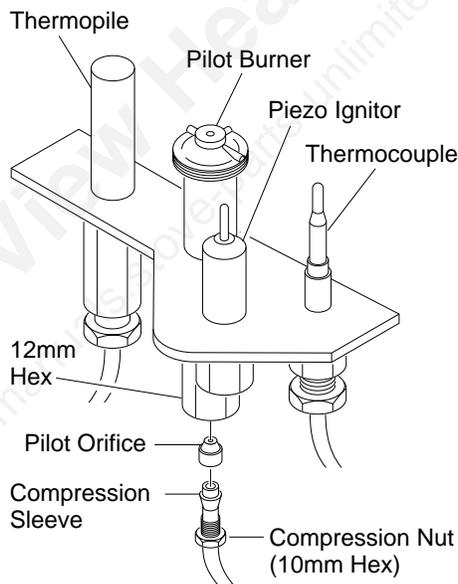


Figure 63 - Removing/Replacing Pilot Orifice

GAS CONTROL VALVE CONVERSION

The SIT Nova millivolt valve converts from natural gas to propane/LP gas with the reversal of the conversion screw located on the stem in the top of the valve (see Figure 64). The valve is located in the bottom of the fireplace underneath the firebox.

Remove the conversion screw from the valve and rotate the screw 180 degrees. The screw is clearly marked as **NG** or **LPG**, insure that the **LPG** is facing outward. Tighten the screw fully but do not over tighten.

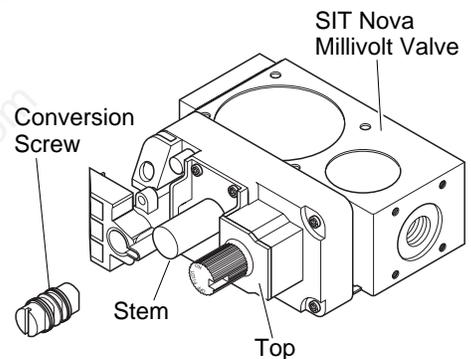


Figure 64 - Valve

FINAL PREPARATION

- Replace logs and embers (see *Removing/Replacing Glass Door*, page 22).
- Reinstall glass door and upper louver panel on fireplace (see *Installing Logs, Lava Rock and Glowing Embers*, page 24).

The conversion is now complete.

Refer to the section on *Checking Gas Connections* (pages 20 and 21) and *Operating Fireplace* (pages 26 and 27).

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

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

OWNER'S MANUAL

TROUBLESHOOTING

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

⚠ 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 pilot. This can damage 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 cable2. Ignitor cable pinched or wet3. Piezo ignitor nut is loose4. Broken ignitor cable5. Bad piezo ignitor6. Ignitor electrode broken7. Ignitor electrode positioned wrong	<ol style="list-style-type: none">1. Reconnect ignitor cable2. Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry3. Tighten nut holding piezo ignitor. Nut is located behind the mounting bracket4. Replace ignitor cable5. Replace piezo ignitor6. Replace pilot assembly7. 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 closed2. Gas control knob not in PILOT position3. Gas control knob not pressed in while in PILOT position4. Air in gas lines when installed5. Depleted gas supply (propane/LP models only)6. Pilot is clogged7. Gas regulator setting is not correct	<ol style="list-style-type: none">1. Turn on gas supply or open equipment shutoff valve2. Turn gas control knob to PILOT position3. Press in gas control knob while in PILOT position4. Continue holding down control knob. Repeat igniting operation until air is removed5. Contact local propane/LP gas company6. Clean pilot (see <i>Cleaning and Maintenance</i>, page 28) or replace pilot assembly7. 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 in2. Gas control knob not pressed in long enough3. Equipment shutoff valve not fully open4. 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 pressureB) Dirty or partially clogged pilot5. Thermocouple connection loose at control valve6. Thermocouple damaged7. Control valve damaged	<ol style="list-style-type: none">1. Press in gas control knob fully2. After pilot lights, keep gas control knob pressed in 30 seconds3. Fully open equipment shutoff valve4. A) Contact local gas company B) Clean pilot (see <i>Cleaning and Maintenance</i>, page 28) or replace pilot assembly5. Hand tighten until snug, then tighten 1/4 turn more6. Replace thermocouple7. Replace control valve

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DIRECT-VENT FIREPLACE

TROUBLESHOOTING

Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Pilot will not light	<ol style="list-style-type: none"> 1. No gas supply, or shutoff valve is OFF 2. Air in gas line 3. Construction debris clogging pilot orifice 4. Low gas pressure 5. Control valve knob is not on the PILOT position 6. Kinked pilot line 7. Bad valve 8. Bad thermocouple or loose connection 	<ol style="list-style-type: none"> 1. Check to see if you have gas supply 2. Hold control valve in the PILOT position for 2 to 3 minutes to purge air. If you smell gas stop and wait for a few minutes before trying to light the fireplace 3. Remove debris and dirt, inspect and clean any other possible obstructions 4. Contact your gas supplier 5. Refer to section on pilot lighting 6. Have a qualified technician replace pilot line 7. Replace control valve (see <i>Replacement Parts</i>, page 35) 8. Tighten thermocouple or replace
No gas to burner, although wall switch and valve are set to the ON position	<ol style="list-style-type: none"> 1. Wall switch wires defective 	<ol style="list-style-type: none"> 1. Check electrical connections
Frequent pilot outage	<ol style="list-style-type: none"> 1. Pilot flame may be too low, causing safety pilot to “drop out” 	<ol style="list-style-type: none"> 1. Clean and adjust pilot flame for maximum flame impingement on thermopile
Burner goes off after a short time	<ol style="list-style-type: none"> 1. Venting recirculation problem 	<ol style="list-style-type: none"> 1. Have a qualified technician check venting system for leaks or obstructions. Have a qualified technician measure the pilot’s millivoltage
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 35) 4. Replace thermopile

OWNER'S MANUAL

TROUBLESHOOTING

Continued

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Delayed ignition burner	<ol style="list-style-type: none">1. Manifold pressure is too low2. Burner porting or orifice clogged	<ol style="list-style-type: none">1. Contact local propane/LP or natural gas company2. 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 damaged2. Damaged burner3. Gas regulator defective	<ol style="list-style-type: none">1. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice2. Replace damaged burner3. 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
Fireplace produces a whistling noise when burner is lit	<ol style="list-style-type: none">1. Air in gas line2. 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 company2. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice
Glass soots	<ol style="list-style-type: none">1. Flame impingement on logs2. Debris around burner air mixer	<ol style="list-style-type: none">1. Adjust the log set so that the flame does not excessively impinge on it2. Inspect the opening at the base of the burner to see that it is NOT packed with any type of material
Fireplace 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

VANGUARD®

DIRECT-VENT FIREPLACE

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 fireplace 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
Fireplace produces unwanted odors	1. Gas leak. See Warning statement above	1. Locate and correct all leaks (see <i>Checking Gas Connections</i> , pages 19 and 20)
Fireplace shuts off in use	1. High or gusting winds 2. Low line pressure 3. Pilot is partially clogged 4. Inner vent pipe leaking exhaust gases into system 5. Horizontal vent improperly pitched 6. Glass too loose and air tight gasket leaks in corners after usage 7. Bad thermopile or thermocouple 8. Improper vent cap installation	1. Fireplace has been tested for up to 40mph winds. However, extreme conditions may occur. See <i>Lighting Instructions</i> on page 26 and 27. 2. Contact local propane/LP or natural gas company 3. Clean pilot (see <i>Cleaning and Maintenance</i> , page 28) 4. Locate and correct all leaks (see <i>Checking Gas Connections</i> , pages 20 and 21) 5. Horizontal vent termination should slope down only enough to prevent any water from entering the unit. The maximum downward slope of the vent termination is 1/4" for any horizontal run 6. Tighten glass 7. Replace faulty component 8. 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 20 and 21) 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 20 and 21)
Dark residue on logs or inside of fireplace	1. Improper log placement 2. Air holes at burner inlet blocked 3. Burner flame holes blocked	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

OWNER'S MANUAL

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 International's Technical Service Department at 1-800-DESA LOG (1-800-337-2564).

When calling DESA International, have ready

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

Usually, we will ask you to return the defective 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 International's Parts Department at 1-800-972-7879 for referral information.

When calling DESA International, have ready

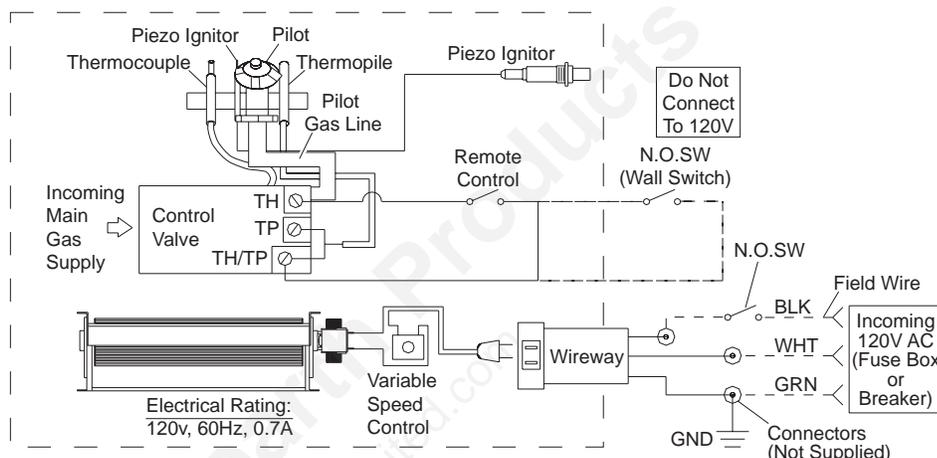
- model number of your fireplace
- the replacement part number

SPECIFICATIONS

	MBDV37	MBDV41
Dimension, Inches/mm (HxWxD) Fireplace	33" x 37" x 18 1/2" 838 x 940 x 470mm	35" x 41" x 18 1/2" 838 x 1041 x 470mm
Carton	36" x 39" x 19 1/2" 914 x 991 x 495mm	36" x 43" x 19 1/2" 914 x 1092 x 495mm
Weight, lbs/kg Fireplace	127 lbs/58 kg	137 lbs/62 kg
Shipping	130 lbs/59 kg	140 lbs/64 kg

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.



TECHNICAL SERVICE

You may have further questions about installation, operation, or troubleshooting. If so, contact DESA International's Technical Service Department at 1-800-DESA LOG (1-800-337-2564).

You can also visit DESA International'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
- fireplace will not produce specified heat
- propane/LP gas supply might be low (propane/LP units only)

When Gas Quality Is Bad

- pilot will not stay lit
- burners will produce flames and soot
- fireplace will backfire when lit

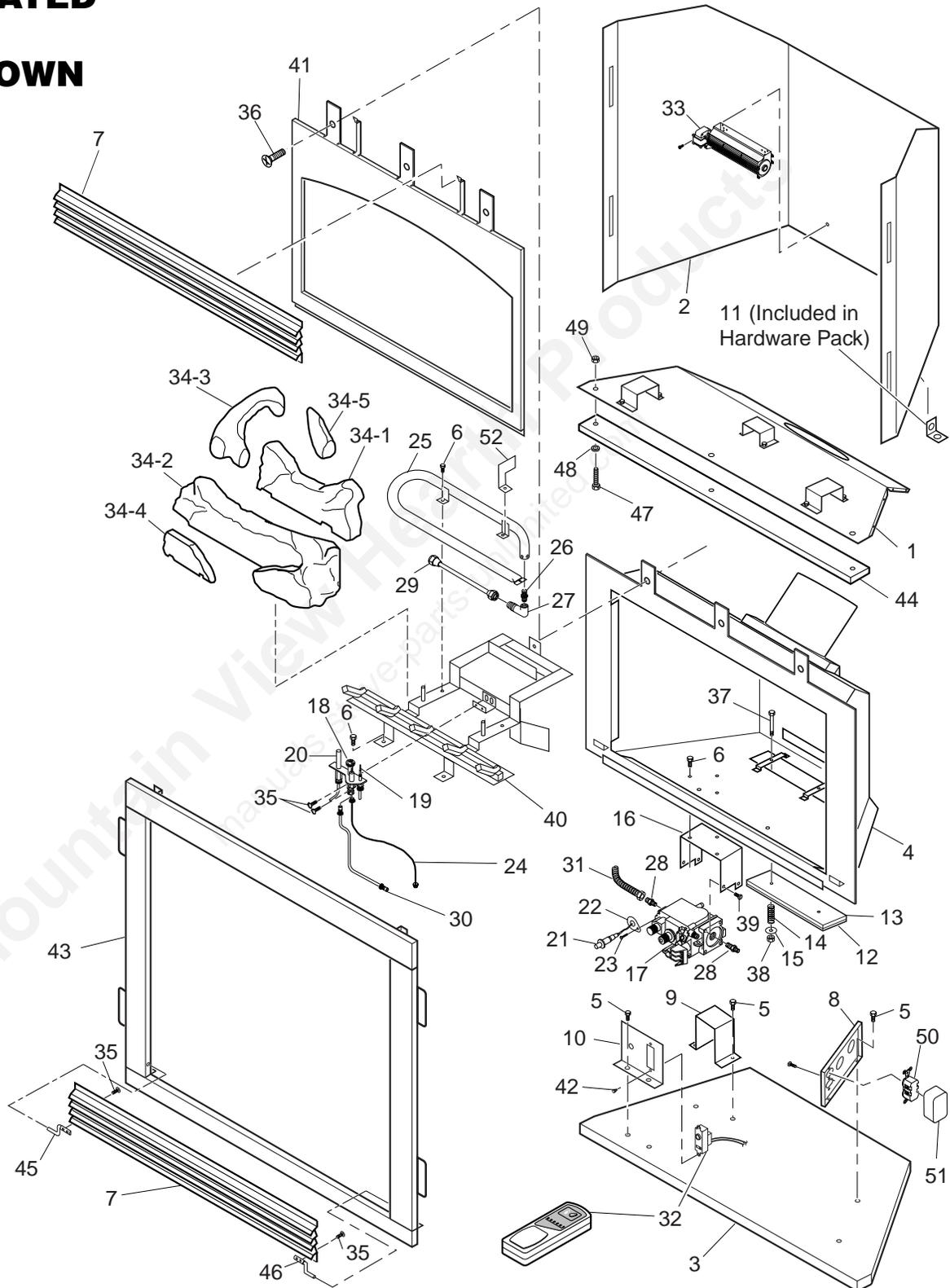
If you feel your gas pressure is too low or gas quality is bad, contact your local natural or propane/LP gas supplier.

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DIRECT-VENT FIREPLACE

ILLUSTRATED PARTS BREAKDOWN

MBDV37
MBDV41



OWNER'S MANUAL

PARTS LIST

This list contains replaceable parts used in your fireplace. When ordering parts, follow the instructions listed under *Replacement Parts* on page 31 of this manual.

DIRECT-VENT FIREPLACE

MBDV37

MBDV41

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
1	104547-02	Top Outer Casing-37"	1
	104547-03	Top Outer Casing-41"	1
2	104474-02	Outer Casing-37"	1
	104474-03	Outer Casing-41"	1
3	104548-02	Bottom Outer Casing-37"	1
	104548-01	Bottom Outer Casing-41"	1
4	104479-12BR	Firebox Assembly-37"	1
	104479-11BR	Firebox Assembly-41"	1
5	M11084-26	Screw, Hex	52
6	M11084-46	Screw, Hex	8
7	102455-04	Louver, Extruded-37"	2
	102455-03	Louver, Extruded-41"	2
8	104443-01	Firebox Support, Right	1
9	104486-01	Firebox Support, Left	1
10	104482-01	Switch Bracket	1
11	104483-01	Floor Mounting Bracket	2
12	104491-01	Relief Cover	1
13	104518-01	Relief Cover Gasket	1
14	104527-01	Relief Spring	2
15	104528-01	Relief Washer	2
16	104537-01	Valve Bracket	1
17	104496-03	SIT Valve, Convertible	1
18	104497-01	SIT Pilot, Convertible	1
19	104498-01	Thermocouple	1
20	104499-01	Thermopile	1
21	104500-01	Ignitor	1
22	104501-01	Ignitor Bracket	1
23	104502-01	Ignitor Screw	1
24	104503-01	Ignitor Wire	1
25	104504-03	Burner w/ Air Shutter	1
26	104506-01	Orifice - 37" (Natural)	1
	104506-03	Orifice - 41" (Natural)	1
27	104507-01	Brass Elbow	1
28	104508-01	Brass Fitting	2
29	104509-01	Aluminum Tubing Assy	1
30	104510-01	Pilot Tubing Assy	1
31	101628-04	Flexible Connector	1
32	103823-02	Remote Set	1
33	GA3700	Blower Assembly w/ Speed Control	1
34	107165-01	Log Set - 37"	1
	107164-01	Log Set - 41"	1

KEY NO.	PART NUMBER	DESCRIPTION	QTY.
34-1	107344-02	Rear Log - 37"	1
	107344-01	Rear Log - 41"	1
34-2	107345-02	Front Log - 37"	1
	107345-01	Front Log - 41"	1
34-3	107346-01	Crossover Log - 37" & 41"	1
34-4	107347-02	Log Piece - 37"	1
	107347-01	Log Piece - 41"	1
34-5	107348-01	Log, Top Twig - 37" & 41"	1
35	M10908-2	Screw	6
36	M12461-73	Screw	3
37	H5C4-20B	Bolt	2
38	NTC-4C	Locknut	2
39	M12461-26	Screw	4
40	104555-02CJ	Grate Assembly - 37"	1
	104555-01CJ	Grate Assembly - 41"	1
41	105775-03	Glass Door Assy - 37"	1
	105775-01	Glass Door Assy - 41"	1
42	104381-01	Fastener, Ratchet	2
43	104576-02CK	Front Assembly - 37"	1
	104576-03CK	Front Assembly - 41"	1
44	104615-02	Insulation - 37"	1
	105628-01	Insulation - 41"	1
45	104313-01	Hinge, Pin	1
46	104313-02	Hinge, Pin	1
47	104954-01	Screw	3
48	104963-01	Washer	3
49	104955-01	Nut	3
50	103769-01	Duplex Outlet	1
51	104602-01	Duplex Outlet Cover	1
52	105325-01	Burner Baffle	1
PARTS AVAILABLE - NOT SHOWN			
	GA6060	Lava Rock	1
	104529-01	Ember Material	1
	104512-01	Ball Valve	1
	106040-02	Pilot Orifice	1
		Propane/LP Conversion	
	104506-02	Main Burner Orifice (#55) 37" Propane/LP Conv.	1
	104506-04	Main Burner Orifice (#54) 41" Propane/LP Conv.	1

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DIRECT-VENT FIREPLACE

ACCESSORIES

Purchase these fireplace accessories from your local dealer. If they can not supply these accessories, call DESA International's Sales Department at 1-800-432-2382, for information. You can also write to the address listed on the back page of this manual.

BRASS PERIMETER TRIM KIT - D9037(37")/GA6091(41") (Not Shown)

Optional three sided brass trim kit covers unfinished edges around fireplace. Provides a finished appearance with the class of brass.

BRASS LOUVER KIT D6037(37") D6041(41") (Not Shown)

These louvers will give your fireplace an elegant look and allows you to customize your fireplace. They easily replace the standard black louvers by screwing into place.

DECORATIVE BRASS STRIP KIT - D5037(37")/D5041(41") FOR BDV ONLY (Not Shown)

These strips have a magnetic backing which makes installation and removal quick and easy. They are designed to go at the top and bottom of the glass door on BDV units. *Note:* Remove the plastic film covering on strips before installing on fireplace.

BRICK LINER D8037A(37") D8041(41") (Not Shown)

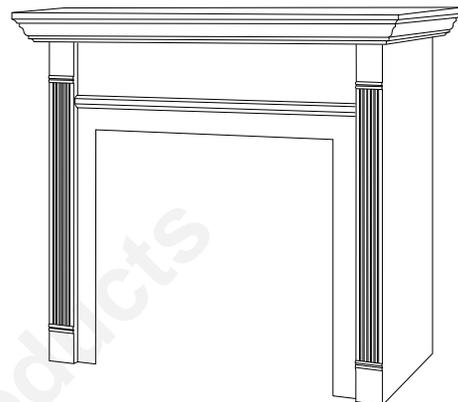
This brick liner adds a touch of style to your direct-vent fireplace and comes with easy to follow instructions for installation.

WALL MOUNT ON/OFF SWITCH KIT - GWMS2

Allows the fireplace to be turned on and off with a wall switch.

CLEANING KIT - GCK (Not Shown)

Your direct-vent gas appliance requires regular cleaning and maintenance to prevent performance problems. This kit gives you the tools and instructions to make it easy to clean all critical areas of your appliance.



CABINET MANTEL WITH SQUARE LEG STYLING - UNFINISHED GM501U(37")/GM103U(41")

For use with all models. This birch-veneer mantel is unfinished and ready to stain or paint. Complete assembly instructions are included along with a three-sided brass trim kit.

WARRANTY INFORMATION

KEEP THIS WARRANTY

Model _____
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.

LIMITED WARRANTY DIRECT-VENT FIREPLACE

DESA International warrants this product to be free from defects in materials and components for four (4) 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 heater 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 International who will provide original factory replacement parts. Failure to use original factory replacement parts voids this warranty. The heater 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 heater 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 FOUR (4) YEARS ON ALL COMPONENTS FROM THE DATE OF FIRST PURCHASE; AND DESA INTERNATIONAL'S LIABILITY IS HEREBY LIMITED TO THE PURCHASE PRICE OF THE PRODUCT AND DESA INTERNATIONAL 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:

DESA

INTERNATIONAL

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



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NOT A UPC

106497-01
Rev. A
03/00