

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 - 2014 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 - 2014
Canadian: CSA 2.22- 2014



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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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BVETTO Rating Label

ISOKERN BVETTO B-VENT GAS FIREPLACE: MODELS 80B36 AND 80B46		EARTHCORE INDUSTRIES, INC. JACKSONVILLE, FL 32256																			
 US <small>PFS REPORT NO. 09-79</small>	<small>LISTED VENTED GAS FIREPLACE PER USA ANSI Z21.50 - 2014 AND CANADIAN: CSA 2.26-2014</small> NOT FOR USE WITH SOLID FUEL		IBV MODEL # <input type="checkbox"/> 80B36 <input type="checkbox"/> 80B46																		
	SUITABLE FOR USE WITH PROPANE (LP) OR NATURAL GAS, SEE GAS IDENTIFYING TAG ON BURNER <input type="checkbox"/> IBV36 MODEL # 80B36 PROPANE (LP) BTU MIN: 22,000; BTU MAX: 50,000 <input type="checkbox"/> IBV36 MODEL # 80B36 NATURAL GAS (NG) BTU MIN: 21,000; BTU MAX: 65,000 <input type="checkbox"/> IBV46 MODEL # 80B46 PROPANE (LP) BTU MIN: 23,000; BTU MAX: 60,000 <input type="checkbox"/> IBV46 MODEL # 80B46 NATURAL GAS (NG) BTU MIN: 22,000; BTU MAX: 75,000 <small>*See Burner Rating Plate For Additional Information</small>		SERIAL NO: 																		
MANIFOLD PRESSURE: PROPANE (LP): 10" WATER COLUMN; NATURAL GAS: 3.5" WATER COLUMN																					
MINIMUM PERMISSIBLE GAS SUPPLY PRESSURE FR 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: <table> <tr> <td>UNIT FRONT AND SIDES</td> <td>= 0in</td> <td></td> </tr> <tr> <td>UNIT REAR</td> <td>= 1.5in.</td> <td>60mm</td> </tr> <tr> <td>COMBUSTIBLE SHEATHING ABOVE OPENING TOP</td> <td>= 8in.</td> <td>205mm</td> </tr> <tr> <td>SHEATHING OR TRIM TO OPENING SIDES</td> <td>= 8in.</td> <td>205mm</td> </tr> <tr> <td>MANTLE ABOVE OPENING</td> <td>= 12in.</td> <td>305mm</td> </tr> <tr> <td>INSULATION FROM FIREBOX</td> <td>= 3in.</td> <td>75mm</td> </tr> </table>			UNIT FRONT AND SIDES	= 0in		UNIT REAR	= 1.5in.	60mm	COMBUSTIBLE SHEATHING ABOVE OPENING TOP	= 8in.	205mm	SHEATHING OR TRIM TO OPENING SIDES	= 8in.	205mm	MANTLE ABOVE OPENING	= 12in.	305mm	INSULATION FROM FIREBOX	= 3in.	75mm
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MANTLE ABOVE OPENING	= 12in.	305mm																			
INSULATION FROM FIREBOX	= 3in.	75mm																			
<small>"CAUTION: THIS APPLIANCE IS ONLY FOR USE WITH THE TYPE OF GAS INDICATED ON THE RATING PLATE AND MAY BE INSTALLED IN THE AFTER-MARKET, PERMANENTLY LOCATED, MANUFACTURED HOME (USA ONLY) OR MOBILE HOME, WHERE NOT PROHIBITED BY LOCAL CODES. SEE OWNER'S MANUAL FOR DETAILS. THIS APPLIANCE IS NOT CONVERTIBLE FOR USE WITH OTHER GASES, UNLESS A CERTIFIED KIT IS USED."</small> <small>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</small>																					

General Information

BVETTO Models 80B36 and 80B46 are tested and listed by PFS Corp., USA Report No. 09-79 to ANSI Z21.50 - 2014 and Canadian Standard CSA 2.22 - 2014. 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 19-22.

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 installation 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. Combustion air inlet kits though not required for the BVETTO may help improve

fireplace operation. Check local codes for combustion air requirements.

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, since 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 guide book 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.

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.

14. Keep all insulation and vapor barriers a minimum of three inches (3") away from all BVETTO B-Vent and chimney components.

15. 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 - 2015 (NFGC). The bonding requirements in previous code editions, in local jurisdictions or in specific situations, may differ.

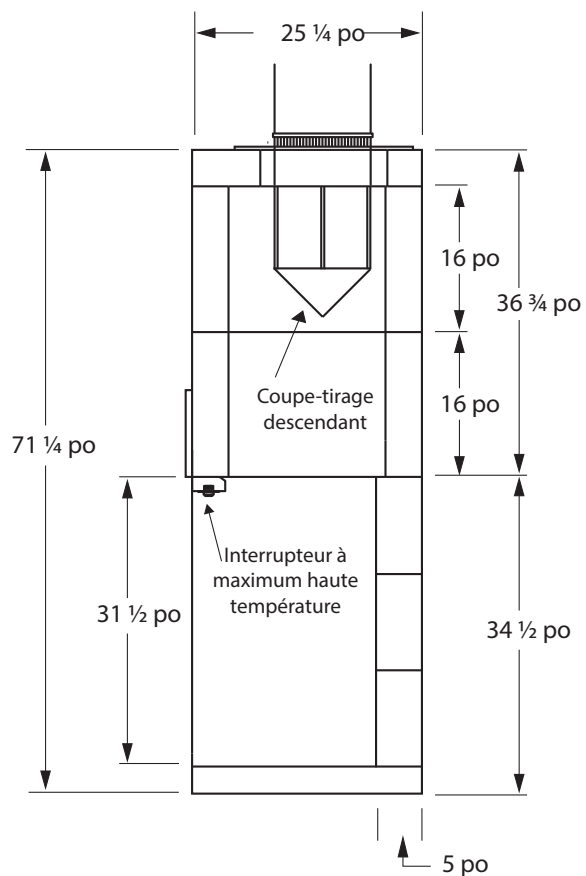
16. Do not pack or fill required air spaces with insulation or other material. No material is allowed in these spaces.

Technical drawing of a furnace assembly showing dimensions and components:

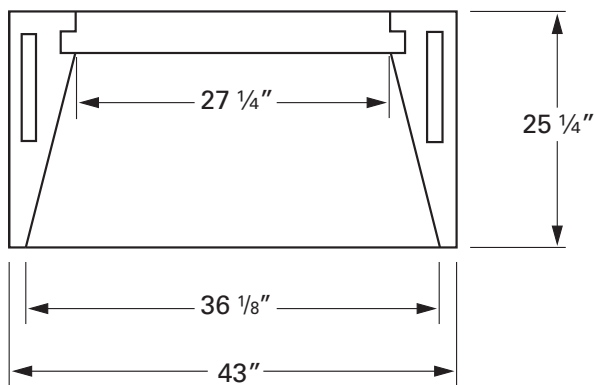
- Top width: $22\frac{1}{2}"$
- Top flange width: $27\frac{1}{4}"$
- Inner width (below flange): $36\frac{1}{8}"$
- Inner width (bottom): $43"$
- Height from top flange to bottom: $71\frac{1}{4}"$
- Height of the main body (from bottom flange to top flange): $31\frac{1}{2}"$
- Height of the bottom flange: $10\frac{1}{2}"$
- Component labeled: High Temp Lintel
- Note: These are inside rough.

Front View

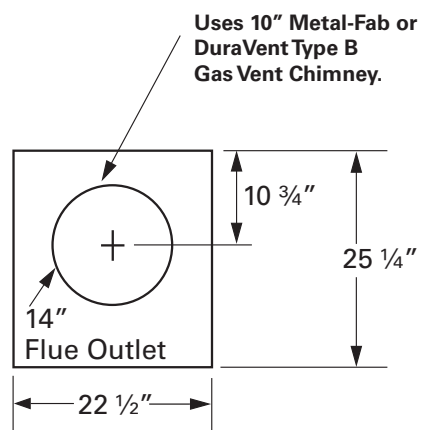
Note: These are inside rough dimensions before firebrick



Side View

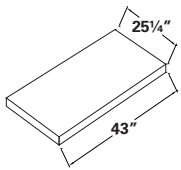
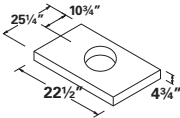
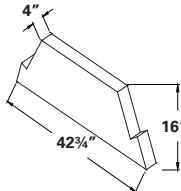
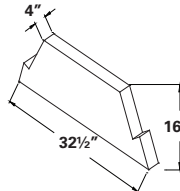
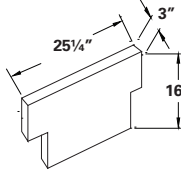
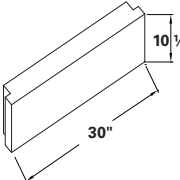
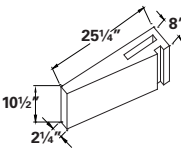


Plan View

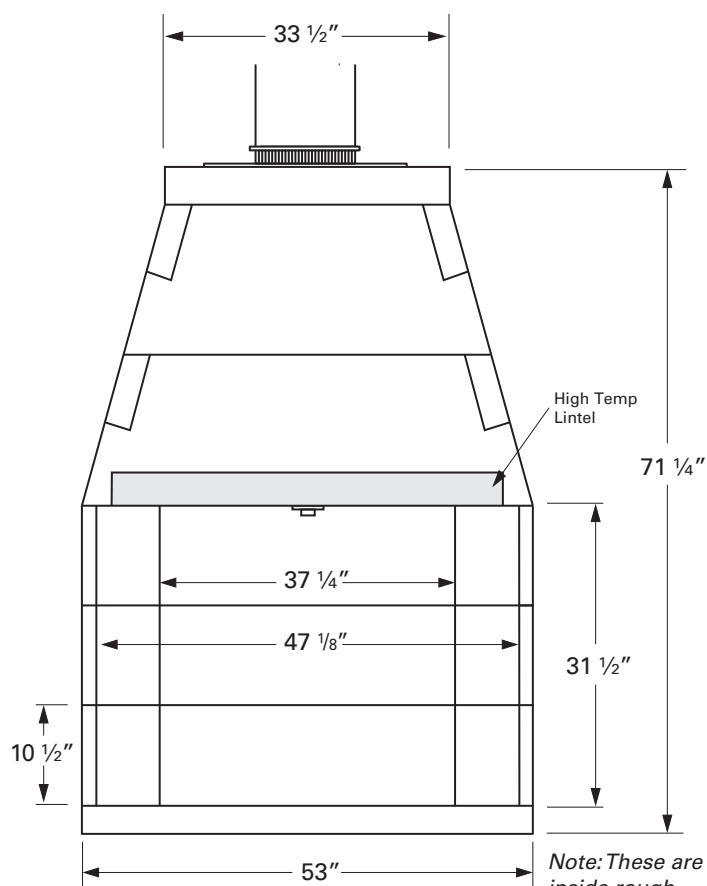


Top View

Component List - BVETTO B-Vent Series 36" (80B36)

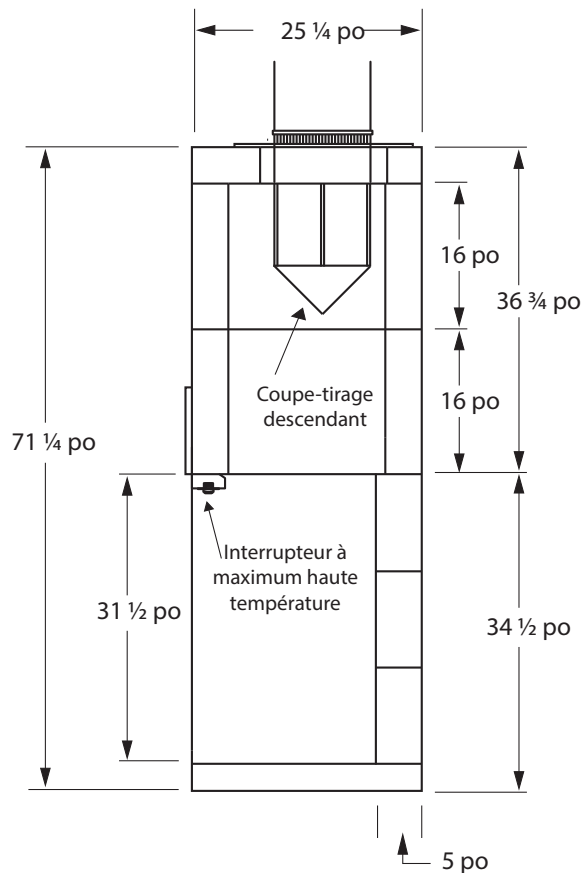
Component	Part#	Description	Component	Part#	Description
	21	Isokern BVETTO Base Plate		36S	Isokern BVETTO Top Plate
	11	Isokern BVETTO Smoke Dome (QTY. 2)		12	Isokern BVETTO Smoke Dome (QTY. 2)
	34	Isokern BVETTO Side Sloping (QTY. 4)		25	Isokern BVETTO Backwall (QTY. 3)*
	20	Isokern BVETTO Sidewall (QTY. 6)*	<p>*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.</p>		

BVETTO B-Vent Series 46" (80B46)

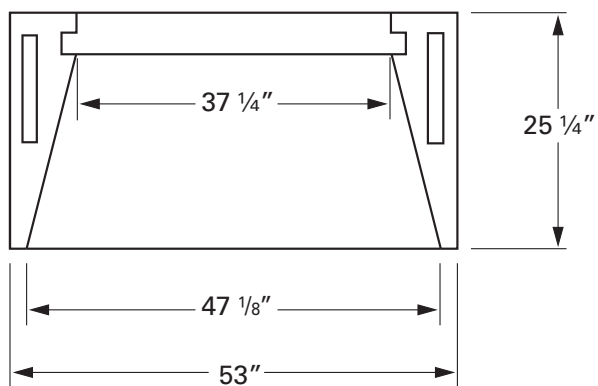


Front View

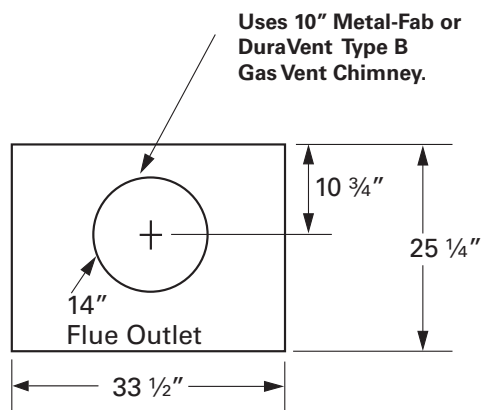
Note: These are inside rough dimensions before firebrick



Side View

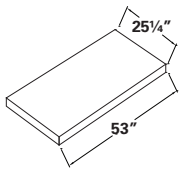
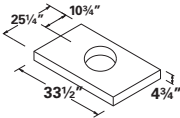
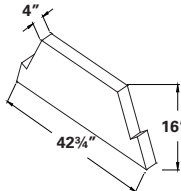
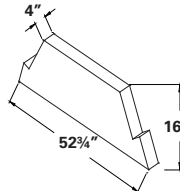
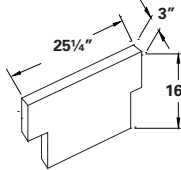
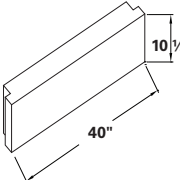
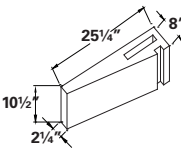


Plan View



Top View

Component List - BVETTO B-Vent Series 46" (80B46)

Component	Part#	Description	Component	Part#	Description
	23	Isokern BVETTO Base Plate		77	Isokern BVETTO Top Plate
	11	Isokern BVETTO Smoke Dome (QTY. 2)		13	Isokern BVETTO Smoke Dome (QTY. 2)
	34	Isokern BVETTO Side Sloping (QTY. 4)		31	Isokern BVETTO Backwall (QTY. 3)*
	20	Isokern BVETTO Sidewall (QTY. 6)*	<p>*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 80B46 fireplace kit.</p>		

Required Clearance to Combustibles

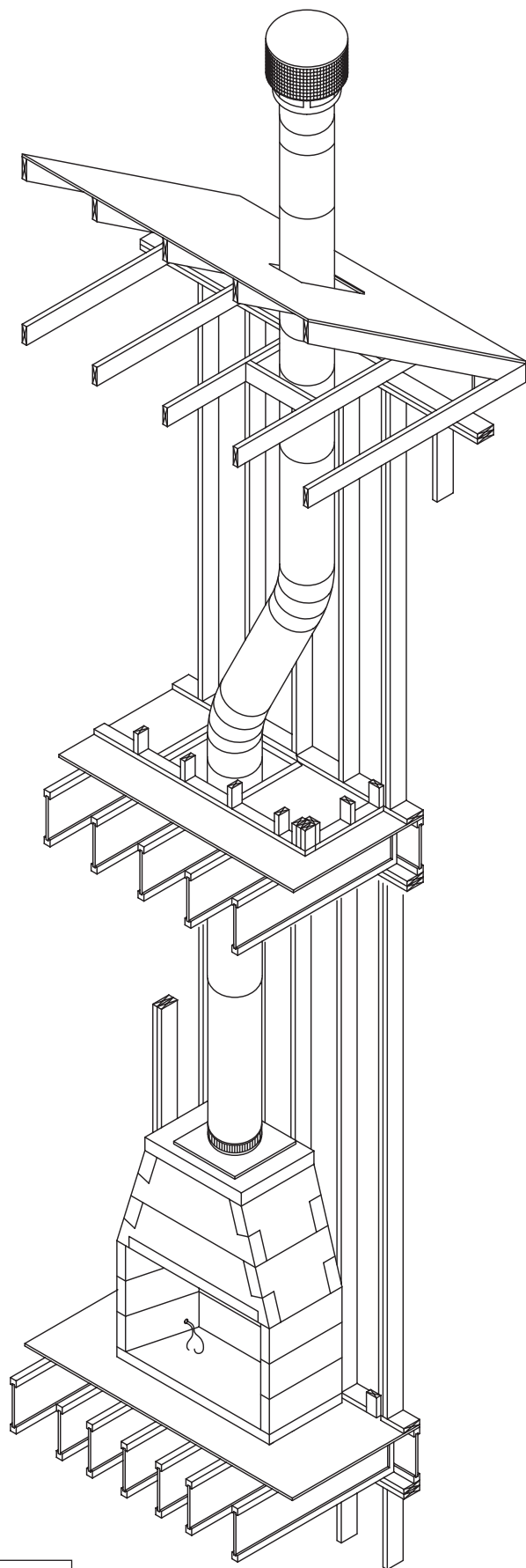


FIGURE 1

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 back wall.

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:

1. The fireplaces must sit upon a support designed to bear the total installed weight of the fireplace.
2. 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.**

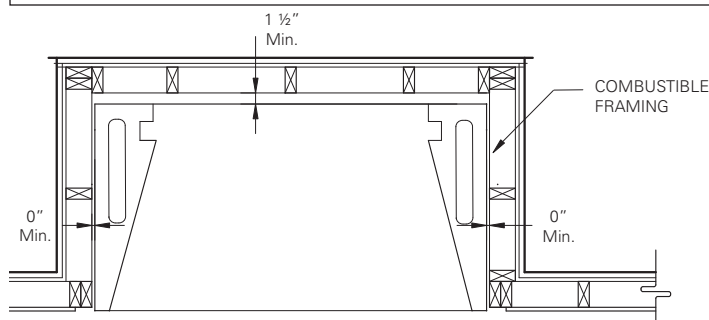


FIGURE 2

Calculating Flooring Loads

Floor framing for BVETTO installation will need to be designed and built to accept substantial dead loads spread over a relative 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 lbs. - 1800 lbs.
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.

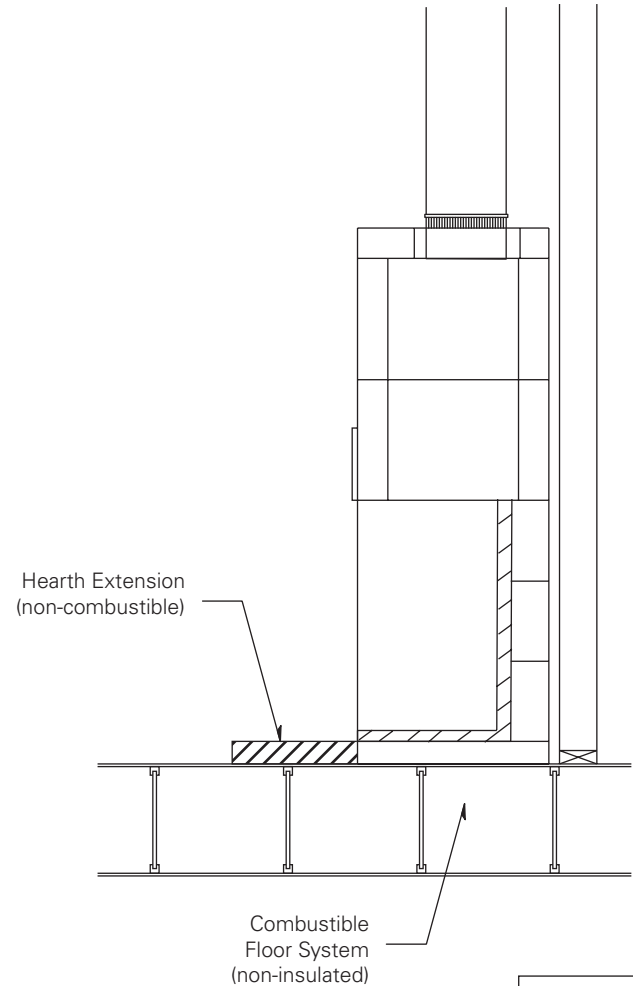


FIGURE 3

Rough Framing Dimensions

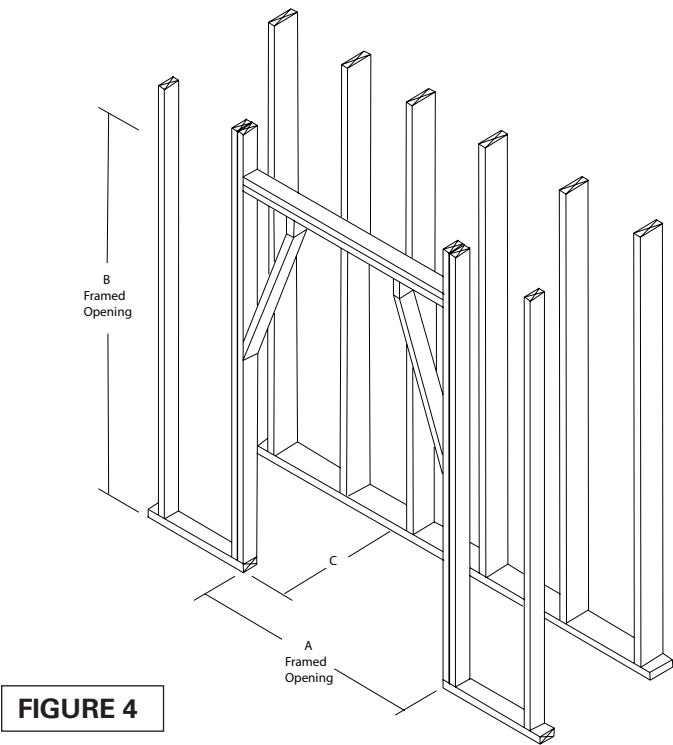


FIGURE 4

Typical Installation Framing Dimensions

<u>BVETTO</u>	Width A	Height B	Depth C
Model 36	44"	72", 83", 93"	26 ¾"
Model 46	54"	72", 83", 93"	26 ¾"

- 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.

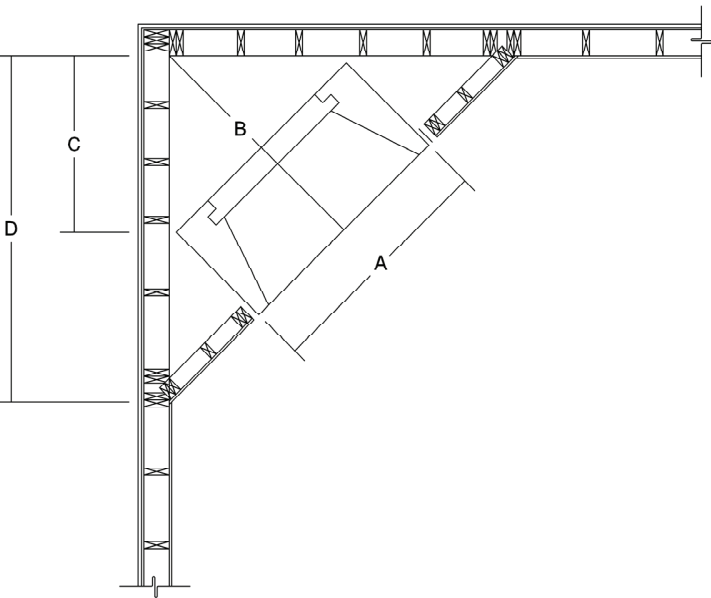


FIGURE 5

Corner Installation Framing Dimensions

<u>BVETTO</u>	A	B	C	D
Model 36	44"	49"	32"	70"
Model 46	54"	59"	39"	77"

Note: The following chart of plan dimensions is intended to aid in the positioning of an BVETTO in a corner condition.

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.

Leveling and Aligning Components:

Be sure to assemble all Isokern components level and flush with adjoining components.

Earthcore Adhesive is not intended to create a Adhesive joint of any thickness for leveling purposes.

Therefore, leveling and alignment adjustments are made by the use of 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 at Isokern components is 1/4".

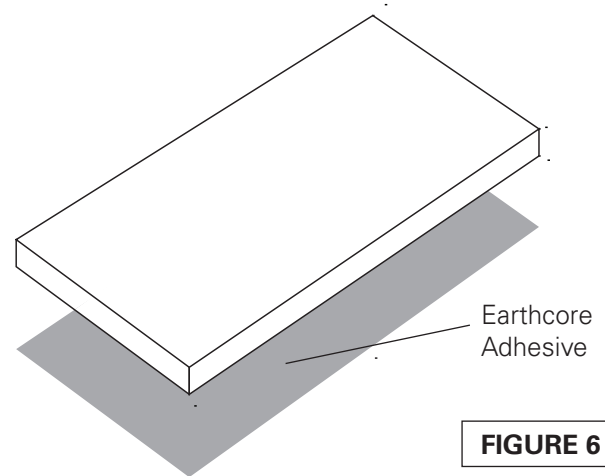


FIGURE 6

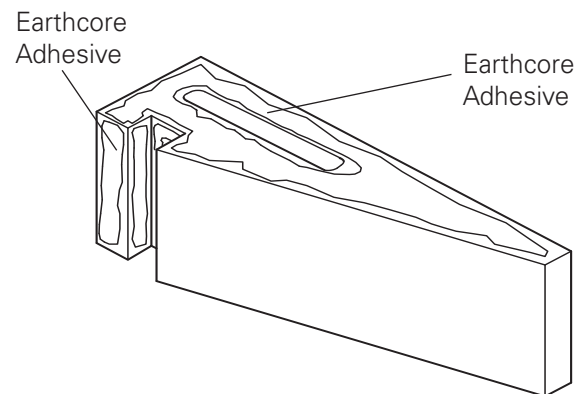


FIGURE 7

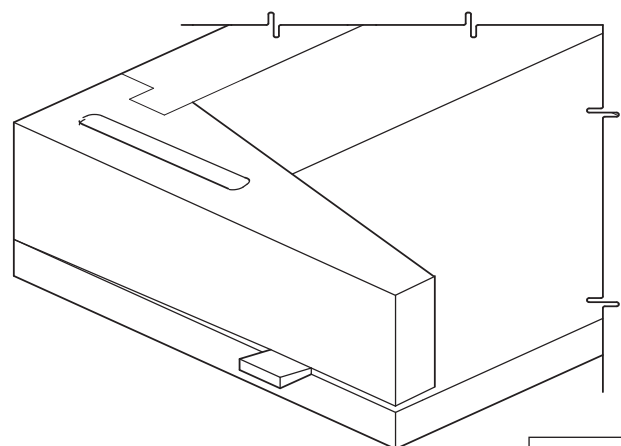


FIGURE 8

Assembly Instructions - BVETTO B-Vent Series

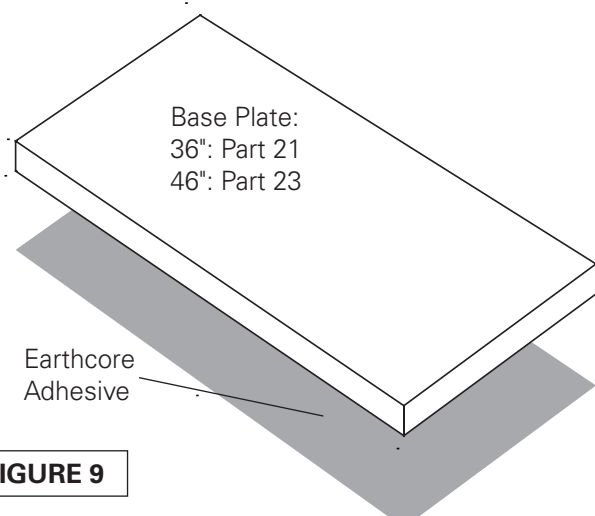


FIGURE 9

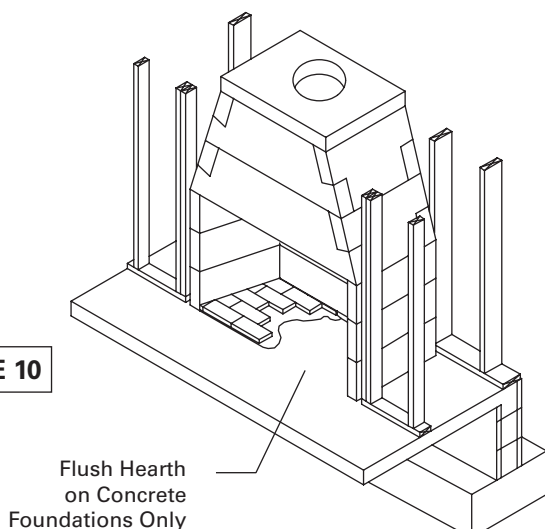


FIGURE 10

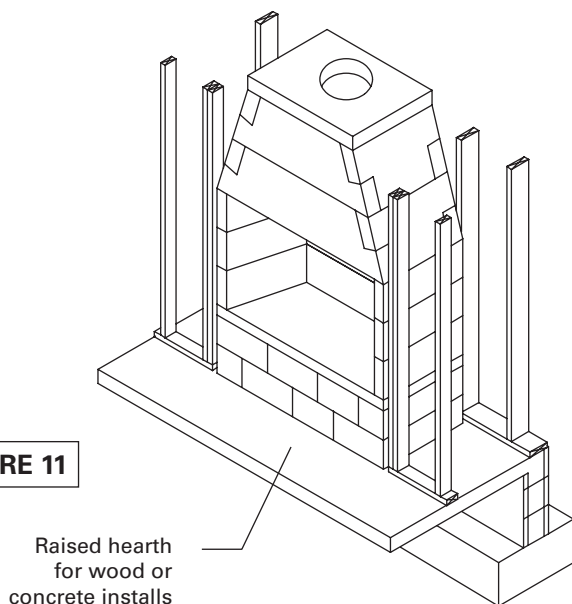


FIGURE 11

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 Adhesive 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 a BVETTO on a combustible floor without the base plate.

Assembly Instructions - BVETTO B-Vent Series

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.

3. It is required that the two supplied high temperature wires be routed from the inside of the BVETTO as follows:

Once the lowest, left hand side wall firebox component is set in place (left, when facing the fireplace) drill a 1/4" - 3/8" dia. hole in the inner face of this side wall located four to six inches (4" - 6") out from the back wall of the BVETTO and at three to four inches (3" - 4") above the BVETTO base plate. **(Figure 14)**

This drill hole must intersect the hollow core of the BVETTO firebox side wall.

Feed the two lengths of high temperature wire from the inside of the BVETTO firebox through the drilled hole and into hollow space of the firebox side wall. Bring the two lengths of wire up and out through the top of the side wall component **(Figure 14)**.

NOTE: For Seismic Installation - With the Seismic installation the opening in the sidewalls are used to anchor the Isokern Fireplace to the floor with rebar and backfilled with concrete. The high temperature wires will need to be run outside of the Isokern unit and not through the openings in the sidewall.

The wires will be run through the bottom course of the sidewall and out to the side of the Isokern Fireplace. Another 1/4" hole should be drilled in the first course of side sloping to attach to the high temperature wires to the high temp lintel for the High Temperature switch.

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.

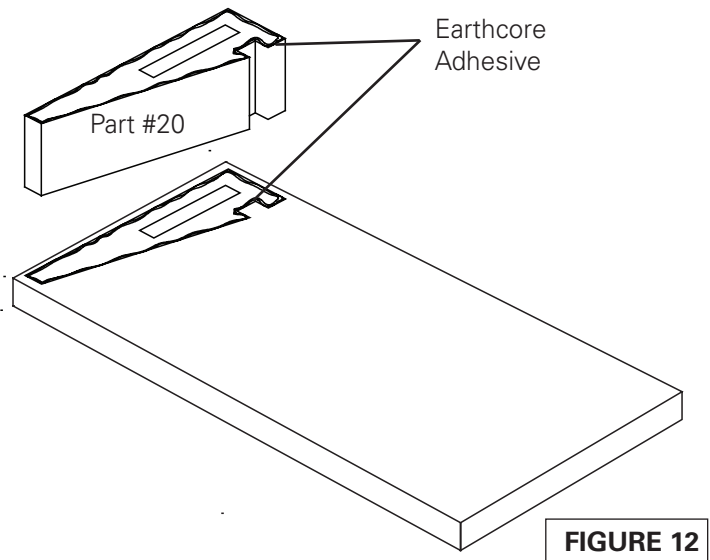


FIGURE 12

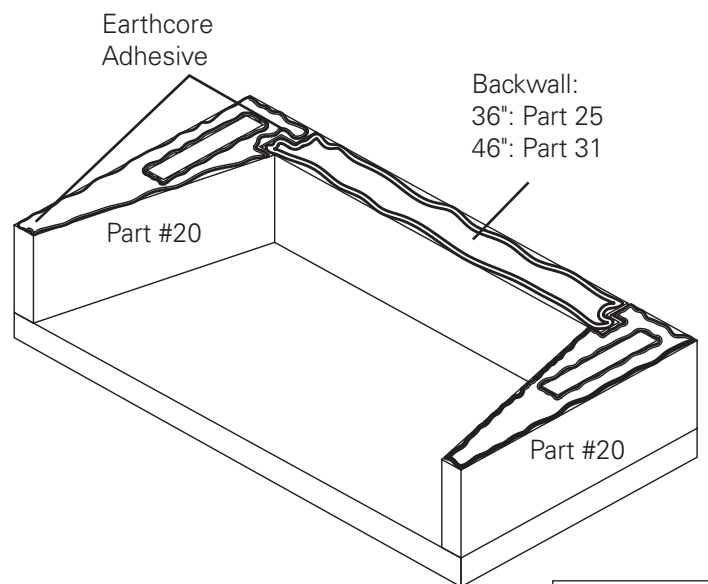


FIGURE 13

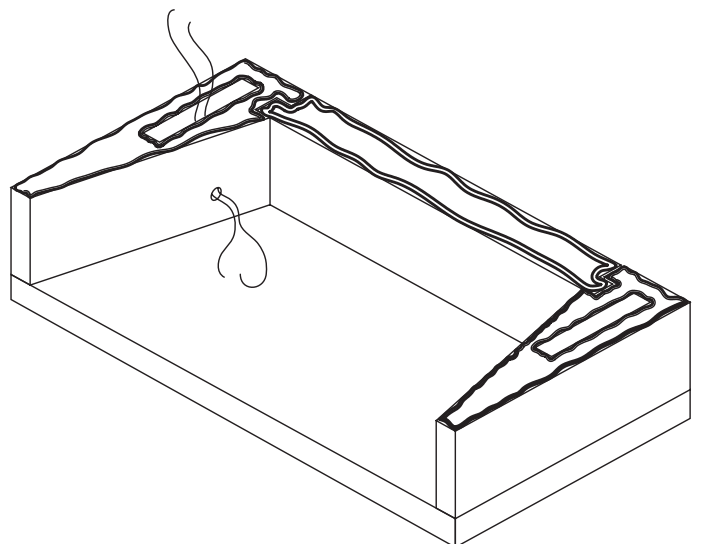


FIGURE 14

Assembly Instructions - BVETTO B-Vent Series

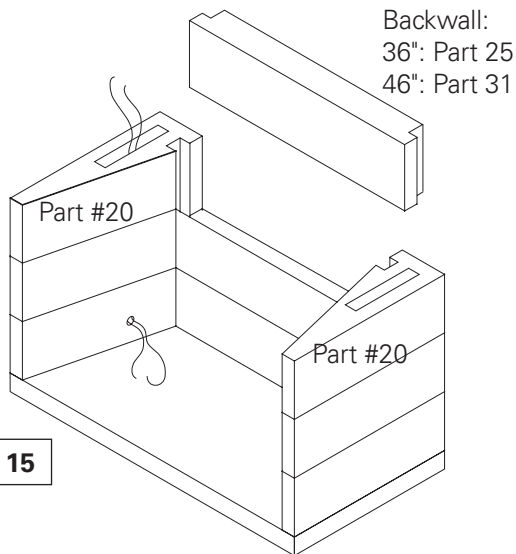


FIGURE 15

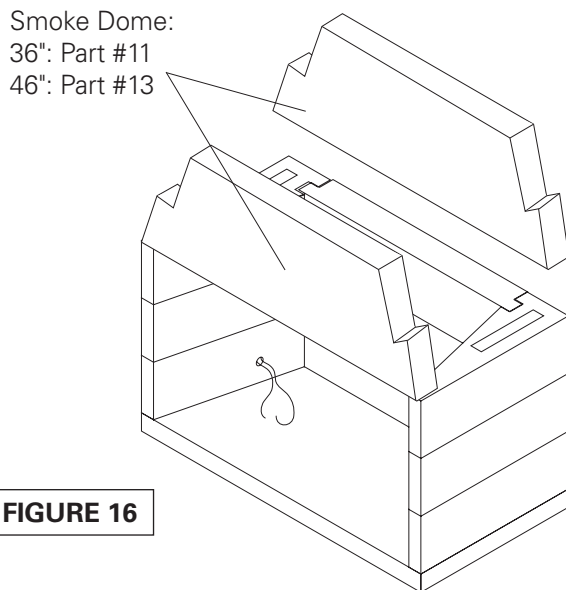


FIGURE 16

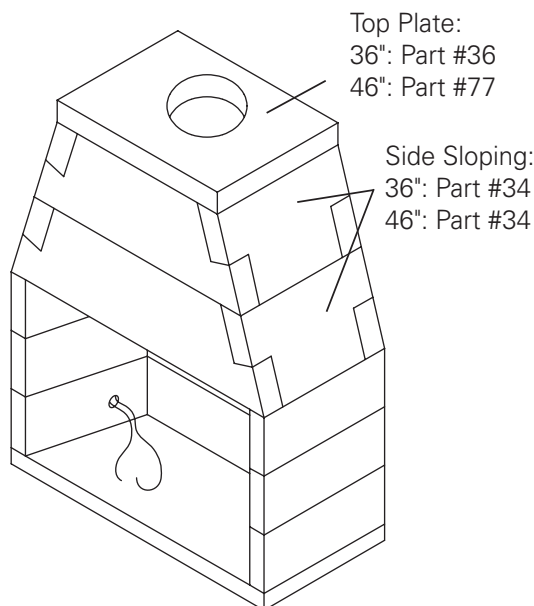


FIGURE 17

4. When all of 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)**

Then 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.

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 also 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 $\frac{3}{4}$ ") from the back of the firebox. **(Figure 17)**

9. The high temp lintel, 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 located in the proper position on the lintel.

Connect the two (2) leads from the high temperature wires to the thermocouple junction block (see diagram, page 29).

Assembly Instructions - BVETTO B-Vent Series

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.

WARNING: Do not bypass the high temperature limit switch. Install downdraft diverter at the top plate. (Figure 20)

Orient assembly such that the wire cable is toward the front of the fireplace opening.

Loosen screws on the cable clamp and loop 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 inside of the BVETTO firebox will connect to the appropriate contacts found on the gas log assembly during the installation of the gas log set.

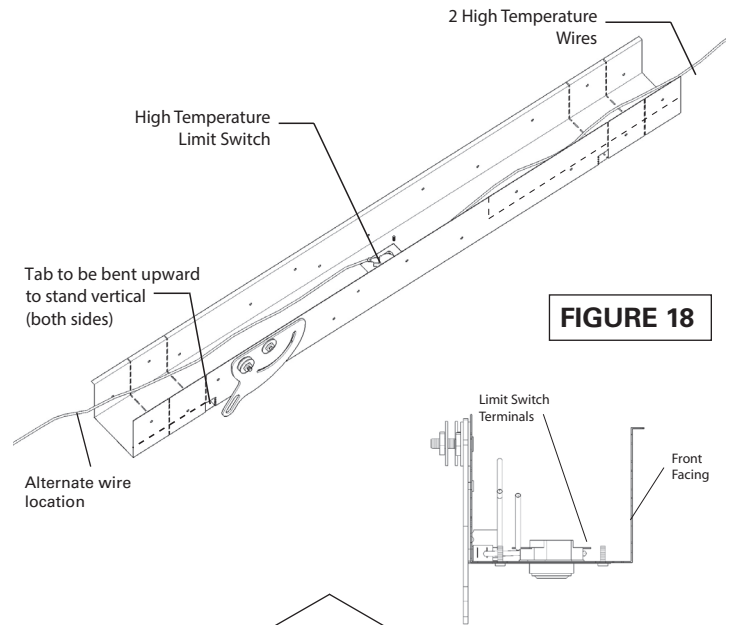


FIGURE 18

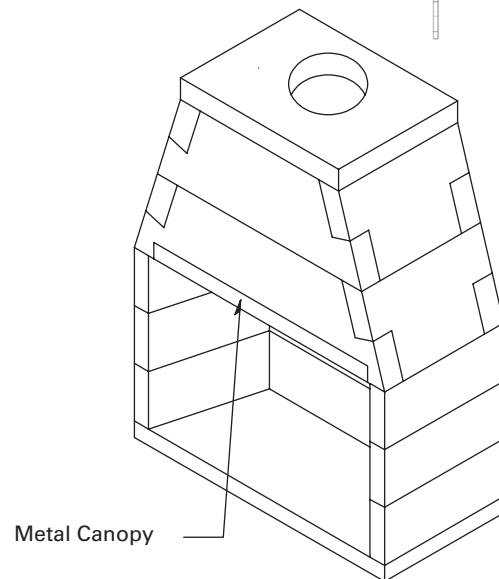


FIGURE 19

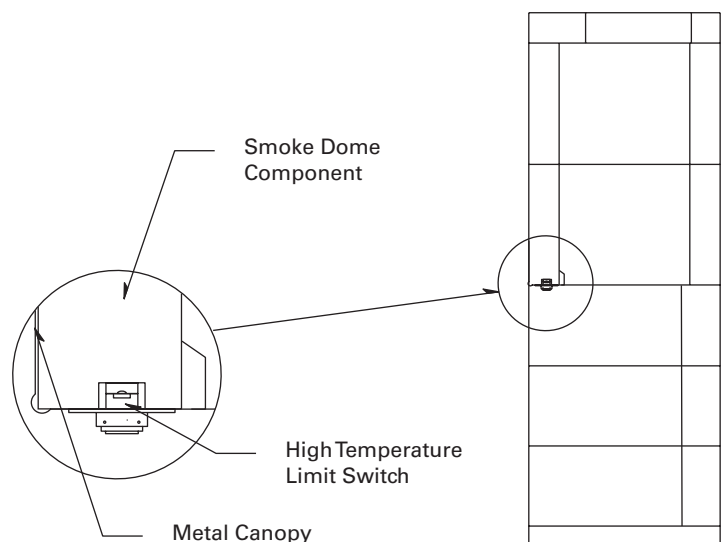


FIGURE 20

Access Modification - Combustion Air Kits, Gas & Electrical Line Feed

A Four Inch (4") Combustion air inlet kits are recommended by Earthcore and may help improve fireplace operation in homes tightly sealed and with other ventilating appliances installed (**Figures 21 & 22**). The following is a general representation of a combustion air kit that is

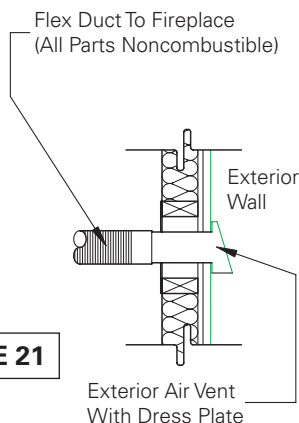


FIGURE 21

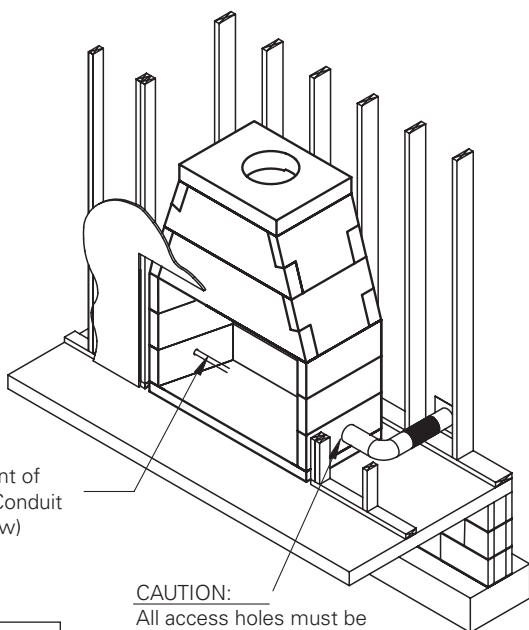


FIGURE 22

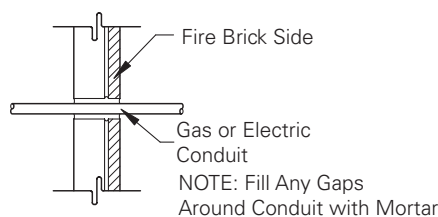


FIGURE 23

recommended by Earthcore Industries. The combustion air kit consist of a sliding stainless steel or black access door affixed to a four-inch (4") in diameter stainless steel sleeve approximately twelve inches (12") long. An exterior vent with dress plate, weather hood, and rodent prevention screen of a maximum quarter inch (1/4") wire mesh and ten feet (10') of hose completes the kit.

The access door is fitted into the front 1/3 of the side wall. The twelve-inch (12") long sleeve can be introduced into the firebox side wall by core drilling an appropriately sized hole at the selected firebox 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 inch (1/4") mortar joint around the air access sleeve for heat expansion. Do not install in the rear of the firebox because sparks will be blown into room.

The sleeve passes through the firebox side wall and must be connected to a UL Listed Air Duct pipe that leads to the source for outside combustion air, as directly as possible from the fireplace. The duct cannot rise vertical higher than the finished opening of the firebox.

If the installation is to be longer than ten feet (10'), then the six-inch (6") adapter will be needed. This adapter will attach to the existing four-inch (4") sleeve outside of the unit. The six inch adapter includes an additional twenty feet of 6" flex hose, for a maximum run of thirty feet (30').

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.

CAUTION: When using the decorative appliance, the fireplace damper must be set in the fully open position. Gas line for gas log sets used in the Isokern firebox can be routed through the side wall, by drilling an appropriately sized hole using a masonry drill bit. (**Figure 23**)

Electrical Line Feed

Should be routed through the BVETTO firebox side walls by drilling an appropriately sized hole using a masonry drill bit (**Figure 61**). Be sure to follow the gas log Appliance Manufacturer's explicit electrical line connection instructions for vented masonry fireplace installations. Gas line and electric line must be fed through separate access holes.

CAUTION: All access holes must be grouted with mortar - after line or conduit feed - to seal any gaps or cracks around line feed conduits. (**Figure 23**)

B-Vent Metal Chimney Installation - General Information

The BVETTO Series Fireplaces are tested and listed for use with the specified factory-built metal B-Vent Chimney Systems. The design and installation require that the system use the Metal-Fab Type B Gas Vent or the DuraVent Type B Gas Vent Chimney Systems.

APPROVED MANUFACTURERS

Metal-Fab®(UL 441 & ULC S605) Type B Gas Vent
DuraVent®(UL 441 & ULC S605) Type B Gas Vent

NOTE: The selected, approved chimney manufacturer must provide the masonry anchor plate with down draft diverter designed to fit their flue system. **(Figure 24)**

All chimneys and chimney liners must be installed in accordance with the manufacturer's installation instructions and under the terms of their listing for use with open faced fireplaces.

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.

Install your Isokern fireplace as described in this installation manual and maintain all required clearances.

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.**

A major cause of chimney related fires is failure to maintain required clearance (air spaces) to combustible material*. Minimum clearance for 10" diameter air-cooled eco-steel chimney is one (1) inches. It is of utmost importance that this chimney is installed only in accordance with these instructions.

Metal-Fab B-Vent Components

Component	Part#	Description
	10M12	B-Vent 12" Length
	10M18	B-Vent 18" Length
	10M24	B-Vent 24" Length
	10M3	B-Vent 3' Length
	10M4	B-Vent 4' Length
	10M5	B-Vent 5' Length
	10M12A	B-Vent 12" Adjustable Length
	10M18A	B-Vent 18" Adjustable Length
	10M45	45 Deg Adjustable Elbow
	BVT-2	B-Vent Draft Diverter
	10MGR	B-Vent Guy Ring
	10MF	B-Vent Standard Flashing
	10MFS	B-Vent Firestop
	10MSC	B-Vent Storm Collar
	10MFT	B-Vent Flat Tall Cone Flashing
	10MC	B-Vent Vent Cap/Termination

DuraVent B-Vent Components

Component	Part#	Description
	10GV18	B-Vent 18" Length
	10GV36	B-Vent 3' Length
	10GV12A	B-Vent 12" Adjustable Length
	10GVL45	45 Deg Adjustable Elbow
	BVT-1	B-Vent Metal Lintel
	10GVRS	B-Vent Firestop Support
	10GVF	B-Vent Adjustable Flashing
	10GVFS	B-Vent Firestop
	10GVSC	B-Vent Storm Collar
	10GVFF	B-Vent Flat Tall Cone Flashing
	10GVVT	B-Vent Vent Cap/Termination

B-Vent Metal Chimney Installation

1. Mount Anchor Plate with down draft diverter: Chimneys for Isokern BVETTO fireplaces begin with an 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.

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.

Secure the Anchor Plate with four (4) masonry anchors. **(Figure 24)** If the Anchor Plate with Damper is installed 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).

To install the lintel hook, place the damper plate in the closed (horizontal) position. Determine and mark the position of the lintel hook. The lintel hook should be mounted in a position so as to provide a small amount of tension in the spring attached to the chain.

The tension is needed to prevent the damper plate from rattling when closed. Mount the lintel hook to masonry with the screws provided. Do not obstruct oval openings in the anchor plate.

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

2. 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.

The B-Vent sections and components use the Metal-Fab positive twist lock for interconnections. Align the ends of the vent, push together then twist section to lock in place. **(Figure 25)**

No additional fasteners are required to assure a safe installation. It is acceptable to apply screws at 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.

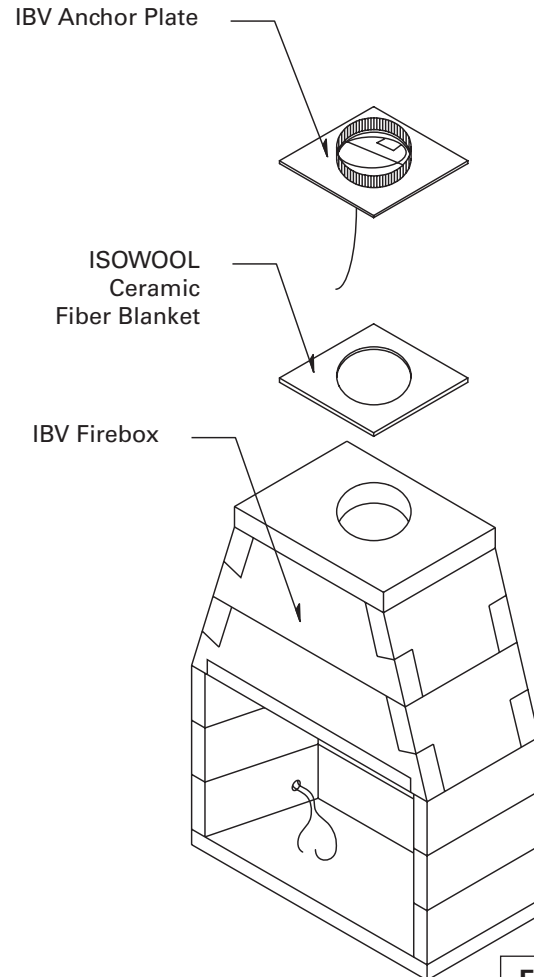


FIGURE 24

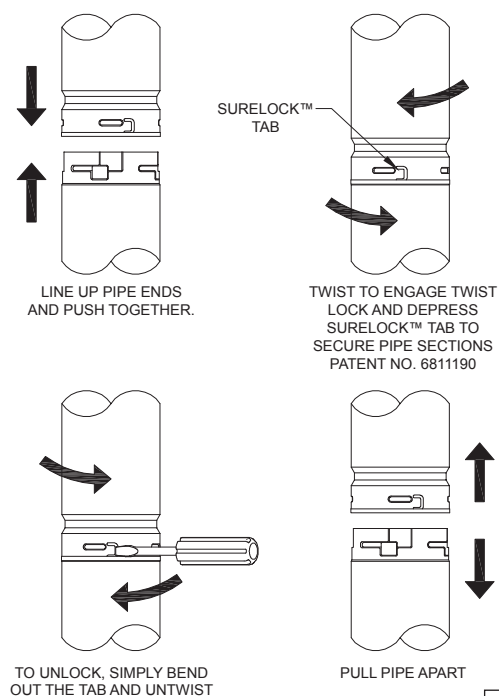


FIGURE 25

B-Vent Metal Chimney Installation

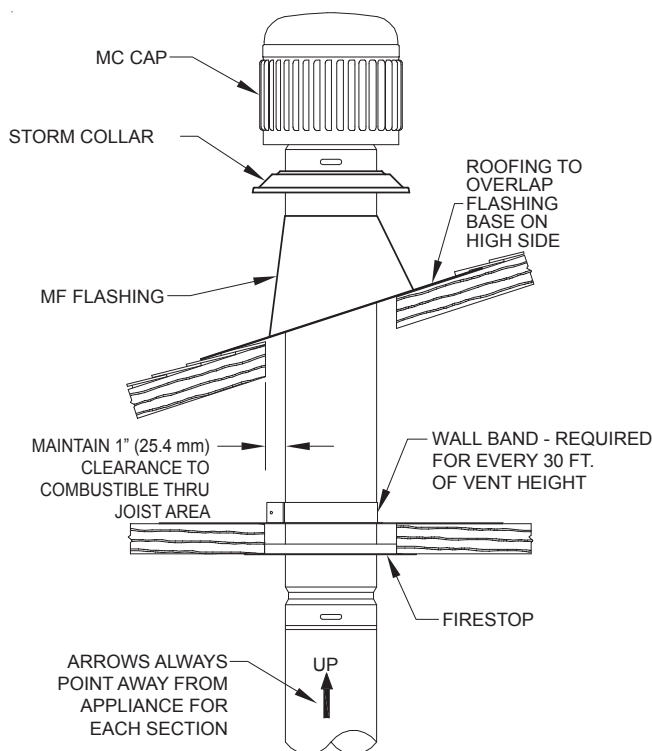


FIGURE 26

3. 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.

4. 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.

5. Install the B-Vent cap (MC) onto the B-Vent.

NOTE: See height of vents under "SAFETY".

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.

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

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 water will accelerate setup
- Joint thickness should be thin (1/16"-1/8")
- 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.
- **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.

Installation Instructions:

1. Wet mop the inside of the fireplace with a damp sponge to remove dust and loose particles from the interior before firebricking.

For Best Results:

1. After wet sponged interior of firebox apply a 1/4 notch bed joint on rear sides and floor.
2. Dip each firebrick in a pale of water before applying mortar to one side for adherence to firebox.

2. Face joint dimensions of 1/8" to 3/8" in the brick work is recommended and has the best appearance. Other face joint dimensions are acceptable however smaller joints may not leave room for heat expansion of firebrick.

3. 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 27)**

4. Next, apply firebrick to the back wall of the unit. The back wall firebrick covers the 1/2" expansion gap left at the brick floor along the back wall of the firebox. **(Figure 28)**

5. 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 1/2" expansion gaps where both the floor firebrick and the back wall firebrick were held off the units side walls. **(Figure 29)**

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.

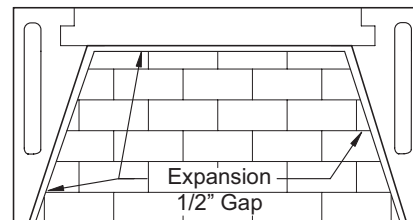


FIGURE 27

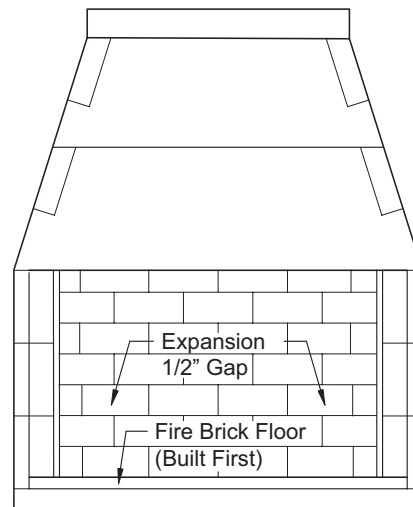


FIGURE 28

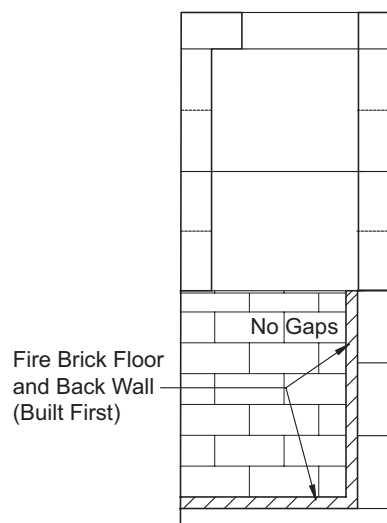


FIGURE 29

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 30)

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.

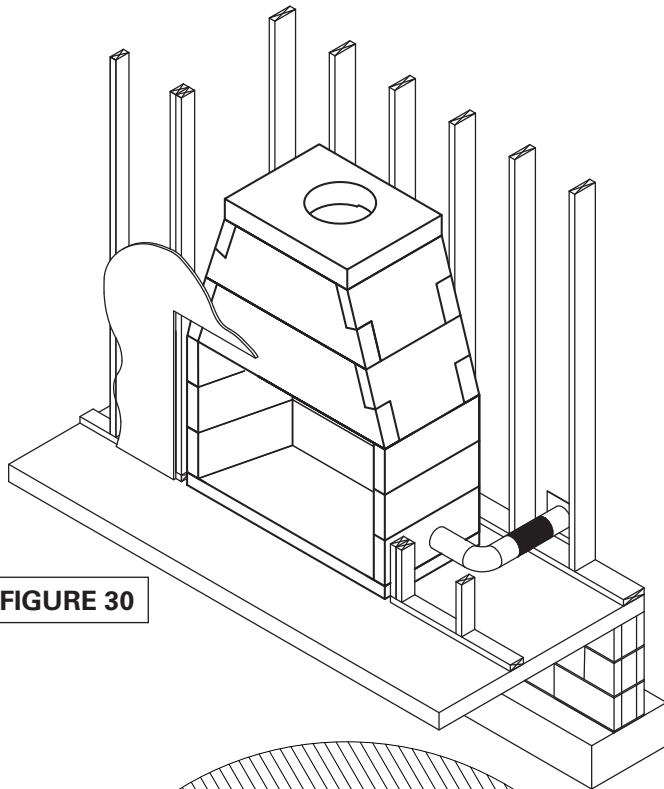


FIGURE 30

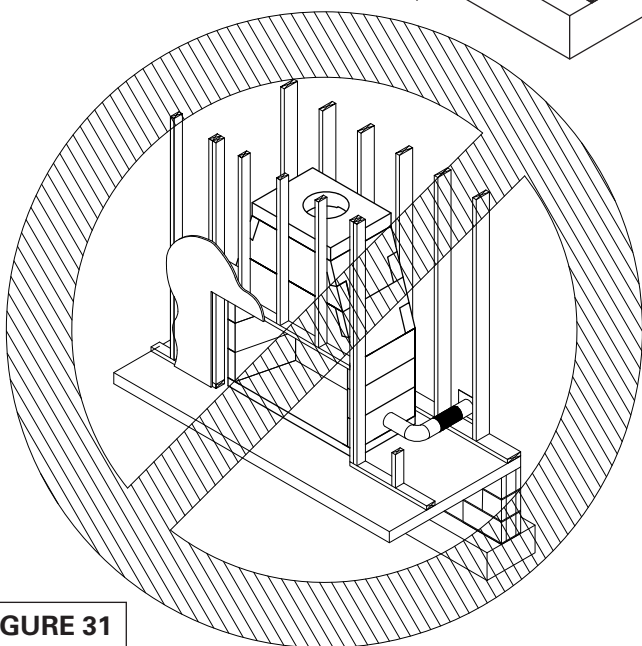


FIGURE 31

Clearance to Drywall:

Drywall can be placed directly in contact with the front of the BVETTO smoke dome. **(Figure 24)** With the Isokern firebox/smoke dome set flush with the interior face of wall framing, 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 drywall 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 30 & 31)**

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 other non-combustible grout.

IMPORTANT: Since there is no fire brick set along the top of the BVETTO firebox opening, when setting the noncombustible facing material onto the drywall 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 Smoke Dome. **(Figure 32)**

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.

Clearance to Combustible Trim

Mantle and Mantle 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 34)**

Parts of the combustible mantle 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 mantle 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 33)**

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 33)**

Ceilings:

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

NOTE: "Clearance to Combustible Trim" are those distances required to ensure that a fireplace mantle 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.

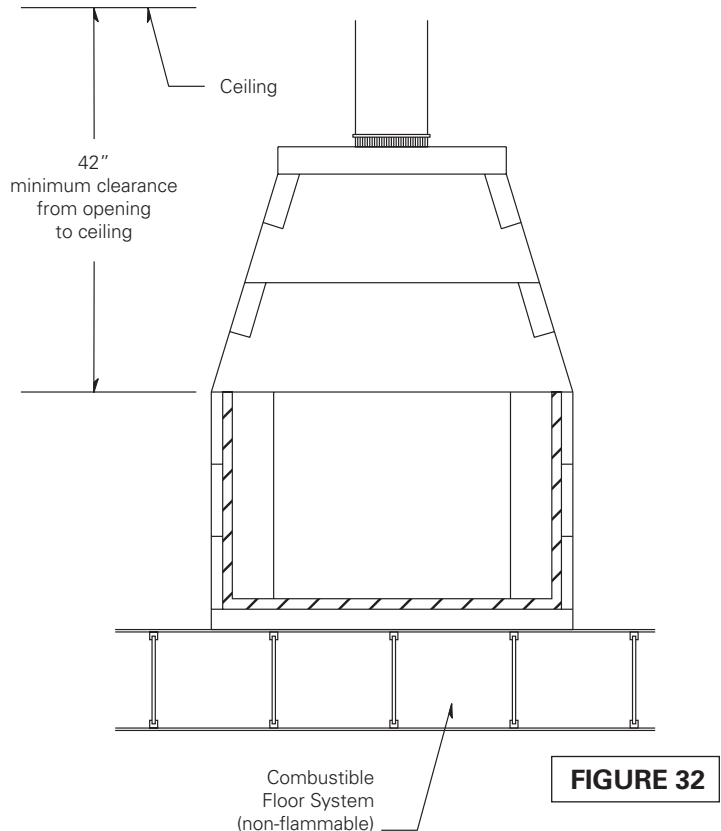


FIGURE 32

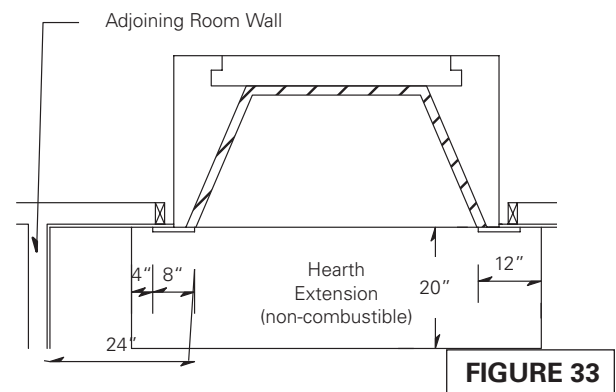


FIGURE 33

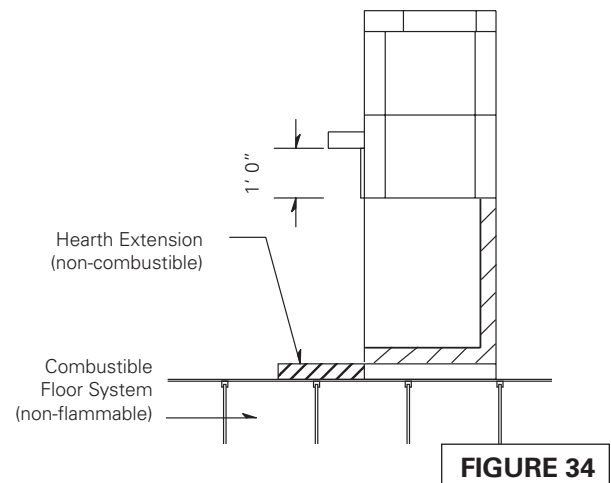


FIGURE 34

ISOKERN Gas Log Set - General Information

The BVETTO burner system is to be installed only in an ISOKERN B-vent (BVETTO) fireplace with a working flue and constructed of noncombustible material. The installation, including provisions for combustion and ventilation air must conform with all guidelines found in the instructions supplied with the BVETTO fireplace.

The chimney damper **MUST** be fully opened when burning the unit. The unit is designed to burn with yellow flames; thus adequate ventilation is absolutely necessary.

To comply with certification, listings, and building code acceptances, and for safe operation and proper performance of this burner system, use **ONLY** BVETTO parts and accessories. Use of other controls, parts, and accessories that are not designed for use with BVETTO burner systems is prohibited and will void all warranties, certifications, listings, and building code approvals, and may cause property damage, personal injury, or loss of life. Earthcore will not be liable for any damages caused by this misuse.

IMPORTANT: Solid-fuels shall not be burned in a fireplace where a decorative appliance is installed.

BE CAREFUL: If not installed, serviced, and used correctly per these instructions, this product can cause serious personal injury, property damage, or loss of life.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is **NOT** FIELD CONVERTIBLE for use with other gasses.

CHECK GAS TYPE (natural or L.P.): The gas supply must be the same as stated on your burner system rating plate. If gas supply is different, **DO NOT INSTALL**. Contact your dealer for immediate assistance.

INSUFFICIENT GAS PRESSURE WILL KEEP THE PILOT (IF EQUIPPED) FROM OPERATING PROPERLY.

DO NOT USE IF GAS PRESSURE IS LOWER THAN THE MINIMUM REQUIREMENT.

The minimum inlet gas-supply pressure for purposes of input adjustment is 5" water column (w.c.) on natural gas and 11" w.c. on L.P. gas. Insufficient gas pressure will affect proper operation of the pilot (if equipped). Do not install this gas appliance if minimum pressure is not available. The maximum inlet gas-supply pressure is 10.5" w.c. on natural gas and

13" w.c. on L.P. gas. The L.P. source must be regulated. (Do not connect this appliance directly to an unregulated L.P. gas tank - this can cause an explosion.) Do not connect this appliance to a portable L.P. gas cylinder.

The gas piping system must be sized to provide minimum inlet pressure at the maximum flow rate (BTU/hr).

Undue pressure loss will occur if the pipe is too small, or the run is too long. Gas supply pipe must be 1/2" minimum interior diameter. If the gas line is longer than 20', a larger diameter line may be necessary. Refer to the NFPA 54 guidelines for further details.

Input ratings shown in BTU per hour are for elevations up to 2,000 ft. For elevations above 2,000 ft., refer to the National Fuel Gas Code or contact manufacturer before installing this product.

This gas 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 psig.

This gas appliance must be isolated from the gas-supply piping system by closing the equipment shutoff valve connected to the gas-supply line during any pressure testing of the gas-supply piping system at test pressures equal to or less than 1/2 psig.

Table 1 - Product Specifications

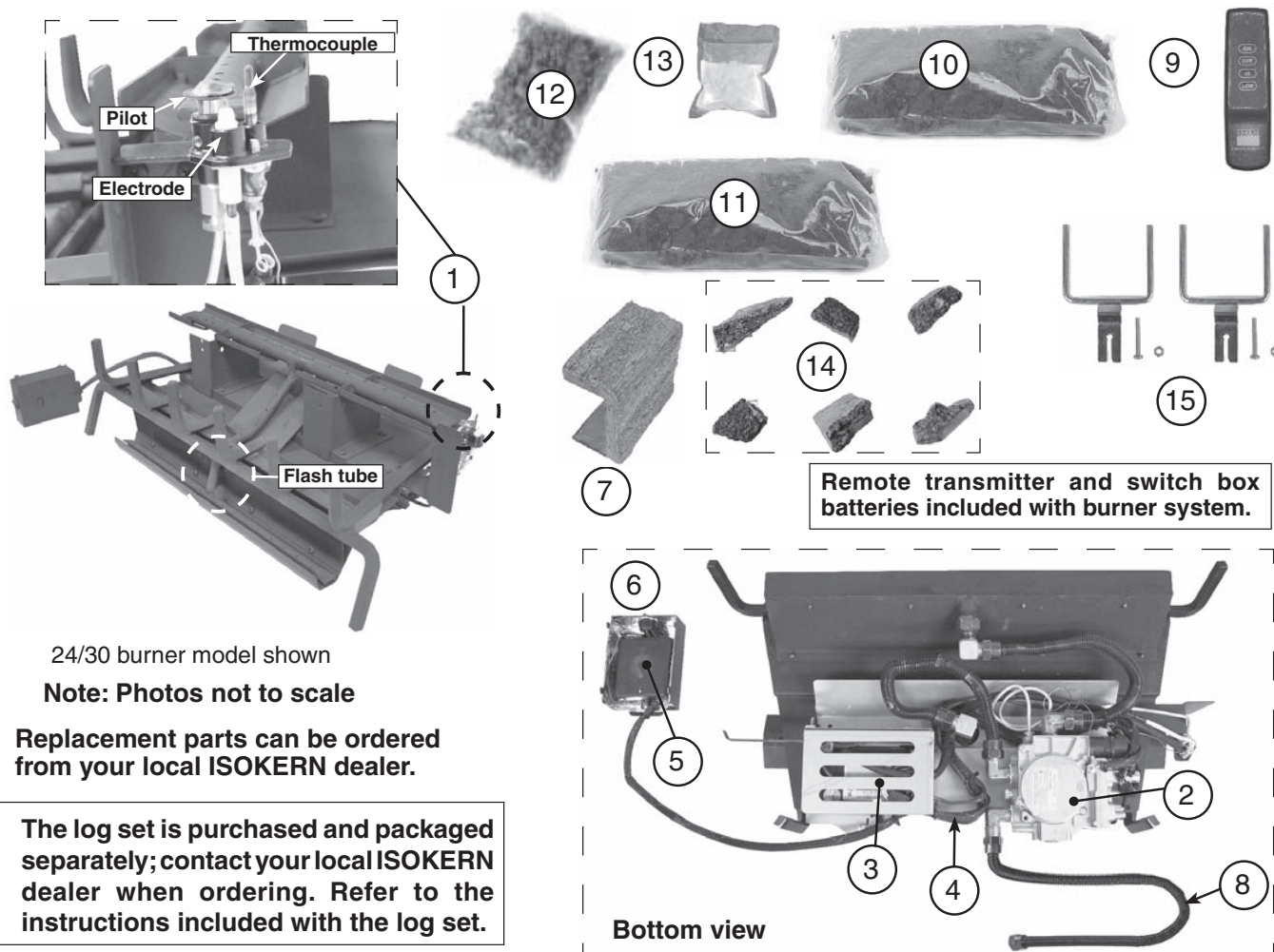
Burner Model	Firebox Model (purchased separately)	BTU Rating				Thermal Efficiency
		Nat Gas		LP Gas		P4*
		High	Low	High	Low	
ISO-IBV36 model	IBV-36	65k	21k	50k	22k	42%
ISO-IBV46 model	IBV-46	75k	22k	60k	23k	46%

*P4 (EnerGuide) is a measurement of the Canadian Office of Energy Efficiency. Efficiencies are based on Normal input operation.

Table 2 - Technical Data

Specification	Value	QTY.
Burner system battery type	AA battery	4
Remote transmitter battery type	12V battery	1

ISOKERN Gas Log Set - Burner Parts List



Item	Description	ISO-IBV36 model		ISO-IBV46 model	
		Part No.	Qty.	Part No.	Qty.
1.	Pilot assembly (natural)	PAC-12	1	PAC-12	1
or	Pilot assembly (propane)	PAC-12P	1	PAC-12P	1
2.	Control valve (natural)	SV-47	1	SV-47	1
or	Control valve (propane)	SV-47P	1	SV-47P	1
3.	Control module / remote receiver	IMP-6	1	IMP-6	1
4.	Main & motor harness assembly	WH-02	1	WH-02	1
5.	Battery box	BAT-02	1	BAT-02	1
6.	Switch box assembly (includes battery box, switch, heat shield)	SBA-02	1	SBA-02	1
7.	Decorative heat shield	HS-42	1	HS-42	1
8.	Flex connector (w/ adapter), 1/2" O.D. x 24"	CK-5-24SP	1	CK-5-24SP	1
9.	Remote transmitter (only)	AT-2VA-1	1	AT-2VA-1	1
10.	Lava fyre coals	LFC-6	1	LFC-6	1
11.	Lava granules	LF-5	1	LF-5	1
12.	Glowing embers	EM-21B	2	EM-21B	3
13.	Bryte coals	EM-11	1	EM-11	1
14.	Wood chunks	WC-6	1	WC-6	1
15.	Log locator w/ screw and nut (ISO-IBV46 model only)	-	-	UP-17	2

ISOKERN Gas Log Set - Wiring Diagrams

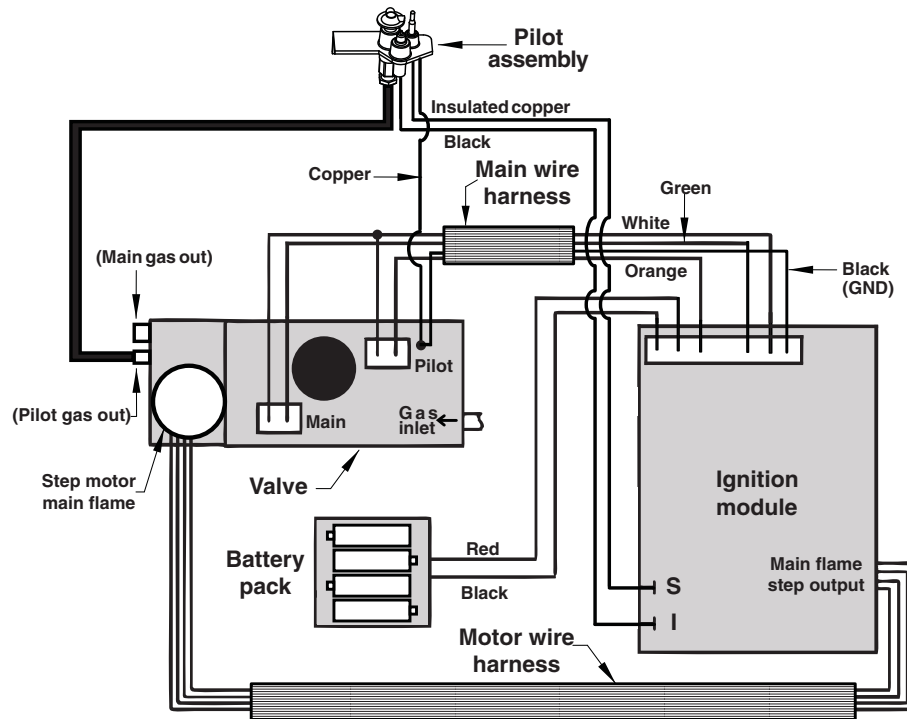


FIGURE 35

WIRING DIAGRAM TO SPILL SWITCH

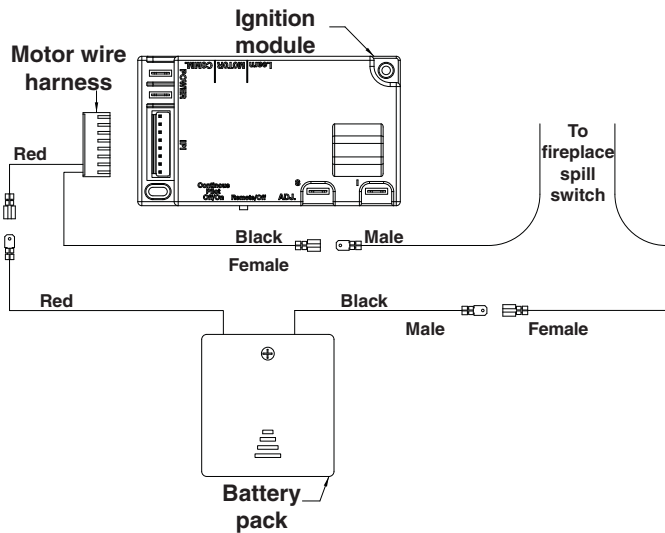


FIGURE 36

WIRING DIAGRAM TO SPILL SWITCH AND POWER VENT

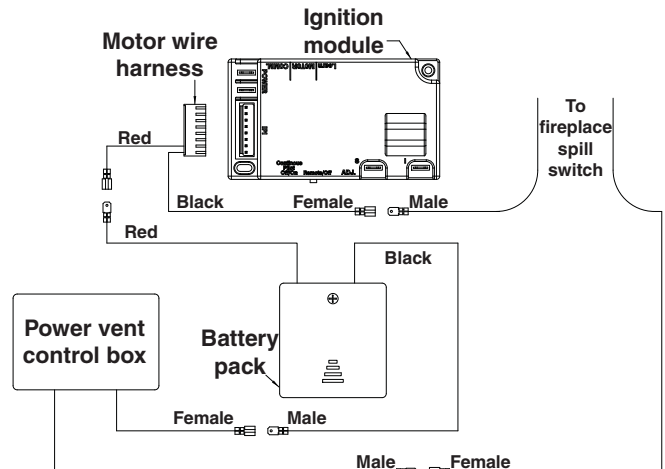


FIGURE 37

ISOKERN Gas Log Set - Burner Installation

The BVETTO burner system must be installed in an ISOKERN B-vent (BVETTO) fireplace and by a qualified professional service technician. Instructions must be followed carefully to ensure proper performance and full benefit from the burner system. Check to be sure the burner system is designed and labeled for the type of gas (natural or propane gas) supplied to the fireplace. Fireplace floor must be level, clean, and smooth.

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

REFER TO THE PARTS LIST WHEN FOLLOWING THESE INSTRUCTIONS.

ISO-IBV36 burner model shown here.

1. MAKE SURE THE FIREPLACE GAS SUPPLY IS TURNED OFF.

2. Place the burner system in the fireplace. Center the burner from left to right in the fireplace. Reference **Figure 35** for orientation.

NOTE: Ensure the porcelainized panel is clean of all dust. Use a clean soft cloth if necessary. (**Figure 39**)

3. Disconnect the black wires, from the main harness to the switch box, as shown in **Figure 40**.

For units to be installed without a power vent, follow step 4 below. For units to be installed with a power vent follow step 5.

4. Units without Power vent: Locate the two spill switch wires coming out of the hole in the lower right side of the fireplace. Connect them to the free wires now coming from the main harness and switch box (male to female). See **Figure 41** and the WIRING DIAGRAM TO SPILL SWITCH in the SPECIFICATIONS section.

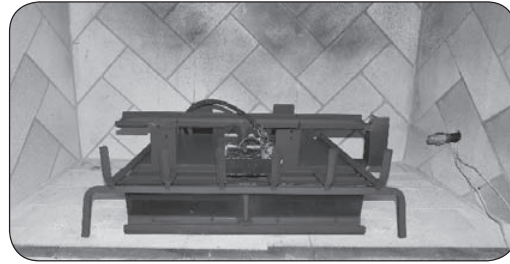


FIGURE 38

Place burner

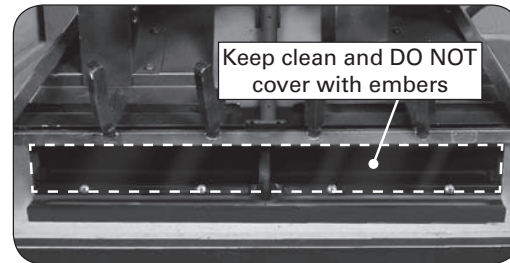


FIGURE 39

Ensure a clean panel

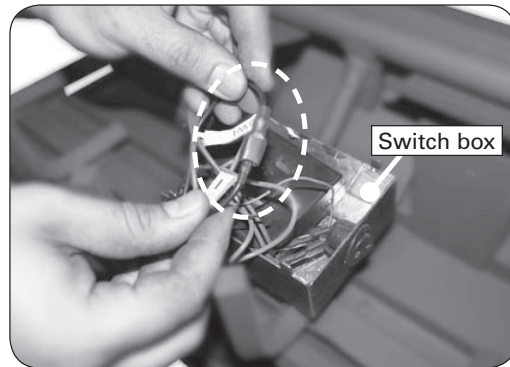


FIGURE 40

Disconnect black wires

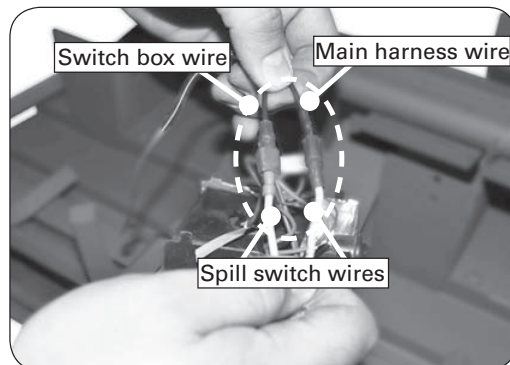
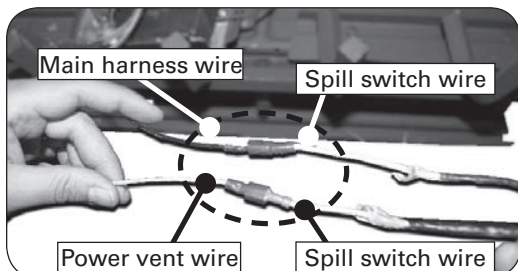


FIGURE 41

Connect spill switch wires

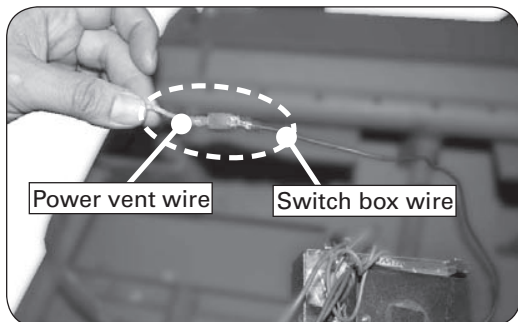
ISOKERN Gas Log Set - Burner Installation

FIGURE 42



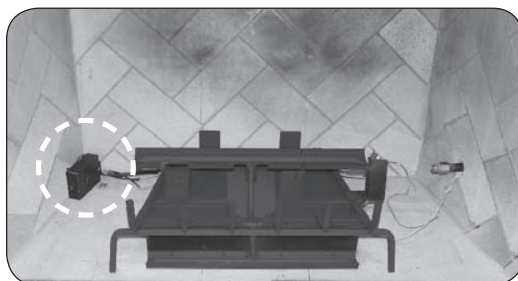
Connect spill switch and power vent wires

FIGURE 43



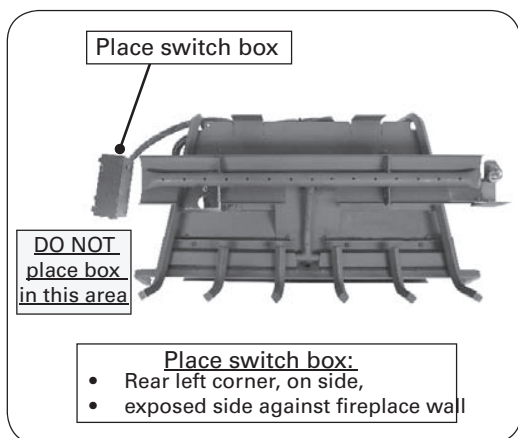
Connect power vent to switch box wire

FIGURE 44



Place switch box

FIGURE 45



Proper box placement

FIGURE 46



Place heat shield

5. Units with Power vent: Locate the two spill switch and two power vent wires coming out of the hole in the lower right side of the fireplace. Connect them to the free wires now coming from the main harness and switch box (male to female). See **Figure 42**, **Figure 3**, and the WIRING DIAGRAM TO SPILL SWITCH AND POWER VENT in the SPECIFICATIONS section.

6. At this stage the burner system batteries are to be installed. Reference the INSTALLING/REPLACING BATTERIES section for details.

7. Place the switch box on its side, at the rear left corner of the fireplace. It should rest with its bottom as near as possible and facing the fireplace wall. It must not be placed directly next to the burner pan area to avoid damage to the batteries. See **Figure 44** & **Figure 45**.

IMPORTANT: Ensure that the box wire remains away from the burner system and its flame during operation.

8. Place the decorative heat shield over the switch box as shown in **Figure 46**.

ISOKERN Gas Log Set - Burner Installation

9. Locate the gas-supply stub inside the fireplace and remove the cap, if attached.

CAUTION: When removing the cap, make sure the stub does not turn, loosening the connection inside the wall.

10. Be sure gas to the fireplace is off. Remove the adapter connected to the flex connector (pre-installed on the burner system). Attach the adapter to the gas-supply stub using a pipe compound resistant to all gasses. Tighten securely. Then attach the open end of the flex connector to the adapter. Tighten securely. **(Figure 47)**

11. LEAK TEST: Turn on the fireplace gas supply, and test at all connections for leaks using the appropriate soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer.

NEVER USE A FLAME TO CHECK FOR LEAKS.

12. LIGHTING TEST: Prior to proceeding with installation, perform a lighting test (see lighting instructions for lighting your burner). Allow the unit to completely cool after testing.

13. Spread the supplied lava granules on the floor of the fireplace, around the front and sides of the burner system. **(Figure 48)** The lava granules may be placed around the switch box. Leave the front of the switch box clear for control access.

14. Repeat this process for the supplied lava coals (on top of the already placed lava granules).

NOTE: DO NOT place any lava media on the burner system, or behind it.

15. Spread the supplied wood chunks on the lava media, around the front and sides of the burner system. Leave the front of the switch box clear for control access.

NOTE: DO NOT place any wood chunks on the burner system, or behind it.

LOG LOCATORS (if applicable)

ISO-IBV 46" models include a set of log locators. They are used to support the front logs of select log sets. If the log set chosen includes log locator install details (in placement instructions), install accordingly. If not, discard the log supports.

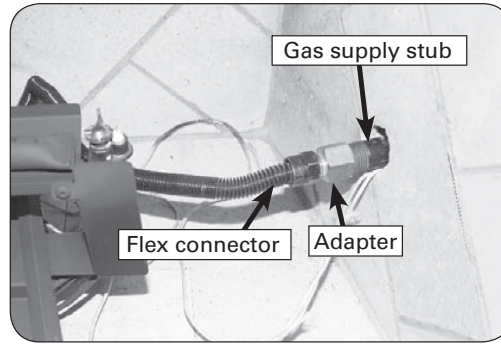


FIGURE 47

Connect gas supply

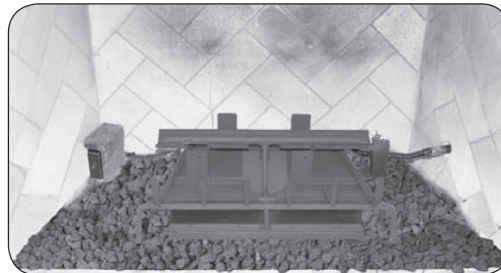


FIGURE 48

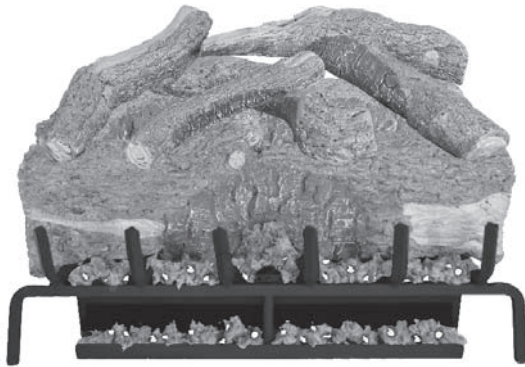
Place lava media

IMPORTANT: For all valves, the air **MUST** be purged from the gas line before the pilot will light and burn properly. The time needed to purge will depend on the length of the gas line to the unit and the amount of time since the unit or gas line was last used. It may take several minutes before all the air is purged and the pilot will light and burn properly. Reference the LIGHTING INSTRUCTIONS section in this manual.

ISOKERN Gas Log Set - Log Set Installation



Charred Hickory (ISF-CH-24) shown



Summit Pine (ISF-SP-24) shown



Sandhill Oak (ISF-SH-24) shown

Log Set Placement

Follow the instructions included with the log set for step by step log placement. Read all safety warnings and important information in the instructions supplied with the log set to ensure proper placement.

IMPORTANT: DO NOT add any additional embers to this log set. Any additional embers will cause unsafe operation.

IMPORTANT: Adequate ventilation is absolutely necessary! Provided significant, noticeable sooting does not occur, some flexibility is possible in log placement to suit your individual preference (select log sets). If you experience a continued accumulation of black carbon (soot) on your logs it is an indication of incomplete combustion and you should move the effected log(s) so as to minimize the flame contact on the effected log(s). Read the instructions supplied with the log set completely and carefully.

CAUTION: BURN HAZARD! Logs will remain hot for some time after use. If you need to reposition any log to maintain the proper layout, use heat-resistant gloves or allow logs adequate time to cool before handling.

ISOKERN Gas Log Set - Installing/Replacing Batteries

CAUTION: Ensure the unit is connected to the gas line and has been tested for leaks before you insert batteries.

CAUTION: Turn off the remote and/or burner and allow the unit to completely cool prior to any battery replacements. Important: Prior to inserting batteries, always apply a small amount of dielectric grease to both ends of each battery. This will ensure conductivity and prevent moisture from affecting the contact.

IMPORTANT: Low/dead batteries will affect burner system operation. Replace batteries any time the burner will not turn on.

Remote Transmitter Battery

The remote transmitter requires one 12V battery to operate (included). Locate the transmitter, remove the lid (found on rear), and properly insert the new battery as marked. Re-secure the lid. **(Figure 49)**

Switch Box Batteries

The burner system requires 4 AA batteries to operate (included). Locate the switch box and turn it over. Detach the battery box from the Velcro. Use a small Phillips screwdriver to remove the screw found on the bottom of the battery box, then remove the battery lid. Properly insert the new batteries as marked. **(Figure 50)** Replace the battery lid using the screw, replace the battery box onto the Velcro, and re-position the switch box in the fireplace.

IMPORTANT: Always replace the decorative heat shield over the switch box after battery replacement.

Remove lid for
12V battery
access



FIGURE 49

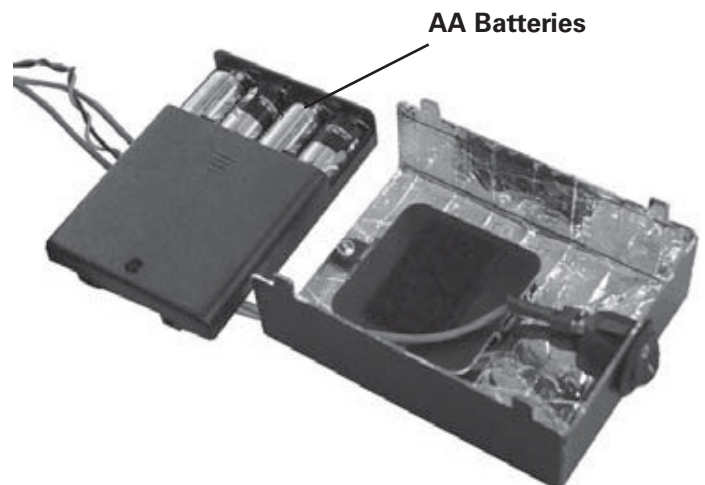


FIGURE 50

ISOKERN Gas Log Set - Lighting Instructions

FOR YOUR SAFETY, READ BEFORE LIGHTING

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

A. This appliance is equipped with an ignition device that automatically lights the pilot. DO NOT attempt 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 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. Use only the control system or remote to light the pilot. This valve will not operate if the pilot is not lit and stable.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water. Attempted operation may result in fire or explosion resulting in property damage, personal injury or loss of life.

Remote Lighting

CAUTION: DO NOT attempt to light the pilot by hand.

NOTE: If the remote does not function, and batteries with an adequate power level are installed, refer to the SYNCING THE REMOTE section.

NOTE: Steps 1 and 2 may not be required if previously done during an earlier lighting.

1. Locate the ON/OFF switch at the front of the switch box. Press the switch to the OFF (O) position. **(Figure 51)**

2. Locate the OFF/REMOTE slide actuator on the left rear of the burner. Slide the actuator to the right / REMOTE position. **(Figure 52)**

3. Locate the remote transmitter and press the ON button. **(Figure 53)** The system will beep and the ignition sequence will begin.

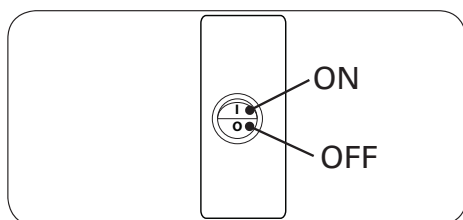
The igniter will begin to spark. After the pilot lights and is established, the valve will automatically open and the burner will light. Adjust to the desired setting with the remote transmitter. See the REMOTE OPERATING INSTRUCTIONS section for details.

NOTE: The ignition sequence will take approximately 5 seconds.

WARNING: If pilot fails to light within 10 seconds, press the OFF button on the remote transmitter or slide the OFF/REMOTE slide actuator (left) to OFF to turn off the system. Allow five (5) minutes for any gas in the unit to dissipate, then repeat steps 2 & 3 above. **IF YOU SMELL GAS, SEE STEP B ABOVE.**

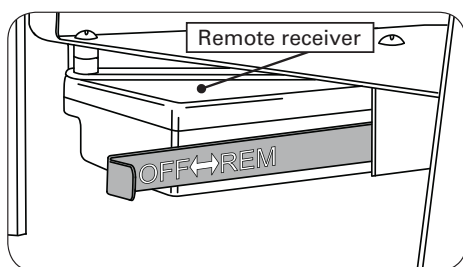
If the pilot fails to light after several tries, turn all control/remote system components to OFF and contact a qualified professional service technician.

FIGURE 51



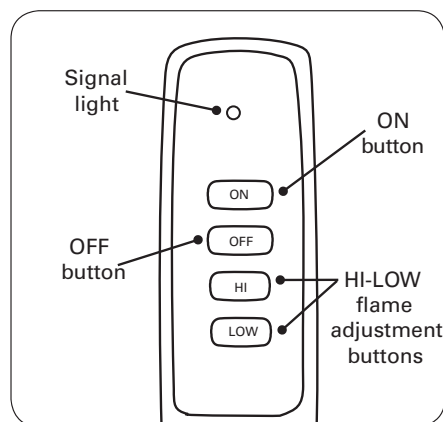
Switch box, ON/OFF

FIGURE 52



OFF/REMOTE slide actuator (left rear of burner)

FIGURE 53



Remote transmitter detail

ISOKERN Gas Log Set - Lighting Instructions

Manual Lighting

CAUTION: DO NOT attempt to light the pilot by hand.

1. Locate the OFF/REMOTE slide actuator on the left rear of the burner. Slide the actuator to the left / OFF position. **(Figure 54)**

2. Locate the ON/OFF switch at the front of the switch box. Press the switch to the ON (I) position. **(Figure 55)** The igniter will begin to spark. After the pilot lights and is established, the valve will automatically open and the burner will light.

NOTE: The ignition sequence will take approximately 5 seconds.

WARNING: If the pilot fails to light within 10 seconds, turn OFF the system. Allow five (5) minutes for any gas in the unit to dissipate, then repeat step 2 above. **IF YOU SMELL GAS, SEE STEP B AT BEGINNING OF LIGHTING INSTRUCTIONS.**

If the pilot fails to light after several tries, turn the system OFF and contact a qualified professional service technician.

NOTE: In manual mode, the remote transmitter will not operate the burner system.

Shutting Down

- For remote shut down, press the OFF button on the remote transmitter. If remote is unavailable, slide the OFF/REMOTE slide actuator (on left rear of burner) to the left / OFF position.
- For manual shutdown, press the ON/OFF switch on the front of the switch box to the OFF (O) position.

NOTE: If the system needs to be relit immediately after shutting down, the thermocouple will require 20 seconds to cool down before the system can reignite.

Pilot Appearance

Periodically check the pilot for proper flame pattern. The pilot flame should encircle the, and is preset at the factory. **(Figure 56)**

If the pilot flame burns incorrectly; shut down completely and contact a qualified professional service technician.

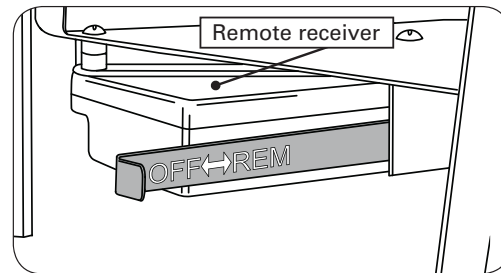


FIGURE 54

OFF/REMOTE slide actuator (left rear of burner)

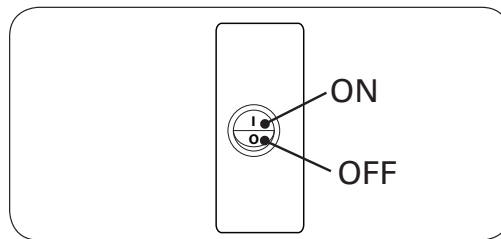


FIGURE 55

Switch box, ON/OFF

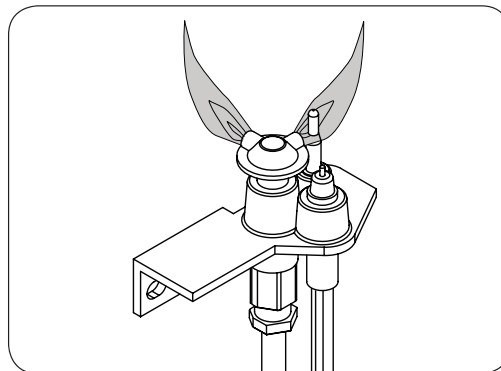
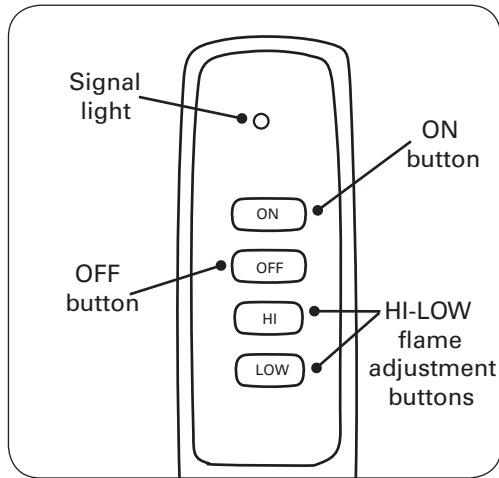


FIGURE 56

Proper pilot flame

ISOKERN Gas Log Set - Remote Operations



Remote transmitter detail

FIGURE 57

ORIENTATION

Prior to remote transmitter use, light the appliance per the REMOTE LIGHTING section. The remote transmitter will only operate the unit when it is in the remote mode. Familiarize yourself with the transmitter buttons, as illustrated in **Figure 57**.

Identify the four transmitter buttons (used with this system):

- ON BUTTON: Turns the system ON.
- OFF BUTTON: Turns the system OFF.
- HI BUTTON: When the system is on, this button is used to increase the flame to the desired height.
- LOW BUTTON: When the system is on, this button is used to decrease the flame to the desired height.

FLAME HEIGHT

Seven flame height levels are available. Press the HI or LOW buttons to enter the Flame Height mode. Pressing the HI or LOW button once will increase or decrease the flame height by 1 of 7 increments. (**Figure 54**)

ISOKERN Gas Log Set - Cleaning & Servicing

NOTE: Servicing may be necessary to ensure proper pilot operation and proper burn characteristics. Always shut off the gas to the appliance while performing service work.

Allow the appliance to cool before servicing.

Installation, service, and repair must be done by an NFI Certified or other qualified professional service technician. The appliance should be examined before use, and must be inspected at least annually to prevent burner shutdown, sooting, odors, etc. It must be checked for clean burning operation and proper pilot appearance, with the correct tools to service this unit. More frequent servicing may be required. It is imperative that all control components and compartments, burner(s), air shutters, and circulating air passageways of the appliance be kept clean and free of all obstructions (as applicable).

In addition, a periodic examination and cleaning of the ISOKERN fireplace venting system should be conducted by a qualified professional service technician.

Any safety screen or guard removed for servicing must be replaced prior to operating this appliance. Verify proper operation after servicing.

If, after a period of use, the flames start to exhibit unusual shapes and behavior, or the burners fail to ignite smoothly, the burner may require cleaning or servicing. If this happens, it is recommended to contact the nearest dealer to get the appliance serviced.

Do not remove the rating plates or the warning tags. These are an integral safety and identification component of this appliance.

We recommend following these instructions at the beginning of each fireplace season and as needed throughout the year, depending on your usage pattern and the environmental conditions in your home. More frequent cleaning and maintenance may be necessary when burning propane gas than with natural gas.

Syncing The Remote System

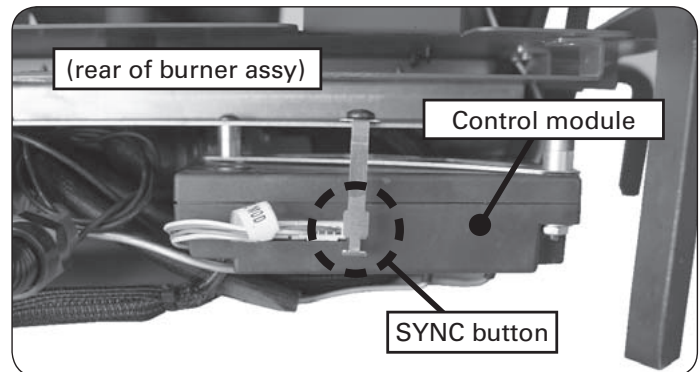
NOTE: Syncing the remote system will cause the burner to ignite.

Ensure the burner system is off and completely cool. The remote receiver (found on the rear of the burner assembly) has a sync button. **(Figure 58)**

Locate the OFF/REMOTE switch actuator on the left rear of the burner. Slide the actuator to the right / REMOTE position, then press the sync button and release. One beep will be heard. Then press and hold the ON button on the remote transmitter, until 4 rapid beeps are heard and the pilot begins to spark. The remote system is now synced. **If ignition is not desired, press OFF on the remote to shut off.**

Flame Description

Observe the flames. The top and middle burner flames should be blue at the base and a combination of blue/yellow at the body and at the tips. The top flames should be approximately 3-5" above the logs, with the center flame being the tallest. The middle flames should be approximately at or below the top of the front log. The ember flames should be 1/4" to 1" above the embers. **(Figure 59)**



Sync detail

FIGURE 58



Flame appearance

FIGURE 59

ISOKERN Gas Log Set - Troubleshooting

BURNER SHUTTING DOWN DURING OPERATION

- | | |
|--|---|
| A. Insufficient or excessive gas pressure | A1. Check gas pressure (Read D.-F. of IMPORTANT PRE-INSTALLATION AND FIREPLACE SAFETY INFORMATION section, & check with local gas company).
A2. Other gas appliances may be on the same gas line, dropping gas pressure to log set. Check pressures with everything operating to ensure adequate pressure. |
| B. Log placement | B. Reference the LOG PLACEMENT section in this manual for recommended log positioning. |
| C. Pilot flame lifting off thermocouple/generator | C. Check gas pressure (see section A1). |
| D. Pilot (remote compatible) | D. Contact your dealer for instructions on replacement. |
| E. Blockages on burner | E. Vacuum any lava granules or material that may have fallen onto burner pipe area. |

PILOT WILL NOT LIGHT

- | | |
|--|--|
| A. Pilot flame lifting off thermocouple/generator | A. Check gas pressure (see Section 1, A1 of this table). |
| B. Electronic spark not lighting pilot | B. Check to ensure sparking when activated.
Note: You may need to turn or press igniter several times to ignite pilot. See LIGHTING INSTRUCTIONS for your control valve. |
| C. Igniter electrode wire loose | C. Check wiring and reconnect any loose wiring. |
| D. Gas supply off/manual shutoff valve closed | D. Turn on gas supply or open manual shutoff valve. |
| E. Air in gas line | E. Bleed the gas supply line and repeat LIGHTING INSTRUCTIONS until air is removed. |
| F. Pilot hood blocked | F. Check for debris or dirt / Clean pilot |

LOW FLAME HEIGHT

- | | |
|------------------------|---|
| A. Gas pressure | A. Check gas pressure (see Section 1, A1 of this table). |
|------------------------|---|

BURNER NOT BURNING EVENLY

- | | |
|--|--|
| A. Burner orifice clogged | A. Clean burner orifice. |
| B. Remote set on low flame (if option available) | B. Adjust flame with remote transmitter. |
| C. Top burner lights; bottom burner has delayed ignition. | C1. Check gas pressure. Can be caused by too small of a gas line (see Section 1, A1 of this table).
C2. Low propane |

ODORS

- | | |
|--|--|
| A. Gas leak | A. Shut off gas, if possible. Follow instructions on front page. Have a qualified professional installer or the gas company correct all leaks. |
| B. New home, new carpet, or new paint | B. When these odors are drawn into the fireplace, this may cause objectionable odors. Thoroughly ventilate the area before restarting your log set. |
| C. Damper closed | C. Ensure that damper is open. |

PILOT WILL NOT STAY LIT

- | | |
|---|--|
| A. Valve won't hold | A. Contact your dealer for instructions on replacement. |
| B. Pilot hood not aimed at thermocouple | B. Pilot hood bent; replace pilot or angle pilot hood properly so pilot flame hits thermocouple. |
| C. Pilot line bent / kinked at connection to valve | C. Replace pilot line. |
| D. Thermocouple is loose | D. Tighten thermocouple nut at gas control valve. (Do not over tighten.) |
| E. Thermocouple cracked or worn out | E. Replace thermocouple. |
| F. Excessive down draft | F. Install chimney cap / Outside chimney too close to other peaks / Check chimney flue for proper height / Poorly designed chimney. |

BURNER WILL NOT TURN ON

- | | |
|---|--|
| A. System deactivated due to closed damper | A. Open damper. |
| B. Low/dead batteries in remote transmitter AND/OR remote receiver / switch box (select models only) | B. Replace batteries as needed (if applicable). |

General Information & Components

The environmentally friendly ENERVEX EcoDamper System is the first completely automated draft and damper system for use with gas fireplaces. The EcoDamper System quietly manages a perfect draft and prevents conditioned air from escaping through the chimney when the fireplace is not in use. It eliminates the need for glass doors, opening up many new design options while allowing for a larger view area of the fire and a more natural look.

The system consists of the RS 9 Chimney Fan, the Mechanical Fireplace Damper (MFD), the ADC100 Control and the PDS-1 Proven Draft Switch.

RS 9 Chimney Fan

Made of high quality, recycled cast aluminum, RS Chimney Fans keep the perfect draft for a long time. The fan features a quiet, enclosed pre-lubricated motor and is recommended to be used with gas or oil fireplaces, stoves, ovens, furnaces, water heaters, BBQs and pizza ovens.

MFD Mechanical Fireplace Damper

The low profile Mechanical Fireplace Damper (MFD) is an accessory to be used in conjunction with an ADC100 control and a chimney fan as part of the EcoDamper and Intellidraft System. This damper prevents conditioned air from escaping through the chimney when the fireplace is not in use and eliminates the need for glass doors.

ADC100 Draft Control

The ADC100 Control, for gas appliances, has pre- and postpurge features, an integrated damper relay and includes a draft switch that shuts the appliance off when there isn't enough draft, protecting your family from dangerous flue-gasses.

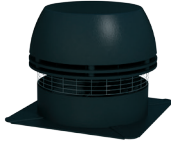
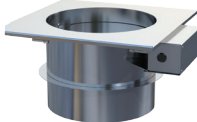


PDS-1 PROVEN DRAFT SWITCH

Use the PDS-1 Proven Draft Switch to provide protection from insufficient draft. When there is an unsafe draft, the switch shuts down the gas-fired appliance or fireplace.

Installations must conform to requirements of the authority having jurisdiction. Where required by the authority having jurisdiction, the installation must also conform to the Standard for Draft Equipment and The National Fuel Gas Code, ANSI Z223.1/NFPA 54.

All electrical wiring must be in accordance with the requirements of authority having jurisdiction or, in the absence of such requirements, with the National Electrical Code, NFPA70.

This installation manual does not contain any system design documentation. System design documentation is available from any authorized ENERVEX representative. Accessories, fans, and variable frequency drives are not covered by this manual. Please refer to these component's individual manuals.

Component	Part#	Description
	EXH0021	RS 9 Chimney Fan
	EXH2810-24	MFD Mechanical Fireplace Damper
	EXH0060	ADC100 Draft Control (includes PDS-1)
	EXH1130	PDS-1 Proven Draft Switch (included with ADC100)

ECODAMPER System - Installation

TO REDUCE THE RISK OF FIRE, ELECTRICAL SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed on the front of the manual.
2. Before servicing or cleaning the unit, switch off at service panel and lock service panel to prevent power from being switched on accidentally.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with applicable codes and standards.
4. Follow the appliance manufacturer's guidelines and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. This system must be grounded.

MECHANICAL DRAFT SYSTEM FOR A GAS-FIRED FIREPLACE WITH DAMPER AND SAFETY SYSTEM PER NFPA 54/IFGC

Application

This installation shows a combination fireplace and damper system. The ADC100 control monitors fan and damper operation and the safety system. No adjustments are necessary after the system is installed and commissioned. The ADC100 does not have to be visible and can be installed in the attic. **(Figure 60)**

Proven Draft Switch is part of ADC100 control.

SEQUENCE OF OPERATION

1. During commissioning, the fan speed is set using the potentiometer located on the ADC100 control board.
2. When the gas igniter is activated, the fan speed increases and the damper begins to open. Once the damper is fully open and the proven draft switch closes, the fan returns to the speed setting of the potentiometer and the ADC100 releases the gas valve.
3. If proper draft is not maintained, the ADC100 will increase fan speed gradually until the PDS closes. If the PDS has not closed 10 seconds after the fan reaches 100% speed, the ADC100 will shut off the gas valve and go into alarm mode. If the PDS closes while in alarm mode, the fan will resume the original speed setting.
4. Once the fireplace is turned off, the fan will continue to operate for a set post-purge time (adjustable between 0-10 minutes) to remove any remaining products of combustion before shutting down. The damper closes 10 seconds after the fan is shut off.
5. In case of a mechanical or electrical failure the ADC100 will shut off the gas valve.

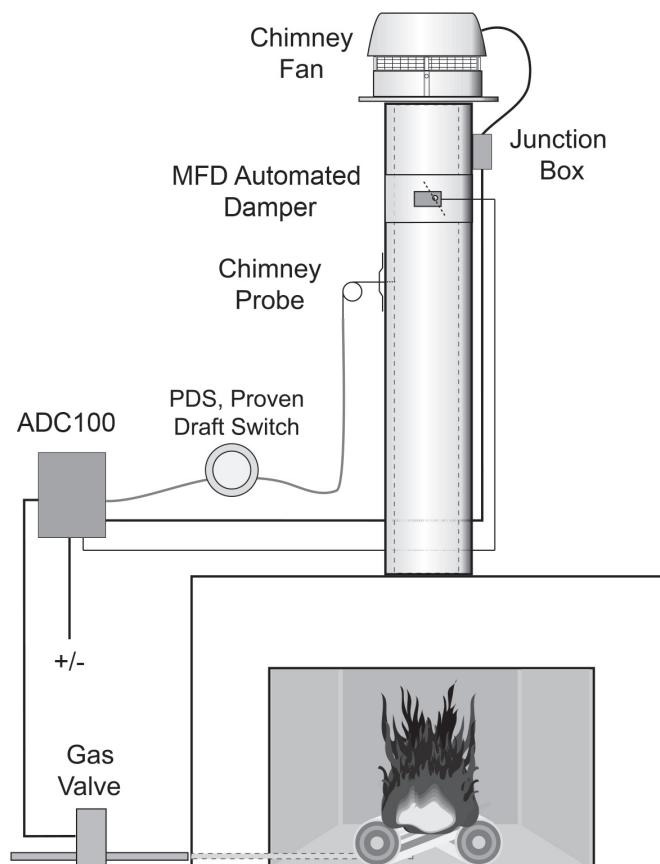
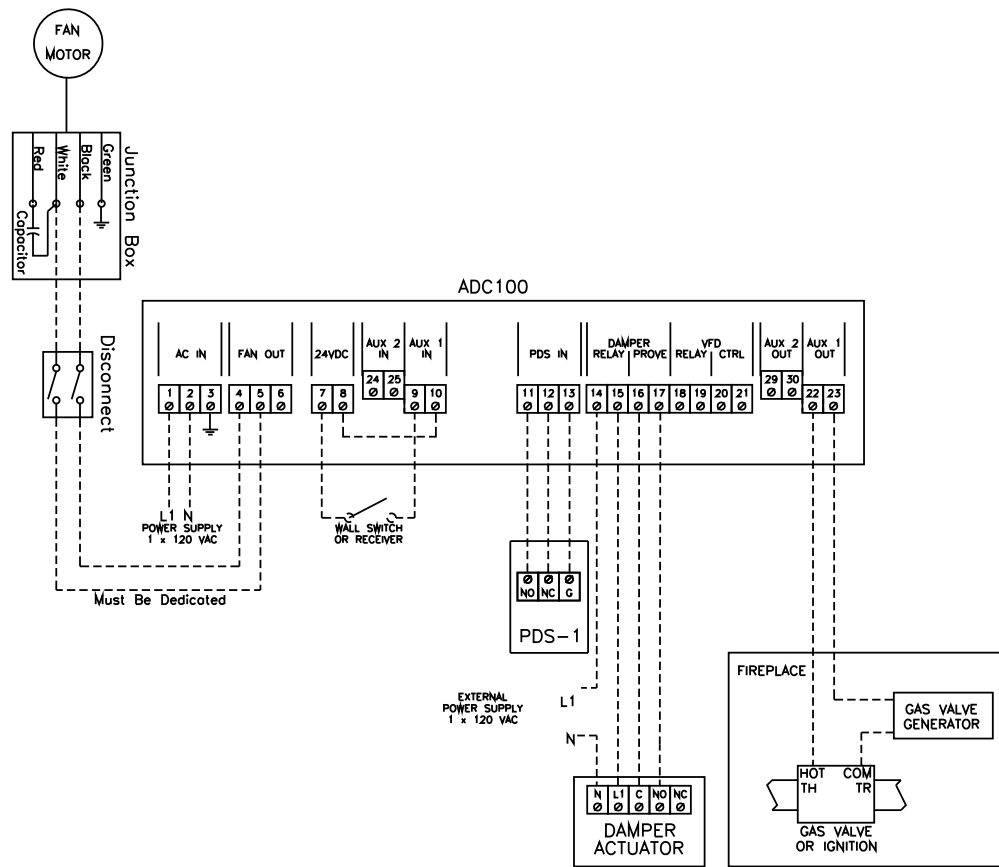


FIGURE 60

ECODAMPER System - Wiring Diagram


FIGURE 61

Notes

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Registration Card

Please tear out along dashed lines 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.: _____

Fireplace Size (Circle One): BVETTO 36" (80B36) BVETTO 46" (80B46)

Gas Type (Circle One): Natural Gas Propane

Fireplace Serial Number: _____

(Located on Rating Plate Inside Fireplace)

Buyer: _____

Address: _____

City, State, Zip: _____

Phone No.: _____

Installed By: _____

Address: _____

City, State, Zip: _____

Phone No.: _____

Warranty & Disclaimer

Isokern BVETTO B-Vent Gas Fireplace

Earthcore 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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