

ISO'ven®

A Personal Size Family Wood Fired Oven

Installation, Operation, Maintenance and Owner's Manual

A PRODUCT OF EARTHCORE INDUSTRIES, LLC.

Important: This manual contains assembly rules, installation steps, guidelines, use and maintenance instructions for the ISO'ven Wood Fired Oven. 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 installer of this product to ensure that the instructions in this manual are followed exactly. It is the responsibility of the general contractor and installer to provide adequate clearances from all Wood Fired Oven surfaces as specified in this manual.

Visit earthcore.co for venting options and accessories!

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.

**THIS Wood Fired Oven Is Designed for Outdoor Use
Only with SOLID WOOD LOGS
FOR OUTDOOR USE ONLY**

WARNING: If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.



earthcore®

Issued: March, 2011
Revised: September, 2013

© 2007 Earthcore Industries, L.L.C.

THIS MANUAL CAN ONLY BE REPRODUCED IN ITS ENTIRETY

General Information

The ISO'ven Wood Fired Oven is a prefabricated, refractory modular wood fired oven designed for field assembly. The system consists of interlocking precast components which are glued together with a masonry adhesive and high temperature caulk.

The parts of the ISO'ven Wood Fired Oven are a proprietary mixture of volcanic pumice aggregate and cement. The oven liner is a proprietary refractory material. It includes all the parts necessary for assembly of a complete Wood Fired Oven.

Each ISO'ven precast component is designed for a specific part of the oven such that only one means for assembly is possible.

The various ISO'ven Wood Fired Oven components will be described and illustrated in the following pages. Close attention should be paid to each component group's specifications and installation requirements as described in this manual.

Important: Due to heat and weight issues, the ISO'ven Wood Fired Oven, Table Top version (ISO'ven 1) installation requires a non-combustible base with no wood underpinnings. Prepare custom base to handle the ISO'ven Oven with the optional base support (ISO'ven 2) weight of 1850 lbs.

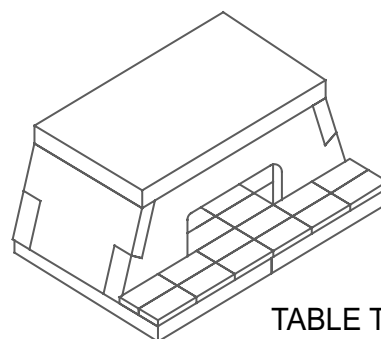
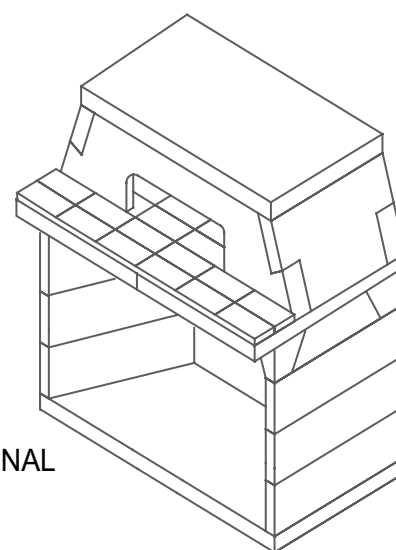
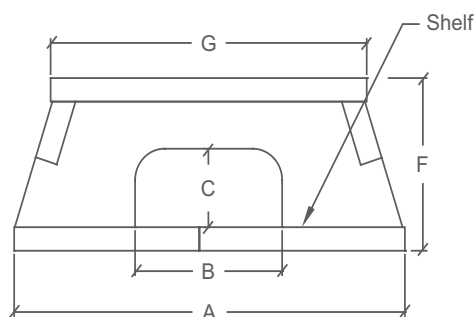


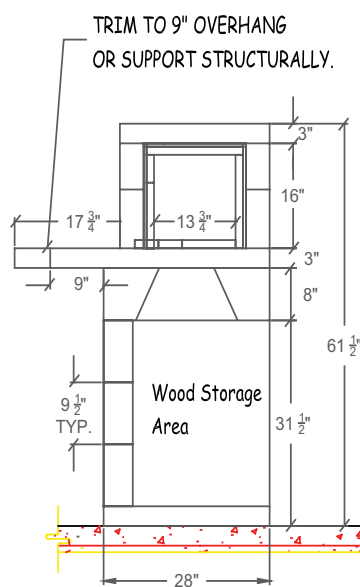
TABLE TOP VERSION



SHOWN WITH OPTIONAL STORAGE BASE

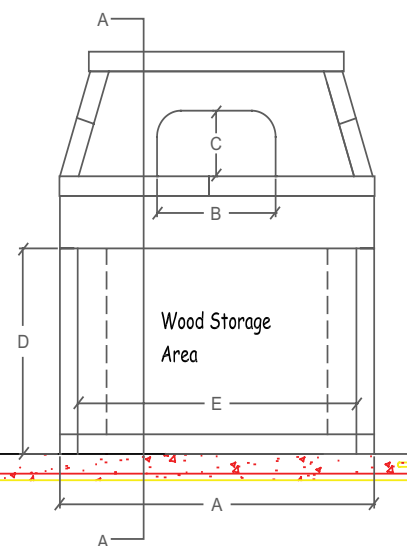


ISO'ven 1 - TABLE TOP
(Base By Others)



Section A - A

ISO'ven 2
WITH OPTIONAL STORAGE



Front View

MODEL	"A"	"B"	"C"	"D"	"E"	"F"	"G"	SHELF DEPTH:	WEIGHT
ISO'ven 1-Table Top	53"	20"	10"	N/A	N/A	22"	43"	43" (35" MIN BASE By Others)	1100 lbs

Intended Use Statement

Intended Product Use Statement:

The ISO'ven Wood Fired Oven is intended to burn solid wood fuel. A gas starter option is available.

Note: This Wood Fired Oven is not designed to sit directly on a combustible floor system.

This Wood Fired Oven is intended for use as an outdoor oven appliance only and is not intended for indoor use.

Overfiring, abusive burning or mistreatment will void any claims (eg. burning construction debris or other highly flammable material; tossing, kicking or otherwise forcing logs into the oven).

ISO'ven Wood Fired Ovens are unique outdoor Wood Fired Ovens. ISO'ven Wood Fired Oven units are intended for installation outside residential homes and other buildings of conventional construction.

Note: Important areas of concern with the installation of these Wood Fired Ovens are: construction of proper load bearing foundation and concrete support slab; proper assembly of components and techniques employed in applying finishing materials to the Wood Fired Oven opening.

Each of these important topics will be covered in detail throughout this manual. Installation personnel must give special attention to each topic as the installation progresses.

Earthcore is not responsible for other construction work around the Wood Fired Oven unit.

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

1. Before starting the ISO'ven Wood Fired Oven installation, read these installation instructions carefully to be sure you understand them completely. Failure to follow them could cause oven malfunction resulting in serious injury or property damage.

2. Always check local building codes governing outdoor appliance installations.

Safety Instructions

3. ISO'ven Wood Fired Ovens are intended for use in an outdoor situation where a traditional, masonry pizza/bread oven would be utilized. The use of a venting system is optional with the ISO'ven. The ISO'ven is designed to vent from the front of the oven however the installation of a front anchored vent is acceptable.

4. Before cleaning, allow the ISO'ven to cool. Use a dry brush and wet mop to clean; **water only, no solvents.**

5. Use only solid, dry wood fuel in this unit. Do not use artificial wax based logs, chemical chimney cleaners or flame colorants in this Wood Fired Oven.

6. Never use gasoline, kerosene, gasoline-type lantern fuel, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this Wood Fired Oven. Keep all flammable liquids at a safe distance from the ISO'ven.

7. Do not use an insert or any other product not specified for use with the ISO'ven Wood Fired Ovens unless written authorization is given by Earthcore. Failure to heed this warning may cause a fire hazard and will void the warranty.

8. When in doubt about a component's usability - has visible or suspected physical damage - consult your Isokern distributor or authorized Isokern representative for advice.

9. Modification to the ISO'ven Wood Fired Oven components not mentioned in this manual may void claims, and could result in an unsafe and potentially dangerous installation.

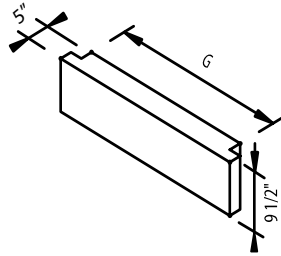
Alterations to the ISO'ven Wood Fired Oven are allowed only with prior written approval and instructions from Earthcore Industries, LLC. The installer indemnifies the manufacturer of all claims and under no circumstances will manufacturer be liable for consequential, incidental, indirect, punitive or other damages of any kind or nature, whether foreseeable or not, based on any claim by any party as to the modifications of the ISO'ven Wood Fired Oven.

10. Never leave children unattended when there is a fire burning in the ISO'ven Wood Fired Oven.

Component List

BACKWALLS

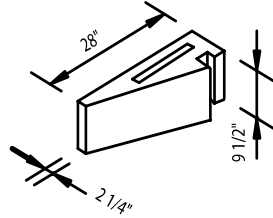
PART NO.:	SIZE	QTY:
67	G	3



**With ISO'ven 2 Only

SIDE WALL

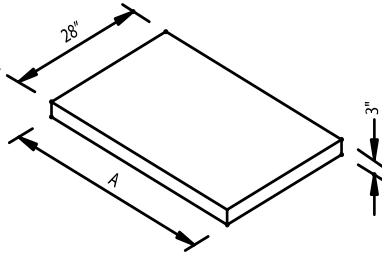
PART NO.:	QTY:
90	6



**With ISO'ven 2 Only

BASE PLATE

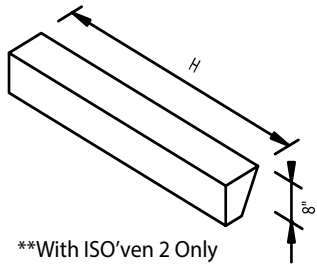
PART NO.:	SIZE	QTY:
M93	A	1



**With ISO'ven 2 Only

DAMPER SUPPORT BEAMS (FRONT and REAR)

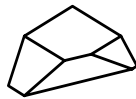
PART NO.:	SIZE	QTY:
70	H	2



**With ISO'ven 2 Only

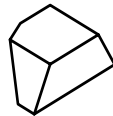
DAMPER SUPPORT-LEFT

PART NO.:	QTY:
94L	1



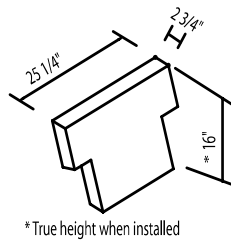
DAMPER SUPPORT-RIGHT

PART NO.:	QTY:
94R	1



TOP SLOPING

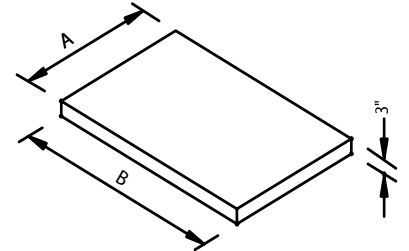
PART NO.:	QTY:
34	2



SHELVES

PART MODEL SIZE QTY:
NO.: A B

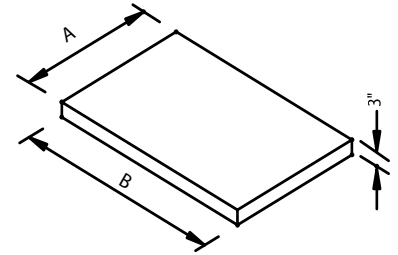
ISO-01	25 1/4" x 34 1/4"	1
ISO-02	28" x 34 1/4"	1



TOP PLATE

PART MODEL SIZE QTY:
NO.: A B

21	25 1/4" x 43"	1
----	---------------	---



OVEN LINER-TOP PLATE

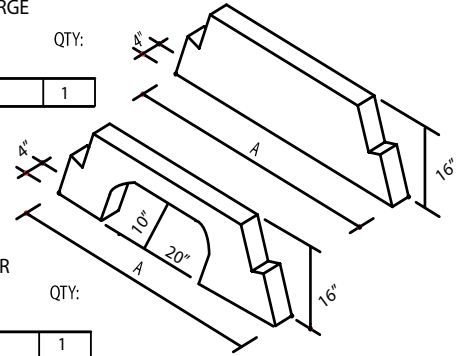
PART MODEL SIZE QTY:
NO.: A B

ISO-06	16 1/4" x 36 1/4"	1
--------	-------------------	---

SMOKE DOME - LARGE

PART NO.:

13P	53"	1
-----	-----	---



FRONT WALL - LINER

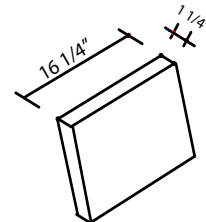
PART NO.:

13	53"	1
----	-----	---

OVEN LINER-SIDE

PART NO.:

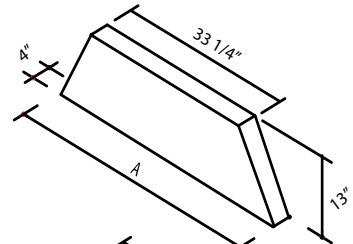
ISO-05	2
--------	---



B-REAR WALL - LINER

PART MODEL SIZE QTY:
NO.: A

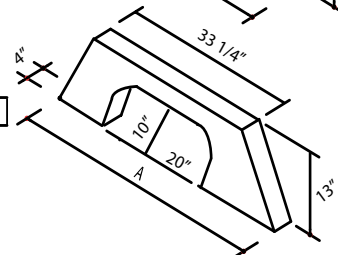
ISO-04	42 3/4"	1
--------	---------	---



D-FRONT WALL - LINER

PART MODEL SIZE QTY:
NO.: A

ISO-03		1
--------	--	---



Assembly Instructions - Optional Base With Optional Base

Note: Earthcore mortar can be troweled over the face of a joint where it has squeezed out while setting components. It is not intended that the exposed faces of the Isokern components be completely covered with the mortar.

Installation of Optional Base:

Step 1:

Set the ISO'ven base plate in a full bed of Earthcore Mortar flat on a proper support foundation. (Figure 1). Do not set the ISO'ven base plate so that it is in span. Level the ISO'ven base plate by floating it in a bed of Earthcore Mortar to full bearing against the underlying support surface.

Step 2:

Set the first course of the storage base back and side walls into place.

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

After outlining the dry set pieces, remove them and apply Earthcore Mortar 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 mortar already applied to the proper areas on the base plate. (Figure 1)

Be sure to put Earthcore Mortar on the contact surfaces of the vertical joints where the side wall and back wall components connect.

Step 3:

Continue assembly of the second and third courses of the storage base side wall and back wall. Apply mortar to the top of each layer of wall components, set the next course above into place. Be sure to mortar all vertical joints of the side wall to back wall connection when setting each component to its mate.

Once the side wall assembly is complete it is necessary to place a steel angle minimum 4"x 4"x 3/8" across the front face of the two sided opening before building the oven assembly. (Figure 4)

Notch the ends of each sidewall equal to the thickness of the steel as shown. Each end of the steel angles must bear fully at least 3" onto the side wall assembly. (Figure 2)

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

Step 4:

When all of the ISO'ven side wall components are set, check the top surface of the storage base for level. If necessary, adjust the top surface of the box assembly for level by inserting a shim between the lowest wall component and the top surface of the ISO'ven storage base plate. (Figure 3)

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



Figure 1



Figure 2

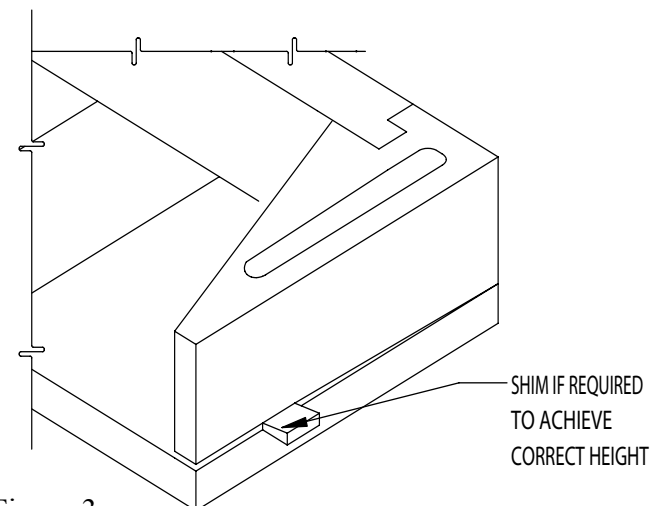


Figure 3

Assembly Instructions - Optional Base continued

Step 5:

Make sure that the storage base assembly has been set level and square. Adjust as required while the mortar is still wet.

Make a final inspection of all contact joints in the storage base assembly to be sure they are properly sealed. Fill any and all gaps in the assembly as necessary, with the approved mortar.

Step 6:

The ISO'ven comes with an eight inch (8") thick support beam assembly, a four piece component group that is to be assembled on top of a steel lenti, (in front as shown) set on the side walls of the storage base.

The support beam assembly consists of two long beams and two short support beam side pieces.

The two long support beams are identical in shape, size and length, equal to the width of the ISO'ven model that they serve.

The support side pieces are designed to sit on the storage base side walls between the front and the back support beams. Each of the support side pieces is designed specifically for its own side of the unit. When properly set, each support side piece fits flush with the outside face of the storage base sidewall so that its interior bottom edge aligns with the interior angle of the storage base side wall that it sits on. (Figure 5)

It is necessary to place a steel angle, supplied by the customer, minimum 4"x 4"x 3/8" across the front face of the two sided opening before building the oven assembly. (Figure 4)

One support beam sits flush with the front of the storage base, spanning the storage base opening. Properly placed, the second long support beam is to sit on top of the storage base back wall and flush with it. These components both sit on their narrow base so that their beveled face points down and into the storage base interior. (Figure 5)

Be sure to mortar all support beam components to the top surfaces of the storage base.

Mortar the contact surfaces of each support side component where it meets the front and back support beam assembly components.

Step 7:

Place the shelf pieces, # 91 & # 21 on top of the support beam assembly or client designed base so that the edge sits flush with the back walls. Mortar into place.

IMPORTANT: If the ISO'ven base is utilized, client should trim shelf to no more than 9" in front of unit without adding support to ledge from underneath. (Figure 7)

Step 8:

Set the back wall of the Isokern material flush with the rear of the shelf unit in a bed of Earthcore mortar ensuring

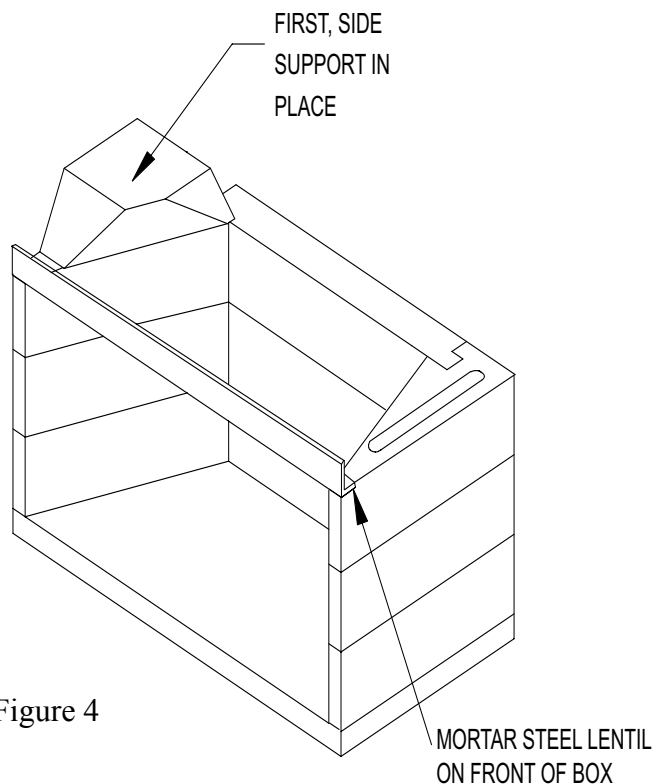


Figure 4



Figure 5

Assembly Instructions - Table Top

Note: If the ISO'ven base is not required, client should build a base approximately 40 inches high and a depth of no less than 35" to set the table top ISO'ven on.

(Figure 6)

Step 9:

Cut a piece of Inswool to fit and lay against the back wall of the Isokern back wall as shown, then place the back wall inner liner against the Inswool.

Note: DO NOT MORTAR OVEN LINER OR INSWOOL TO ISOKERN MATERIAL.

Step 10:

Place a row of brick on the Isokern material flush up against the back wall inner liner. (Figure 8)
There is no need to mortar brick in place. Butt brick tightly against each other and back wall liner.

Step 11:

Run a bead of high temperature caulking along the outside edges of the back wall liner. Rest the side wall liner against the back wall edge.

(Figure9)

Repeat on other side. Place Inswool up against outside of side wall liners as shown.

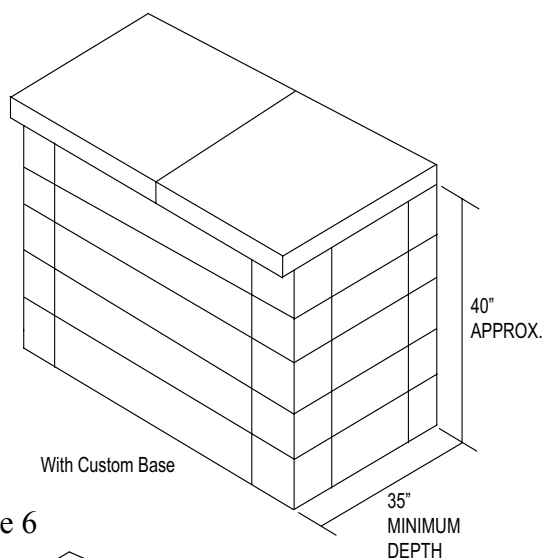


Figure 6

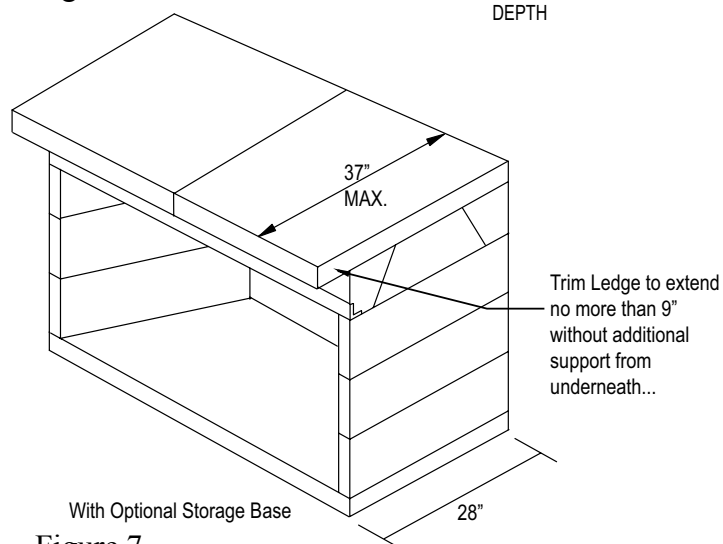
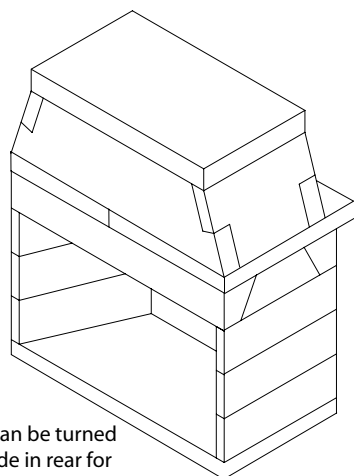


Figure 7



Design Idea:
Optional base can be turned to have open side in rear for storage.

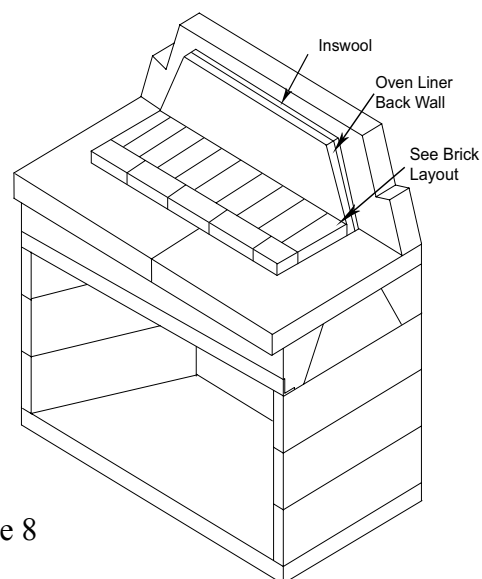


Figure 8

Assembly Instructions Continued

Step 12:

Run a bead of Earthcore Mortar along the outside edges of the Isokern Back wall, #13. Rest the Isokern side wall, #34 into the notch provided in the back wall of Isokern material. Repeat on other side. (Figures 9 & 11)

Step 13:

Your firebrick for the oven cooking surface are pre-cut. Place firebrick tightly together using the appropriate layout shown in Figure 9. Do not mortar firebrick to floor of oven or to each other. Place a small amount of mortar under outside bricks to hold in place.

Step 14:

Caulk front wall of oven liner to side walls of oven liner. Cut and place inswool pieces over front and side liner walls as shown. (Figure 11)

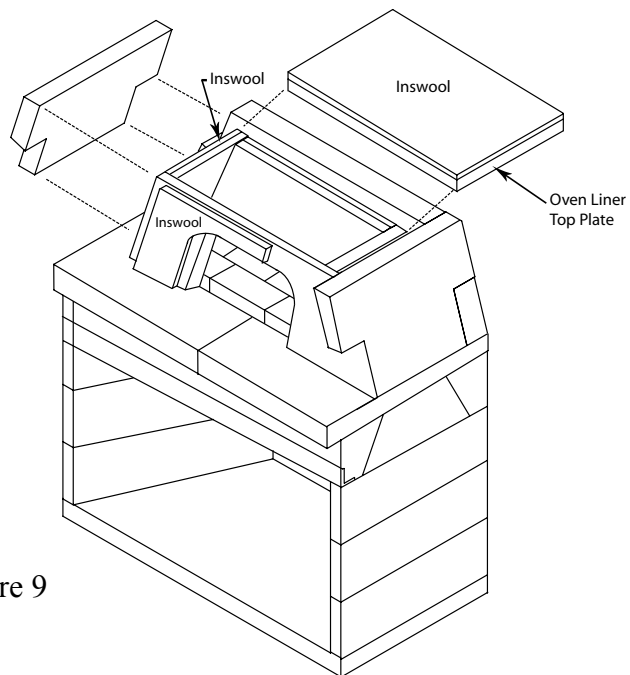
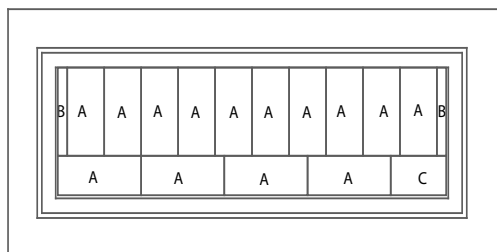


Figure 9



A - 9" x 4 1/2" = 13
B - 1" x 9" = 2
C - 4 1/2" x 6" = 1

Figure 10

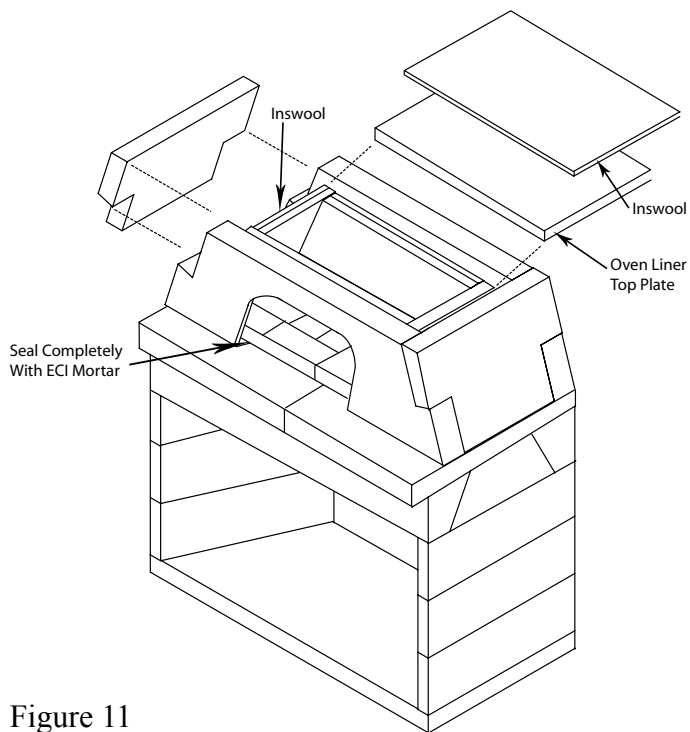


Figure 11

Assembly Instructions Continued

Step 15:

Caulk top of all liner pieces and lay oven liner top plate on to side, front & back walls. Cut and place a piece of inswool over liner top plate as shown.

(Figure 12)

Step 16:

Mortar Isokern side walls, front and back walls of the Isokern product with ECI mortar provided. (Figure 13) Next mortar top plate of Isokern material to the top of the Isokern smokedome side wall, front and rear walls with the ECI mortar provided.

Step 17:

Finally, seal gap between oven liner front wall and Isokern front wall completely with ECI mortar.

(Figure 13)

Step 18:

The thermometer has a 6 1/2" or 9" stem. A hole should be drilled into the upper right quadrant of the oven walls, just thick enough for the stem to be pushed through. The face of the thermometer can be counter sunk into the Isokern material or left a bit raised. The length of your thermometer stem will be determined by your facing material and the look you wish to achieve. The tip of the probe should either penetrate the oven slightly or penetrate the liner of the ISO'ven. Use the shorter stem for thin, exterior facing applications such as stucco. Use the longer stem for thicker, exterior applications such as brick or stone veneers. After insertion of the thermometer, mortar into place. (Figure 14)

ISO'ven Curing Instructions:

It is critical that the Isokern elements in the ISO'ven assembly be dry before firing of the unit. Moisture left in the ISO'ven components from exposure during storage and shipping, as well as moisture from the installation phase, must be eliminated before the unit is put to its intended use.

The first step in reducing the ambient moisture is to be sure that the completed ISO'ven rest totally in a dried-in setting for a minimum of 14 days after construction of the unit is complete.

The next step in curing the ISO'ven is to be sure that the first three or four fires are of short duration. These fires can take place after the first week of installation. Make small kindling fires to about 200 - 300 degrees to dry out any last moisture from the unit.

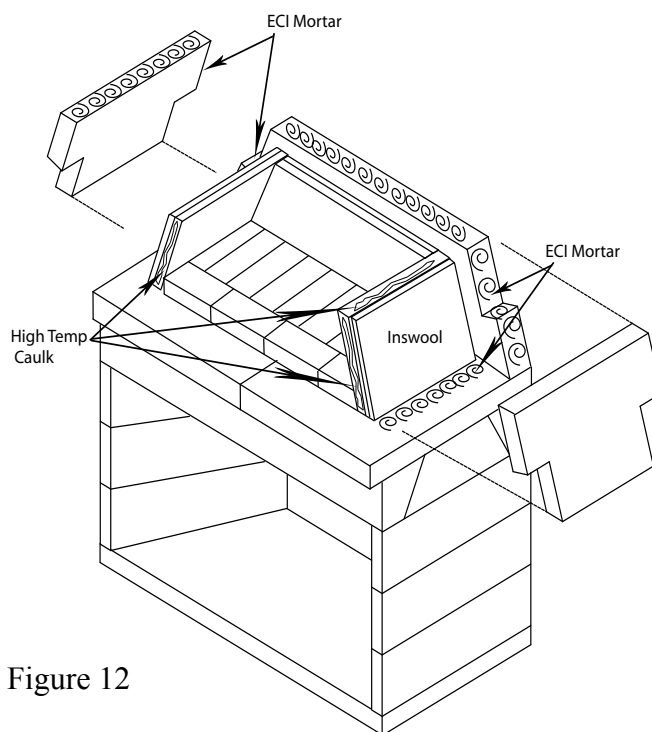


Figure 12

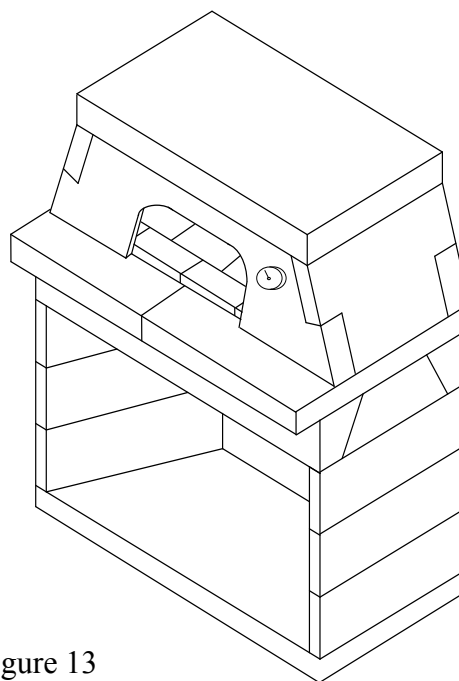


Figure 13

Curing and Lighting Instructions

Heating the ISO'ven for cooking:

Start the first fire slowly with a small amount of paper and kindling (small dry wood splits or twigs) stacked in a crossed or teepee fashion (shown) toward the center, rear of the oven. Slowly add small but larger pieces of dried hardwood of about three inches (3") to four inches (4") diameter.

The temperature will begin to rise in your oven however it may take about 15 minutes to begin a faster temperature ascent.

NOTE: Take care not to feed your fire too fast and smother it. As you add more wood, a temporary decrease in temperature may occur. This is normal and as soon as the new wood begins to burn, your temperature will rise again.

The next step is to ensure that your fire continues to build and heat the entire oven. When a temperature of about 500 degrees is reached, spread the coals throughout the oven (toward the rear of the oven) while continuing to feed the flames.

When the temperature of 600 - 700 degrees is reached, use a hoe or paddle to rake all the coals together to one side of your oven. (either side is acceptable). You are now ready to cook in the center and on the side without coals.

Cooking Pizza in your ISO'ven:

1. Roll out your dough to desired thickness, and place on top of the screens provided in your accessory kit (or purchased on your own). Let stand about 5 minutes to let the dough rise.

2. Spread desired pizza sauce in a thin, even layer on top of the dough. Cover with toppings as you wish.

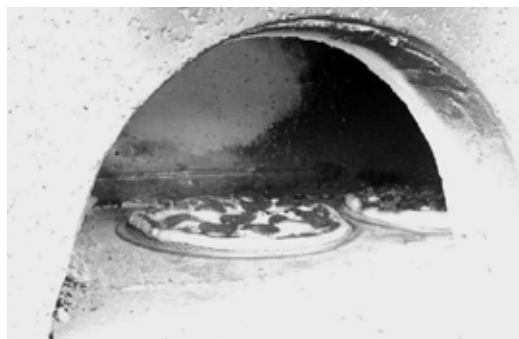
3. Place pizza screen on peel and slide into the oven. Watch pizza carefully as it will cook quickly.

4. Turn pizza every 30 seconds to a minute to ensure even cooking throughout. The crust will begin to puff and turn brown. Depending on the thickness and toppings, your pizza should cook in approximately 3-5 minutes.

Visit earthcore.co for venting options and accessories!



Optional Vent Hood



Warranty & Disclaimer

ISO'ven Wood Fired Oven

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

This warranty covers only the above stated components, and NO WARRANTY, EXPRESS OR IMPLIED, EXTENDS TO ANY OF THE HARDWARE, FOOTING, VENTS, DUCTING, METAL FLUES, FIRE BRICK OR ACCESSORIES. THIS WARRANTY DOES NOT COVER, SMOKING OR PUFFING OF THE WOOD FIRED OVEN SYSTEM. Factors beyond the manufacturer's control affect oven performance, smoking, and puffing, and ISOKERN cannot guarantee these aspects of performance.

If a component is found to be defective under the terms of this warranty the party to whom this warranty is extended shall, notify ISOKERN, 6899 Philips 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.

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

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

ISOKERN, OR ANY DIVISION THEREOF, SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES ARISING OUT OF THE USE OF THE WOOD FIRED OVEN SYSTEM. ALL SUCH DAMAGES AND EXPENSES ARE HEREBY EXCLUDED.

This warranty is null and void when the ISO'ven is not installed pursuant to the installation instructions provided by ISOKERN or local building codes have not been followed completely.

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

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

earthcore®

6899 PHILIPS INDUSTRIAL BLVD. • JACKSONVILLE, FLORIDA 32256
TEL (904) 363-3417 • TOLL 1 (800) 642-2920 • FAX (904) 363-3408

ISO'ven ®
A Personal Size Family Wood Fired Oven
Quick Installation Guide - Graphic

A PRODUCT OF EARTHCORE INDUSTRIES

**THIS Wood Fired Oven Is Designed for Outdoor Use
Only with SOLID WOOD LOGS
FOR OUTDOOR USE ONLY**



**ISO'ven 1
TABLE TOP**



**ISO'ven 2
WITH OPTIONAL STORAGE BASE**

Issued: March, 2011
Revised: September, 2013

Assembly Illustrations Optional Base



1. Float the Base Plate in a bed of Earthcore mortar on a flat, even surface which is suitable to hold the entire weight of the finished appliance.



2. Set the side wall and back walls on to the base plate and secure with Earthcore mortar; at each course, checking to ensure level.



3. After all sidewalls and back walls are in place, check for level and plumb as needed.



4. The rear base support beam should be set angled side in, flush against the back walls of the base unit secured with Earthcore mortar.



5. The support side walls should be placed flush with exterior of side walls and mortared into place with Earthcore mortar.



6. Notch out a section from the top forward section of the uppermost sidewall (both sides) to accommodate the steel lentil.

Assembly Illustrations Optional Base Continued



7. The front base support beam should be angled side in, flush against the front wall of the base unit secured with Earthcore mortar. The base is now complete.



8. If using the optional base, trim off protruding length of shelf to no more than 9" past the base unless adding additional structural support underneath shelves.

Assembly Illustrations Table Top

This section will refer to a base which is "Built By Others". This base should be a minimum 35" deep to support ISO'ven.



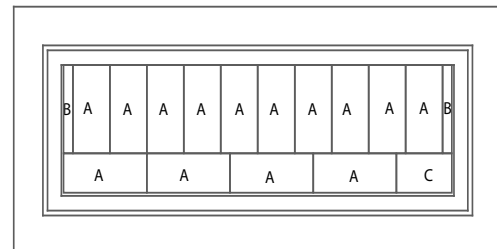
1. Mortar the shelf pieces together on top of base so shelf is flush to the rear of the base (built by others).



2. Mortar Isokern back wall to shelf so Isokern back wall is flush with back of shelf. Cut inswool blanket to fit inside Isokern back wall as shown. Do not glue inswool to Isokern material or oven liner.



3. Set oven back wall against inswool. Using high temperature caulk included, run a bead along edges of oven back wall and lay oven side walls against back wall as shown. Do not mortar or caulk oven liner to Isokern material.



A - 9" x 4 1/2" = 13
B - 1" x 9" = 2
C - 4 1/2" x 6" = 1

4. Place firebrick inside the side walls using the layouts above. The brick do not all need to be mortared, just the outermost ones lightly. They should fit tightly together with no gaps.

Assembly Illustrations Table Top Continued

**** Please note new opening shape on cover page****

Shown with original opening.



5. After bricks have been laid out, cut inswool and lay against oven liner side walls (both sides) as shown. Do not glue inswool to oven liner material.



6. Use high temperature caulk on the edges of the oven liner sidewalls and glue oven liner front wall to side walls as shown.



7. Cut inswool and place over front oven wall as shown. Do not glue inswool to oven liner front.



8. Lay Isokern front wall up against inswool covering the oven liner front wall and mortar to the Isokern shelf pieces. Do not mortar to the inswool.



NEW , WIDER OPENING



ORIGINAL OPENING

9. Place Earthcore mortar on to edges of front and rear Isokern walls. Set the Isokern side walls into place as shown.

10. After using high temperature caulk to seal the oven liner top plate on to oven liner walls, lay inswool accross top of oven liner top. (Trim if necessary) Seal Isokern top plate with Earthcore mortar to Isokern walls as shown.

Assembly Illustrations Table Top Continued



11. With earthcore mortar, securely seal gap between the oven liner front wall and Isokern front wall making sure no inswool is visible or protruding out of the opening of the unit. Your finished oven kit is now ready to be completed with your choice of finishes! Enjoy!



12. Optional vent hood with new, wider opening mortars directly to the opening of the unit. Made from the same pumice material, your finish can be applied directly to the hood.

NOTE: Do not mortar or glue any of the inswool pieces to any part of the oven liner or the Isokern components.

Allow your oven to sit in a dry area for about 2 weeks before firing for cooking. During the 2 week curing time, make small 200-300 degree fires to dry your unit from the inside. This will ensure your oven fires hot and quick when you are ready to cook in it.



12. Drill a hole in the upper right hand quadrant of the front wall all the way through your oven. Probe should penetrate just inside oven wall or at least imbed in oven liner wall. Mortar temperature gauge into place.

Shown with original opening.



Large enough for two 12" pizzas at one time!

