



HEARTH PRODUCTS

P/N 506015-04 Rev. C 01/2012

This manual is one of a set of two supporting this product. Refer to P/N 506017-03 for Care and Operation Instructions.

Ce manuel est disponible en français, simplement en faire la demande. Numéro de la pièce 506223-21.

INSTALLATION INSTRUCTIONS

**B-Vent Gas Fireplaces
MLBV 35/40 Models**

MERIT™ SERIES

MODELS

MILLIVOLT:

MLBV-35NM MLBV-40NM
MLBV-35PM MLBV-40PM

ELECTRONIC:

MLBV-35NE
MLBV-40NE



Intertek

ITS Report No. 100017854

INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.
INSTALLATEUR : Laissez cette notice avec l'appareil.
CONSOMMATEUR : Conservez cette notice pour consultation ultérieure.

Please read and understand these instructions before starting installation.

WARNING / AVERTISSEMENT / AVISO

- HOT GLASS WILL CAUSE BURNS.
- DO NOT TOUCH GLASS UNTIL COOLED.
- NEVER ALLOW CHILDREN TO TOUCH GLASS.



- UNE SURFACE VITRÉE CHAUDE PEUT CAUSER DES BRÛLURES.
- LAISSER REFROIDIR LA SURFACE VITRÉE AVANT D'Y TOUCHER.
- NE PERMETTEZ JAMAIS À UN ENFANT DE TOUCHER LA SURFACE VITRÉE.

- EL VIDRIO CALIENTE CAUSARÁ QUEMADURAS.
- USTED DEBE NUNCA TOCAR EL VIDRIO CALIENTE.
- LOS NIÑOS DEBEN NUNCA TOCAR EL VIDRIO.

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

- 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.

AVERTISSEMENT : Assurez-vous de bien suivre les instructions données dans cette notice pour réduire au minimum le risque d'incendie ou d'explosion ou pour éviter tout dommage matériel, toute blessure ou la mort.

- Ne pas entreposer ni utiliser d'essence ni d'autres vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.
- **QUE FAIRE SI VOUS SENTEZ UNE ODEUR DE GAZ :**
 - Ne pas tenter d'allumer d'appareil.
 - Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous trouvez.
 - Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
 - Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.
- L'installation et l'entretien doivent être assurés par un installateur ou un service d'entretien qualifié ou par le fournisseur de gaz.

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PACKAGING

The assembled vented gas fireplace is packaged with the following items:

- 1 - One log set located in firebox area.
- 2 - One envelope containing the literature package which consists of the care and operations manual, installation instructions, safety-in-operation warning labels and warranty; envelope is located in the control compartment.
- 3 - One hood located behind the glass enclosure panel assembly.
- 4 - One bag of decorative volcanic stone located in the lower control compartment.
- 5 - One bag of glowing embers located in the lower control compartment.

INTRODUCTION

The *Millivolt* appliances have a millivolt gas control valve with piezo ignition system.

The *Electronic* appliances have a battery backed-up electronic intermittent pilot ignition system. No external electrical power is required to operate these appliances; however, 120V AC is recommended (see Step 4, "Install Field Wiring," on **Page 12**).

Use Only These Approved Vent Components:

These vented gas fireplaces are designed for residential applications. They must be installed with approved Type-B double-wall vent pipe systems and a listed vent termination routed to the outside atmosphere. Use only the proper size listed below.

- 4" B-Vent for 35" models and 5" B-Vent for 40" models.

GENERAL INFORMATION

WARNING

B-Vent appliances are not designed to operate in negatively pressured environments (pressure within the home is less than pressures outside). Significant negatively pressured environments caused by weather, home design, or other devices may impact the operation of these appliances. Negative pressures may result in poor flame appearance, sooting, damage to property and/or severe personal injury. Do not operate these appliances in negatively pressured environments.

WARNING

Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at risk individuals in the house. To restrict access to a fireplace or stove, install an adjustable safety gate to keep toddlers, young children and other at risk individuals out of the room and away from hot surfaces.

AVERTISSEMENT

Les jeunes enfants devraient être surveillés étroitement lorsqu'ils se trouvent dans la même pièce que l'appareil. Les tout petits, les jeunes enfants ou les adultes peuvent subir des brûlures s'ils viennent en contact avec la surface chaude. Il est recommandé d'installer une barrière physique si des personnes à risques habitent la maison. Pour empêcher l'accès à un foyer ou à un poêle, installez une barrière de sécurité; cette mesure empêchera les tout petits, les jeunes enfants et toute autre personne à risque d'avoir accès à la pièce et aux surfaces chaudes.

Children and adults should be alerted to the hazards of high surface temperature and should stay away to avoid burns or clothing ignition.

Les enfants et les adultes devraient être informés des dangers que posent les températures de surface élevées et se tenir à distance afin d'éviter des brûlures ou que leurs vêtements ne s'enflamment.

DO NOT ATTEMPT TO ALTER OR MODIFY THE CONSTRUCTION OF THE APPLIANCE OR ITS COMPONENTS. ANY MODIFICATION OR ALTERATION MAY VOID THE WARRANTY, CERTIFICATION, AND LISTINGS OF THIS UNIT.

GENERAL INFORMATION
(continued)

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

! WARNING
Failure to comply with these installation instructions will result in an improperly installed and operating appliance, voiding its warranty. Any change to this appliance and/or its operating controls is dangerous.

! WARNING
Clothing or other flammable material should not be placed on or near the appliance.

! AVERTISSEMENT
On ne devrait pas placer de vêtements ni d'autres matières inflammables sur l'appareil ni à proximité.

! WARNING
Any safety screen or guard removed for servicing the appliance must be replaced prior to operating the appliance.

! AVERTISSEMENT
Tout écran ou protecteur retiré pour permettre l'entretien de l'appareil doit être remis en place avant de mettre l'appareil en marche.

! WARNING
Improper installation or use of this appliance can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.



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

www.nficertified.org

Note: Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etcetera. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.

Remarque : L'installation et la réparation devrait être confiées à un technicien qualifié. L'appareil devrait faire l'objet d'une inspection par un technicien professionnel avant d'être utilisé et au moins une fois l'an par la suite. Des nettoyages plus fréquents peuvent être nécessaires si les tapis, la literie, et cetera produisent une quantité importante de poussière. Il est essentiel que les compartiments abritant les commandes, les brûleurs et les conduits de circulation d'air de l'appareil soient tenus propres.

Do not use these appliances if any part has been under water. Immediately call a qualified, professional service technician to inspect the appliance and to replace any parts of the control system and any gas control which have been under water.

Ne pas utiliser cet appareil s'il a été plongé, même partiellement, dans l'eau. Appeler un technicien qualifié pour inspecter l'appareil et remplacer toute partie du système de commande et toute commande qui a été plongée dans l'eau.

Only trim kit(s) supplied by the manufacturer shall be used in the installation of this appliance.

Seules les trousse de garniture fournies par le fabricant doivent être utilisées pour l'installation de cet appareil.

These appliances comply with National Safety Standards and are tested and listed by ITS (Report No. 100017854) to ANSI Z21.50 (in Canada, CSA-2.22) and to CAN/CGA-2.17-M91 in both USA and Canada (latest editions at time of manual publication) as vented gas fireplaces.

Both millivolt and electronic versions of these appliances are listed by ITS for installation in bedrooms in the United States (not approved in Canada).

These appliances must not be connected to a chimney or flue serving a separate solid fuel burning appliance.

Installation must conform to local codes, or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1/NFPA 54 (latest edition), or the Natural Gas and Propane Installation Code, CAN/CSA B149.1 (latest edition).

The appliance, when installed, must be electrically grounded and wired in accordance with local codes or, in the absence of local codes, with the USA *National Electrical Code, ANSI/NFPA 70* (latest edition) or, in Canada, the *Canadian Electrical Code, CSA C22.1* (latest edition).

Provide adequate clearances around air openings and adequate accessibility clearance for service and proper operation. Never obstruct the front opening of the appliance.

These appliances are designed to operate on natural or propane gas only. The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous.

These fireplaces are designed as supplemental heaters; therefore, it is advisable to have an alternate primary heat source when installed in a dwelling.

MILLIVOLT MODELS: The millivolt appliances are manually controlled and feature a spark igniter (piezo) that allows the appliance's pilot gas to be lit without the use of matches or batteries. This system provides continued service in the event of a power outage.

ELECTRONIC MODELS: The electronic appliances are manually controlled and feature an electronic intermittent pilot ignition system. External electrical power is required to operate these units.

ALL MODELS: Both millivolt and electronic models come standard with a manually-modulated gas valve; flame appearance and heat output can be controlled at the gas valve. BTU input rates for all models are listed in **Table 1**, below.

Input (BTU/hr) Manually-Modulated Gas Valves (all models)		
Models	Input Rate (BTU / HR)	
	Natural Gas	Propane Gas
MLBV-35	17,000 high 13,000 low	17,000 high 14,000 low
MLBV-40	22,000 high 17,000 low	20,000 high 15,500 low

Table 1

GAS PRESSURE REQUIREMENTS

(All Models)

Tables 2 and 3 show the appliances' inlet and manifold gas pressure requirements:

Inlet Gas Supply Pressure (All models)		
Fuel #	Minimum	Maximum
Natural Gas	4.5" WC (1.12 kPa)	10.5" WC (2.61 kPa)
Propane	11.0" WC (2.74 kPa)	13.0" WC (3.23 kPa)

Table 2

Manifold Gas Supply Pressure (All models)		
Fuel #	Low	High
Natural Gas	(Lo) 2.2" WC (0.55 kPa)	(Hi) 3.5" WC (0.87 kPa)
Propane	(Lo) 6.3" WC (1.57 kPa)	(Hi) 10.0" WC (2.49 kPa)

Table 3

Test gauge connections are provided on the front of the gas control valve, identified **IN** for the inlet and **OUT** for the manifold side (see Figures 1 and 2).

Propane tanks are at pressures that will cause damage to valve components. Verify that the tanks have step-down regulators to reduce the pressure to safe levels.

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

These appliances and their individual shut-off valves must be disconnected from the gas supply piping system during any pressure testing of that system at pressures greater than 1/2 psig (3.5 kPa).

ORIFICE SIZES

Sea Level to High Altitude

(All Models)

These appliances are tested and approved for installation at elevations of 0–4500 feet (0–1372 meters) above sea level using the standard burner orifice sizes (marked with an asterisk (*) in Table 4, below).

For elevations above 4500 feet, contact your gas supplier or a qualified service technician.

Deration

At higher elevations, the amount of BTU fuel value delivered must be reduced by either:

- using gas that has been derated by the gas company,
- changing the burner orifice to a smaller size as regulated by the local authorities having jurisdiction and by the (USA) National Fuel Gas Code NFPA 54/ANSI Z223.1 - latest edition or, in Canada, the CAN/CSA-B149.1 codes - latest edition.

Install the appliance according to the regulations of the local authorities having jurisdiction and, in the USA, the National Fuel Gas Code NFPA 54 / ANSI Z223.1 - latest edition or, in Canada, the CAN/CSA-B149.1 - latest edition.

NOTE: Flame appearance will diminish 4% per thousand feet of altitude.

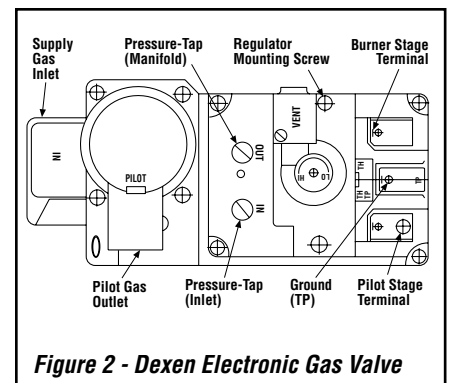
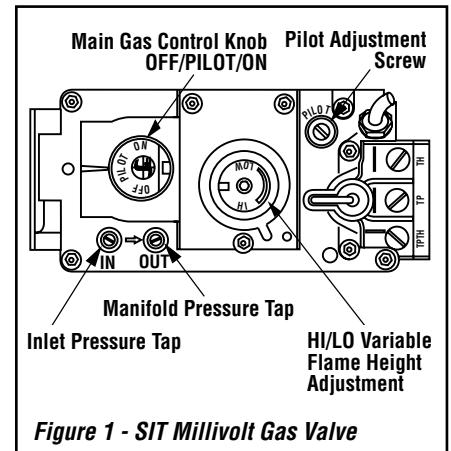
Burner Orifice Sizes Elevation 0-4500 feet (0-1372 meters)		
Model Series	Nat. Gas drill size (inches)	Propane drill size (inches)
MLBV-35	#48 (0.076")* H1236•	#56 (0.046")* 62L37•
MLBV-40	#43 (0.089")* 99K75•	#55 (0.052")* 19L52•

Table 4

* Standard size installed at factory.
• Part / Catalog Number.

GAS VALVE DIAGRAMS

See Figure 1 for millivolt models and Figure 2 for electronic models.



REQUIREMENTS FOR THE COMMONWEALTH OF MASSACHUSETTS

These fireplaces are approved for installation in the US state of Massachusetts if the following additional requirements are met:

- Install this appliance in accordance with Massachusetts Rules and Regulations 248 C.M.R.
- Installation and repair must be done by a plumber or gas fitter licensed in the Commonwealth of Massachusetts.
- The flexible gas line connector used shall not exceed 36 inches (92 centimeters) in length.
- The individual manual shut-off must be a T-handle type valve.

NEW YORK CITY APPROVAL

New York City, NY (MEA)

These fireplaces are approved for installation in New York City in the US state of New York if the following additional requirement is met:

- An Outside Combustion Air Kit (FOAK-4, FOAK-4LD, or DK-4) must be installed. See Step 5 on Page 14.

COLD CLIMATE INSULATION

For cold climate installations, seal all cracks around your appliance with noncombustible material and wherever cold air could enter the room. It is especially important to insulate outside chase cavity between studs and under floor on which appliance rests, if floor is above ground level. Gas line holes and other openings should be caulked or stuffed with unfaced fiberglass insulation. **Check local codes for additional requirements.**

If the fireplace is being installed on a cement slab in cold climates, a sheet of plywood or other raised, insulated platform can be placed underneath to prevent cold transfer to the fireplace and into the room. It also may help to sheetrock the inside surfaces and/or tape for maximum air tightness.

LOCATION

In selecting the location, the aesthetic and functional use of the appliance are primary concerns. However, vent system routing to the exterior and access to the fuel supply are also important.

Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies (Figure 3).

En raison des températures élevées, l'appareil devrait être installé dans un endroit où il y a peu de circulation et loin du mobilier et des tentures (Figure 3).

The location should also be free of electrical, plumbing or other heating/air conditioning ducting.

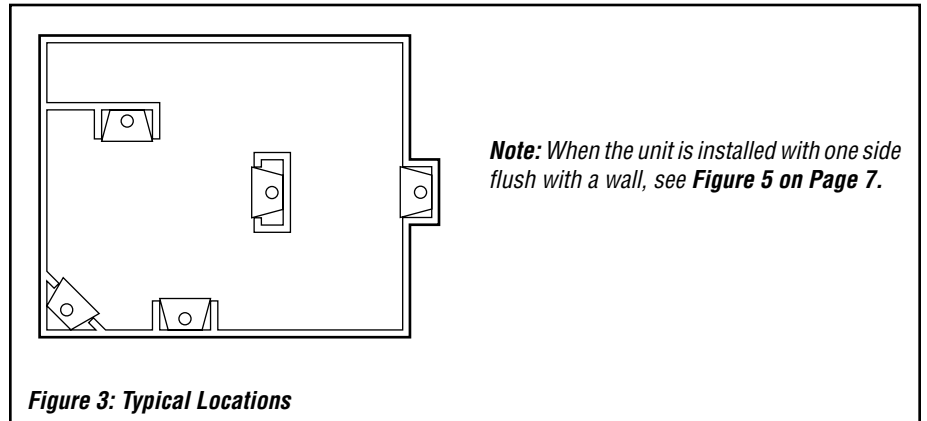
These appliances are equipped with an integral combustion air door and actuator arm.

Combustion air kits are optional and must be installed before removing the securing screw allowing the movement of the combustion air actuator arm (see Step 5 on Page 14).

Be aware that this is a heat-producing appliance. Objects placed above the unit are exposed to elevated temperatures.

The appliance should be mounted on a fully supported base extending the full width and depth of the unit. The appliance may be located on or near conventional construction materials. However, if installed on combustible materials, such as carpeting, vinyl tile, etc., a metal or wood barrier covering the entire bottom surface must be used.

These appliances may be used for bedroom installations in the United States and are listed accordingly. These units may not be installed in bedrooms in Canada.



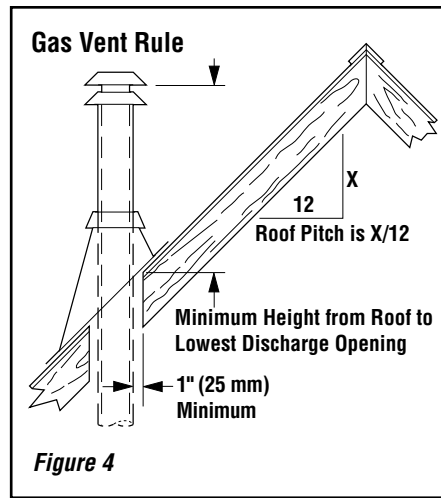
VENT TERMINATION CLEARANCES

Multiple Terminations

These appliances may vent adjacent to and at the same level with any other gas appliances (including direct vent appliances), provided there is at least 2 ft (0.6 m) between the proximal edges of the vent caps. These appliances may be vented adjacent to a chimney vent servicing a solid fuel fireplace, provided the B-vent cap is at least 2 ft (0.6 m) away from the nearest point of the chimney opening.

Gas Vent Rule

Gas vent caps are not permitted within 8 ft (2.4 m) of a vertical wall or similar obstruction. Gas vent caps that are located 8 ft or more from a portion of a building that extends at an angle greater than 45° upward from the horizontal may terminate in accordance with **Figure 4**, provided that any discharge opening on the cap is **NEVER LESS THAN 2 ft (0.6 m) horizontally from the roof surface** (National Fuel Gas Code ANSI Z223.1 (NFPA 54) "Gas Vent Termination" section) (CAN/CGA B149.1).



Termination Heights For Vents Above Flat Or Sloped Roofs
Ref. NFPA 54 / ANSI Z223.1

Roof Pitch	* Feet	* Meters
Flat to 6/12	1.0	0.3
6/12 to 7/12	1.25	0.38
7/12 to 8/12	1.5	0.46
8/12 to 9/12	2.0	0.61
9/12 to 10/12	2.5	0.76
10/12 to 11/12	3.25	0.99
11/12 to 12/12	4.0	1.22
12/12 to 14/12	5.0	1.52
14/12 to 16/12	6.0	1.83
16/12 to 18/12	7.0	2.13
18/12 to 20/12	7.5	2.29
20/12 to 21/12	8.0	2.44

Table 5

MINIMUM CLEARANCES TO COMBUSTIBLES

Appliance and Vent Clearances

The appliance is approved with zero clearance to combustible materials on all sides (as detailed in **Table 6**), with the following exception: **When the unit is installed with one side flush with a wall, the wall on the other side of the unit must not extend beyond the front edge of the unit (see Figure 5).**

MINIMUM CLEARANCES	
Back	0 in. (0 mm) to Standoffs or Dimples
Sides	0 in. (0 mm) to Standoffs or Dimples**
Top	3 in. (76 mm)
Floor	0 in. (0 mm)
From Bottom of Unit to Ceiling	64 in. (1626 mm)
Vent	1 in. (25.4 mm)
SERVICE CLEARANCES	
Front	3 ft. (0.9 m)

Table 6

**Note: See Step 1 on Page 8 for clearance requirements to the nailing flange at each side of the unit and any screw heads adjacent to it.

Hearth Extension

A hearth extension is not required with this appliance. If a hearth extension is used, do not block the lower control compartment door. Any hearth extension used is for appearance only and does not have to conform to standard hearth extension installation requirements.

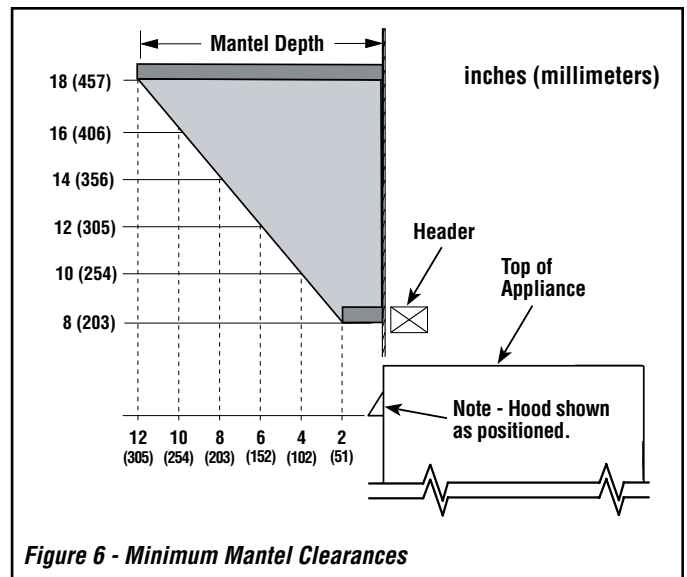
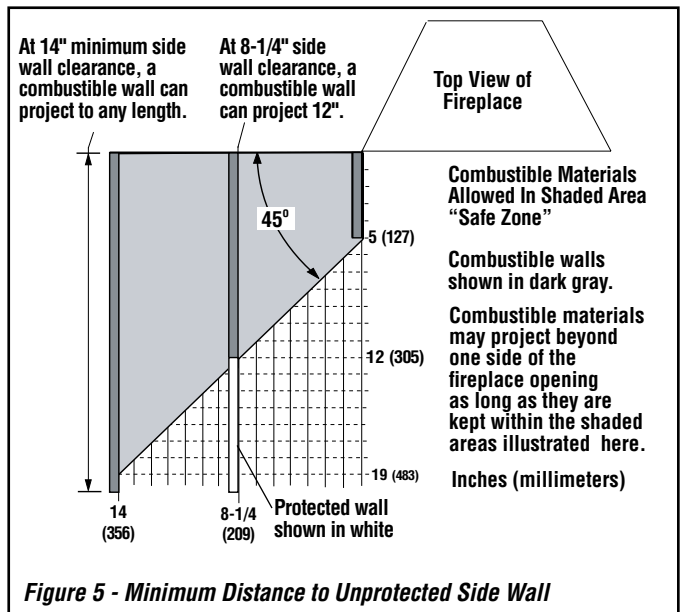
Wall Finishes / Surrounds / Mantels

Note: Combustible wall finish materials and/or surround materials must not be allowed to encroach the area defined by the appliance front face (black sheet metal). **Never allow combustible materials to be positioned in front of or overlapping the appliance face (see Figure 5; also see Figure 30 on Page 23).**

Non-combustible materials, such as surrounds and other appliance trim, may be installed on the appliance face with these exceptions: they must not cover any portion of the removable glass panel.

Vertical installation clearances to combustible mantels vary according to the depth of the mantel. See **Figure 6**. Mantels constructed of non-combustible materials may be installed at any height above the appliance opening; however, do not allow anything to hang below the fireplace hood.

Note: We recommend the use of high-temperature paint (rated 175°F or higher) on the underside of the mantel.



PRE-INSTALLATION STEPS (Remove Glass Enclosure Panel)

The appliance is shipped with all gas controls and components installed and pre-wired.

Note: Remove the glass enclosure panel before installing the fireplace.

To remove the glass enclosure panel:

1. Remove the shipping carton, and then remove the shipping pad, exposing the front glass panel.
2. Open the two latches securing the glass panel (under the firebox floor).
3. Remove the glass panel by tilting it outward at the bottom and lifting it up.
4. **Set aside the glass enclosure panel in a safe location** to protect it from inadvertent damage.

TYPICAL INSTALLATION SEQUENCE

The typical sequence of installation is outlined below, with page number references to the related detailed instructions.

NOTE: Each installation is unique and may result in variations to these steps.

- Step 1. (Pages 8–10)** Construct the appliance framing.

Position the appliance within the framing and secure with nailing brackets.

IMPORTANT! Bend up the appropriate top standoff spacers for the drywall/finish material thickness to be used (see Figure 7). Bend up the outer pair for 1/2" materials and the inner pair for 5/8" materials.

Bend up the outer pair for 1/2" materials and the inner pair for 5/8" materials.

Bend out the appropriate nailing flanges for the drywall/finish material to be used.

Nailing flanges are provided for flush framing, 1/2 inch and 5/8 inch framing depths (see Figure 7).

- Step 2. (Page 11)** Route the gas supply line to the appliance location.

- Step 3. (Page 11)** Install the vent system and exterior termination.

- Step 4. (Page 12)** Install field wiring.
- a. **Millivolt Appliances:** Install the operating control switch (not factory provided).
 - b. **Electronic Appliances:** Field wire and install operating control switch.

- Step 5. (Page 14)** [OPTIONAL]: Install outside supplemental combustion air kit.
- Step 6. (Page 15)** Make connection to gas supply.
- Step 7. (Page 16)** Verify appliance operation.
- Step 8. (Page 17)** Install the logs, decorative volcanic stone, and glowing embers.
- Step 9. (Page 20)** Install the glass enclosure panel.
- Step 10. (Page 20)** Adjust burner air shutter to ensure proper flame appearance.
- Step 11. (Page 22)** Perform spillage test.
- Step 12. (Page 23)** Install hood.
- Step 13. (Page 23)** Complete finished interior wall.
- Step 14. (Page 24)** Attach "Safety-in-Operation" warnings.

DETAILED INSTALLATION STEPS

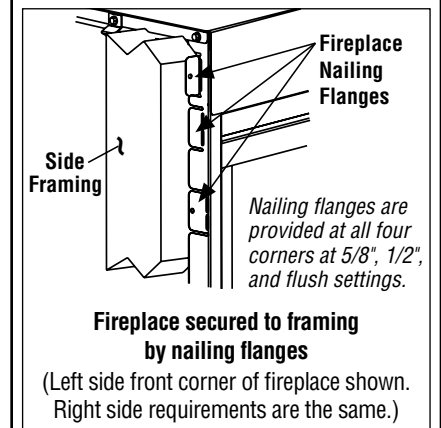
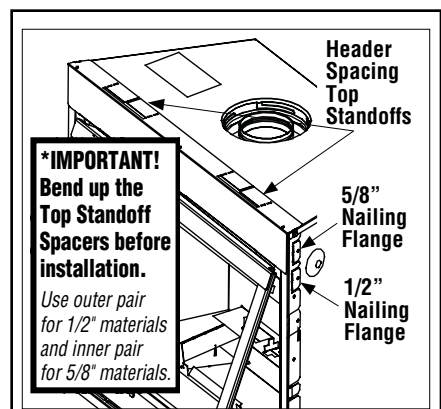
Step 1. Construct Appliance Framing

Frame the appliance as illustrated in **Figures 8-1 and 8-2**. All framing details must allow for a minimum clearance to combustible framing members as shown in **Table 6, Page 7**.

If the appliance is to be elevated above floor level, a solid continuous platform must be constructed below the appliance.

Headers may be in direct contact with the appliance top standoff spacers **when they are bent up vertically**, maintaining the 3" clearance to the fireplace top, **but must not be supported by them or notched to fit around them**. All construction above the appliance must be self-supporting. **DO NOT use the appliance for structural support.**

Secure the fireplace to the side framing members using the unit's nailing flanges — one top and bottom on each side of the fireplace front. See **Figure 7**. Use 8d nails or equivalent.



NOTE: The nailing flanges, combustible members, and screw heads in areas directly adjacent to the nailing flanges are EXEMPT from the 1/2" clearance to combustible requirements for the firebox outer wrapper.

Combustible framing may be in direct contact with the nailing flanges and may be located closer than 1/2" from screw heads and the firebox wrapper in areas adjacent to the nailing flanges.

Frame the opening to the exact dimensions specified in the framing details in this manual.

Figure 7

⚠ WARNING

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

⚠ AVERTISSEMENT

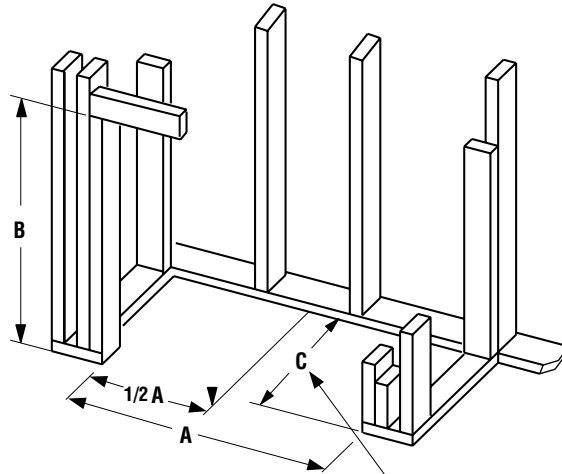
Risque de dommages ou de blessures si les pièces ne sont pas installées conformément à ces schémas et ou si des pièces autres que celles spécifiquement approuvées avec cet appareil sont utilisées.

FIREPLACE AND FRAMING SPECIFICATIONS

NOTE: Diagrams, illustrations and photographs are not to scale. Product designs, materials, dimensions, specifications, colors, and prices are subject to change or discontinuance without notice.

FIREPLACE FRAMING DIMENSIONS

Construct framing with 2x4 or larger lumber.

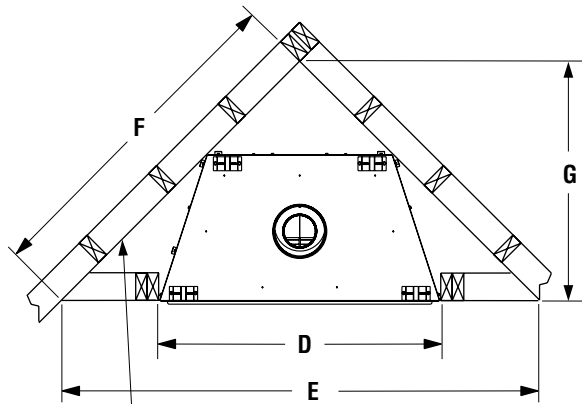


"C" is the required framing depth dimension when the finish material (drywall) thickness is 1/2 in. (13mm).

Input (BTU/hr) Manually-Modulated Gas Valves (all models)		
Model	Input Rate (BTU / HR)	
	Natural Gas	Propane Gas
MLBV-35	17,000 high	17,000 high
	13,000 low	14,000 low
MLBV-40	22,000 high	20,000 high
	17,000 low	15,500 low

Framing Dimensions				
Model No.		A	B	C
MLBV-35	in.	35-1/4	35-1/4	16
	mm	895	895	406
MLBV-40	in.	40-1/4	40-1/4	16
	mm	1022	1022	406

CORNER FRAMING DIMENSIONS

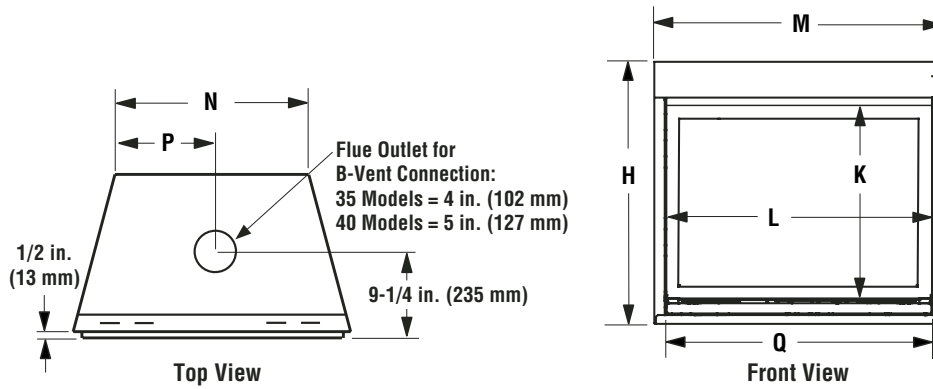


Back wall of chase/enclosure (including any finishing materials)

Corner Framing Dimensions					
Model No.		D	E	F	G
MLBV-35	in.	35-1/4	57-1/2	40-5/8	28-3/4
	mm	895	1461	1032	730
MLBV-40	in.	40-1/4	61-13/16	48-11/32	30-11/16
	mm	1022	1554	1101	779

Figure 8-1

APPLIANCE SPECIFICATIONS



Model No.		H	J	K	L	M	N	P	Q
MLBV-35	in.	32-1/4	28-1/8	23-1/4	32	35-1/4	25	12-1/2	33
	mm	819	714	590	813	895	635	317	838
MLBV-40	in.	37-1/4	33-1/8	28-1/4	37	40-1/4	30	15	38
	mm	946	841	718	940	1022	762	381	965

Vertical Venting Through Ceiling

Frame Ceiling Opening: To locate the center of the vertical run, use a plumb line from the ceiling above the appliance.

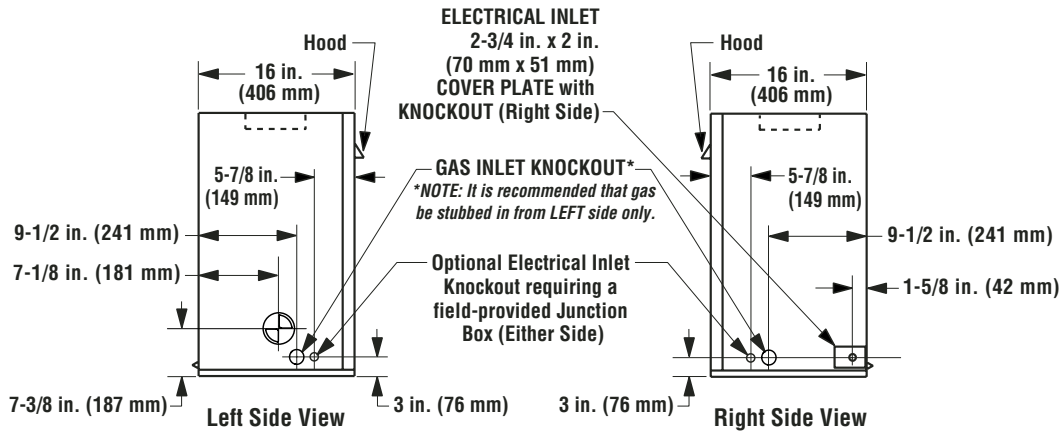
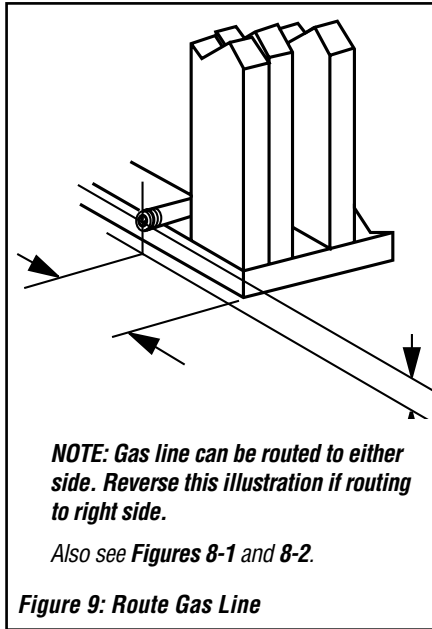


Figure 8-2

Step 2. Route the Gas Line

Route a 1/2" (13 mm) gas line to either side of the appliance (left side routing is shown in **Figure 9**). Gas lines must be routed, constructed, and made of materials that are in strict accordance with local codes and regulations. All appliances are factory-equipped with a flexible gas line connector and 1/2-inch shutoff valve. (See **Step 6 on Page 15.**)



Proper Sizing of Gas Line

Properly size and route the gas supply line from the supply regulator to the area where the appliance is to be installed per requirements outlined in the National Fuel Gas Code, NFPA 54 - latest edition (USA) or CAN/CSA-B149.1 - latest edition (Canada).

Never use galvanized or plastic pipe. Gas lines must be routed, constructed and made of materials that are in strict accordance with local codes and regulations.

IMPORTANT: It is critical that a licensed installer perform this step strictly per NFPA.

We recommend that a qualified, licensed plumber or gas fitter be hired to correctly size and route the gas supply line to the appliance. Installing a gas supply line from the fuel supply to the appliance involves numerous considerations of materials, protection, sizing, locations, controls, pressure, sediment, and more. Certainly no one unfamiliar and unqualified should attempt sizing or installing gas piping.

Notes:

- All appliances are factory-equipped with a flexible gas line connector and 1/2 inch shutoff valve (see **Figure 17 on Page 15**).
- See **Massachusetts Requirements on Page 4** for additional requirements for installations in the state of Massachusetts in the USA.
- The gas supply line should NOT be connected to the appliance until **Step 6 on Page 15**).
- A pipe joint compound rated for gas should be used on the threaded joints. **Ensure that propane-resistant compounds are used in propane applications.** Be very careful that the pipe compound does not get inside the pipe.
- It is recommended to install a sediment trap in the supply line as close as possible to the appliance. Appliances using propane should have a sediment trap at the base of the tank.
- Check with local building official for local code requirements (e.g., whether below-grade penetrations of the gas line are allowed, etc.).

IMPORTANT: If propane is used, be aware that if the tank size is too small (i.e., under 100 lbs if this is the only gas appliance in the dwelling; ref. NPFA 58), there may be pressure loss resulting in insufficient fuel delivery, which can result in sooting, severe delayed ignition, or other malfunctions. Any damage resulting from an improper installation, such as this, is not covered under the limited warranty.

Step 3. Install Venting System and Exterior Termination

These instructions should be used as a guideline and do not supercede local codes in any way.

Install venting according to local codes, these instructions, the current National Fuel Gas Code in the USA (ANSI-Z223.1) or the current standards in Canada (CAN/CSA-B149.1).

MLBV-35 and MLBV-40 series fireplaces must be vertically vented using listed type-B, double-walled vent pipe with the proper diameter as listed below and a listed vent termination.

Required Pipe Diameter

MLBV-35 series: Requires 4 in. (102 mm)

MLBV-40 series: Requires 5 in. (127 mm)



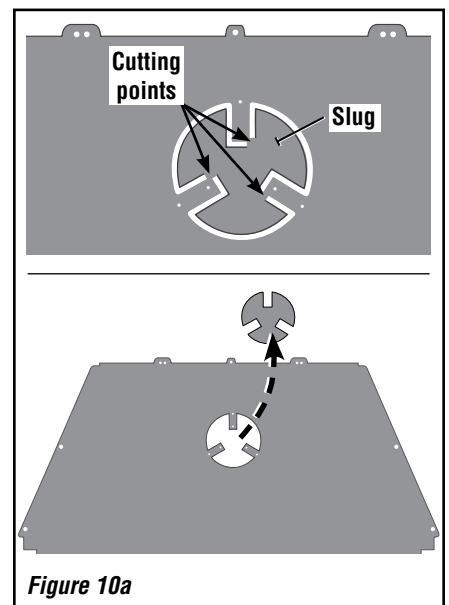
WARNING: EDGES OF SHEET METAL ARE SHARP! WEAR PROTECTIVE GLOVES AND USE EXTREME CARE WHEN HANDLING.

Required tools:

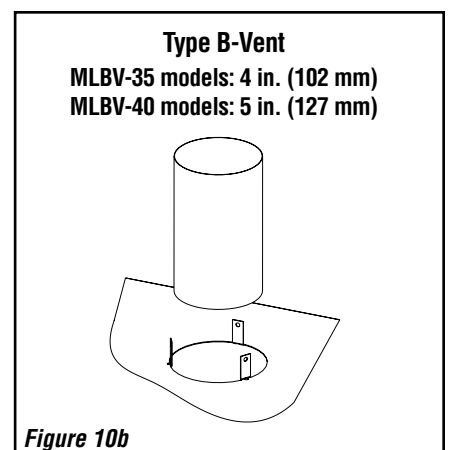
- Sheet Metal-resistant Gloves
- Tin Snips

1. Using tin snips, cut the three connecting points securing the slug to the three tabs in the flue collar (as shown in **Figure 10a**), and remove the slug.

Carefully dispose of slug in an appropriate container.



2. Connect the proper size Type B-vent system to the fireplace flue collar by bending up the three tabs and securing with three sheet metal screws (No. 8 or larger) bend up tabs. See **Figure 10b**. Then install the remainder of the Type B-vent to the outside.



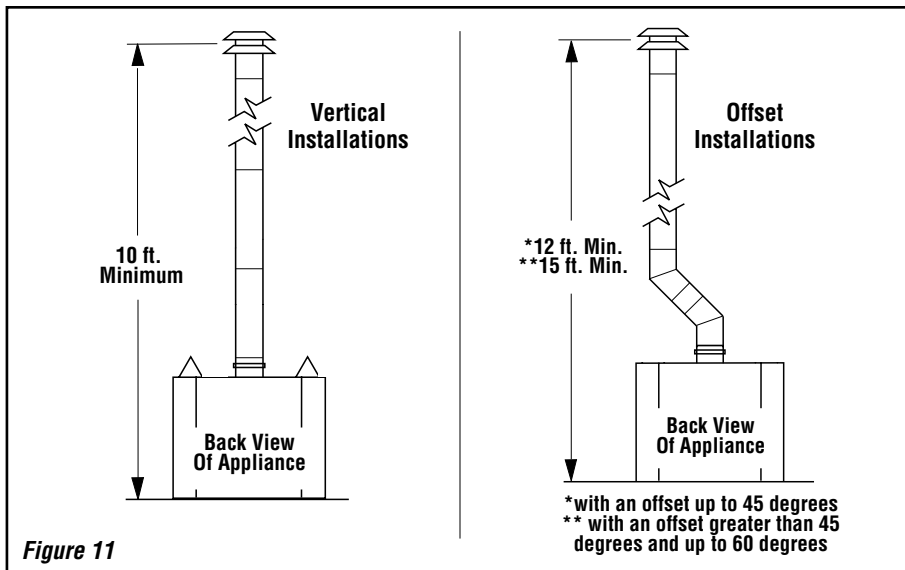


Figure 11

3. Refer to **Figure 11**. The following venting configurations may be installed:

Vertical Installations

- **Minimum** overall height of the vent system and appliance without an offset must be 10 ft (2.54 m).

Offset Installations

- *Offset up to 45 degrees from vertical:* **Minimum** overall height of the vent system and appliance must be 12 ft (3.66 m). The lower part of the offset may start at the fireplace flue collar.
- *Offset greater than 45 degrees and up to 60 degrees from vertical:* **Minimum** overall height of the vent system and appliance must be 15 ft (4.57 m). The lower part of the offset may start at the fireplace flue collar.

Maximum overall height of the vent system and appliance should not exceed 40 ft (12.19 m).

Install the B-vent system in accordance with the vent manufacturer's instructions.

CAUTION: THIS APPLIANCE CANNOT BE VENTED HORIZONTALLY.

Note: Refer to the vent manufacturers installation instructions for variations of venting techniques. If common venting of several units is contemplated, it should be discussed with an architect and the local Building Department.

Do not place insulation materials within 1 in. of the gas vent system.

Step 4. Install Field Wiring

CAUTION

Ground supply lead must be connected to the wire attached to the green ground screw located on the outlet box. See Figure 13. Failure to do so will result in a potential safety hazard. The appliance must be electrically grounded in accordance with local codes or, in the absence of local codes, the National Electrical Code, ANSI/NFPA 70-latest edition. (In Canada, the current CSA C22-1 Canadian Electrical Code).

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

ATTENTION : Au moment de l'entretien des commandes, étiquetez tous les fils avant de les débrancher. Des erreurs de câblage peuvent entraîner un fonctionnement inadéquat et dangereux.

Verify proper operation after installing.

A. All Models

- An optional unit-mounted ON/OFF switch may be installed in the lower control compartment.
- An optional wall-mounted ON/OFF switch or optional ON/OFF remote control kit also may be used.
- If a wall-mounted ON/OFF control switch is used, mount it in a convenient location on a wall near the fireplace.
- If an optional Style View Door is used in conjunction with an optional unit-mounted

ON/OFF switch, the switch may be mounted onto the Style View Door per instructions provided in kit.

- The gas valve is set in place and pre-wired at the factory on all models.

Refer to **Section B (below)** for millivolt appliances and **Section C (below)** for electronic appliances.

B. Millivolt Wiring (see **Figure 12**)

1. Read **Section A, "All Models," at left.**
2. Wire the control switch within the millivolt control circuit using the 15 feet of 2 conductor wire supplied with the unit.

Note: The supplied 15 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose inside the bottom compartment.

CAUTION: Do NOT connect the optional wall switch to a 120V power supply.

C. Electronic Wiring (see **Figure 13**)

Note: The electronic appliance must be connected to the main power supply.

1. Read **Section A, "All Models," at left.**
2. Route a 3-wire 120Vac 60Hz 1ph power supply to the appliance junction box.
3. Remove the electrical inlet cover plate from the side of the unit by removing the plate's securing screws (see **Figures 8-1 and 8-2 on Pages 9 and 10**).
4. Remove the cover plate's knockout; then feed the power supply wire through the knockout opening and into the unit junction box.
5. Connect the black power supply wire to the **lower outlet's** red pigtail lead and the white power supply wire to the **common** terminal of the outlet as shown in **Figures 13 and 14**.
6. **Connect ground supply wire to pigtail lead attached to outlet's green ground screw.**

Note: Remote receiver should be located in the wall, or if installed in the control compartment, pulled all the way forward and completely to the left or right against the corner posts. The glass enclosure panel must be removed first to place the receiver in the lower control compartment.

7. If using an optional control, wire it in the low voltage circuit as shown in **Figure 13**.

Note: The supplied 15 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose inside the bottom compartment.

8. After wiring is complete, replace cover plate.

Note: Do NOT install batteries in the battery holder until needed (i.e., in the event of a power outage or if operating the appliance solely by batteries). The battery holder requires two [2] "D" batteries.

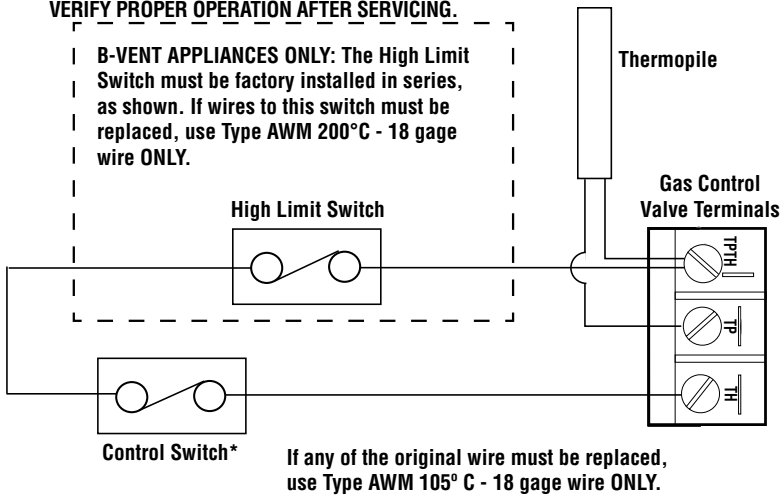
NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

MILLIVOLT WIRING DIAGRAM

CAUTION: WHEN SERVICING CONTROLS, LABEL ALL WIRES PRIOR TO DISCONNECTION. WIRING ERRORS CAN CAUSE IMPROPER AND DANGEROUS OPERATION.

VERIFY PROPER OPERATION AFTER SERVICING.

B-VENT APPLIANCES ONLY: The High Limit Switch must be factory installed in series, as shown. If wires to this switch must be replaced, use Type AWM 200°C - 18 gage wire ONLY.

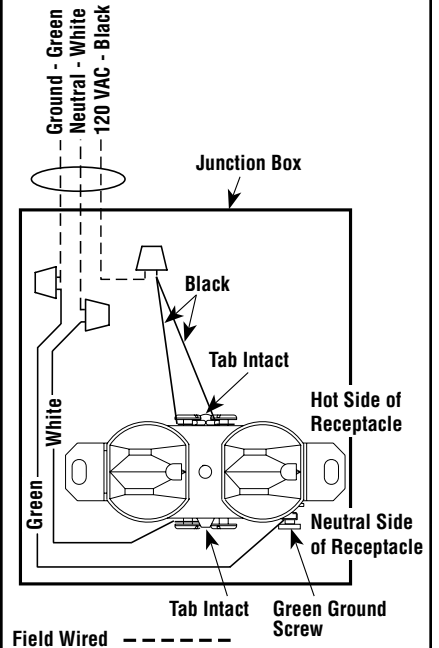


If any of the original wire must be replaced, use Type AWM 105° C - 18 gage wire ONLY.

*Control switch options: ON/OFF wall switch, unit-mountable ON/OFF switch, or ON/OFF remote control system (see "Accessory Components" in the *Care and Operation Instructions*).

Figure 12

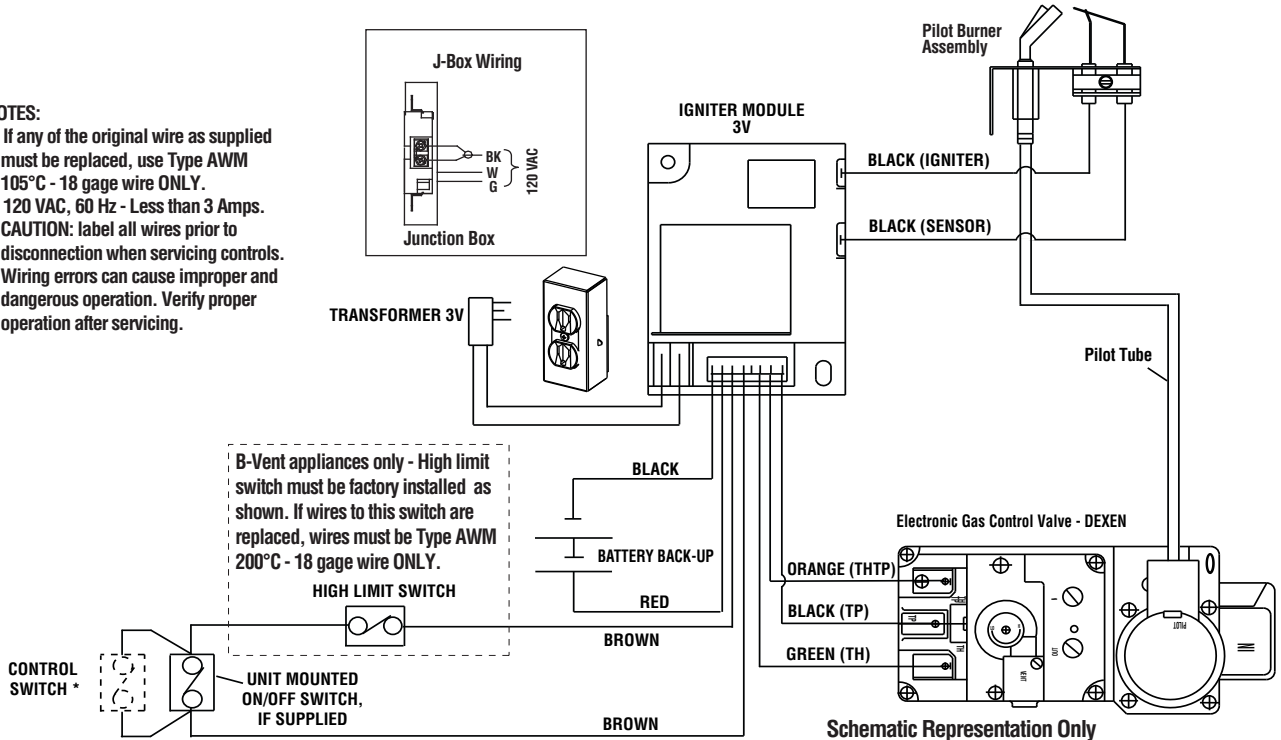
J-BOX/RECEPTACLE WIRING 120V, 60HZ, 1PH



Field Wired - - - - -
Factory Wired - - - - -
Figure 14

ELECTRONIC IGNITION WIRING DIAGRAM

- NOTES:**
- If any of the original wire as supplied must be replaced, use Type AWM 105°C - 18 gage wire ONLY.
 - 120 VAC, 60 Hz - Less than 3 Amps. **CAUTION:** label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.



Schematic Representation Only

See Figure 14 for detailed drawing of junction box / receptacle wiring.

*Control switch options: ON/OFF wall switch, unit-mountable ON/OFF switch, or ON/OFF remote control system (see "Accessory Components" in the *Care and Operation Instructions*).

Figure 13

Step 5. [OPTIONAL] Install Outside Combustion Air Kit

An optional outside combustion air kit (model FOAK-4, FOAK-4LD, or DK-4) may be used with these appliances (see "Installation Accessories," **at right**).

Refer to the instructions included with the air kits for specific installation information. If used, the outside air kit must be installed before the fireplace is framed and enclosed in the finished wall.

Outside air drawn into the fireplace supplies supplemental combustion air to the fire. Only one outside air duct is necessary, if installed.

If additional length of duct is necessary, purchase locally available U.L. Class 0 or Class 1 metallic ducting. The duct may extend up to 50' (15.24 m) in one continuous piece.

Note: When installing the air duct vertically, do **NOT** terminate the duct closer than 3' below the chimney top.

Outside supplemental combustion air ducting may be run upward or vertically through framing and ceiling joists, with the hood installed through an outside wall and 3' (1 m) below the termination. Ducting may also be run downward through floor joists and under the home to a ventilated crawlspace not considered part of the living area of the home.

Note: NEVER terminate an outside supplemental combustion air kit in attic space under any circumstances.

After completing installation of the optional outside air vent system the outside air control lever must be put in service and tested to ensure proper operation before completing any enclosure around the firebox.

CAUTION

Never locate inlet where it can be blocked by shrubs, snow drifts, etc. Never locate inlet in garage or any area where there is another fuel burning appliance or products emitting combustible gases such as paint, gasoline, etc. In cold climates, it is recommended the outside air duct be insulated.

Failure to do so may result in extensive and costly rework. Before the operation of the vent system can be tested, the lever securing screw must be removed. **See Figure 15.**

The hand-operated outside air control lever is located on the left side of the lower control compartment opening. **See Figure 15.**

To open the outside air shutter, open the bottom control access panel, reach into the control compartment, and pull the outside air control lever all the way out. The outside air shutter should be fully open when the fireplace is in use and completely closed when the fireplace is not being used. Closing it when not in use will help limit the amount of outside cold air entering the dwelling.

Operate the actuator through several cycles including the closed position. Ensuring proper operation and freedom of movement. Return the actuator arm to the closed position.

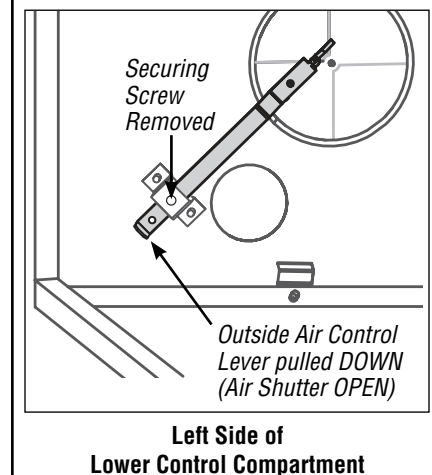
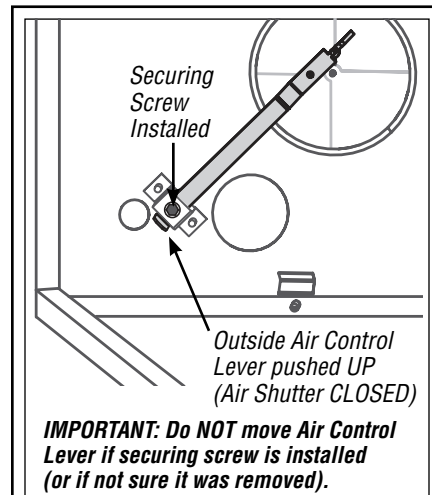


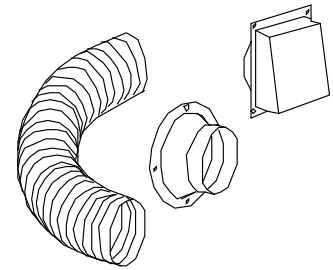
Figure 15

WARNING

Do not operate the shutoff lever unless a complete outside combustion air system has been installed with your appliance.

INSTALLATION ACCESSORIES

The following accessory items are available for use in the installation of this appliance.



Outside Combustion Air Kits Models FOAK-4 and FOAK-4LD

Outside combustion air kits are available with duct (FOAK-4) and without duct (FOAK-4LD) for use if supplemental outside combustion air is required or desired. If model FOAK-4LD is used, it must be used in conjunction with locally purchased, non-combustible Class 1 or Class 0 flexible duct.

Outside Combustion Air Kits		
Cat. No.	Model No.	Description
81L87	FOAK-4	Combustion Air Kit (w/duct)
81L88	FOAK-4LD	Combustion Air Kit (w/o duct)
H5377	DK-4	Single 4" Duct Kit

Step 6. Connect the Gas Line

All codes require a shut-off valve mounted in the supply line. The orientation of the shut-off valve should face the front. **Figure 16** illustrates two methods for connecting the gas supply. A sediment trap is recommended in the gas piping within the home to prevent moisture and debris in the line from damaging the valve.

The flex-line method is acceptable in the U.S.A. where local codes permit, however, Canadian requirements vary depending on locality. Installation must be in compliance with local codes. These appliances are equipped with a gas flex-line for use in connecting the unit to the gas line. See **Figure 16** for flex-line description. The flex-line is rated for both natural and propane gas. A manual shut off valve is also provided with the flex-line.

The gas control valve is located in the lower control compartment.

Access the valve compartment by removing the lower control compartment panel (see **Figure 17**) by lifting and pulling the panel forward. The panel is mounted on supporting tabs at the extreme right and left hand sides. Engage the tabs into the reliefs in the panel.

The millivolt and electronic control valve has a 3/8" (10 mm) NPT thread inlet port.

Secure all joints tightly using appropriate tools and sealing compounds (ensure propane resistant compounds are used in propane applications). It is recommended to seal around the gas line to prevent cold air leakage.

Gas line connection may be performed largely outside of the confines of the control compartment and without having to enter the firebox behind the glass. Proceed as follows:

Acquire the shut-off valve and gas flex-line and pull the assembly forward out of the compartment. Separate the shut-off valve from the gas flex-line. Determine the length of pipe needed to route the gas line from the last fitting (shown in **Figure 9**) to a point within the control compartment that will allow the shut-off valve to be easily attached by hand to the gas flex-line.

Using pipe-dressing materials appropriate for the gas type, securely affix the shut-off valve to this determined pipe length at a convenient location **outside** of the appliance lower control compartment.

Refer to **Figure 18**. Insert the last length of gas pipe with its attached shut-off valve into the lower control compartment, and pass it through the gas line access hole on the left side of the appliance outer wrapper.

Using appropriate materials for the gas type, thread the last length of pipe into the end of the gas vent run and tighten in place using a

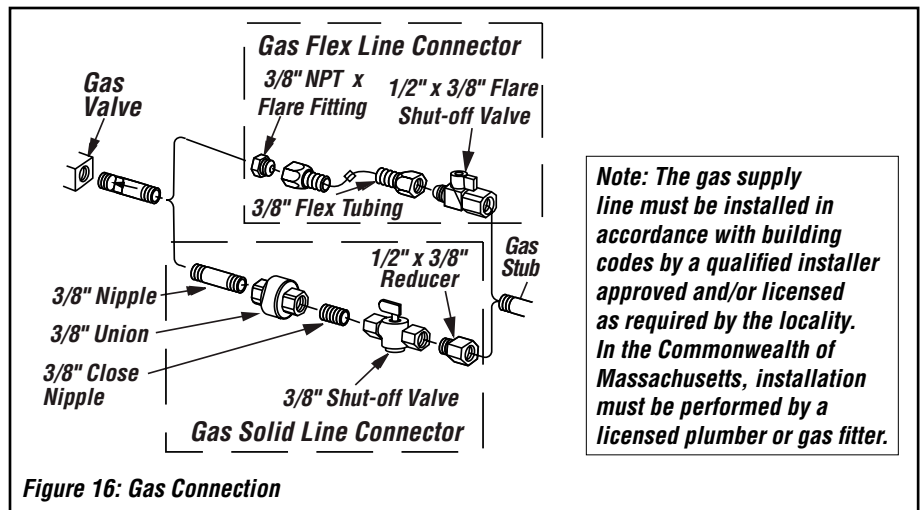


Figure 16: Gas Connection

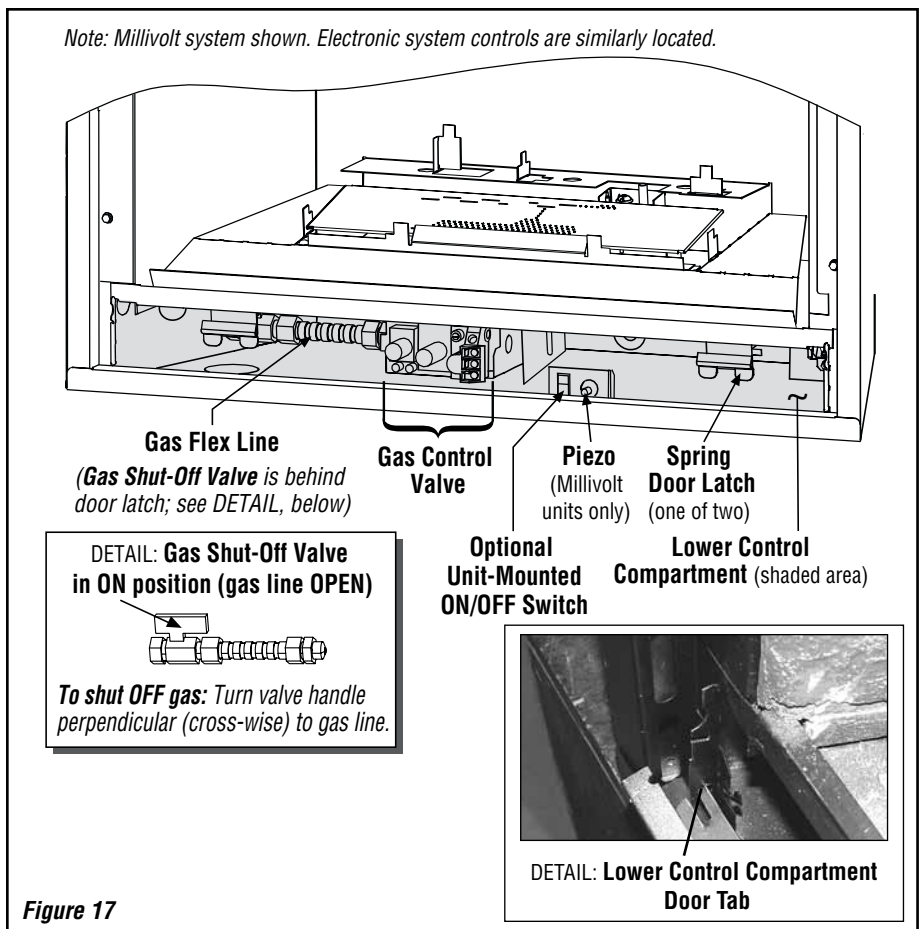
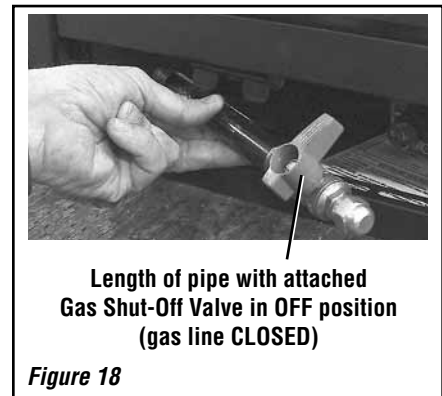


Figure 17

pipe wrench *external* to the appliance *between* the appliance outer wrapper and the framing.

Important: Turn the last piece of gas pipe in the last fitting until the shut-off valve is positioned in a way that allows the shut-off valve handle to be accessed in the lower control compartment, easily operated throughout its full range of motion.

Bring the flex-line to the shutoff valve by hand and align the flare fittings. Tighten the fittings by hand, and then use wrench to tighten completely, 1/4-turn at a time.



Test All Connections for Gas Leaks (Factory and Field)



WARNING

Never use an open flame to check for leaks.

Turn on gas supply and test for gas leaks, using a gas leak test solution (also referred to as bubble leak solution).

Note: Using a soapy water solution is an effective leak test solution but it is not recommended, because the soap residue that is left on the pipes/fittings can result in corrosion over time.

- A. Light the appliance (refer to the lighting instructions label in the control compartment or in the Care and Operation Instructions manual).
- B. Brush all joints and connections with the gas leak test solution to check for leaks. If bubbles are formed, or gas odor is detected, turn the gas control knob (off/pilot/on) to the "OFF" position. Either tighten or refasten the leaking connection, then retest as described above.
- C. When the gas lines are tested and leak free, be sure to rinse off the leak testing solution.

Step 7. Verify Appliance Operation

Turn on burner then observe the individual tongues of flame on the burner. Make sure all ports are open and producing flame evenly across the burner. If any ports are blocked, or partially blocked, clean out the ports.

With gas line installed run initial system check-out before closing up the front of the unit. Follow the pilot lighting instructions provided in the Care and Operation Instructions manual. For piezo igniter location, see **Figure 17** (millivolt appliances only).

*Note: Lighting Instructions are also found on the literature tag tied to the gas piping next to the gas valve. To access the tag, open the lower control compartment door by pulling the panel forward (see **Figures 17 and 25**).*

When first lighting the appliance, it will take a few minutes for the line to purge itself of air. Once purging is complete, the pilot and burner will light and operate as indicated in the instruction manual. Subsequent lighting of the appliance will not require such purging. Inspect the pilot flame (remove logs, if necessary, handling carefully).

Millivolt Appliance Checkout

The pilot flame should be steady, not lifting or floating. Flame should be blue in color with traces of orange at the outer edge.

The top 3/8" (10 mm) at the pilot generator (thermopile) and the top 1/8" minimum (tip) of the quick drop out thermocouple should be engulfed in the pilot flame.

The flame should project 1" (25 mm) beyond the hood at all three ports (see **Figure 19**). Replace logs if removed for pilot inspection.

To light the burner; turn "ON" the remote wall switch and rotate the gas valve control knob counterclockwise to the "ON" position ("ON" will be at the top side of the valve).

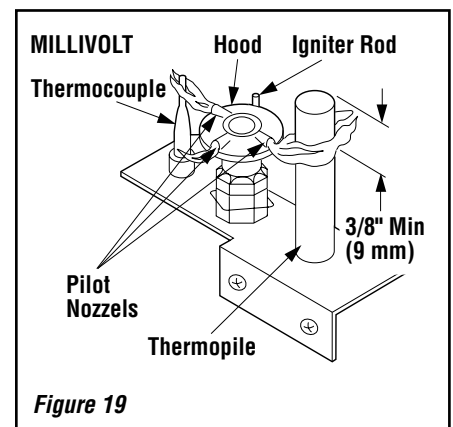


Figure 19

Electronic Appliance Checkout

To light the burner, turn 'ON' the unit mounted On/Off switch or the optional remote wall switch. Ensure the igniter lights the pilot. The pilot flame should engulf the flame rod as shown in **Figure 20**.

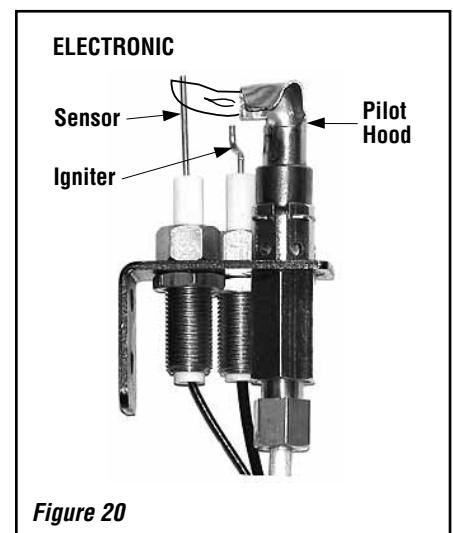
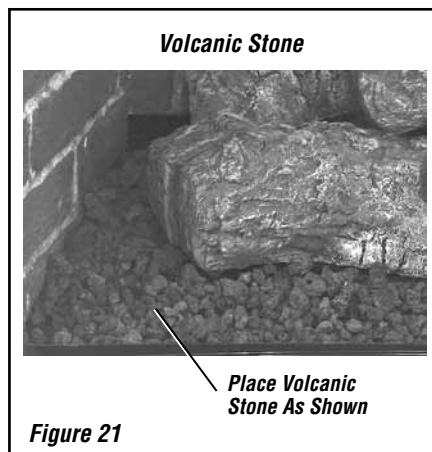


Figure 20

Step 8. Install Volcanic Stone, Glowing Embers (Rockwool), and Logs

NOTE: Turn OFF all electricity to the fireplace before installing volcanic stone, glowing embers, or logs.

1. Remove the front glass enclosure panel (see "Removal and Installation of Glass Enclosure Panel," on previous page).
2. Install ceramic brickaded panel liners.
3. Install decorative volcanic stone. Refer to **Figure 21**. Sprinkle the decorative volcanic stone in a pleasing pattern directly on the firebox bottom, along the slope and to the back, at the right and left sides of the burner.

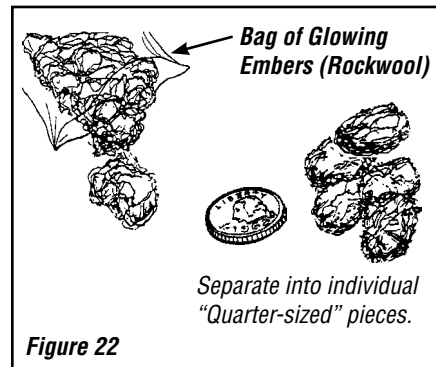


4. Place the glowing ember material (rockwool).

Note: The bag of Glowing Embers contains enough rockwool for several applications; therefore, do not use the entire bag at one time. For best glowing effect, replace the ember material annually.

Refer to **Figure 22**. Separate the glowing ember material into pieces about the size of a quarter. Keep the pieces fluffed up, not matted. Distribute the pieces over the surface of the burner, as shown in **Figures 23 and 24**. Do not use more than is necessary. Position the embers on the small holes of the ember bed area.

Note: Make sure the glowing ember material does NOT cover the main burner slots.



5. Install the Logs.

The logs have locating notches or slots to help ensure that they are properly positioned. The top logs that rest on lower logs, do so over notches, indents or nubs. Proper log placement is critical to prevent sooting. Logs should be placed in the gaps between the flame peaks and should be positioned so they do not impinge the flames. Follow the log placement instructions exactly.

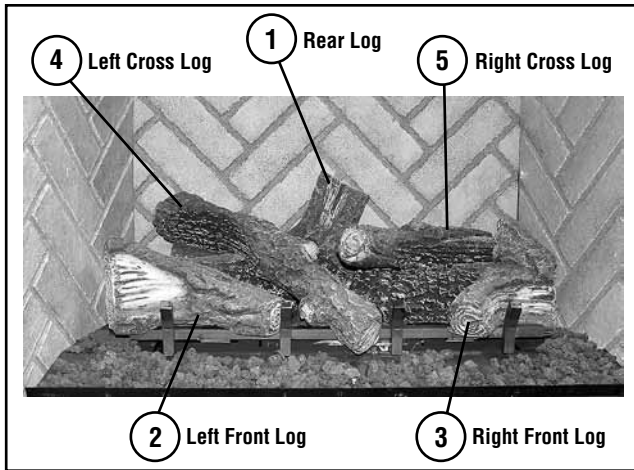
MLBV-35: Install logs as shown in **Figure 23**.

MLBV-40: Install logs as shown in **Figure 24**.

⚠ WARNING

- DO NOT attempt to install the logs until the appliance installation has been completed, the gas line connected and tested for leaks and the initial burner operation has been checked out.
- The size and position of the log set was engineered to give the appliance a safe, reliable and attractive flame pattern. Any attempt to use a different log set in the fireplace will void the warranty and will result in incomplete combustion, sooting, and poor flame quality.
- Logs get very hot and will remain hot up to one hour after gas supply is turned off. Handle only when logs are cool. Turn off all electricity to the appliance before you install grate, volcanic stone, embers, and logs.
- This appliance is not designed to burn wood. Any attempt to do so could cause irreparable damage to the appliance and prove hazardous to your safety.
- If logs are not installed according to the log installation instructions, flame impingement and improper combustion could occur and result in soot and/or excessive production of carbon monoxide (CO), a colorless, odorless, toxic gas.

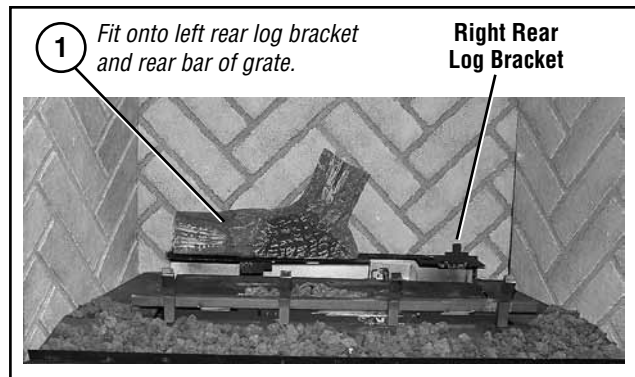
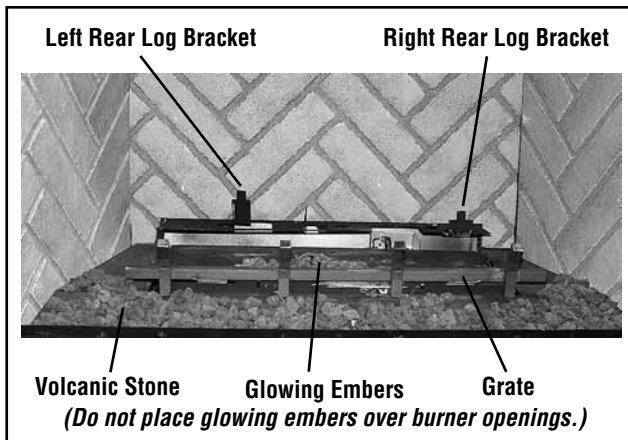
MLBV-35 LOG PLACEMENT INSTRUCTIONS



Note:

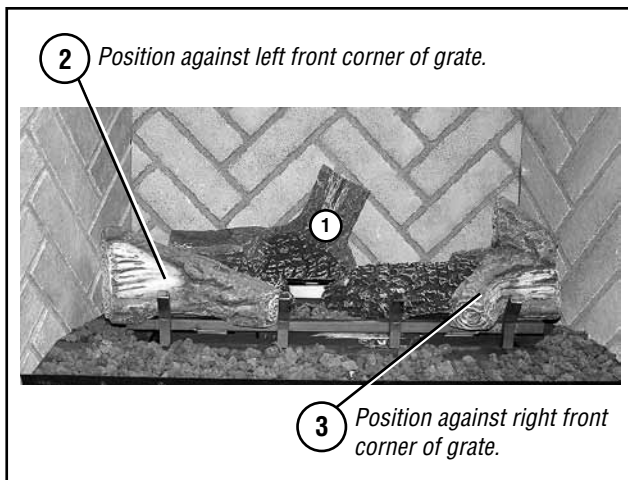
- Ceramic fiber logs are **FRAGILE!** Handle carefully to prevent breakage.
- Install volcanic stone and glowing embers **BEFORE** installing logs.
- To prevent sooting, make sure logs do **not** cover any burner openings.

MLBV Firebox Accessories/Parts		
Cat. No.	Model No.	Description
H7666	—	MLBV-35 Log Set Assembly
88L53	FGE	Bag of Glowing Embers (Rockwool)
80L42	FDVS	Bag of Decorative Volcanic Stone



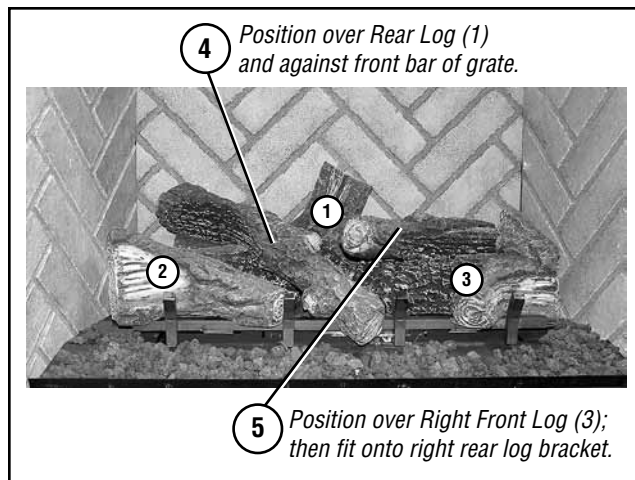
Step 1. Fit bottom slots of **Rear Log (1)** onto left rear log bracket and rear bar of grate.

NOTE: Install volcanic stone and glowing embers **FIRST**.



Step 2. Fit bottom slots of **Left Front Log (2)** onto left front corner of grate.

Step 3. Fit bottom slots of **Right Front Log (3)** onto right front corner of grate.

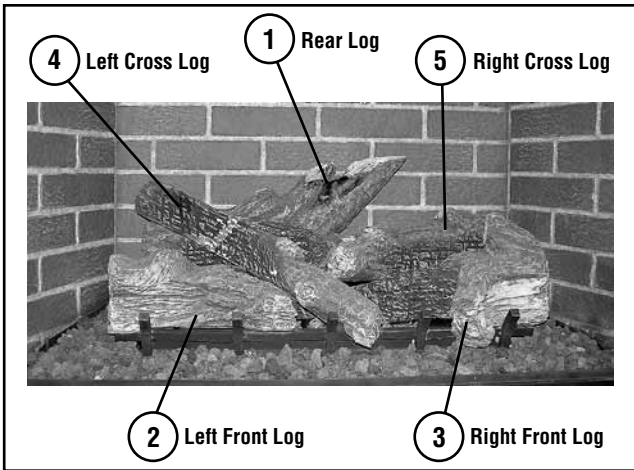


Step 4. Place **Left Cross Log (4)** over Rear Log (1); then fit the bottom slot over the center front bar of grate.

Step 5. Place **Right Cross Log (5)** over and behind Right Front Log (3); then fit the bottom slot onto the Right Rear Log Bracket.

Figure 23

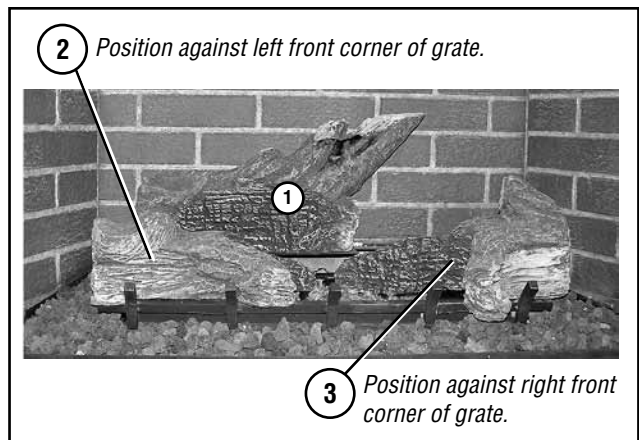
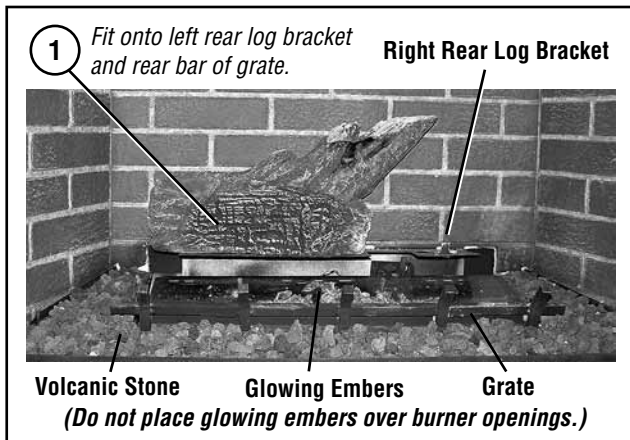
MLBV-40 LOG PLACEMENT INSTRUCTIONS



Note:

- Ceramic fiber logs are **FRAGILE!** Handle carefully to prevent breakage.
- Install volcanic stone and glowing embers **BEFORE** installing logs.
- To prevent sooting, make sure logs do not cover any burner openings.

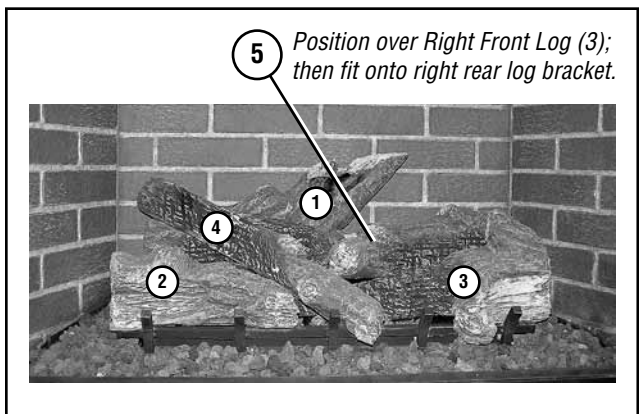
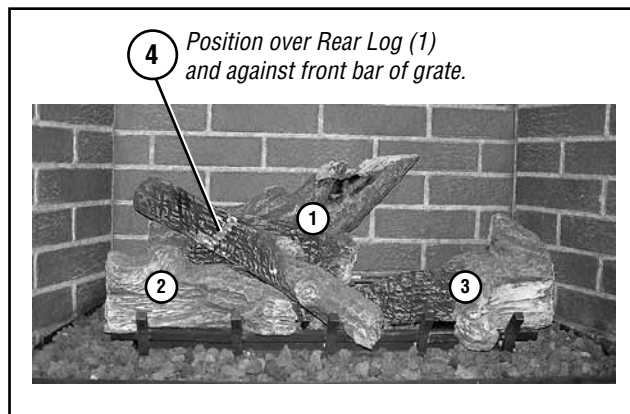
MLBV Firebox Accessories/Parts		
Cat. No.	Model No.	Description
H7667	—	MLBV-40 Log Set Assembly
88L53	FGE	Bag of Glowing Embers (Rockwool)
80L42	FDVS	Bag of Decorative Volcanic Stone



NOTE: Install volcanic stone and glowing embers **FIRST**.
Step 1. Fit bottom slots of **Rear Log (1)** onto left rear log bracket and rear bar of grate.

Step 2. Fit bottom slots of **Left Front Log (2)** onto left front corner of grate.

Step 3. Fit bottom slots of **Right Front Log (3)** onto right front corner of grate.



Step 4. Place **Left Cross Log (4)** over Rear Log (1); then fit the bottom slot over the center front bar of grate.

Step 5. Place **Right Cross Log (5)** over and behind Right Front Log (3); then fit the bottom slot onto the right rear log bracket.

Figure 24

Step 9. Install the Glass Enclosure Panel

! WARNING

- Do not attempt to substitute the materials used on these doors, or replace cracked or broken glass.
- Handle this glass with extreme care! Glass is susceptible to damage – Do not scratch or handle roughly while reinstalling the glass door frame.
- The glass door(s) of this appliance must only be replaced as a complete unit as provided by the manufacturer. Do not attempt to replace broken, cracked or chipped glass separately.
- Do not attempt to touch the front enclosure glass with your hands while the fireplace is in use.

! WARNING

Do not operate appliance with the glass front removed, cracked or broken.

! AVERTISSEMENT

Ne pas utiliser l'appareil si le panneau frontal en verre n'est pas en place, est craqué ou brisé.

Only doors certified with the appliance shall be used.

Seules des portes certifiées pour cet appareil doivent être utilisées.

CAUTION: DO NOT abuse glass enclosure panel by striking or slamming shut.

Installing the Glass Enclosure Panel

1. Refer to **Figure 25**. Position the glass enclosure panel in front of the firebox opening, with the bottom of the enclosure panel held away from the fireplace. Hook the top flange of the enclosure panel frame over the top of the firebox frame.
2. Gently move the bottom of the enclosure panel frame toward the fireplace, ensuring that the gasket seats evenly. Fasten the two latches under the firebox floor to the vee-flange on the enclosure panel. Close both latches securely.

3. Install the hood. Note the location of the three clips inside the top air channel above the glass enclosure panel. The clips are equally spaced on the top surface of the air channel opening. If needed, use a screwdriver to open the clips slightly. Engage the back edge of the hood into the clips to secure.

Removing the Glass Enclosure Panel

1. Refer to **Figure 25**. To access the spring latches securing the front glass enclosure panel, open the lower control compartment door by lifting and pulling the bottom panel forward.
2. Pull the spring latches forward and down to release them from the lower door channel.
3. Pull the bottom of the glass enclosure panel out a few inches, and grasp it on the right and left sides. Gently lift to release the panel from its upper channel, and then pull the enclosure panel forward to remove it.
4. Visually inspect the gasket on the backside of the enclosure panel frame. The gasket surface must be clean, free of irregularities, and firmly seated.

This appliance is designed to operate only when the glass enclosure panel is installed. Do NOT remove the glass enclosure panel unless necessary (e.g., to gain access to components within the firebox or to clean the glass).

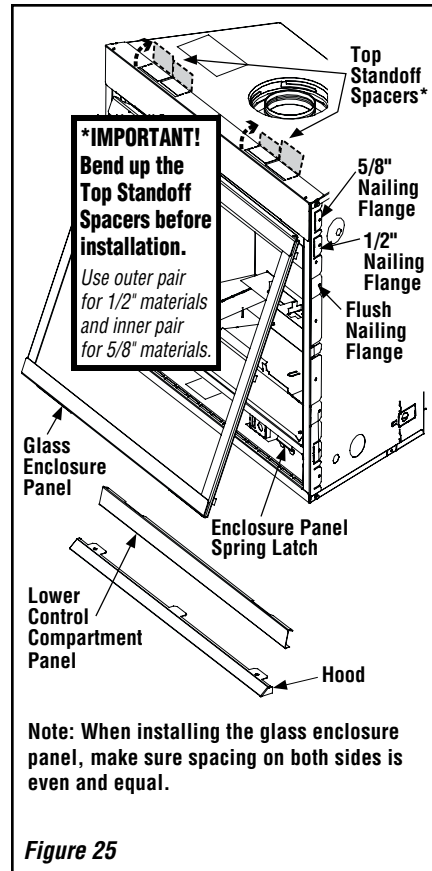


Figure 25

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

Step 10. Burner Air Shutter Adjustments

(QUALIFIED TECHNICIANS ONLY)

Flame Appearance and Sooting

Proper flame appearance is a flame which is blue at the base and becomes yellowish-orange in the body of the flame. When the appliance is first lit, the entire flame may be blue and will gradually turn yellowish-orange during the first 15 minutes of operation. After 15 minutes of operation, if the flame is blue, or if the flame is orange with evidence of sooting (black tip), the air shutter opening may need to be adjusted.

If the air shutter opening is closed too far, sooting may develop. Sooting is indicated by black puffs developing at the tips of very long orange flames. Sooting results in black deposits forming on the logs, appliance inside surfaces and on exterior surfaces adjacent to the vent termination.

Sooting is caused by incomplete combustion in the flames and lack of combustion air entering the air shutter opening. To achieve a warm yellowish-orange flame with an orange body that does not soot, the shutter opening must be adjusted between these two extremes.

Air Shutter Adjustment Guidelines

- If there is smoke or soot present, first check the log set positioning to ensure that the flames are not impinging on any of the logs. If the log set is properly positioned and a sooting condition still exists, then the air shutter opening should be increased.
- The more offsets in the vent system, the larger the air shutter opening will need to be.
- An appliance operated with the air shutter opened too far, may have flames that appear blue and transparent. These weak, blue and transparent flames are termed anemic.
- Propane models may exhibit flames which candle or appear stringy. If this is present and persists, adjust the air shutter to a more open position, then operate the appliance for a few more minutes to ensure that the flame normalizes and the flames do not appear sooty.

The following chart is provided to aid you in achieving the correct air shutter adjustment for your installation.

Air Shutter Adjustment Guidelines:		
Amount of Primary Air	Flame Color	Air Shutter Adjustment
If air shutter is closed too far →	Flame will be orange →	Air shutter gap should be increased
If air shutter is open too far →	Flame will be blue →	Air shutter gap should be decreased

Burner Air Shutter Adjustment Procedure

! WARNING

- Air shutter adjustment should only be performed by a qualified professional service technician.
- Ensure front glass panel are in place and sealed during adjustment.

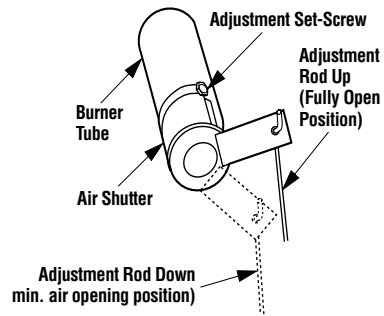
! CAUTION

- Soot will be produced if the air shutter is closed too much. Any damage due to sooting resulting from improperly setting the air shutter is not covered under the warranty.
- The air shutter door and nearby appliance surfaces are hot. Exercise caution to avoid injury while adjusting flame appearance.

1. Locate adjustment rod and adjust air shutter to the standard setting as shown in **Figure 26** (adjustment rod is located in the lower control compartment).

Note: Move the adjustment rod **DOWN** to decrease air and **UP** to increase air.

2. Light appliance (follow lighting procedure on lighting label in control compartment or see the Care and Operation manual).
3. Allow the burner to operate for at least 15 minutes while observing the flame continuously to ensure that the proper flame appearance has been achieved (see **Figure 27 and 28**). If the following conditions are present, adjust accordingly:
- If flame appears weak or sooty, adjust the air shutter, incrementally, to a more open position until the proper flame appearance is achieved.
 - If flame stays lowered blue, adjust the air shutter, incrementally, to a more closed position until the proper flame appearance is achieved.
4. Leave the control knob (off/pilot/on) in the ON position and the burner OFF/ON switch OFF (and remote switches, if applicable).
5. When satisfied that the burner flame appearance is normal, re-install the lower control compartment door then proceed to finish the installation.



Main Burner Factory Air Shutter Opening Setting - inches (millimeters)

Model	Nat. Gas	Propane Gas
MLBV-35	Closed	3/32 (2.362)
MLBV-40	Closed	3/32 (2.362)

Figure 26: Burner Air Shutter Adjustment



Figure 27: Burner Flame Appearance – Model MLBV-35



Figure 28: Burner Flame Appearance – Model MLBV-40

Step 11. Perform Spillage Test

After appliance installation, perform this spillage test to verify proper venting conditions:

- 1 - Place unit in its normally-operated condition, that is, with the glass enclosure panel in place.
- 2 - Close all doors and windows in the room. Turn on all exhaust fans in the house.
- 3 - Light the appliance.
- 4 - Wait 15 minutes.
- 5 - To check for venting action, start by holding a smoke producing device below the glass enclosure panel. The smoke should be drawn into the control compartment. Continue the test by moving the smoke-producing device along the entire length of the lower edge of the glass enclosure panel.
- 6 - **If the smoke is NOT drawn into the control compartment, turn off the appliance and call a qualified service technician.**

Manually-Reset Safety Limit Switch

This appliance is equipped with a manually-reset safety limit switch in the upper RIGHT side of the firebox, behind the right side scoop. Refer to **Figure 29** for its location.

If, during appliance operation, the flame goes out (independently of the burner ON/OFF switch), the safety limit switch may have tripped.

Some causes for a tripped safety limit switch include the following:

- Incorrect flue configuration
- Blocked flue
- Negative pressure inside house

Before resetting the safety limit switch, have a qualified service technician inspect the fireplace and venting for these conditions and repair as needed.

To RESET the safety limit switch, push the reset button located between the wire terminals on the back of the switch. *Follow the steps below to access the switch (also see Figure 29-C).*

To REPLACE the safety limit switch, follow the steps below.

IMPORTANT: This procedure should only be performed by a qualified service technician.

- 1 - **Turn OFF electrical power to appliance.**
- 2 - **Allow the appliance to cool.**
- 3 - Remove the lower control compartment access panel.
- 4 - *Refer to Figure 25 on Page 20.* Open both latches under the firebox floor securing the glass enclosure panel. Remove the panel by tilting it outward at the bottom and lifting it up. Set aside the panel, taking care to protect it from damage.

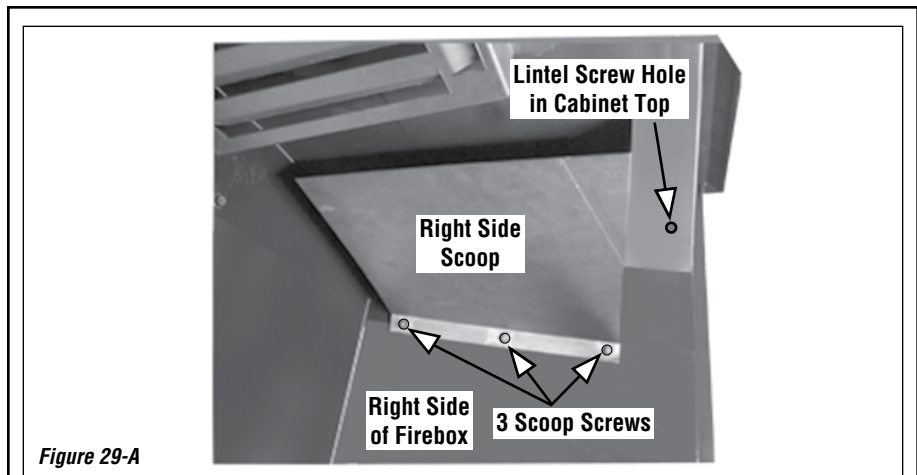


Figure 29-A

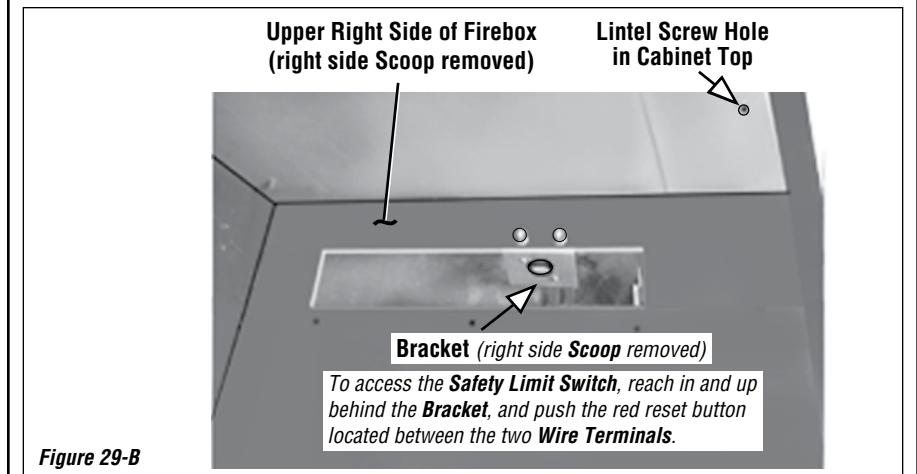


Figure 29-B

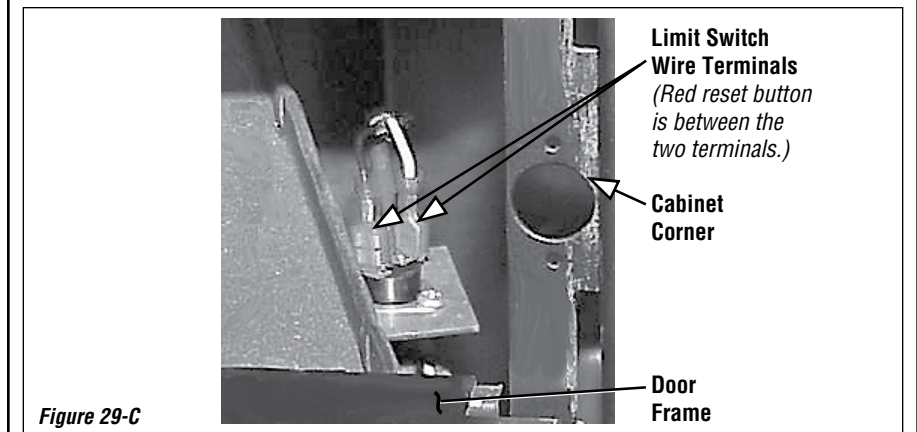


Figure 29-C

Safety Limit Switch / Reset Button Location
Inside View of Firebox (upper right side)

Figure 29

- 5 - Remove the (3) screws securing the lintel, and then remove the lintel. One of the lintel cabinet top holes is shown in **Figure 29**.
- 6 - Remove the (3) screws securing the scoop, and then remove the scoop. Refer to **Figure 29** for correct location for model size.
- 7 - Reset the limit switch per **Figure 29-B**. If unit does not reset, remove the (2) screws securing the safety switch bracket, and

pull the switch/bracket assembly (**with low voltage wires attached**) through the side panel slot into the firebox.

- 8 - Replace the switch, if necessary..
- 9 - Reinstall the scoop and lintel.
- 10 - Reinstall the glass enclosure panel and control compartment access panel.

The appliance should then relight and remain lit. If this does not occur, contact your dealer.

NOTE: DIAGRAMS & ILLUSTRATIONS ARE NOT TO SCALE.

Step 12. Install Hood

NOTE: All models must have a hood installed prior to operating.

Refer to **Figure 30**. Install hood by sliding it into the slots on the lower edge of the cabinet top.

Step 13. Finishing Requirements

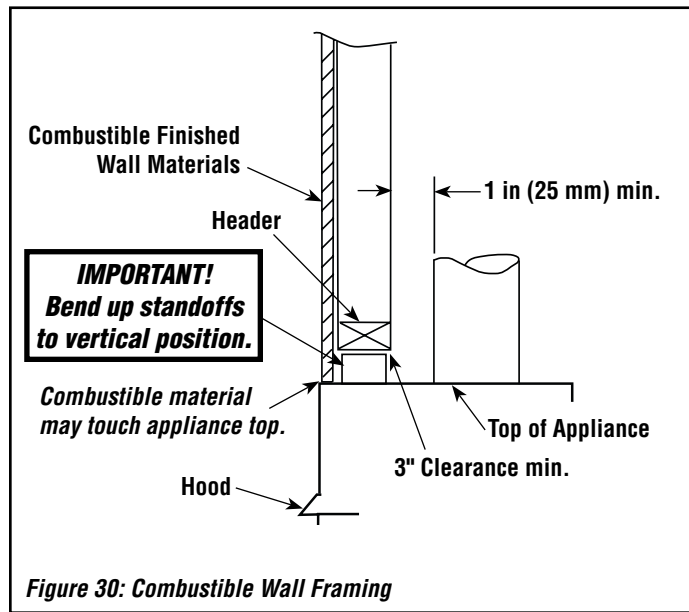
Wall Details

Complete finished interior wall.

To install the appliance facing flush with the finished wall, position framework to accommodate the thickness of the finished wall (**Figure 30**).

For Cold Climate Insulation, see Page 5.

For Clearances, see Page 7.



Step 14. Attach Safety-In-Operation Warnings

It is the installer's responsibility to ensure these warning labels are properly affixed during installation. These warning labels are a critical step in informing consumers of the safe operation of this appliance.

ATTACHING SAFETY-IN-OPERATION WARNINGS

It is required that the safety instruction labels furnished with the fireplace be affixed to the operation and control point of the fireplace. A safety instruction label must be affixed to the wall switch plate where the fireplace is turned on and off (See **Figure A**) and if used on the remote control handheld transmitter (**Figure B**). To properly complete the installation of this fireplace, locate the multi-lingual adhesive labels provided with the Care and Operation Instructions and proceed as follows:

1. Locate the wall switch that controls the fireplace (verify the switch operates the fireplace by turning it on and off). Clean the wall switch plate thoroughly to remove any dust and oils. Affix the label to the surface of the plate of the wall switch that controls the fireplace (**Figure A**). Choose the language primarily spoken in the home. If unknown, affix the English language label.
2. If a remote control is used to control the fireplace, locate the transmitter and clean it thoroughly to remove any dust and oils. Affix the label to the surface of handheld transmitter (**Figure B**). Choose the language primarily spoken in the home. If unknown, affix the English language label.
3. If you are unable to locate the labels, please call Lennox Hearth Products or your nearest Lennox Hearth Products dealer to receive additional safety instruction labels free of charge.

Cat. No. H8024 Replacement Label Kit

LENNOX HEARTH PRODUCTS
1-800-9-LENNOX

Note: English is red text on clear label. French and Spanish are white text on black label.

SAFETY LABEL DIAGRAMS



Figure A

APPOSITION DES MISES EN GARDE RELATIVES À LA SÉCURITÉ D'UTILISATION

Il est impératif que les étiquettes de sécurité fournies avec le foyer soient collées à côté des dispositifs de contrôle du foyer. Une étiquette de sécurité doit être collée sur la plaque de l'interrupteur contrôlant l'allumage du foyer (voir **Figure A**) et, le cas échéant, sur le boîtier de la télécommande (**Figure B**). Pour achever l'installation correcte de ce foyer, procédez comme suit avec les étiquettes adhésives en langues étrangères fournies avec les instructions d'utilisation et d'entretien :

1. Repérez l'interrupteur qui contrôle le foyer (vérifiez que l'interrupteur contrôle le fonctionnement du foyer en le faisant basculer de Marche à Arrêt, et vice-versa). Nettoyez soigneusement la plaque murale de l'interrupteur pour éliminer la poussière et les traces de graisse ou d'huile. Collez l'étiquette sur la surface de la plaque de l'interrupteur mural qui contrôle le foyer (**Figure A**). Choisissez la langue qui est principalement parlée dans la résidence du propriétaire. En cas de doute, collez l'étiquette en anglais.
2. Si une télécommande est utilisée pour contrôler le foyer, nettoyez la soigneusement pour éliminer la poussière et les traces de graisse ou d'huile. Collez l'étiquette sur le boîtier de la télécommande (**Figure B**). Choisissez la langue qui est principalement parlée dans la résidence du propriétaire. En cas de doute, collez l'étiquette en anglais.
3. Si vous ne trouvez pas les étiquettes, veuillez appeler Lennox Hearth Products ou votre distributeur Lennox Hearth Products local pour recevoir gratuitement des étiquettes supplémentaires.

Étiquettes de remplacement, n° cat. H8024

LENNOX HEARTH PRODUCTS
1-800-9-LENNOX

Remarque : Le texte anglais est rouge sur un support transparent. Le texte français et espagnol est blanc sur un support noir.

DIAGRAMMES DES ÉTIQUETTES DE SÉCURITÉ



Figure B

COLOCACIÓN DE ADVERTENCIAS DE SEGURIDAD EN OPERACIÓN

Se requiere que las etiquetas de instrucciones de seguridad incluidas con la chimenea se coloquen en el punto de operación y control de la misma. Se debe colocar una etiqueta de instrucciones de seguridad en la placa del interruptor de pared desde el cual se enciende y se apaga la chimenea (ver la **Figura A**) y en el transmisor de control remoto (**Figura B**) si se usa. Para completar correctamente la instalación de esta chimenea, encuentre las etiquetas adhesivas multilingües incluidas con las instrucciones de cuidado y operación y haga lo siguiente:

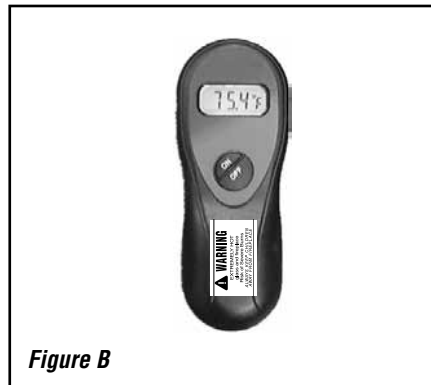
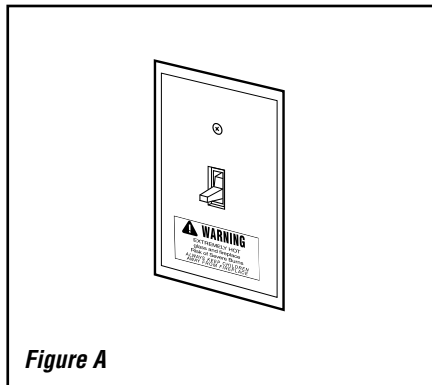
1. Identifique el interruptor de pared que controla la chimenea (verifique que el interruptor opera la chimenea encendiéndola y apagándola). Limpie bien la placa del interruptor de pared para quitar el polvo y aceite. Pegue la etiqueta en la superficie de la placa del interruptor que controla la chimenea (**Figura A**). Seleccione el idioma que más se habla en la casa. Si no sabe cuál es, use la etiqueta en inglés.
2. Si se usa un control remoto para controlar la chimenea, encuentre el transmisor y límpielo bien para quitar el polvo y aceite. Pegue la etiqueta en la superficie del transmisor (**Figura B**). Seleccione el idioma que más se habla en la casa. Si no sabe cuál es, use la etiqueta en inglés.
3. Si no puede encontrar las etiquetas, sírvase llamar a Lennox Hearth Products o al distribuidor de Lennox Hearth Products más cercano para recibir etiquetas de instrucciones de seguridad adicionales gratuitas.

Juego de etiquetas de repuesto - N° de cat. H8024

LENNOX HEARTH PRODUCTS
1-800-9-LENNOX

Nota: La etiqueta en inglés es transparente con texto rojo. Las etiquetas en francés y español son negras con texto blanco.

DIAGRAMAS DE ETIQUETAS DE SEGURIDAD



GAS CONVERSION KITS

WARNING

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

AVERTISSEMENT

Cette trousse de conversion doit être installée par un technicien agréé, selon les instructions du fabricant et selon toutes les exigences et tous les codes pertinents de l'autorité compétente. Assurez-vous de bien suivre les instructions dans cette notice pour réduire au minimum le risque d'incendie, d'explosion ou la production de monoxyde de carbone pouvant causer des dommages matériels, des blessures ou la mort. Le technicien agréé est responsable de l'installation de cette trousse. L'installation n'est pas adéquate ni complète tant que le bon fonctionnement de l'appareil converti n'a pas été vérifié selon les instructions du fabricant fournies avec la trousse. Le fournisseur de service qualifié ayant réalisé l'installation assume les responsabilités liées à la conversion.

In Canada:
THE CONVERSION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROVINCIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN/CSA-B149.1 INSTALLATION CODE.

LA CONVERSION DEVRA ÊTRE EFFECTUÉE CONFORMÉMENT AUX RECOMMANDATIONS DES AUTORITÉS PROVINCIALES AYANT JURIDICTION ET CONFORMÉMENT AUX EXIGENCES DU CODE D'INSTALLATION CAN/CSA-B149.1.

Gas conversion kits are available to adapt your appliance from the use of one type of gas to the use of another. These kits contain all the necessary components needed to complete the task including labeling that must be affixed to ensure safe operation.

Kit part numbers are listed here and the following steps detail the conversion procedure. Refer to the instructions provided with the conversion kit when performing any gas conversion.

<i>Millivolt SIT Systems</i> Natural Gas To Propane Gas Conversion Kits	
Models	Catalog No.
MLBV-35	H8270
MLBV-40	H7673

<i>Millivolt SIT Systems</i> Propane Gas to Natural Gas Conversion Kits	
Models	Catalog No.
MLBV-35	H8271
MLBV-40	H7675

<i>Electronic DEXEN Systems</i> Natural Gas To Propane Gas Conversion Kits	
Models	Catalog No.
MLBV-35	H8268
MLBV-40	H7669

<i>Electronic DEXEN Systems</i> Propane Gas To Natural Gas Conversion Kits	
Models	Catalog No.
MLBV-35	H8269
MLBV-40	H7671

Gas Conversion Kit Installation Instructions

Step 1. TURN OFF THE GAS SUPPLY TO THE APPLIANCE and disconnect power supply at the circuit breaker. Ensure appliance is cold.

CAUTION: THE GAS SUPPLY SHALL BE SHUT OFF PRIOR TO DISCONNECTING THE ELECTRICAL POWER, BEFORE PROCEEDING WITH THE CONVERSION.

ATTENTION: AVANT D'EFFECTUER LA CONVERSION, COUPEZ D'ABORD L'ALIMENTATION EN GAZ, ENSUITE, COUPEZ L'ALIMENTATION ÉLECTRIQUE.

Step 2. Remove the front glass enclosure panel. See *Figure 25 on Page 20*.

Step 3. Carefully remove the logs.
Note: Logs are fragile. Handle gently to prevent breakage.

Step 4. Refer to *Figure 31*. Remove the burner assembly with attached venturi tube.

For Millivolt Systems, continue to Step 5.

For Electronic Systems, skip to Step 8.

Step 5. SIT Millivolt Valve: Refer to *Figure 32* and the instructions provided with the kit.

- Using a Torx T20 (with 1/4" shank and center hole), remove and discard the three pressure regulator mounting screws.
- Remove the pressure regulator, spring, poppet, diaphragm and bushing.
- Discard all removed components.**
- Make sure the rubber gasket installed on the back of the replacement pressure regulator is properly positioned. Tighten screws to 25 in.-lb. torque.

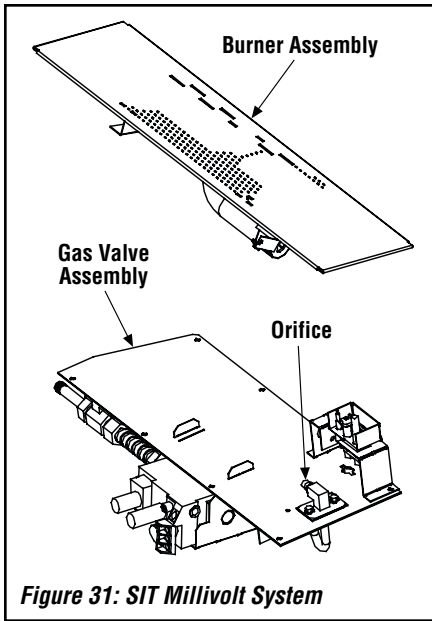


Figure 31: SIT Millivolt System

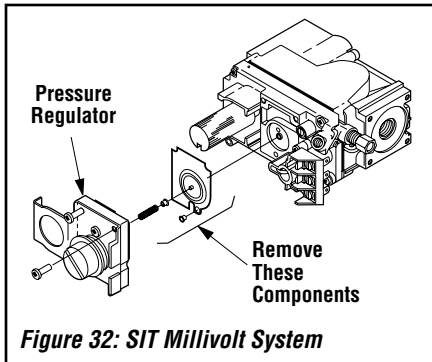


Figure 32: SIT Millivolt System

Step 6. (Millivolt systems only): Attach manometer to the manifold side pressure test fitting and verify manifold pressure reads 3.5 inches water column (0.87 kPa) for natural gas, and 10.0 inches water column (2.49 kPa) for propane gas.

Step 7. (Millivolt systems only): Refer to **Figure 33**. Remove the pilot hood assembly to access the hexed pilot orifice. Remove and replace the orifice with the one provided in the kit.

Skip to Step 10.

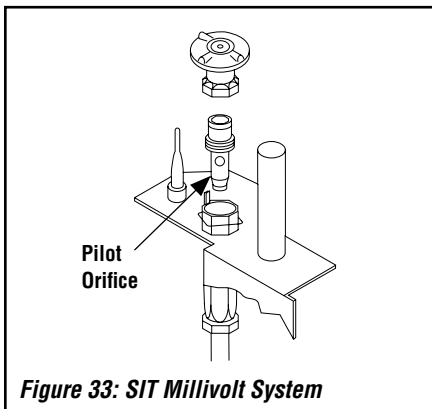


Figure 33: SIT Millivolt System

Electronic Appliances

Step 8. Dexen Electronic Valves: Refer to **Figure 34** and the instructions provided with the kit.

- Remove and discard the two pressure regulator mounting screws.
- Remove the pressure regulator and diaphragm.
- Discard all removed components.**
- Make sure the provided diaphragm is installed properly onto the replacement pressure regulator.
- Install the new pressure regulator using the new screws supplied with the kit; tighten the screws.

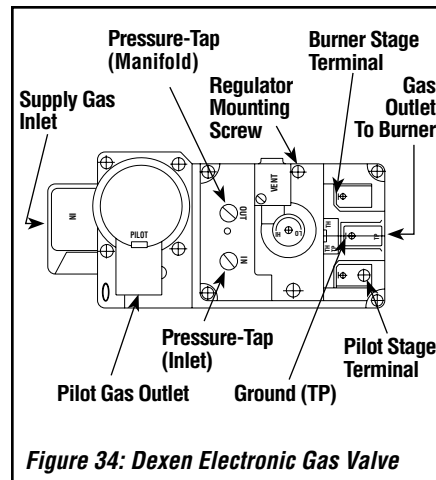


Figure 34: Dexen Electronic Gas Valve

Step 9. Refer to **Figure 35**. Follow these steps to replace the pilot orifice:

- Remove pilot hood assembly to access the phillipped pilot orifice.
- Remove and replace the orifice with the one provided with the kit. **Exercise extreme care to prevent damage to or breakage of the igniter assembly.**

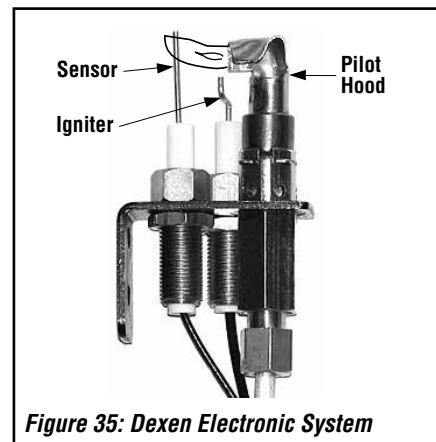


Figure 35: Dexen Electronic System

All Models

Note the following:

Use pipe joint compound or Teflon tape on all pipe fittings before installing.

Ensure propane-resistant compounds are used in propane applications.

Do NOT use pipe joint compounds on flare fittings.

Step 10. Refer to **Figure 31**.

- VERIFY PROPER ORIFICE SIZE BEFORE INSTALLING IT.**
- Remove the orifice from the manifold and replace it with the one provided in the kit. See **Table 7** for orifice sizes for natural and propane models. **Figure 36** illustrates the orifice. Always check and verify orifice size.
- Retrieve the burner. Slide the venturi tube over the orifice.
- Adjust the burner air shutter as shown in **Figure 26 on Page 21**.

Burner Orifice Sizes Elevation 0-4500 feet (0-1372 meters)		
Model Series	Nat. Gas drill size (inches)	Propane drill size (inches)
MLBV-35	#48 (0.076")* H1236•	#56 (0.046")* 62L37•
MLBV-40	#43 (0.089")* 99K75•	#55 (0.052")* 19L52•

** Standard size installed at factory.
• Part/Cat. Number.*

Table 7

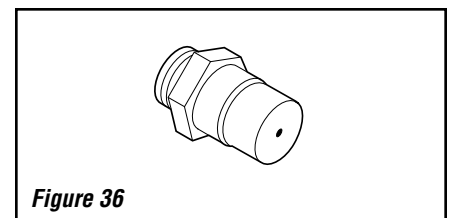


Figure 36

Step 11. Reassemble the remaining components by reversing the procedures outlined in the preceding steps.

Step 12. Attach the conversion label (provided in the conversion kit) next to the rating plate on the appliance.

Step 13. Turn on gas supply and test for gas leaks (refer to **Page 16**).

ALWAYS TEST PRESSURES WITH THE VALVE REGULATOR CONTROL AT THE HIGHEST SETTING.

Notes

Lennox Hearth Products reserves the right to make changes at any time, without notice, in design, materials, specifications, prices and also to discontinue colors, styles and products. Consult your local distributor for fireplace code information.



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