

El Patio Kiva Fireplace Kit



Information Guide

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OVERVIEW

THE FOUR MAJOR COMPONENT SECTIONS OF THE KIVA FIREPLACE KIT ARE:

1. Firebox Assembly
2. Chimney System
3. Gas Assembly (optional)
4. Face Frame
5. Finish

1. FIREBOX ASSEMBLY

The Firebox Assembly consists of three Firebox Sections. During installation, these Firebox Sections are stacked to form a traditional looking masonry firebox. The entire Firebox Assembly weighs less than 600 pounds and two people can lift each section. Special structural support is not required because of its minimal weight.



2. CHIMNEY UNIT

The function of the Chimney Unit is to evacuate smoke from the Firebox Assembly. The Chimney Unit consists of a single pre-fabricated clay pipe and concrete unit. The Chimney Unit rests on top of, and is sealed to, the Firebox Assembly.

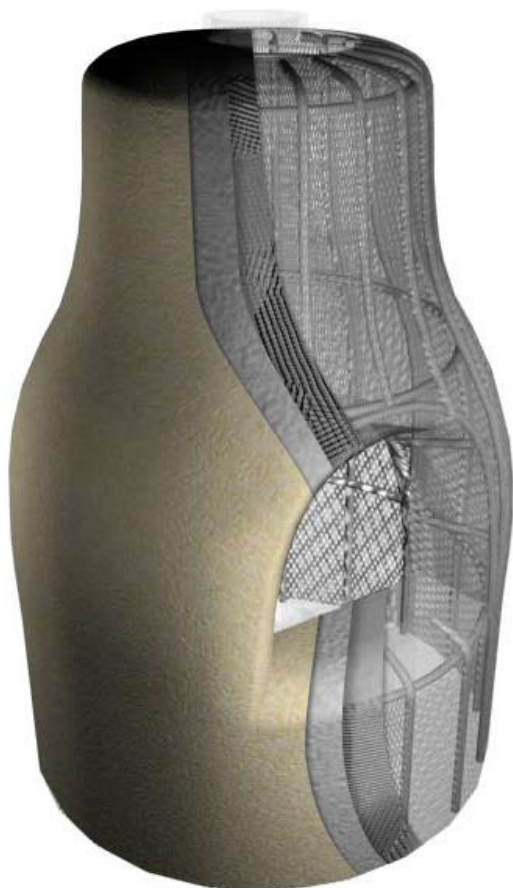
3. GAS ASSEMBLY (OPTIONAL)

In addition to wood log burning, the El Patio Kiva Fireplace Kit can be installed with an optional natural gas or propane vented Gas Logs Set or a Log Lighter available from Grand River Supply. If the intended installation includes one of these gas devices, it will be necessary to have a gas line brought into the firebox. This gas line can easily be installed after the Firebox Assembly is in place but before the Face Frame is fixed into place.



4. FACE FRAME

The Face Frame is pre-fabricated of ½” tubular steel with ¼” Metal Diamond Mesh attached. You can customize your installation with optional Bancos available from Grand River Supply. During installation the Face Frame assembly will be attached to the Firebox.



5. FINISH

A three-coat stucco process is the most popular finish applied to the Fireplace.

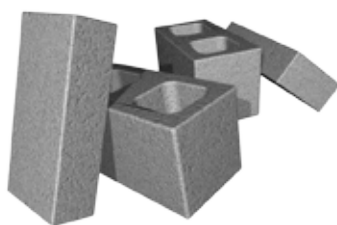
EL PATIO KIVA FIREPLACE COMPONENTS

All necessary components you will need to install your Kiva Fireplace Kit are shown below.

1. FIREBOX ASSEMBLY COMPONENTS



Flue Goo



Concrete Blocks



Firebox Top

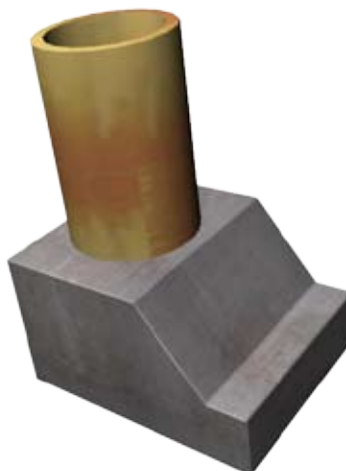


Firebox Middle



Firebox Base

2. CHIMNEY UNIT



3. GAS SYSTEM COMPONENTS (OPTIONAL)



Gas Wall Valve



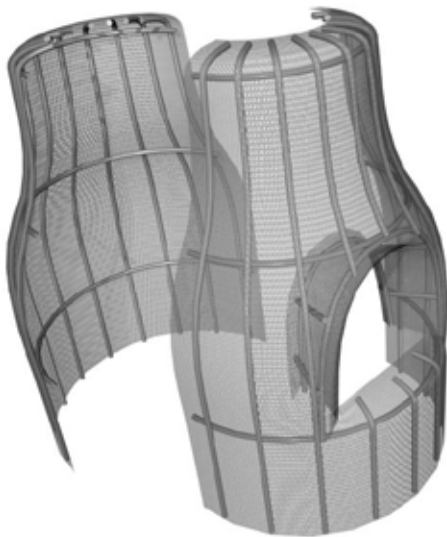
Propane Adapter Kit



Gas Log Kit

Gas Log Kit: As well as wood burning, the Kiva Fireplace Kit has been approved for use with a vented Gas Log Kit. The Gas Log Kit should incorporate an automatic shutoff device and comply with the Standard for Decorative Gas Appliances for Installation in Vented Fireplaces, ANSI Z21.60 and must be installed in accordance with the National Fuel Gas Code. The Gas Log Kit sold by Grand River Supply is pre-approved. The fireplace has not been tested with an un-vented gas log set. To reduce risk of fire or injury, do not install an un-vented gas log set into fireplace.

5. FACE FRAME COMPONENTS



Face Frame



Metal Diamond Mesh



Door Frame

6. FINISH COMPONENTS



Stucco Mix

7. OPTIONAL ACCESSORIES



Screen



Grate

INSTALLATION CONSIDERATIONS

1. CLEARANCE

To determine the location for your El Patio Kiva Fireplace, the following guidelines should be taken into consideration.

1. Make sure the El Patio will fit in the space allotted. The size of your Kiva Fireplace is based on Face Frame. Please refer to **Chart A - Fireplace Clearance Requirements** and *figure 1 - El Patio Fireplace Dimensions*.

CHART A FIREPLACE CLEARANCE REQUIREMENTS	
Frame Style:	El Patio
1 - Face Frame Diameter	52"
2 - Face Frame Height	80"
3 - Firebox Opening Height from Ground	24"
4 - Hearth Clearance Requirement	18"

2. The location of your Kiva Fireplace should not interfere with pathways, sidewalks, windows or doors.
3. If possible, choose a location where high winds can be avoided.

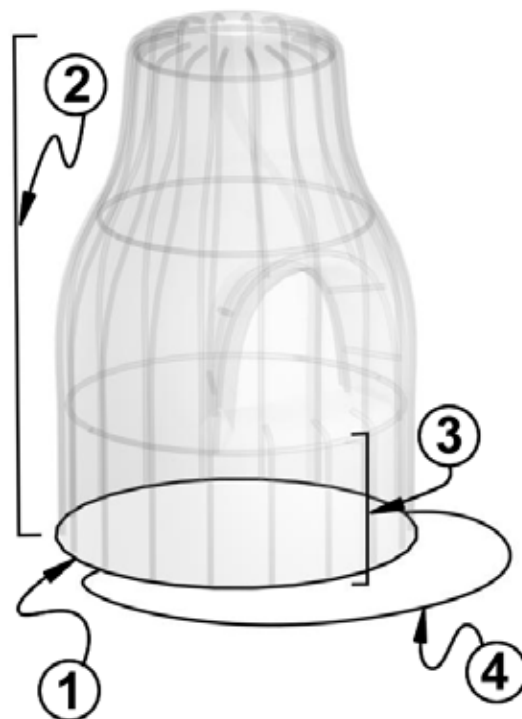


Figure 1 - El Patio Fireplace Dimensions

2. INSTALLATION SURFACE

One of the most important considerations when choosing the location for your El Patio Kiva Fireplace is the Installation Surface. The most common installation surfaces include a wood deck, concrete pad and undisturbed or compacted soil.

WOOD DECK

Your El Patio Kiva Fireplace Kit can be installed on a good solid wood deck as long as the entire surface within the Face Frame is covered by a non-flammable masonry surface such as Masonry Board. In addition, UL 127 fireplace safety code requires an additional nonflammable hearth. The hearth area must extend 18" in each direction from the firebox opening.

CONCRETE PAD

A concrete pad is the best installation surface, but does require greater expense and expertise to install. The concrete pad can be part of a larger patio if desired, but should be at least 52" in diameter. A round pad can be sealed into the stucco and completely hidden for aesthetic purposes. A square pad is easier to pour, but will have exposed corners.

UNDISTURBED SOIL

If you choose to install your El Patio Kiva Fireplace Kit directly on undisturbed or compacted soil, great care should be used to insure that moisture is drained away from the site. Direct soil installation is best reserved to dry climates with firm soils that shed water quickly.

INSTALLATION

1. SITE PREPARATION

The firebox must be placed on a solid and level non-combustible surface. A minimum distance of 26" is required from the center point of the El Patio Kiva Fireplace to the nearest obstruction as shown in *figure 2 - El Patio Kiva Fireplace Clearance*.

In addition, a minimum of 18" clearance from the firebox opening to any combustible material is required. If the surface is a wood deck, or other combustible material it will need to be protected with Masonry Board.

WOOD DECK

Masonry Board should be placed on the wood deck prior to any layout or installation and must cover the deck beneath the Firebox Assembly and the entire area inside the Face Frame. An additional 18" hearth area extending to the front and sides of the firebox opening must be covered as well.

Find the center of the desired location and using a string or stick compass, draw a full circle with a 26" radius from the center point shown in *figure 3 - Masonry Board Layout*. This is the El Patio Face Frame Circle. Place Masonry Board covering this 52" diameter Face Frame Circle where your El Patio Kiva Fireplace will be located.

Cut the masonry board to completely cover this 52" Face Frame Circle. DO NOT FORGET to cover the 18" hearth area with additional nonflammable material such as Masonry Board.

After cutting the Masonry Board to size, fasten it in place as shown in *figure 4 - Masonry Board Installation*. You will also need to insert Lag Eye Screws around the perimeter of the Masonry Board as tied downs for the Face Frame installation later as shown in *figure 4 - Masonry Board Installation*.

TIP: To draw a large radius, use a piece of string attached to a nail in the center as a compass. At the desired radius distance tie a pencil as shown in *Figure 3*. As long as you keep tension on the string as you draw, you will have a perfect circle with the correct radius to cut your Masonry Board.

TIP: To cut the Masonry Board, score along the cut line with a sharp utility or carbide scoring knife. The cement is tough, so you will have to score it a few times. Once it is well scored, use your knee to snap the board in two, just like you do a piece of drywall, and then cut the nylon mesh along the back seam.

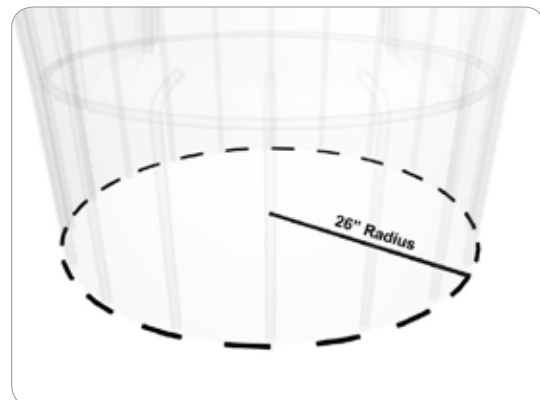


Figure 2 - El Patio Kiva Fireplace Clearance

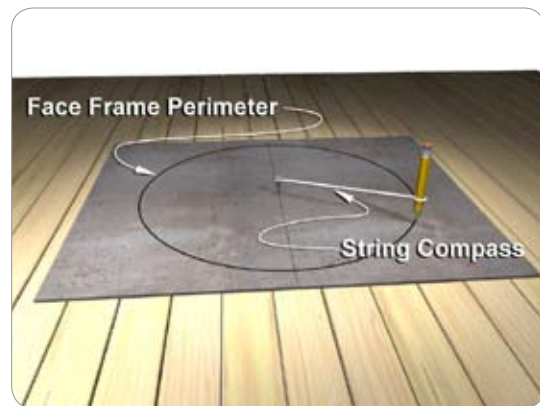


Figure 3 - Masonry Board Layout

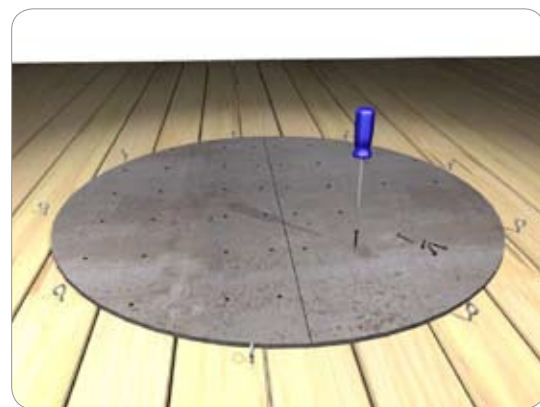


Figure 4 - Masonry Board Installation

CONCRETE PAD

The preferred surface for installation of the El Patio Kiva Fireplace is on a Concrete Pad at least 4" thick with a diameter of at least 52"

For best results, the concrete pad should be poured on undisturbed or compacted soil. Identify and mark the center of the 52" diameter and location of the Face Frame. Using heavy galvanized wire, place wire loops into the wet concrete as shown in *figure 5 - Face Frame Tie-downs*. The wire ends should stick out of the concrete about 1 foot and will be used to tie the Face Frame to the concrete pad after the Firebox has been installed. This will result in a single unified structure for a more durable Kiva Fireplace.



Figure 5 - Face Frame Tie-downs

COMPACTED OR UNDISTURBED SOIL

In dry climates, the El Patio Kiva Fireplace can be installed on compacted or undisturbed soil. With this installation it is important that water drain away from your El Patio Kiva Fireplace to prevent soil from softening and allowing the Firebox to settle. This can cause shifting and cracking of the stucco and other masonry components.

After assembling the firebox dig a 6 to 8 inch trench at the Face Frame Perimeter and drive steel or galvanized stakes at least 2 feet into the ground as shown in *figure 6 - Undisturbed Soil Installation*. You will anchor the face frame to the ground with these stakes. No part of the Face Frame should come in direct contact with the soil.

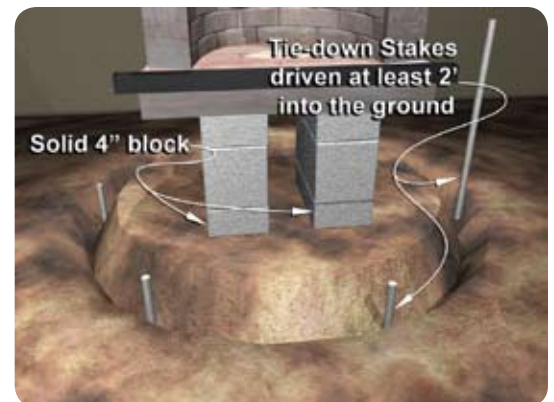


Figure 6 - Undisturbed Soil Installation

When applying the stucco finish completely fill the shallow trench with stucco material around and below the Face Frame cage as shown in *figure 7 - Undisturbed Soil Stucco*. This will help protect the cage from rust and form a moisture barrier to help prevent the softening of soil below the firebox.



Figure 7 - Undisturbed Soil Stucco

2. FIREBOX INSTALLATION

CHART B
FIREPLACE LAYOUT DIMENSIONS

Frame Style:	El Patio
1 - Face Frame Circle Diameter	52"
2 - Face Frame Circle Radius	26"
3 - Base Front Line from Center Point	14"

LAYOUT

The Layout and positioning of your Kiva Fireplace is important to insure proper alignment of all components. Be sure to double check your measurements and all dimensions.

If you have not already done so, locate the Center Point of where you are placing your El Patio Kiva Fireplace. Draw the Face Frame Circle with a 26" radius using a string or stick compass as described and illustrated in the Wood Deck preparation section on page 8.

On the Face Frame Circle Locate and mark the center of where you would like the Fireplace Opening to be positioned. Draw a line from the center point of the Face Frame Circle to the center mark of the Firebox Opening as shown in *figure 8 - Base Center Line*. This is your Base Center Line.

The Base Front Line is the most important line to be drawn here. It will be used to locate the front of the Firebox Base. Place a mark on the Base Center Line 14" from the Center Point.

With a framing square draw a perpendicular line about 1 foot long to the right of the Base Center Line. Flip the framing square over and draw another perpendicular line about 1 foot long out to the left of the Base Center Line as shown in *figure 9 - Base Front Line*.

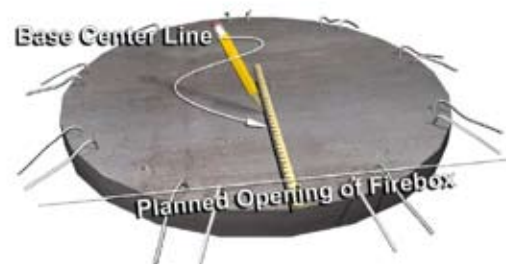


Figure 8 - Base Center Line

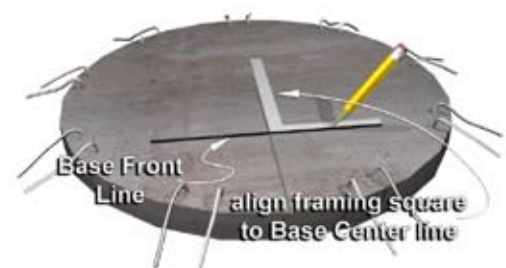


Figure 9 - Base Front Line

CAUTION: If you are installing on undisturbed soil, it is important that the bottom block in each column be a solid 4" x 8" x 16" block to resist sinking into the soil.

BASE COLUMNS

The Firebox Assembly will set on top of two concrete block columns. One 8" x 8" x 16" and Three 4" x 8" x 16" concrete block is used to form each column. These columns are set 3" to the right and 3" to the left of the Base Center Line, with the front face of the block on the Base Front Line as shown in *figure 10 - Base Column Flue Goo*.

NOTE: Use caution to ensure proper positioning when installing the Base Column, because the top edge of the concrete block columns will be used to locate the Firebox Base that will be placed on top of them.

Use a small amount of the Flue Goo that was included in your Kiva Fireplace Kit on the floor and between the concrete blocks. Care should be taken that these blocks are plumb, level, and the same height as shown in *figure 11 - Base Column Installation*. Make sure they are exactly aligned to and on the Base Front Line. This is an important step because the top edge of the concrete block columns will be used to locate the Firebox Base that will be placed on top of them.

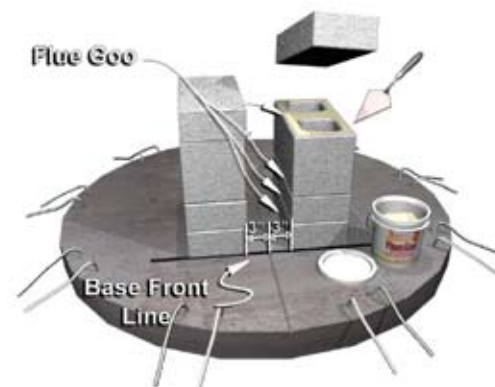


Figure 10 - Base Column Flue Goo

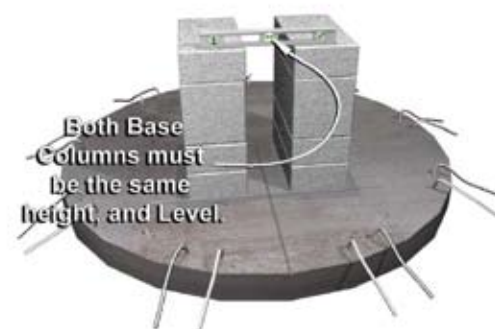


Figure 11 - Base Column Installation

FIREBOX BASE

Measure across the front of the Firebox Base and mark a Front Center Line at its center as shown in *figure 12 - Firebox Base*.

Spread a thin coat of Flue Goo on top of the Base Columns. Set the Firebox Base section on the Base Columns and align and center the front edge of the Firebox Base with the front edge and center of the Base Columns. Check to see that the Firebox Base is level.

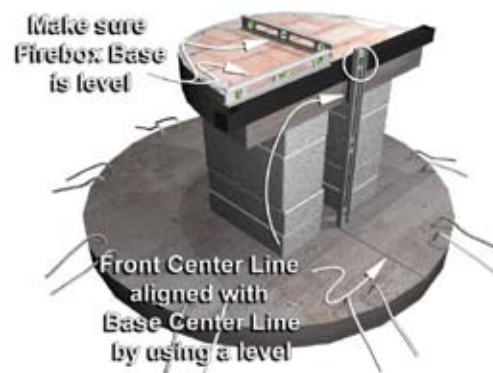


Figure 12 - Firebox Base

FIREBOX MIDDLE

Temporarily place the Firebox Middle on top of the Firebox Base. Draw a Firebox Curve Line on the Firebox Base using the interior bottom edge of the Firebox Middle as shown in *figure 13 - Firebox Middle*.

Remove the Firebox Middle section and spread a thin coat of Flue Goo on the Firebox Base staying about 1" behind the Firebox Curve Line as shown in *figure 13 - Firebox Middle*. Reset the Firebox Middle, press into position, and align with the back and sides of the Firebox Base.

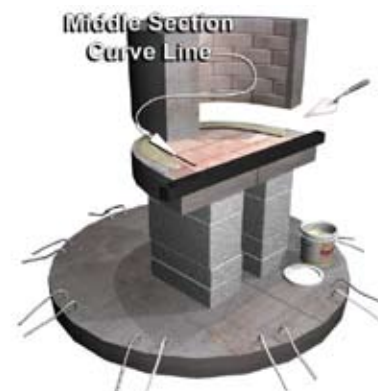


Figure 13 - Firebox Middle

FIREBOX TOP

Spread a thin coat of Flue Goo on the top of the Firebox Middle. Place the Firebox Top onto the Firebox Middle, press into position, and align with the back and sides of the Firebox Middle as shown in *figure 14 - Firebox Top*.



Figure 14 - Firebox Top

Spread a thin coat of Flue Goo or mortar on the outside edge of all seams to completely seal the Firebox Base, Firebox Middle and Firebox Top together where they connect as shown in *figure 15 - Seal Firebox Seams*.



Figure 15 - Seal Firebox Seams

3. GAS LINE (OPTIONAL)

If the immediate or possible future use of the fireplace includes a Gas Log Kit or a Log Lighter, a gas line must be run into the firebox. Under normal circumstances the Firebox Assembly will be in place and the gas line will be run into the back center of the Firebox Middle section one brick up from the base. Drill a hole from the inside of the firebox out using a masonry bit just large enough to allow minimal clearance for the gas pipe. Stub the gas line into the firebox enough to accommodate a cap and carefully patch the hole with Flue Goo as shown in *figure 16 - Firebox Gas Line*. CONSULT LOCAL BUILDING CODES for gas line installation.

As well as other factors, the size of the gas line depends on the length of the run and the BTU's of the gas device being installed. The Grand River Supply Gas Log Kit runs in the 50K BTU range. Generally, the gas line that is actually stubbed into the firebox will be ½" but it is quite possible that a ¾" or more line will be necessary leading up to the stub-in. The gas line may be run many different ways, horizontally as well as vertically.

A Gas Wall Valve may be required, and is normally installed on the wall 24" above the floor. Since the El Patio Kiva Fireplace is designed to be free standing, the Gas Wall Valve can be installed in the Face Frame as shown in *figure 16 - Firebox Gas Line*. This exact location is not critical but the Gas Wall Valve should be visible and allow the gas to be conveniently shut off when not in use. Check your building codes for positioning requirements.

NOTE: You should have a licensed gas installer bring the gas line into your firebox and follow all local building codes.

4. CHIMNEY UNIT INSTALLATION

The pre-fabricated Chimney Unit is included with the El Patio Kiva Fireplace Kit and shipped as a single component. Apply Flue Goo to the top of the Firebox Assembly and set the Chimney Unit in place as shown in *figure 17 - Chimney Unit Installation*.

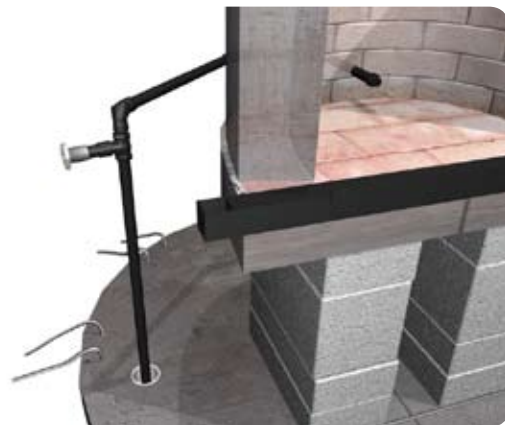


Figure 16 - Firebox Gas Line



Figure 17 - Chimney Unit Installation

5. FACE FRAME INSTALLATION

CAUTION: Before moving on to the Face Frame Installation, make sure there is no combustible material inside the Face Frame Area.

Attach a 32" x 32" piece of Metal Diamond Mesh covering the entire opening of the firebox with the provided #8 washer head screws. Insert screws 3" apart in the concrete portion of the firebox face. Do not screw into the refractory bricks.

After screws are in place, cut the Metal Diamond Mesh as indicated in *figure 18 - Metal Diamond Mesh Cut*.

Place the front section of the Face Frame in front of, and recessed into, the firebox opening by approximately 1/2" as shown in *figure 19 - Front Face Frame in Place*.

Pull the cut sections of the Metal Diamond Mesh out through the firebox opening and wrap around the front of the Face Frame. Secure to the Face Frame with the provided #6 x 1/2" self-drilling screws. Attach another piece of Metal Diamond Mesh 28" x 24" folded in half along the 24" dimension to the face of the Combustion Air Tube with the provided #6 x 1/2" self-drilling screws. Once in place the mesh should be folded down on the Face Frame doorway. This mesh is also screwed to the Face Frame with the provided #6 x 1/2" self-drilling screws as shown in *figure 20 - Metal Diamond Mesh to Face Frame Door*.

Position the back half of the Face Frame, overlap the Metal Diamond Mesh and join the front and back Face Frame halves with the provided #6 x 1/2" self-drilling screws as shown in *figure 21 - Join Face Frame Sections*. The Face Frame Assembly should also be attached to the Base or Stakes at this time.



Figure 18 - Metal Diamond Mesh Cut

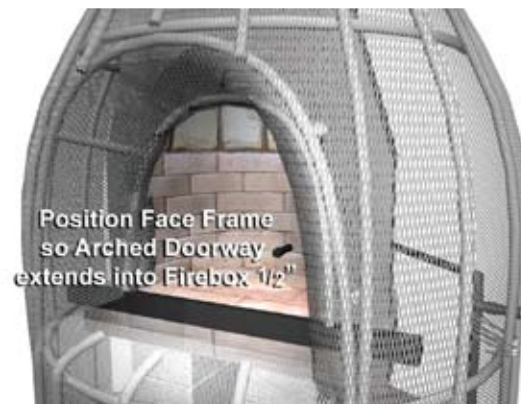


Figure 19 - Front Face Frame in Place

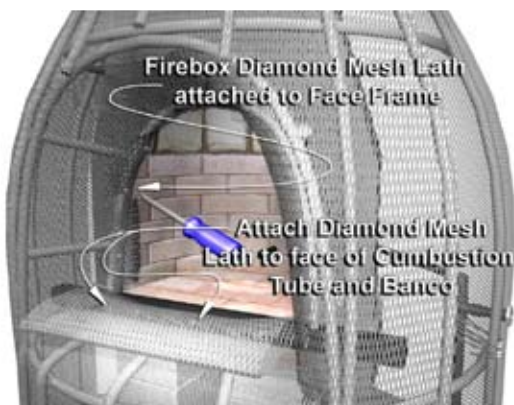


Figure 20 - Metal Diamond Mesh to Face Frame Door



Figure 21 - Join Face Frame Sections

DOOR FRAME INSTALLATION

Install the Ball Latch onto the Door Frame. This Ball Latch will hold the top of the optional Glass Door and/or Fireplace Screen in place. Bring the Door Frame up into the firebox opening and set it on top of the Combustion Air Tube. Make a hole in the mesh at the top large enough to allow for the Ball Latch. Align the holes in the base of the Door Frame with the two pilot holes in the Combustion Air Tube, and loosely attach with the provided screws. Place a 1/2" wood strip between the Door Frame and the lip on the top inside edge of the Combustion Air Tube as shown in *figure 22 - Door Frame Position*. It will act as a spacer for the Fireplace Screen that must fit into this space. Tighten the Door Frame screws. After the bottom of the Door Frame is in the proper position, Vertically align the Door Frame and push the provided butterfly bolt through the Face Frame mesh and tighten.



Figure 22 - Door Frame Position

6. FINISH

A standard 3 coat plaster process should be used to finish your Kiva Fireplace.

1. Scratch Coat
2. Brown coat
3. Finish coat.

First plaster the interior of the kiva opening arch with a mortar mix of 1 part Portland cement, ½ part lime, 3 parts Vermiculite, ½ cup (by volume) of shredded fiberglass. Limit water to only an amount to make mixture workable. Apply to the Metal Diamond Mesh inside the arch opening between Firebox Assembly and Face Frame as shown in *figure 23 - Door Frame Finish*. This is to seal the firebox from possible ashes spilling out of the firebox through the unsealed Metal Diamond Mesh onto the surface below.

Cover the entire Face Frame with stucco. Stucco is a moisture resistant Portland Cement based product and must be used if your Kiva Fireplace is installed outside. Stucco may be purchased from your local supplier or hardware store.

You may also purchase factory blended, fiber reinforced and sanded stucco mix direct from Grand River Supply and have it shipped along with your Kiva Fireplace Kit. The fiber reinforced stucco should be used for the Scratch Coat and the Brown Coat. Your choice of cement based colored stucco finish mix or premixed acrylic polymer based stucco finish can be used for the final Finish Coat. Both finishes are available in a variety of colors and can be shipped from Grand River Supply along with your Kiva Fireplace Kit.

When applying your stucco around the doorway, make sure your stucco does not interfere with the operation of your Glass Door or Screen. Only apply enough stucco to seat the door frame without covering the outer face as shown in *figure 23 - Door Frame Finish*.



Figure 23 - Door Frame Finish

SCRATCH COAT

The Scratch Coat is a base coat and should not be over worked. It is important for some stucco to press into the mesh to “hold on”, but pressing too hard will cause the stucco to push through. Apply a layer of stucco mixture to the Metal Diamond Mesh about $\frac{3}{8}$ inch thick. Before the mix sets too hard, scratch the surface with a small hand rake leaving grooves about $\frac{1}{8}$ inch deep as shown in *figure 24 - Scratch Coat*, giving the Brown Coat a good surface to adhere to.

CAUTION: Be sure to follow Manufacturer’s Instructions when mixing and applying the plaster or stucco.



Figure 24 - Scratch Coat

BROWN COAT

The Brown Coat is the second layer or stucco. This is the layer where you want to shape and prepare your Kiva Fireplace for the very thin final Finish Coat as shown in *figure 25 - Brown Coat*.

Trowel a second $\frac{3}{8}$ inch layer or stucco base coat mixture over the scratch coat. Care should be given to creating a reasonably smooth well shaped surface. The finish coat is very thin and will not hide significant imperfections such as bumps dips or valleys in the surface.



Figure 25 - Brown Coat

FINISH COAT

Trowel a very thin $\frac{1}{8}$ inch thick layer of Finish Coat mixture to the surface of your Kiva Fireplace. At this time you should create the final surface texture you desire as shown in *figure 26 - Finish Coat*. If necessary, mix the final coat according to Manufacturer’s Instructions. Many Finish Coats allow the inclusion of color.



Figure 26 - Finish Coat