



INSTALLATION MANUAL

MODEL 2000 FIREPLACE

READ THIS ENTIRE MANUAL
INCLUDING THE WARRANTY SECTION
BEFORE STARTING THE INSTALLATION

WARNING!!
TO ENSURE THE SAFE AND
EFFICIENT OPERATION OF THIS
HEATER, SECTION 5 MUST BE
REVIEWED PRIOR TO STARTING
THE INSTALLATION

TABLE OF CONTENTS

SECTION1 – INTRODUCTION	PAGE #
General Information	3
Site Preparation	3
Clearances	3
The Façade	4
Delivery & Handling	4
Tools	4
Additional Materials	4
Combustion Air Supply	5
 SECTION 2 – CHIMNEYS & DAMPERS	
General Requirements	6
Flue Connections	6
Masonry Chimneys	6
Factory-built Chimneys	7
Base-Exit Dampers	8
Installing the Roof-top Chimney Damper	9
 SECTION 3 - STEP-BY STEP ASSEMBLY	
Assembly Notes	10
Step-by-Step Installation	11
 SECTION 4 - DOOR FRAMES & FACADE	
The Door Frame Flange	37
Installing Arched Fire-Box Doors	38
Air Supply Doors	42
Clean-out (Soot) Doors	42
Installing "See-Through" Doors	43
Installing Square Fire-Box Doors	44
Installing Bake Oven Doors	46
The Trim Plate Option	47
Installing the Facade	48
The Masonry Cap	49
 SECTION 5 - AVOIDING INSTALLATION ERRORS	50
 SECTION 6 – CERAMIC FIBRE CUTTING PLAN	51
 SECTION 7 –WARRANTY	53

SECTION 1: INTRODUCTION

GENERAL INFORMATION

The Temp-Cast 2000 is a modular "site-built" fireplace kit. The assembled modules form the "core" of the fireplace, including internal flue passages. The Standard Fireplace package also contains a cast iron fire grate, two soot cleanout doors, refractory joint-sealing mortar, corrugated cardboard spacers, gasket material, and assorted fasteners.

READ THESE INSTRUCTIONS **COMPLETELY** BEFORE BEGINNING THE INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY CREATE A FIRE HAZARD, HAMPER THE PERFORMANCE OF THE FIREPLACE AND VOID THE PRODUCT WARRANTY.

IMPORTANT: Review Section 5, "Avoiding Installation Errors" before beginning the installation!

SITE PREPARATION

The following instructions detail the assembly of the Temp-Cast 2000 Fireplace, on a properly prepared and supported concrete pad. Support requirements are described in the *Temp-Cast Planning Guide*, and related *Plan Drawings*. If you require assistance with the support details for the fireplace or other preparatory work, please contact your dealer or the factory. If you are unsure regarding *any* aspect of the installation of this product, please contact:

Temp-Cast Enviroheat Ltd,
Bedford Park Postal Outlet, Box 94059
Toronto, Ontario, Canada, M4N 3R1.

Tel: 416-322-5197 Fax: 416-486-3624

Toll-free 1-800-561-8594

Email: staywarm@tempcast.com

CLEARANCES

A **minimum** clearance of 4" (100mm) from the back and sides of the completed fireplace (i.e. from the masonry facing) to combustible materials is required. The clearance required from the top of the heater is 10" (250mm).

48" (1200mm) clearance is required in front of the door & a non-combustible hearth of 20" (500mm) deep is required, extending 8" either side of the door. (approx. 38" [1m] wide). Also, a clearance of 2" (50mm) is required between the chimney and any combustible construction. (See Fig 1 & 1-1 below.)

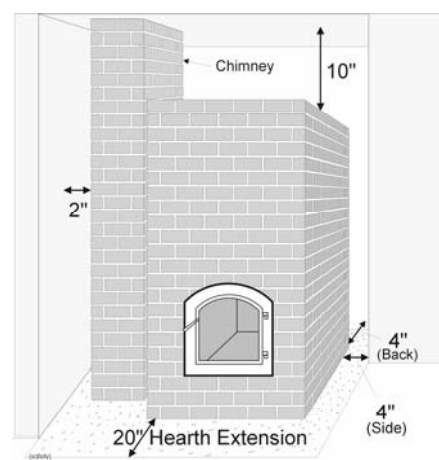
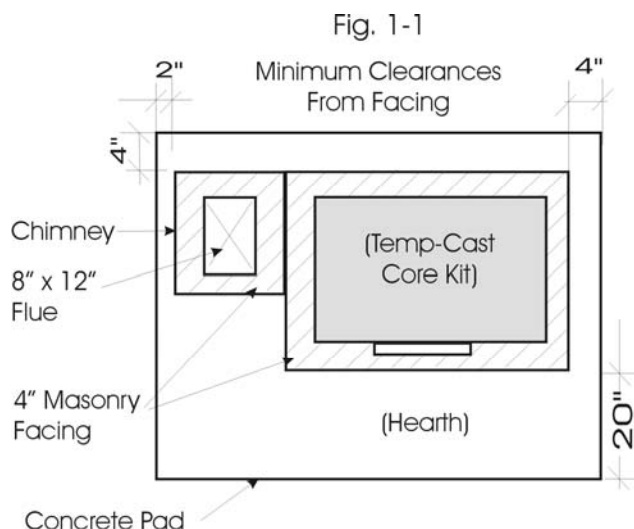


Fig 1
(minimum clearances to combustibles)



If necessary, a metal or masonry convection shield may be placed between your fireplace facade and the combustible structure, reducing clearances by up to 67%. Contact your dealer, local building inspector or the factory for details. *(In new construction, a non-combustible solid masonry wall or metal stud and "cement-board" wall will eliminate concern with clearances.)*

FAILURE TO MAINTAIN THE MINIMUM CLEARANCES TO COMBUSTIBLES MAY CREATE A FIRE HAZARD.

THE FACADE

Once the core is assembled, it must be faced with additional suitable heat-storing masonry material, usually installed by a professional mason. *(See also Section 4.)* Suitable facade materials include brick, rock, fieldstone, or soapstone – concrete block facings are not recommended. *(Hollow units must be filled. If using solid bricks, they **should not be perfectly flat on both sides** - a depression is needed to ensure that bricks do not move during thermal expansion.)* **THE FACADE MUST BE BETWEEN 4" (100mm) & 5" (130mm) OF SOLID MASONRY, STONE OR ROCK.** *(Substantially thinner facings may not comply with building codes, due to higher surface temperatures, requiring greater clearances to combustibles. Thicker facings will make the heater slower to respond & more difficult to regulate.)*

DELIVERY & HANDLING

The fireplace kit weighs 2800 lbs and is delivered on a wood pallet, covered with plastic. If unloaded by forklift, it should be placed on a level and even surface, so that parts will not fall when the strapping is cut. Unpacking should be done **by at least 2 persons**, following the unpacking instructions.

As soon as possible after delivery, the fireplace should be unpacked and dry assembled, to become familiar with all the parts, to ensure the delivery is complete and to check for damage. **Visible damage to the pallet or the contents must be reported immediately to the delivery person and noted on the shipping bill before accepting delivery. Hidden damage or missing parts must be reported to Temp-Cast and to the shipping company within 24 hours.**

The pieces must be handled with reasonable care to avoid damage, although minor chips to corners and edges are acceptable and do not affect installation or performance. The modules should be stored indoors, in a dry area. When possible, in cold weather, the modules should be left in a heated area for a few days prior to beginning the installation.

TOOLS

The following tools are required to simplify the assembly process:

- 48" (1.2m) and 12" levels
- powered cutting tool - options include:
 1. 4" grinder with diamond blade
 2. circular saw with diamond blade
 3. masonry "water" saw or gas concrete saw (less accurate & convenient on smaller cuts)
- 1/2" (12.5mm) hammer drill & masonry bits
- heavy rubber mallet
- 2" (50mm) margin or pointed trowel
- 2" packing tape (e.g. "Scotch" tape)
- black magic marker
- pencil
- utility knife
- bucket, water & sponge
- measuring tape
- 20 ft (10m) tie-down or web-clamp, for temporary support of side channels (Step 18).

ADDITIONAL MATERIALS:

- all masonry facing & chimney materials
- Portland cement (to level the base)
- chimney cleanout for rear connections (see Section 4)
- optional air supply door & frame (for slab-on-grade installations - refer to Fig 1B)
- optional chimney damper
- 6" or 8" combustion air supply duct (e.g. galvanized duct - see next section)

COMBUSTION AIR SUPPLY:

The Temp-Cast heater requires an unrestricted air supply for proper combustion and maximum performance. *(This section refers to the standard Temp-Cast "arched" door & air-frame installation. The Temp-Cast "square" door installation is described in a separate manual.)*

Combustion air can be drawn from outside or inside the house and delivered by way of a 15" x 2" (380mm x 50mm) air intake formed in front of the heater during construction of the concrete floor pad. Air is then directed up behind the facing masonry, and into the hollow door frame through slots on the bottom. The air travels up inside the door frame and feeds the fire from above, creating an "air-wash" across the doors to keep the glass clean. (See Fig. 1a)

If the installation is designed to use inside air from the same room as the heater, and an inside air source is permitted by the building authority having jurisdiction, then an optional "air supply door" must be purchased and installed under the loading doors. This will allow combustion air to be drawn from the room, travel up behind the facade and into the hollow door frame. (Refer to Fig. 1b).

In a basement installation, outside air can still be brought into the fireplace, if ceiling height permits. Where local building codes permit, a raised hearth can be constructed, and 6" (150mm) of fresh air can be fed into this structure. (A "false" chimney can be used for this fresh air supply.) The air is brought to the front of the heater into a 15" x 2" (380mm x 50mm) masonry slot or custom-fabricated "boot" and treated as a normal outside air installation.

In a "See-Through" fireplace, **8" of combustion air** must be supplied and divided equally to both door frames to provide an "air wash" for each door glass. (See Fig. 16)

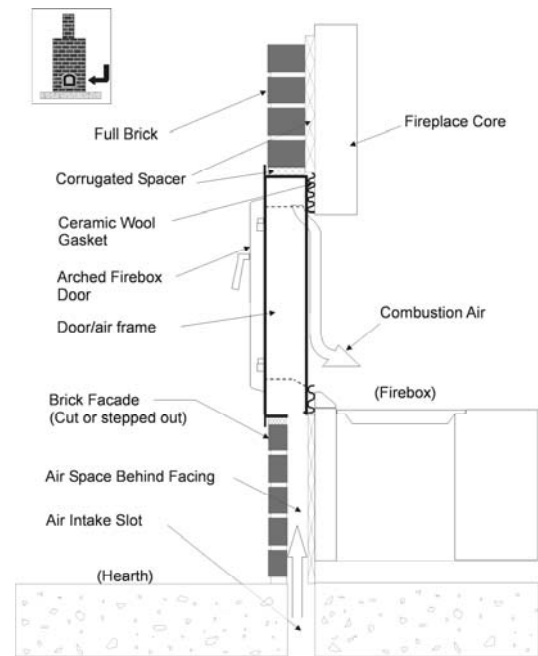


Fig 1a

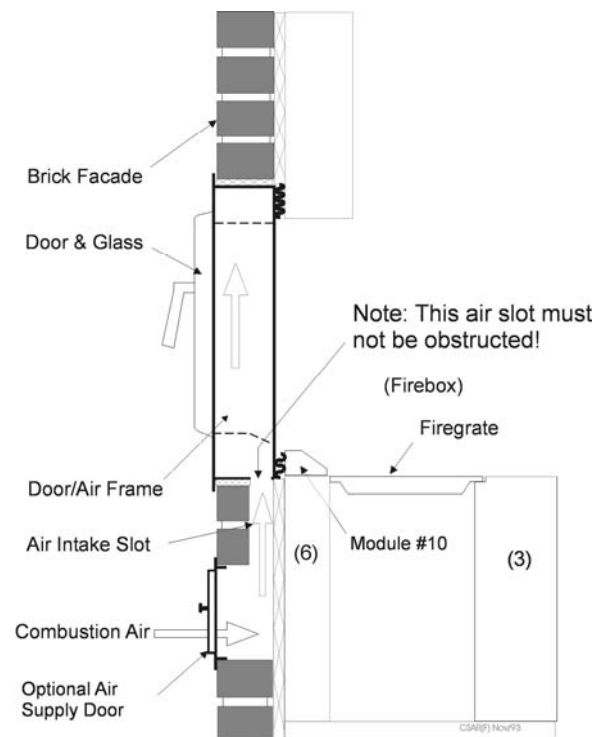


Fig 1b

SECTION 2: CHIMNEYS & DAMPERS

GENERAL REQUIREMENTS

Temp-Cast fireplaces require an approved chimney system for safe and satisfactory performance. Code-approved masonry and factory-built chimney systems are both acceptable.

In addition to building code requirements, every chimney system should:

- extend straight up from the base of the fireplace
- be at least 18 ft (5.5m) in height
- have an access at the base, with a tight-fitting metal door, for chimney cleaning
- have a cross-sectional area of at least 50 sq. inches (320 sq cm)
- NOT BE CONNECTED TO ANOTHER APPLIANCE OR TO ANY AIR DUCTS

FLUE CONNECTIONS

The chimney connection is made at the bottom of the fireplace, in the first course. The connection can be made on either side of the fireplace or through the back wall, into the cross manifold. (Refer to Fig. # 2). The flue connection can be up to 5 ft. long, creating heated benches & allowing additional flexibility in chimney locations.

For a side connection, the side channel (Part # 30 or 31) is cut to receive the connector. (see step 18.) Make this cut carefully so that a smooth transition from the fireplace to the chimney results, free of obstructions to the flow of the escaping smoke. Use joint sealing mortar to make it completely smoke tight. The connector piece penetrates the fireplace side channel about 1" (25mm), but care must be taken to ensure that it does not protrude past the inner edge of the side channel. (See Figs. # 3 and 4.)

If the connection is made at the back of the fireplace, the cross manifold (Part #3) is cut to

receive the flue connector. This joint must also be smoke-tight. (See also Section 3, Step #3.)

MASONRY CHIMNEYS

Due to the thermal mass storage capability of masonry chimneys, we recommend them over factory-built chimneys, provided they are completely inside the home & fitted with a damper.

Masonry chimneys should have carefully aligned flue liners, with joints that are smoke-tight and joined with refractory mortar. The inside surface of the liner should be smooth, with all excess mortar removed. Refractory, clay and UL/ULC listed stainless steel are all acceptable liners.

An access for a chimney cleanout can be cut in the first vertical flue tile. (See Fig #10)

Fig 2

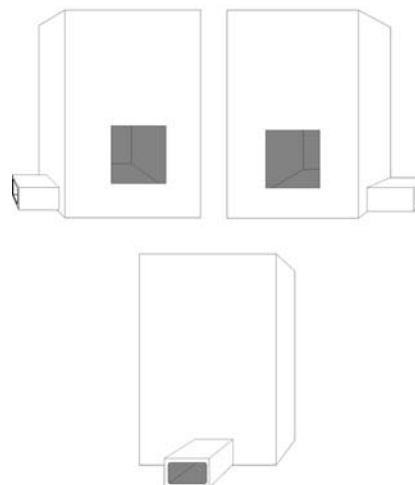
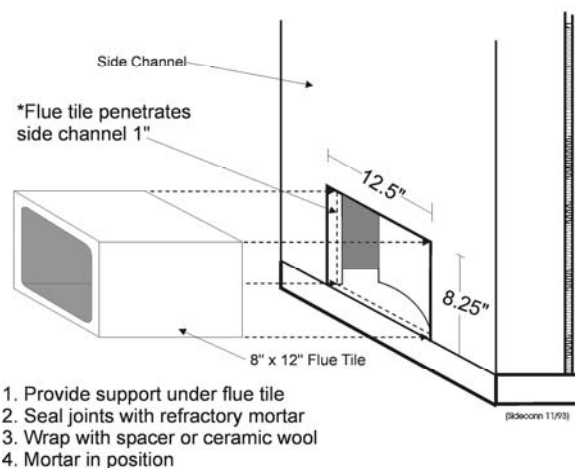


Fig 3

A 4" grinder with a diamond blade is ideal for cutting accurate & neat holes in the refractory concrete modules.

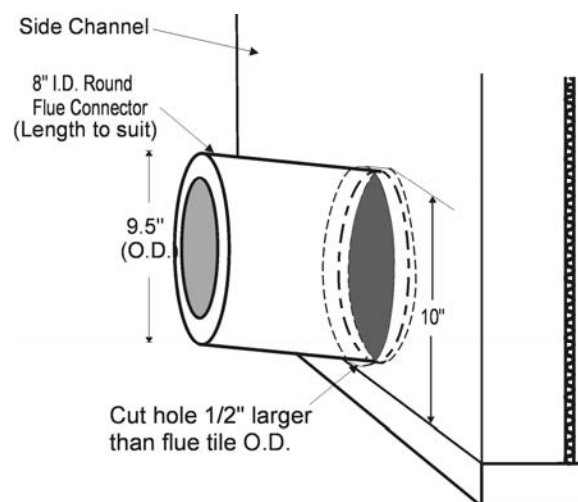
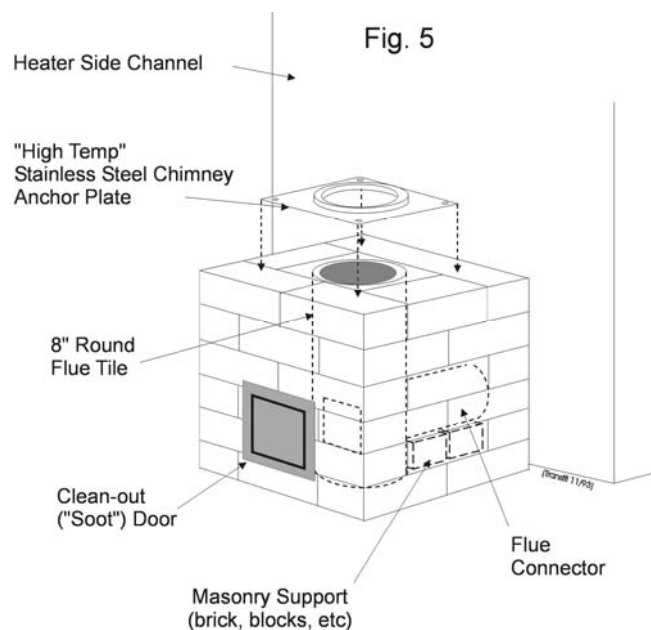
FACTORY-BUILT CHIMNEYS

We do not recommend exterior chimneys, (*see Sec. 4 of the Temp-Cast Planning Guide*) but if a chimney on the outside of the house is unavoidable, then an insulated factory-built (e.g. "HT" or 2100°F.) chimney is the better choice.

When a factory-built chimney is started at the floor level, there will not be sufficient space to access the clean-out cap under it. In order to provide a clean out access, one of the following 2 methods is suggested.

Create a masonry connection to the fireplace, with 8" (200mm) round flue tile. Add vertical sections of 8" round flue tile, with a clean-out access built into the first vertical section. Wrap the horizontal tile and the first vertical flue tile with "ceramic wool" blanket & ensure they cannot be dislodged. Continue with flue tile & masonry to the point where the transition to factor-built chimney is wanted – often the masonry is extended to the first ceiling. If a roof-top damper is to be installed, the cable protector for the damper cable must be built into the masonry chimney where it will be accessible for daily use – we recommend at least 6 feet from the floor. Install an anchor plate approved

for the factory-built chimney, on top of the last masonry section - the factory-built chimney continues from this point. (See Fig. 5.) If the factory-built chimney will also be enclosed in masonry, the layout of the first masonry courses must take this into account. (*Confirm this connection method with your local building official.*)

Fig 4**Fig. 5**

BASE-EXIT DAMPER/TRANSITION

A Temp-Cast base-exit damper/transition is another method to make a suitable connection from the heater to a factory-built chimney, and also incorporates a damper & cleanout access that is not otherwise possible with factory-built chimneys. (See Fig 6.)

If you use a damper of any kind, be certain to read the cautions regarding carbon monoxide, in the next section.

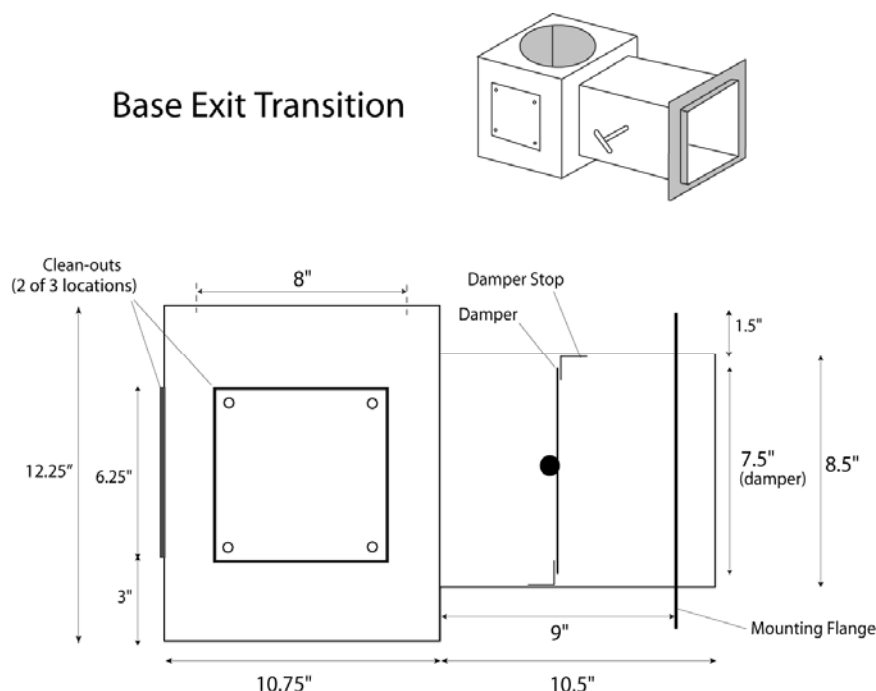
The following details the installation of the Temp-Cast base-exit damper/transition.

1. At Step 18, position the base-exit damper/transition, sitting on the concrete slab. Mark where the damper will be installed into the side channel (Part #30 or 31) or rear manifold (Part #3), and cut a 9½" x 9½" opening.
2. Cut the damper rod to length, if required, to extend beyond the masonry which will enclose the entire assembly.
3. Attach the handle to the rod with the nut extender and nuts supplied. Check the operation of the damper to become familiar with its operation. (The handle is usually shipped inside the damper.)
4. Attach a strip of ceramic wool to the outside of the side channel around the damper opening, with high-temperature silicone. Lay a strip of ceramic wool on the bottom edge of the opening and insert the base-exit damper/transition. Insert the damper into the opening and slightly compress the ceramic wool – it may be helpful to temporarily support the damper box until masonry work has been started around it.
5. Cover the damper rod so that it will not be inadvertently cemented in position during installation of the masonry facing – flexible cardboard or ½" copper pipe (not supplied) may be used for this.
6. With at least 3 metal screws, attach an approved masonry adapter to the top of the damper assembly & install the first vertical section of factory-built chimney.
7. Enclose the entire damper assembly with at least 4" of solid masonry, leaving an access for the cleanout. (If the factory-built chimney will also be enclosed, the first masonry courses must take this into account.)

Other methods of connecting factory-built chimneys may also be acceptable. Consult the chimney manufacturer, a *certified* installer or your local building official.

Fig 6

Base Exit Transition



INSTALLING THE ROOF-TOP CHIMNEY DAMPER

An optional “roof-top” chimney damper is recommended to allow the chimney to be closed off when the fire is out. This will let the chimney mass hold additional heat and greatly improve the overall heating efficiency of the system. *(Refer to the Temp-Cast Owner’s Manual for proper use of the chimney damper.)*

The damper is cemented to the top of the uppermost flue tile of the chimney, and is controlled by a cable through the centre of the chimney. *(See Fig. 7)* The cable is routed through the side of the flue tile during construction of the chimney and masonry facing. *(Note: Installation of the damper cable is greatly simplified if the protective sleeve and steel cable are installed in the desired area when the chimney is being built. If this has not been done, then a string will have to be fished through the sleeve & secured to the steel cable.)* Attach the cable bracket to the outside of the chimney in a visible, convenient location, **but always out of the reach of small children.**

For 8” round chimneys, including factory-built models, a Round-to-Square adapter and a 13” x 13” damper will be required.

NOTE: When a stainless steel (i.e. “factory-built”) chimney is used, **penetrating the steel chimney is not permitted.** Alternatives include:

1. Installing a Temp-Cast Base-Exit Damper, construct a short section of masonry chimney, install an approved masonry adapter part and continue with factory-built chimney through the roof. *(See Fig 6.)*
2. Starting the installation with a Temp-Cast Base-Exit Transition, with or without an integral damper. For exposed chimneys, a Temp-Cast Base-Exit Transition/Damper must be used. If the chimney is to be enclosed to the first ceiling or through to the roof, you can use the same Temp-Cast Base Exit Damper/Transition, or obtain an adapter with a built-in damper, which can

be installed with the first section of “factory-built” chimney. This permits a more effective damper, much higher up in the chimney system. In either case, the whole chimney assembly and transition can be enclosed in masonry.

CAUTION: Whenever a full-closure damper is used, extra care should be taken to ensure that the fire is **completely out** before the damper is shut. Closing the damper prematurely could cause combustion gases, especially carbon monoxide, to be spilled into the home. **Carbon monoxide has the potential to be fatal.** We therefore **strongly** recommend installation of a carbon monoxide alarm, whenever a full-closure damper is used with a Temp-Cast masonry heater. (If the heater is installed in accordance with ASTM E1602, then the damper must be modified to create a permanent 5% opening.)

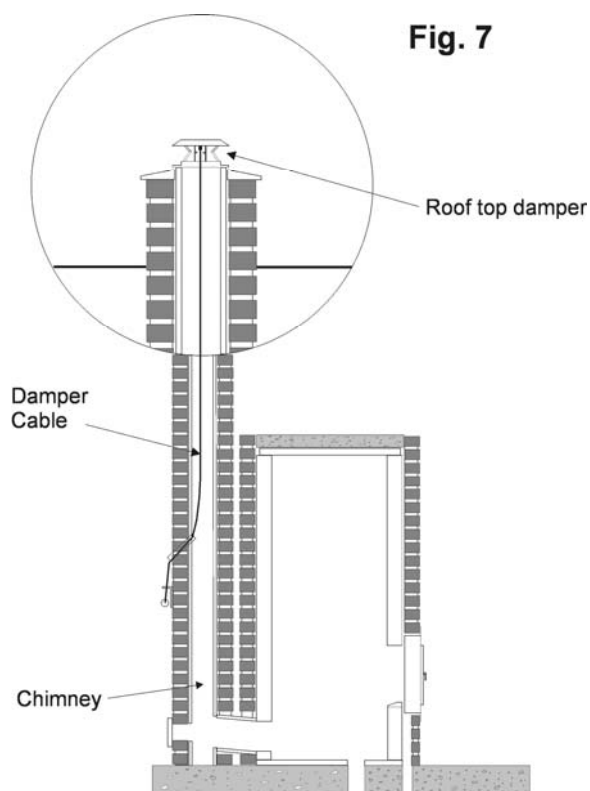


Fig. 7

SECTION 3: STEP-BY-STEP ASSEMBLY

ASSEMBLY NOTES

1. **Dry-assemble** the heater upon delivery, to check the condition of all parts and to familiarize yourself with the modules. (If all of the parts are not numbered, you may find it helpful to do so, using this manual, before taking the unit apart again.)
2. Cutting of flue tiles and fireplace modules should be done outdoors due to the excessive dust created. **WEAR SUITABLE EAR, EYE AND LUNG PROTECTION.**
3. A 4" grinder with a diamond blade is best for cutting holes in flue tiles and fireplace modules. Or round holes can be cut as six or eight-sided shapes with a gas, water or circular saw or drilled every inch (25mm) and then cut with a reciprocating saw fitted with a masonry blade. Rounding or beveling the inside edges of the hole in the module creates the least resistance to the flow of smoke and gases, maximizing draft and performance. (See Fig. 8)
4. When using the ceramic-fibre gasket material, it should only be **slightly** compressed. Compressing it too much will defeat its purpose as an expansion gasket. (A small amount of refractory mortar can be used to cement the gasket in position.)
5. Refractory casting occasionally leaves behind rough spots or small bumps on the modules. If these rough spots should occur in a joint between 2 modules, they may prevent a tight joint and make installation of subsequent parts more difficult. Remove any such bumps with a rasp or scraping tool before assembling.
6. *Refractory mortar should be used sparingly, **applying a small (1/4" to 3/8") bead between modules.*** The finished joint should have a very thin skin of refractory mortar, which is the strongest. *(In addition, the parts will only fit properly if the thinnest possible joint is created.)* Apply a small amount on the outside edges of the part, where indicated by the shaded areas. **Do not use a full bed of mortar.** Seat the parts completely, using a rubber mallet, so that a little mortar squeezes out. After each course, scrape off and save excess mortar for possible later use. Periodically wipe the modules inside and out with a damp sponge to ensure that excess mortar has not been left behind.

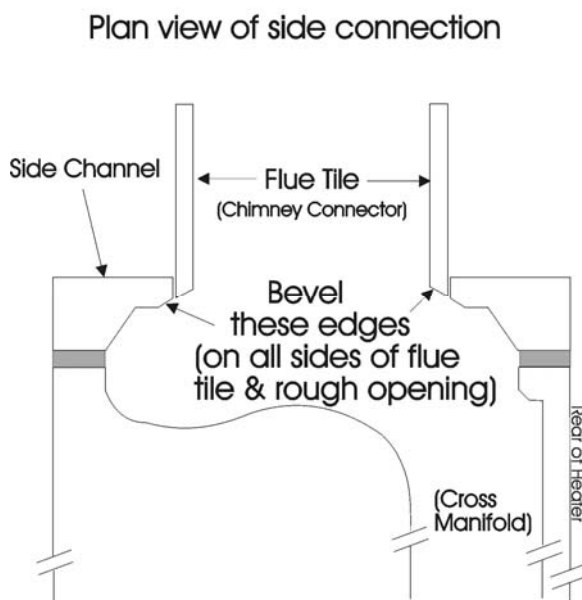
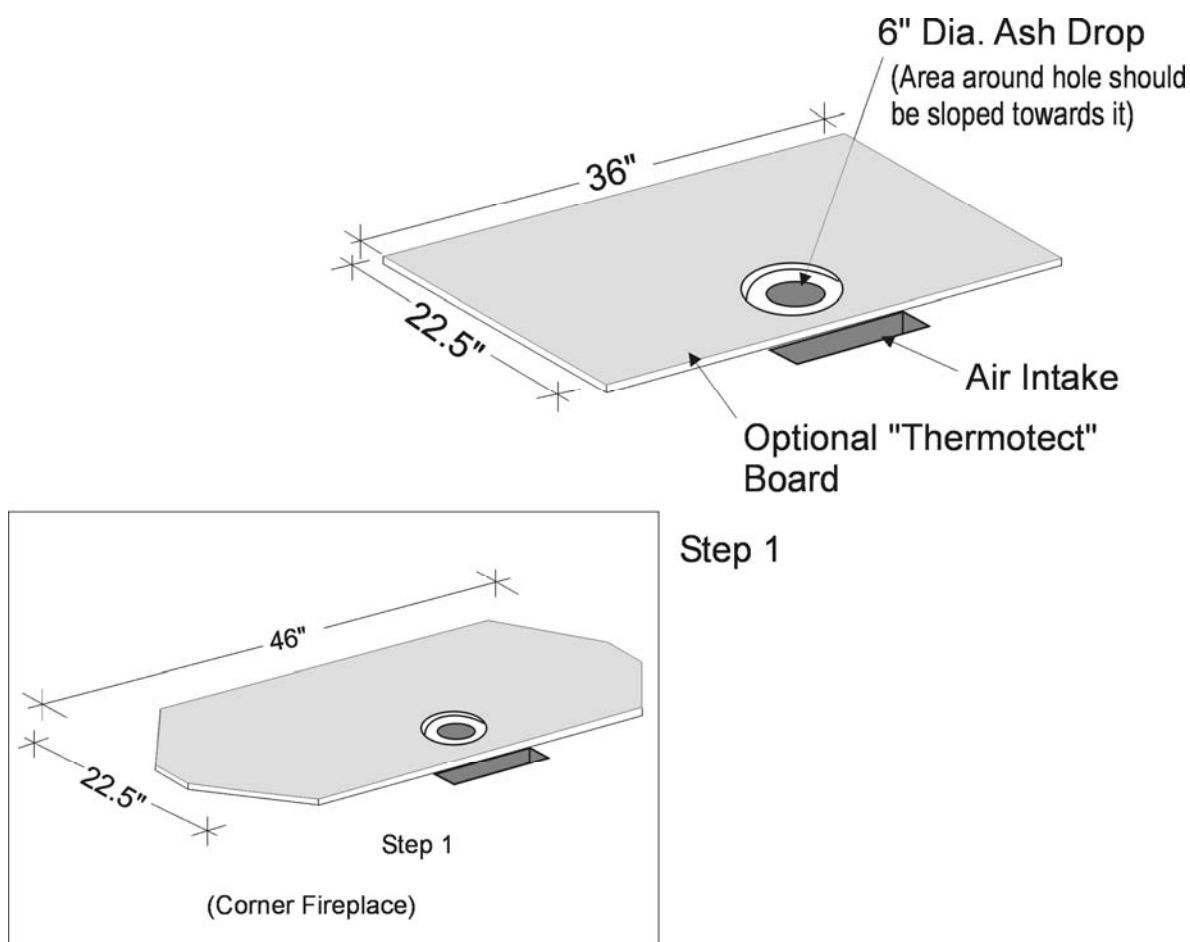


Fig. 8

STEP 1: "THERMOTECT" INSULATING BOARD

If an optional insulating board is to be installed, it is installed before starting the Levelling Pad. Cut the board to size as indicated and place it in position. Check that it is square to the concrete floor pad. Ensure that the air intake hole is located immediately in front of the board and centered. (It is also advisable at this point to double check that there will be sufficient clearances to combustible construction around the fireplace.)

If you have followed the Temp-Cast Planning Guide, the area around the 6" diameter Ash Drop hole in the concrete pad will be sloped towards the hole for a few inches all around. Cut an appropriately sized hole in the insulating board so that the sloped area around the hole is not obstructed. Lay the board in position as illustrated.



STEP 2:

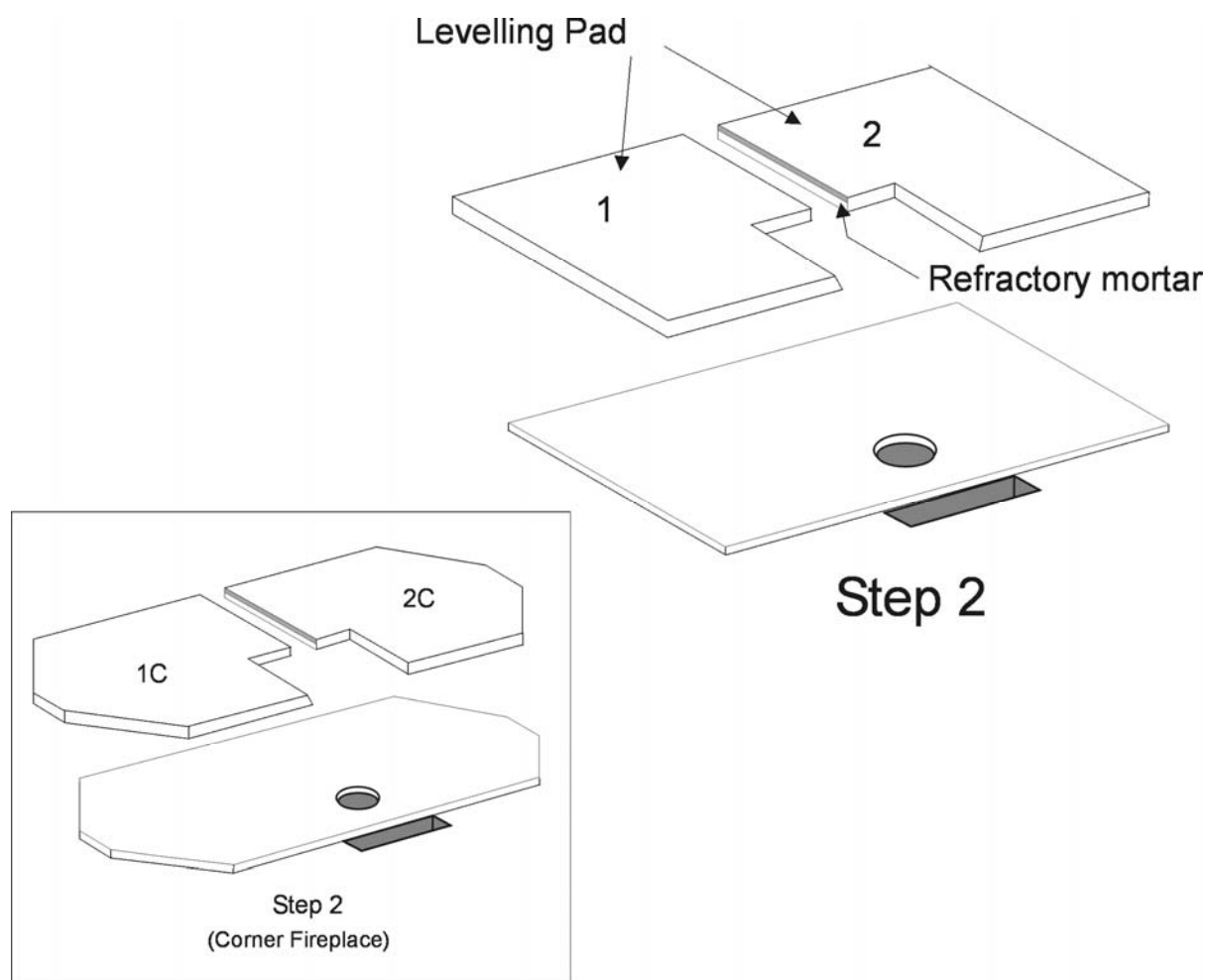
"Dry" assemble (i.e. without mortar) the two halves of the Leveling Pad (Part #1 & #2) on the "Thermotect" board (optional), or on the concrete floor pad, so that the air intake slot is not obstructed and is centered in front of the Leveling Pad. Ensure that the 6" (150mm) diameter ash drop is located within the cut-out section of the base. **CHECK THAT THE FLOOR IS REASONABLY LEVEL BEFORE STARTING TO INSTALL THE LEVELLING PAD - ADDITIONAL MORTAR MAY BE NEEDED TO LEVEL IT AS REQUIRED.**

Lay the two halves of the Leveling Pad in a 1/2" (12mm) bed of common mortar, using refractory mortar between them. Using the 48" level, tap the base into the mortar, ensuring that it is level. Before the mortar has set, tap down along the centre-line of the leveling pad, so that the centre of the pad is about 3/16" lower than the sides. (See illustration below.) This centre-line gap will ensure that parts in the upper courses lean in slightly, simplifying installation.

Weights

#1 & 2 - 49 lbs

#1C & 2C - 59 lbs



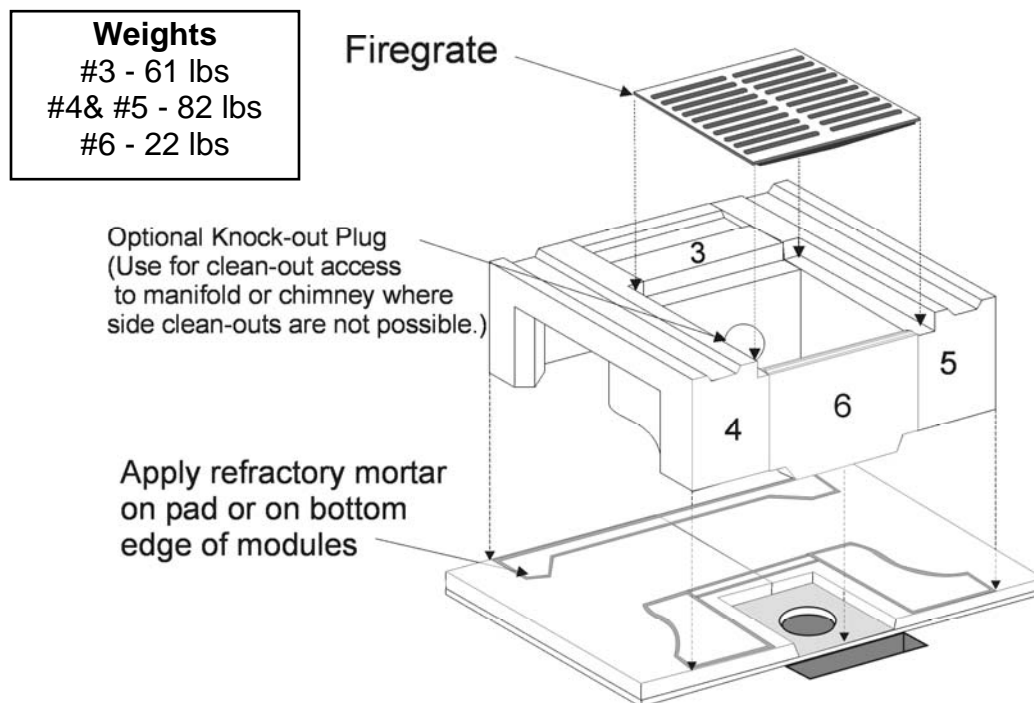
STEP 3:

When the Leveling Pad can support weight, **dry assemble** the first course of modules, **including the grate**, as in the accompanying drawings, to check for proper fit. This course ***must be centered*** on the Leveling Pad, so that equal space is left on both sides for the heat exchange channels - mark the correct placement with a pencil.

If the chimney is to be connected at the **rear** of the fireplace, mark the cross manifold (#3) to be cut for the flue connection. Take this part outdoors and cut a hole for the flue connector being used. For flue tile or HT chimney, cut the hole the same size as the ***inside*** dimensions of the flue connector. The flue connector or HT adapter will then be mortared or attached to the outside of the cross manifold - Part #3. (Holes for a ***side*** connection are discussed at Step 18.)

Once the layout of fireplace and chimney connection, all dimensions and locations of cleanout doors have been confirmed, draw a line on the Leveling Pad to mark the outside edges of the base course. Now remove the modules, (cut the flue hole in #3 if required) and re-assemble, using a small amount of the refractory mortar provided ***on the bottom edges and between modules***. Seat the parts with the rubber mallet, then reach inside the cross manifold and wipe off all excess mortar.

NOTE: once final assembly has been started, the entire core should be assembled in a continuous operation, so that minor adjustments to previous courses can be made before the refractory mortar has set. Place the fire-grate in position, which should fit loosely to allow for expansion. Cover it to keep clean.



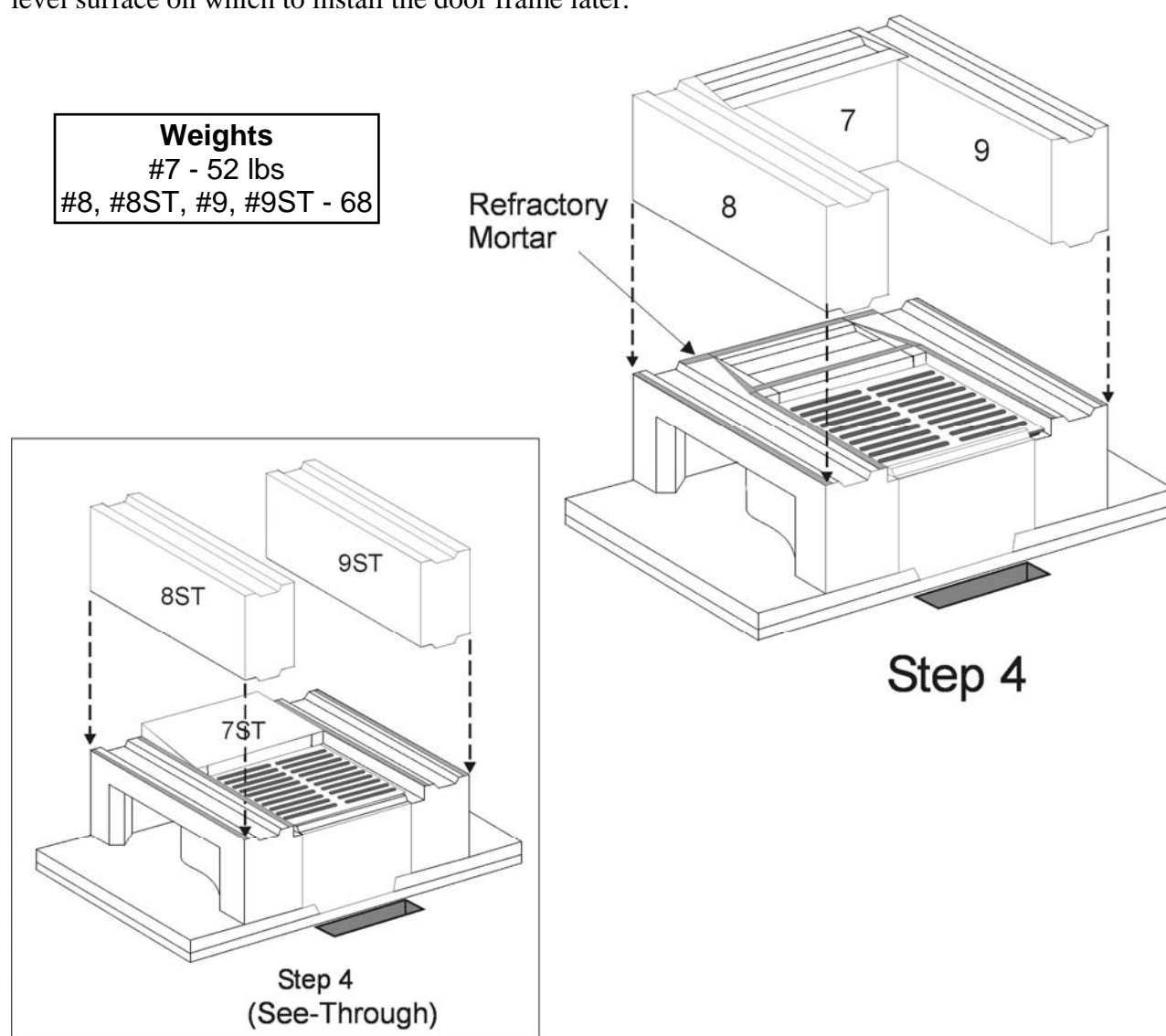
Step 3

STEP 4:

Assemble the second course, parts #7, #8 & #9. A small bead (1/2") of refractory mortar is laid on the outside edges where the two parts meet. (The bead can be laid either on the part being laid on or the previous part - whichever is easier.) Note that the parts are numbered in the order that they should be placed. *(For a Temp-Cast "See-Through" fireplace, these 3 parts are slightly different, as in the accompanying illustration.)*

Use the rubber mallet to seat the modules. Remove excess mortar and wipe inside and out with a damp sponge as work progresses.

NOTE: When installing the modules on this course and subsequent courses around the firebox opening, take care that the parts are flush **at the front of the fireplace**. This will produce the most level surface on which to install the door frame later.



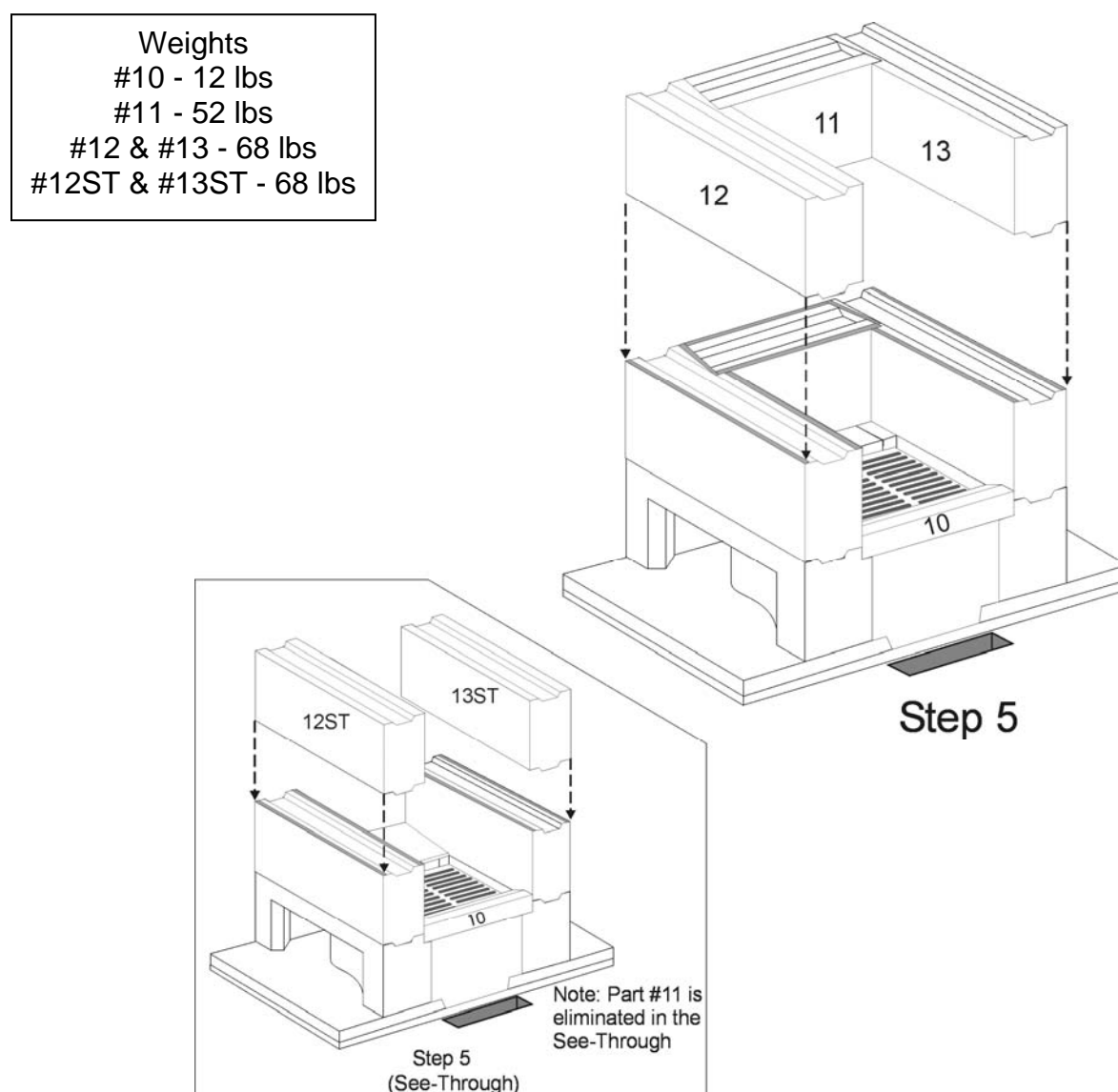
STEP 5:

Install Parts# 10, 11, 12 & 13, using refractory mortar. Also “butter” the ends of part #10, so there are no gaps on the ends. (Note that parts 11 thru 13 are identical to the previous course.) (*In the "See-Through" fireplace, there is no part #11.*)

Seat with the rubber mallet and ensure that joints are tight.

Remember to keep the *front edges* of the modules aligned and **use a 48” level to ensure that the four sides are plumb.**

Leveling the courses is not critical – it is sufficient if the courses are approximately level.



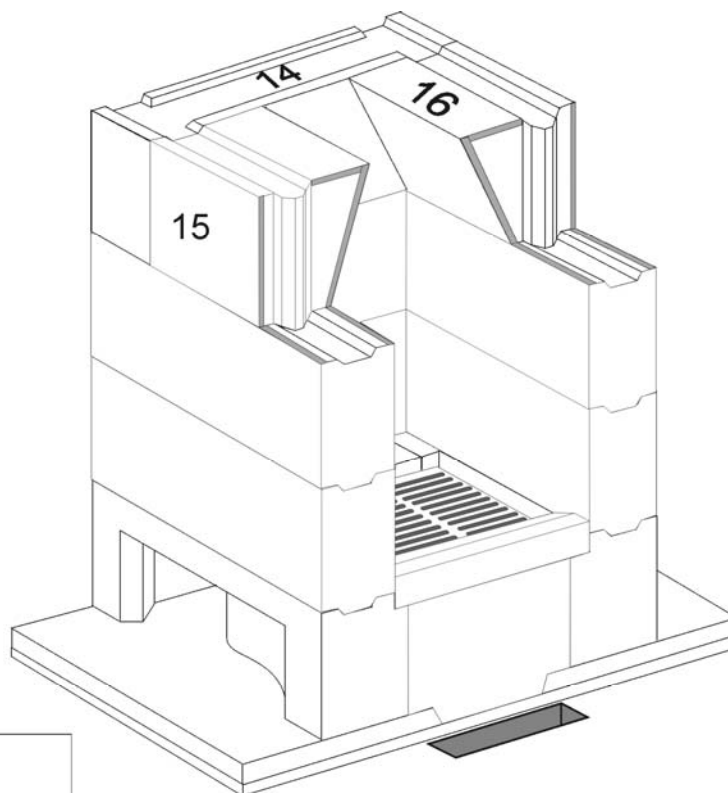
STEP 6:

Install the lintel course, parts 14, 15 & 16, in order, using a small (3/8") bead of refractory mortar on the outside edges of the adjoining parts.

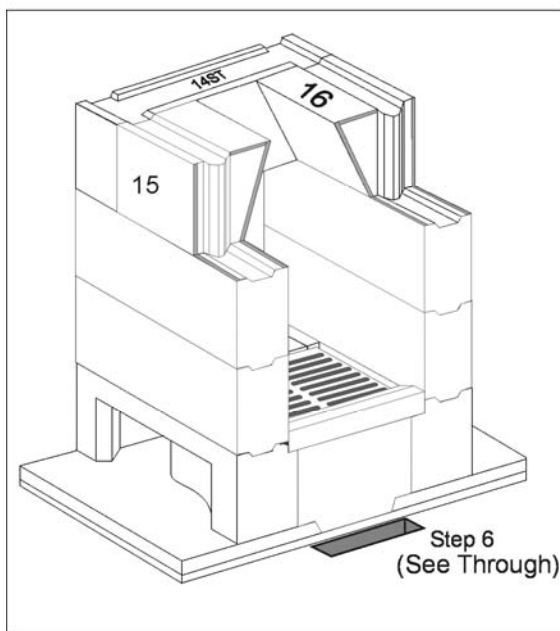
Weights

#14 & #14 ST- 86 lbs

#15 & #16 - 64 lbs



Step 6

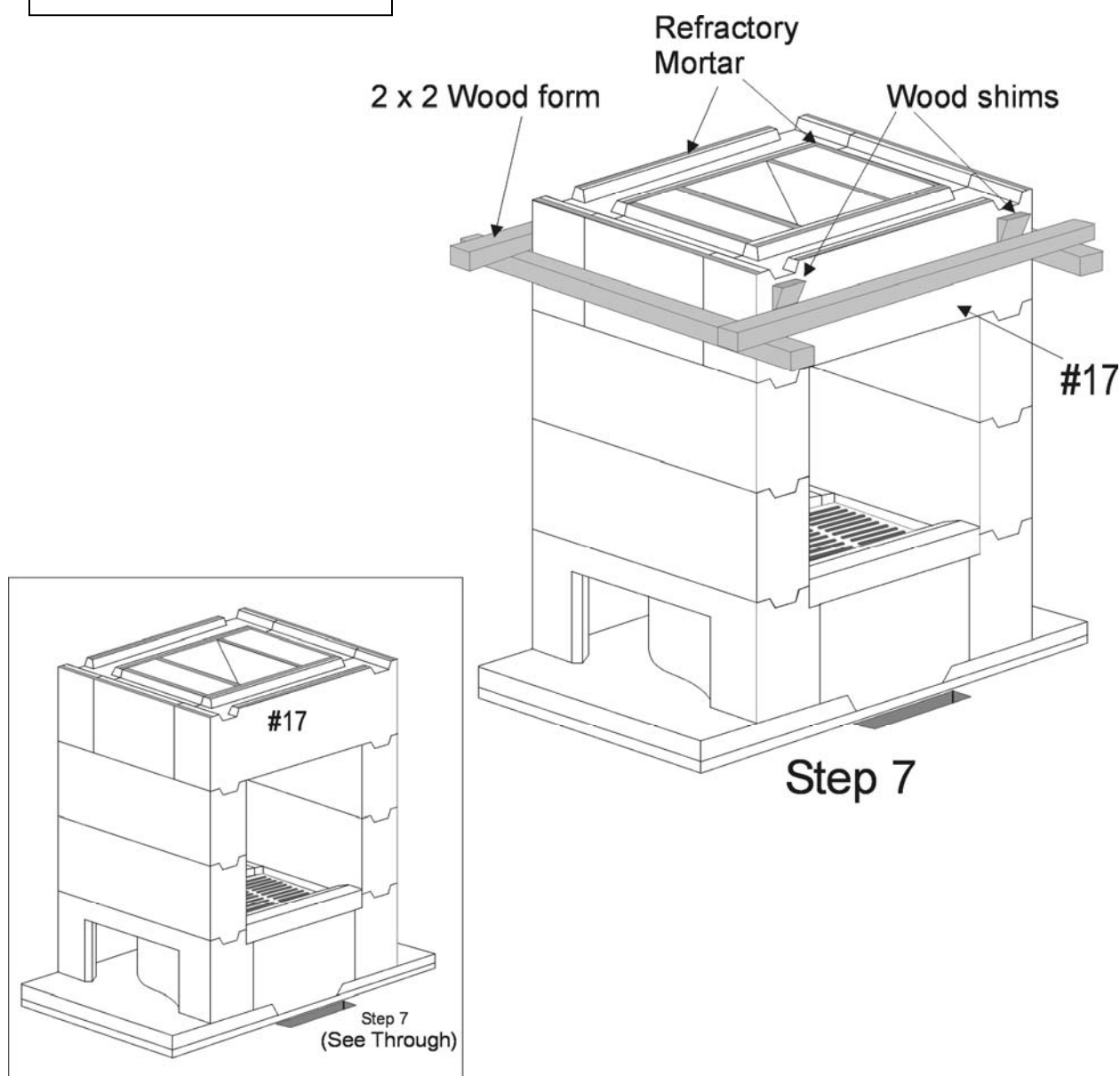
Step 6
(See Through)

STEP 7:

Complete the lintel course with part #17. Ensure that it aligns with the *front edges* of the previous course. Seat firmly with the rubber mallet to ensure thin, strong joints and stable support for the next course.

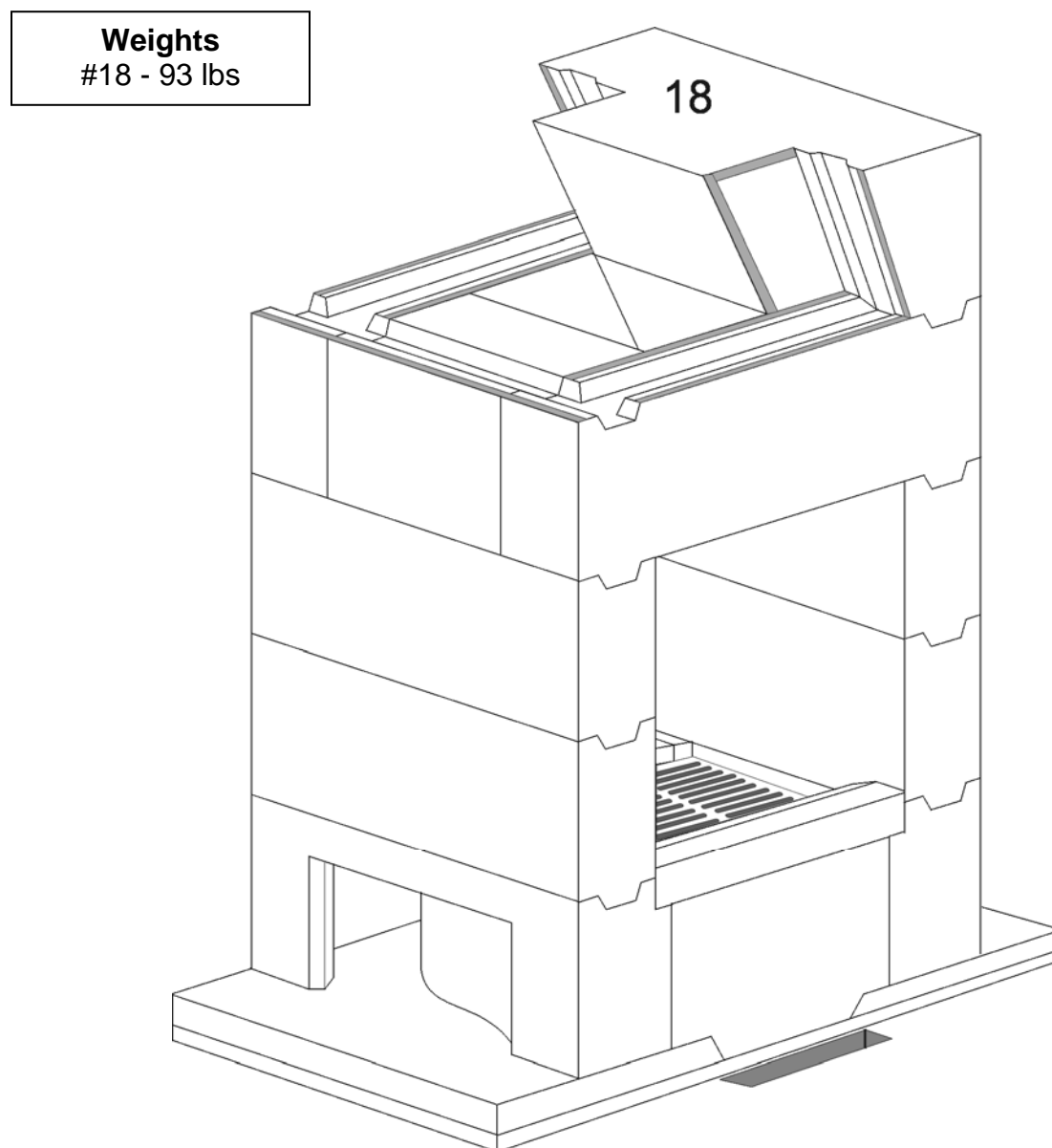
(If necessary, this course can be clamped with a tie-down until the refractory mortar sets.)

Weights
#17 - 84 lbs



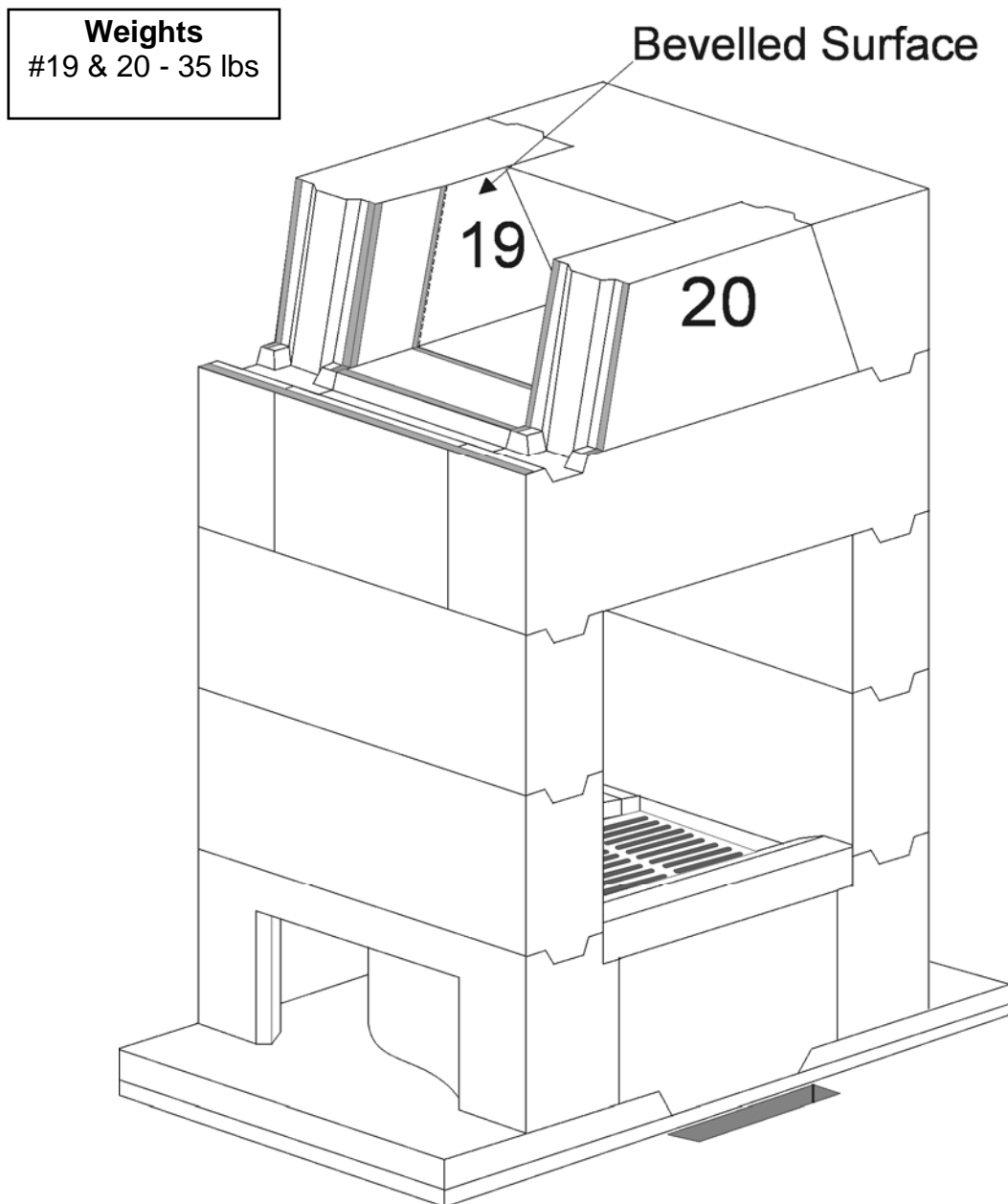
STEP 8:

This is the “smoke throat” course and begins with module #18. This part is heavy and awkwardly shaped and usually requires 2 persons.

**Step 8**

STEP 9:

Continue the smoke throat course with parts 19 & 20. (Note that the slightly beveled surfaces of these modules face in towards the firebox.)

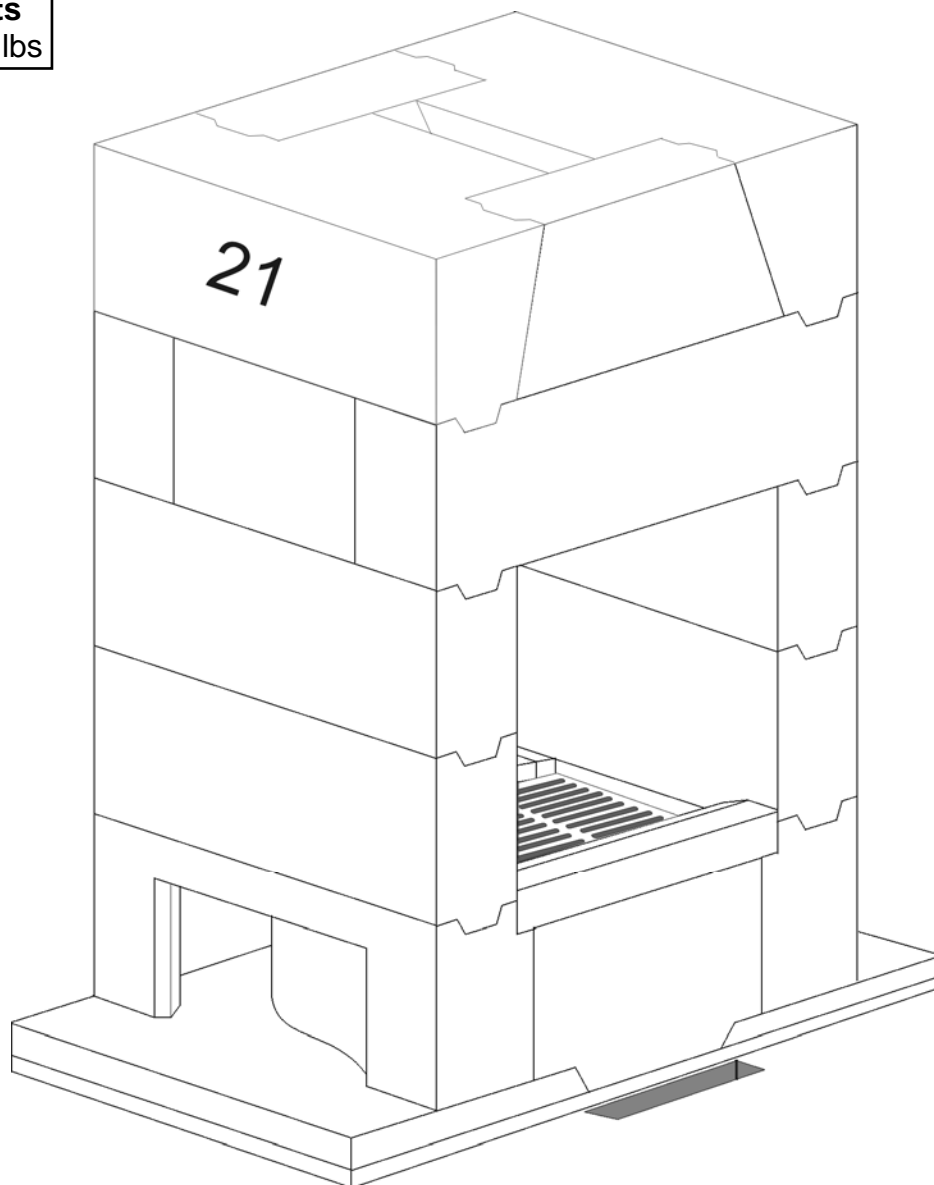


Step 9

STEP 10:

Complete the smoke-throat course by installing #21. Remove all excess mortar and wipe the modules inside and out.

Weights
#21 - 93 lbs

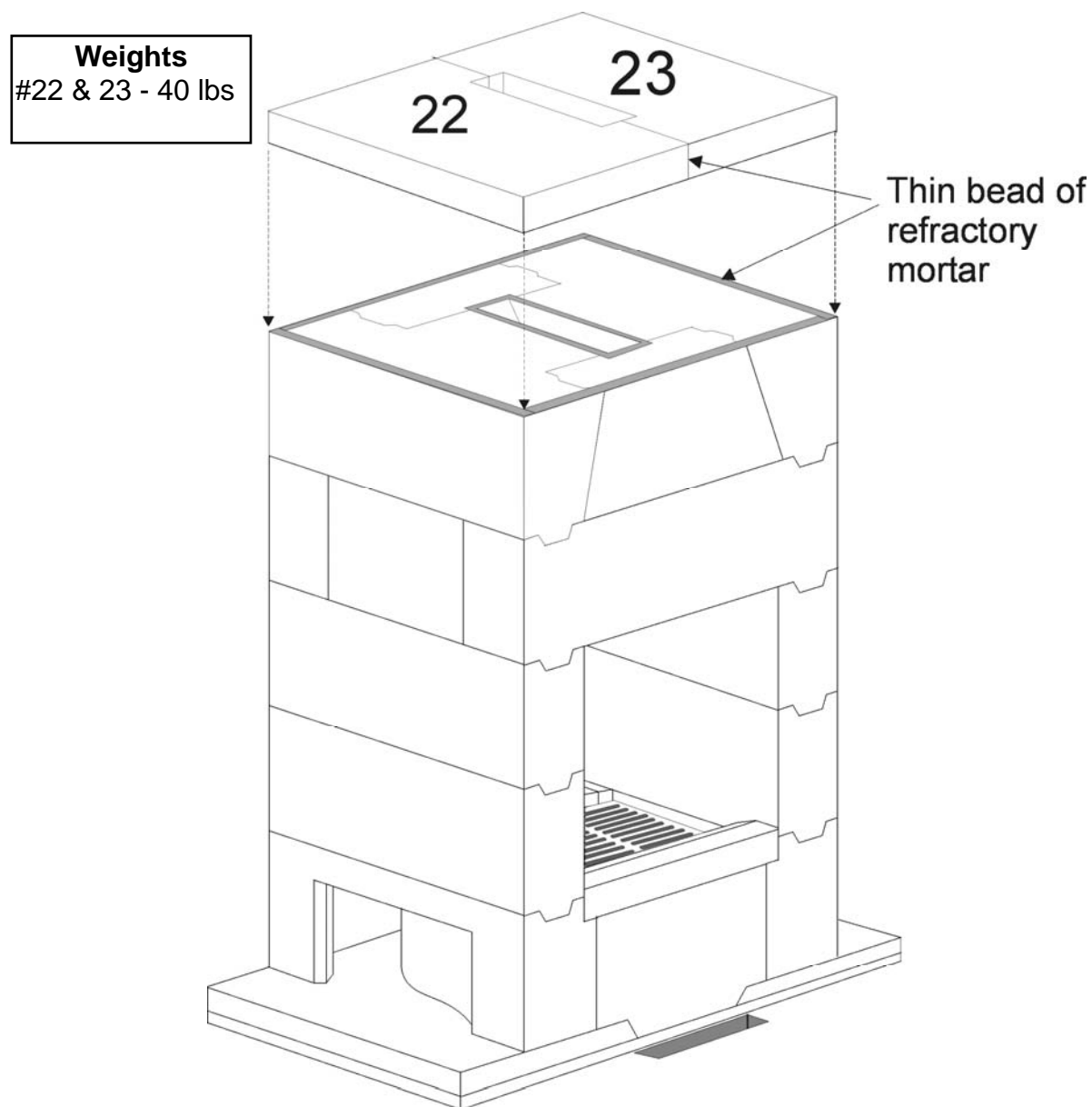


Step 10

STEP 11:

These 2 parts, #22 & 23, form the floor of the secondary combustion chamber. They are not keyed and are simply mortared in position with a **thin bead** of refractory mortar, around the edges and between the 2 parts. *(If this installation includes a **Bake Oven**, these parts and subsequent courses are detailed on page 26.)*

Tap firmly into place with the rubber mallet, to create as thin a joint as possible.

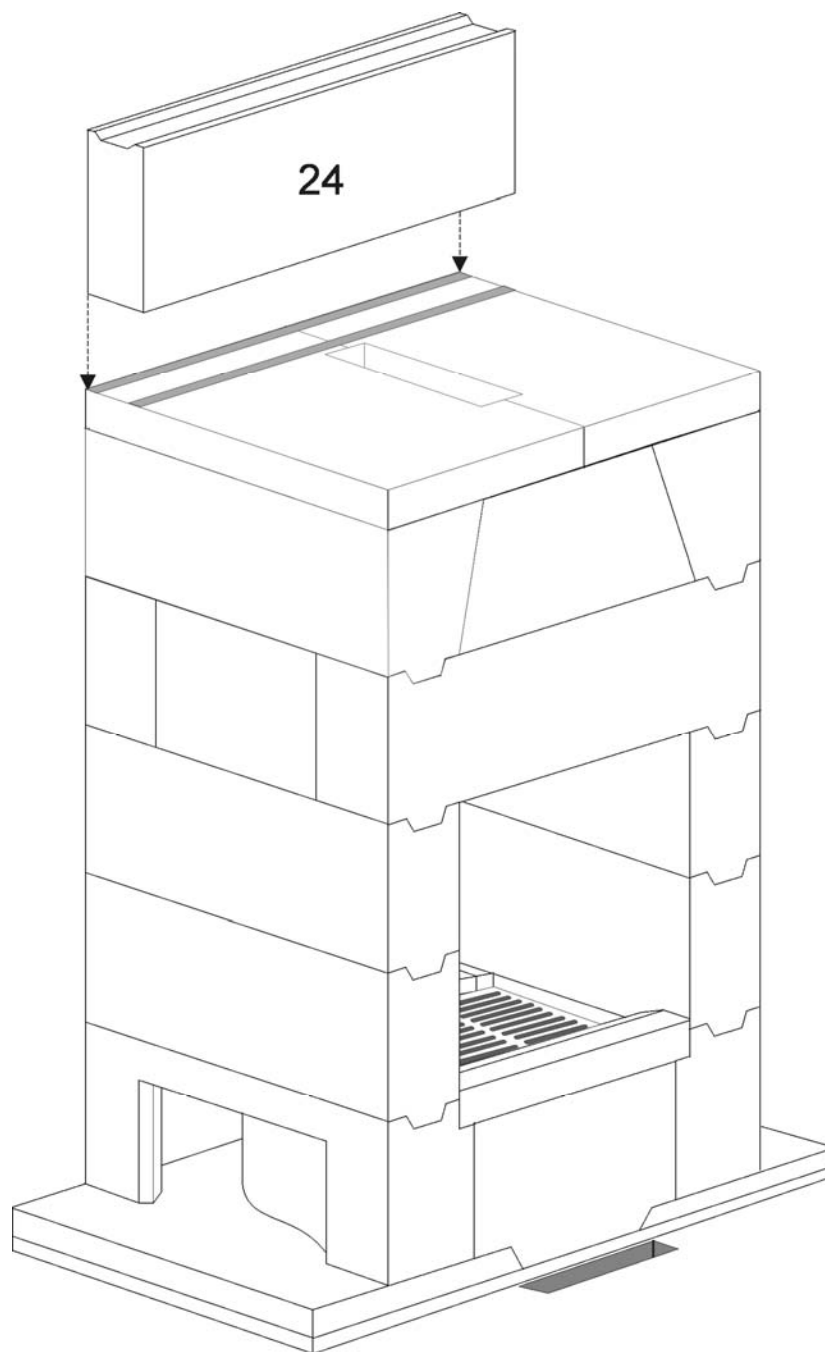


Step 11

STEP 12:

Mortar and place the lower rear wall of the secondary combustion chamber, part #24. (*Note that the bottom edges of the parts on this course are not keyed.*)

Weights
#24 - 66 lbs

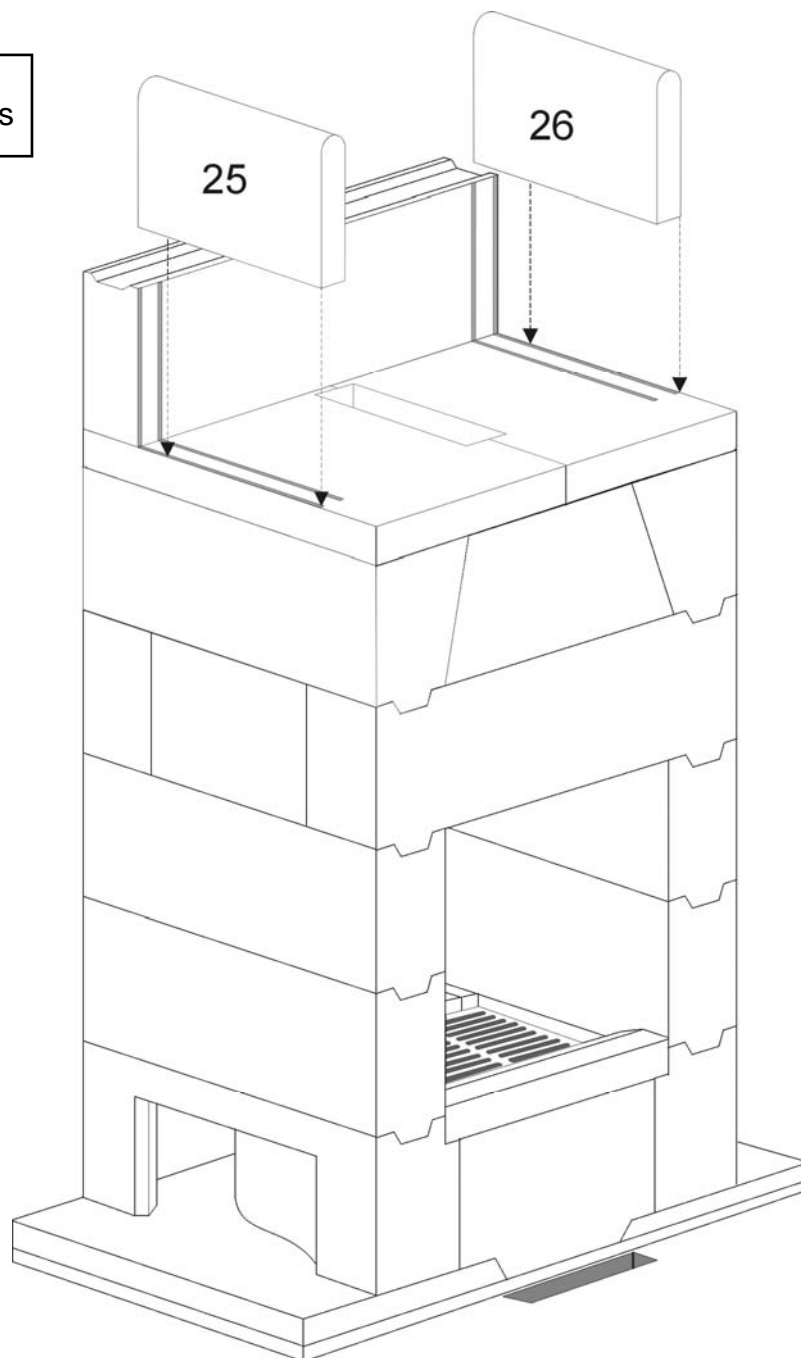


Step 12

STEP 13:

Install the 2 short side walls of the secondary combustion chamber, parts 25 & 26. These parts are not keyed and must be checked periodically to ensure they don't get out of position while the refractory is drying.

Weights
#25 & 26 - 36 lbs



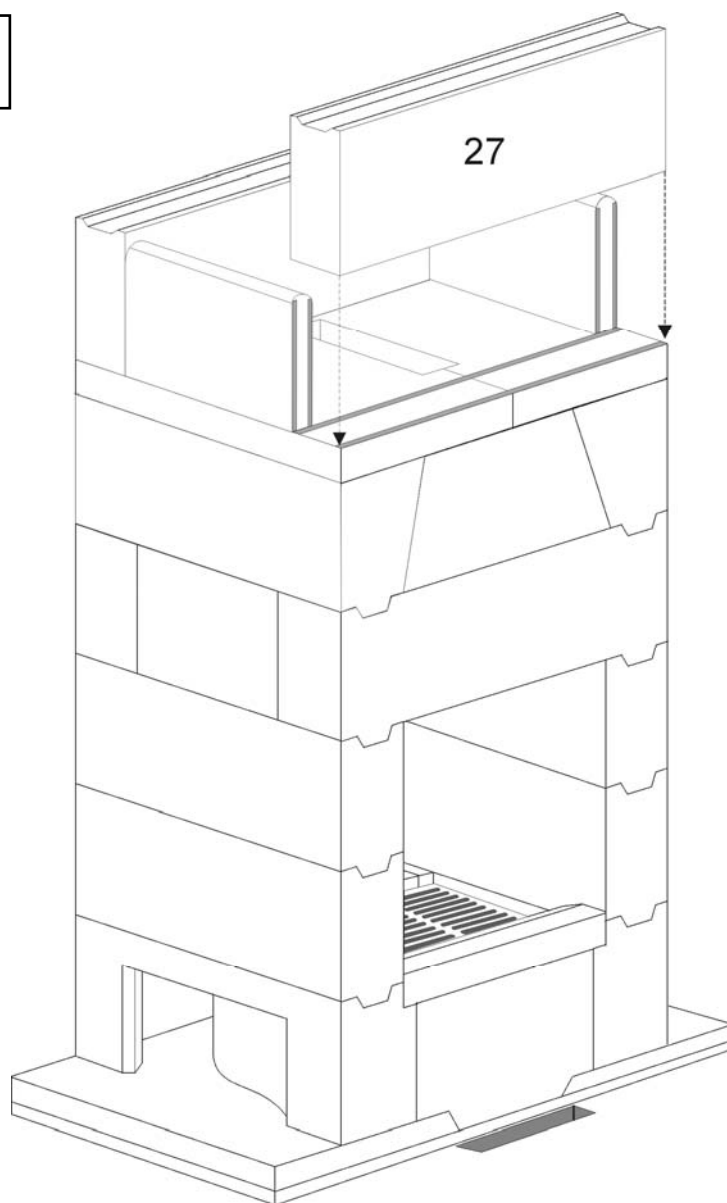
Step 13

STEP 14:

Install the lower front wall of the secondary combustion chamber, part # 27.

Seat this part with the mallet & double-check the position of the side walls - adjust with the rubber mallet as required.

Weights
#27 - 66 lbs



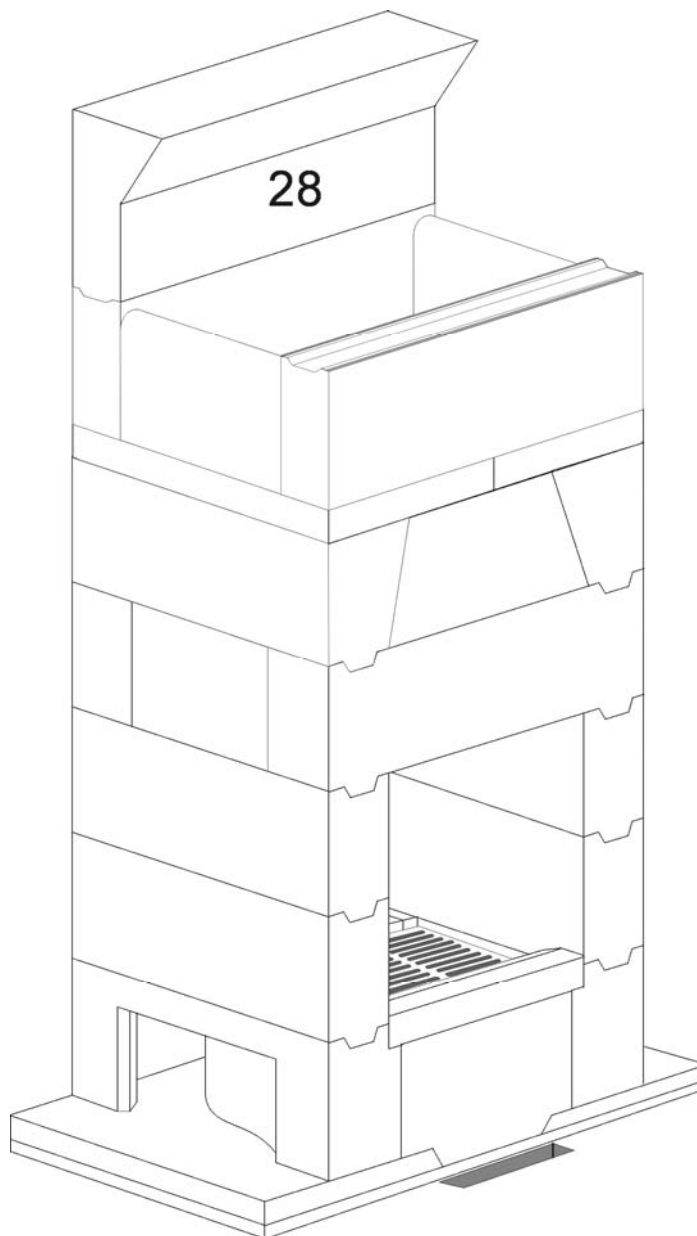
Step 14

STEP 15:

Install part #28, the upper rear secondary combustion wall.

This is also a heavy part and may require 2 people, so that the previous course does get disturbed. Installation is easiest if the bottom of the module is placed first into position and then raised upright. So this part does not tilt inwards, a little extra refractory mortar can be used on the inside edge of the part.

Weights
#28 - 126 lbs



Step 15

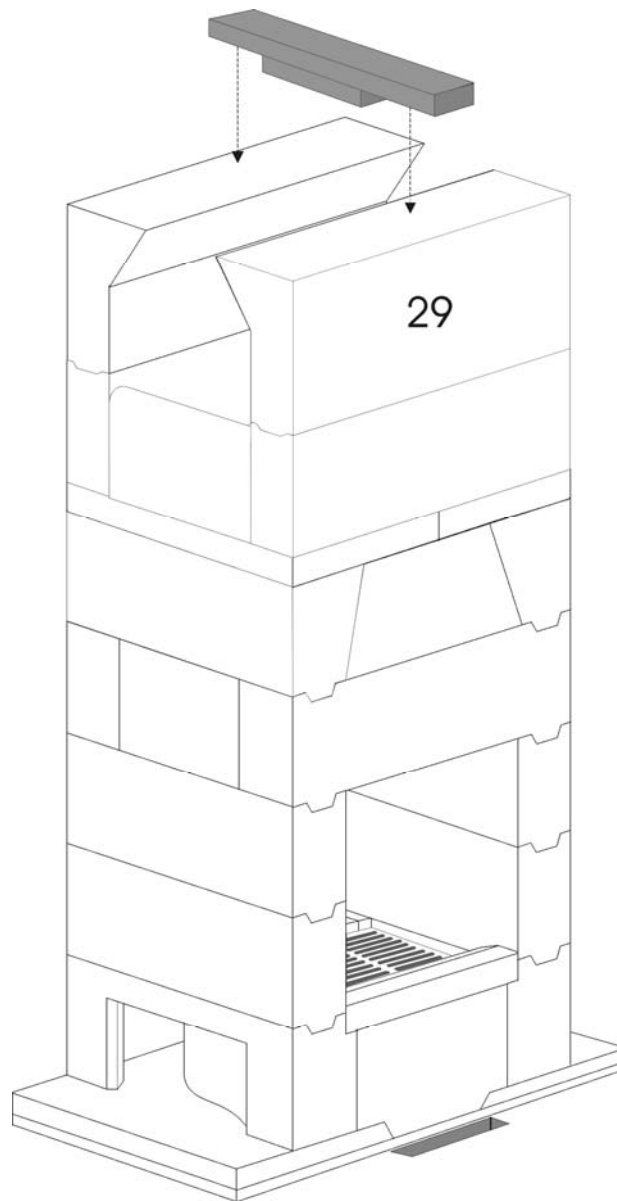
STEP 16:

Part #29 is installed to complete the secondary combustion chamber, forming the front wall.

These 2 upper walls may have a tendency to lean inward while the mortar is setting. Leaning can be prevented by making a simple wood jig. Cut a length of 2x4, 11-7/8" long. This piece will be the "spacer".

Nail this piece to a longer piece of wood. Place the jig on top of the walls, so that the spacer hangs down and prevents the two walls from leaning inward. (This jig can be left in place until Step 20.)

Weights
#29 - 126 lbs



Step 16

STEPS 11 THRU 16: (Bake Oven Installation)

Assemble the Bake Oven parts, in numerical order, as illustrated below. Parts 22B and 23B are laid with a bead of refractory mortar around the outside edges of the parts and seated with the rubber mallet. Use refractory mortar wherever one part joins another, as indicated by shaded areas. (Remember to immediately remove excess mortar and clean the inside with a damp sponge.)

Weights

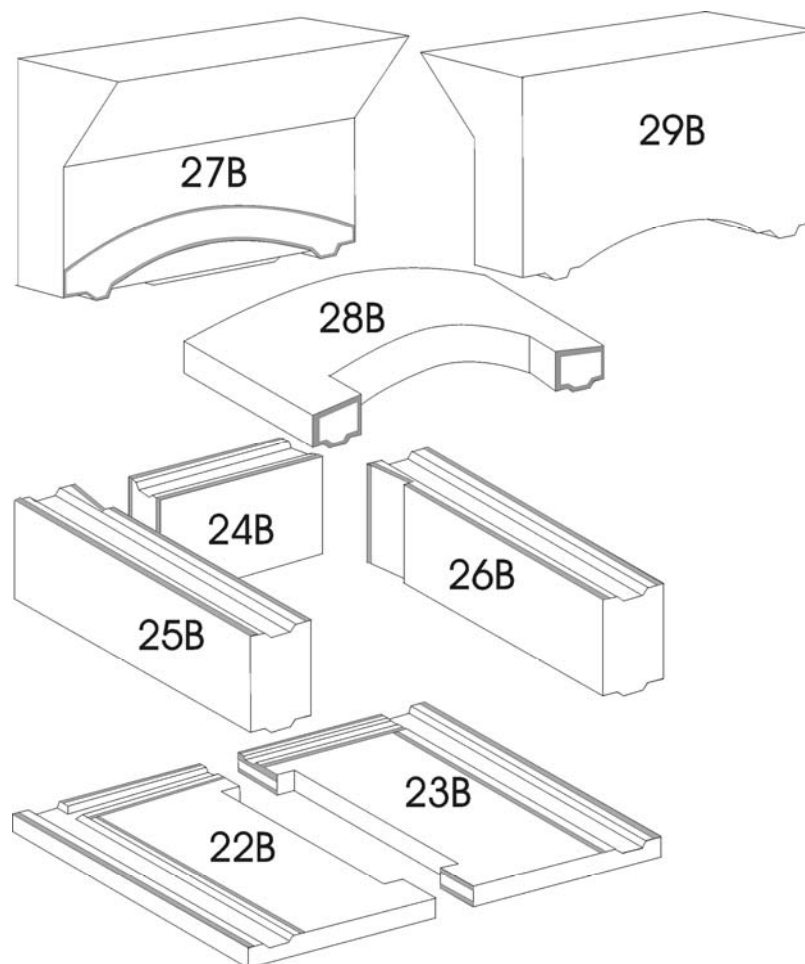
#22B, #23B & #24B - 48 lbs

#25B & #26B - 51 lbs

#27B - 126 lbs

#28B - 100 lbs

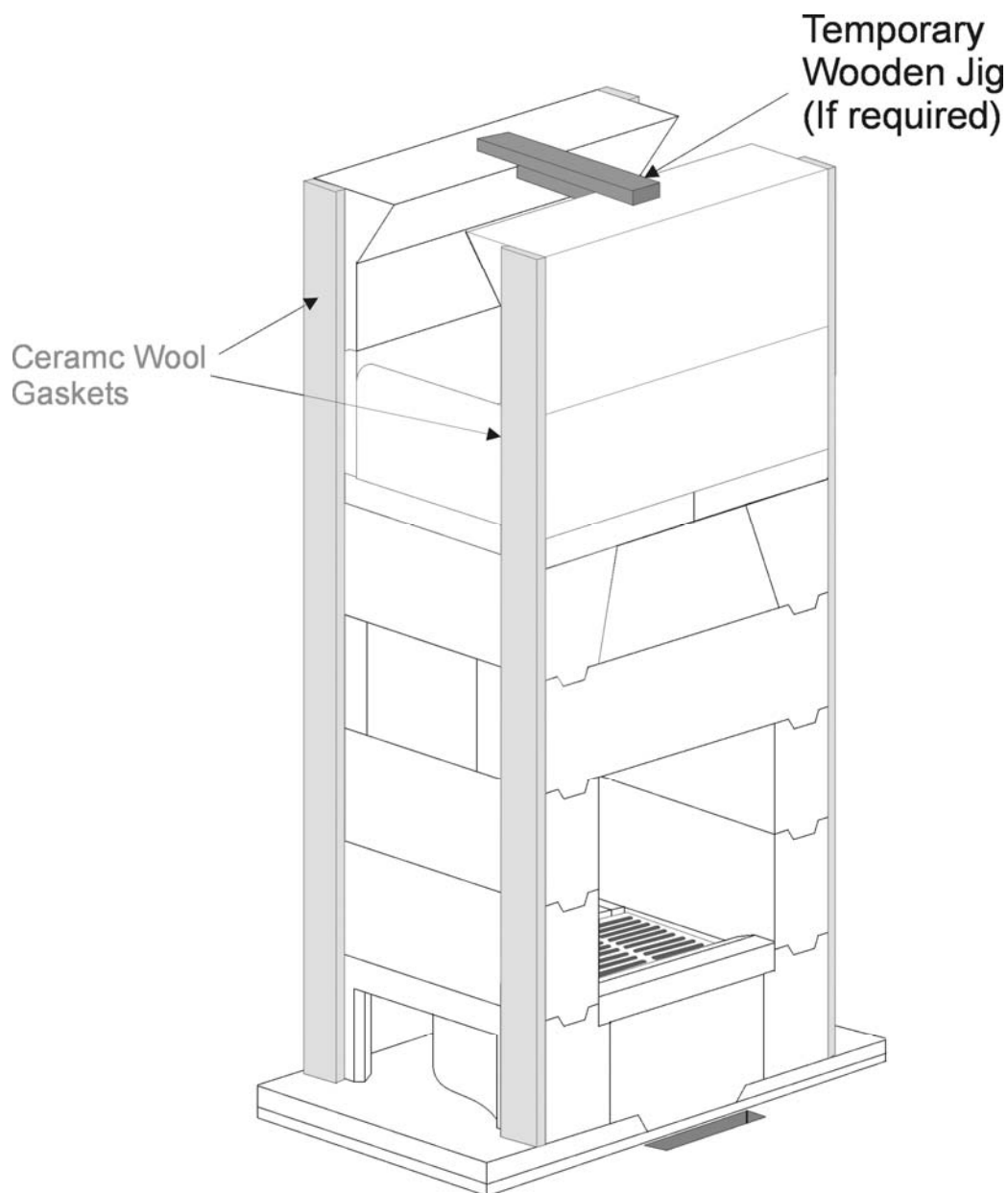
#29B - 114 lbs



Steps 11 to 16
(Bake Oven Model)

STEP 17:

Find the ceramic fibre "Cutting Plan" in Section 6 for the model you are installing. With a tape measure, magic marker & straight-edge, transfer the "Cutting Plan" dimensions & piece numbers to the ceramic fibre. Cut out the four (4) strips marked "3"x72" (Side Channels)" K1 thru K4, and glue them to the exterior of the core as shown below, using five or six evenly spaced small dabs of refractory mortar.

**Step 17**

STEP 18:

If the flue connection is on the *side* of the fireplace, the hole for the flue connector is cut at this point, as shown. (See below for important suggested cutting technique.) (Refer also to Fig. #3 & #4.) (For a **Corner Fireplace**, see page 31, for Steps 18 to 20.)

Dry assemble the lower heat exchange channels, #30 & 31, and mark the location of the flue hole. The hole in the heat exchange channel should be cut as tightly as possible, up to about 1/4" larger all around than the flue tile.

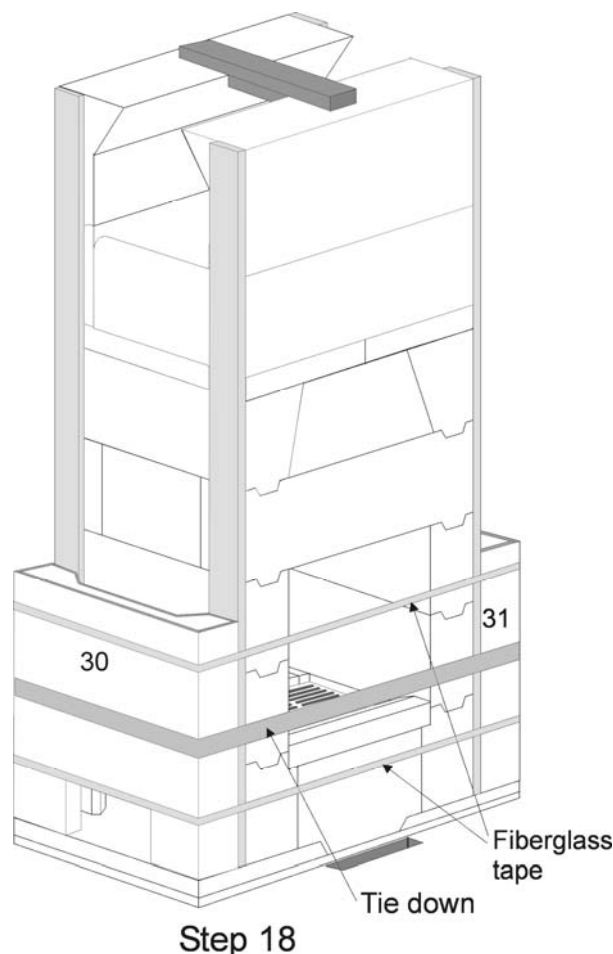
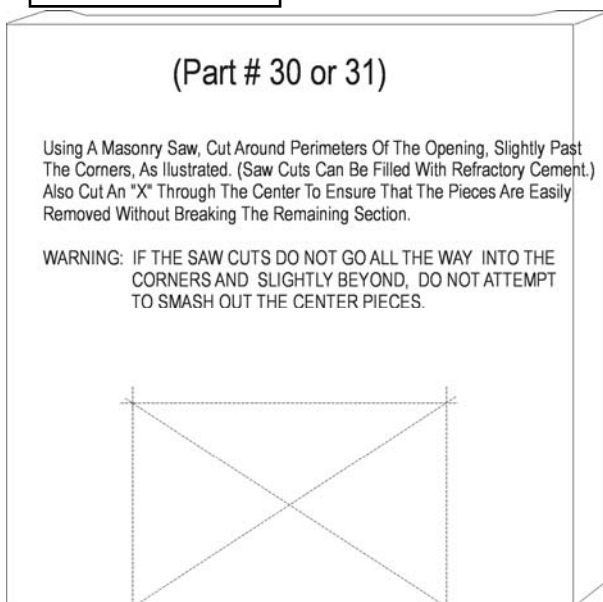
In addition, cut a 6" x 6" hole in the opposite heat exchange channel, on the non-chimney side, for a soot cleanout door. Align this hole with the centre of the cross manifold, part # 3. (If a **rear** chimney connection has been made, the second soot door may be installed on the **opposite** side channel, to simplify inspection and cleaning from both sides. Both soot doors should align with the centre of the cross manifold. A third cleanout door will be needed for the base of the chimney.)

The transition from fireplace to flue connector should be as smooth and rounded as possible, so that the smoke does not encounter any corners or ledges as it enters the flue connector. (Refer to Fig. 8.)

Ensure that the ceramic fibre strips have been applied to the core walls. Now position the first 2 heat exchange channels, using refractory mortar on their bottom edges only.

Use a "tie-down" or web clamp around the 2 channels to slightly compress the ceramic fibre. Secure the channels with 2 bands of packing tape, then remove the tie-down.

Weights
#30 & 31 - 95 lbs

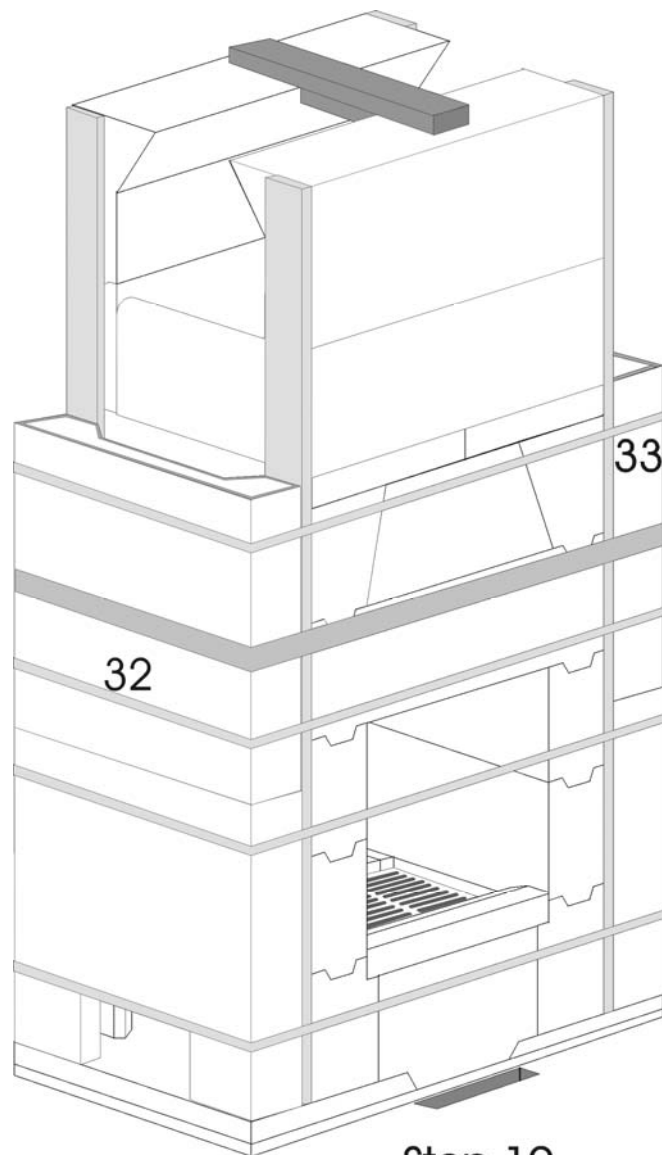


STEP 19:

Set the middle heat exchange channels (#s 32 & 33) in place, using a *thin* joint of refractory mortar between channels. (*If mortar squeezes out on the **inside surface** of the heat exchange channels, wipe it off. Keeping the mortar back from the inside edges will prevent having to reach in to wipe off excess mortar from this area.*)

Slightly compress the ceramic fibre using the tie-down and secure these two channels with 2 bands of packing tape, as illustrated. (The packing tape can be left in position when the facing is being applied and then any visible tape can be cut out.)

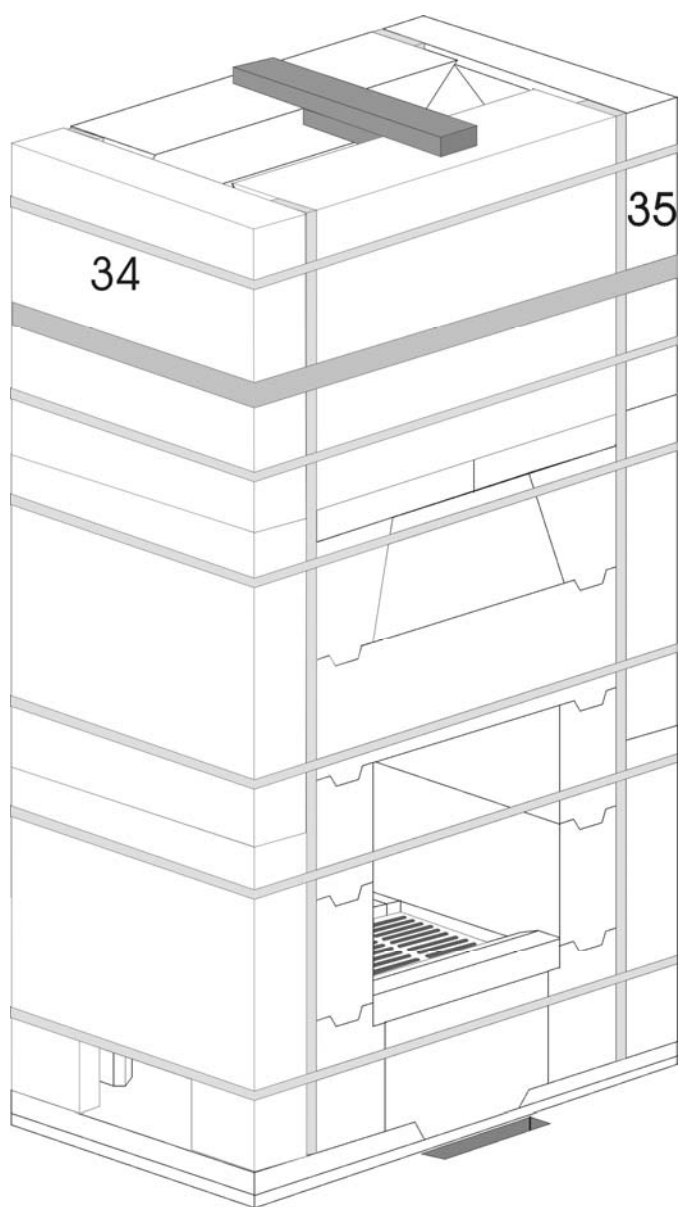
Weights
#32 & 33 - 95



STEP 20:

Install the upper heat exchange channels, #34 & 35. Note that these are slightly different than the other 4, with a transition formed on the inside upper surfaces, and an enclosed top.

Use a thin refractory mortar joint between these and the previous channels and secure these parts with the tie down and packing tape. (Remove the temporary wood support jig.)



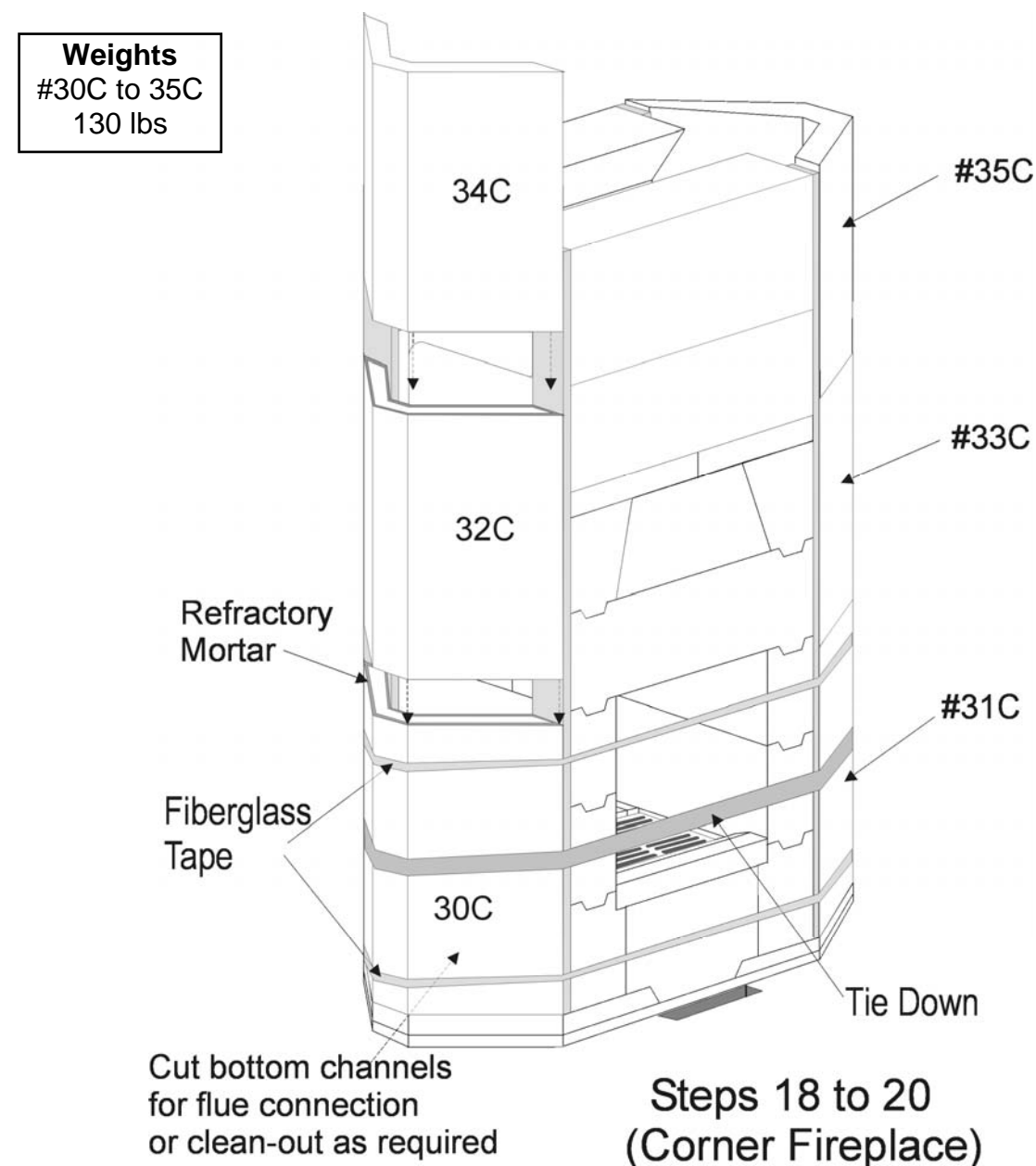
Step 20

STEPS 18 THU 20: (Corner Fireplace)

If the chimney connection is to be made in the side of the fireplace, dry assemble the first corner channel and mark the location of the flue hole on the designated surface. Mark a location for a clean-out (soot) door on the opposite channel. Cut these holes in the outdoors.

Re-assemble the first two corner channels, using a little refractory on their bottom edges. Use a tie down and 2 bands of packing tape or fiberglass-reinforced tape around each pair of channels - so they do not fall during the next few steps.

Continue with the other four corner channels, using refractory mortar between them. Secure each pair of channels with 2 bands of packing tape or fiberglass re-enforced tape as they are installed.

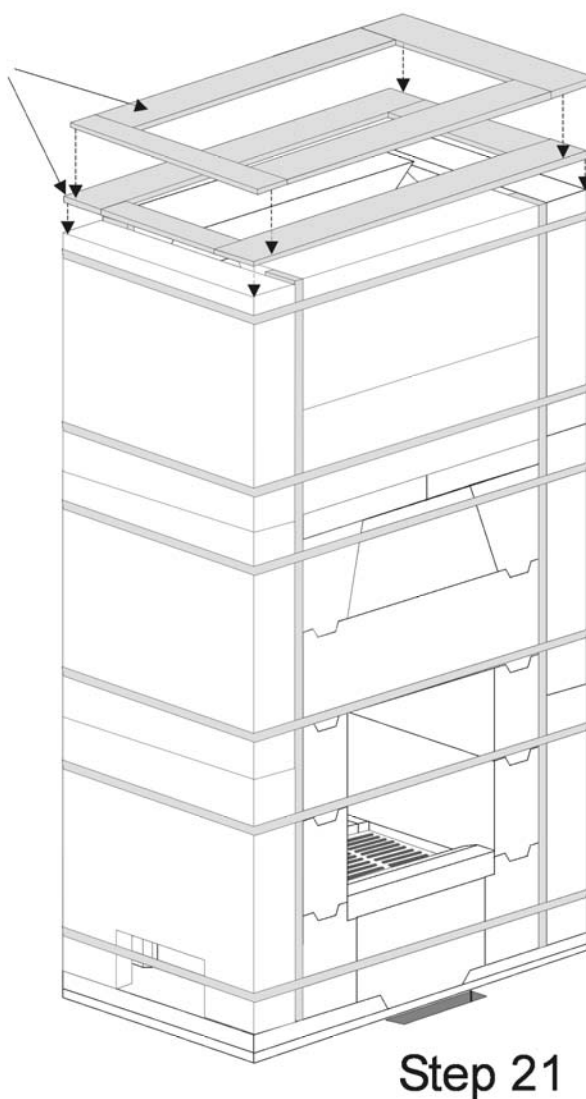
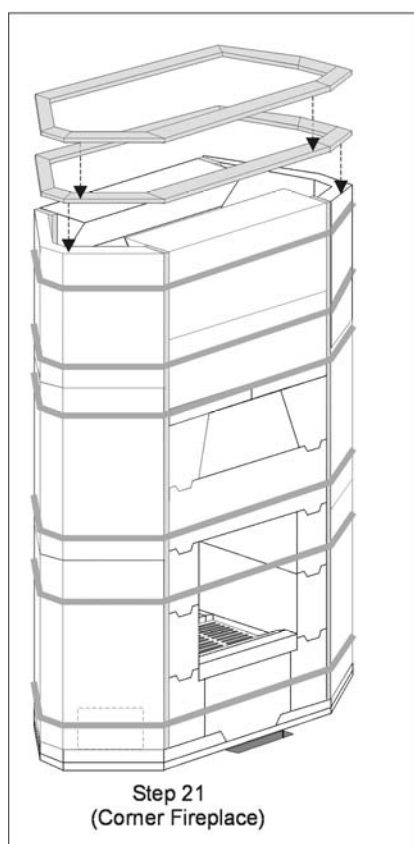


STEP 21:

Install a gasket of strips of ceramic wool to the top of the fireplace, as illustrated below. (A few spaced dabs of refractory mortar can be used to keep gaskets in place.)

On bake oven models, an extra strip should be installed front and rear to bring the center up to the same level as the top of the side channels (see note below). Install the remaining strips, as illustrated, using a **small** dab of refractory mortar to hold them in place. Trim the strips as required for a snug fit. (*Corner fireplace gaskets are placed with the same over-lapping principle in mind.*)

Use double gasket of
ceramic wool on top
& stagger gasket joints



STEP 22:

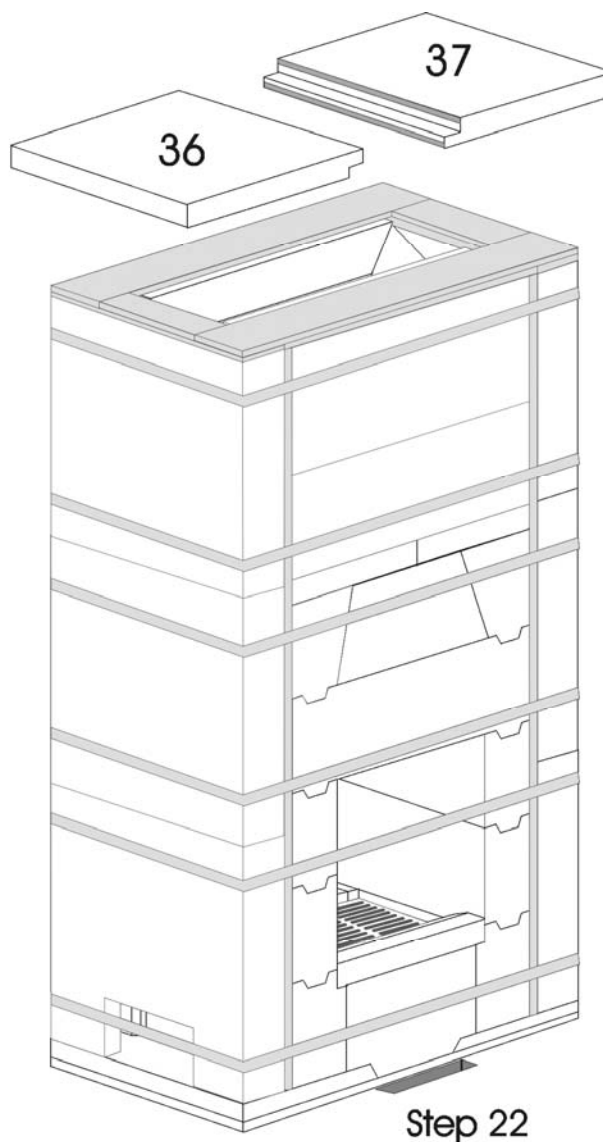
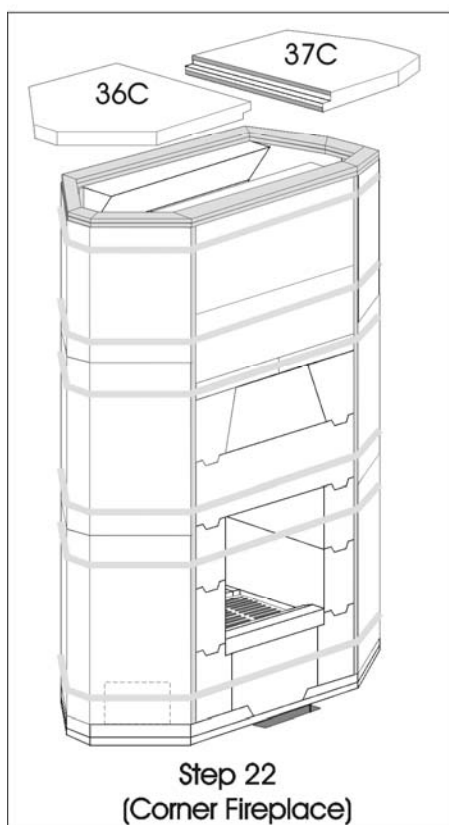
Place the two halves of the fireplace lid on top, using a refractory mortar between them. (*The smoothest side should be placed down - the parts are interchangeable left to right.*) Note **that no mortar** is used between the lid and the ceramic gasket.

Since the lid is slightly smaller than the top of the fireplace, an equal amount of space should be left all around.

Weights

#36 & 37 - 80 lbs

#36C & 37C -95



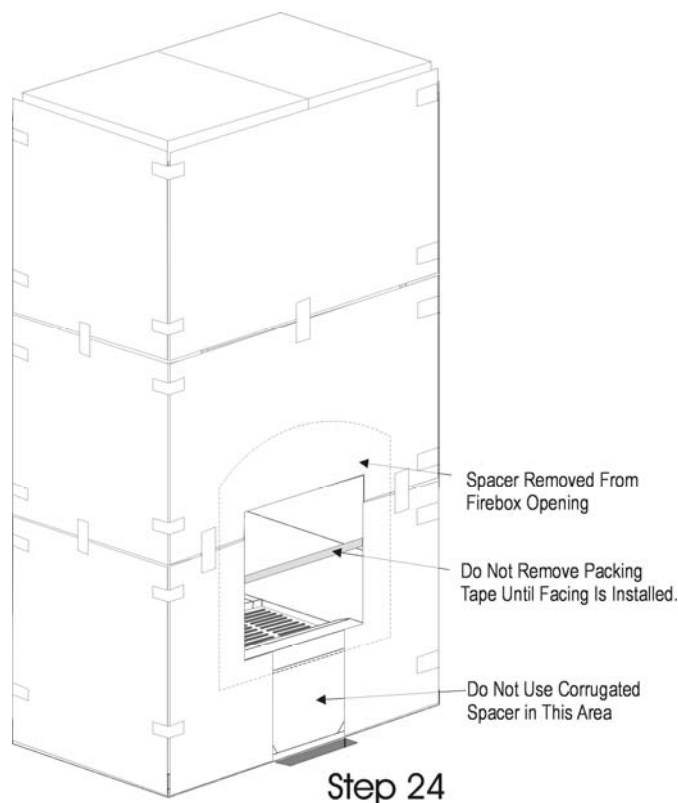
STEP 24:

Remove the “tie-downs”, **but leave the tape in place.** The heater now needs to be completely wrapped with the corrugated spacer supplied, but openings for fire-doors, bake-ovens, air doors and cleanouts may have to be pre-cut, so that the packing tape is not inadvertently cut.

To pre-cut the opening for the firebox, lay 2 pieces of corrugated spacer on the floor, with their longest sides butting. Measure up from the bottom of the spacer $13\frac{1}{2}$ " and draw a horizontal line across the spacer. Measure over 6" from either side edge and draw a vertical line at this point. Remove the door from the frame and place the frame on the spacer, using the two lines drawn to position the bottom and left edges of the frame. Trace around the entire frame and then remove the frame. Cut the spacer approximately **$\frac{1}{2}$ " larger** than the traced line on all sides & remove the piece.

Place these 2 cut pieces on the front of the heater, starting at the bottom. Continue with other pieces of corrugated spacer around the heater, but pre-cut any holes for cleanouts, air doors, bake-ovens etc using the same technique as the firebox doors, to prevent cutting the packing tape. (*When installing the cardboard on the back side, it may be helpful to cut the cardboard vertically **part-way** through where it covers the ends of the side channels – this will help to prevent any air gaps from being created in these areas.*) Tape the spacer in place. (*For corner units, a flexible “coreflex” spacer is supplied. Wrap this around the heater twice to get the correct thickness.*)

Also cut out a section of spacer in the area of the air intake slot, directly under the firebox, as illustrated.



SECTION 4: DOOR FRAMES & FACADE

THE DOOR FRAME FLANGE:

The Temp-Cast “arched” door system was designed so that a standard 4" brick, with a nominal thickness of 3.75", could be easily installed behind the door flange. However, since brick sizes vary greatly across North America, masons often cannot find a suitable brick in these dimensions. In addition, natural stone and rock often cannot be found in these dimensions.

FACADE/ FLANGE OPTIONS:

The following techniques will allow thicker facades to be concealed behind the door flange.

FOR FACADES UP TO 4.25" THICK:

Glue an extra layer of 1/2" ceramic fibre between the door frame and the heater core, on top of the standard 1/2" layer. When slightly compressed, this extra layer will provide up to 3/8" additional space behind the door flange. (Refer to Fig. 11)

FOR FACADES OVER 4.25" THICK:

For facades more than 4.25" thick, a “row-lock” bond can be employed, in which half-bricks are cut to approx. 3" and laid around the door frame, fitted behind the flange. Thicker facade materials can then be laid up next to these row-lock bricks. (See Fig. 11a)

Alternatively, attach fire-brick “splits” around the door frame opening with refractory mortar, before the ceramic wool is applied. These splits, up to 1.5" thick, increase the space between the core and the flange, allowing for a thicker facade material to fit behind it. (In all cases, increase the combustion air space under the door by the thickness of the added splits - e.g. cut an extra 1.5" from the facing under the door if 1.5" splits are added.)

FIG. 11

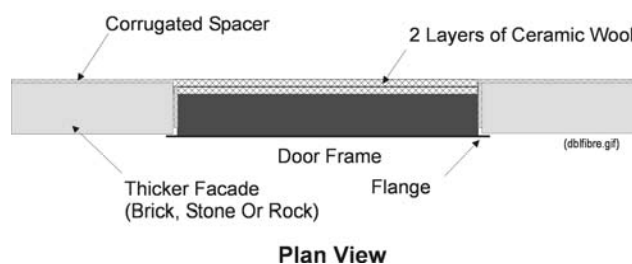
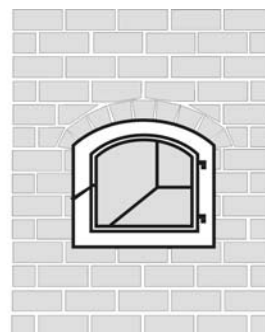
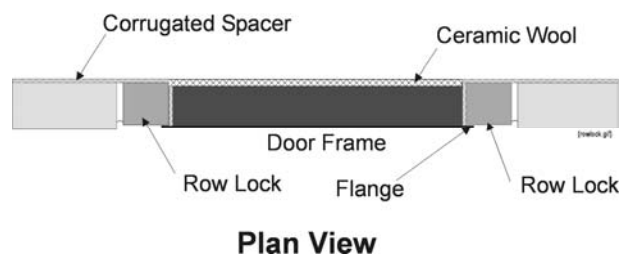
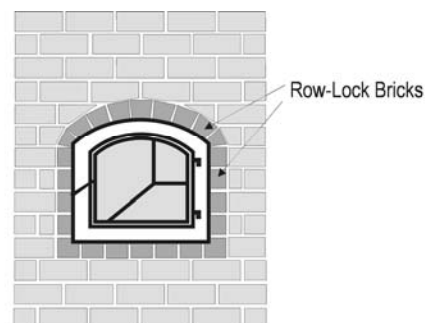


FIG. 11A



INSTALLING ARCHED FIRE DOORS

Although experienced masons may use a different technique to attach the arched door frame, the following method ensures two critical points:

- The finished door frame **MUST NOT** be **permanently** attached directly to the core. This will ensure that the frame is isolated from the thermal expansion of the refractory. (See Fig. 11b)
- Air slots in the bottom of the frame and in the concrete floor pad are **properly aligned & unobstructed**, as in Fig. 12.

(Note: rear doors on a See-Through Fireplace are positioned **slightly higher** than the front doors - about 1.5". Refer to Fig. 16)

The door frame position can be adjusted up or down slightly to accommodate the facade, so that the frame will sit on top of a masonry or stone course. **However, ensure that the door frame still covers the firebox opening, particularly on the top, in the case of an arched frame.** (See Fig. 13)

ARCHED FIRE DOORS - Step One

Remove the doors from the frame and set them aside. Position the door frame on the core so that the slope of the bottom inside edge of the frame (i.e. the "sill" of the door frame) and the slope of module # 10 form a nearly continuous angle, as in Fig. 12.

Level the frame and make a pencil mark on the cardboard spacer along its bottom edge.

To keep the door clean, it can be removed from the frame and installed when the facing is completed.

Fig 11b

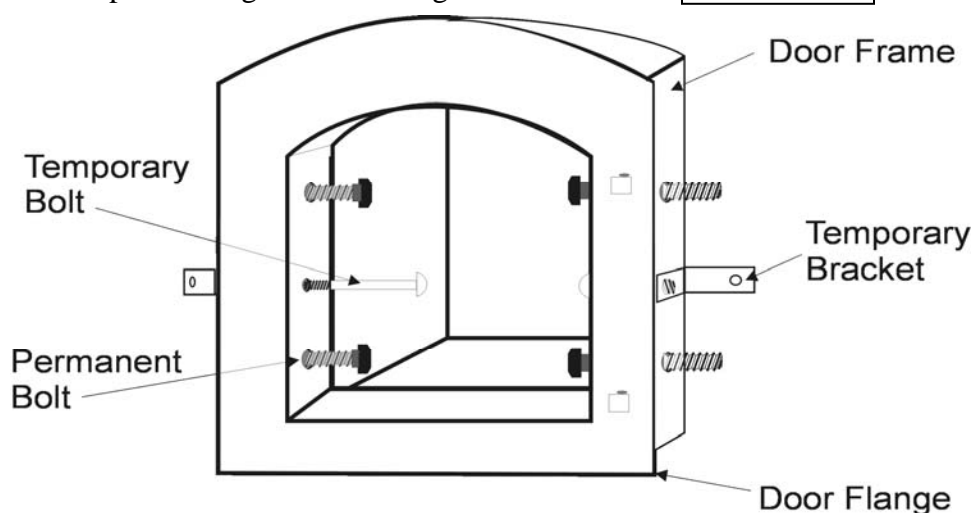
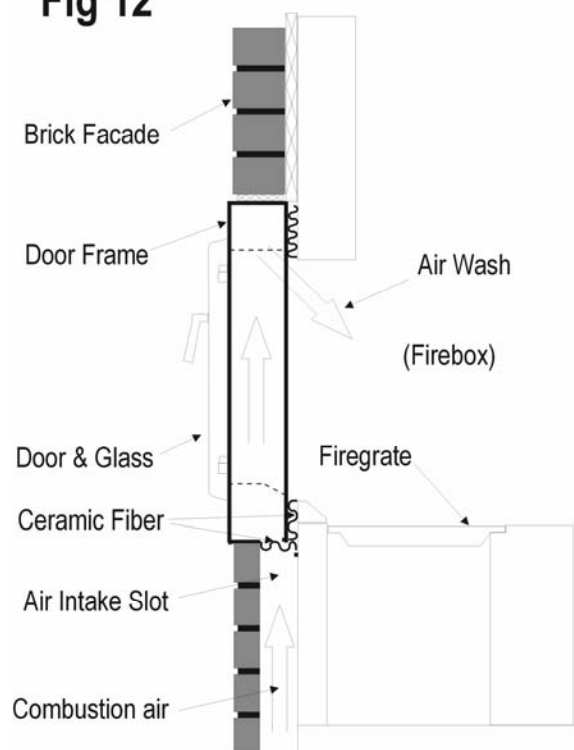
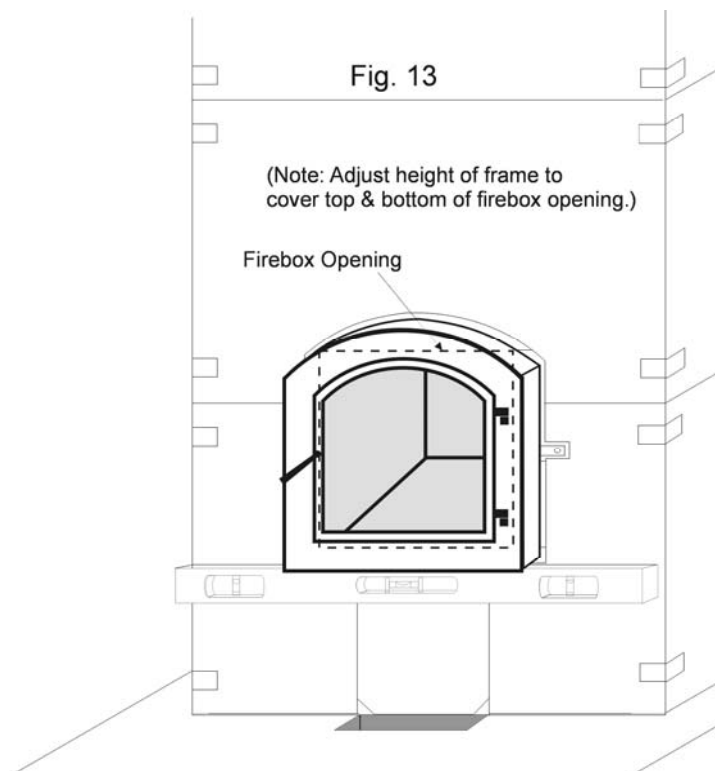


Fig 12**Fig. 13**

(Note: Adjust height of frame to cover top & bottom of firebox opening.)

Firebox Opening



ARCHED FIRE DOORS - Step Two

Build up the masonry facade to the **bottom** of the firebox door, *while maintaining a 2"x15" air slot under the door*. Adjust the height of the door frame as needed to suit the masonry courses, ensuring the frame still covers the firebox opening. Trace the frame on the cardboard spacer.

Using a small amount of refractory mortar, glue a 3" wide strip of ceramic wool to the face of the core where the cardboard was removed. (e.g. *Pieces K13 thru K15 on the ceramic wool cutting plan*). Also glue a strip of ceramic fiber on the top of the last masonry course, ensuring that the air slot in the bottom of the door frame is not obstructed.

Place the door frame in position & brace it firmly with a length of 2x4 wedged under the one of the hinges & nailed to the floor. A second 2x4 can be braced under the upper door opening. (Alternately, the frame is fitted with 2 small brackets, which can be used to temporarily secure the frame to the core with the "tap-con" screws supplied.) **NOTE:** ensure that the ceramic gasket is slightly compressed, **but not crushed**.

WARNING!

*It is important that the ceramic fibre be slightly compressed **and** glued in place, so that it cannot fall out. This will ensure that live embers cannot fall into the space between the door and the heater core, or into the air intake and create a potential fire hazard.*

No combustible materials should be installed in the foundation or under the foundation, due to the potential fire risk!

Cover the door frame to keep it clean for the rest of the installation. Continue to Step 3.

IF THE FLANGE WILL NOT COVER THE FACADE:

If the masonry facade **will not** be hidden behind the door flange, care must be taken to ensure that **an expansion gap** is created between facade and door frame.

Glue a 3" strip of ceramic wool (*pcs K13 thru K15*) onto the core where the cardboard was just removed. Also place one or two strips of ceramic wool fiber on top of the masonry course, so that air cannot leak into the fire box from under the door frame.

Care must be taken to ensure the air slots in the bottom of the door frame are not obstructed. Place the door frame in position & bolt it or brace it with 2x4s. The bottom flange of the door frame rests on the masonry.

(Note: **do not** remove the factory-installed cardboard "coreflex" gasket from around the door frame!)

Continue with Step 3. *However, ensure that an expansion gap of about 1/8" (3mm) is left between the masonry and the **side** and **top** flanges of the door frame.* (See Fig. 14)

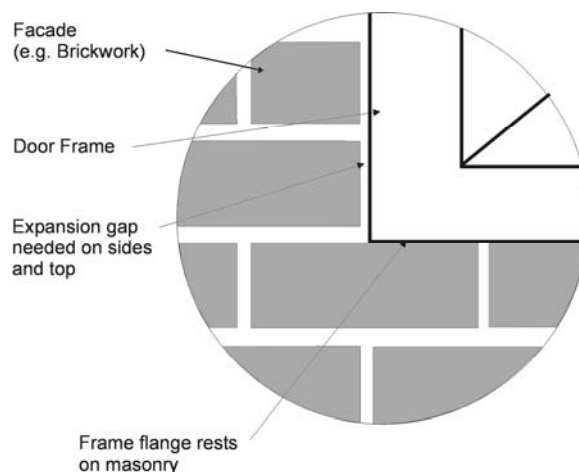


Fig 14

ARCHED FIRE DOORS - Step Three

Continue with the masonry facade, up to the level of the first permanent bolt attachment. Insert the four permanent bolts into the frame.

Chip or cut the brick or other masonry, so that a cavity is created around the area of the bolt. (Refer to plan-view illustration, Fig. 15)

Continue raising the facade, filling the space around the bolt with mortar, tight to the "coreflex" spacer.

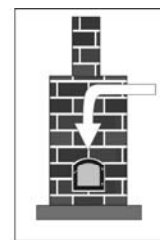
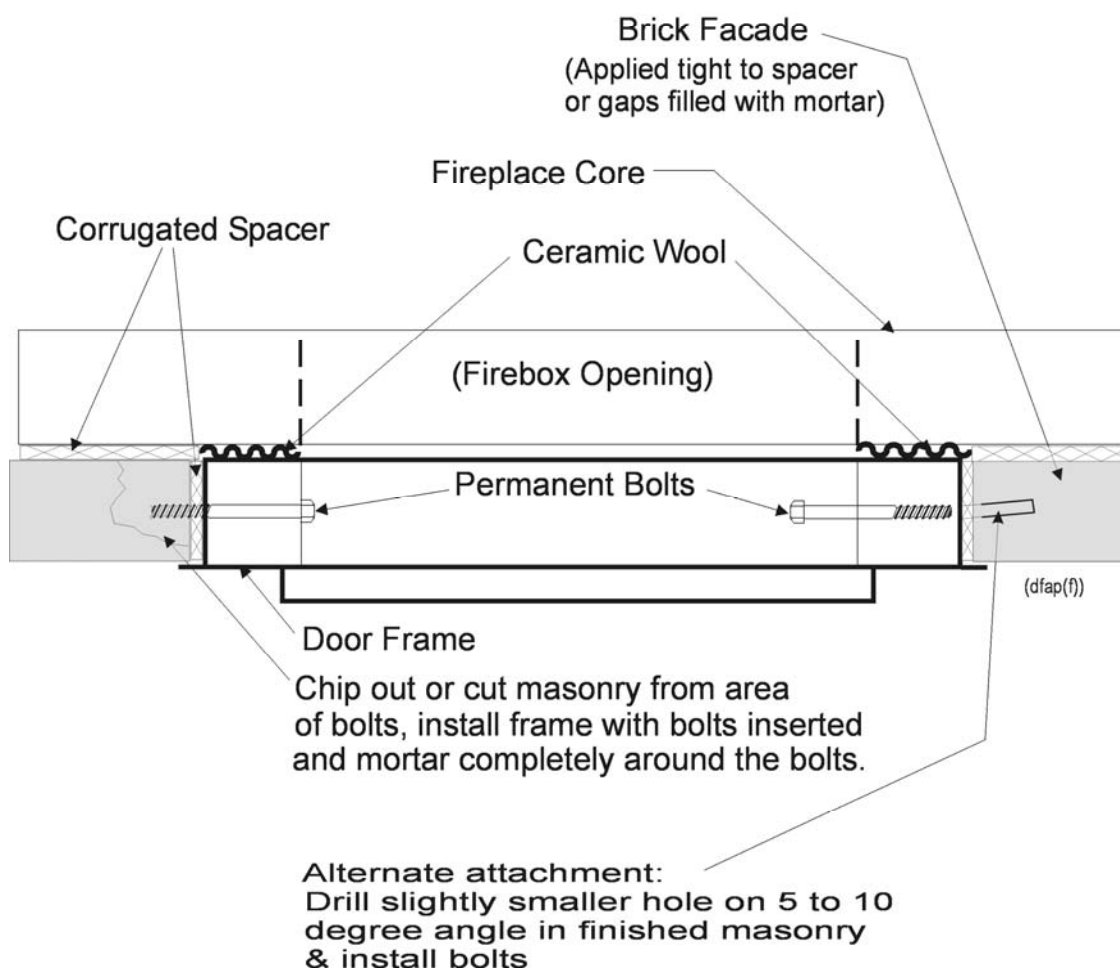


Fig. 15



ARCHED FIRE DOORS - Step Four

When the facade is complete and the masonry has fully set, **remove the 2 temporary bolts from the frame.** (If the 2 small brackets were used, this will detach the frame from them.) The door frame is now independent of the fireplace core and will not be affected by the thermal expansion of the core.

Replace the doors on the frame and check for proper fit and operation.

ALTERNATE ATTACHMENT METHOD

If cutting or chipping masonry around the bolts is not possible, an alternate (but more difficult) attachment method can be used. (See Fig. 15.)

Remove the 4 **permanent** bolts from the door frame. Build the facade around the door frame (or around the flange, as the case may be) and complete the masonry work.

When the masonry work is fully set, (i.e. after 1 or 2 days) make a mark on the masonry where the 4 bolts will go, using the bolt holes as a guide. **Care must be taken at this point so that the threaded holes on the outside of the frame are not damaged.**

Now unbolt the frame from the 2 temporary brackets and take the door frame out. (If the "coreflex" spacer comes out with the frame, replace it before the frame is re-installed.)

Using a masonry drill of the same thickness as the permanent bolts, drill holes into the masonry at the marks made earlier. These holes should be at least 1" (25mm) deep and on a slight angle (*about 5 degrees*) towards the firebox. (Fig. 15)

Re-install the door frame and attach with the four permanent bolts - the slightly angled holes will draw the frame tight to the

ceramic wool gasket. (***Do not re-bolt the frame to the temporary brackets.***)

AIR SUPPLY DOORS

If an air supply door is to be installed, its frame is installed in the facade when it reaches the desired height. (See Fig. 1b). The installer can use mortar, lead anchors or "tap-con" screws to secure the door frame.

CLEAN-OUT DOORS

Similarly, clean-out (soot) door frames are installed when the facade reaches the height of the clean-out holes in the heat exchange channels. The soot doors should be located on both sides of the heater, at the bottom of both heat exchange channels, in line with the cross-manifold, Part # 3.

When a side chimney connection is made, one of the two clean-out doors should be placed at the bottom of the chimney, so that the bottom of the heat exchange channel on that side can also be accessed from the same door. In the case of a rear chimney connection, a third clean-out door will be required for the chimney itself. (Standard chimney clean-outs are available at brick supply yards or a third Temp-Cast clean-out can be ordered.) Cover all door frames immediately after installation to keep them clean.

INSTALLING "See-Through" DOORS

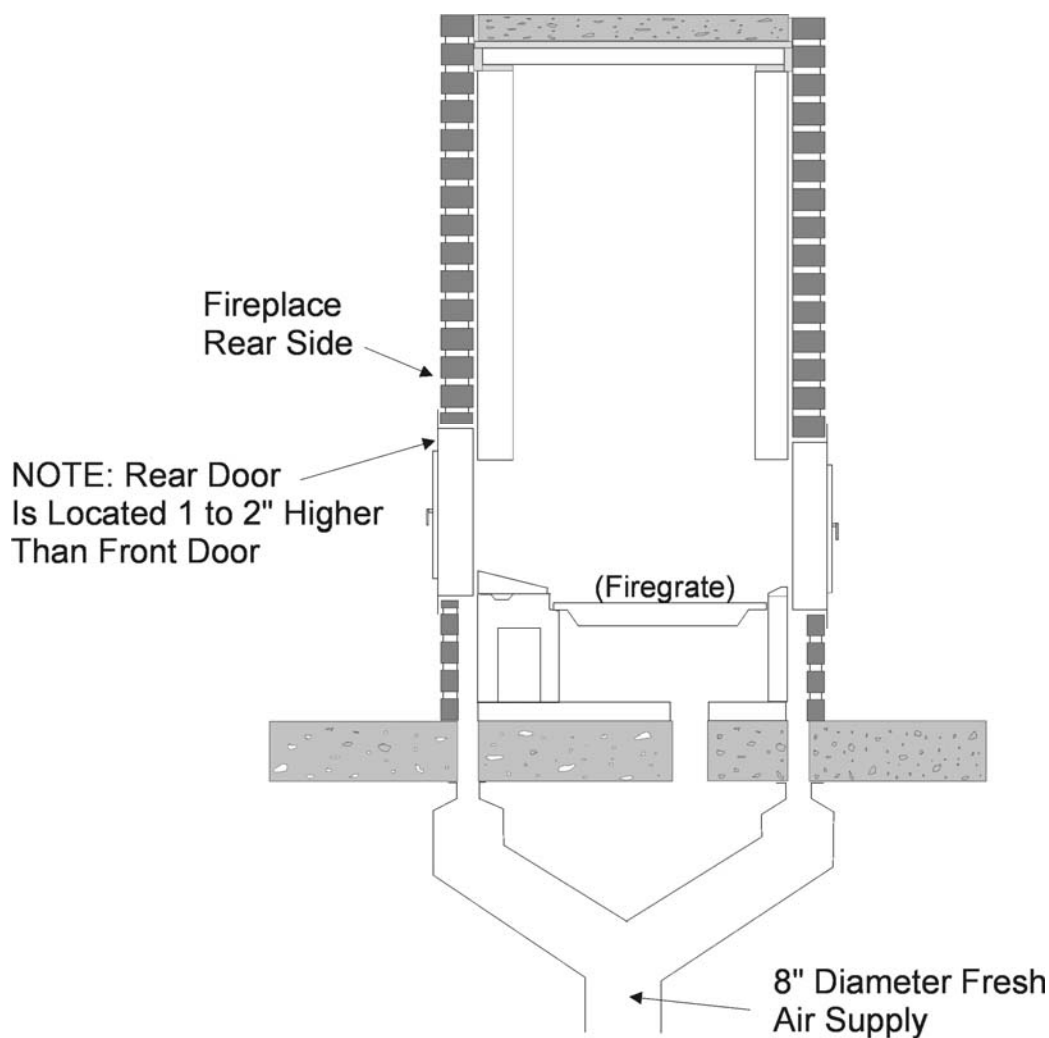
The installation of a second set of fire doors for a "See-Through" Fireplace will follow the same steps as previously detailed.

However, the finished height of the rear doors will be about 1.5" (380mm) **higher** than the front doors. *(Refer to Fig. 16).* This dimension can be adjusted down a little, but care must be taken so that the door frame is sealed against the ceramic gasket **on all four sides** of the firebox opening and a reasonably smooth transition from the door

sill to Part #7ST results. *(It is important that air enters the firebox only from the slots in the top of the door frame.)*

In addition, the installer must ensure that half of the 8" dia. combustion air supply is fed to the second door, and that an identical 2"x15" air slot is created behind the facade, under the door frame, on the rear side of the fireplace. *(Without this provision, the rear doors will not have an air wash and will become dirty.)*

Fig 16



INSTALLING SQUARE FIRE DOORS

The Temp-Cast *square door* system installation differs from the *arched door* installation. In the *square door* system, air delivery and air wash is created with an *air deflector*. In addition, a 1/4" angle iron lintel must be used over the square door to support facing materials.

Although experienced heater masons may use a different technique to attach the doorframe, the following method ensures three critical points:

- The doorframe **MUST NOT** be attached permanently to the refractory core. (Thermal expansion of the refractory core and the door may cause lifting or cracking of the facing material.)
- The air deflector must be correctly positioned to channel the air from the air slot into the bottom of the door glass **and** into the firebox, as in *Fig. 16a*.
- The doorframe must **completely** cover the firebox opening.

STEP ONE

Installation of the Temp-Cast square door system can begin after the refractory core has been assembled and the corrugated spacer attached.

Cut the corrugated spacer from the firebox opening and remove the spacer from the area under the door, where the air deflector will be installed. (See *Fig. 16a*)

STEP TWO

Place the air deflector in position as shown in *Fig 16a*. It should rest on top of part #10 & be centered in the opening over the air slot. It should be installed tightly to the outside of the core.

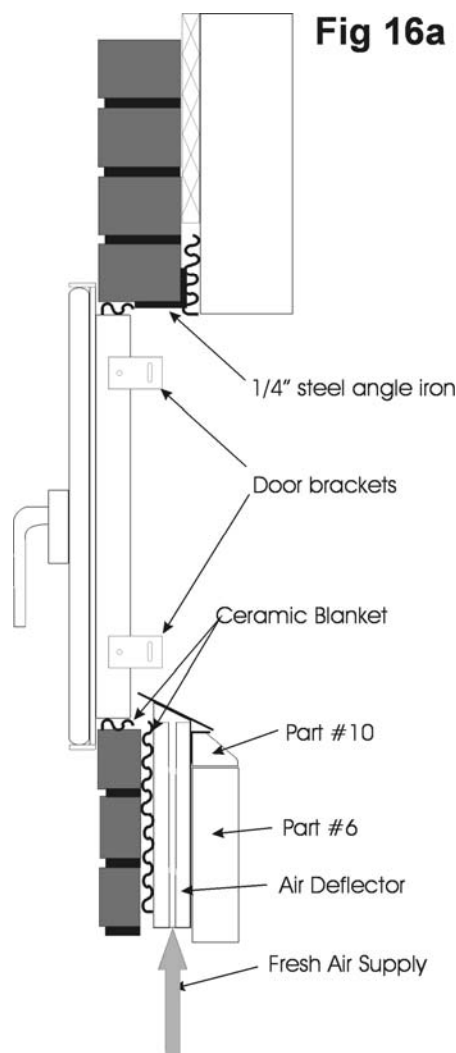
STEP TWO

Using the door as a template, trace it's position onto the corrugated spacer, ensuring that the door completely covers the firebox opening. In addition, ensure that the door and air deflector are positioned so that air is directed onto the glass near the bottom of the door.

STEP THREE

Measure 2" in from the previously traced door line, towards the firebox opening, on all four sides. Cut away this strip of corrugated spacer.

Using a small amount of refractory mortar, glue a 2" strip of ceramic fibre to this area.



STEP FOUR

The facing material can now be applied, up to the bottom of the door. The façade should be planned so that the firebox opening will be approx. 1" bigger than the inner flange of the door frame – creating an opening of approx 18 ½" high and 20 ¾" wide. (This ½ " space will eventually be filled with ceramic fibre to create an expansion & smoke gasket.)

(Note: follow the guidelines for installing the facing material, as described in the section "INSTALLING THE FACADE")

In addition, a ¼" steel angle iron must be used as a lintel to support the masonry over the door. Note the placement of ceramic fibre around the doorframe and the steel lintel, in order to create expansion gaskets. **The ends of the angle iron must also be wrapped with ceramic fibre, so that horizontal expansion of the angle iron will not affect the facing material adjacent to the ends of the lintel.**

STEP FIVE

Lay a strip of ceramic fibre on top of the last course below the door opening & position the door in the opening, resting on the ceramic fibre.

The door is attached to the facing material (never to the core), using the brackets provided. When using brick or block facing, the attachment bolts can be laid in a mortar joint, or the back of the brick or block can be cut & re-filled if a mortar joint is not convenient. (The

bracket has a slot for the bolts, so in most cases it can be moved to line up with a joint.) When using other materials, which cannot be easily cut or chipped (such as river rock), then joints will have to be more carefully planned to line up with the slots in the brackets. (Alternately, another hole could be drilled in the frame to move the bracket in line with the rock joints.)

When the facing material is complete, **loosely** pack some ceramic fibre between the doorframe and the facing on the remaining 2 sides and the top, to act as an expansion gasket and smoke break. (It should be **slightly** compressed, but do not pack the ceramic fibre tightly into this opening, which will prevent the gasket from compressing as the door heats up. A small amount of refractory mortar can be used to hold the gasket in place, applied to the **firebox** side of the gasket.)

SEE-THRU DOORS

The installation of a second square door will be required with the See-thru option. It should be installed in the same manner as the first door, except that the rear door will be about 1.5" higher than the front door. In addition, the rear air deflector will rest on Part #7ST, but will be positioned in a similar manner as the front deflector, in relationship to the doorframe and the air slot from below. (i.e. It must also direct air onto the bottom of the door glass and into the firebox.) (See *Fig 16*).

INSTALLING BAKE OVEN DOORS

We recommend that the Bake Oven door be installed directly on the core, (with a gasket and/or optional Trim Plate), in contrast to the fire doors. Without the benefit of an "air wash", the door glass will tend to stay cleaner if it is as close as possible to the fire. *(In this case, the door frame is installed before the facade reaches this level.)*

Some installers may want to install it on the facade, without a Trim Plate, which may be acceptable only if the appearance of the glass is not a consideration.

To make the installation simpler, tap the hinge pin out of the hinge and remove the door from the frame.

WITHOUT THE TRIM PLATE

Use the frame as a template & cut out the cardboard spacer from around the bake oven, allowing an extra 1/2" (12.5mm).

Glue a 1" (25mm) wide strip of ceramic wool to the door sill. Also glue 1" strips of ceramic wool around the opening, so that a gasket is formed between the door frame and the core. *(Use ceramic wool pcs K17 & K18) (See Fig. 17)*

Position the door frame, level and plumb it, and secure it with four "tap-con" screws. Slight pressure should be used to gently compress the ceramic gasket. Fill any remaining gaps between top and sides of the frame and the bake oven opening with ceramic wool. *(See Fig. 18)*

Fig. 17

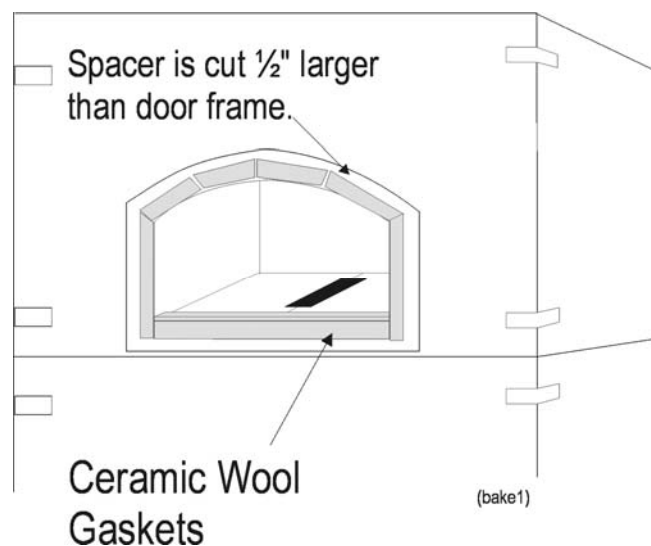
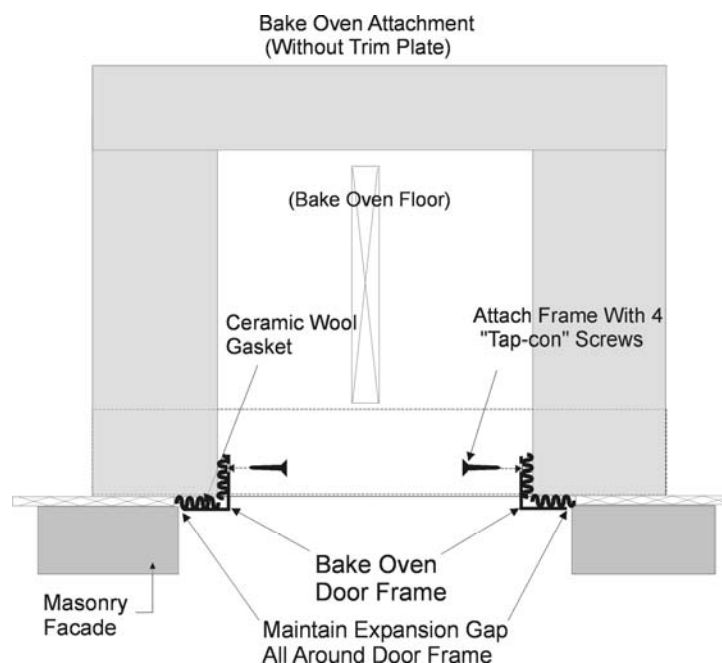


Fig. 18



THE TRIM PLATE OPTION:

The Bake Oven Trim Plate option simplifies the installation and creates a neater finished appearance. With the trim plate in position, the masonry facade can be set away from the door frame without exposing the heater core.

To install the trim plate, cut out the opening of the bake oven in the corrugated spacer. Hold the trim plate in position and mark the rectangle of the trim plate on the corrugated spacer. Cut the spacer out of this area.

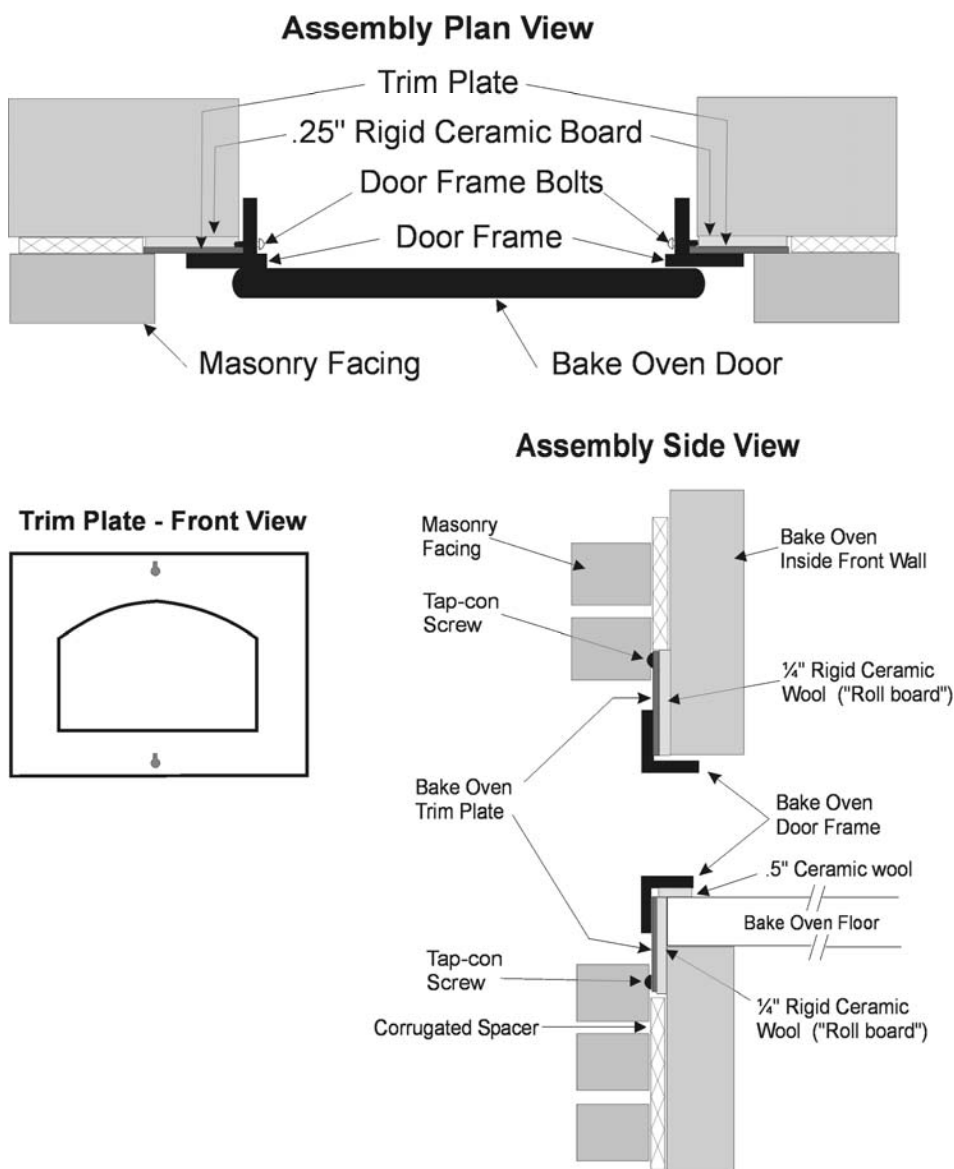
Using the trim plate as a template, cut a piece of 1/4" rigid "coreboard" ceramic fibre (supplied). Centre this fibre in the opening and glue it to the core with refractory cement.

Attach the trim plate to the core with the tap-con screws supplied.

Position the bake oven door and attach it with the 4

machine screws supplied, which go **behind** the trim plate. Check that it is level and plumb. (Leave the door off or cover it to keep it clean during masonry work.)

Note: when the masonry facing is installed, a space of 1 to 1½" must be left between the door and the masonry to allow the door to fully open & for full movement of the door handle. (See Fig 18a.)

Fig 18a

INSTALLING THE FACADE

Most facades will be installed by professional masons, who will have their own methods of planning and working. (Refer also to “FACADE/FLANGE OPTIONS” earlier in this section.)

Several details concerning the installation of the masonry facade are unique to Temp-Cast fireplaces and must be considered.

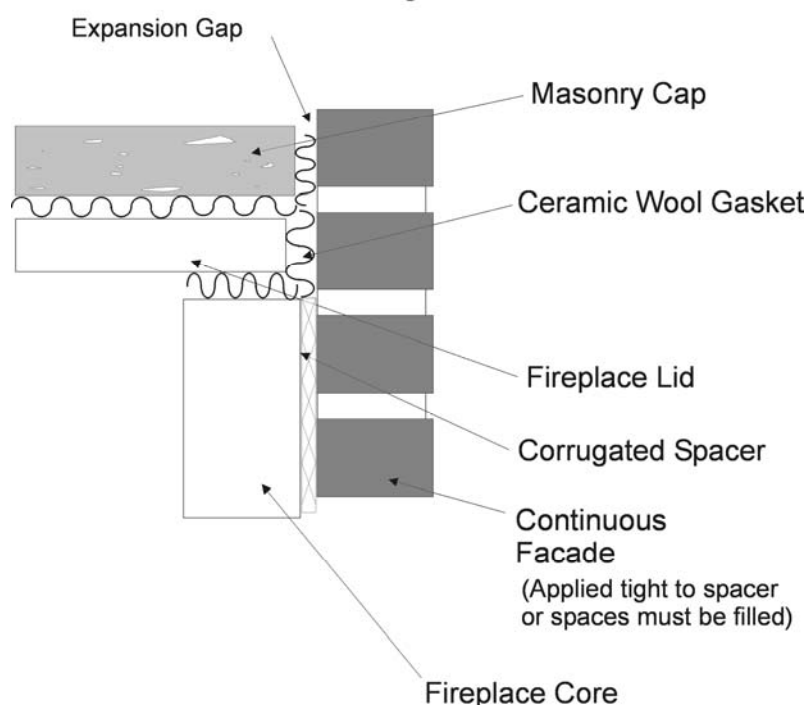
WARNING!

It is important that no air be able to get into the space between heater core & facing - on all 4 sides and the top & around firebox & bakeoven door frames. **FAILURE TO SEAL THESE SPACES MAY RESULT IN A FIRE HAZARD.**

These points must be followed during the installation of the facade:

- ***All spaces between corrugated spacer and masonry facing must be filled. DO NOT LEAVE AN AIR SPACE BETWEEN FACING AND HEATER CORE!*** (See Fig. #19)
- *The masonry courses directly below the fire doors **must be sliced in half** or stepped out. This will provide a permanent air slot, which will feed combustion air from below into the bottom of the door frame and into the fire.* (See Fig # 1a & 1b.)
- *An **expansion break must be created** between the masonry cap & the facing, to allow for unrestricted vertical expansion of the core.* (See Figs. 19 & 20)
- *The facade **must be continuous** on all four sides and top of the heater. The heater core **must not be left exposed** at any point.*

Fig 19



THE MASONRY CAP

The facade must be continued at least 4" (100mm) above the top of the fireplace modules.

Fill the resulting space between facade and sides of the fireplace lid with ceramic wool.

Place a layer of 1/2" (12mm) ceramic wool (*pc K23*) on top of the fireplace, ensuring that it runs up the sides and ends of the facade. (*See Figs.19 & 20*)

A continuous masonry cap of at least 2" (50mm) **must be added** to the top of the fireplace. It can be poured concrete, stone, brick or other solid masonry material. (***Remember to include an expansion joint.- refer to Figs. 19 & 20.***)

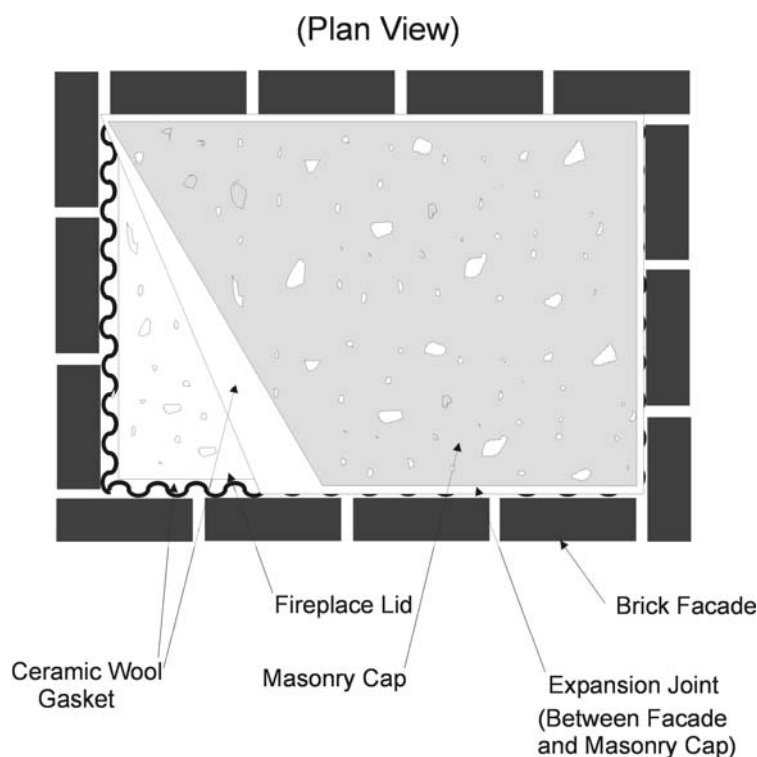
The facade can now be continued to the ceiling, if

desired. In this case, open spaces should be created in the top course of the masonry facade or decorative metal grills should be installed, to vent the trapped heat and humidity.

The installation of your Temp-Cast fireplace is now complete. The fire can be lit immediately to begin the curing process or left with doors and dampers open in warm weather to allow trapped moisture to escape.

IMPORTANT!! Before firing the heater, refer to the Owner's Manual for curing and firing procedures.

Fig. 20



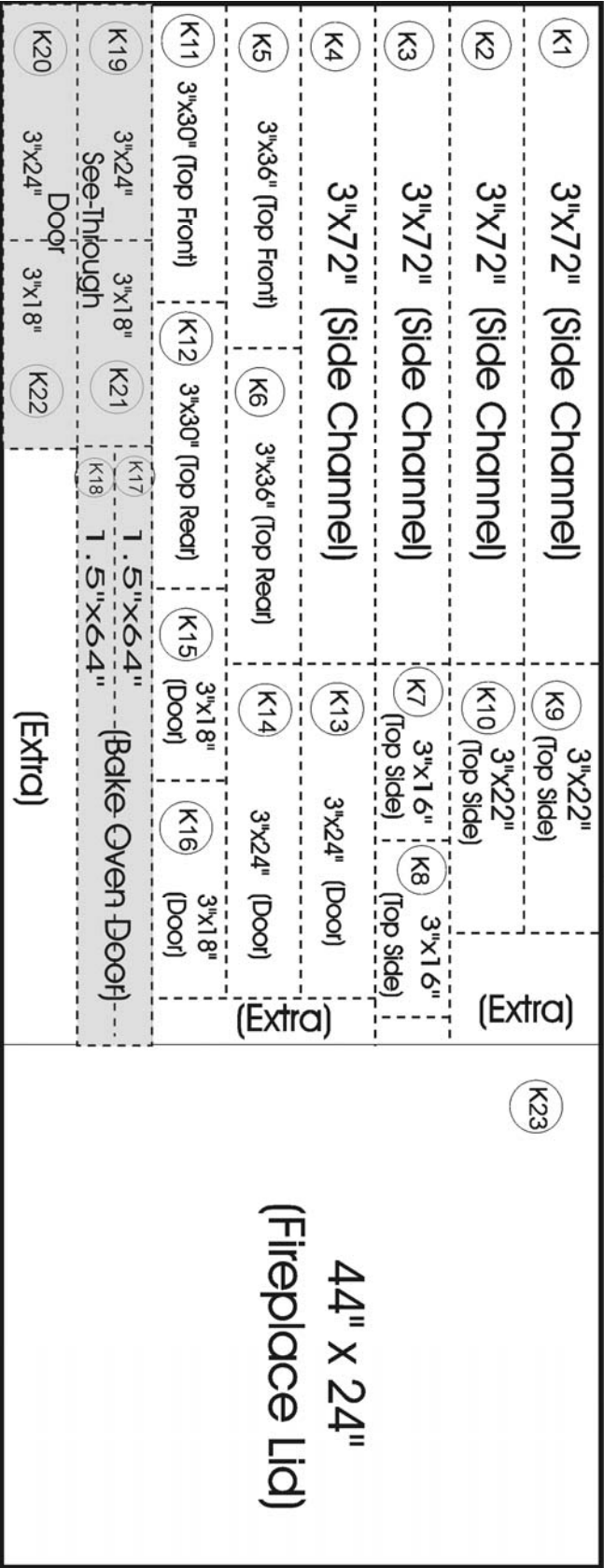
SECTION 5: AVOIDING INSTALLATION ERRORS

The Temp-Cast modular system was designed to be as "fool-proof" as possible and is easily and properly installed when the instructions are followed. Unfortunately, every year, one or two installers do not read or follow the instructions, resulting in a costly repair. **This section reinforces the most important installation points which cannot be ignored or altered for a safe and effective heater.** Review this list **before** starting the installation **and** as the work progresses, especially if you are hiring someone to do the installation. *If both you **and** your installer follow this check-list, the likelihood of errors is greatly reduced.)*

1. **ALL AIR-SPACES BETWEEN THE MASONRY FACING AND THE CORRUGATED SPACER MUST BE BACK-FILLED WITH MORTAR.** (Air spaces between facing and corrugated spacer will restrict the heating output of your unit to **as little as 20%** of its design capability. This is a very costly error to fix – the entire facing must be removed and correctly re-installed.)
2. **DO NOT USE CONCRETE BLOCKS AS A FACADE.** (Concrete blocks are difficult to properly back-fill behind without air spaces, especially if they are cut for fitting. We suggest only a **brick, natural stone or natural rock** facing with a thickness of 4" but **not more than 5"**.)
3. **A MASONRY FACADE MUST BE INSTALLED ON ALL 4 SIDES AND TOP OF THE HEATER, EVEN IF SOME AREAS WILL NOT BE VISIBLE.** (Failure to have a continuous masonry façade of 4" on all 4 sides and top of the heater will create a fire hazard, which could cause property damage, personal injury or death!!)
4. **ENSURE THE CORRUGATED SPACER IS ATTACHED TO ALL 4 SIDES OF THE CORE BEFORE STARTING THE FACING.)**
5. **THE SPACE BETWEEN THE BACK OF THE DOOR FRAME AND HEATER CORE MUST BE SEALED WITH CERAMIC WOOL.** (This will prevent any combustion gases from leaking out around the door frame.
6. **DURING TRIAL FITTING, ENSURE THAT THE AIR SLOT IN THE BOTTOM OF THE DOOR FRAME IS ALIGNED WITH THE AIR SLOT IN THE CONCRETE PAD.** (This is the reason the frame cannot be mounted on the outside of the masonry work when the facade is thicker than 4" - the air slot will not line up properly. *If you purchased the Temp-Cast "square" door system, a special air-deflector will be included.*)
7. **THE AIR SLOT BETWEEN THE BOTTOM OF THE DOOR FRAME AND THE CONCRETE PAD MUST NOT BE OBSTRUCTED.** (The facing under the door frame must be "cut" to create a 2" x 15" air slot & this space must be kept free of rough masonry, mortar, ceramic wool or other debris.)
8. **PROVIDE ADDITIONAL COMBUSTION AIR AND A NON-COMBUSTIBLE HEARTH FOR BOTH DOORS OF A "SEE-THROUGH" FIREPLACE.** (8" dia. of air needed, divided between the 2 doors. This creates an air-wash for each glass door. See Fig. 16.)
9. **PROVIDE AN EXPANSION JOINT ON TOP, BETWEEN MASONRY CAP AND MASONRY FACADE.** (To prevent cracks caused by vertical expansion of the core.)

Note: Using a measuring tape & marker, transfer all dimensions and piece numbers onto the ceramic fiber supplied, before starting to make any cuts. This will ensure that there will be sufficient ceramic fibre in the required shapes.

Ceramic Wool Cutting Plan
(Standard Fireplace)
(Standard Bake Oven)
(Standard See-through)
(24" X 150")



Note: Using a marker & measuring tape, transfer these dimensions and piece numbers onto the ceramic fiber supplied, before starting to make any cuts. This will ensure that there will be sufficient ceramic fibre in the required shapes.

Ceramic Wool Cutting Plan

(Corner Fireplace)
(Corner Bake Oven)
(Corner See-through)
(24" X 150")

K1 3"X7/2" (Side Channel)		K13 3"X24" (Door)	K23 54" X 24" (Fireplace Lid)
K2 3"X7/2" (Side Channel)		K14 3"X24" (Door)	
K3 3"X7/2" (Side Channel)		K7 3"X24" (*Top Side)	
K4 3"X7/2" (Side Channel)		K8 3"X24" (*Top Side)	
K5 3"X30" (Top Front)		K6 3"X30" (Top Rear)	
K11 3"X30" (Top Front)		K12 3"X30" (Top Rear)	
K19 3"X24" See-Through		K21 3"X18"	K17 1.5"X40" K18 1.5"X40" Bake-Oven Door
K20 3"X24" Door		K22 3"X18"	
		K9 3"X58" (*Top Side)	
		K10 3"X58" (*Top Side)	

* Trim top side strips on corner channels to correct length & angle as required.

TEMP-CAST ENVIROHEAT LTD WARRANTY

Temp-Cast Enviroheat Ltd. warrants, subject to the conditions and exceptions noted below, that should this product become defective due to materials or workmanship within the specified warranty period, Temp-Cast Enviroheat Ltd. will repair or replace the defective part, at its option.

WARRANTY PERIOD

- **Refractory Parts:** FIVE Years from date of purchase
- **Metal Parts:** One Year from date of purchase

EXCEPTIONS

*The following are **not covered** by this warranty:*

1. Glass components
2. Stress cracks in the refractory caused by normal thermal expansion.
3. Defects or cracks of any kind in the masonry facade.
4. Any other materials or labour, including removal and replacement of masonry facades.
5. Damage caused by incorrect installation, or by failing to follow Temp-Cast installation instructions.
6. Damage caused by incorrect operation or abuse, or by failing to follow Temp-Cast curing and operating instructions.

CONDITIONS

1. **Registration Card** must be completed and mailed within 30 days of installation to **Temp-Cast Enviroheat Ltd, Bedford Park Postal Outlet, Box 94059, Toronto, Ontario, Canada, M4N 3R1.**
2. **At least 4 Installation Photos** (or video) must be included with the Registration Card, showing the completed core, the core with partial facade erected, the completed installation and one showing a normal fire, following the curing process - this photo can be sent separately at a later date.
3. **All defective parts must be properly crated** and shipped pre-paid to the Factory.
4. **Proof of Purchase** must be included, showing the date of retail purchase.
5. **Temp-Cast must be contacted** for approval **prior** to any part being returned for warranty claim.

REGISTRATION CARD

NAME:		STREET ADDRESS:					
CITY:		STATE/PROV:			ZIP/POSTAL:		
EMAIL:		HOME TEL:			BUS TEL:		
PURCHASE DATE:		INSTALL DATE:			DEALER:		
INSTALLER:		INSTALLER CITY:			INSTALLER PHONE:		
OPTIONS INSTALLED:							
PRIMARY PURPOSE?		Main Heat Source <input type="checkbox"/>		Zone/Supplementary Heat Only <input type="checkbox"/>		Decorative Fireplace <input type="checkbox"/> Other <input type="checkbox"/>	
FAÇADE MATERIAL:				FAÇADE THICKNESS:			
HOUSE TYPE:	Frame <input type="checkbox"/>	Log <input type="checkbox"/>	Timer Frame <input type="checkbox"/>	Post & Beam <input type="checkbox"/>	Straw Bale <input type="checkbox"/>	Earth/Adobe <input type="checkbox"/>	Concrete <input type="checkbox"/>
HOUSE STYLE:	Bungalow <input type="checkbox"/>	2 Storey <input type="checkbox"/>	3 Storey <input type="checkbox"/>	Split Level <input type="checkbox"/>	Other <input type="checkbox"/>		
TOTAL HOUSE SIZE:				AREA HEATED BY TEMPCAST:			
COMMENTS: (use reverse also)							