



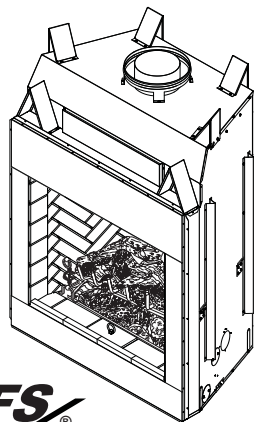
MOSAIC MASONRY™  
B-VENT GAS FIREPLACE  
WITH ELECTRONIC IGNITION  
OWNER'S OPERATION AND  
INSTALLATION MANUAL

FIREPLACE CHASSIS MODELS  
BVC-36YA, BVC-42YA AND BVC-50YA

NATURAL GAS BURNER & LOG  
MODULE MODELS  
BBM-36N-JHB, BBM-42N-JHB AND  
BBM-50N-JHB

PROPANE/LP GAS BURNER & LOG  
MODULE MODELS  
BBM-36P-JHB, BBM-42P-JHB AND  
BBM-50P-JHB

FIREBRICK WALL SYSTEMS MODELS  
MKB-36,42,50(SS)(SH)-(R,I)A SERIES



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

**FOR YOUR SAFETY**

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

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

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

**NOT FOR USE WITH SOLID FUEL  
CHECK LOCAL CODES PRIOR TO INSTALLATION**

### **SAVE THIS BOOK**

This book is valuable. In addition to instructing you on how to install and maintain your appliance, it also contains information that will enable you to obtain replacement parts or optional accessory items when needed. Keep it with your other important papers.

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

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## SAFETY

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

**IMPORTANT:** Read this owner's manual carefully and completely before trying to assemble, operate or service this 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. If this unit is not properly installed by a qualified service person, 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. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases unless a certified kit is used.
2. For propane/LP 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.
3. If you smell gas
  - shut off gas supply
  - do not try to light any appliance
  - do not touch any electrical switch; do not use any phone in your building
  - immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions
  - if you cannot reach your gas supplier, call the fire department.
4. Never install the fireplace
  - in a recreational vehicle
  - in high traffic areas
  - in windy or drafty areas
5. 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.
6. Carefully supervise young children when they are in the room with fireplace.
7. A hearth extension is not required with this appliance. If one is installed, it is for aesthetic purposes only and does not have to meet the standard requirements.
8. Turn fireplace off and let cool before servicing or repairing. Only a qualified service person should install, service or repair this fireplace. Have fireplace inspected annually by a qualified service person.
9. You must keep control compartments, burners and circulating air passages clean. More frequent cleaning may be needed due to excessive lint and dust from carpeting,

## SAFETY

### Continued

- bedding material, etc. Turn off the gas valve and pilot light before cleaning fireplace.
10. Have venting system inspected annually by a qualified service person. If needed, have venting system cleaned or repaired.
  11. 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.
  12. Do not use this fireplace to cook food or burn paper or other objects.
  13. Do not use any solid fuels (wood, coal, paper, cardboard, etc.) in this fireplace. Use only the gas type indicated on fireplace nameplate.
  14. This appliance, when installed, must be electrically grounded in accordance with local codes or, in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70*.
  15. 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.
  16. 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.
  17. 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.
  18. Do not operate fireplace if any log is broken.
  19. Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this fireplace.
  20. Provide adequate clearances around air openings.

## UNPACKING BBM SERIES

**⚠ CAUTION: Do not remove data plates from module. Data plates contain important warranty and safety information.**

*Note: Unit and all its loose components are attached to carton tray inside box.*

1. Remove entire contents of box using tray handles (see Figure 1).
2. Set tray on floor and remove floor media components and remote control.
3. Remove module with log set from tray by cutting zip ties. Discard tray and foam.
4. Check all items for any shipping damage. If damaged, promptly inform dealer where you bought appliance.



**Figure 1 - Log Set in Packing Box**

# INTRODUCTION

Models BBM-36(N,P)-JHB, BBM-42(N,P)-JHB and BBM-50(N,P)-JHB are log/gas burner modules that use an electronic control valve and ignition system. These modules are installed into fireplace chassis models BVC-36YA, BVC-42YA and BVC-50YA along with the Mosaic Masonry™ engineered firebrick wall models MKB-36(H,S)-(I,R)A, MKB-42(H,S)-(I,R)A and MKB-50(H,S)-(I,R)A. A FMI PRODUCTS, LLC venting system and vent cap are not supplied, but are required for proper operation. If a B-type venting system is installed, transition pipe model BTC-8 is required. See venting instructions beginning on page 11.

**⚠ WARNING: This gas appliance must not be connected to a chimney flue servicing a solid fuel burning appliance.**

## BEFORE YOU BEGIN

Before beginning the installation of your fireplace chassis, firebrick walls or module, read these instructions through completely.

This FMI PRODUCTS, LLC appliance and its approved components are safe when installed according to this installation manual and are operated as recommended by FMI PRODUCTS, LLC. Unless you use FMI PRODUCTS, LLC approved components tested for this appliance, **YOU MAY CAUSE**

### **A FIRE HAZARD!**

The FMI PRODUCTS, LLC warranty will be voided by and FMI PRODUCTS, LLC disclaims any responsibility for the following actions:

- A) Modification of the appliance or any of the components.
- B) Use of any component part not approved by FMI PRODUCTS, LLC in combination with this appliance.
- C) Installation and/or operation in a manner other than instructed in this manual.
- D) The burning of anything other than the type of gas approved for use in this gas appliance.

The installation must conform with local codes or, in the absence of local codes, with the current *National Fuel Gas Code, ANSI Z223.1/NFPA 54*.

**⚠ WARNING: Installation of this appliance should be done by a qualified service person.**

**NOTICE: This appliance is not intended to be used as a primary source of heat.**

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

The appliance and its individual shutoff valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shutoff 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).

For the purpose of input adjustment two pressure taps (for IN and OUT pressures) are provided on the gas control valve for test gauge connections to the appliance.

## SELECTING LOCATION

To determine the safest and most efficient location for your appliance, you must take into consideration the following guidelines:

1. The location must allow for proper clearances (see clearance information on page 10).
2. Consider a location where heat output would not be affected by drafts, air conditioning ducts, windows or doors.
3. A location that avoids the cutting of joists or roof rafters will make installation easier.

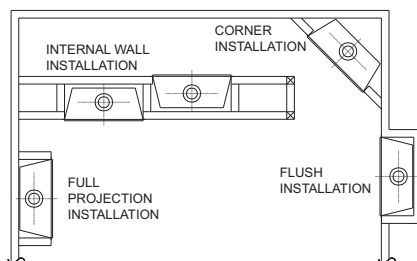
Figure 1 shows a plan view of a few common locations.

**Flush installations** are recommended where living space is limited or at a premium and since the space required to enclose the appliance would be located beyond an outside wall, this would also reduce the cutting of joists, roof rafters and such. Check local codes for any restrictions.

**Projected installations** can extend any distance into the room. A projection may be ideal for a new addition on an existing, finished wall.

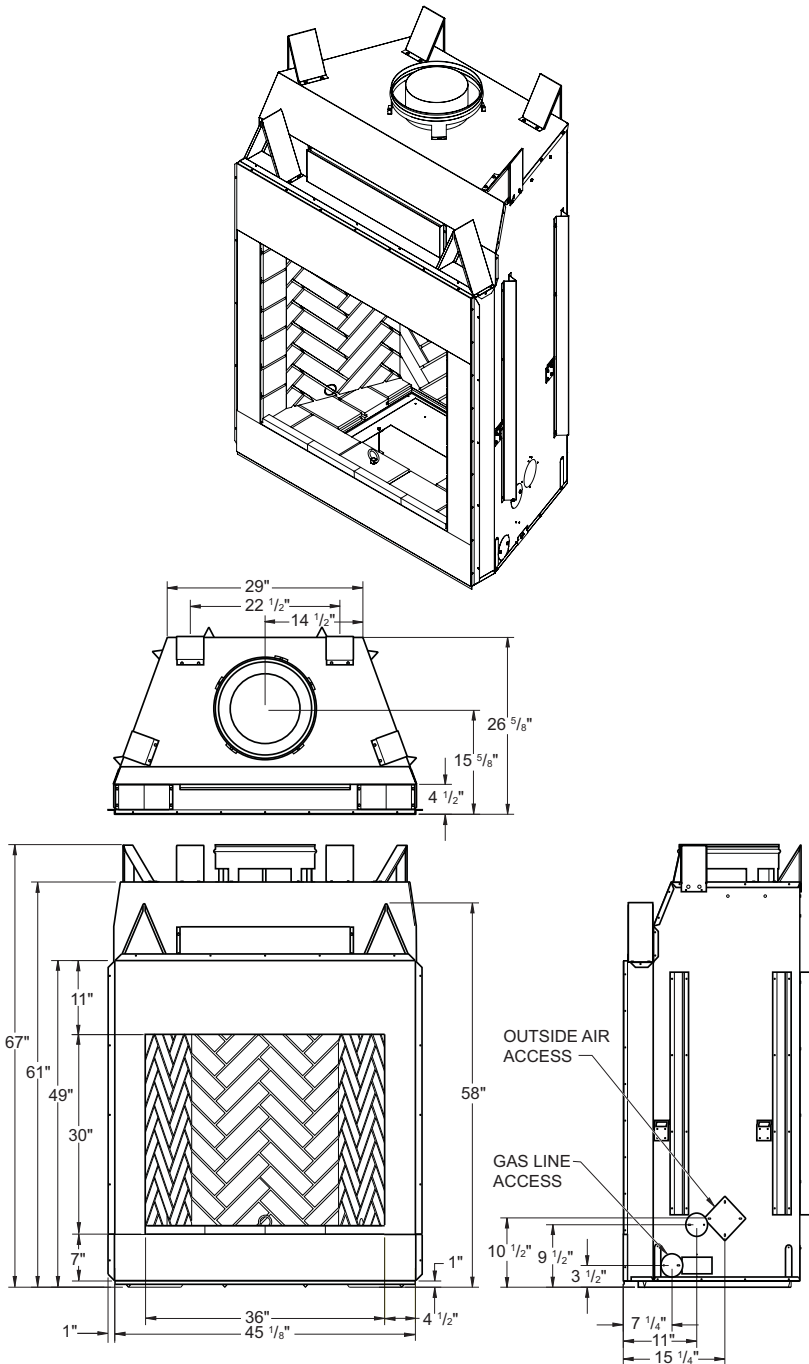
**Corner installations** make use of space that may not normally be used and provides a wider and more efficient range for radiant heat transference.

**Internal wall installations** provide a discreet option for room separation and can also be ideal as an addition to an existing wall.



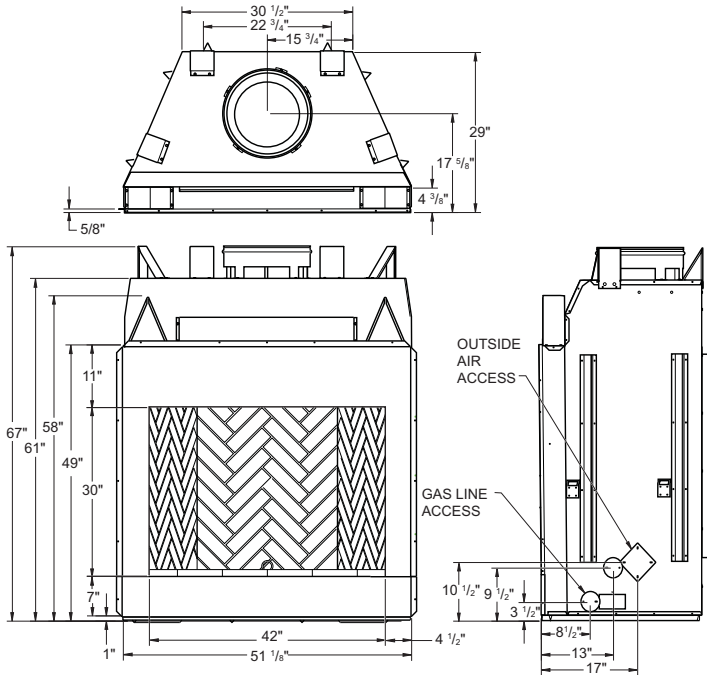
**Figure 2 - Possible Locations for Installing Appliance**

## PRODUCT DIMENSIONS

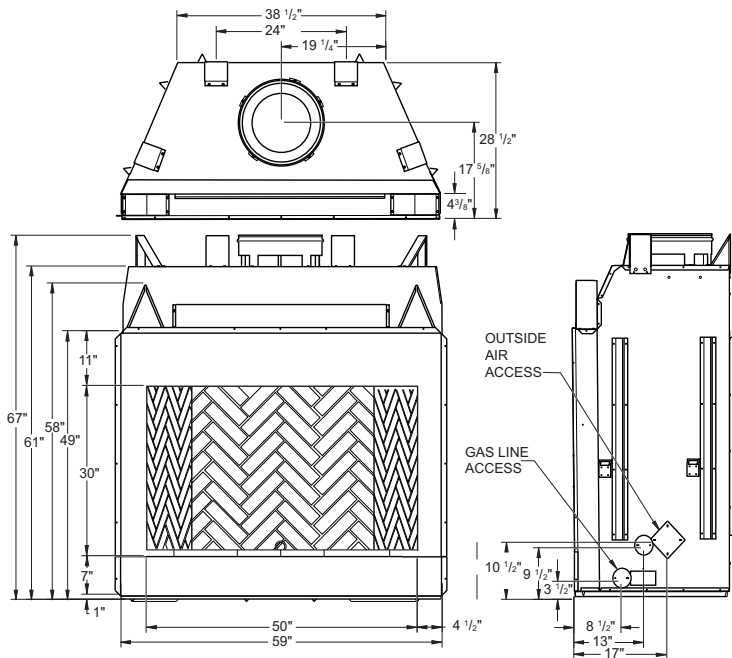


**Figure 3 - 36" Model BVC-36YA**

## PRODUCT DIMENSIONS *Continued*



**Figure 4 - 42" Model BVC-42YA**



**Figure 5 - 50" Model BVC-50YA**



# PRE INSTALLATION PREPARATION

## SELECTING LOCATION

To determine the safest and most efficient location for the fireplace, you must take into consideration the following guidelines:

1. The location must allow for proper clearances (see Figures 6 and 7).
2. Consider a location where fireplace will not be affected by drafts, air conditioning ducts, windows or doors.
3. A location that avoids cutting of joists or roof rafters will make installation easier.
4. An outside air kit is available with this fireplace (see *Optional Outside Air Kit*, page 10).

## MINIMUM CLEARANCE TO COMBUSTIBLES

Back and sides of fireplace	1 1/2" min.*
Front of fireplace	48" min.
Floor**	0" min.
Perpendicular wall to opening	12" min.
Top spacers	0" min.
Mantel clearances	see <i>Mantels</i> , page 10
Chimney outer pipe surface	1" min.

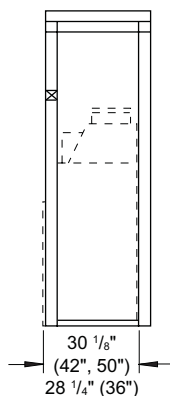
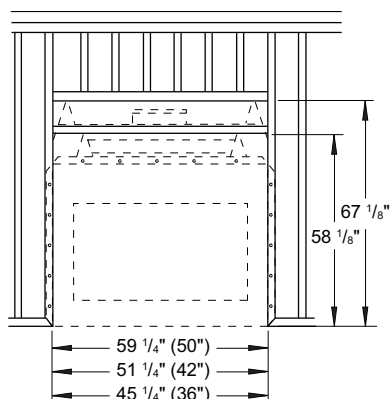
\* Not required at nailing flanges

\*\* See step 2 of *Framing*

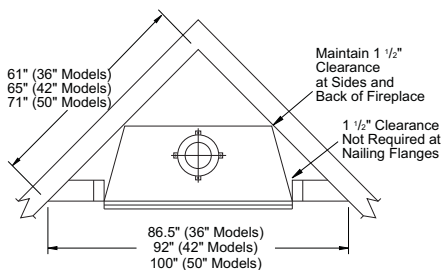
**⚠ WARNING: Do not pack required air spaces with insulation or other materials.**

## FRAMING

1. Frame opening for fireplace using dimensions shown in Figures 6 and 7.
2. If fireplace is to be installed directly on carpeting, tile (other than ceramic) or any combustible material other than wood flooring, fireplace must be installed upon a metal or wood panel extending full width and depth of fireplace.
3. Set fireplace directly in front of this opening and slide unit back until nailing flanges touch side framing.
4. Check level of the fireplace and shim with sheet metal if necessary.



**Figure 6 - Rough Opening Dimensions for Installing in a Wall**



**Figure 7 - Corner Installation**

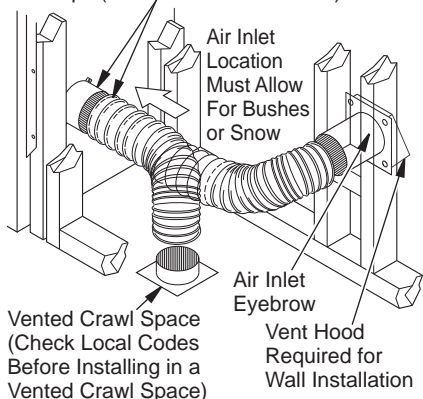
## PRE-INSTALLATION PREPARATION

### Continued

- Using screws or nails, secure fireplace to framing through flanges located on sides of fireplace.

**⚠ WARNING:** When finishing appliance, do not overlap combustible material onto the black front face. Brick, tile or other noncombustible materials may be applied to the face provided that any gap is between the material used and the face is caulked with a noncombustible caulking.

Secure to Collars with Metal Tape, Screws or Straps (Min. of 1/4" x 20" in size)



**Figure 8 - Outside Air Kit**

### OPTIONAL OUTSIDE AIR KIT (MODEL AK4/AK4F)

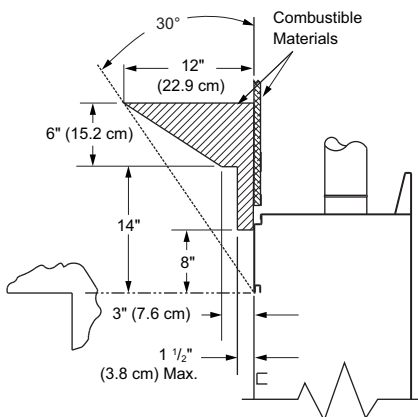
Installation of an outside air kit should be performed during rough framing of fireplace due to the nature of its location. Outside combustion air is accessed through a vented crawl space (AK4F) or through a sidewall (AK4).

**⚠ CAUTION:** Combustion air inlet ducts shall not terminate in attic space.

**The maximum height for the air vent can not exceed 3 feet below the flue gas outlet of the termination.**

### MANTELS

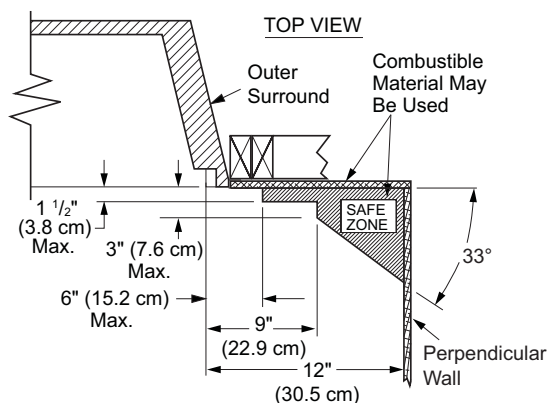
A combustible mantle shelf maybe installed a maximum 12" (22.9 cm) from the wall. Figure 9 and Figure 10 on page 11 show the minimum allowable distances from various combustible mantle components in relation to the fireplace opening.



**Figure 9 - Mantel Clearances - Side View (Cross Section)**

# PRE INSTALLATION PREPARATION

## Continued



**Figure 10 - Side Clearances - Top View (Cross Section)**

## VENTING INSTALLATION

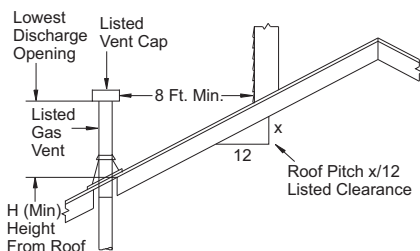
AFMI PRODUCTS, LLC or an 8" B-type venting system must be connected to appliance for venting to the outside of building. Transition pipe model BTC-8 is required for use with B-type venting.

Standing codes requirements concerning vent installations may vary within your state, province or local codes jurisdiction. Therefore, it is recommended that you check with your local building codes for specific requirements or in absence of local codes, follow Section 7.0 of the current *National Fuel Gas Code ANSI Z223.1/NFPA 54*.

This gas appliance must be vented to the outdoors only and may not be terminated into an attic space or into a chimney flue servicing a solid-fuel burning appliance.

Vent terminations must be located in accordance with height and proximity rules of NFPA No. 54. These rules apply to vents at 12" diameter or less and require a minimum height in accordance with the roof pitch and a minimum of 8 ft. distance from a vertical wall or obstruction (see Figure 11).

**⚠ WARNING: This appliance must be properly connected to a system and must not be connected to a chimney flue servicing a separate solid fuel burning appliance.**



Roof Pitch	H (Min.) Feet	Meter
Flat to 6/12	1.0	0.30
6/12 to 7/12	1.25	0.38
Over 7/12 to 8/12	1.5	0.46
Over 8/12 to 9/12	2.0	0.61
Over 9/12 to 10/12	2.5	0.76
Over 10/12 to 11/12	3.25	0.99
Over 11/12 to 12/12	4.0	1.22
Over 12/12 to 14/12	5.0	1.52
Over 14/12 to 16/12	6.0	1.83
Over 16/12 to 18/12	7.0	2.13
Over 18/12 to 20/12	7.5	2.27
Over 20/12 to 21/12	8.0	2.44

**Figure 11 - Typical Terminations**

# VENTING INSTALLATION

## Continued

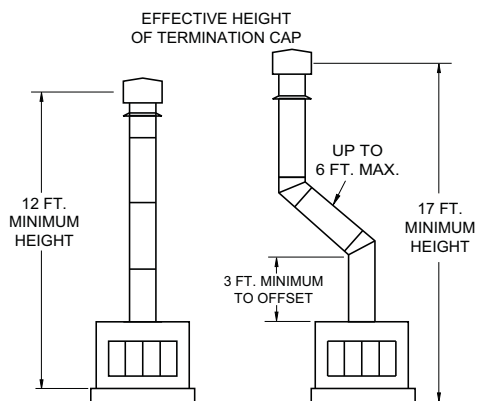
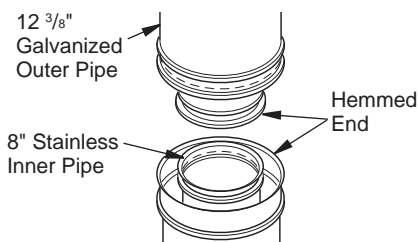


Figure 12 - Typical Residential Installations

## VENTING INSTALLATION USING FMI PRODUCTS, LLC VENTING SYSTEM

FMI PRODUCTS, LLC chimney system consists of 12", 18", 24", 36" and 48" snap-lock, double-wall pipe segments, planned for maximum adaptability to individual site requirements.

**WARNING:** The opening in collar around chimney at top of fireplace must not be obstructed. Never use blown insulation to fill chimney enclosure.



PART NO.	DESCRIPTION
12-8DM	Pipe Section
18-8DM	Pipe Section
24-8DM	Pipe Section
36-8DM	Pipe Section
48-8DM	Pipe Section
RT-8DM	Round Termination
RTL-8DM	Round Termination
RTT-8DM	Round Termination with Slip Section
RTTL-8DM	Round Termination with Slip Section
ET-8DM	Square Chase-Top
ETO-8DM	Square Chase-Top with Mesh
ETL-8DM	Square Chase-Top with Slip Section
ETLO-8DM	Square Chase-Top with Mesh & Slip Section
60E-8DM	60° Offset and Return

Figure 13 - Chimney Pipes and Accessories

## VENTING INSTALLATION

### *Continued*

#### **ASSEMBLY AND INSTALLATION OF DOUBLE WALL CHIMNEY SYSTEM**

Each double wall chimney section consists of a galvanized outer pipe, a stainless steel inner flue pipe and a wire spacer. Pipe sections must be assembled independently as chimney is installed. When connecting chimney directly to fireplace, inner flue pipe section must be installed first with lanced side up. Outer pipe section can then be installed over flue pipe section with hemmed end up. Press down on each pipe section until lances securely engage hem on fireplace starter. The wire will assure proper spacing between inner and outer pipe sections.

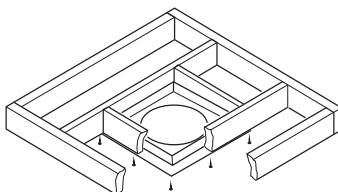
**⚠ Opening in collar around chimney at top of fireplace must not be obstructed. Never use blown insulation to fill chimney enclosure.**

Continue to assemble chimney sections as outlined, making sure that both inner and outer pipe sections are locked together. When installing double wall snap-lock chimney together, it is important to assure joint between chimney sections is locked. Check by pulling chimney upward after locking. Chimney will not come apart if properly locked. It is not necessary to add screws to keep chimney together.

#### **FIRESTOP SPACERS (V3600FS-8DM)**

Firestop spacers are required at each point where chimney penetrates a floor space. Their purpose is to establish and maintain required clearance between chimney and combustible materials. When pipe passes through a framed opening into a living space above, firestop must be placed into ceiling from below as shown in Figure 14.

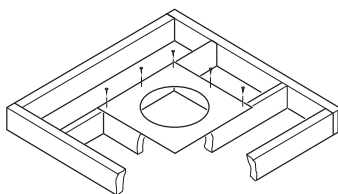
If area above is a living space, install firestop below framed hole.



**Figure 14 - Firestop Spacer with Living Space Above Ceiling**

They also provide complete separation from one floor space to another or attic space as required by most codes. When double wall pipe passes through a framed opening into an attic space, firestop must be placed into an attic floor as shown in Figure 15.

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



**Figure 15 - Firestop Spacer with Attic Space Above Ceiling**

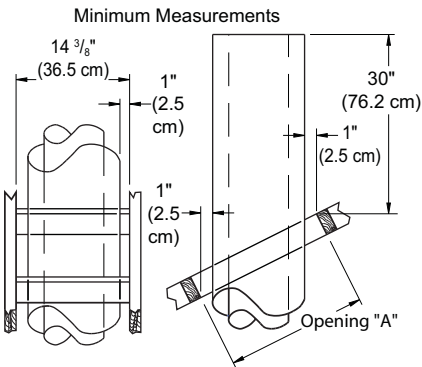
# VENTING INSTALLATION

## Continued

### PENETRATING ROOF

To maintain a 1" clearance to pipe on a roof with a pitch, a rectangular opening must be cut.

1. Determine center point where pipe will penetrate roof.
2. Determine center point of roof. Pitch is the distance the roof drops over a given span, usually 12". A 6/12 pitch means that the roof drops 6" for each 12" measure horizontally down from roof rafters.
3. Use roof opening chart (Figure 16) to determine correct opening length and flashing required.
4. Remove shingles around opening measured. Cut out this section.

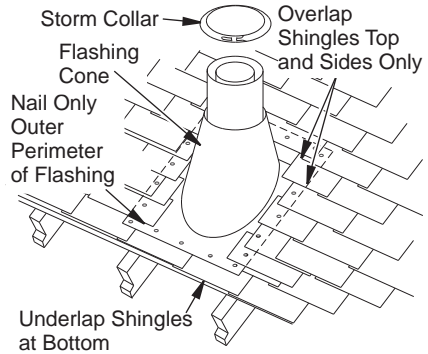


Pitch	Slope	Opening "A" Max.	Used Flashing Model No.
Flat	0°	15"	V6F-8DM
0-6/12	26.6°	16 1/8"	V6F-8DM
6/12- 12/12	45.0°	20 3/8"	V12F-8DM

**Figure 16 - Roof Opening Measurements**

### FLASHING INSTALLATION (V6F-8DM OR V12F-8DM)

Determine flashing to be used with roof opening chart. Slide flashing over pipe until base is flat against roof. Replace as many shingles as needed to cover exposed area and flashing base. Secure in position by nailing through shingles (see Figure 17). **DO NOT NAIL THROUGH FLASHING CONE.**



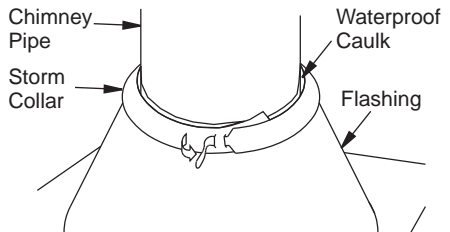
**Figure 17 - Flashing Installation**

### Installing Flashing on a Metal Roof

When installing flashing on a metal roof, it is required that putty tape be used between flashing and roof. Flashing must be secured to roof using #8 x 3/4" screws and then sealed with roof coating to prevent leakage through screw holes. A roof coating must also be applied around perimeter of flashing to provide a proper seal.

### Storm Collar Installation (SC1)

Place storm collar over pipe and slide down until it is snug against open edge of flashing (see Figure 18). Apply waterproof caulk around perimeter of collar to provide a proper seal.



**Figure 18 - Storm Collar**

# VENTING INSTALLATION

## Continued

### Terminations/Spark Arrestor

Fireplace system must be terminated with listed round top or chase terminations. In any case, refer to installation instructions supplied with termination. Terminations approved for this fireplace are RT-8DM and RTL-8DM that can be used for flashing or chase and ET-8DM, ETO-8DM, ETL-8DM and ETLO-8DM for chase style termination only. Figure 19 shows an RTL-8DM round top termination.

**CAUTION: Do not seal openings on the rooftop flashing. Follow the installation instructions provided with the termination being used.**

Terminations with 16" slip pipe sections are available. RTT-8DM and RTTL-8DM are approved for flashing installations. When needed, these adjustable terminations may be used in combination with pipe assembly to achieve correct chimney height.

*Note: In rare instance there is a problem with side driven rain or wind or chimney is not drafting properly, an ADS-8DM (Anti-Draft Shield) can be used with round terminations.*

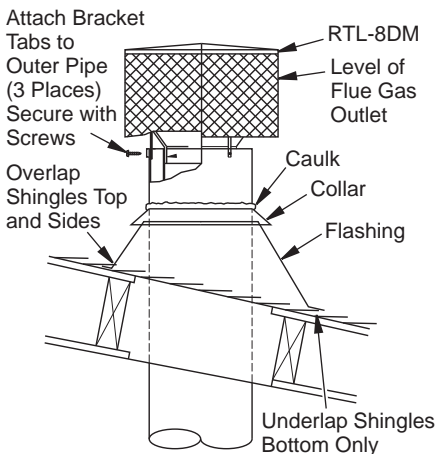


Figure 19 - Termination

### VENTING INSTALLATION USING 8" B-TYPE VENTING SYSTEM

Transition pipe model BTC-8 and starter collar are shown in Figure 20. Remove starter collar and set aside. Slide transition pipe over vent collar and attach with a minimum of 4 screws. Replace starter collar over transition pipe and attach using 4 screws located on leg stands. To install b-vent piping, slide first piece of b-vent over transition pipe and attach with either a minimum of 3 screws or other means approved by the vent manufacturer.

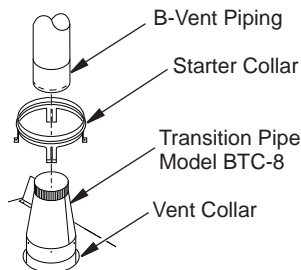


Figure 20 - Installing Transition Pipe and Starter Collar

### CHECKING FOR PROPER VENTING

After completing and checking electrical, gas and vent connections, follow the lighting instructions and allow the main burner to run for approximately 5 minutes. Hold a lighted match near the top edge of fireplace opening and play it along entire length of opening (see Figure 21, page 16). Proper venting should tend to draw the flame or smoke into the appliance. Improper venting or escaping of spillage of burned gas, is indicated when the match flickers or goes out.

If the appliance is found to be improperly venting, shut it off and notify your installer or a qualified service agency to inspect the venting system.

**NOTICE: This appliance is equipped with a vent safety shutoff switch which will shut down the appliance in the case of a venting problem. Do not bypass the vent safety switch. If the appliance should shut down, contact a qualified installer, service agency or your gas supplier to have the vent inspected before operating.**

## VENTING INSTALLATION

### Continued

Check this area along entire top edge of fireplace opening. Smoke or flame should be drawn into appliance opening.

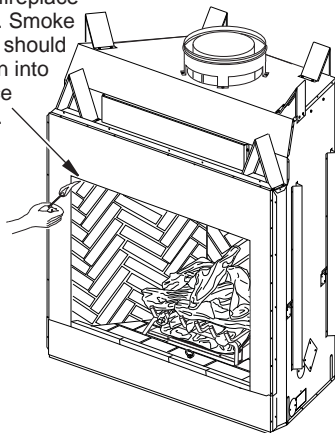


Figure 21 - Checking for Spillage

### FINISHING FIREPLACE

Combustible materials, such as wallboard, gypsum board, sheet rock, drywall, plywood, etc. may make direct contact with sides and top around the fireplace face. It is important that combustible materials do not overlap face itself. Brick, glass, tile or other noncombustible materials may overlap front face provided they do not obstruct essential openings such as louvered slots. When overlapping with a noncombustible facing material, use only noncombustible mortar or adhesive.

## INSTALLATION

### 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 retailer where you purchased the fireplace for proper fireplace according to your gas type.

### 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 fireplace directly to the propane/LP supply. This heater requires an external regulator (not supplied). Install the external regulator between the fireplace and propane/LP supply.

**⚠ WARNING:** Before you proceed, make sure your gas supply is OFF.

**⚠ WARNING:** For natural gas, never connect fireplace to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

### Installation Items Needed

Before installing fireplace, make sure you have the items listed below.

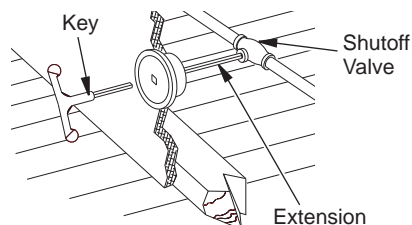
- external regulator (supplied by installer)
- piping (check local codes)
- sealant (resistant to propane/LP gas)
- equipment shutoff valve \*
- test gauge connection \*
- sediment trap
- tee joint
- pipe wrench
- approved flexible gas line with gas connector (if allowed by local codes)

\* A manual shutoff valve has been included with log/burner module models BBM-36(N,P)-JHB, BBM-42(N,P)-JHB and BBM-50(N,P)-JHB. You may consider installing an extra gas shutoff valve outside appliance's enclosure (check with local codes) where it can be accessed more conveniently with a key through a wall as shown in Figure 22, page 17.



# INSTALLATION

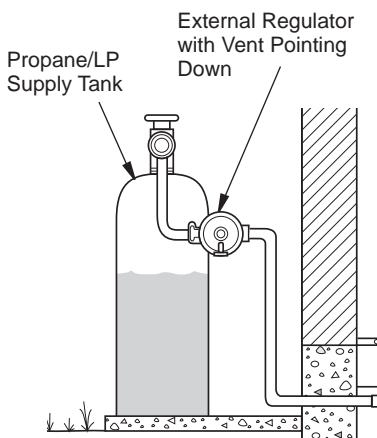
## Continued



Typical Exterior Wall Gas Shutoff Installation

**Figure 22 - Manual Shutoff Valve Installation**

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" of w.c. pressure. If you do not reduce incoming gas pressure, fireplace regulator damage could occur. Install external regulator with the vent pointing down as shown in Figure 23. Pointing the vent down protects it from freezing rain or sleet.



**Figure 23 - External Regulator with Vent Pointing Down (Propane/LP Only)**

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

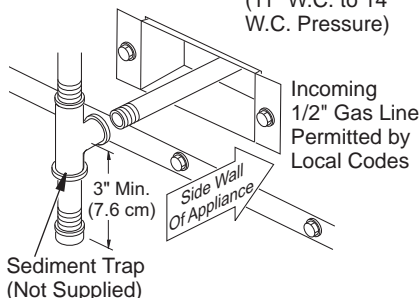
Installation must include an equipment shutoff valve, union and plugged 1/8" NPT tap. Locate NPT tap within reach for test gauge hook up. NPT tap must be upstream from fireplace.

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

**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 volume will occur.

We recommend that you install a sediment trap/drip leg in supply line as shown in Figure 24. Locate sediment trap/drip leg where it is within reach for cleaning. Install in piping system between fuel supply and fireplace. 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.

**Natural** - From Gas Meter (5.5" W.C. to 10.5" W.C. Pressure)  
**Propane/LP** From External Regulator (11" W.C. to 14" W.C. Pressure)

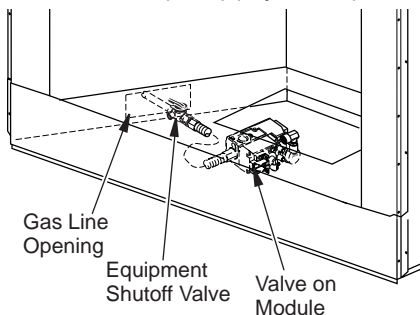


**Figure 24 - Sediment Trap**

## INSTALLATION

### Continued

Install incoming 1/2" gas line (as permitted by local codes) through the gas line opening on left or right side of the fireplace chassis (Figure 25). The pipe should extend to around the middle of the fireplace in order to be long enough to connect to the flexible gas line with shut off valve that is supplied with the log/burner module. Prepare incoming gas line with teflon tape or pipe joint compound.



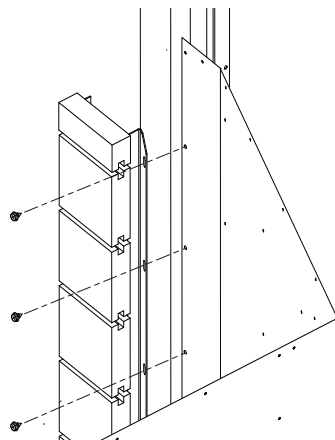
**Figure 25 - Installing Gas Line**

### FIREBRICK WALLS

**IMPORTANT: Installation of brick should be done after the fireplace is placed in a permanent location.**

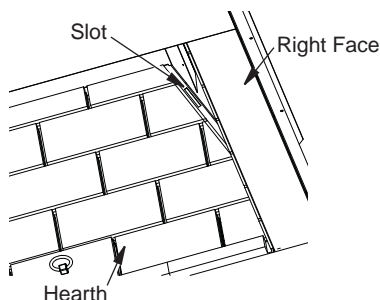
1. The firebox is shipped with the firebrick wall retaining brackets preinstalled. There are a total of six (6) brackets. Remove these brackets before installing any of the firebrick walls.
2. Place the hearth into the firebox. This may require two people. The hearth is wider than the fireplace opening and will need to be tilted to get it inside the firebox. The ash lip needs to be pulled all the way forward toward the front of the firebox.
3. It is critical the hearth is center in the fireplace before installing any of the other firebrick walls. There are four slots on the firebox floor. These slots (two on the left and two on the right) will be visible when the hearth is center. Cover the hearth with a piece of cardboard for protection during the rest of installation of the firebrick walls.

4. Install the left and right leading bricks. Set the firebrick wall on the hearth with the sheet metal side toward the firebox surround. The bricks will be flush with the face of the fireplace. Secure with screws provided as shown in Figure 26.



**Figure 26 - Installing Leading Bricks**

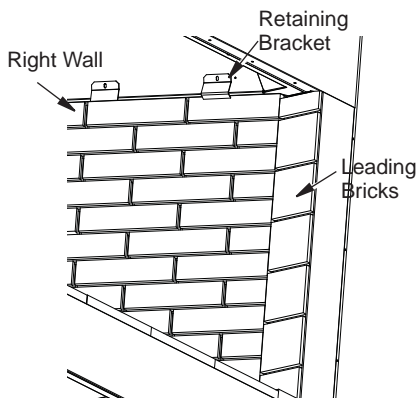
5. Install the left and right firebrick walls. There is a bracket with 2 tabs on the bottom of each firebrick wall. Angle the wall into the fireplace opening and into the slots on the side of the hearth (Figure 27), then tilt the top of the panel toward the firebox surround.
6. Secure the firebrick wall using 2 of the retainers provided. The bracket will slip underneath the metal lip on the top of the wall and screw into the inner dome of the fireplace (Figure 28, page 19).



**Figure 27 - Slots for Firebrick Walls**

## INSTALLATION

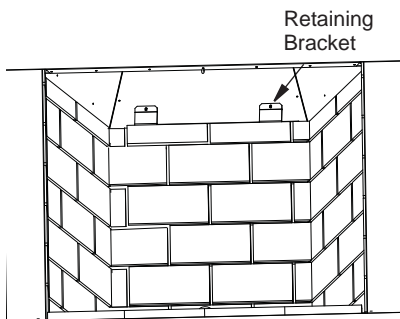
### Continued



**Figure 28 - Installing Side Walls**

7. Install the rear firebrick wall last. Place the wall face side down on the hearth with the bottom of the wall toward the rear of the firebox and the top toward the front of the fireplace. Tilt the wall up toward the back of the firebox. Secure with 2 rear retaining brackets provided (Figure 29).
8. It is recommended that the joints between all firebrick walls be grouted for a more finished look, see grouting instructions.

For more information and to watch a how to video go to [www.fmiproducts.com](http://www.fmiproducts.com) and select Technical Support.



**Figure 29 - Installing Rear Wall**

### GROUTING INSTRUCTIONS

Material provided:

Bag of cement

Bag of sand

Material required:

Piping bag

Joints striker

Heavy duty mixing bucket

Sponge or Wet Cloth

1. Moisten brick surface with damp sponge or spray bottle just prior to application. When bricks are wet, any excess grout mixture on bricks will easily wipe off.
2. In a heavy duty mixing bucket, add equal parts cement and sand. Add enough water and mix together well using a power drill with mixing wand attachment to a yogurt like consistency. Not adding enough water can lead to grout falling out after burning.
3. The overall length of piping bag should be about 16". If the bag is longer than 16", cut it down to size by removing end with larger opening. This will make the bag easier to handle.
4. Put grout mixture into piping bag making sure the smaller opening is downward and over a moist towel to avoid spilling. Place a wet towel over the bucket making sure it is directly on the surface of grout mixture. This will keep the mixture moist and it will not dry out before use.
5. Grout all joints where two firebrick walls come together.
6. Using a trowel, remove excess grout mixture by moving trowel in the direction of the joint. Grout mixture in the joint should now be flush with brick surface. If not enough grout is applied into each space, grout may fall out after burning.
7. Using a joint striker, smooth out grout line.

**Allow 72 hours before installing log/burner module.**

## INSTALLATION

### Continued

#### INSTALLING SCREEN

1. Slide round end of screen rod into rings at top of screen. Attach one push-on nut to end of rod before attaching last ring of screen.
2. Insert the round end screen rod into hole on the left and right side of smoke shelf (Figure 30).
3. Mount flat end of screen rod with #10 x 5/8" to center of smoke shelf.
4. Install other screen rod in same manner.

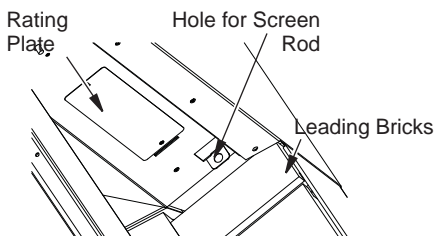


Figure 30 - Installing Fireplace Screen

#### CONNECTING FIREPLACE TO GAS SUPPLY

**⚠ WARNING:** Gas line hookup should be done by your gas supplier or a qualified service person.

**⚠ CAUTION:** Do not kink flexible gas line.

**⚠ CAUTION:** Compounds used on threaded joints of gas piping shall be resistant to the action of Liquefied Petroleum (LP or propane) and should be applied lightly to ensure excess sealant does not enter the gas line.

**⚠ WARNING:** All gas piping and connections must be tested for leaks after the installation is completed.

After ensuring that gas valve is on, apply a commercial leak detection solution to all connections and joints. If bubbles appear, leaks can be detected and corrected.

Do not use an open flame for leak testing and do not operate any appliance if a leak is detected.

Complete your gas installation by connecting incoming gas line with flexible gas line attached to the log/burner modu. Secure tightly with wrench but **DO NOT OVERTIGHTEN**.

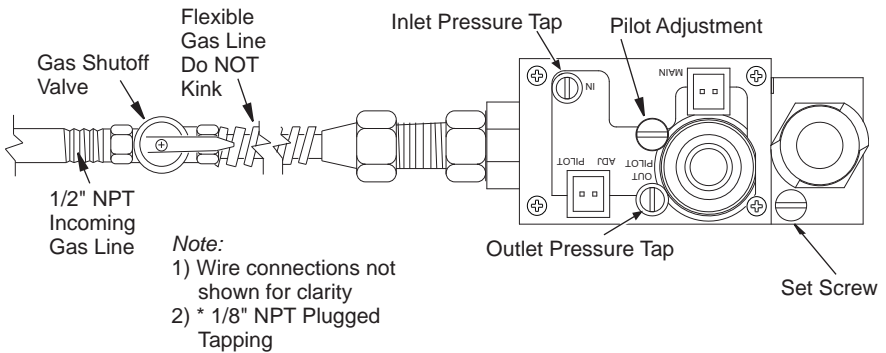
Apply pipe joint sealant lightly to male NPT threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged fireplace valves.

#### Installation Items Needed

- 5/16" hex socket wrench or nut-driver
  - sealant (resistant to propane/LP gas, not provided)
1. Route flexible gas line supplied with log/burner module through the large hole on the firebox bottom to the incoming gas line (Figure 25, page 18).
  2. Attach flexible gas line from gas supply to control valve (see Figure 31, page 24).
  3. Check all gas connections for leaks. See Checking Gas Connections, page 25.

## INSTALLATION

### *Continued*



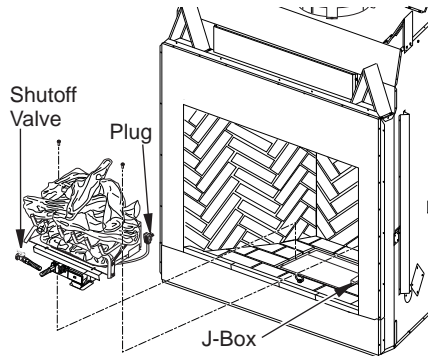
**Figure 31 - Connecting Incoming Gas Line to Flex Gas Line**

### INSTALLING LOG/BURNER MODULE

Before installing module, make sure all batteries have been installed into the receiver and battery backup.

**⚠ CAUTION: Gloves should be worn when installing module into fireplace. Metal edges may be sharp.**

1. Plug module into J-Box on the right side of firebox floor (see Figure 32).
2. Connect shutoff valve of module to incoming gas line (see [Connecting Fireplace to Gas Supply](#), page 20).
3. Connect wires from limit switch (located underneath the firebox floor) to orange wire in the wire harness of the module as shown in the [Wiring Diagram](#), page 35).
4. Carefully place module into hearth in firebox. Be careful not to chip or break logs.



**Figure 32 - Installing Module into Firebox**

## INSTALLATION

### Continued

#### CHECKING GAS CONNECTIONS

**⚠ WARNING:** Test all gas piping and connections, internal and external to unit, for leaks after installing or servicing. Correct all leaks at once.

**⚠ WARNING:** Never use an open flame to check for a leak. Apply noncorrosive leak detection fluid to all 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 noncorrosive leak detection fluid to all 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.

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

1. Close equipment shutoff valve (see Figure 33).
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.

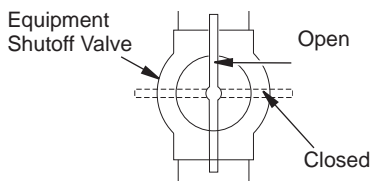


Figure 33 - Equipment Shutoff Valve

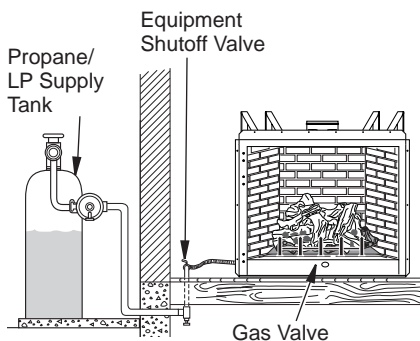


Figure 34 - Checking Gas Joints for Propane/LP Gas Fireplace  
(fireplace picture may vary from actual)

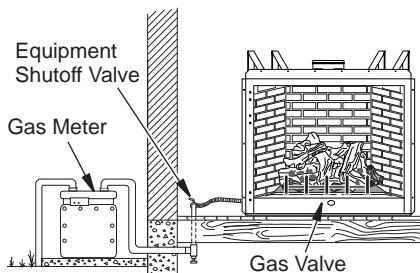


Figure 35 - Checking Gas Joints for Natural Gas Fireplace  
(fireplace picture may vary from actual)

# INSTALLATION

## Continued

3. Check all joints from propane/LP supply tank or gas meter to equipment shutoff valve (see Figure 34 or Figure 35, page 22). Apply noncorrosive leak detection fluid to all joints. Bubbles forming show a leak.
4. Correct all leaks at once.

### PRESSURE TESTING FIREPLACE GAS CONNECTIONS

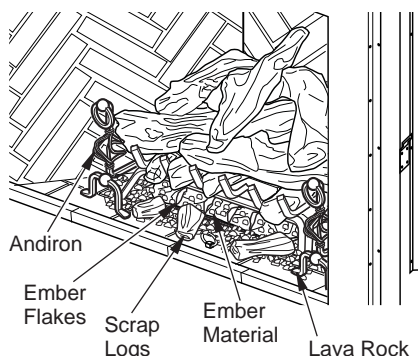
1. Open equipment shutoff valve (see Figure 33, page 22).
2. Open propane/LP supply tank valve for propane/LP fireplace or main gas valve located on or near gas meter for natural gas fireplace.
3. Make sure control knob of fireplace is in the OFF position.
4. Check all joints from equipment shutoff valve to gas valve (see Figure 34 or Figure 35, page 22). Apply noncorrosive leak detection fluid to all joints. Bubbles forming show a leak. Correct all leaks at once.
5. Light fireplace (see *Operation*, page 25). Check all other internal joints for leaks.
6. Turn off fireplace (see *To Turn Off Gas to Appliance*, page 25).

### INSTALLING FLOOR MEDIA

Lava rock, ember flakes, scrap logs and glowing embers are included with the log/burner module models BBM-36(N,P)-JHB, BBM-42(N,P)-JHB and BBM-50(N,P)-JHB.

1. Follow instructions from *Installing Log/Burner Module*, page 21.
2. Pull glowing ember material apart into pieces no larger than a dime. Place these pieces loosely and sparingly directly onto exposed burner ports (Figure 36). This will create the glowing ember appearance as flame touches ember material. Do not block air slots by using too much ember material in one area. Do not block pilot ports with embers. It is not necessary to use all of the glowing ember material provided.

3. Place ember flakes around front and sides of burner and on burner ports (see Figure 36). This will create the glowing ember appearance as the flame touches the ember flakes. Do not block burner ports or pilot ports by overlapping ember flakes in one area. It is not necessary to use all ember material provided.
4. Place lava rock around base of burner. Make sure burner ports are not covered (see Figure 36).
5. Place scrap log pieces randomly as desired on fireplace hearth floor around base of log set (see Figure 36).
6. Place decorative andirons to the left and right of log set on the hearth floor. Grate does not attach to hearth assembly (see Figure 36).



**Figure 36 - Installing Floor Media**

## INSTALLATION

### Continued

#### INSTALLING OPTIONAL GLASS DOOR ACCESSORY

**IMPORTANT:** Install glass door frame before installing glass door.

#### INSTALLING FRAME

1. Remove screws from smoke shelf (see Figure 37).
2. Mount top door frame and secure with screws provided (see Figure 37).
3. Place bottom door frame on top of ash lip at front of fireplace (see Figure 38).
4. Secure bottom door frame to brick with two hex screws provided as shown in Figure 38 using a 7/16" open end or adjustable wrench.

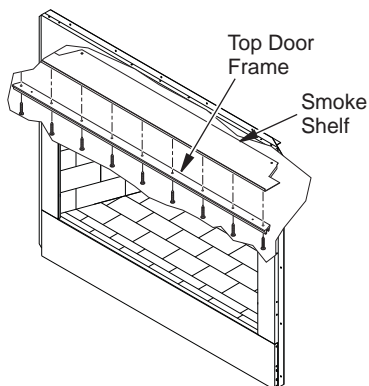


Figure 37 - Installing Top Door Frame

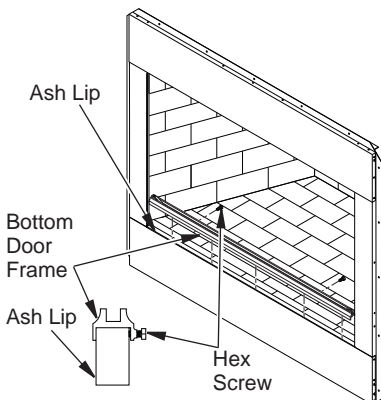


Figure 38 - Installing Bottom Door Frame

#### INSTALLING GLASS DOORS

Spring clips have been installed but some adjustments may be needed. Install the doors using the following steps:

1. With bifold doors completely folded, insert bottom pivot pin into pivot hole located near bottom corner of front face opening and swing door to vertical position making sure top pins slide into door track. Door is installed when top door pin snaps into spring clip.
2. Repeat step 1 for remaining door.

If you find the doors do not close properly or do not appear level or straight, proceed with section on door adjustment,

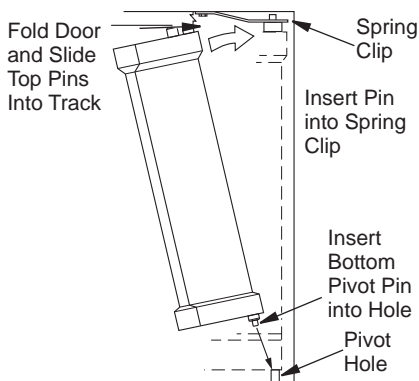


Figure 39 - Installing Bi-Fold Doors

#### DOOR ADJUSTMENT

Remove doors and slightly loosen lower pivot clips and upper spring clips. Replace doors and fully close them. Use 1/8" shims (any material) to level doors. Once proper setting is achieved, carefully open doors enough so that you can access spring clips with a phillips screwdriver. Tighten screws. See Figure 40.

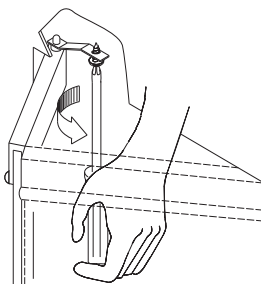


Figure 40 - Adjusting Bi-Fold Doors



## OPERATION

### FOR YOUR SAFETY READ BEFORE LIGHTING

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

- A. This appliance is equipped with an ignition device which automatically lights the pilot. Do not light pilot by hand.
- 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. 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

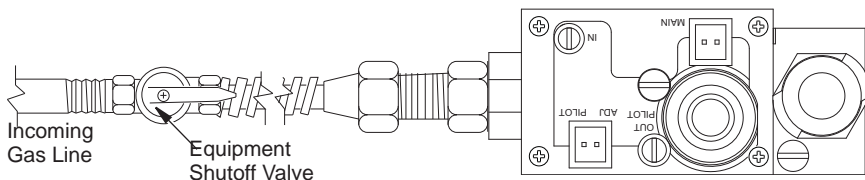
**NOTICE:** During initial operation of new fireplace, burning logs will give off a paper-burning smell. Orange flame will also be present. Open damper or window to vent smell. This will only last a few hours.

1. STOP! Read the safety information above.

2. Turn off all electric power to fireplace.
3. Turn safety shutoff switch to the OFF position or press OFF on hand-held remote.
4. Fully open glass doors, if installed.
5. Remove center brick/control cover.
6. Turn equipment shutoff valve clockwise  to the OFF position (see Figure 41). Do not force.
7. 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 1. If you don't smell gas, go to the next step.
8. Turn equipment shutoff valve counter-clockwise  to the ON position. Do not force.
9. Center brick/control cover.
10. Fully close glass doors, if installed.
11. Turn on all electric power to appliance.
12. Turn safety shutoff switch to the ON position or press ON on hand-held remote.
13. Visually locate pilot. Ignitor should begin to spark and main burner should ignite once flame appears at pilot.
  - If lighting appliance for the first time each season, it may take several attempts before supply gas can reach pilot and main burners.
  - If appliance will not stay lit after several attempts, follow instructions under To Turn Off Gas To Appliance and call your service technician or gas supplier.

### TO TURN OFF GAS TO APPLIANCE

1. Turn off safety shutoff switch.
2. Turn off all electric power to appliance if service is to be performed.
3. Remove center brick/control cover.
4. Turn equipment shutoff valve clockwise  to OFF. Do not force.
5. Replace center brick/control cover.



**Figure 41 - Turning Equipment Shutoff Valve to the OFF Position**

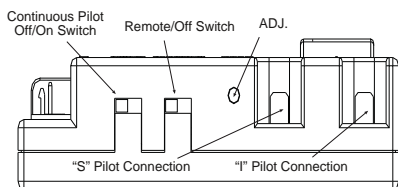
# GAS CONTROL MODULE SYSTEM

The module has 2 special features built into the system.

## CONTINUOUS PILOT FEATURE

This allows the change from a spark to pilot system to a standing pilot system

1. There is a switch located on the right side of the module that reads **CONTINUOUS PILOT ON/OFF**. This switch selects the pilot's mode of operation (Figure 42).
2. When the continuous pilot switch is in the **OFF** position and the appliance rocker switch is turned **ON**, the pilot will spark and light. When the appliance rocker switch is turned **OFF**, the pilot will shut **OFF** when the main burner shuts **OFF**.



**Figure 42 - Gas Module Right Side**

3. When the continuous pilot switch is in the **ON** position and the appliance rocker switch is turned **ON**, the pilot will spark and light. When the appliance rocker switch is turned **OFF**, the pilot will stay **ON** when the main burner shuts **OFF**.
4. The continuous pilot mode can also be activated by the Remote Control.

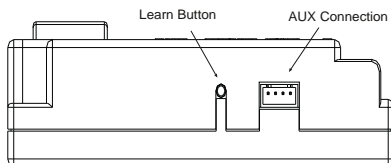
## REMOTE CONTROL FEATURE

The module has a built in remote control receiver that allows the user to program the remote transmitter at any time during or after the installation of the burner.

1. There is a switch located on the right side of the module that reads **REMOTE/OFF** (Figure 43).
2. When the remote/off switch is in the **OFF** position, the burner will operate from the rocker switch or wall switch connected to the two **BROWN** wires on the module.
3. When the remote/off is in the **REMOTE** position the burner will operate from the Remote Control transmitter.

**NOTE:** The module must be programmed to the Remote Control transmitter.

- To program the module (make sure the system has power), locate the learn button (Figure 43) on the module. Press and release the learn button. There will be a beep sound from the module. Then press any button on the remote transmitter. Once the module's internal receiver accepts the transmitter code, there will be a series of confirming beeps.
- The remote system is ready for use.



**Figure 43 - Gas Module Left Side**

## BATTERY BACK-UP

This fireplace is equipped with a battery back-up. If the power was to go out on the fireplace, the battery back-up allows the fireplace to remain operational. Make sure to periodically check the condition of the four **AA** batteries used for the battery back-up.

## INSPECTING BURNERS

Check pilot flame pattern and burner flame patterns often.

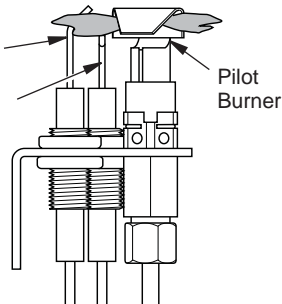
### PILOT ASSEMBLY

The pilot assembly is factory preset for the proper flame. Alterations may have occurred during shipping and handling. The pilot is located on right hand side of burner.

The flame must envelope 1/4" of top of the ignitor/sensor and grounding stem.

If your pilot assembly does not meet these requirements:

- Turn the adjustment screw marked PILOT clockwise to decrease or counterclockwise to increase the flame to proper size (see Figure 44). Do not remove the adjustment screw.
- see [Troubleshooting](#), page 30



**Figure 44 - Correct Pilot Flame Pattern**

### 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, flames will lift or "ghost". This can be dangerous. Inspect flames after installation to ensure proper installation and performance.

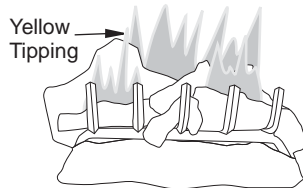
Figure 45 shows a typical flame pattern.

If burner flame pattern differs from that described:

- turn fireplace off (see [To Turn Off Gas to Appliance](#), page 25)
- see [Troubleshooting](#), page 30



**Figure 45 - Correct Burner Flame Pattern**



**Figure 46 - Incorrect Burner Flame Pattern**

## 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.

**⚠ WARNING:** Installation and repair should be done by a qualified service person. The appliance should be inspected before each use and at least annually by a qualified service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, pet hair, etc. It is imperative that the control compartments, burners and circulating air system be kept clean.

**⚠ WARNING:** The logs can be hot. Handle only when cool.

**⚠ WARNING:** Turn off gas and electrical power before servicing appliance.

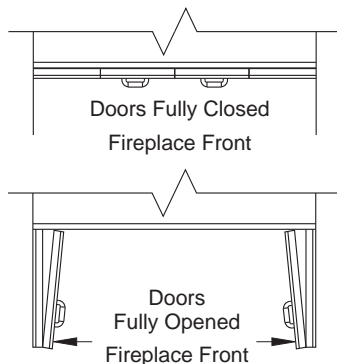
**⚠ WARNING:** Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.

### GLASS DOORS

Glass doors are optional with the fireplace. When fireplace is in operation, doors must be fully opened or fully closed position only or a fire hazard may be created (see Figure 47).

A fireplace equipped with glass doors operates much differently than a fireplace with an open front. A fireplace with glass doors has a limited amount of air for combustion.

Excessive heat within fireplace can result if too large a fire is built or if combustion air gate is not completely open. The following tips should be followed to assure that both fireplace and glass doors retain their beauty and function properly. Both flue damper and glass doors must be fully opened before starting fire. This will provide sufficient combustion air and maintain safe temperatures in firebox.



**Figure 47 - Bi-Fold Glass Doors**

**⚠ WARNING:** Fireplaces equipped with glass doors should be operated only with doors fully opened or doors fully closed. Doors, if left partly open, may draw gas and flame out of the fireplace opening creating risks of both fire and smoke.

### CLEANING GLASS

Clean glass with any commercial glass cleaner or soap and water. Do not use any abrasive material to clean glass. Do not clean glass with any cool water if glass is still hot from the fire and smoke.

## CLEANING AND MAINTENANCE

### *Continued*

#### PILOT AND BURNERS

- Remove 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

- Use a vacuum cleaner to remove any carbon buildup on logs.
- Replace material periodically as needed. See [Replacement Parts](#), page 43.

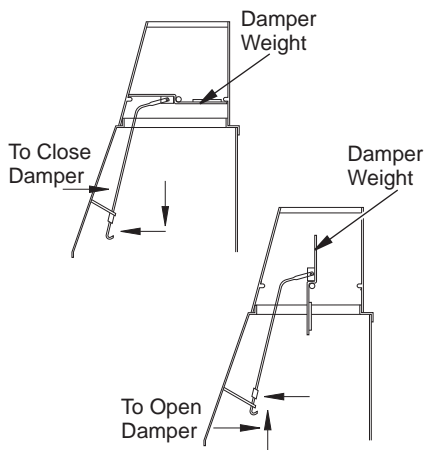
#### VENTING SYSTEM

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.

#### OUTSIDE AIR AND DAMPER HANDLE OPERATION

The damper handle, which opens and closes the damper blade, is located in the upper front face of the fireplace. Pushing the handle forward and up through the keyway slot will free damper blade to automatically open. Pushing the handle forward and down will lock damper blade closed (see Figure 48).



**Figure 48 - Operating Damper Handle**

#### REPLACING BATTERIES IN HAND-HELD REMOTE CONTROL AND AC BATTERY BACKUP

##### Replacing Batteries in AC Battery Backup

1. Remove bottom access door.
2. Remove battery pack from metal housing.
3. Remove existing batteries. Install 4 AA batteries into battery pack following positive and negative directions.
4. Insert battery pack back into metal housing.
5. Replace bottom access door.

##### Installing Batteries in Remote Control Unit

1. Remove battery cover on back of remote control unit.
2. Remove battery.
3. Install 1 A23/12V battery following positive and negative directions.
4. Replace battery cover onto remote control unit.

## TROUBLESHOOTING

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

**⚠ 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.*

The two most common causes of a malfunctioning gas appliance are:

1. Loose wiring connections
2. Construction debris clogging the pilot and/or gas control valve filter

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Ignitor will not spark or pilot will not light	1. No gas supply or shutoff valve is OFF	1. Check to see if you have gas supply and that equipment shutoff valve is opened
	2. Air in gas line	2. Repeat lighting procedure several times to purge all air out of lines. If after repeated attempts appliance does not light, call for qualified service and repair
	3. Construction debris clogging pilot orifice	3. Remove debris and dirt, inspect and clean any other possible obstructions
	4. Low gas pressure	4. Contact your gas supplier to check pressure
	5. Kinked pilot line	5. Have a qualified technician replace pilot line
	6. Control valve is not opening	6. Replace control valve (Refer to <u>Replacement Parts</u> , page 43)
	7. No power to unit or ignition module	7. Check that main power is on and that all wire connections are made correctly to ignition model (see <u>Wiring Diagram</u> , page 31).

# TROUBLESHOOTING

## *Continued*

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Pilot will not stay lit	<ol style="list-style-type: none"> <li>1. Loose wiring on ignitor wire to ignition module and/ or poor ground to ignition module</li> <li>2. Main burner does not come on when manual switch or remote control is turned on.</li> </ol>	<ol style="list-style-type: none"> <li>1. Confirm the "S" wire and the "I" wire are properly connected to the module in the proper "S" and "I" terminals. Confirm that the spark to the pilot burner is properly grounded to the gas control valve and to the module. Check the 110 volt power source or the 6 volt battery back-up connections and condition of batteries. Check the position of the CONTINUOUS PILOT switch on the module.</li> <li>2. Confirm the pilot is sparking and lights. Check the two plastic connectors that plug in the face of the gas control valve. Confirm the gas control valve is properly grounded to the module.</li> </ol>
No gas to burner, although safety shutoff switch and valve are set to the ON position	<ol style="list-style-type: none"> <li>1. Safety shutoff switch wires defective or too long</li> </ol>	<ol style="list-style-type: none"> <li>1. Check electrical connections</li> </ol>
Frequent pilot outage	<ol style="list-style-type: none"> <li>1. Pilot flame may be too low, causing safety pilot to "drop out"</li> <li>2. Improper venting or excessive blockage</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean and adjust pilot flame for maximum flame impingement on thermopile</li> <li>2. Have vent system inspected, including termination cap. Remove any restriction or obstruction</li> </ol>
Fireplace produces a clicking/ ticking noise just after burner is lit or shut off	<ol style="list-style-type: none"> <li>1. Metal expanding while heating or contracting while cooling</li> </ol>	<ol style="list-style-type: none"> <li>1. This is normal with most fireplaces. If noise is excessive, contact qualified service person</li> </ol>
Remote does not function	<ol style="list-style-type: none"> <li>1. Battery is not installed or battery is power is low</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace 4-AA batteries in receiver and/or remote control</li> </ol>

# TROUBLESHOOTING

## *Continued*

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Burner does not light after pilot is lit or cycles during operation.	<ol style="list-style-type: none"> <li>1. Burner orifice clogged</li> <li>2. Inlet gas pressure is too low</li> <li>3. Thermopile leads disconnected or improperly connected</li> <li>4. Thermopile is defective</li> <li>5. Improper venting or excessive blockage</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice</li> <li>2. Contact local propane/LP or natural gas company</li> <li>3. Reconnect leads</li> <li>4. Replace thermopile</li> <li>5. Have the vent system inspected, including the termination cap. Remove any restriction or obstruction</li> </ol>
Delayed ignition at burner	<ol style="list-style-type: none"> <li>1. Manifold pressure too low</li> <li>2. Burner porting or orifice clogged</li> </ol>	<ol style="list-style-type: none"> <li>1. Contact local propane/LP or natural gas company</li> <li>2. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice</li> </ol>
Burner backfiring during combustion	<ol style="list-style-type: none"> <li>1. Burner orifice is clogged or damaged</li> <li>2. Damaged burner</li> <li>3. Gas regulator defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice</li> <li>2. Replace damaged burner</li> <li>3. Replace gas control</li> </ol>
Slight smoke or odor during initial operation	<ol style="list-style-type: none"> <li>1. Residues from manufacturing processes and logs curing</li> </ol>	<ol style="list-style-type: none"> <li>1. Problem will stop after a few hours of operation</li> </ol>
Heat produces a whistling noise when burner is lit	<ol style="list-style-type: none"> <li>1. Turning gas control knob to HI position when burner is cold</li> <li>2. Air in gas line</li> <li>3. Dirty or partially clogged burner orifice</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn gas control knob to LO position and let warm up for a minute</li> <li>2. Operate burner until air is removed from line. Have gas line checked by propane/LP or natural gas company</li> <li>3. Clean burner (see <i>Cleaning and Maintenance</i>, page 28) or replace burner orifice</li> </ol>



# TROUBLESHOOTING

## *Continued*

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Fireplace produces unwanted odors	1. Gas leak. <b>See Warning statement above</b>	1. Locate and correct all leaks (see <u><i>Checking Gas Connections</i></u> , page 22)
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. Bad thermopile or thermocouple 6. Vent cap improperly installed or blocked	1. Fireplace has been tested for up to 40 mph winds. However, extreme conditions may occur. See <u><i>Lighting Instructions</i></u> , page 25 2. Check local propane/LP or natural gas company 3. Clean pilot (see <u><i>Cleaning and Maintenance</i></u> , page 28) 4. Locate and correct all vent connections (see <u><i>Venting</i></u> , page 11) 5. Replace faulty components 6. Check for proper installation or remove debris or blockage.
Burner does not light after pilot is lit	1. Burner orifice clogged 2. Inlet gas pressure is too low 3. Thermopile leads disconnected or improperly connected 4. Thermopile is defective	1. Clean burner (see <u><i>Cleaning and Maintenance</i></u> , page 28) or replace burner orifice 2. Contact local propane/LP or natural gas company 3. Reconnect leads to TP and TPTH terminals on control valve 4. Replace thermopile

## 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.

OBSERVED PROBLEM	POSSIBLE CAUSE	REMEDY
Gas odor even when gas control valve is off	<ol style="list-style-type: none"> <li>1. Gas leak. <b>See Warning statement at top of page</b></li> <li>2. Control valve defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Locate and correct all leaks (see <u>Checking Gas Connections</u>, page 22)</li> <li>2. Replace control valve</li> </ol>
Gas odor during combustion	<ol style="list-style-type: none"> <li>1. Foreign matter between control valve and burner</li> <li>2. Gas leak. <b>See Warning statement at top of page</b></li> </ol>	<ol style="list-style-type: none"> <li>1. Take apart gas tubing and remove foreign matter</li> <li>2. Locate and correct all leaks (see <u>Checking Gas Connections</u>, page 22)</li> </ol>
Glass soots	<ol style="list-style-type: none"> <li>1. Debris around burner air mixer</li> <li>2. Improper vent configuration</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect opening at base of burner to see that it is NOT packed with any type of material</li> <li>2. Check vent configuration specification (see <u>Venting Installation</u>, page 11)</li> </ol>
Dark residue on logs or inside of fireplace	<ol style="list-style-type: none"> <li>1. Air holes at burner inlet blocked</li> <li>2. Burner flame holes blocked</li> <li>3. Improper venting or excessive blockage</li> <li>4. Excessive amounts of embers and pan material</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean out air holes at burner inlets. Periodically repeat as needed</li> <li>2. Remove blockage</li> <li>3. Have vent system inspected, including termination cap. Remove any restrictions or obstruction</li> <li>4. Clear excess embers until a minimum gap of 1/2" remains under grate</li> </ol>

# SPECIFICATIONS

## BBM-36N-JHB

- Rating: 53,000/32,000 Btu/hr
- Gas Type: Natural Gas Only
- Ignition: Electronic
- Manifold Pressure: 3.5" w.c.
- Minimum Inlet Supply Pressure: 4.5" w.c.
- Maximum Inlet Supply Pressure: 10.5" w.c.
- Orifice: #25

## BBM-42N-JHB

- Rating: 62,000/37,000 Btu/hr
- Gas Type: Natural Gas Only
- Ignition: Electronic
- Manifold Pressure: 3.5" w.c.
- Minimum Inlet Supply Pressure: 4.5" w.c.
- Maximum Inlet Supply Pressure: 10.5" w.c.
- Orifice: #19

## BBM-50N-JHB

- Rating: 66,000/38,000 Btu/hr
- Gas Type: Natural Gas Only
- Ignition: Electronic
- Manifold Pressure: 3.5" w.c.
- Minimum Inlet Supply Pressure: 4.5" w.c.
- Maximum Inlet Supply Pressure: 10.5" w.c.
- Orifice: #16

## BBM-36P-JHB

- Rating: 52,000/39,000 Btu/hr
- Gas Type: Propane/LP Only
- Ignition: Electronic
- Manifold Pressure: 10" w.c.
- Minimum Inlet Supply Pressure: 11" w.c.
- Maximum Inlet Supply Pressure: 13" w.c.
- Orifice: #44

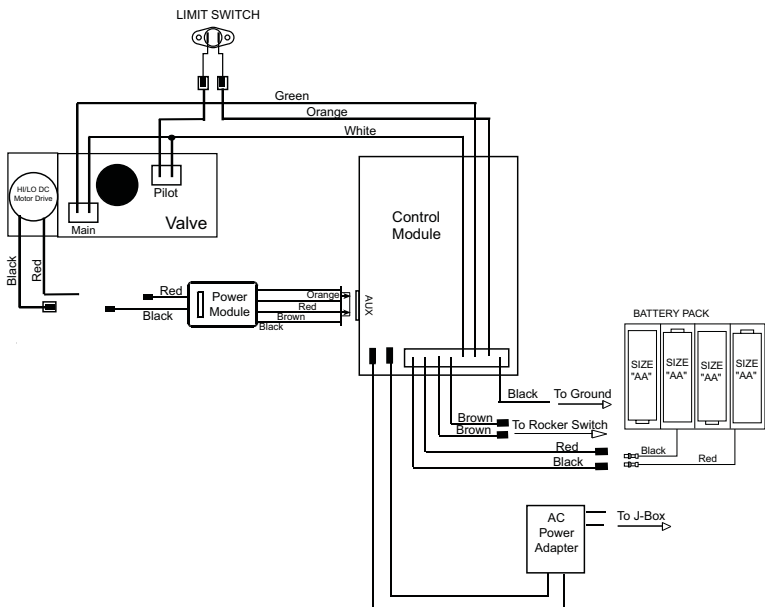
## BBM-42P-JHB

- Rating: 59,000/43,000 Btu/hr
- Gas Type: Propane/LP Only
- Ignition: Electronic
- Manifold Pressure: 10" w.c.
- Minimum Inlet Supply Pressure: 11" w.c.
- Maximum Inlet Supply Pressure: 13" w.c.
- Orifice: #43

## BBM-50P-JHB

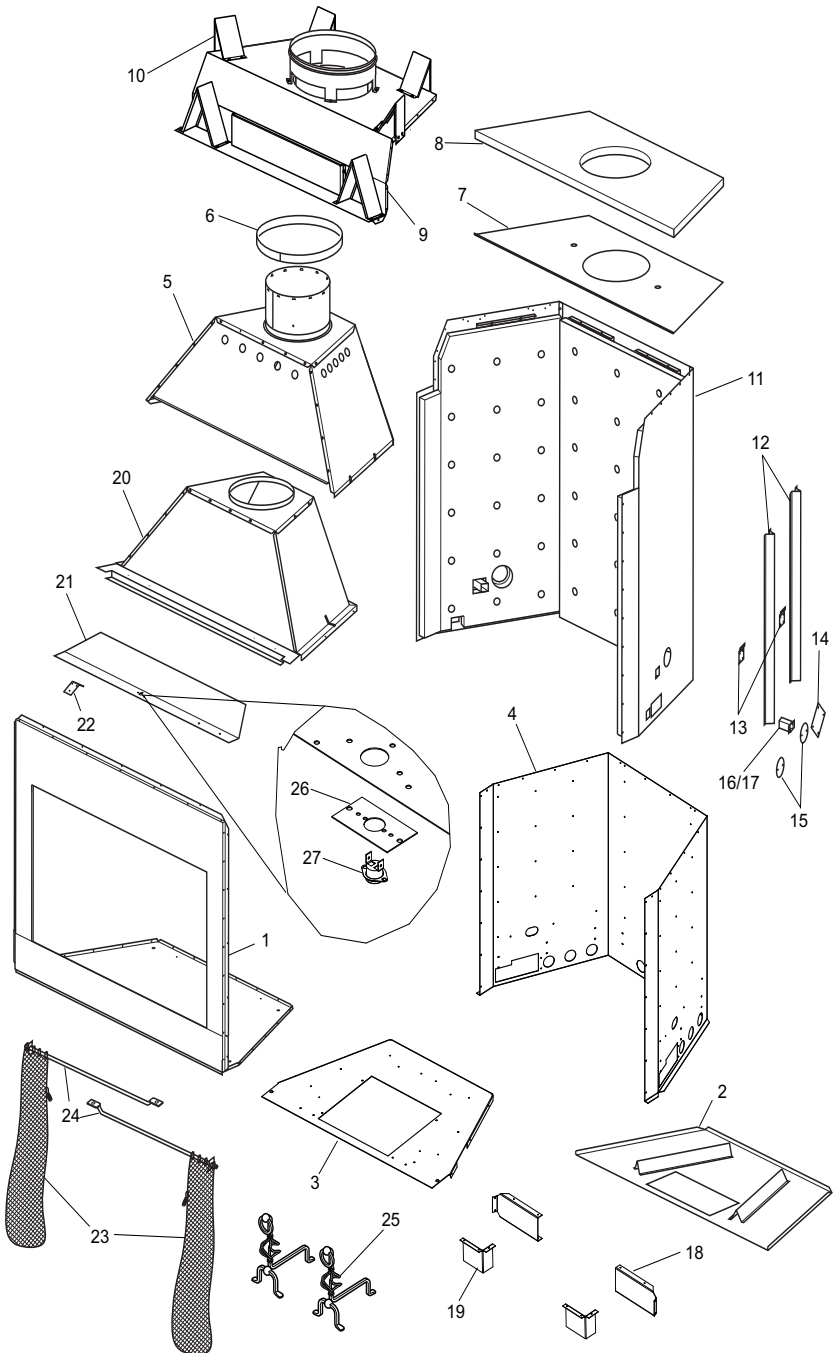
- Rating: 63,000/46,000 Btu/hr
- Gas Type: Propane/LP Only
- Ignition: Electronic
- Manifold Pressure: 10" w.c.
- Minimum Inlet Supply Pressure: 11" w.c.
- Maximum Inlet Supply Pressure: 13" w.c.
- Orifice: #42)

# WIRING DIAGRAM



# PARTS

## MODELS BVC-36YA, BVC-42YA AND BVC-50YA



## PARTS

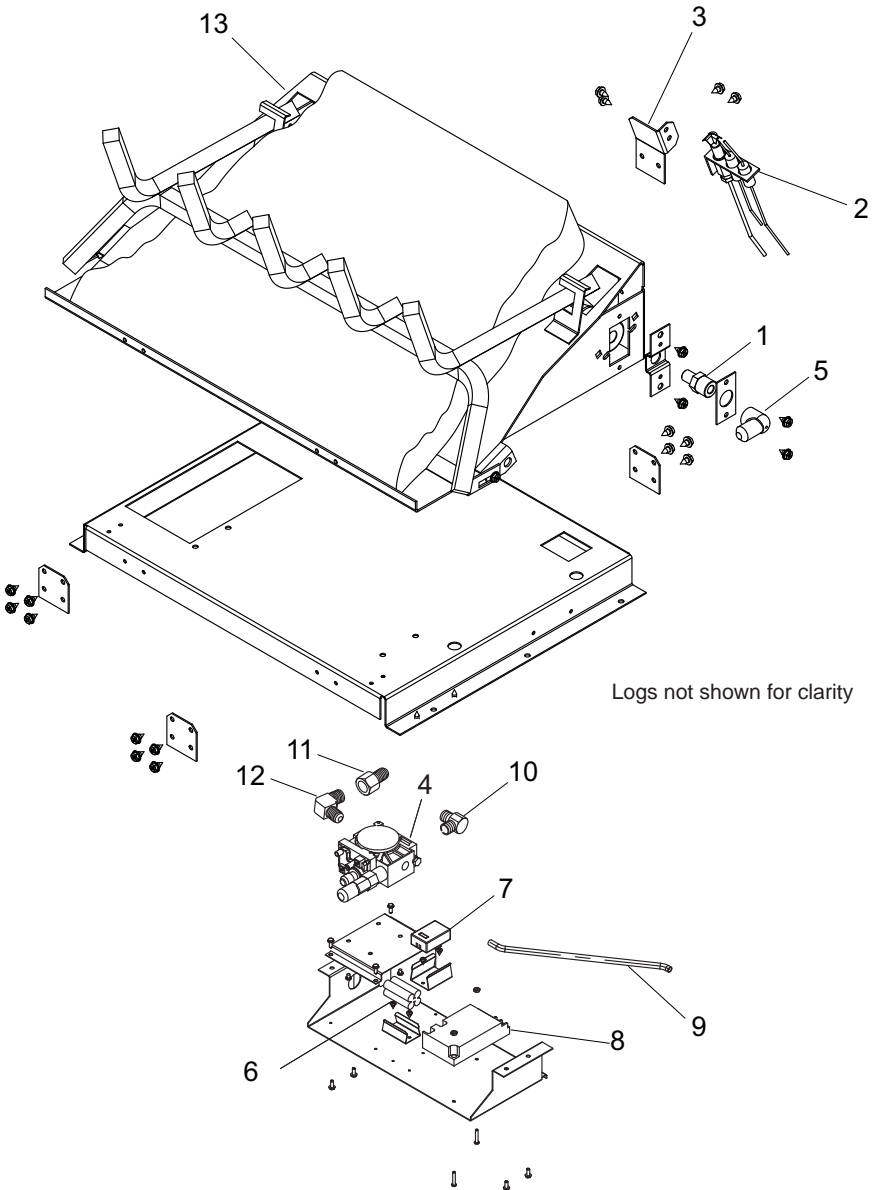
This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under Replacement Parts on page 43 of this manual.

KEY NO.	PART NO.	DESCRIPTION	BVC-36YA	BVC-42YA	BVC-50YA	QTY.
1	**	Face Assembly	•	•	•	1
2	**	Firebox Bottom Assembly	•	•	•	1
3	**	Firebox Bottom	•	•	•	1
4	**	Firebox Surround	•	•	•	1
5	**	Outer Dome Assembly	•	•	•	1
6	**	Insulation Pan Support	•	•	•	1
7	**	Insulation Pan	•	•	•	1
8	**	Top Insulation	•	•	•	1
9	110285-03	Fireplace Top Assembly, 36"	•			1
	110285-02	Fireplace Top Assembly, 42"		•		1
	110285-01	Fireplace Top Assembly, 50"			•	1
10	23490SA	Standoff	•	•	•	4
11	**	Fireplace Surround Assembly	•	•	•	1
12	109720-02	Clearance Spacer	•	•	•	6
13	117891-01	Fireplace Handle Bracket	•	•	•	4
14	20042	Outside Air Cover Plate	•	•	•	2
15	21171	Gas Conduit Cover	•	•	•	4
16	109752-01	Conduit One	•	•	•	2
17	109752-02	Conduit Two	•	•	•	2
18	**	Firebox Support	•			2
	**	Firebox Support		•	•	1
19	**	Firebox Legs	•	•	•	2
20	**	Inner Dome Assembly	•	•	•	1
21	**	Smoke Shield	•	•	•	1
22	**	Damper Control Bracket	•	•	•	1
23	109457-03	Screen 36"	•			2
	109457-02	Screen 42"		•		2
	109457-01	Screen 50"			•	2
24	20806	Screen Rod 36"	•			2
	110146-03	Screen Rod 42"		•		2
	110146-02	Screen Rod 50"			•	2
25	120441-01	Decorative Andiron	•	•	•	2
26	14574	Limit Switch	•		•	1
	106543-01	Limit Switch		•		1
27	125358-01	Limit Switch Plate	•	•	•	1
<b>PARTS AVAILABLE NOT SHOWN</b>						
	108055-11	Wire Harness	•	•	•	1
	see page 40	Firebrick Walls	•	•	•	

\*\* Not a field replaceable part.

## PARTS

### MODULE MODELS BBM-36(N,P)-JHB, BBM-42(N,P)-JHB AND BBM-50(N,P)-JHB



## PARTS

This list contains replaceable parts used in your heater. When ordering parts, follow the instructions listed under Replacement Parts on page 43 of this manual.

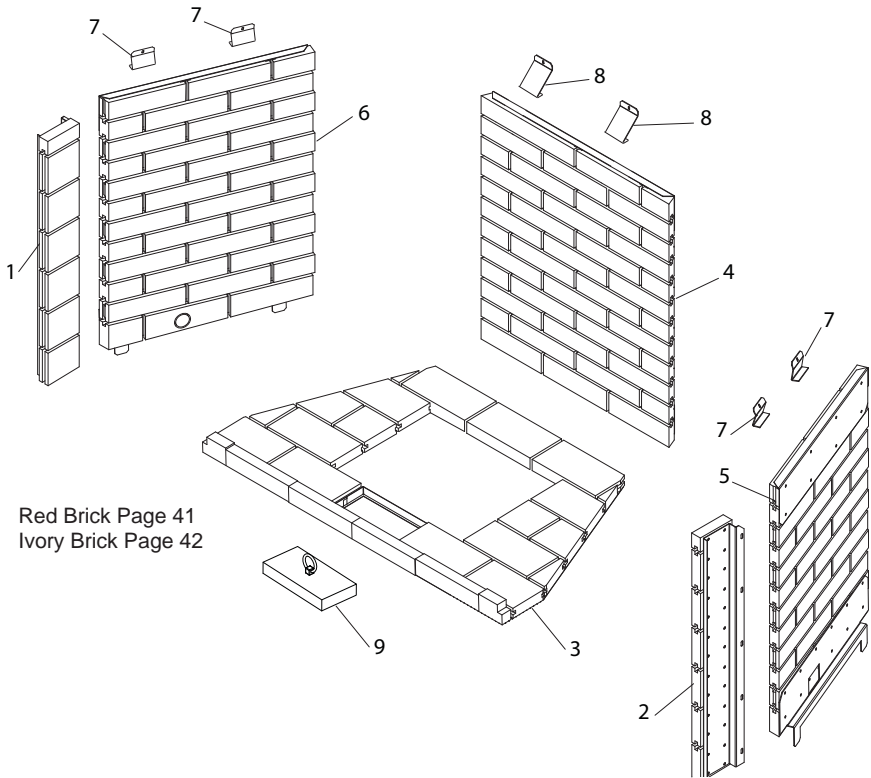
KEY NO.	PART NO.	DESCRIPTION	BBM-36N-JHB	BBM-36P-JHB	BBM-42N-JHB	BBM-42P-JHB	BBM-50N-JHB	BBM-50P-JHB	QTY.
1	23101	Orifice #44		•					1
	112371-17	Orifice #23	•						1
	25683	Orifice #43				•			1
	112371-11	Orifice #19			•				1
	112371-16	Orifice #16					•		1
	24771	Orifice #42						•	1
2	125699-01	Pilot, NG	•		•		•		1
	125699-02	Pilot, LP		•		•		•	1
3	125609-01	Pilot Bracket	•	•	•	•	•	•	1
4	125063-03	Valve, NG	•		•		•		1
	125063-01	Valve, LP		•		•		•	1
5	14528	Brass Adapter 3/8 X 3/8	•	•	•	•	•	•	1
6	125068-01	Battery Backup	•	•	•	•	•	•	1
7	125067-01	Power Module	•	•	•	•	•	•	1
8	125064-01	Control Module	•	•	•	•	•	•	1
9	108368-01	Flex Line 3/8 x 30"	•	•	•	•	•	•	1
10	14264	Brass Elbow	•	•	•	•	•	•	1
11	110118-01	Flared Fitting	•	•	•	•	•	•	1
12	901062-01	Brass Elbow	•	•	•	•	•	•	1
13	125673-01	Logset Assembly, 36"	•	•					1
	125673-02	Logset Assembly, 42"			•	•			1
	125673-03	Logset Assembly, 50"					•	•	1
<b>PARTS AVAILABLE NOT SHOWN</b>									
	112799-01	Ember Flakes Kit	•	•	•	•	•	•	1
	26839	Rockwool	•	•	•	•	•	•	1
	101142-01SA	Lave Rock Kit	•	•	•	•	•	•	1
	117501-02	Log Scrap Kit	•	•	•	•	•	•	1
	125069-01	Remote Control	•	•	•	•	•	•	1
	14253	30" Flex Line w/ Shut Off	•	•	•	•	•	•	1
	125065-02	Wire Harness	•	•	•	•	•	•	1
	125066-01	AC Adapter (Power Cord)	•	•	•	•	•	•	1
	14163	Extension Cord	•	•	•	•	•	•	1
	14607	On/Off Switch	•	•	•	•	•	•	1
	125518-01	Touch Up Paint	•	•	•	•	•	•	1

\*\* Not a field replaceable part.

## PARTS

### MODELS MODELS MKB SERIES

Picture may vary from actual





## PARTS

This list contains replaceable parts used in your firebox. When ordering parts, follow the instructions listed under Replacement Parts on page 43 of this manual.

KEY NO.	PART NO.	DESCRIPTION							QTY.
			MKB-36SS-RA	MKB-36SH-RA	MKB-42SS-RA	MKB-42SH-RA	MKB-50SS-RA	MKB-50SH-RA	
1	125116-01	Left Leading Brick 36" Red	•	•					1
	125118-01	Left Leading Brick 42"/50" Red			•	•	•	•	1
2	125116-02	Right Leading Brick 36" Red	•	•					1
	125118-02	Right Leading Brick 42"/50" Red			•	•	•	•	1
3	125042-01	Hearth 36" Red	•	•					1
	125043-01	Hearth 42" Red			•	•			1
	125044-01	Hearth 50" Red					•	•	1
4	124216-01	Rear Stacked 36" Red	•						1
	124228-01	Rear Herringbone 36" Red		•					1
	125419-01	Rear Stacked 42" Red			•				1
	125431-01	Rear Herringbone 42" Red				•			1
	125443-01	Rear Stacked 50" Red					•		1
	125455-01	Rear Herringbone 50" Red						•	1
5	124218-01	Right Stacked 36" Red	•						1
	124230-01	Right Herringbone 36" Red		•					1
	125445-01	Right Stacked 42"/50" Red			•		•		1
	125433-01	Right Herringbone 42" Red				•			1
	125457-01	Right Herringbone 50" Red						•	1
6	124220-01	Left Stacked 36" Red	•						1
	124232-01	Left Herringbone 36" Red		•					1
	125447-01	Left Stacked 42"/50" Red			•		•		1
	125435-01	Left Herringbone 42" Red				•			1
	125459-01	Left Herringbone 50" Red						•	1
7	124134-01	Side Retainer 36" (Included with Firebox)	•	•					4
	124134-02	Side Retainer 42"/50" (Included with Firebox)			•	•	•	•	4
	124134-04	Side Retainer 36" Stainless (Included with Firebox)	•	•					4
	124134-05	Side Retainer 42"/50" Stainless (Included with Firebox)			•	•	•	•	4
8	124134-03	Rear Retainer (Included with Firebox)	•	•	•	•	•	•	2
	124134-06	Rear Retainer Stainless (Included with Firebox)	•	•	•	•	•	•	2
9	120848-01	Ash Brick Red	•	•	•	•	•	•	1

## PARTS

This list contains replaceable parts used in your firebox. When ordering parts, follow the instructions listed under Replacement Parts on page 43 of this manual.

KEY NO.	PART NO.	DESCRIPTION							QTY.
			MKB-36SS-1A	MKB-36SH-1A	MKB-42SS-1A	MKB-42SH-1A	MKB-50SS-1A	MKB-50SH-1A	
1	125116-03	Left Leading Brick 36" Ivory	•	•					1
	125118-03	Left Leading Brick 42"/50" Ivory			•	•	•	•	1
2	125116-04	Right Leading Brick 36" Ivory	•	•					1
	125118-04	Right Leading Brick 42"/50" Ivory			•	•	•	•	1
3	125042-02	Hearth 36" Ivory	•	•					1
	125043-02	Hearth 42" Ivory			•	•			1
	125044-02	Hearth 50" Ivory					•	•	1
4	124216-02	Rear Stacked 36" Ivory	•						1
	124228-02	Rear Herringbone 36" Ivory		•					1
	125419-02	Rear Stacked 42" Ivory			•				1
	125431-02	Rear Herringbone 42" Ivory				•			1
	125443-02	Rear Stacked 50" Ivory					•		1
	125455-02	Rear Herringbone 50" Ivory						•	1
5	124218-02	Right Stacked 36" Ivory	•						1
	124230-02	Right Herringbone 36" Ivory		•					1
	125445-02	Right Stacked 42"/50" Ivory			•		•		1
	125433-02	Right Herringbone 42" Ivory				•			1
	125457-02	Right Herringbone 50" Ivory						•	1
6	124220-02	Left Stacked 36" Ivory	•						1
	124232-02	Left Herringbone 36" Ivory		•					1
	125447-02	Left Stacked 42"/50" Ivory			•		•		1
	125435-02	Left Herringbone 42" Ivory				•			1
	125459-02	Left Herringbone 50" Ivory						•	1
7	124134-01	Side Retainer 36" (Included with Firebox)	•	•					4
	124134-02	Side Retainer 42"/50" (Included with Firebox)			•	•	•	•	4
	124134-04	Side Retainer 36" Stainless (Included with Firebox)	•	•					4
	124134-05	Side Retainer 42"/50" Stainless (Included with Firebox)			•	•	•	•	4
8	124134-03	Rear Retainer (Included with Firebox)	•	•	•	•	•	•	2
	124134-06	Rear Retainer Stainless (Included with Firebox)	•	•	•	•	•	•	2
9	120848-03	Ash Brick Ivory	•	•	•	•	•	•	1

## REPLACEMENT PARTS

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

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

When calling FMI PRODUCTS, LLC, have ready:

- your name
- your address
- model and serial numbers of your fireplace & module
- how module was malfunctioning
- purchase date

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

## SERVICE HINTS

### **When Gas Pressure Is Too Low**

- pilot will not stay lit
- burner will have delayed ignition
- fireplace will not produce specified heat
- propane/LP gas supply may be low if using propane/LP gas

If using propane/LP gas, you may feel your gas pressure is too low. If so, contact your local propane/LP gas supplier.

## TECHNICAL SERVICE

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

You can also visit FMI PRODUCTS, LLC's web site at **[www.fmiproducts.com](http://www.fmiproducts.com)**.

## ACCESSORIES

**NOTICE: All accessories may not be available for all fireplace models.**

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

### **BI-FOLD GLASS MASONRY DOORS**

**BDMO36E** - 36" Ebony  
**BDMO36G** - 36" Pewter  
**BDMO36C** - 36" Oiled Bronze  
**BDMO42E** - 42" Ebony  
**BDMO42G** - 42" Pewter  
**BDMO42C** - 42" Oiled Bronze  
**BDMO50E** - 50" Ebony  
**BDMO50G** - 50" Pewter  
**BDMO50C** - 50" Oiled Bronze

### **AIR KIT - AK4 AND AK4F**

Optional kit helps offset the negative pressure often existing in today's tightly constructed homes.

### **8" B-TYPE TRANSITION PIPE - BTC-8**

### **WIRELESS ON/OFF WALL SWITCH - 125702-01**

# WARRANTY

## KEEP THIS WARRANTY

Model (located on product or identification tag) \_\_\_\_\_

Serial No. (located on product or identification tag) \_\_\_\_\_

Date Purchased \_\_\_\_\_

Keep receipt for warranty verification.

## FMI PRODUCTS, LLC LIMITED WARRANTIES

### New Products

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

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

### Factory Reconditioned Products

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

### Terms Common to All Warranties

The following terms apply to all of the above warranties:

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

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

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

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

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

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

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

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

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

For information about this warranty contact:

  
**FMI PRODUCTS, LLC**  
2701 S. Harbor Blvd.  
Santa Ana, CA 92704  
1-866-328-4537  
[www.fmiproducts.com](http://www.fmiproducts.com)

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