

# Isokern® BVETTO™ B-Vent Gas Fireplaces and Chimney System

## Installation, Operation, Maintenance and Owner's Manual

### Isokern BVETTO Models 80B36 & 80B46

A PRODUCT OF EARTHCORE® INDUSTRIES, LLC

**IMPORTANT:** This manual contains assembly rules, installation steps and guidelines, and use and maintenance instructions for Isokern B-VENT gas appliances (BVETTO). This manual must become the property of and be reviewed by all current and future users of this product. It is the responsibility of the distributor, general contractor, and the installer of this product that the instructions in this manual are followed exactly and, further that the allowed gas log appliance used in this product be installed in strict accordance with the gas log manufacturer's listing and explicit installation and operation instructions.

**INSTALLER:** Leave this manual with the appliance

**CONSUMER:** Retain this manual for future reference

### Be Sure to Read Entire Manual Before Beginning Construction.

Contents of this manual may change without prior notification.



#### **WARNING:**

##### **FIRE OR EXPLOSION HAZARD**

Failure to follow safety warning exactly could result in serious injury, death, or property damage.

- 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.
  - Leave the building immediately.
  - 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.

Do not install the BVETTO B-Vent Gas Fireplace in a manufactured home or mobile home or recreational vehicle.

- This appliance complies with National Safety and is tested and listed to ANSI Z21.50 - 2019 as vented gas fireplaces.
- Installation must conform to local codes. Check local codes prior to installation. In the absence of local codes, installation must conform with current National Fuel Gas Code, ANSI Z223.1.

PFS Report No. 09-79 SAP No.  
506022-03 USA: ANSI Z21.50 - 2019  
Canadian: CSA 2.22- 2019



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**THESE FIREPLACES ARE DESIGNED for USE with: PROPANE (LP) or NATURAL GAS (NG), ONLY**

THIS MANUAL CAN ONLY BE REPRODUCED IN ITS ENTIRETY

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## ANSI Z21.50 LISTING LABEL

ISOKERN BVETTO B-VENT GAS FIREPLACE:  
MODELS 80B36 AND 80B46



LISTED VENTED GAS FIREPLACE  
PER USA ANSI Z21.50 - 2019  
AND CANADIAN CSA 2.22-2019

**ISOKERN®**

MODEL #

☐ 80B36 ☐ 80B46

**NOT FOR USE WITH SOLID FUEL**

**SERIAL NO: B000000**

PFS REPORT NO. F09-79

SUITABLE FOR USE WITH PROPANE (LP) OR NATURAL GAS, SEE GAS IDENTIFYING TAG ON BURNER

- ☐ IBV36 MODEL # 80B36 PROPANE (LP) BTU MIN: 44,000; BTU MAX: 56,000
- ☐ IBV36 MODEL # 80B36 NATURAL GAS (NG) BTU MIN: 44,000; BTU MAX: 62,000
- ☐ IBV46 MODEL # 80B46 PROPANE (LP) BTU MIN: 61,000; BTU MAX: 81,000
- ☐ IBV46 MODEL # 80B46 NATURAL GAS (NG) BTU MIN: 51,000; BTU MAX: 85,000

\*SEE BURNER RATING PLATE FOR ADDITIONAL INFORMATION

SEE INSTALLATION AND OPERATING INSTRUCTION FOR THIS MODEL AND ICC # ESR-4873

MANIFOLD PRESSURE: PROPANE (LP): 10" WATER COLUMN; NATURAL GAS: 3.5" WATER COLUMN

MINIMUM PERMISSIBLE GAS SUPPLY PRESSURE FOR PURPOSE OF INPUT ADJUSTMENT:

PROPANE (LP): 11" WATER COLUMN; NATURAL GAS: 5" WATER COLUMN

**ELECTRICAL RATING:**

UNIT: ELECTRONIC

1 PH

60 HZ

120 VOLTS

LESS THAN 5 AMPS

**CLEARANCE TO COMBUSTIBLES:**

SMOKE DOME FRONT AND UNIT SIDES	= 0 in	
UNIT REAR	= 1.5 in	60 mm
COMBUSTIBLE SHEATHING ABOVE OPENING	= 8 in	205 mm
TOP SHEATHING OR TRIM TO OPENING SIDES	= 8 in	205 mm
MANTEL ABOVE OPENING	= 12 in	305 mm
INSULATION FROM FIREBOX	= 3 in	75 mm

CAUTION: 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.

THIS APPLIANCE MUST BE INSTALLED IN ACCORDANCE WITH LOCAL CODES, IF ANY, IF NONE FOLLOW THE CURRENT ANSI Z223.0/NFPA 54 OR CSA B149.1

MADE IN THE USA  
CHESAPEAKE, VA 23323

EARTHCORE INDUSTRIES HEADQUARTERS  
JACKSONVILLE, FL 32256

## GENERAL INFORMATION

BVETTO Models 80B36 and 80B46 are tested and listed by PFS Corp., USA Report No. 09-79 to ANSI Z21.50 - 2019 and Canadian Standard CSA 2.22 - 2019. The BVETTO models are top-vented, gas only fireplaces that are listed for use only with the ISOKERN Gas Log appliance listed in this installation manual. These gas appliances come with a gas control valve that includes an automatic shut-off switch. The gas valve is available in a millivolt remote control pilot assembly.

The exhaust flue gases are to be vented through the top of the unit with listed B-Vent piping. A ten-inch (10") diameter, double wall B-Venting system and a listed vent cap are not supplied but are required for proper operation of all BVETTO Models, 36 and 46. See venting instructions on pages 21-23.

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

### Intended Use Statement

The BVETTO is intended to burn propane (LP) gas or natural gas (NG), only. This appliance is not intended to be used as a primary source of heat.

The BVETTO and its approved components are safe when installed according to this installation manual and when operated as recommended by the manufacturer. Unless you use Earthcore Industries, LLC approved components tested for this appliance, you may cause a fire hazard or serious injury.

Before you begin the installation of this appliance, read these instructions completely.

Earthcore Industries, LLC disclaims any responsibility for the following actions:

1. Modification of the appliance or any of its components.
2. Use of any component part not approved by Earthcore Industries in combination with this appliance.
3. Installation or operation in a manner other than instructed in this manual.
4. Burning of anything (solid fuel) other than the listed gas log unit and the type of gas approved for use in this gas appliance.

The most important areas of concern with the of the top venting BVETTO are clearance to combustible materials, proper assembly of component parts, load carrying capacity of underlying floor system, height of chimney system, hearth extensions and the techniques employed in applying finishing materials to the wall surrounding the BVETTO.

Each of these topics will be covered in detail throughout this manual. Special attention must be given to each topic as the installation progresses.

The installation of the BVETTO must conform with local codes or, in the absence of local codes, with the current National Fuel Gas Code, ANSI-Z223.1/NFPA 54 or the current Natural Gas and Propane Installation Code, CSA B149.1.

### Seismic Code Specifications

If installation of the Isokern Firebox is to be installed in an area with Seismic Codes, please follow these instructions. Four No. 4 ASTM A615 Grade 40 minimum, vertical reinforcing bars, 2 on each side of the fire box running from mid-height (where the tapered section of the box begins) of the structure to approximately 4 inches into the concrete slab (for anchorage).

**Important:** The top plate of the firebox is not meant to be used as a structural support. Please consult structural engineer for structural support of any veneer bearing weight on the Isokern top plate.

**Note:** Do not scale drawings. Illustrations in this manual are not to scale and are intended to show "typical" installations.

Nominal dimensions are given for design and framing reference only. Actual installations may vary due to job specific design preferences. Always maintain the stated minimum clearances to combustible materials. Do not violate any specific installation requirements.

## SAFETY INSTRUCTIONS

**WARNING:** This product contains 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 fire, burns, explosions and carbon monoxide poisoning.

**DANGER: CARBON MONOXIDE POISONING MAY LEAD TO DEATH!**

This fireplace is a vented product and will not produce any gas leakage into your home if properly installed by a qualified service person. If this unit is not properly installed by a qualified service person, gas leakage may occur.

Propane (LP) gas and natural gas (NG) are both colorless and odorless gases. An odor-making agent is added to each of these gases to help you detect a gas leak. However, the odor added to these gases can fade and gas may be present even though no odor exists.

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning resemble flu symptoms, including headaches, dizziness, or nausea. If you have these signs the fireplace may not have been installed properly, get fresh air at once! Have the fireplace inspected and serviced by a qualified service person or your gas supplier. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung diseases or anemia, people at high altitude or under the influence of alcohol. Earthcore Industries strongly recommends the use of a carbon monoxide detector/alarm device wherever gas fired appliances are in use.

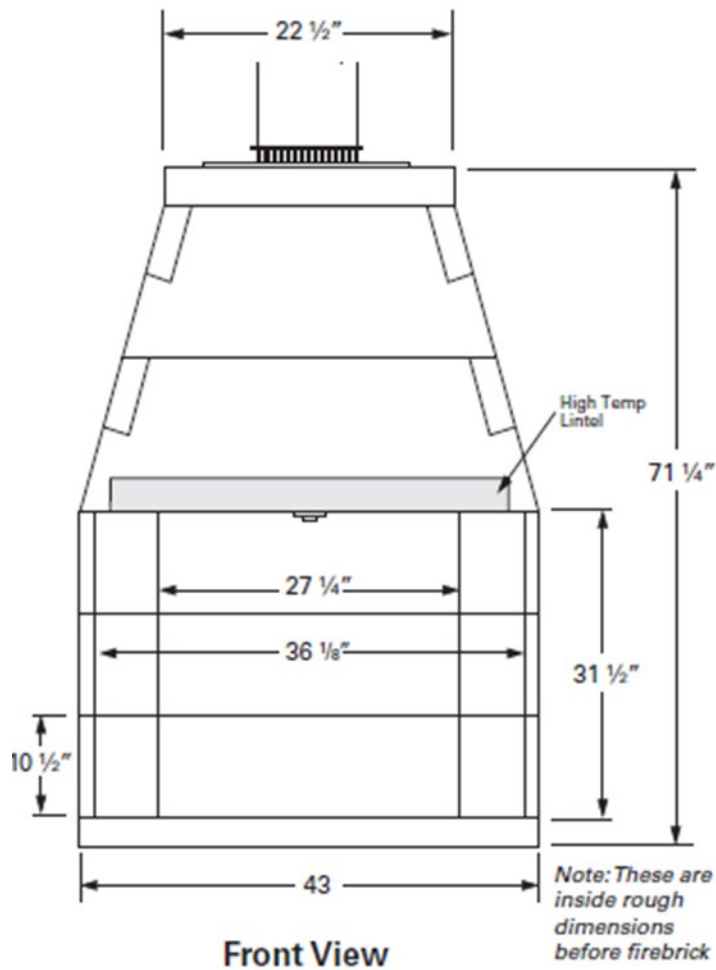
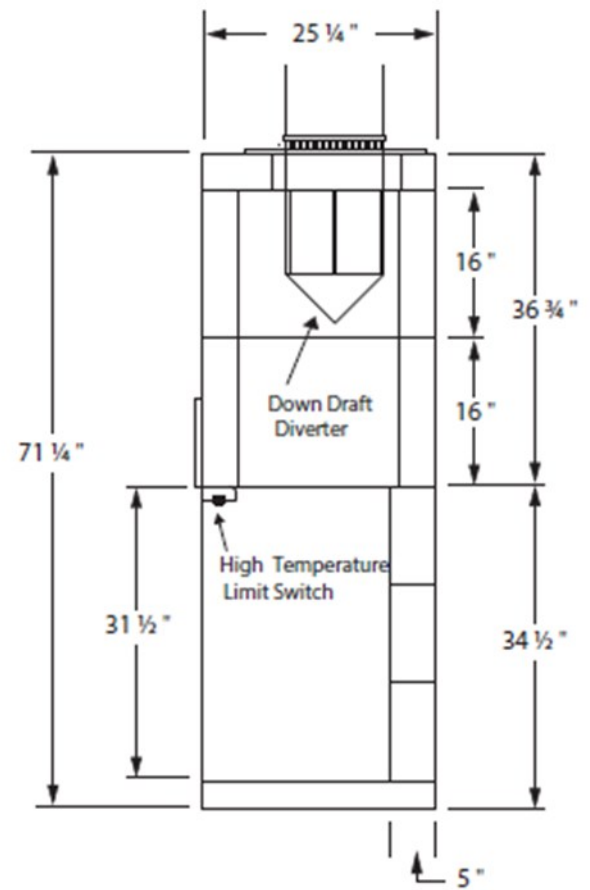
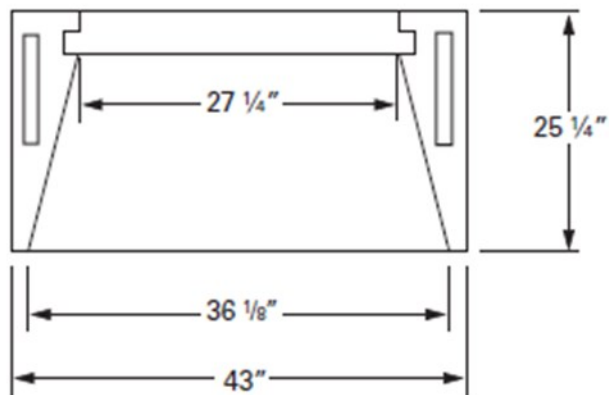
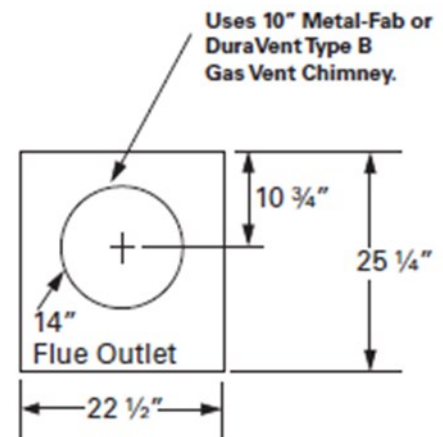
All parties either involved in or associated with the installation, service and use of this fireplace must read this entire manual. Keep this manual for reference and as a guidebook to safe operation of this fireplace.

**WARNING: THIS UNIT IS NOT FOR USE WITH SOLID FUEL.**

1. Always check local building codes governing fireplaces and fireplace installations. The BVETTO B-Vent Series installation must comply with all local, regional, state, and national codes and regulations.
2. The BVETTO B-Vent Series fireplaces are listed for use with the decorative gas log appliance listed in this manual only.
3. This appliance is only for use with the type of gas indicated on the rating plate. This appliance can be field converted for use with other gases with Propane (LP) or Natural Gas (NG).
4. For propane (LP) use do not place propane supply tank(s) inside any structure. Locate propane supply tank(s) outdoors. To prevent performance problems, do not use propane fuel tank of less than 100 lbs. capacity.
5. Do not install the BVETTO B-Vent Gas Fireplace in a manufactured home or mobile home or recreational vehicle.
6. This fireplace reaches high temperature. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Fireplace will remain hot for a time after shutdown. Allow surfaces to cool before touching.
7. Turn the BVETTO B-Vent Fireplace off and allow to cool before servicing. Always shut off any electricity and gas to the BVETTO B-Vent Fireplace while working on it. Only a qualified service person should install, service or repair this fireplace. Have your fireplace inspected annually by a qualified service person.
8. It is imperative that the unit's control areas, burners and circulation air passages be kept clean.
9. Venting system should be inspected annually by a qualified service person. If needed have venting system cleaned or repaired.
10. Keep all combustible material, gasoline, and other flammable liquids at a safe distance from the fireplace. Do not use the fireplace where these items are used or stored. Decorations, clothing, and other such combustible items should not be placed on the fireplace.

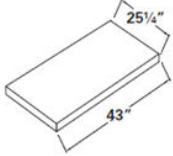
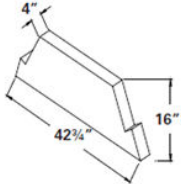
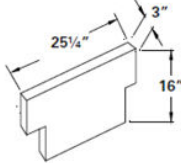
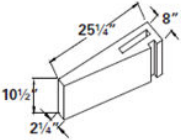
## SAFETY INSTRUCTIONS

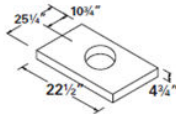
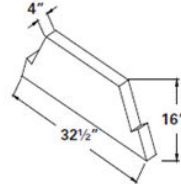
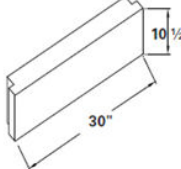
11. Do not use the BVETTO B-Vent Series Fireplace to cook food or burn paper or other objects.
12. Do not use any solid fuels - wood, coal, paper, cardboard, etc. - in this fireplace. Use only the gas type listed on the fireplace's gas log label
13. Keep all insulation and vapor barriers a minimum of three inches (3") away from all BVETTO B-Vent and chimney components.
14. This American Gas Association fact sheet provides an overview of the requirements for the electrical bonding of fuel gas piping systems to the electrical grounding system based on ANSI Z223.1/NFPA 54, National Fuel Gas Code (NFGC). The bonding requirements in previous code editions, in local jurisdictions or in specific situations, may differ.
15. Do not pack or fill required air spaces with insulation or other material. No material is allowed in these spaces.
16. Never install a BVETTO B-Vent Series component, chimney component or accessory that has visible or suspected physical damage as a result of handling or transportation. These items should be inspected by a qualified representative to ensure safe condition. When in doubt, consult your local supplier.
17. Do not alter or modify the BVETTO B-Vent Series, venting components under any circumstances. Modification or alteration of the venting components may void manufacturer's warranty, listings, and approvals.
18. Do not use a fireplace blower insert, heat exchanger or any other product not specified by the manufacturer herein for use with this fireplace.
19. Do not use any BVETTO B-Vent Series 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.
20. The BVETTO B-Vent Series is not intended to heat an entire home or to be used as a heat source.
21. Children and adults should be alerted to the hazards of high surface temperature and should stay away from this appliance to avoid burns or clothing ignition.
22. 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 the fireplace, install an adjustable safety gate to keep toddlers, young children, and other at-risk individuals out of the room and away from hot surfaces.
23. Clothing or flammable material should not be placed on or near the appliance.
24. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
25. 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.
26. Do not nail or screw into the fireplace, which includes firebox or smoke dome components unless attaching the anchor plate for the metal flue system or as specifically instructed in this manual. This may alter the integrity of the fireplace and cause a house fire. **THIS WILL VOID THE WARRANTY OF THE FIREPLACE.**
27. Never spray or apply any type of sealer, insulation, or other materials to the fireplace

**BVETTO B-VENT SERIES 36 (80B36)****Front View****Side View****Plan View****Top View**

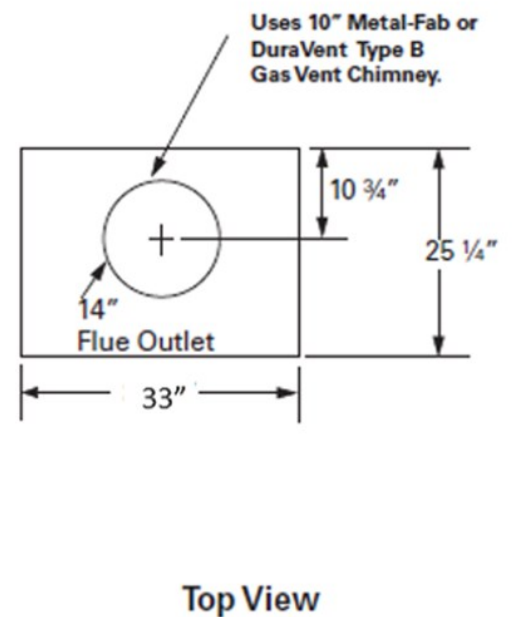
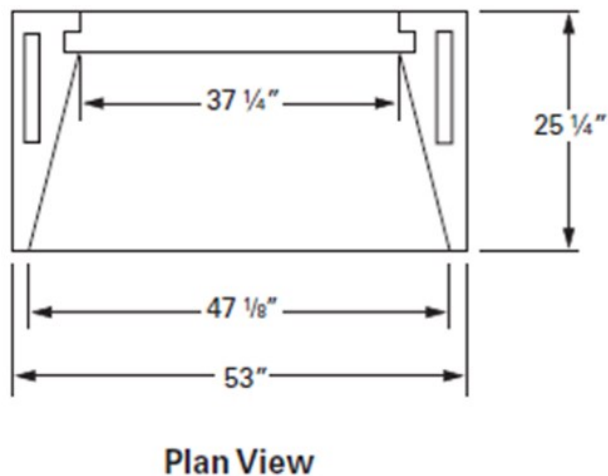
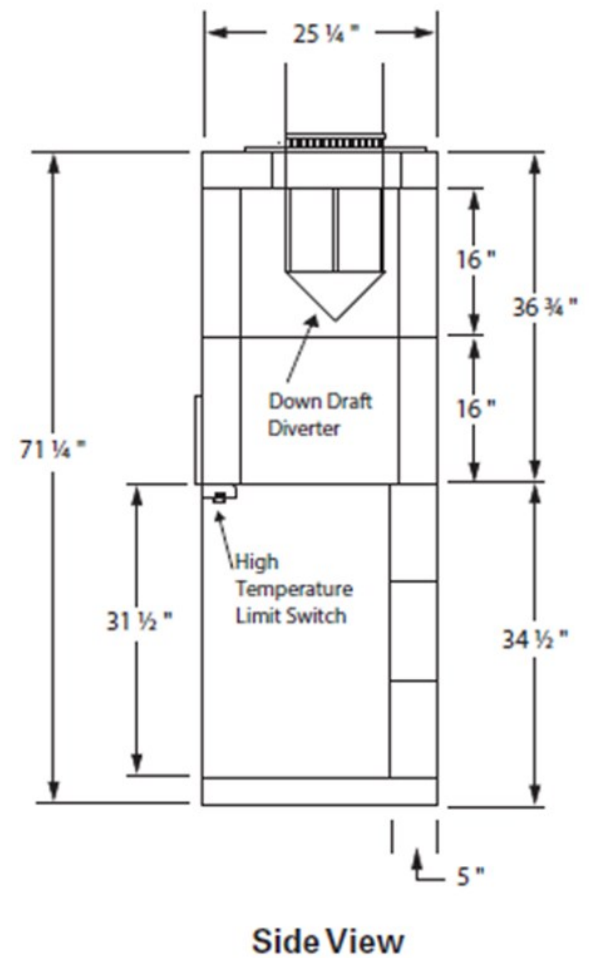
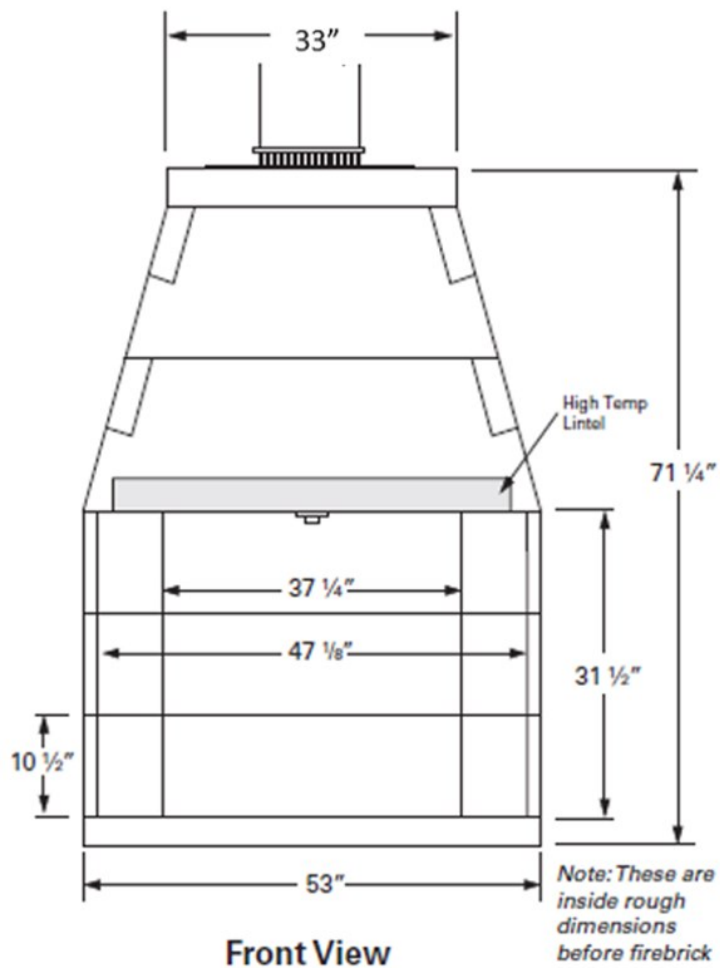


## COMPONENT LIST—BVETTO B-VENT SERIES 36 (80B36)

Component	Part#	Description
	21	Isokern BVETTO Base Plate
	11	Isokern BVETTO Smoke Dome (QTY. 2)
	34	Isokern BVETTO Side Sloping (QTY. 4)
	20	Isokern BVETTO Sidewall (QTY. 6)*

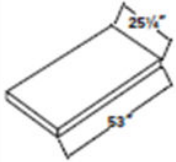
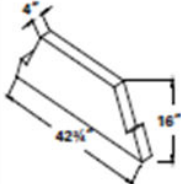
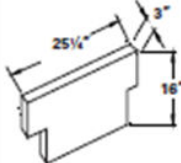
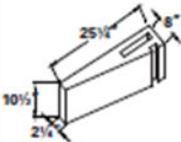
Component	Part#	Description
	36S	Isokern BVETTO Top Plate
	12	Isokern BVETTO Smoke Dome (QTY. 2)
	25	Isokern BVETTO Backwall (QTY. 3)*

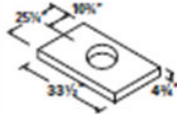
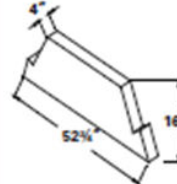
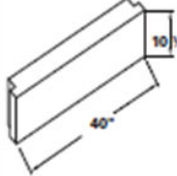
\*NOTE: One additional backwall and two additional sidewalls can be added to obtain an opening of 42" tall before brick is installed, as well as, Two additional backwalls and four additional sidewalls can be added to obtain an opening of 52 1/2" tall before brick is installed. To obtain this height the additional pieces will need to be ordered in addition to the 80B36 fireplace kit.

**BVETTO B-VENT SERIES 46 (80B46)**



## COMPONENT LIST—BVETTO B-VENT SERIES 46 (80B46)

Component	Part#	Description
	23	Isokern BVETTO Base Plate
	11	Isokern BVETTO Smoke Dome (QTY. 2)
	34	Isokern BVETTO Side Sloping (QTY. 4)
	20	Isokern BVETTO Sidewall (QTY. 6)*

Component	Part#	Description
	77	Isokern BVETTO Top Plate
	13	Isokern BVETTO Smoke Dome (QTY. 2)
	31	Isokern BVETTO Backwall (QTY. 3)*

\*NOTE: One additional backwall and two additional sidewalls can be added to obtain an opening of 42" tall before brick is installed, as well as, Two additional backwalls and four additional sidewalls can be added to obtain an opening of 52½" tall before brick is installed. To obtain this height the additional pieces will need to be ordered in addition to the 80B46 fireplace kit.

## Required Clearance to Combustibles

The BVETTO fireplaces and chimney systems are tested and listed for installation with “clearance to combustibles” as follows:

- Zero-inch (0”) clearance to the combustible floor; (Isokern Base Plate must be used)
- Zero-inch (0”) clearance at the Isokern firebox sides and front and smoke dome sides and front.
- One- and one-half inches (1-1/2”) clearance at the Isokern firebox back wall and smoke dome backwall.
- One inch (1”) minimum air space to combustibles at all B-Vent double wall chimney components’ outer layer.

When installing on a combustible floor system the front of the fireplace must be covered with a non-combustible hearth extension material set tight against the fireplace front and extending at least twenty inches (20”) out from the finished front of the fireplace and at least twelve inches (12”) beyond the finished sides of the fireplace opening.

**IMPORTANT:** “Combustibles” are defined as “normal construction materials” and considered to be wood framing materials, particle board, mill board, plywood paneling, plywood subflooring and wood flooring.

**CAUTION:** Maintain three inches (3”) clearance to insulation and vapor barriers from all firebox, smoke dome and B-Vent flue components’ outer layer.

**EXCEPTION:** If insulation is used in walls surrounding the fireplace, insulation may be installed behind sheathing of gypsum board, plywood, particle board or other rigid, fire rated material on the side facing the Isokern. The facing material cannot be within 1 1/2” to the fireplace sidewalls.

### NOTES:

The fireplaces must sit upon a support designed to bear the total installed weight of the fireplace.

All BVETTO installations will result in the minimum finished fire brick floor of the firebox being at least four- and one-half inches (4-1/2”) above the combustible floor system. **Never place a BVETTO on a combustible floor without the base plate.**

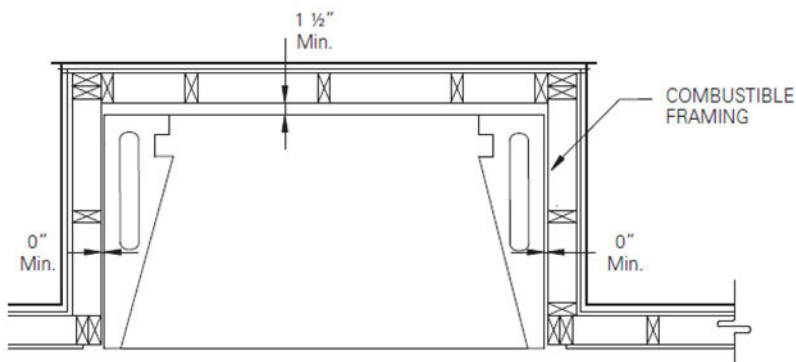


FIGURE 1

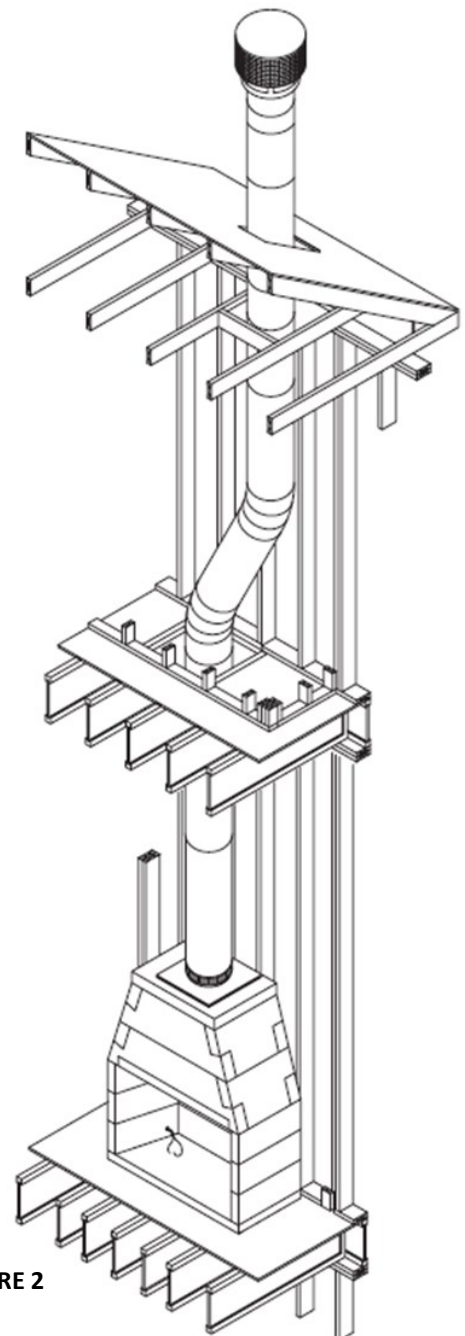


FIGURE 2

## CALCULATING FLOORING LOADS

Floor framing for BVETTO installation will need to be designed and built to accept substantial dead loads spread over a relatively small floor area. **(Figure 3)**

The following weights and sizes can be used to calculate loading. It is the contractor's responsibility to provide adequate floor system load capacity.

### BVETTO Weights and Load Calculations

Total dead load amounts include (but are not necessarily limited to) the following items and their corresponding weight estimates as listed below:

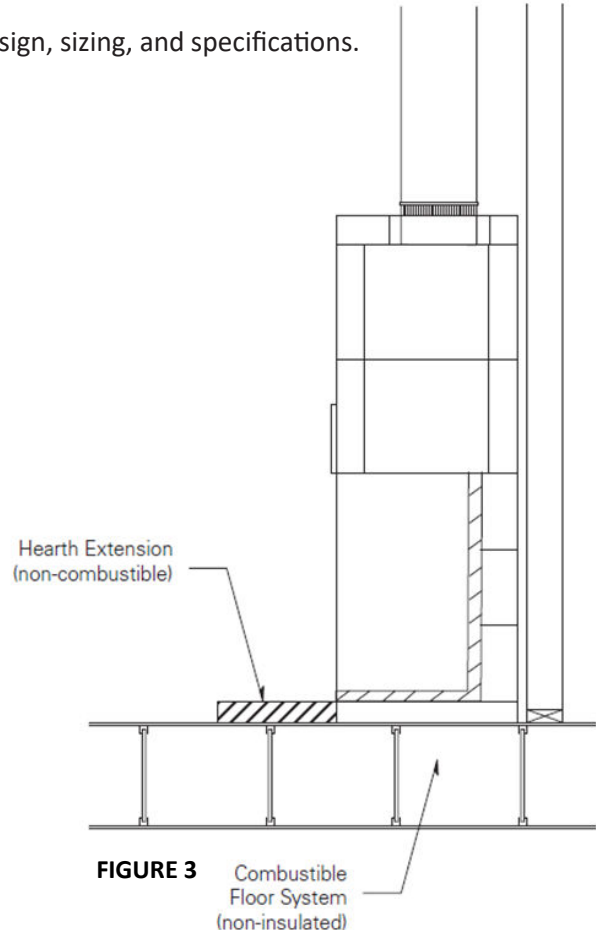
1. Isokern unit model weights:
  - A) BVETTO-46: 1400 lb.
  - B) BVETTO-36: 1200 lb.
2. Approximate weight of log set: 100 lb.
3. Fire brick and Adhesive: 350 – 1800 lbs.
  - A) Depending on brick size and pattern
4. Facing material: per general contractor
5. B-Vent metal flue: per manufacturer

The floor area for each model is as follows:

- BVETTO-46 @ 53" x 25.25" = 9.30 sq. ft.
- BVETTO-36 @ 43" x 25.25" = 7.54 sq. ft.

Earthcore is not responsible for structural floor support details for this fireplace system. Unless otherwise noted all floor framing drawings in this manual are merely illustrations to indicate the presence of an underlying floor system.

Consult your local structural engineer for proper floor system design, sizing, and specifications.



## ROUGH FRAMING DIMENSIONS

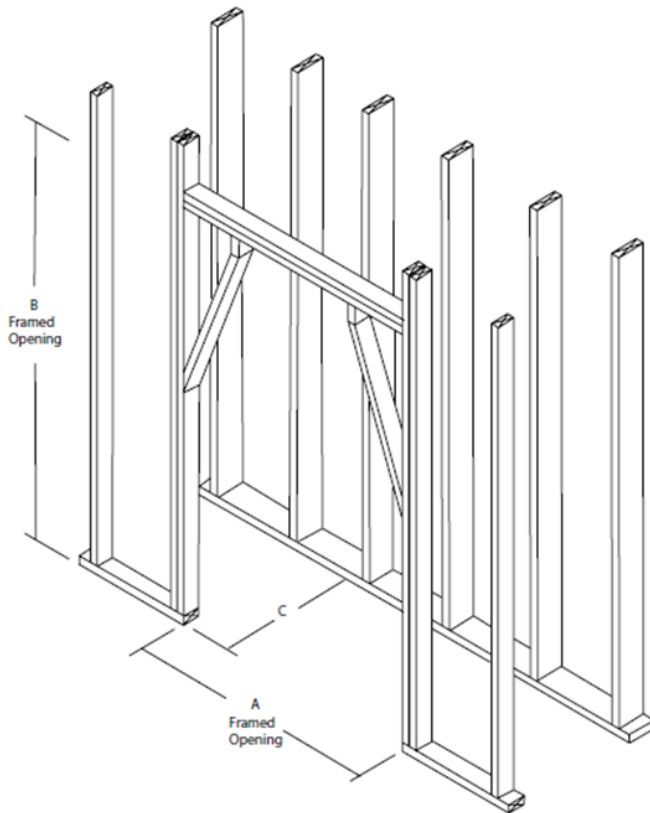


FIGURE 4

### TYPICAL INSTALLATION FRAMING DIMENSIONS (in)

MODEL	WIDTH – A	HEIGHT – B	DEPTH – C
80B36	44	72, 83, 93	26 - 3/4
80B46	54	72, 83, 93	26 - 3/4

#### Notes:

1. "B" includes the 3" thick base plate.
2. "Raised hearth" requires additional rough opening height at "B" equal to the height of the raised hearth detail.
3. Rough framing dimension for width "A" allows for the 1/2" for each side to build fireplace in the space. There is 0" required clearance at the sides of the Fireplace.
4. Rough framing dimension for depth "C" allows for the required 1-1/2" clearance at the back of the Fireplace.
5. Opening height of 83" requires minimum 9' flue; 93" height requires minimum 12' flue.

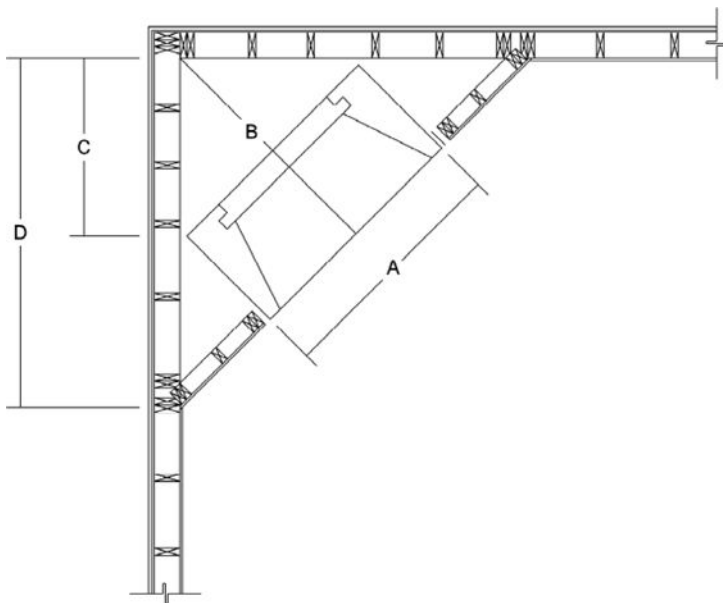


FIGURE 5

### CORNER INSTALLATION FRAMING DIMENSIONS (in)

MODEL	A	B	C	D
80B36	44	49	32	70
80B46	54	59	39	77

**NOTE:** The following chart of plan dimensions is intended to aid in the positioning of an BVETTO in a corner

## GENERAL ASSEMBLY INSTRUCTIONS

When beginning the assembly process, mix the Earthcore Adhesive with clean water to a smooth, workable texture (without lumps or dry pockets) of a “toothpaste” consistency. This mixture is suitable for application onto Isokern components by using a masonry grout bag supplied with the unit.

Attention should be paid that the Adhesive mixture is not too thin or runny, as this will not allow the Adhesive to reach its maximum bonding strength.

Mark out the position of the base plate on the supporting floor system. Apply a thin layer of Earthcore Adhesive to the area and set base plate in the Adhesive. **(Figure 6)**

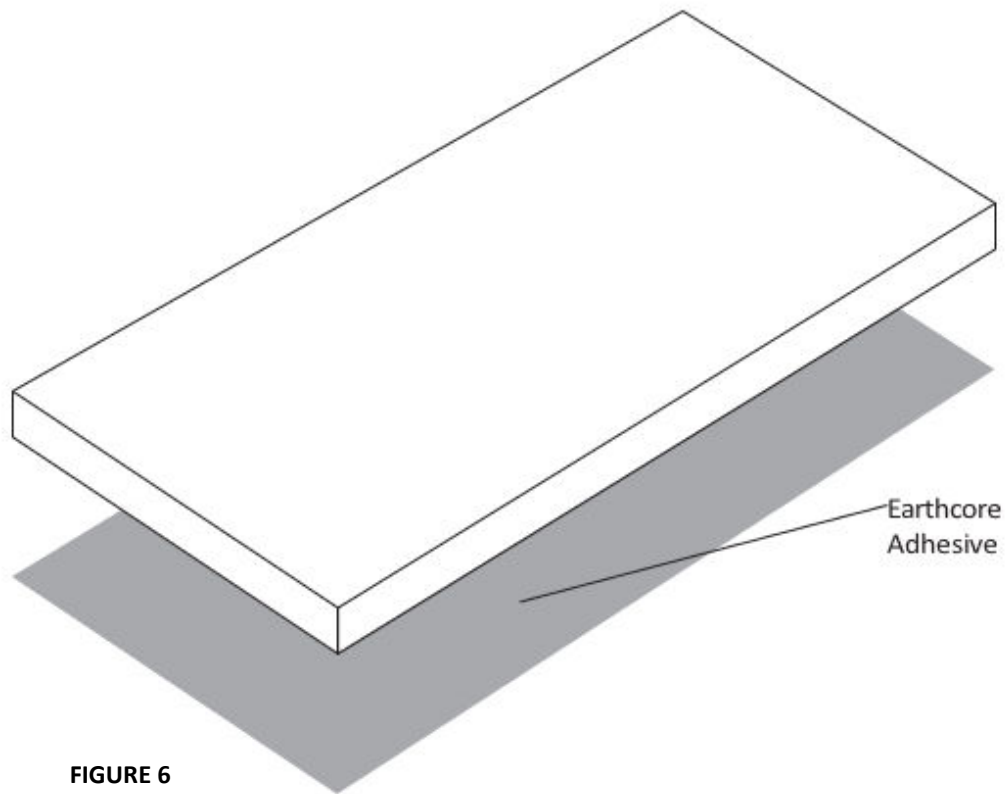
Earthcore Adhesive is then squeezed from a grout bag onto the contact surfaces of the Isokern components as they are fitted together.

**NOTE:** It is important that a 1/2” bead of Adhesive is piped onto all the components’ contact surfaces, about 1/2” in from all edges. **(Figure 7)**

When setting the next component onto the Adhered contact surface of the base plate, some Adhesive should squeeze out along the face of the entire joint as a sign of complete and proper sealing of the joint.

On broader contact surfaces it is advisable to apply several additional 1/2” beads of the Earthcore Adhesive to the area to assure proper sealing of the joint.

Properly Adhered firebox and smoke dome assembly requires approximately 100 pounds (dry measure) of Earthcore Adhesive.



## GENERAL ASSEMBLY INSTRUCTIONS

### LEVELING AND ALIGNING COMPONENTS

Be sure to assemble all Isokern components level and flush with adjoining components. Earthcore Adhesive is not intended to create an Adhesive joint of any thickness for leveling purposes. **Therefore, leveling and alignment adjustments are made using small plastic shims supplied with the unit. (Figure 8)**

The shims can be inserted under a component to level and align it with adjacent Isokern components. Be sure to re-grout any and all gaps resulting from shim insertion to maintain components to full bearing.

### BROKEN COMPONENTS:

Components can be repaired by using Earthcore Adhesive along the break line as the component is set into place. Components broken into multiple small pieces should be discarded and replaced.

### IMPORTANT:

1. Do not mix Earthcore Adhesive with anti-freeze agents.
2. The maximum recommended Adhesive joint thickness
3. at Isokern components is 1/4".

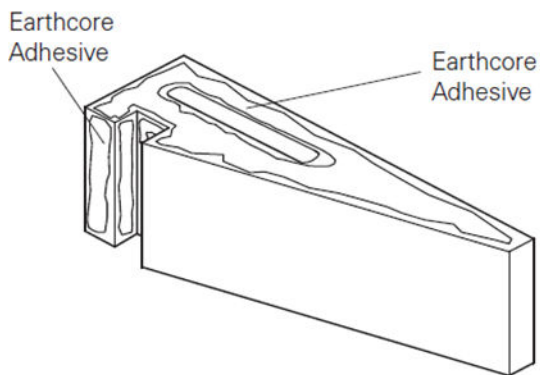


FIGURE 7

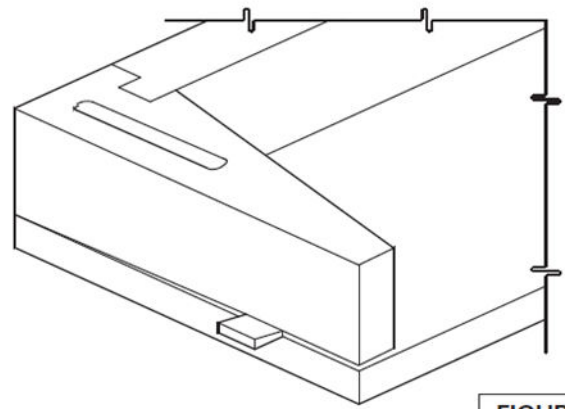


FIGURE 8

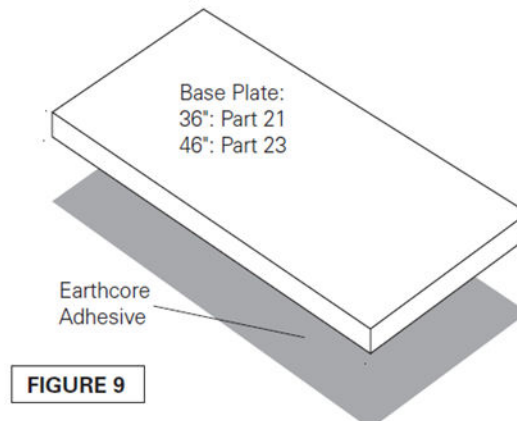


## ASSEMBLY INSTRUCTIONS

The following assembly instructions identify the parts by name, part number and the placement of each part in the assembly process.

NOTE: At all component placement, be sure to adhere all contact surfaces with Earthcore Adhesive. Check for complete sealing of each contact joint while assembly progresses.

1. Set the base plates in a full bed of Earthcore Adhesive on a level support surface. See page 11 for supporting floor system. (Figure 9). Do not set the base plate so that it is in span.



### Flush Hearth:

If the design preference is for a “flush hearth” the base plate can be omitted from the assembly and the firebox walls built directly on a minimum 4" concrete support slab. The fire brick floor of the firebox is then set directly to the concrete support slab. This makes the fireplace finished fire brick floor approximately one and one-half inches (1-1/2") above the top of the concrete support slab. The noncombustible hearth material will butt tight up against the fire brick floor. (Figure 10)

### Raised Hearth:

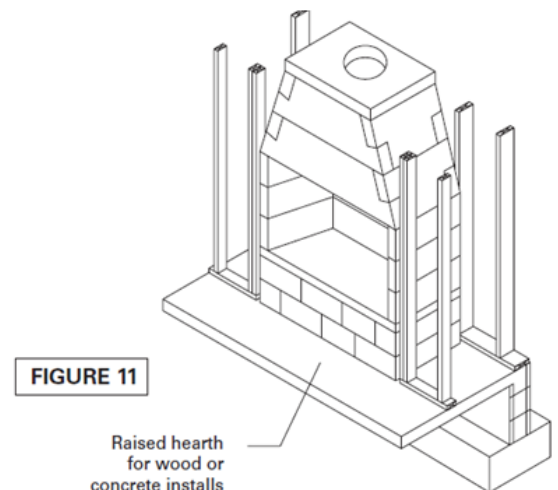
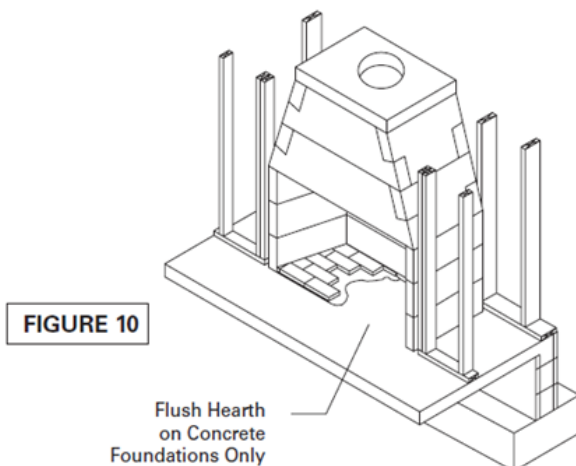
If the design preference is for a raised hearth (floor of the fireplace elevated above the room’s floor), then the base plate can be set on a noncombustible platform that is built up to the desired raised hearth height on the concrete support slab. (Figure 11)

When calculating raised hearth height be sure to allow for the three inch (3") thick base plate plus the one- and one-half inch (1-1/2") thick fire brick floor in addition to the height of the platform.

For all “raised hearth” construction where concrete blocks are used to create the raised platform, it is necessary to use the base plate. Be sure to Adhesive the concrete block platform together. CMU used for base plate support should be rated ASTM 90.

Whether a flush hearth or a raised hearth is installed, the combustible floor in front of the fireplace must be covered with a noncombustible hearth extension set tight against the fireplace front and extending at least 20 inches out from the finished fireplace and at least 12 inches beyond the finished sides of the fireplace opening.

**WARNING:** “Flush hearth” installations are possible only where the BVETTO support is a concrete slab without any wood underpinning as the base plate is omitted. Never place an BVETTO on a combustible floor without the base plate.

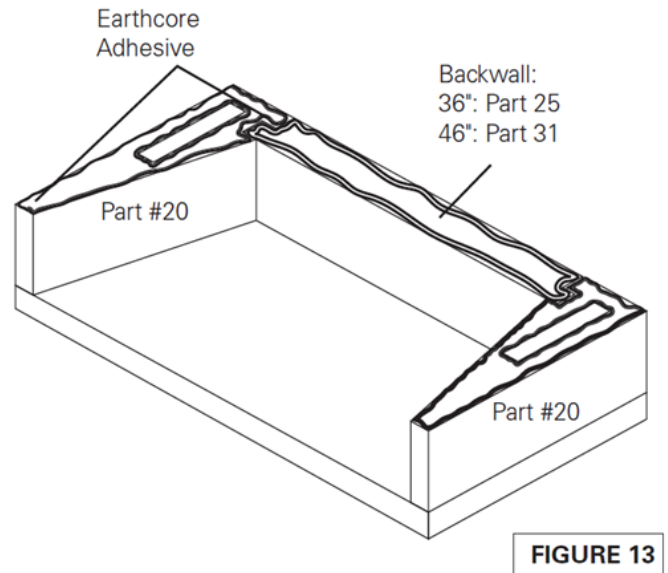
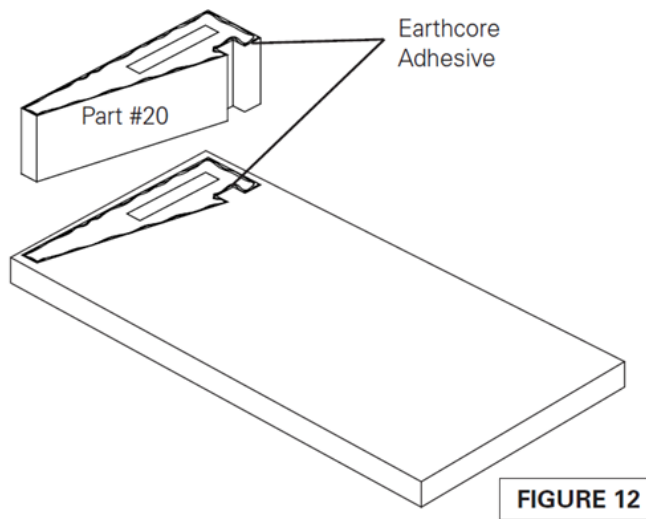


## ASSEMBLY INSTRUCTIONS

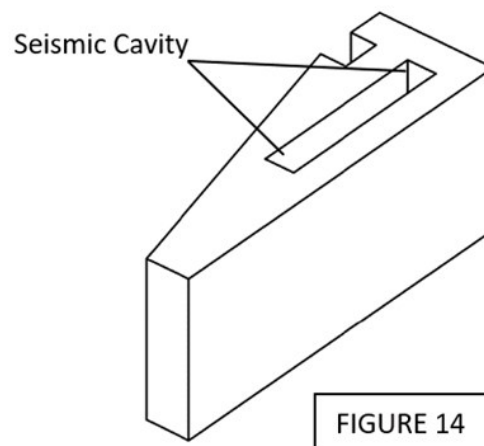
2. Set the first course of the firebox side walls and back walls into place. **(Figure 12-13)**

**NOTE:** It may be convenient to dry set the first course of side walls and back walls into place on the Isokern base plate and then trace their position on the base plate with a pencil.

After outlining the dry set pieces, remove them and apply Earthcore Adhesive to the areas traced on the base plate where the side walls and back wall are to sit. By doing this, the first layer of wall components can be set directly into Adhesive already applied to the proper areas on the base plate.



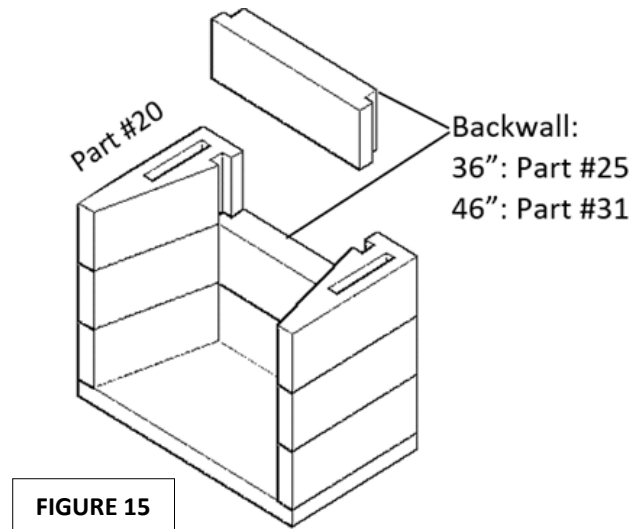
**NOTE: For Seismic Installation** - The opening in the sidewalls is used to anchor the Isokern Fireplace to the floor with rebar and backfilled with concrete. **(Figure 14)**



## ASSEMBLY INSTRUCTIONS

3. Continue assembly of the consecutive courses of the firebox side wall and back wall. Apply Adhesive to the top of each layer of wall components, set the next course above into place. Be sure to Adhesive all vertical joints of the side wall to back wall connection when setting each component to its mate. (**Figure 15**)

Look for some Adhesive to squeeze out along the joints of all contact surfaces as a sign that the joint is thoroughly sealed with the approved Adhesive.

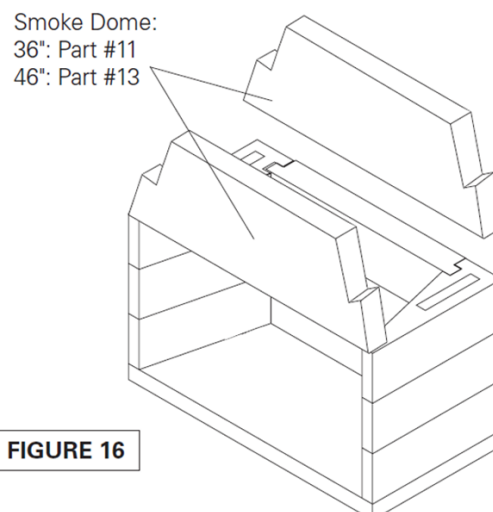


4. When all the firebox sidewall and backwall components are set, check the top surface of the firebox for level. If necessary, adjust the top surface of the box assembly for level by inserting a shim supplied with the unit between the lowest wall component and the top surface of the base plate.

Any gap created under the wall components during the Shim leveling process must be filled with Earthcore Adhesive to fill bearing against the base plate.

5. Begin the smoke dome assembly by setting the rear bottom smoke dome component on top of the firebox back wall assembly in a bed of Earthcore Adhesive. The smoke dome component should sit flush with the back side of the firebox assembly. (**Figure 16**)

Next, set the front bottom smoke dome component across the firebox opening so that the smoke dome piece spans the firebox opening and is flush with the front of the firebox



## ASSEMBLY INSTRUCTIONS

6. Position the smoke dome's sloping sidewalls at each end of the bottom smoke dome components.

The sloping sidewalls fit in between the front and rear smoke dome components and fit into the haunches at the ends of the front and rear smoke dome components.

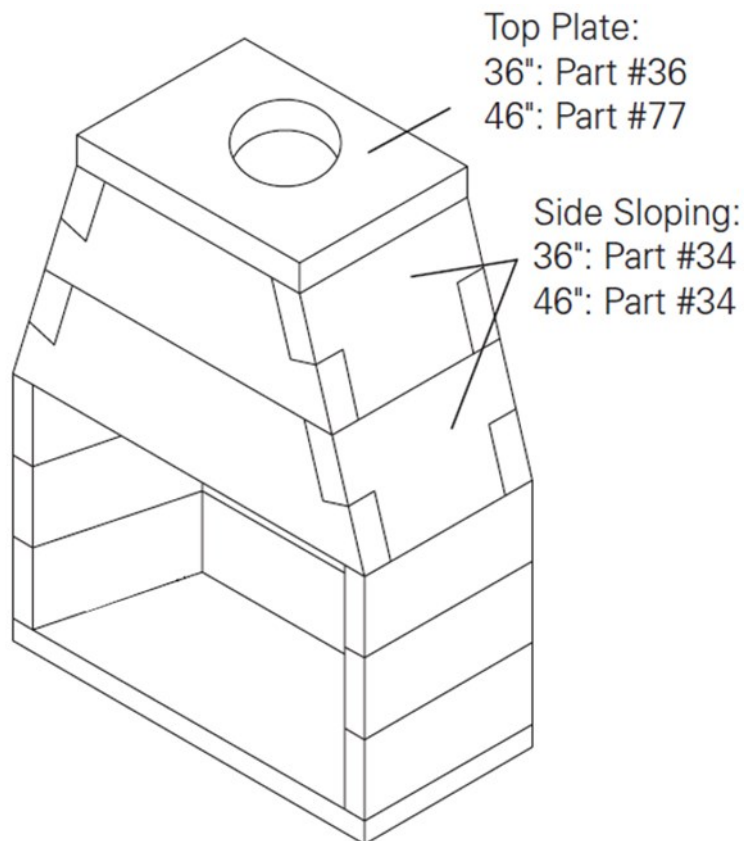
The smoke dome sloping sidewalls have a beveled bottom edge so that they will sit tight onto the flat top of the firebox side walls.

7. Set the upper course of front and rear smoke dome components directly on top of and aligned with the bottom front and bottom rear smoke dome components that are already in place.

Set the two upper smoke dome sloping sidewalls into position, one at each end of the upper front and rear smoke dome components. **(Figure 17)**

8. Set the top plate into position and adhere on top of the smoke dome wall assembly. One side of the top plate shows a thickened center. This side is the bottom face.

The flue hole in the top plate is centered in the smoke dome from side to side but is offset from front to back, the center being ten and three-fourths inches (10 3/4") from the back of the firebox. **(Figure17)**



## ASSEMBLY INSTRUCTIONS

9. The high temp lintel (**Figure 18**), as supplied, is forty-five inches (45") long and fits the BVETTO models 36 & 46. Field cut the high temp lintel equally at the perforated lines as required for the 36" unit. This will ensure the limit switch and micro-switch are in the proper position on the lintel.

Connect the two (2) leads from the high temperature wires to the thermocouple junction block X4 (see diagram, page 31).

Measure and locate the centerline of the fireplace opening. Align notch at the front of the lintel to the centerline of the fireplace. Install lintel using 1 1/2" masonry screws.

**NOTE:** The limit switch and microswitch are already supplied and mounted in the BVETTO high temp lintel component. Connect the two high temperature wires (coming out the top of the BVETTO left hand firebox side wall) to the two high temperature wires that are attached to the limit switch with ceramic wire nuts.

The small tab near damper lever should be bent upward to stand vertical. This protects wires passing through the harness.

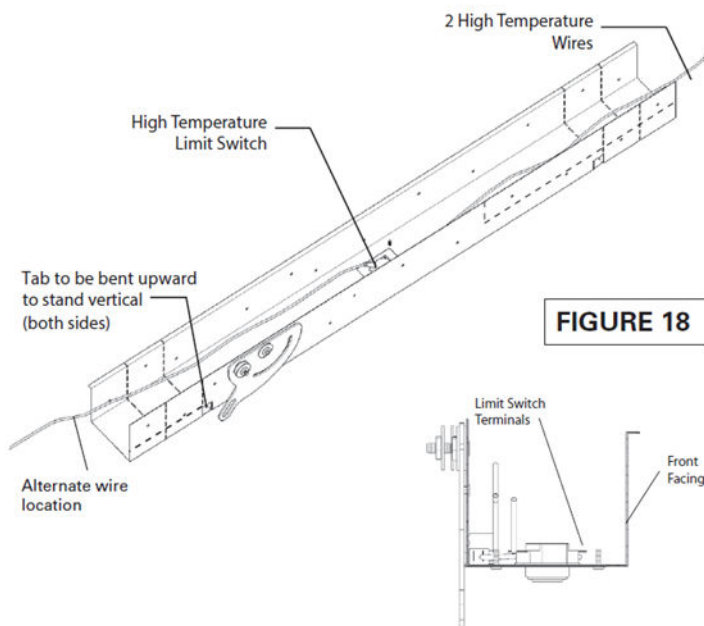


FIGURE 18

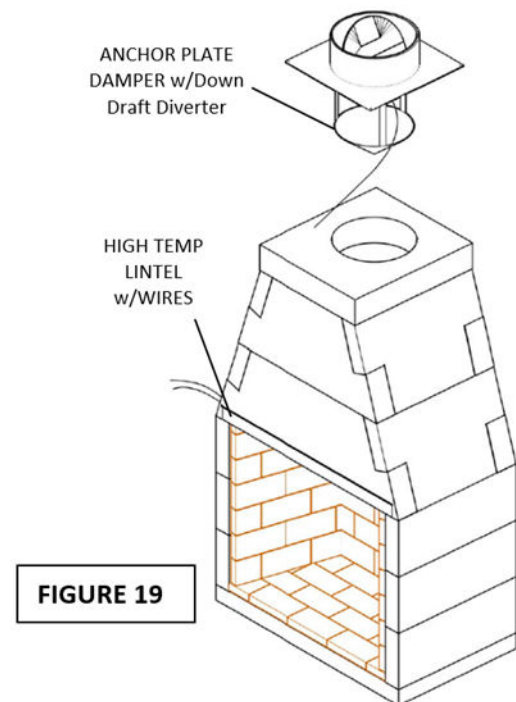


FIGURE 19

**WARNING:** Do not bypass the high temperature limit switch.

- Install downdraft diverter at the top plate with four (4) masonry anchors (**Figure 19**)
- Position assembly such that the wire cable is toward the front of the fireplace opening.
- Loosen screws on the cable clamp and loop cable between the two washers at the end of the handle assembly.

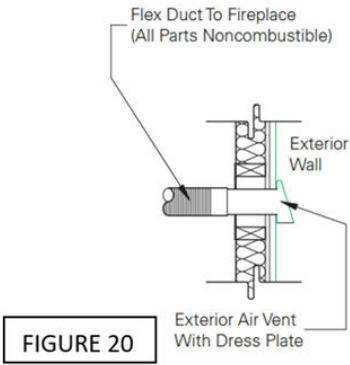
**NOTE:** Wire clamp should be approximately 4" from the washers. Tighten lock nuts on the handle if necessary. Pull cable to close the damper and adjust the length of wire cable by swinging the handle between open and close positions. When in the open position, the damper should be rotated a full 90 degrees from the closed position. Retighten screws on the cable clamp and remove excess cable.

- The high temp lintel fits horizontally up toward the bottom of the smoke dome. The adjoining short leg of the high temp lintel fits up against the bottom of the smoke dome component. (**Figure 19**)
- The high temp lintel has 4 pilot holes for the screw placement. Attach the high temp lintel flush against the front face of the smoke dome with 4 mounting screws driven into the face of the BVETTO smoke dome.
- Any excess wire draped between the high temp lintel and the left-hand firebox sidewall should be neatly tucked into the hollow core of the left-hand sidewall. Excess wire should not be visible below the canopy bottom.

**NOTE:** The 2 high temperature wires will connect to the appropriate contacts found on the burner ignition module. **Page 33 & 34**

## ACCESS MODIFICATION—COMBUSTION AIR KITS, GAS. AND ELECTRICAL LINE FEED

A four-inch (4”) combustion air inlet kit is recommended by Earthcore and may help improve fireplace operation in tightly sealed homes and with other ventilating appliances installed. The following is a general representation of a combustion air kit: **(Figures 20 & 21)**



FIREPLACE MAKE-UP AIR REQUIREMENTS		
MODEL	OPENING HEIGHT (in)	CONSUMPTION AIR FLOW (CFM)
80B36	30	272
80B36	40	365
80B36	50	459
80B46	30	348
80B46	40	466
80B46	50	587

The air kit is fitted into the front 1/3 of the side wall of the firebox by core drilling an appropriately sized hole at the selected sidewall location. Keep the top of the access hole no more than six inches (6”) above the finished firebrick floor. The hole size should allow for a quarter in (1/4”) joint around the duct pipe for heat expansion. Combustion air kits must be installed in accordance with local codes.

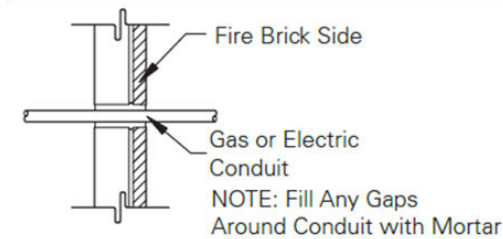
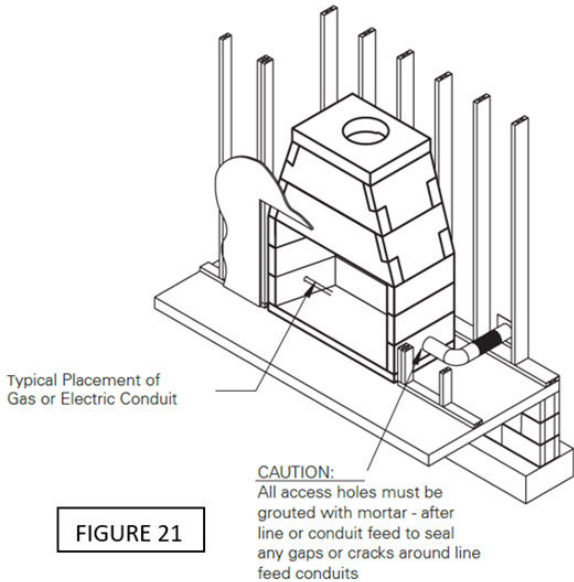
**WARNING:** Do not use combustible duct material. Avoid installing a combustion air inlet where the opening could be blocked by snow, bushes, or other obstacles. Air inlet ducts shall not terminate in attic, basement, or garage spaces

### Gas Line Feed

For a fireplace having the provision for installation of a gas pipe, the provision is intended only for connection to a decorative gas appliance. Gas line for a log set used in the Isokern firebox can be routed through the sidewall, by drilling an appropriately sized hole using a masonry drill bit.

### Pilot Assembly Line Feed



Can be routed through the BVETTO firebox sidewalls by drilling an appropriately sized hole using a masonry drill bit. Be sure to follow burner instructions (page 33 & 34). Gas line and electrical line must be fed through separate access holes.





## B-VENT METAL CHIMNEY INSTALLATION - GENERAL INFORMATION

The BVETTO Series design and installation require usage of the High-Temp Lintel and Anchor Plate with Down-Draft Diverter safety system. A listed 10" Type-B Gas vent approved for connection to the system must be used.

	BVT-1	B-Vent Kit: Channel
	BVT-2	B-Vent Kit: Draft Diverter

Refer to metal flue manufacturer for number of offsets, approved chimney shrouds, clearance to combustibles and any information specific to that flue system. Only tested and listed chimney terminations can be used on metal flue chimney systems. B-Vent Chimney is not designed for use on products that operate at continuous temperatures in excess of 1000°F.

**IMPORTANT:** Never fill any required clearance space with insulation or any other building materials surrounding the chimney.

Exterior metal parts, with exception of the top portion of the chimney cap, can be painted with a high temperature rust proof paint. Wash the metal surface with a vinegar and water solution to remove any residue before painting. Painting the chimney will help to increase chimney life.

Interior chimneys shall be enclosed where they extend through closets, storage areas, occupied spaces, or anywhere the surface of the chimney could be contacted by persons or combustible materials. The air space between the outer wall of the chimney and the enclosure shall not be less than 1 inches.

Except for installation in one- or two-family dwellings, a factory-built chimney that extends through any zone above that on which the connected appliance is located is to be provided with an enclosure having a fire resistance rating equal to or greater than that of the floor or roof assemblies through which it passes.

In cold climates, chimneys mounted on an outside wall should be enclosed in a chase. Exterior chases reduce condensation and enhance draft.

Proper planning for your B-Vent Chimney installation will result in greater safety, efficiency, and convenience. You must use only B-Vent Chimney parts and components to maintain a listed chimney system. Do not mix parts or try to match with other products or use improvised solutions.

Connect only one fireplace per chimney. Follow the fireplace safety manual for maximum efficiency and safety. Do not over fire. Any damage to the fireplace or chimney can possibly void the warranty.

Do not burn wood, driftwood, plastic, or chemically treated wood such as railroad ties. They are corrosive to your chimney system. **THIS IS A GAS ONLY FIREPLACE.**

### MECHANICAL VENT SYSTEMS:

It is acceptable to use mechanical draft systems if the venting companies do the engineering calculations and make the necessary recommendations for fan size and flue vent diameter following the guidelines of NFPA 211/2020. Installation of such systems must also follow the mechanical drafting company's explicit installation and operation instructions.

### IMPORTANT:

If a mechanical draft system is incorporated with this fireplace, the draft system must be from an approved manufacturer. Any mechanical draft system shall be installed according to the manufacturer's instructions.

Any installed mechanical draft system must be interlocked with the gas appliance control system to allow appliance operation only when the mechanical draft system is in operation.

A major cause of chimney related fires is failure to maintain required clearance (air spaces) to combustible material\*. Minimum clearance for 10" I.D. (11 O.D.) B-Vent chimney is one (1) inch. It is of utmost importance that this chimney is installed only in accordance with these instructions.

## B-VENT METAL CHIMNEY INSTALLATION

### Mount BVT-2 Anchor Plate with down draft diverter:

1. Chimneys for Isokern BVETTO fireplaces begin with the BVT-2 Anchor Plate with Down draft diverter. It is important that the surface of the Isokern chimney has a level surface on which to attach the Anchor Plate. If the top of the Isokern does not have a level surface, then it will need to be modified accordingly.
2. Center the Inswool blanket over Isokern Top Plate hole and trace outline of hole with a pen or marker. Cut a hole in the blanket to match the hole in the Isokern top plate. Center the Inswool blanket over the Isokern Top Plate flue opening, then center anchor plate over the Inswool blanket. Make sure nothing interferes with the damper plate movement.
3. Secure the BVT-2 Anchor Plate with Down-Draft Diverter with four (4) masonry anchors (**Figure 23**). The damper should swing freely. When the chain is pulled down, the damper should close (horizontal position). When the chain is released (no weight on the chain), the damper should swing open (vertical position).

**WARNING:** Do not locate Anchor Plate with Down Draft Diverter in a location inaccessible for inspection, cleaning, and servicing after installation.

**NOTE:** The BVT-2 must be attached to the BVT-1 High-Temp Lintel as detailed on pg. 19 of this installation manual.

5. Starting at the anchor plate, attach the first section of B-Vent Pipe. It is acceptable to use screws to attach the B-Vent to the anchor plate.

**NOTE:** If allowed by chimney manufacturer, it is acceptable to apply screws to the joints if local code requires, or at the installing contractor's option, provided that the screws DO NOT penetrate the flue.

**NOTE:** When installing B-Vent always align "Up" arrow away from appliance. Chimneys must be installed so that access is provided for inspection and cleaning.

**NOTE:** Vent height minimum is 100 inches, maximum height shall comply with NFPA 54, chapter 13.1 requirement.

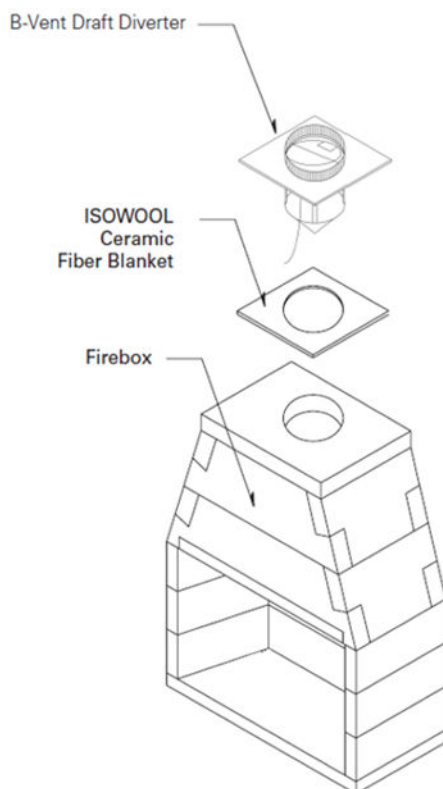


FIGURE 23

## B-VENT METAL CHIMNEY INSTALLATION

6. If the B-Vent must penetrate the ceiling between floors, cut a hole in the ceiling 2 inches larger than the outside diameter (OD) of the outer casing. The B-Vent is to be centered in this opening. When installed, check to make sure the one-inch (25.4 mm) clearance to combustible has been maintained.

**NOTE:** The B-Vent type chimney system must be enclosed within a chase when installed in or passing through a living area where combustibles or people may come in contact with it. This is important to prevent possible personal injury or fire hazard.

7. Continue with B-Vent penetrating the roof.

**NOTE:** For Canadian installations, use labeled ULC section, designated with Suffix G, on vent sections exposed to atmosphere.

At the roof, the opening should be 2 inches (51 mm) greater than the B-Vent OD. Above the roof, a flashing is required to maintain the one-inch (25.4 mm) clearance to the combustibles of the roof. Installation of a storm collar allows water to drain over the flashing.

8. Install the B-Vent cap onto the B-Vent.

**NOTE:** Vent height minimum is 100 inches, maximum height shall comply with NFPA 54, chapter 13.1 requirement

A B-Vent Cap should be used on all installations to prevent back drafts and to keep out rain and debris. The vent must extend through a flashing and should terminate with the lowest discharge opening no closer to the roof than the minimum height shown in the table below. These minimum heights may be used provided the vent is not less than 8' from any vertical wall. For installations not covered in table below, the lowest discharge opening of the vent cap should be at least 2' above the highest point where it passes through the roof. All gas vents extending above the roof more than 5 feet must be securely guyed or braced.

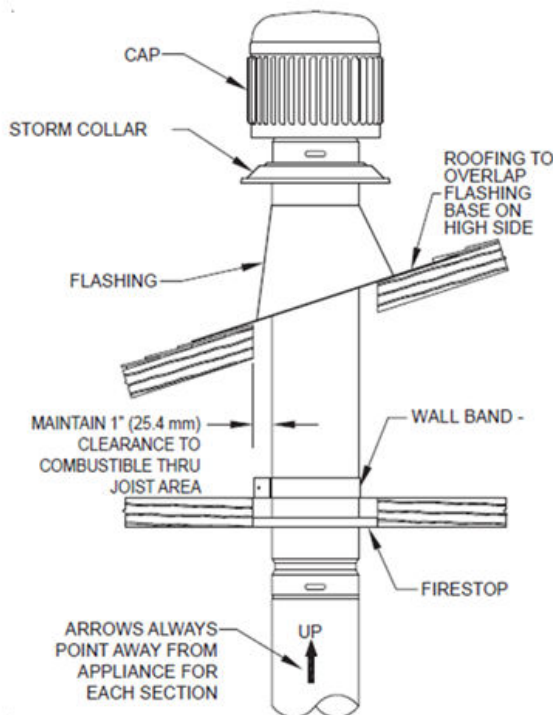


FIGURE 24

Roof Pitch	Minimum Height	
Flat to 7/12	(305 mm)	1.0 ft
Over 7/12 to 8/12	(451 mm)	1.5 ft
Over 8/12 to 9/12	(610 mm)	2.0 ft
Over 9/12 to 10/12	(762 mm)	2.5 ft
Over 10/12 to 11/12	(991 mm)	3.25 ft
Over 11/12 to 12/12	(1218 mm)	4.0 ft
Over 12/12 to 14/12	(1524 mm)	5.0 ft
Over 14/12 to 16/12	(1829 mm)	6.0 ft
Over 16/12 to 18/12	(2134 mm)	7.0 ft
Over 18/12 to 20/12	(2286 mm)	7.5 ft
Over 20/12 to 21/12	(2438 mm)	8.0 ft

FIGURE 25

## FIREBRICK INSTALLATION

The manufacturer requires that the fireplace fireboxes be lined with a minimum one and one-eighth (1-1/8") thick firebrick for the Floor, Backwall and Sidewalls. Thicker firebrick may be used as an option. The pattern for the firebrick lining is an owner option. The ISOSET mortar by Earthcore is to be used when lining the Isokern Fireplace

### The ISOSET Firebrick Mortar Application:

- Add .75 quarts of water per 10lbs of dry product until completely blended.
- Only mix what can be utilized within 15 minutes
- Do not retemper (the addition of water after the chemical reaction has begun).
- The use of warm/hot water will accelerate setup
- Joint thickness should be thin (1/4"-3/8")
- Complete set time is between 48 & 72 hours.
- For best results, please allow seven days before heat is applied.
- Approximately 35 to 40 lbs. of prepared mortar will lay up one hundred 9x4½x2½" Straights.

**IMPORTANT!!!: DO NOT add additives such as fireclay, sand, cement, or other accelerators.**

These instructions may vary because of different climates and conditions. The use of good masonry practices for your area should also be considered.

### **For Best Results:**

- Wet mop the inside of the fireplace with a damp sponge to remove dust and loose particles from the interior before firebricking.
  - Keep the firebox interior damp while installing firebrick
  - After wetting interior of firebox with a sponge, apply a ¼" notch bed joint on rear, sides, and floor.
  - Dip each firebrick in a pale of water before applying mortar to one side for adherence to firebox.
  - Face joint dimension of 1/8" to 3/8" in the brick work is recommended and has the best appearance. Other face dimensions are acceptable, however smaller joints may not leave enough room for heat expansion of firebrick.
1. Start the firebrick at the front edge of the floor of the Isokern firebox, proceeding inward toward the back. Let the floor brick gap approximately 1/2" off the back wall and side walls. This air space allows heat expansion of the firebrick and is to be left empty of mortar. (Figure 26)
  2. Next, apply firebrick to the back wall of the unit. The back wall firebrick covers the ½" expansion gap left at the brick floor along the back wall of the firebox. (Figure 27)
  3. Set the side wall firebrick by starting at the front edge of the unit's side wall and working inward toward the back wall firebrick. The side wall firebrick, when completed, covers the ½" expansion gaps where both the floor firebrick and the back wall firebrick were held off the unit's side walls. (Figure 28)
  4. All required through-wall accesses (gas and air intake supply access holes) should be drilled before the required firebrick lining is installed. Do not cover these areas with firebrick.

Earthcore makes no claims as to the performance of firebrick or firebrick mortar(s). It is typical for heat stress cracks to appear in the firebrick in fireplaces.

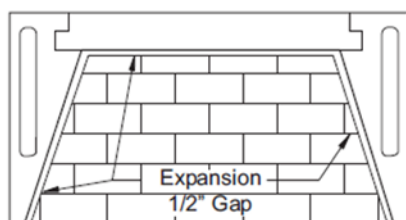


FIGURE 26

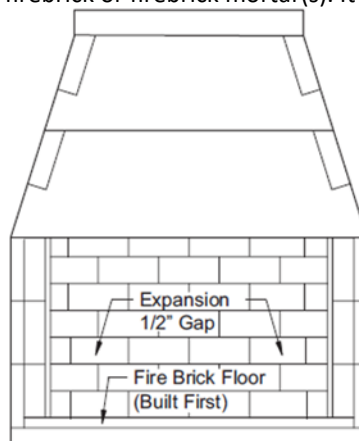


FIGURE 27

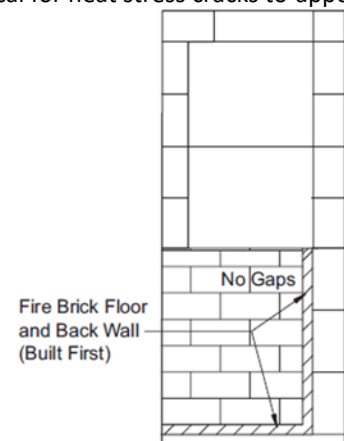


FIGURE 28

## FLUSH WALL FINISH DETAIL

BVETTO units are designed to be installed so that the rough front face of the Isokern firebox and smoke dome sit flush to the room face of the rough framing members that create the room wall finish.

**IMPORTANT:** Do not build a combustible frame wall in front of the BVETTO firebox / smoke dome assembly. (Figure 29)

Wall Framing for the room wall where the BVETTO is set must not be placed across the front face of the BVETTO firebox and smoke dome assembly.

### Clearance to Drywall:

Drywall can be placed directly in contact with the front of the BVETTO smoke dome. Drywall can be hung on the framing members and pass across the face of the BVETTO smoke dome and in contact with it.

The drywall must be cut back a minimum of eight inches (8") from the sides of the firebox opening and eight inches (8") back from the top of the BVETTO firebox opening, leaving BVETTO material exposed around the face of the BVETTO firebox opening. These drywalls cut back areas will be filled with grout in conjunction with the installation of the required fire brick lining requirements.

Combustible wood sheathing such as plywood and particle board may be used to cover the front of the Isokern smoke dome and be in direct contact with it. Application of such combustible sheathings must assure that the sheathing is held a minimum of eight inches (8") away from each side of the finished fireplace opening and a minimum of eight inches (8") inches above the top of the finished fireplace opening. (Figure 29 & 30)

If combustible wood sheathing is installed across the face of the Isokern smoke dome front be sure that when the required noncombustible finished facing materials are applied directly to the front of the BVETTO, that no gaps or voids are left behind the finished facing materials. Completely seal the required noncombustible finished facing materials directly to the Isokern unit with Earthcore Adhesive or any other non-combustible grout.

**IMPORTANT:** When setting the noncombustible facing material onto the drywall that spans across the top of the firebox opening there will be a gap between the back of the noncombustible finish material and the rough front face of the Isokern firebox.

Be sure to fill this gap with Earthcore Adhesive in conjunction with placement of the code required noncombustible finish facing material that is set across the top of the firebox opening.

**WARNING!!!** Avoid false chimneys.

**IMPORTANT:** Failure to seal any gaps between the front face of the BVETTO and the back of the noncombustible finished facing material will create what is known as a "false chimney" or "secondary chimney". A "false chimney", in this case is the narrow gap (mentioned above) between the back of the noncombustible facing material at the top of the firebox opening and the rough front of the BVETTO smoke dome. If left unfilled this gap creates a "false-chimney" which can cause a fire hazard by drawing considerable heat out of the firebox and into the space behind the noncombustible finish facing and from there up into the wall cavity behind the drywall or other sheathing material that houses the Isokern fireplace

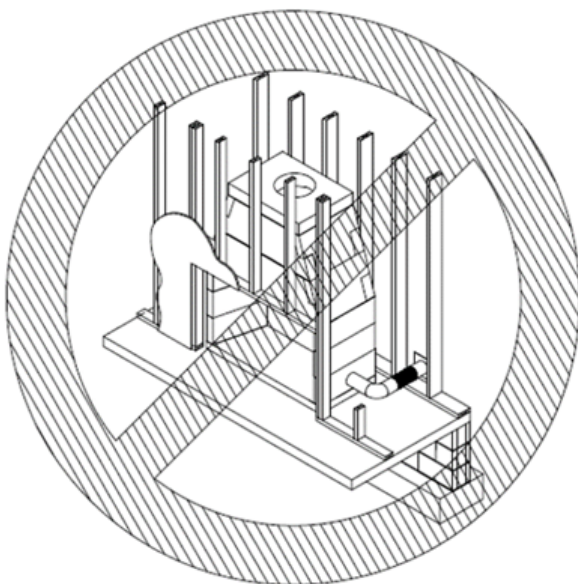


FIGURE 29

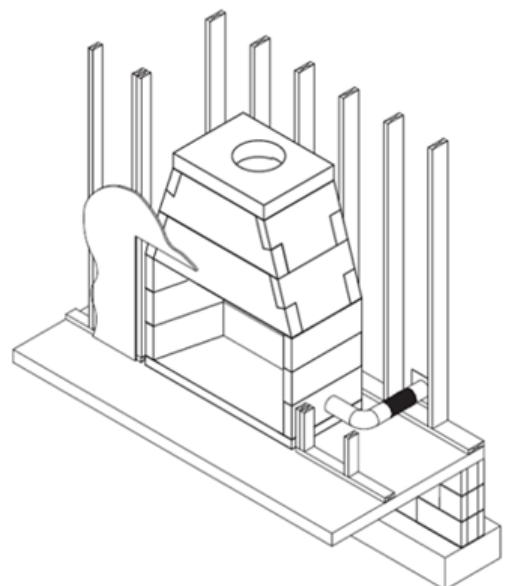
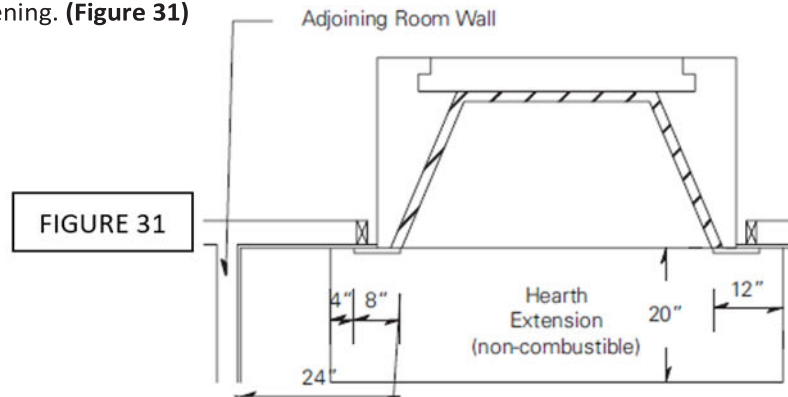


FIGURE 30

## CLEARANCE TO COMBUSTIBLE TRIM

### Adjoining Walls:

Side walls and walls to rooms adjoining the Isokern fireplace installation cannot be closer than twenty-four inches (24") to the finished fireplace opening. **(Figure 31)**



### Ceilings:

The minimum clearance from the top of the fireplace opening to a ceiling is forty-two inches (42"). **(Figure 32)**

### Mantel and Mantel Shelf Clearances:

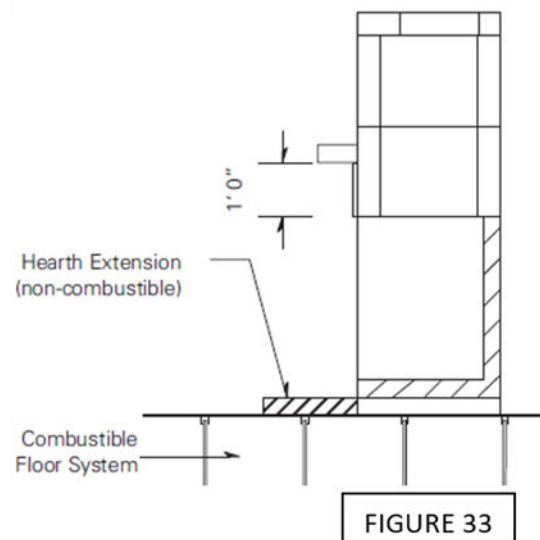
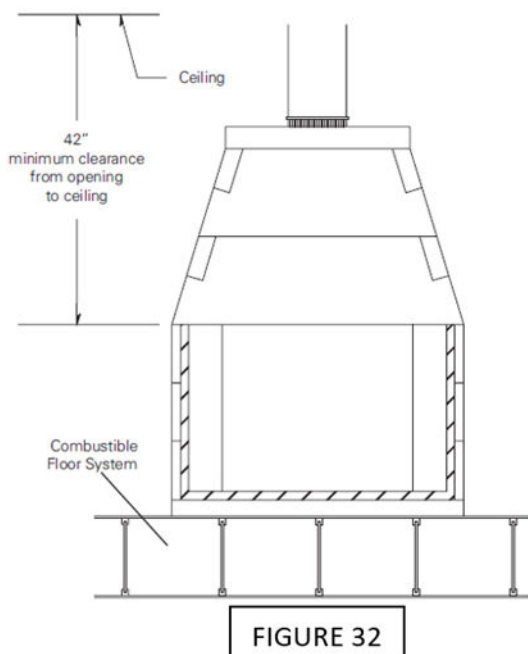
All combustible trim projecting less than one and one-half inch (1-1/2") must be kept eight inches (8") from the sides of the fireplace opening. All combustible trim projecting more than one and one-half inch (1-1/2") must be kept twelve inches (12") from the fireplace opening. **(Figure 33)**

Parts of the combustible mantel assembly located along the sides of the fireplace opening, which project more than one- and one-half inches (1-1/2") from the face of the fireplace, shall have additional clearance equal to that of the projection.

Parts of the combustible mantel assembly located above and projecting more than one- and one-half inches (1-1/2") from the fireplace opening shall not be placed less than twelve inches (12") from the top of the fireplace opening. **(Figure 31)**

**NOTE:** "Clearance to Combustible Trim" are those distances required to ensure that a fireplace mantel or facing will not catch fire. In most cases the distances should also be adequate to prevent any discoloration or warping due to heat. However, each installation presents a unique and completely different set of circumstances involving many variables.

These include paint or finish composition, previous exposure to heat, methods and quality of construction, air flow patterns, etc. Because of these variables, the manufacturer does not guarantee that heat warping or discoloration will never occur.





## BURNER SAFETY INSTRUCTIONS

**WARNING!!!** This product contains or generates chemicals known to the state of California to cause cancer or birth defects or other reproductive harm.

**WARNING!!!** This appliance assembly contains burner orifices specifically for the input gas specified on the burner and box, as well as the BTU rating specified in this manual. Modifying or failure to use the factory orifice may cause property damage, personal injury, or loss of life.

**WARNING!!!** THIS UNIT IS NOT FOR USE WITH SOLID FUEL.

Read these instructions completely before installing and using this Decorative Gas Appliance.

**IMPORTANT:** Read this owner's manual carefully and completely before trying to assemble, operate or service this appliance.

**Improper use of this appliance can cause serious injury or death from fire, burns, explosions and carbon monoxide poisoning.**

1. Solid fuels shall not be burned with this decorative gas appliance, or any fireplace where a decorative appliance has been installed.
2. The minimum inlet supply pressure for the purpose of input adjustment is 5.0 inches (natural gas) 11.0 inches (propane) in water column. The maximum inlet supply pressure is 10.5 inches (natural gas) 13.0 inches (propane) in water column.
3. Gas type will be indicated on the appliance rating plate. Do not use a natural gas burner with propane or a propane burner with natural gas. The gas appliance is not field convertible to use with other gas types.
4. The installation, provisions for combustion, and ventilation air must conform to the National Fuel Gas Code, ANSI Z223.1/ NFPA 54, or the Natural Gas and Propane Installation code, CSA B149.1.
5. The appliance and its main gas 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 psi (3.5 kPa). The appliance must be isolated from the gas piping system by closing its equipment shutoff valve during any pressure testing of the supply piping system at test pressures equal to or less than 1/2 psi (3.5 kPa).
6. 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.
7. Periodic examination and cleaning of the venting system including frequency of such examination and cleaning, by a qualified agency.
8. The appliance area is to be clear and free from combustible materials, gasoline and or flammable vapors and liquids.
9. For warranty to be valid gas log sets must be installed by a NFI certified or other qualified professional installer.
10. Always check local building codes governing fireplaces and fireplace installations. Decorative gas appliance installation must comply with all local, regional, state, and national codes and regulations.
11. This appliance is only for use with the type of gas indicated on the rating plate. This appliance SHALL NOT be field converted for use with other gases with Propane (LP) or Natural Gas (NG).
12. This appliance shall only be installed, serviced, or inspected by qualified professional service technician.
13. For propane (LP) use do not place propane supply tank(s) inside any structure. Locate propane supply tank(s) outdoors.
14. To prevent performance problems, do not use propane fuel tank of less than 100 lbs. capacity.
15. This decorative gas appliance reaches high temperature. 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.
16. Turn the appliance off and allow to cool before servicing. Always shut off any electricity and gas to the appliance while working on it. Only a qualified service person should install, service or repair this appliance. Have your appliance inspected annually by a qualified service person.

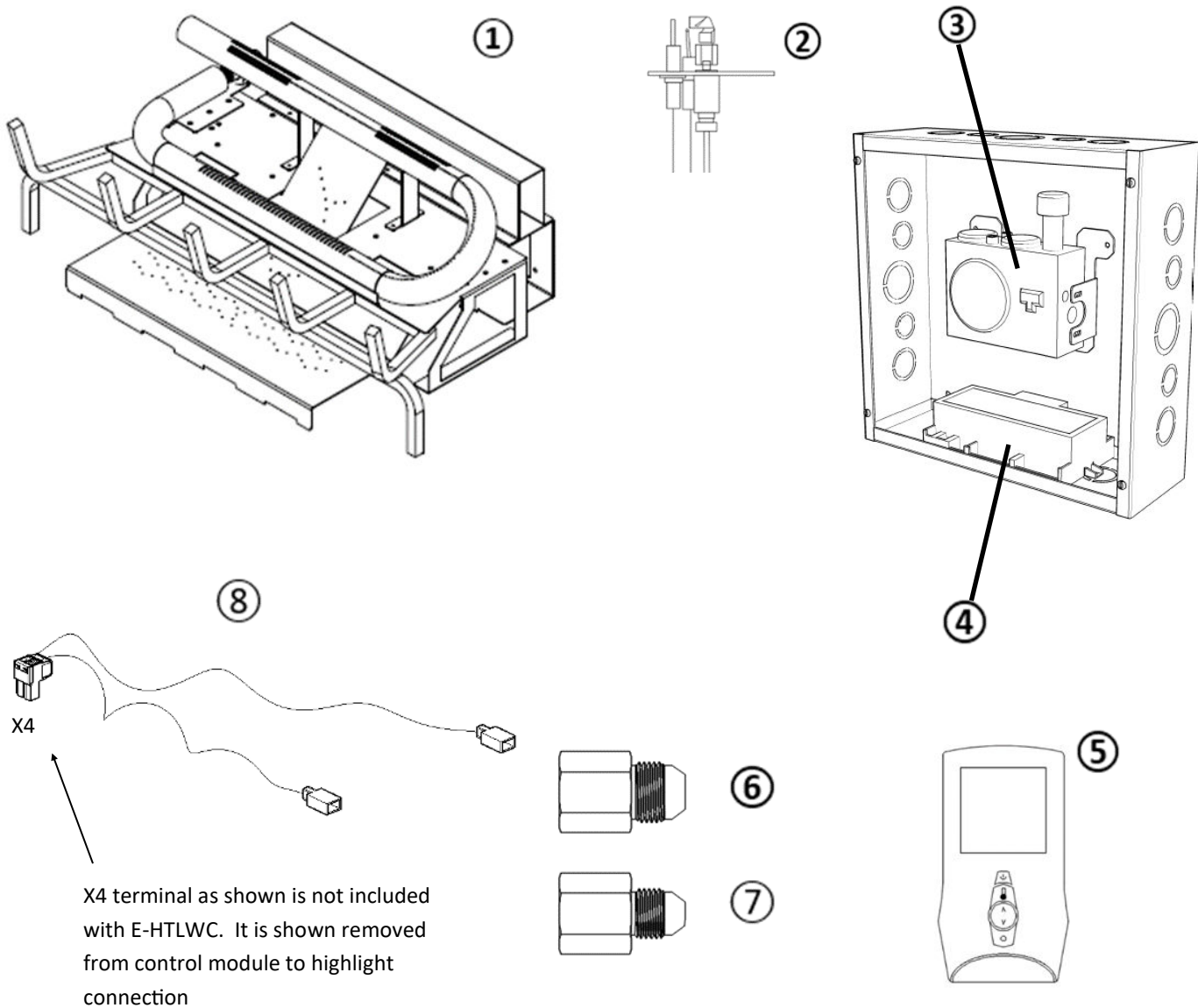
## BURNER SAFETY INSTRUCTIONS

17. It is imperative that the unit's control areas, burners and circulation air passages be kept clean.
18. Keep all combustible material, gasoline, and other flammable liquids at a safe distance from the fireplace. Do not use the appliance where these items are used or stored. Decorations, clothing, and other such combustible items should not be placed on the appliance.
19. Do not cook food or burn paper or other object(s).
20. Do not use any solid fuels - wood, coal, paper, cardboard, etc. - Use only the gas type listed on the fireplace's burner rating plate.
21. Do not in any way obstruct the flow of combustion and ventilation air. Provide adequate clearances around air openings into the combustion chamber as well as adequate accessibility clearances for servicing and proper operation.
22. Never install an burner component or accessory that has visible or suspected physical damage. These items should be inspected by a qualified representative to ensure safe condition. When in doubt, consult your local supplier.
23. Do not alter or modify the burner components under any circumstances. Modification or alteration of any sort may void manufacturer's warranty, listings, and approvals.
24. The BVETTO decorative gas appliance system is not intended to heat an entire home or to be used as a primary heat source.
25. Children and adults should be alerted to the hazards of high surface temperature and should stay away from this appliance to avoid burns or clothing ignition.
26. 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 the fireplace, install an adjustable safety gate to keep toddlers, young children, and other at-risk individuals out of the room and away from hot surfaces.
27. Clothing or flammable material should not be placed on or near the appliance.
28. Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
29. Any safety screen, guard, or barrier removed for servicing an appliance must be replaced prior to operating the appliance.
30. 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.

## Burner - Specifications

Fireplace Model	Burner Model	BTU			
		Nat. Gas (N)		L.P. Gas (P)	
		High	Low	High	Low
80B36	ISF-SB24-SN/ ISF-SB24-SP	62K	44K	56K	44K
80B46	ISF-SB36-SN/ ISF-SB36-SP	85K	51K	81K	61K

## BVETTO BURNER - COMPONENT LIST

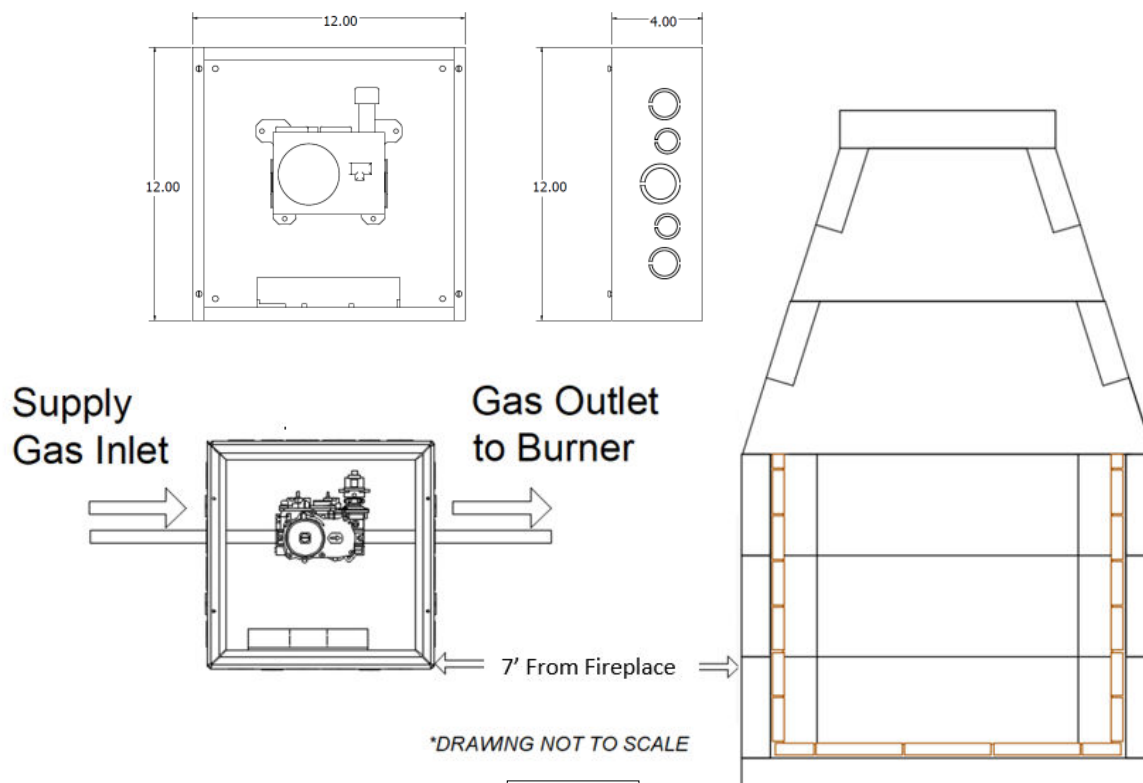


Item No.	Description	Part No.	Qty
1	Main Burner Assembly (natural gas)	ISF-SB24-SN/ ISF-SB24-SP	1
	Main Burner Assembly (propane)	ISF-SB36-SN/ ISF-SB36-SP	1
2	Pilot Assembly (natural gas)	ISF-E-PAN	1
	Pilot Assembly (propane)	ISF-E-PAP	1
3	Gas Valve (natural gas)	ISF-E-GVN	1
	Gas Valve (propane)	ISF-E-GVP	1
4	Control module/remote receiver	ISF-E-ICM	1
5	Remote Transmitter	ISF-E-RMT	1
6	1/2" Male Flare to 3/8" NPT Female Adapter	E-12FF-38FIP	1
7	3/8" Male Flare to 3/8" NPT Female Adapter	E-38FF-38FIP	1
8	High Temp Lintel wire connector	E-HTLWC	1

## GAS LINE & VALVE BOX INSTALLATION

This appliance must be connected to the gas line in accordance with local codes and/or the National Fuel Gas Code, ANSI Z223.1. After connecting the gas line, all joints in the line and connections at the valve should be checked for leaks before final positioning of the unit. Conduct a gas leakage test of the appliance piping and control system downstream of the shutoff valve in the supply line to the appliance.

1. The valve control box comes with a 110" pilot assembly lead; therefore, the box's metal enclosure must be mounted within 7' of the fireplace. Valve controls are contained in a 12" x 12" x 4" NEMA1 enclosure. **(Figure 34)**
2. Attach the metal enclosure to the studs using standard building materials. The metal enclosure must be mounted in a location that can be accessed in the future for additional connections and servicing.
3. Installation and servicing of gas appliances and ignition systems must only be performed by qualified personnel.
4. Turn off gas and electricity before starting installation or service.
5. Make sure gas valve is rated for gas being used.
6. Make sure gas piping is pressure tested before control is connected. High pressure can damage the control causing a hazardous condition.
7. Make sure piping is clean and free from burrs. Apply a small amount of good quality gas-rated pipe thread compound or plumbers' tape suitable for the gas being used. Thread compound should be used sparingly on male threads only, leaving the first two threads clean.
8. Inlet and Outlet of valve are 3/8" NPT
9. It is recommended that a safety shut off valve is installed inside the valve enclosure on inlet side of the gas valve.
10. It is recommended to hard pipe in the connections with unions installed inside the box.
11. Gas outlet from the valve should terminate into the firebox no less than 3" from sidewall/backwall.
12. Uncoil the pilot assembly. Be careful to not create unwanted kinks in the pilot tubing.
13. Feed the spade connector ends of the pilot assembly from inside the fireplace to the outside, being careful not to clog the flared fitting of the pilot tube or damage the spade connectors.
14. Plug the pilot assembly's spade connectors into the module according to the following wiring diagram **(Figures 35 & 36)**. Insert the pilot tubing into the right side of the valve and, using a wrench, tighten the nut so that the pilot tubing cannot be pulled out.
15. Install the High-Temp Lintel Wire Connector wires provided with the burner to the X4 terminal of the module. Connect the wires coming from the BVT-1 High-Temp Lintel to the High-Temp Lintel Wire Connector wires as shown **(Figures 36-38)**.



**FIGURE 34**

## VALVE BOX & BURNER WIRING DIAGRAM

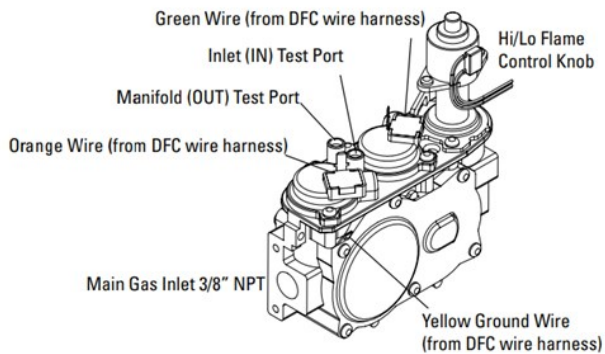
**WARNING!!!: Do not connect 120 VAC to the control valve.**

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

The 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. If not installed and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or fuel combustion which are known to the state of California to cause cancer, birth defects or other reproductive harm.

For a copy of the homeowner's care and operation manual, go to [www.earthcore.com](http://www.earthcore.com) or call 1-800-642-2920.

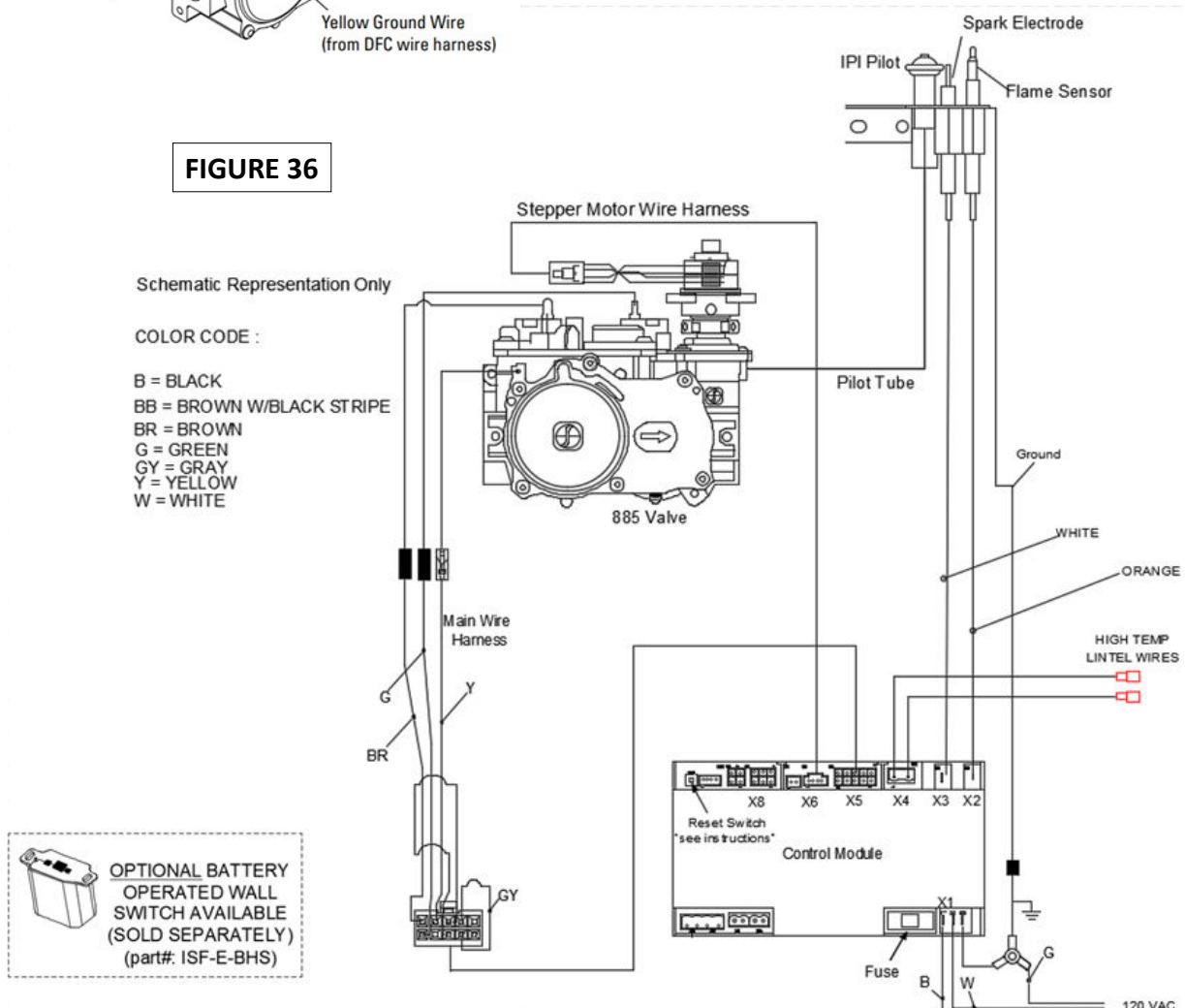
**FIGURE 35**



**TABLE 1**

FUEL TYPE	INLET PRESSURE			MANIFOLD PRESSURE	
	DESIRED	MINIMUM	MAXIMUM	HIGH FLAME	LOW FLAME
NATURAL GAS	7" WC	5" WC	10.5" WC	3.5" WC	1.6" WC
LP GAS	11" WC	10.5 WC	13" WC	10" WC	6.4" WC

**FIGURE 36**



## BVETTO SWITCH WIRES AND BURNER MODULE CONNECTION

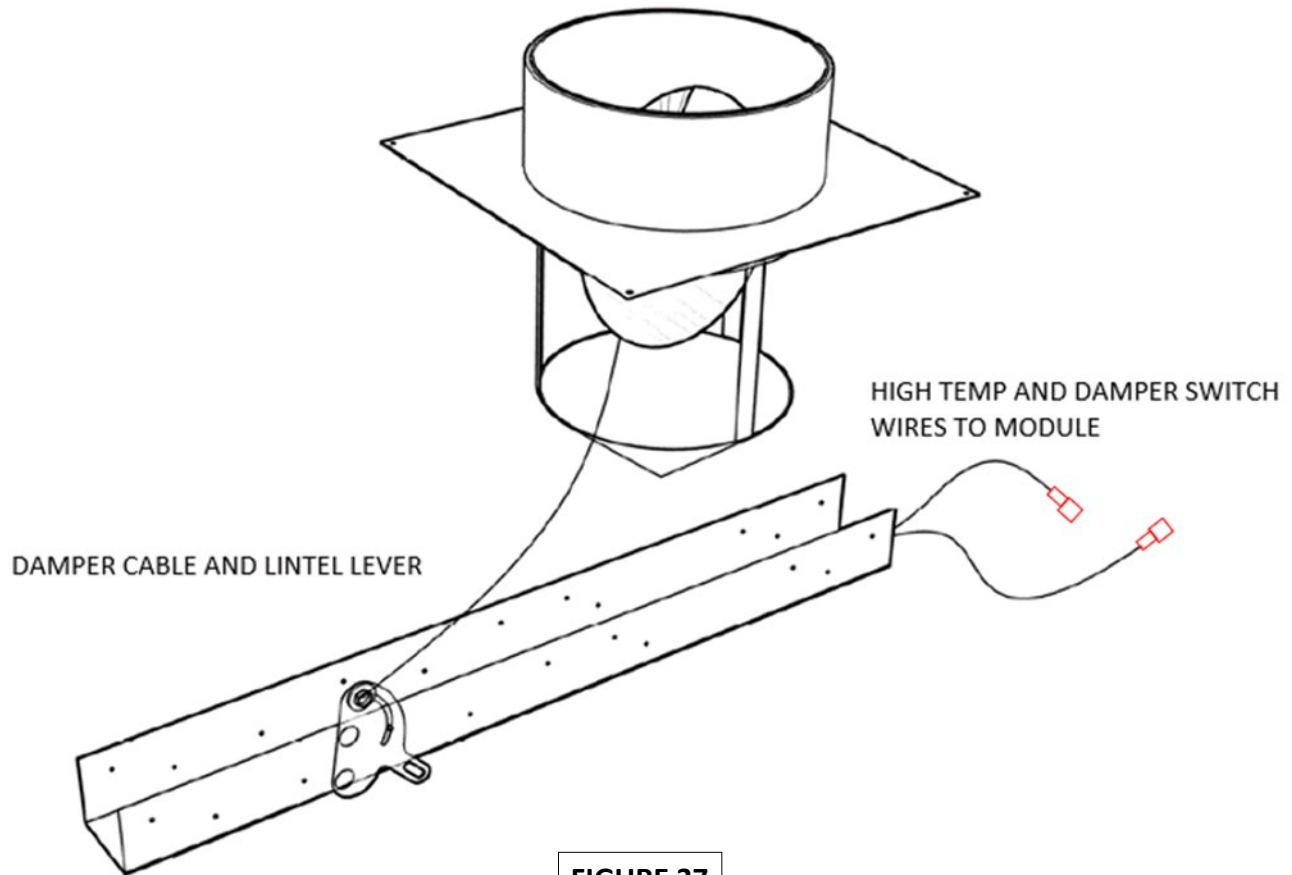
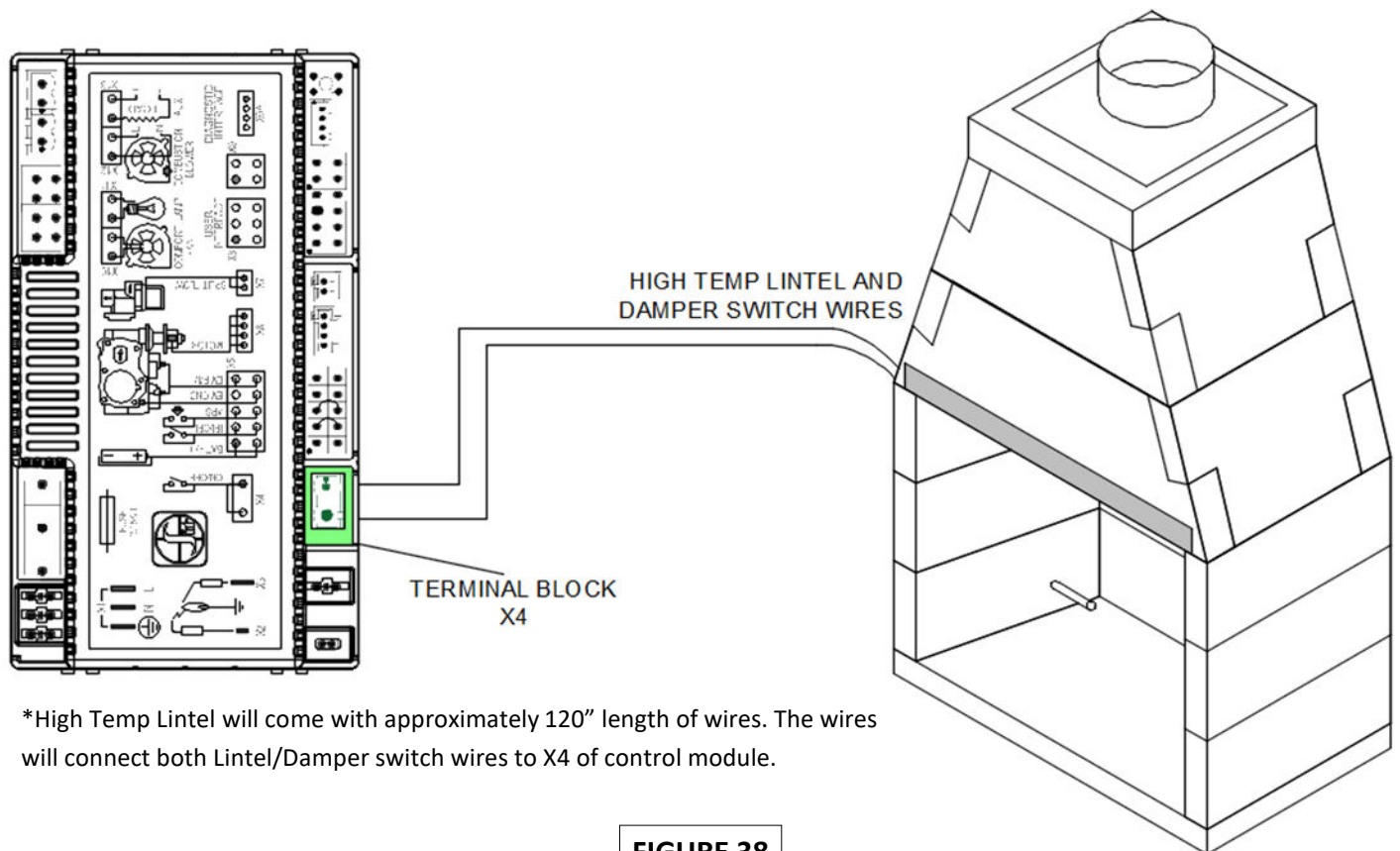


FIGURE 37



\*High Temp Lintel will come with approximately 120" length of wires. The wires will connect both Lintel/Damper switch wires to X4 of control module.

FIGURE 38

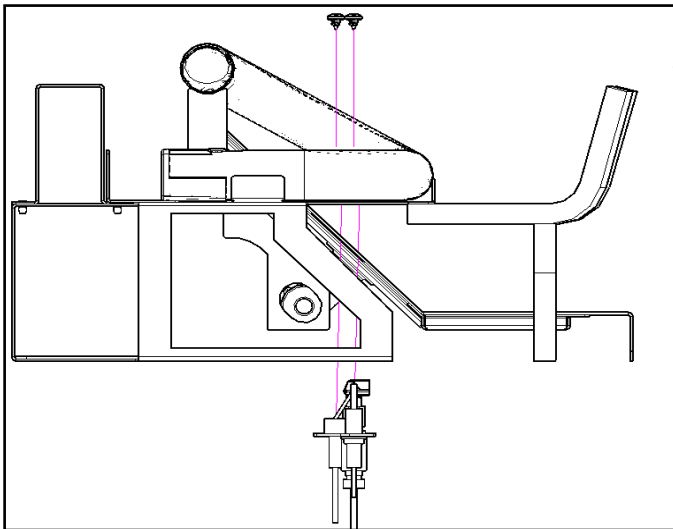


## BURNER INSTALLATION

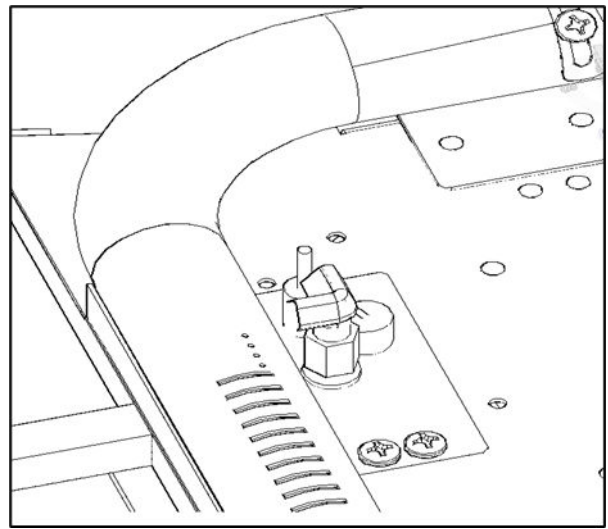
**IMPORTANT:** Prior to installation: Shut off main gas supply to fireplace.

This burner shall be installed by qualified professional service technician. To ensure proper performance of the appliance the owner's installation manual must be followed carefully.

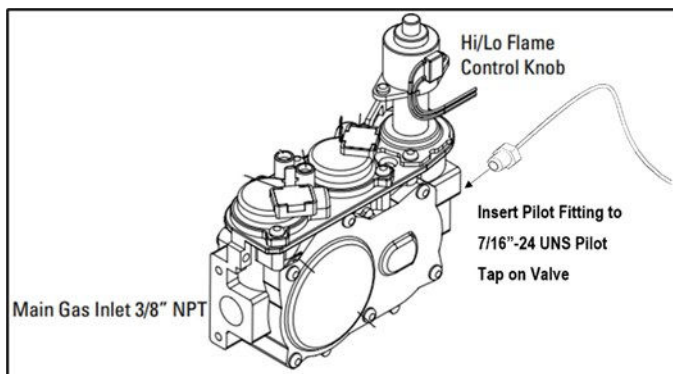
1. Position the burner in the center of BVETTO fireplace floor towards the rear. Leave a minimum 1" clearance from the rear wall.
2. Uncoil the pilot assembly. Be careful to not create unwanted kinks in the pilot tubing.
3. Feed the pilot assembly through the bottom of the burner cut out and mount the bracket using the provided screws/nuts.  
**Figure 38 & 39**
4. Feed the pilot assembly connectors through the hole of the sidewall towards the valve box, be careful not to clog the flared fitting of the pilot tube or damage the spade connectors.
5. Plug the spade connectors into the module according to the wiring diagram (**Figures 37, 38 & 39**), insert the pilot tubing into the right side of the valve and, using a wrench, tighten the nut so that the pilot tubing cannot be pulled out.
6. Ensure the appropriate flared fitting is connected to the gas supply stub.
7. Connect the open end of 12" flex connector to the gas-supply. **Figure 41**
8. Avoid creating kinks in the flex connector.
9. Make sure all connections are tightly secured.
10. Spread media evenly across burner pan section. **Page 38**
11. Proceed to burner lighting instructions.



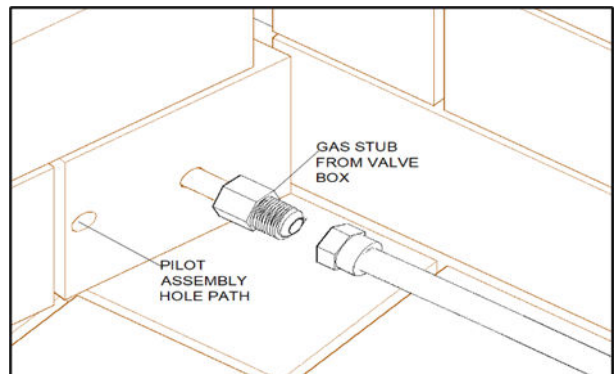
**FIGURE 38**



**FIGURE 39**



**FIGURE 40**



**FIGURE 41**

## REMOTE CONTROL SYSTEM

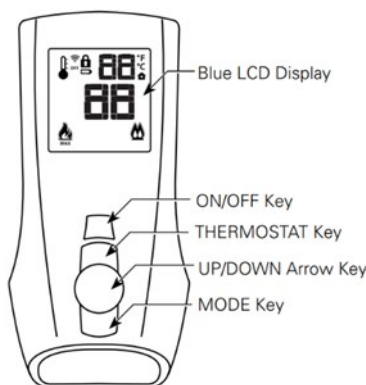
The Remote allows you to command the functions of your appliance from the comfort of your chair and is configured to control the On/Off primary burner operation, its flame height through six (6) levels, and provides On/Off control of the appliance.

### SYNCHRONIZE REMOTE TO CONTROL MODULE FOR THE FIRST TIME

1. Insert the three (3) provided AAA batteries into the battery bay in the remote. Correctly align polarity (+/-).
2. Press the red SW1 button on the control module. The control module will beep 3 times and an amber LED is illuminated to indicate that the control module is ready to synchronize with a remote within 10 seconds.
3. Push the "ON" button on the remote (**Figure 42**). The control module will beep four (4) times to indicate acceptance of the remote's command. The system is now synchronized.

### TURN ON THE APPLIANCE

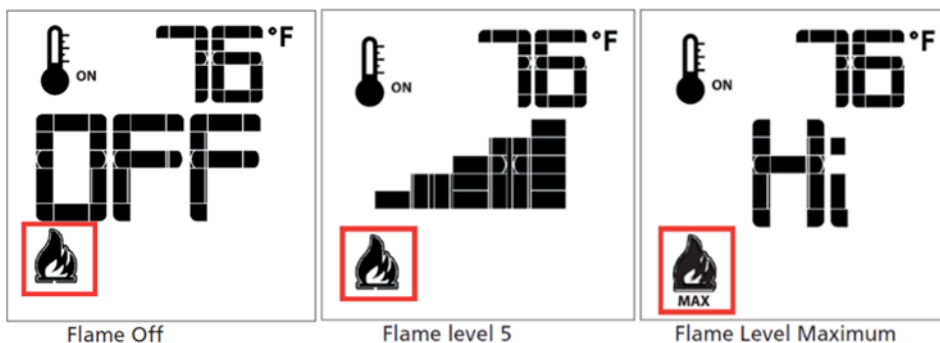
Press the ON/OFF Key on the Remote. The Remote LCD display will only show the room temperature and Icon and the appliance burner will turn off. A single "beep" from the Receiver confirms reception of the command.



**FIGURE 42**

### REMOTE FLAME CONTROL

The system has six (6) flame levels. See (**Figure 43**) for an example. With the system on, and the flame level at the maximum in the appliance, pressing the Down Arrow Key once will reduce the flame height by one step until the flame is turned off. The Up-Arrow Key will increase the flame height each time it is pressed. If the Up Arrow Key is pressed while the system is on, but the flame is off, the flame will come on in the high position (**Figure 43**). A single "beep" will confirm reception of the command.



**FIGURE 43**

## REMOTE CONTROL SYSTEM

### TEMPERATURE INDICATOR DISPLAY

With the system in the “OFF” position, press the Thermostat Key and the Mode Key at the same time (**Figure 42**). Look at the LCD screen on the Remote to verify that a C or F is visible to the right of the Room Temperature display (**Figure 44**).

FIGURE 44



### TURN OFF THE APPLIANCE

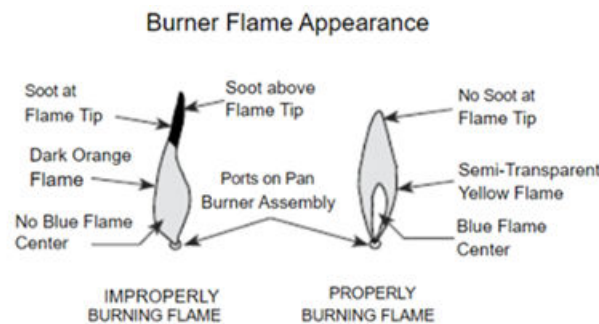
Press the ON/OFF Key on the Remote. The Remote LCD display will only show the room temperature and Icon and the appliance will turn off. A single “beep” from the Receiver confirms reception of the command.

### FLAME COLOR AND BEHAVIOR

This appliance is designed for maximum heating efficiency. Therefore, upon lighting of the main burner, the flames will be semi-transparent or “bluish.” After 10- 20 minutes of operation the logs will heat up and the flames will become a yellow/ orange color.

Adjusting the appliance to cause the flames to turn orange sooner may result in poor combustion, sooting and a hazardous situation. See (**Figure 45**) showing proper flame appearance.

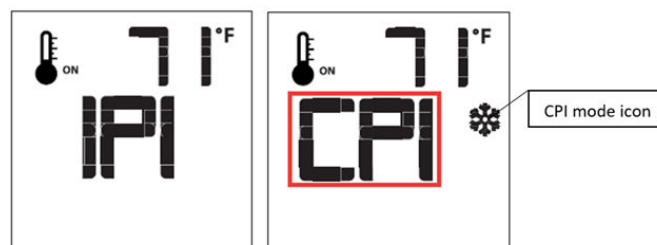
FIGURE 45



### Continuous Pilot (CPI) & Intermittent Pilot (IPI) selection

The IPI selection is the intended setting for the appliance operation. If remote is in CPI mode, it must be returned to the IPI mode. To turn it back the remote needs to be OFF. With the system in the OFF position, press the Mode Key (**Figure 42**) once to index to the CPI mode icon. Pressing the DOWN Arrow Key will return to IPI. A single “beep” will confirm the reception of the command (**Figure 46**).

FIGURE 46



**WARNING!!!:** Fire hazard. Can cause severe injury or death. The receiver causes ignition of the appliance. The appliance can turn on suddenly. Keep away from the appliance burner when operating the remote system or activating manual bypass of the remote system.

**WARNING!!!:** Property damage hazard. Excessive heat can cause property damage. The appliance can stay lit for many hours. Turn off the appliance if it is not going to be attended for any length of time. Always place the Transmitter where children cannot reach it.

## BURNER LIGHTING INSTRUCTIONS

### INSTALLER INSTRUCTIONS

It is required that the set of safety instruction labels that have been supplied with the appliance be affixed to the operation and control points of the appliance. It is the installers responsibility to ensure these warnings are properly affixed during installation. These warning labels are a critical step in informing consumers of safe operation of this appliance.

### PRE-LIGHTING CHECKLIST

Be sure to check these items before the initial lighting of the appliance:

- Gas pressure has been checked carefully
- All gas fittings have been checked for leaks.
- All clearances to combustibles have been met
- All combustibles materials have been removed from the area in front of the appliance.
- All vented areas of the appliance face are unobstructed
- House is ventilated to clear initial paint curing odors
- All packaging materials have been removed from the appliance.
- While appliance is cool, fingerprints or other marks have been cleaned from any plated surfaces with denatured alcohol and a soft cloth. Marks left on these surfaces may become permanent into the finish if not removed prior burning the unit.

**WARNING!!!: IF YOU DO NOT FOLLOW THESE INSTRUCTIONS EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.**

### SAFETY INSTRUCTIONS

- A. This appliance is equipped with an ignition device which automatically lights the pilot. Do NOT try to light the pilot by hand.
- B. BEFORE OPERATING 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.**
  - **If you cannot reach your gas supplier, call the fire department.**
- C. If any portion of this appliance does not operate as the instructions indicate, do not try to repair it, call a qualified service technician. Do not use tools. Force or attempted repair may result in a fire or explosion.
- D. **Do not use this appliance if any part has been under water.** Immediately call a qualified service technician to inspect the appliance and to replace any part of the system and any gas control which has been under water.

### Main Power and Remote Overview

Terminal X4 on module serves as ON/OFF switch. When the High Temp Lintel Wires are connected to Terminal X4, the REMOTE functions as a burner and pilot override switch.

### Remote Lighting Instructions

Press ON/OFF on Remote transmitter. Module will beep one time to confirm. Pilot will begin to spark. It may take several minutes for air to purge from pilot tube. Once pilot is ignited, the main burner will turn on.

### TO TURN OFF GAS TO APPLIANCE

1. Press the "ON/OFF" key on remote to turn off appliance operation.
2. Turn off all electric power to the appliance if service is to be performed.
3. Close the main line gas shut-off valve.

## BURNER MEDIA AND LOG INSTALLATION

1. Spread lava rock on the hearth floor of the fireplace around the front and sides of burner.

a. **DO NOT** put lava rock directly on the burner OR behind it.

2. Place embers along the pan section of the burner and spread evenly. **Figure 46**

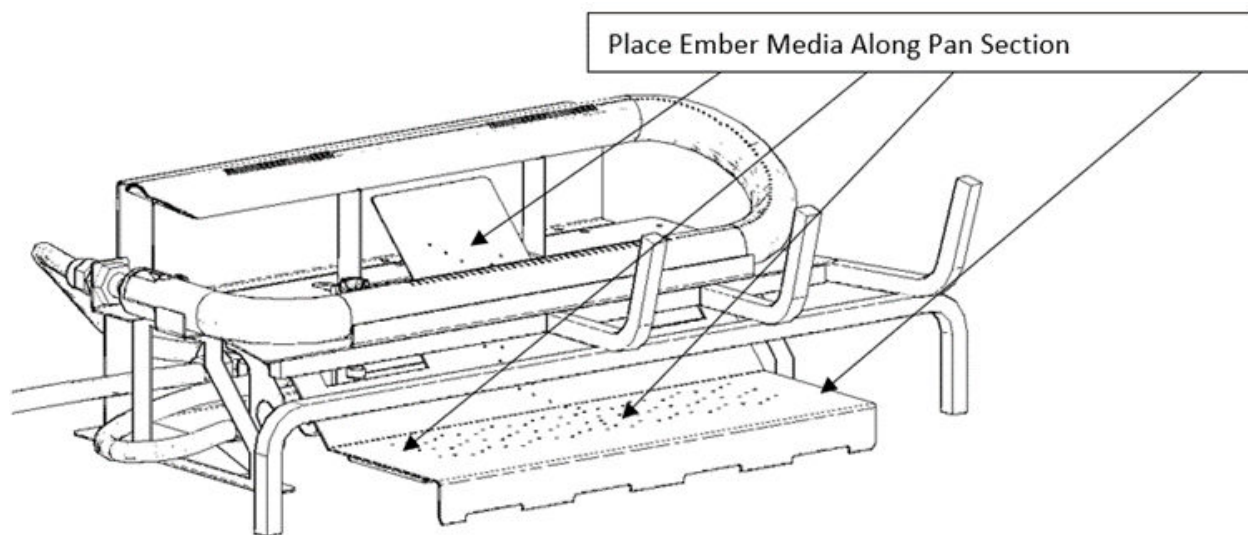
a. It may be necessary to break large clumps into smaller pieces

b. For LP models, vermiculite media must be used prior to using embers.

3. Install Log Set according to Log Set instructions included with the log set package.

**IMPORTANT:** Read all safety warnings and ensure proper placement for safer operation.

**IMPORTANT:** DO NOT add additional logs or embers to this log set as it may cause unsafe operation.



\*Vermiculite must be used on LP burner models

**FIGURE 46**

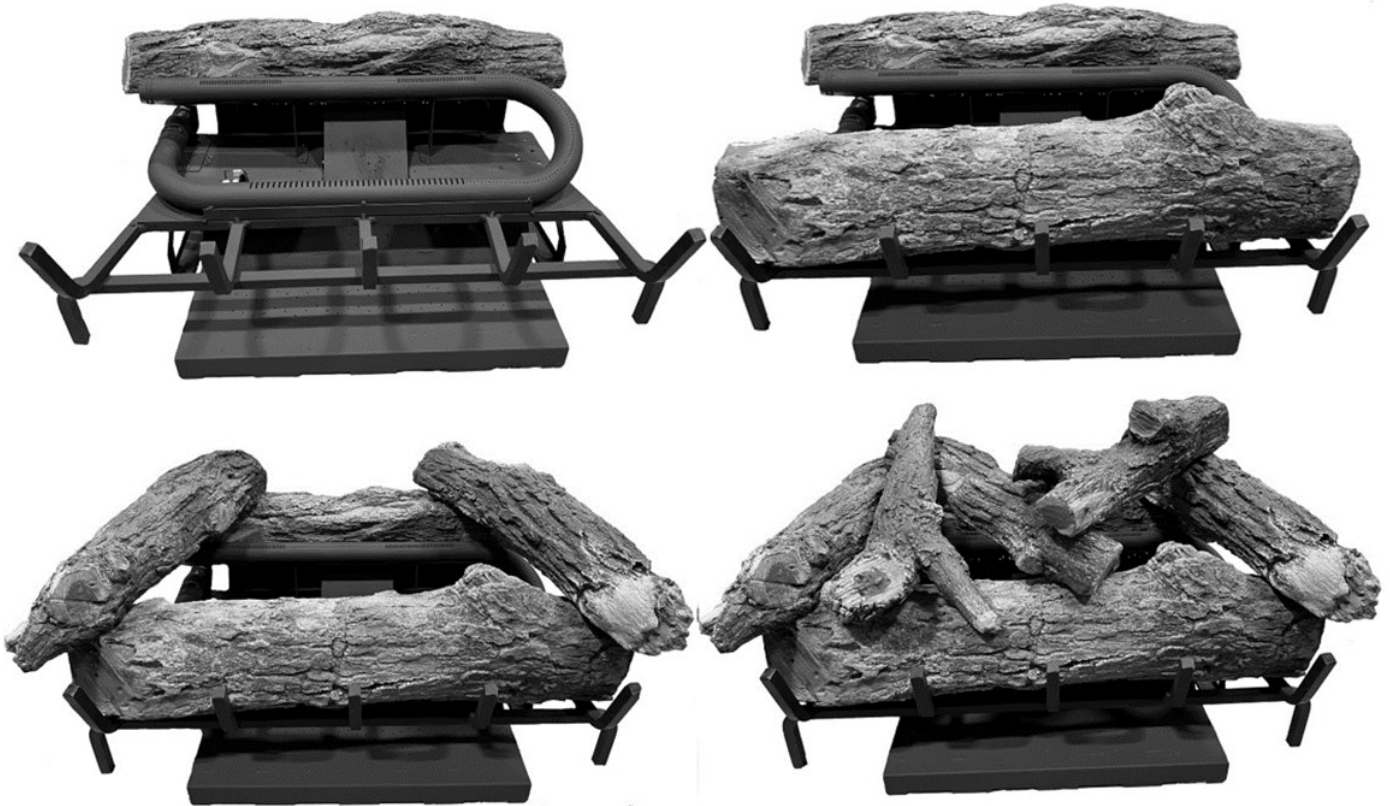
**NOTE:** Burning Gas Logs for any length of time will create soot; generally, on the logs and firebrick. Soot is the result of incomplete combustion of the gas, producing dark dense material. Improper placement of the log set will contribute to excessive soot. It is critical to place logs according to the log placement diagrams. To clean off soot use an old toothbrush and gently rub away the soot. Periodic examination and cleaning of the venting system and the fireplace, including frequency of such examination and cleaning, by a qualified agency is recommended.

**WARNING!!!: OPERATION OF THIS APPLIANCE WHEN NOT CONNECTED TO A PROPERLY INSTALLED AND MAINTAINED VENTING SYSTEM CAN RESULT IN CARBON MONOXIDE (CO) POISONING AND POSSIBLE DEATH.**



## BURNER MEDIA AND LOG INSTALLATION

### 24" Weathered Oak Logs



### 36" Weathered Oak Logs



## BURNER MEDIA AND LOG INSTALLATION

### 24" Birch Logs

①



②



③





## BURNER MEDIA AND LOG INSTALLATION

### 36" Birch Logs

①



②



③



④



## TROUBLESHOOTING

Earthcore Industries Technical Support: 1-800-642-2920

Issue	Probable Cause	Possible Solution
No spark on pilot	No power	-Verify power is ON -Check wiring on ignition module and gas valve are correct
	Ignitor misalignment	-Verify ignitor not contacting pilot gas hood
	Loose pilot connections	- Check pilot wiring assembly is tightly secured to ignition module
Pilot won't ignite	No spark	- See "No spark on pilot"
	Air in pilot gas line	- It may take a few minutes to purge out all the air from the pilot gas tube to ignite
	No gas	-Verify pilot gas tube is threaded sufficiently to gas valve -Verify all gas connections going to and from gas valve are tight -Verify main gas-shutoff valve is in ON position
Pilot won't stay ignited	Flame sensor obstruction	- Remove any obstruction near pilot igniter and flame sensor
	Loose pilot connections	- Check pilot wiring assembly is tightly secured to ignition module
	Low gas pressure	- Verify adequate gas supply pressure
Remote won't work/ unresponsive	Range	- Remote is too far from receiver
	Batteries need replacement	- Replace batteries on remote transmitter
	Program remote to receiver	- Sync remote transmitter to ignition module; Page 34
Main burner won't ignite	Pilot won't ignite	- See "Pilot won't ignite"
	Pilot flame won't stay ignited	- See "Pilot won't stay ignited"
	Defective valve/ignition module	- Replace gas valve or ignition module

## NOTES

This image shows a full page of blank, lined paper. It features approximately 20 evenly spaced horizontal gray lines across its entire width, typical of notebook or composition paper. The background is white, and there are no margins, text, or other markings present.

**REGISTRATION CARD**

Please tear out along line and send to:

Earthcore Industries  
Attn: Technical Department  
6899 Phillips Industrial Blvd  
Jacksonville, FL 32256

Dealer \_\_\_\_\_

Date of Purchase: \_\_\_\_\_

Date Of Installation: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Burner Model (Circle One):

ISF-SB24-S(N/P)

ISF-SB36-S(N/P)

Fuel Type (Circle One):

Natural Gas

Propane

Firebox Serial Number:

(Located on Rating Plate Inside Firebox)

Buyer: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone No.: \_\_\_\_\_

Installed By: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Phone No.: \_\_\_\_\_

## REGISTRATION CARD

ISOKERN offers a Lifetime Warranty for all Isokern components, to be free from defects in materials that negatively affect system performance from the date of purchase, subject to the terms and conditions of this limited warranty.

This warranty covers only the above stated components. THIS WARRANTY DOES NOT COVER DRAFTING, SMOKING OR PUFFING OF THE FIREPLACE SYSTEM. Factors beyond the manufacturer's control affect fireplace drafting, smoking, and puffing, and ISOKERN cannot guarantee these aspects of performance.

### EXCLUSIONS AND LIMITATIONS

This Lifetime Warranty applies only if the Isokern Product is installed in the United States and Canada and only if operated and maintained in accordance with the printed instructions accompanying the Product and in compliance with all applicable installation and building codes and good trade practices. This warranty is non-transferable and extends to the original owner only. The following do not carry the Lifetime Warranty but are warranted as follows:

**Burner** – The BVETTO gas log burner has a one-year warranty against any performance defects.

**Gas Logs** – The BVETTO gas logs have a one-year warranty against breakage, except breakage due to mishandling or negligence.

**Control Valve** – If the BVETTO gas log burner was purchased with a gas control valve, the gas control valve has a one-year warranty against any performance defects.

**Gas Logs** – All painted surfaces that get wet due to rain, flooding, household pets, wild animals or birds, or get damaged due to negligence or disaster, have no warranty.

**Accessories** – Embers and lava coal that get wet due to rain, flooding, household pets, wild animals or birds, or get damaged due to negligence or disaster, have no warranty.

Parts not otherwise listed carry a 90-day warranty from the date of installation.

If a component is found to be defective under the terms of this warranty the party to whom this warranty is extended shall, notify Earthcore, 6899 Phillips Industrial Blvd, Jacksonville, Florida 32256, in writing, by registered mail, within thirty (30) days following the discovery of the defect within the lifetime warranty period. The notice shall contain (1) the date of purchase; (2) place of purchase; (3) address of installation; (4) name, address and phone number of the owner; and (5) a brief description of the defect.

Earthcore, or any division thereof, is not responsible for any labor costs or indirect costs incurred for the replacement of defective components.

Earthcore is not responsible for misuse or mishandling of components. Nothing in this warranty makes Earthcore, or any division thereof, liable in any respect for any injury or damage to the building or structure in which the fireplace or chimney system has been installed or to persons or property therein arising out of the use, misuse, or installation of properly manufactured ISOKERN product.

EARTHCORE, OR ANY DIVISION THEREOF, SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES ARISING OUT OF THE USE OF THE FIREPLACES OR CHIMNEY SYSTEMS. ALL SUCH DAMAGES AND EXPENSES ARE HEREBY EXCLUDED.

This warranty is null and void when the fireplace or chimney systems are not installed pursuant to the installation instructions provided by Earthcore or local building codes have not been followed completely.

This warranty applies only to those fireplace and chimney systems installed in the continental United States and Canada. If any part of this warranty is found to be unenforceable, the remaining parts shall remain in force and effect.

EARTHCORE HEREBY DISCLAIMS ALL GUARANTEES AND WARRANTIES, EXPRESS OR IMPLIED, BEYOND THE WARRANTIES SET FORTH HEREIN.

**earthcore®**

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