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 lsokern 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.



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 - 2019 Canadian: CSA 2.22- 2019

PFS ®

Issued: December 2021 Revision: **007** ©2017 Earthcore Industries, LLC

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

THIS MANUAL CAN ONLY BE REPRODUCED IN ITS ENTIRETY

Earthcore Industries

The latest revision of this installation manual is available on the Earthcore website: https://earthcore.co/installation-manuals/



SCAN

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BVETTO Rating Label

ISOKERN BVETTO B-VENT GAS FIREPLACE: MODELS 80B36 AND 80B46 **O** ISOK≣RN° LISTED VENTED GAS FIREPLACE PER USA: ANSI Z21.50 - 2019 AND CANADIAN: CSA 2.22- 2019 **IBV MODEL#** ■80B36 ■80B46 NOT FOR USE WITH SOLID FUEL PFS REPORT NO. F09-79 SERIAL NO: B000001 SUITABLE FOR USE WITH PROPANE (LP) OR NATURAL GAS, SEE GAS IDENTIFYING TAG ON BURNER IBV36 MODEL # 80B36 PROPANE (LP) BTU MIN: 22,000; BTU MAX: 50,000 IBV36 MODEL # 80B36 NATURAL GAS (NG) BTU MIN: 21,000; BTU MAX: 65,000 ■ IBV46 MODEL # 80B46 PROPANE (LP) BTU MIN: 23,000; BTU MAX: 60,000
■ IBV46 MODEL # 80B46 NATURAL GAS (NG) BTU MIN: 22,000; BTU MAX: 75,000 *See Burner Rating Plate For Additional Information See Installation and Operating Instructions For This Model and ICC # ESR - 4873 MANIFOLD PRESSURE: PROPANE (LP): 10" WATER COLUMN; NATURAL GAS: 3.5" WATER COLUMN MINIMUM PERMISSIBLE GAS SUPPLY PRESSURE FR PURPOSE OF INPUT ADJUSTMENT: PROPANE (LP): 11" WATER COLUMN / NATURAL GAS: 5" WATER COLUMN **ELECTRICAL RATING: CLEARANCE TO COMBUSTIBLES:** UNIT: ELECTRONIC SMOKE DOME FRONT AND UNIT SIDES = 1.5in. 60mm 1 PH 205mm COMBUSTIBLE SHEATHING ABOVE OPENING TOP SHEATHING OR TRIM TO OPENING SIDES 60 HZ 205mm = 8in. 120 VOLTS MANTEL ABOVE OPENING 305mm = 12in. **LESS THAN 5 AMPS** INSULATION FROM FIREBOX "CAUTION: THIS APPLIANCE IS ONLY FOR USE WITH THE TYPE OF GAS INDICATED ON THE BURNER RATING PLATE. THIS APPLIANCE IS NOT CONVERTIBLE FOR USE WITH OTHER GASES" This appliance must be installed in accordance with local codes, if any, if none, follow the current ANSI Z223.0/NFPA 54 or CSA B149.1 MADE IN USA CHESAPEAKE, VA 23323 EARTHCORE INDUSTRIES HEADQUARTERS JACKSONVILLE, FL 32256

General Information

BVETTO Models 80B36 and 80B46 are tested and listed by PFS Corp., USA Report No. 09-79 to ANSI Z21.50 - 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 fine 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.

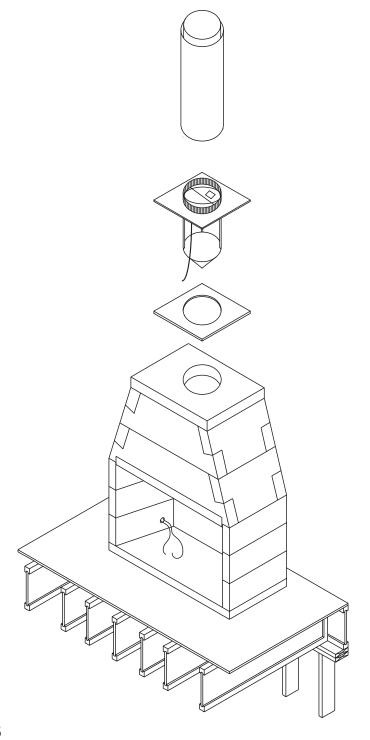
- **1.** Always check local building codes governing fireplaces and fireplace installations. The BVETTO B-Vent Series installation must comply with all local, regional, state and national codes and regulations.
- **2.** The BVETTO B-Vent Series fireplaces are listed for use with the decorative gas log 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 2021 (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.

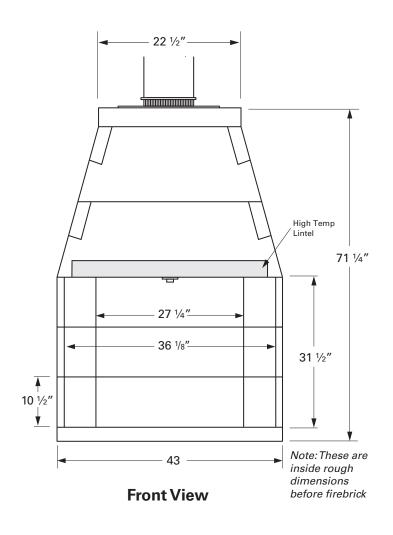
Safety Instructions

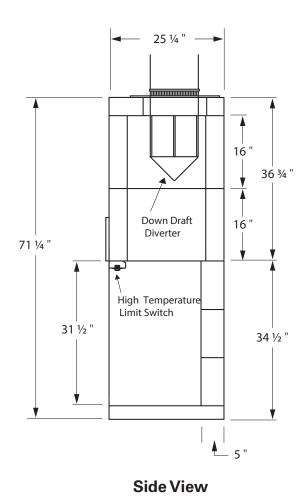
- **17.** Never install a BVETTO B-Vent Series component, chimney component or accessory that has visible or suspected physical damage as a result of handling or transportation. These items should be inspected by a qualified representative to ensure safe condition. When in doubt, consult your local supplier.
- **18.** Do not alter or modify the BVETTO B-Vent Series, venting components under any circumstances. Modification or alteration of the venting components may void manufacturer's warranty, listings and approvals.
- **19.** Do not use a fireplace blower insert, heat exchanger or any other product not specified by the manufacturer herein for use with this fireplace.
- **20.** Do not use any BVETTO B-Vent Series appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.
- **21.** The BVETTO B-Vent Series is not intended to heat an entire home or to be used as a heat source.
- **22.** Children and adults should be alerted to the hazards of high surface temperature and should stay away from this appliance to avoid burns or clothing ignition.
- **23.** Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at-risk individuals in the house. To restrict access to the fireplace, install a adjustable safety gate to keep toddlers, young children and other at-risk individuals out of the room and away from hot surfaces.
- **24.** Clothing or flammable material should not be placed on or near the appliance.
- **25.** Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
- **28.** Installation and repair should be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etcetera. It is imperative that control compartments, burners, and circulating air passageways of the appliance be kept clean.

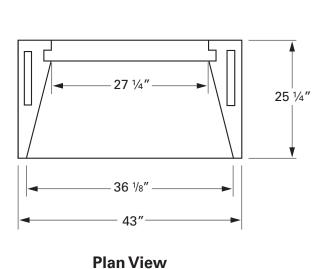
- 29. Do not nail or screw into the isokern fireplace, which includes firebox or smoke dome components unless attaching the anchor plate for the metal flue system. This may alter the integrity of the fireplace and cause a house fire. THIS WILL VOID THE WARRANTY OF THE FIREPLACE.
- **30.** Never spray or apply any type of sealer, insulation or other materials to the fireplace.

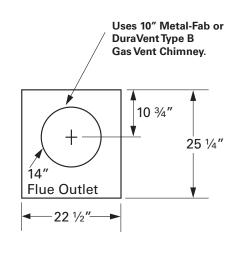


BVETTO B-Vent Series 36" (80B36)









Top View

Earthcore Industries BVETTO B-Vent Gas Fireplace

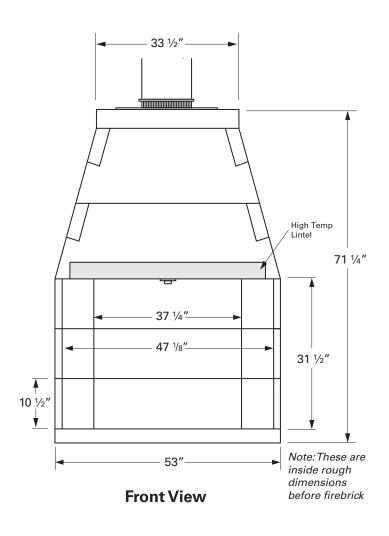
Component List - BVETTO B-Vent Series 36" (80B36)

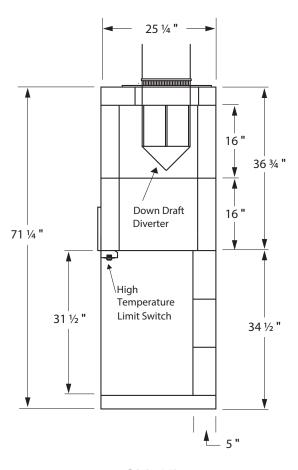
Component	Part#	Description
251/4"	21	lsokern BVETTO Base Plate
42%"	11	Isokern BVETTO Smoke Dome (QTY. 2)
251/4" 3"	34	Isokern BVETTO Side Sloping (QTY. 4)
251/4" 8"	20	Isokern BVETTO Sidewall (QTY. 6)*

Component	Part#	Description
251/4" 103/4" 221/2" 43/4"	36S	Isokern BVETTO Top Plate
321/2"	12	Isokern BVETTO Smoke Dome (QTY. 2)
30"	25	Isokern BVETTO Backwall (QTY. 3)*

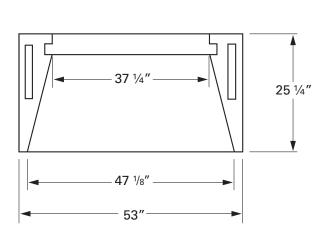
*NOTE: One additional backwall and two additional sidewalls can be added to obtain an opening of 42" tall before brick is installed, as well as, Two additional backwalls and four additional sidewalls can be added to obtain an opening of 52% tall before brick is installed. To obtain this height the additional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

BVETTO B-Vent Series 46" (80B46)

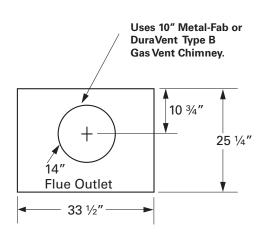




Side View



Plan View



Top View

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

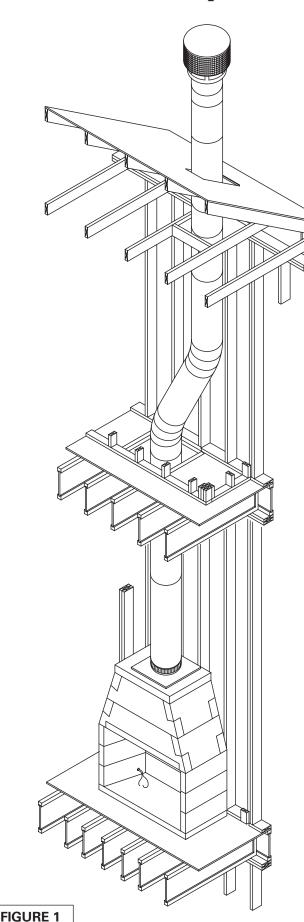
Component	Part#	Description
53"	23	lsokern BVETTO Base Plate
423/4"	11	Isokern BVETTO Smoke Dome (QTY. 2)
251/4" 3"	34	Isokern BVETTO Side Sloping (QTY. 4)
251/4" 8"	20	Isokern BVETTO Sidewall (QTY. 6)*

Component	Part#	Description
251/4" 103/4" 331/2" 43/4"	77	lsokern BVETTO Top Plate
5234"	13	Isokern BVETTO Smoke Dome (QTY. 2)
10 1/2"	31	Isokern BVETTO Backwall (QTY. 3)*

^{*}NOTE: One additional backwall and two additional sidewalls can be added to obtain an opening of 42" tall before brick is installed, as well as, Two additional backwalls and four additional sidewalls can be added to obtain an opening of 52%" tall before brick is installed. To obtain this height the additional pieces will need to be ordered in addition to the 80B46 fireplace kit.

Earthcore Industries
BVETTO B-Vent Gas Fireplace 12/2021

Required Clearance to Combustibles



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

Zero inch (0") clearance to the combustible floor; (Isokern Base Plate must be used)

Zero inch (0") clearance at the Isokern firebox sides and front and smoke dome sides and front.

One and one half inches (1-1/2") clearance at the Isokern firebox back wall and smoke dome 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.**

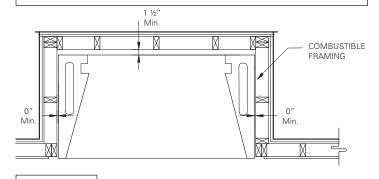


FIGURE 2

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

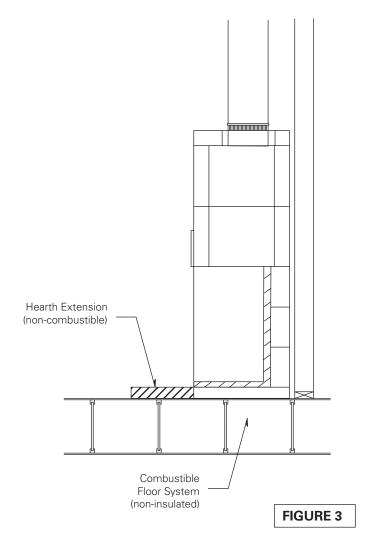
Total dead load amounts include (but are not necessarily limited to) the following items and their corresponding weight estimates as listed below:

- 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

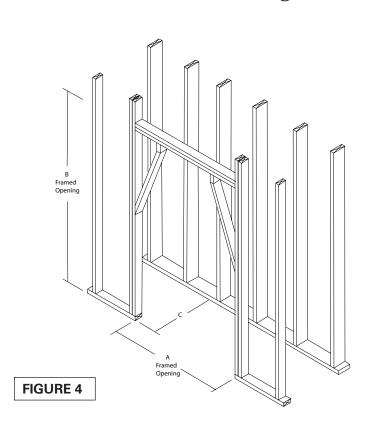
The floor area for each model is as follows: BVETTO-46 @ 53" x 25.25" = 9.30 sq. ft. BVETTO-36 @ 43" x 25.25" = 7.54 sq. ft.

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.



Rough Framing Dimensions

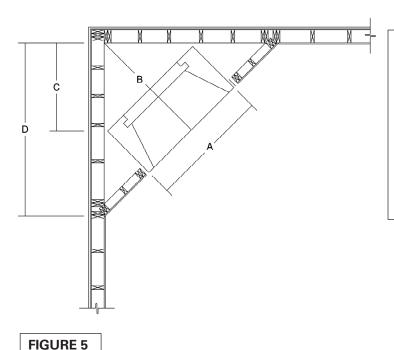


Typical Installation Framing Dimensions

<u>BVETTO</u>	Width	Height	Depth
	A	B	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.



Corner Installation Framing Dimensions

<u>BVETTO</u>	Α	В	С	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 Farthcore 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)

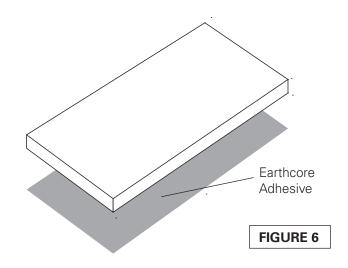
The shims can be inserted under a component to level and align it with adjacent Isokern components. Be sure to re-grout any and all gaps resulting from shim insertion to maintain components to full bearing.

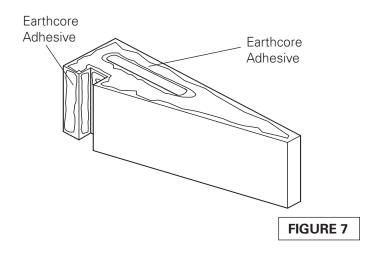
Broken Components:

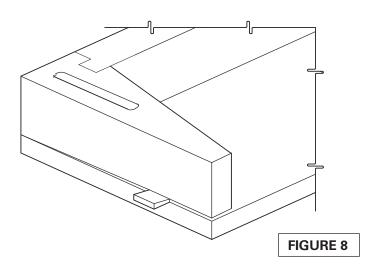
Components can be repaired by using Earthcore Adhesive along the break line as the component is set into place. Components broken into multiple small pieces should be discarded and replaced.

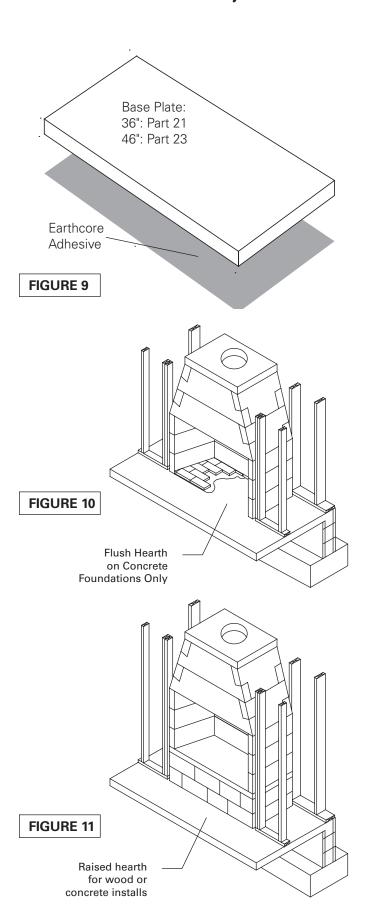
IMPORTANT:

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









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.

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.

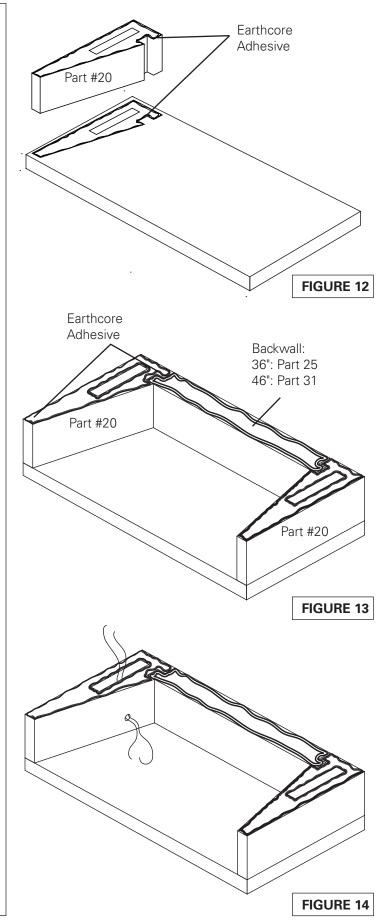
Feed the two lengths of high temperature wire from the inside of the BVETTO firebox through the drilled hole and into hollow space of the firebox side wall. Bring the two lengths of wire up and out through the top of the side wall component **(Figure 14).**

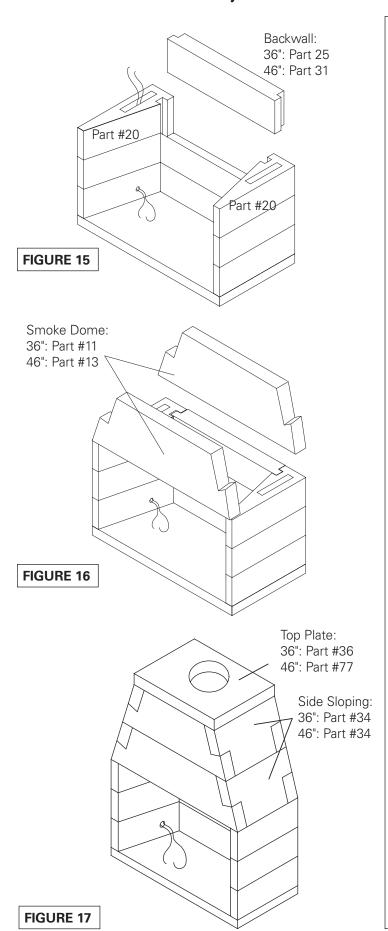
NOTE: For Seismic Installation - With the Seismic installation the opening in the sidewalls are used to anchor the Isokern Fireplace to the floor with rebarb and backfilled with concrete. The high temperature wires will need to be run outside of the Isokern unit and not through the openings in the sidewall.

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.





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 ¾") 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).

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 micro-switch 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.

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.

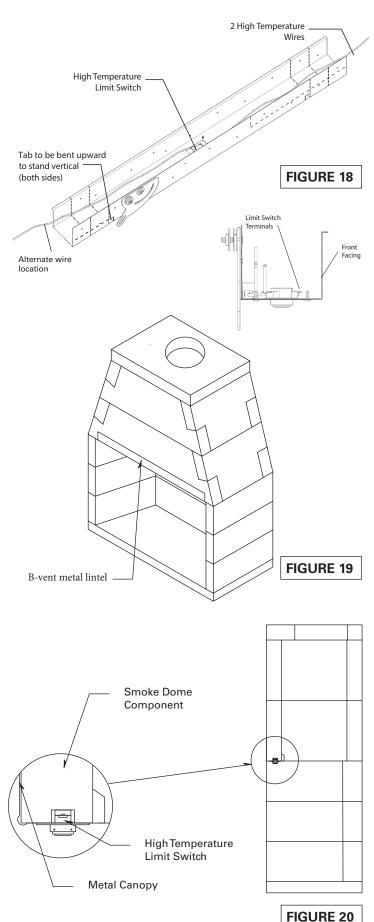
NOTE: Wire clamp should be approximately 4" from the washers. Tighten lock nuts on the handle if necessary. Pull cable to close the damper and adjust the length of wire cable by swinging the handle between open and close po-sitions. When in the open position, the damper should be rotated a full 90 degrees from the closed position. Re-tighten 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 driv-en into the face of the BVETTO smoke dome.

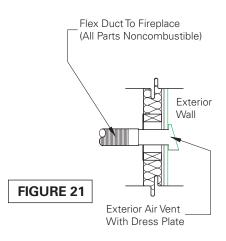
Any excess wire draped between the high temp lintel and the left hand firebox sidewall should be neatly tucked into the hollow core of the left hand sidewall. Excess wire should not be visible below the canopy bottom.

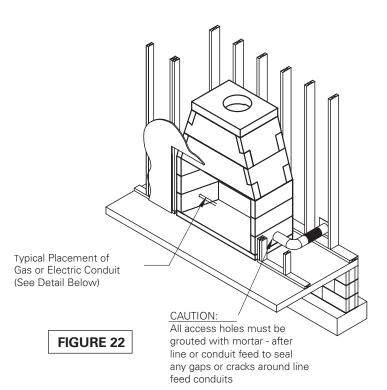
NOTE: The 2 high temperature wires inside of the BVETTO firebox will connect to the appropriate contacts found on the gas burner assembly during the installation of the gas log set.



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.





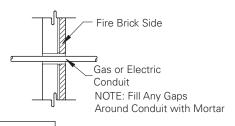


FIGURE 23

The air kit is fitted into the front 1/3 of the side wall of the firebox by core drilling an appropriately sized hole at the selected 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 f or a quarter inch (1/4") joint around the air access sleeve for heat expansion. Do not install in the rear of the firebox. Combustion air kits must be installed in accordance with local codes.

Fireplace Make Up Air Requirements

Bvetto Series

Model	Opening Height (in)	Consumption Air Flow (CFM)
80B36	30	272
80B36	40	365
80B36	50	459
80B46	30	348
80B46	40	466
80B46	50	587

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

Gas Line Feed

For a fireplace having the provision for installation of a gas pipe, the provision is intended only for connection to a decorative gas appliance. Gas line for 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)

CAUTION: When using the decorative appliance, the fireplace damper must be set in the fully open position.

Electrical Line Feed

can be routed through the MAGNUM firebox side walls by drilling an appropriately sized hole using a masonry drill bit (Figure 23). 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 chimney is one (1) inches. It is of utmost importance that this chimney is installed only in accordance with these instructions.

MECHANICAL VENT SYSTEMS

It is acceptable to use mechanical draft systems of venting companies that do engineering calculations and make necessary recommendations for fan size and flue vent diameter following the guidelines of NFPA 211/2016. Installation of such systems must also follow the mechanical draft company's explicit installation and operation instructions.

IMPORTANT: MECHANICAL VENT SYSTEMS

If a mechanical draft system in incorporated with this fireplace, the draft system must be from an approved manufacturer. Any mechanical draft system shall be installed according to the manufacturer's instructions. Any installed mechanical draft system must be interlocked with the gas appliance control system to allow appliance operation only when the mechanical draft system in in operation.

Metal-Fab B-Vent Components

DuraVent B-Vent Components

12/2021

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

Component	Part#	Description
	10GV18	B-Vent 18" Length
927	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
1	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.

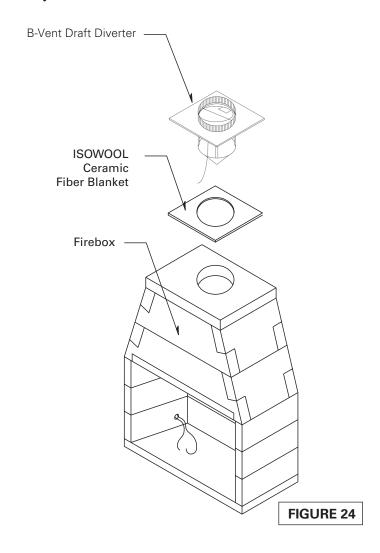
WARNING: Do not locate Anchor Plate with Down Draft Diverter in a location inaccessible for inspection, cleaning and servicing after installation.

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.



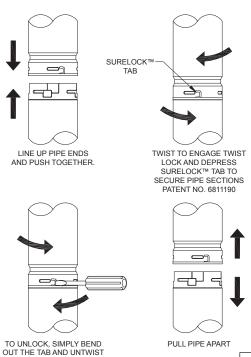


FIGURE 25

B-Vent Metal Chimney Installation

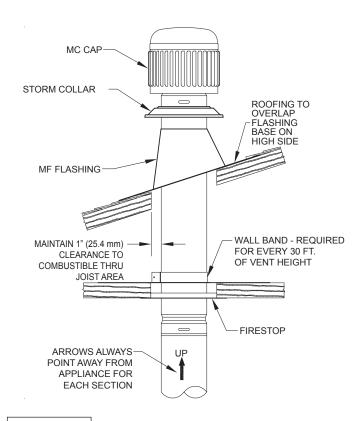


FIGURE 26

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

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

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 lsokern 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.

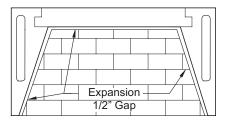


FIGURE 27

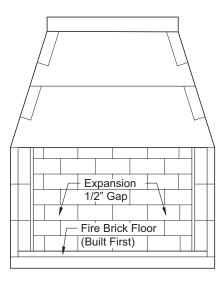


FIGURE 28

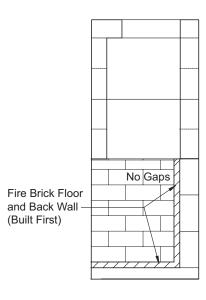


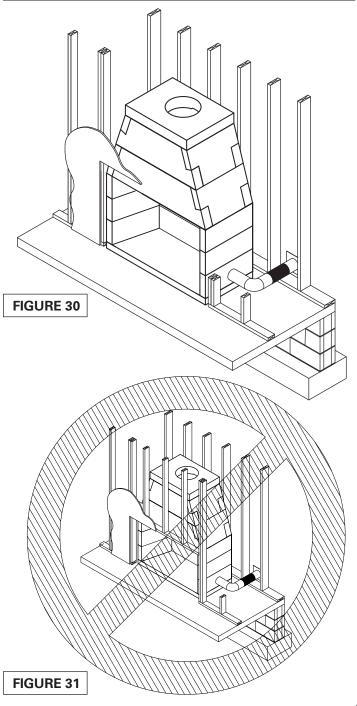
FIGURE 29

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.



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:

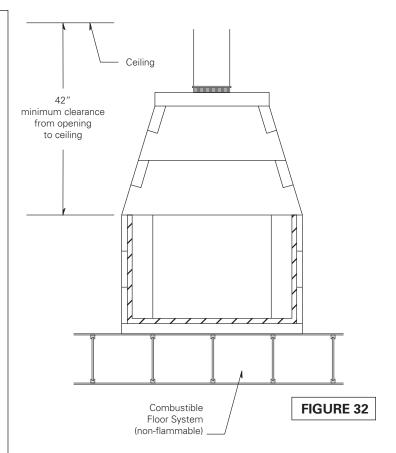
Side walls and walls to rooms adjoining the Isokern fireplace installation cannot be closer than twenty four inches (24") to the finished fireplace opening. (Figure 33

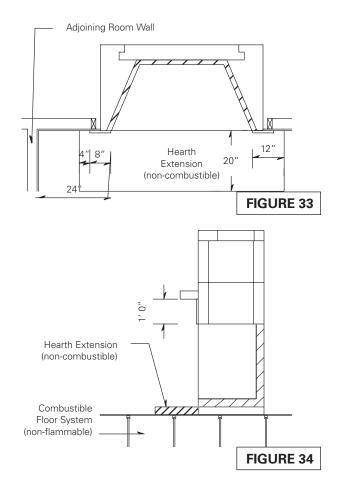
Ceilings:

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.





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.

WARNING: 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 LOWERTHANTHE 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. Insuffi cient 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 fl ow 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.

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 gassupply 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

			BTU Rating	
			NATURAL GAS	LP GAS
Firebox Model	Burner Model	Log Set Model	HIGH	HIGH
80B36	BV-3BRN-24-NG/LP-MVKEI-GCRK	AWO24	74K	66K
80B46	BV-3BRN-24-NG/LP-MVKEI-GCRK	AWO30	74K	66K

ISOKERN Gas Log Set - Burner Parts List

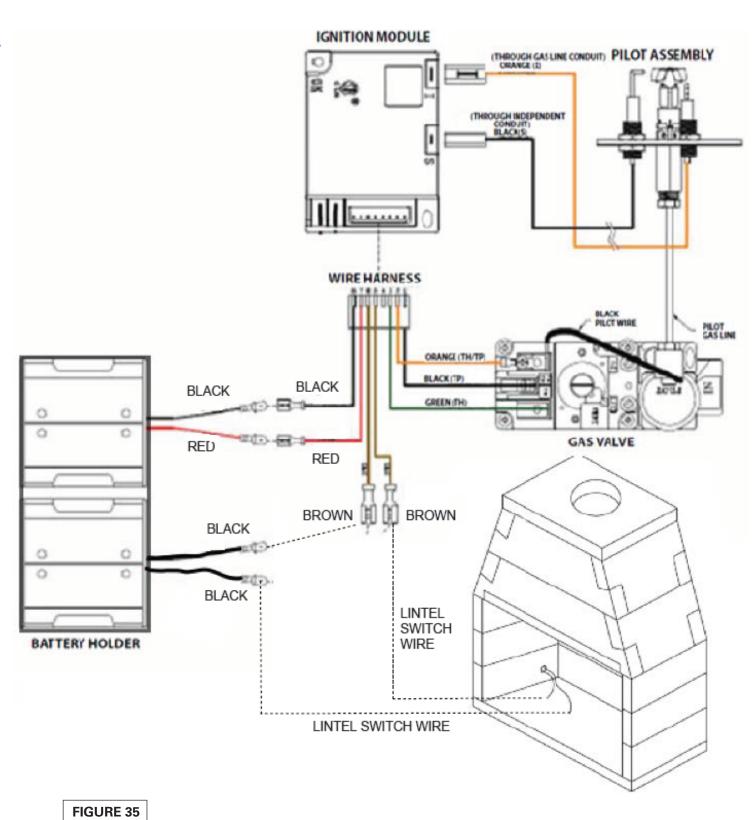


	#	Part #	Description
	1	3BRN-24	24" 3 Burner
	2	LP-CONV * Propane Models Only	24" 3 Burner Propane Conversion Kit
-	3	6003V	NG Control Valve
	3	6003V-LP	LP Control Valve
	4	GM6KA	Control Module
	5	6K-WIR	Wiring Harness
T	6	3V-PIL-24	NG Pilot Assembly
	O	3V-PIL-24P	LP Pilot Assembly
	7	3V-BAT	Battery Pack
	8	GCRK	Remote Kit (Receiver & Handheld)
	9	HP-R-B-10	Lava Rock
	10	GLE-6B	Black Embers
	11	T102-9898-16	Flex Line
	12	46-68	Gas Inlet Fitting

Replacement parts can be ordered from your local ISOKERN dealer.

The log set is purchased and packaged separately; contact your local ISOKERN dealer when ordering. Refer to the instructions included with the log set.

ISOKERN Gas Log Set - Wiring Diagrams



Earthcore Industries
12/2021 BVETTO B-Vent Gas Fireplace

ISOKERN Gas Log Set - Burner Installation

IMPORTANT: Ensure fireplace is clear of all debris

BURNER INSTALLATION:

- **1.**Make sure the fireplace gas supply is turned off.
- **2.**Locate the gas-supply stub inside the fireplace and remove the cap. When removing the cap make sure the stud does not turn, loosening the connection inside the wall.
- **3.**Center the burner from side to side and position it as close to the back wall of the firebox. Ideally, the burner will be aligned directly under the flue damper.
- **4.**Disconnect one black-to-brown wire connection and connect the black and brown wires to the Spill Switch wires. (Figure 35, 38, and 39)
- **5.**Use the 1/2" stainless steel flex line connector to connect the gas supply line to the gas inlet on the valve. When bending the flex line use proper bending procedures to avoid kinking the tubing.
- **6.**Verify that connections are tight, then turn on the gas and check each connection using soap and water solution. DO NOT USE AN OPEN FLAME FOR LEAK TESTING. The soap and water connection should be 50% water and 50% soap. Brush the solution over the connections and check for bubbles. Any leak must be corrected prior to proceeding with installation.
- **7.**Determine the valve system that is installed on the appliance, then proceed with lighting the pilot
- **8.**Before lighting the appliance make sure the heat shield is placed back in the position it was when the appliance was taken out of the box.



FIGURE 36

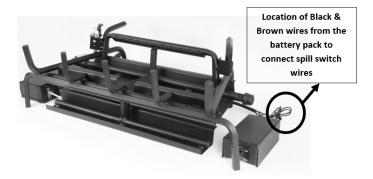
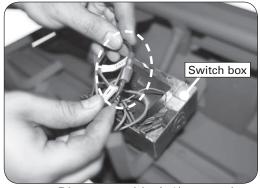
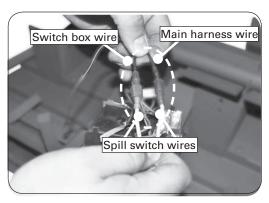


FIGURE 37



Disconnect black / brown wires

FIGURE 38

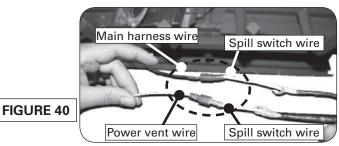


Connect spill switch wires

FIGURE 39

Earthcore Industries
BVETTO B-Vent Gas Fireplace 12/2021

ISOKERN Gas Log Set - Burner Installation



Connect spill switch and power vent wires

9. Units with Power vent: Locate the two spill switches and two power vent wires (not supplied) 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 battery box . See **Figure 40 - 42**

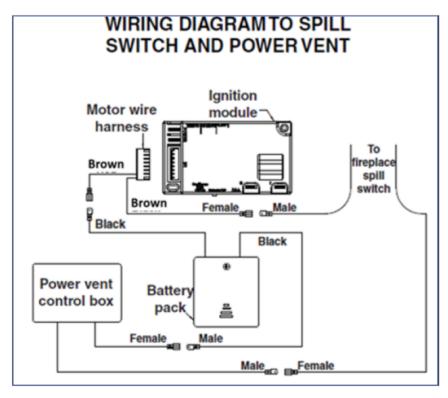
- **10.** Install burner system batteries. Reference the INSTALLING/REPLACING BATTERIES section for details.
- **11.** Place the switch box on the side, at the rear right corner of the fireplace. **Figure 36 & 37**

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

12. Place the decorative heat shield over the battery box.



Connect power vent to switch box wire



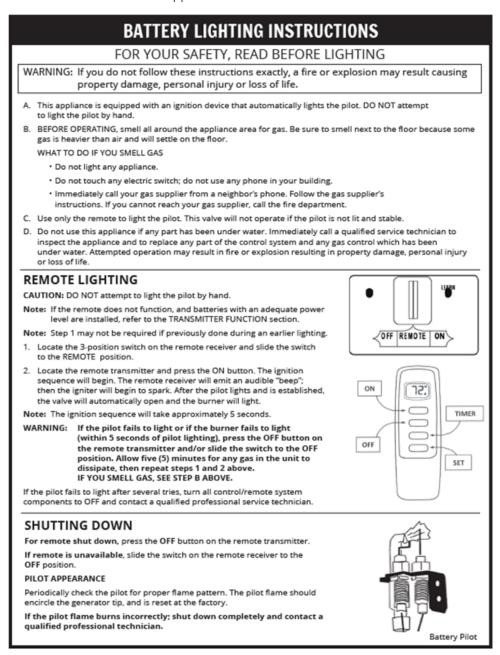
Note: power vent wires not supplied

FIGURE 42

ISOKERN Gas Log Set - Burner Installation

- 13. locate vermiculite (3 burner and LP units only) and the rock wool (Glowing Embers). Vermiculite is used for all propane units and for the ember burner on the 3 burner appliance. Open the vermiculite, then evenly fill the entire ember pan area,
- **14.** Open the bag of rock wool, then spread it evenly throughout the entire ember pan area. Tear the rock wool into smaller pieces and keeping it loosely packed will provide a better ember bed appearance.

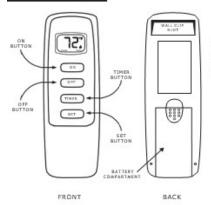




IMPORTANT: For all valves, the air MUST be purged from the gas line before the pilot will light and burn properly. The time needed to purge will depend on the length of the gas line to the unit and the amount of time since the unit or gas line was last used. It may take several minutes before all the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

ISOKERN Gas Log Set - Burner Installation / Remote

TRANSMITTER



SET

(6)

The transmitter operates on (2) 1.5V AAA batteries. It is recommended that ALKALINE batteries always be used for this product. Be sure the batteries are installed with the (+) and (-) ends facing the correct direction, and are fully charged.

KEY SETTINGS

- ON - Turns appliance ON.
- OFF - Turns appliance OFF.
- TIMER Changes unit from manual mode to timer mode.
- SET - Adjusts timer setting.





LCD - LIQUID CRYSTAL DISPLAY

- Display ----- Indicates current room temperature.
- 2 Fahrenheit or Celsius Indicates degrees Fahrenheit or Celsius.
- 3. Flame------- Indicates appliance is ON.
- Room ----- Appears when LCD screen is ON.
- 5. Temperature - - - - Appears during manual operation.
- ----- Appears when adjusting the desired timer setting.

SETTING °FAHRENHEIT / °CELSIUS SCALE

The factory setting for temperature is °F. To change the displayed temperature scale, press the ON and OFF keys at the same time. Follow this same procedure to return to °F.



MANUAL FUNCTION

ON OPERATION:

Press the ON key to turn the appliance ON. (The flame icon will appear on the LCD screen).





ON MODE

OFF MODE

Press the OFF key to turn the appliance OFF. (The flame icon will disappear from the LCD screen).

TIMER FUNCTION

- Press the ON button to start the appliance.
- Press the TIMER button. The LCD screen will show the word
- Press the SET button until the desired time is reached (15 min. -180 min. in 15 minute increments). The max setting time is 3 hours
- NOTE: The LCD display will flash the set time for 6-seconds, then start the countdown.
- Press the OFF button to turn OFF the timer, and the appliance.





COUNT DOWN MODE

LEARNING TRANSMITTER TO RECEIVER

Each transmitter uses a unique security code. It will be necessary to press the LEARN button on the receiver to accept the transmitter security code upon initial use, if batteries are replaced, or if a replacement transmitter is purchased from your dealer or the factory. In order for the receiver to accept the transmitter security code, be sure the slide button on the receiver is in the REMOTE position; the receiver will not LEARN if the slide switch is in the ON or OFF position. The LEARN button in located on the front face of the receiver; inside the small hole labeled LEARN Using a small screwdriver or end of apaperclip gently press and release the black LEARN button inside the hole. When you release the LEARN button the receiver will emit an audible "beep". After the receiver emits the beep press the transmitter ON button and release. The receiver will emit several beeps indicating that the transmitter's code has been accepted into the receiver.

ISOKERN Gas Log Set - Burner Installation/ Log Placement

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

AZ WEATHERED OAK 24" LOG PLACEMENT GUIDE



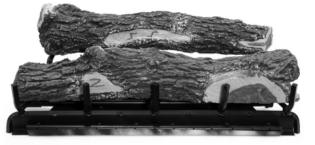






AZ WEATHERED OAK 30" LOG PLACEMENT GUIDE









ISOKERN Gas Log Set - Troubleshooting

BURNER SHUTTING DOWN DURING OPERATION

- A. Insufficient or excessive gas pressure
- A1. Check source gas pressure & 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
- **B**. Remote set on low fl ame (if option available)
- C. Top burner lights;
- bottomburner has delayed ignition.
- A. Clean burner orifice.
- B. Adjust flame with remote transmitter.
- **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. Ensure that damper is open; .

C. Damper closed

PILOT WILL NOT STAY LIT

- A. Valve won't hold
- B. Pilot hood not aimed at thermocouple
- **A**. Contact your dealer for instructions on replacement.
- Dilat line le cut / Links el ct commention to colo
- B. Pilot hood bent; replace pilot or angle pilot hood properly so pilot
- 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 **F.** Excessive down draft
- **E**. Replace thermocouple.

flame hits thermocouple.

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).

EcoDamper Draft System 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 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 Chimney Fan, the Mechanical Fireplace Damper (MFD), the ADC100 Control and the PDS1 Proven Draft Switch.

RS 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 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 post-purge 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-gas.

PDS1 PROVEN DRAFT SWITCH

Use the PDS1 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.

Component	Part#	Description
	101.0299.1200	RS 9 Chimney Fan
	216.0100.1210	MFD Mechanical Fireplace Damper
ADC100 *	302.0100.1200	ADC100 Draft Control (includes PDS-1)
POS-1 ®	301.1001.0000	PDS-1 Proven Draft Switch (included with ADC100)

ECODAMPER System - Installation

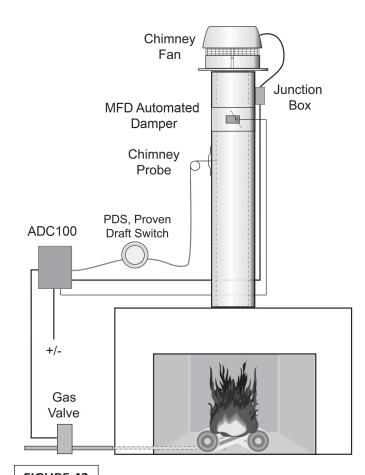
Installations must conform to requirements of the authority having jurisdiction. Where required by the authority having jurisdiction, the installation must also conform to the Standard for Draft Equipment and The National Fuel Gas Code, ANSI Z223.1/NFPA 54.

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.

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

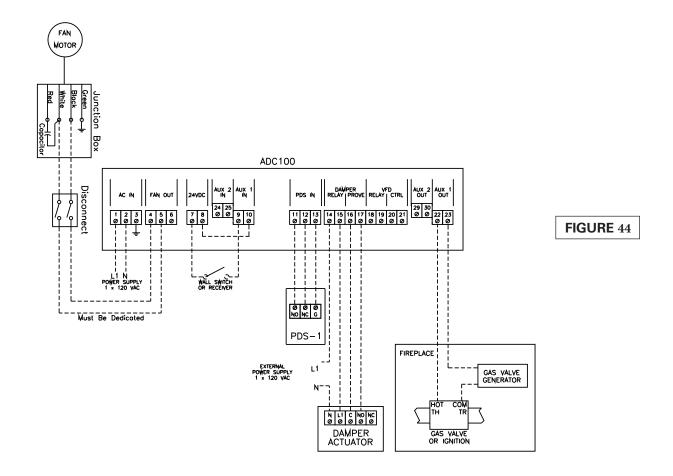
This installation shows a combination fireplace and damper system. The ADC100 control monitors fan and damper operation and the safety system. No adjustments are necessary after the system is installed and commissioned. The ADC100 does not have to be visible and can be installed in the attic. (Figure 55)

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.

ECODAMPER System - Wiring Diagram



Notes

	
 -	
	

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 Installation:
Address:		
Phone No.:		
Fireplace Size (Circle One):	BVETTO 36" (80B	BVETTO 46" (80B46)
Gas Type (Circle One):	Natural Gas	Propane
Fireplace Serial Number:		
(Located on Rating Plate Inside	e 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 DIVISIONTHEREOF, 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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