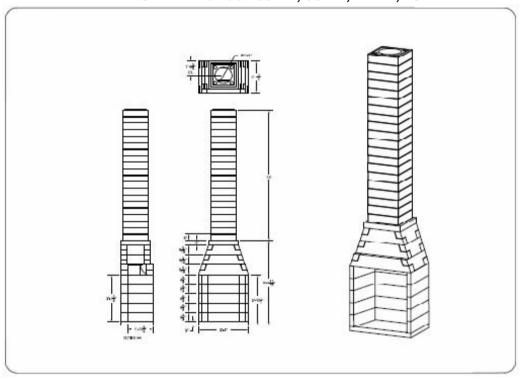


# INSTALLATION AND SPECIFICATION MANUAL

LISTED RUMFORD STYLE MASONRY FIREPLACE SYSTEM MODEL FIRE ROCK 30, 36, 42, 48 INCH MODULAR FIREPLACES

LISTED RUMFORD STYLE VENTLESS FIREBOX ENCLOSURE MODEL FireRock 30 VF, 36 VF, 42 VF, 48 VF



Before installing this product please consult with local building and zoning authorities regarding the need for proper permitting.

INSTALLER: LEAVE THIS MANUAL WITH THE FIREPLACE OR APPLIANCE CONSUMER: RETAIN THIS MANUAL FOR FUTURE REFERENCE

U.L. 127 Compliant, ULC S610 M87 Compliant A.N.S.I. Z21.91 – 2007 Compliant



MANUFACTURING 3620 AVENUE C BIRMINGHAM, AL 205 639-5000 ADMINISTRATIVE PO Box 272 BIRMINGHAM, AL 35064 205 639-5000



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#### INTENDED PRODUCT USAGE

This Fire Rock fireplace is designed to burn wood, gas, or coal. This fireplace is not designed, in it's wood burning or coal burning version, to sit directly on or abutting a combustible surface. This fireplace must be installed with the clearances found in this manual on page 4 for the vented version and page 22 for the non-vented version.

This product is designed to work with the Fire Rock masonry flue system or any approved U.L. 103 metal chimney appropriately sized for the firebox opening. The metal chimney manufacturer must offer an adaptor plate for the express purpose of connecting the metal chimney to a masonry firebox. Installation of the chimney must conform to the manufacturer's installation instructions. It is appropriate to use standard and traditional roof flashing, dampers, lintels, and support walls in the installation of the Fire Rock fireplace. The use of improper parts or parts not recommended herein can be hazardous. For use of the Fire Rock fireplace as an unvented gas appliance enclosure refer to pages 21 –22.

"USE SOLID WOOD, PLUMBED PROPANE OR NATURAL GAS FUEL ONLY"
GAS LOGS MUST BE LISTED BY A.N.S.I. Z 21.11.2 OR A.N.S.I. Z 21.60. ONLY GAS LOGS
LISTED TO A.N.S.I. Z 21.11.2 CAN BE USED WITH UNVENTED ENCLOSURES.

"DO NOT USE A FIREPLACE INSERT OR OTHER PRODUCT NOT SPECIFIED FOR USE WITH A FIREPLACE WITH THE REFLECTIVE PROPERTIES OF THIS PRODUCT."

# \*\*\* WARNING \*\*\*

ANY FIREPLACE INSERT MUST BE APPROVED IN WRITING BY FIRE ROCK MANUFACTURING, INC. FAILURE TO HEED THIS WARNING COULD RESULT IN FAILURE OF THIS PRODUCT AND/OR THE INSERT PRODUCT.

# \*\*\* WARNING \*\*\*

DO NOT PACK AIR SPACES WITH INSULATION OR OTHER MATERIALS.

OBTAIN NECESSARY PERMITS FROM AUTHORITIES IN LOCAL JURISDICTION AND COMPLY WITH ALL LOCAL BUILDING CODES.

#### IMPROPER INSTALLATION

Improper installation or misuse of this product can cause:

- Failure of fireplace due to overheating.
- Combustion of materials adjacent to the fireplace.
- The emission of smoke, sparks, or hazardous gases into the home.
- Leakage of rainwater into the home.
- Cracks due to improper footings and foundations or settling.

Fire Rock recommends that any chimney be inspected at least once per year by a certified chimney sweep and that the recommendations made by that professional be strictly adhered to.

#### **CAUTION**

A FIREPLACE REQUIRES ADEQUATE COMBUSTION AIR. This fireplace is recommended to have an outside air source for proper combustion and subsequent drafting of combustion byproducts. The fresh air requirements of this fireplace may have a detrimental effect on other appliances in the home. Please be sure adequate combustion air provisions are made.

THE BURNING OF SOME FUELS MAY RELEASE CARBON MONOXIDE. Be aware that the burning of some fuels, such as charcoal, can generate carbon monoxide. Inhalation of carbon monoxide may cause injury or death.

Fire Rock recommends that only homes with operating smoke detectors install this fireplace product.

### I N – FIELD APPLICATION

# A. MIXING MORTAR FOR FIRE ROCK INSTALLATION:

The mortar used when installing the Fire Rock fireplace and chimney system is available from your Fire Rock distributor, the same Fire Rock distributor that sold you the Fire Rock system.

This specially formulated mortar is a low sand, polymer modified with heat resistant additives and is designed to work as a "glue" rather than a traditional joint provider.

This mortar must be used in order for your Fire Rock warranty to be valid.

It is appropriate to use a trowel or grout bag to apply the mortar to firebox and smoke chamber joints. This material is to be mixed according to the instructions on the bag and troweled directly from the mixing pail. These joints should be completely covered with 1/16 to 1/8 inches of mortar to secure the joint. After the component is set into place the mortar should push (ooze) out and be scraped away. Use this product as you would an adhesive rather than a traditional mortar, a thin coating (1/16th to 1/8th inches) will work the best.

Upon completion of the firebox and smoke chamber it is important to go back and "butter" all joints. This procedure involves a final smoothing, inside and out, sealing all joints and assuring a "no-leak" installation.

# B. FIREBRICK LINING THE FIREBOX

A 1 ¼ inch minimum firebrick lining is required for an acceptable fire safety level. The same Fire Rock mortar used for the firebox and chimney may be used to affix the firebrick to the inner wall of the firebox. The firebrick joints may be achieved two ways.

- Troweled joints: the mortar may be troweled onto the face of the firebrick at a thickness of 1/16 of an inch and stuck to the presoaked inner wall of the firebox.
- Dipped joints: add enough clean (suitable for drinking) water to the mixed mortar to achieve a consistency that a typical firebrick floats with roughly 40% of its mass above the surface. Too much water will reduce strength.

A thin joint between bricks gives the best results. Each seam should be filled with mortar "grout style" after the installation of the firebrick.

The mortar will not develop its full strength until completely dry.

# IN - FIELD APPLICATION (cont.)

# C. BROKEN COMPONENTS

Components that become broken due to poor handling or shipping should be mortared back together providing the breaks or cracks are clean and original alignment and dimension can be maintained. Components broken into multiple pieces or fragments must be discarded and replaced.

#### D. HINTS

- a. If this is your first Fire Rock installation, it would only take a few extra minutes to "dry stack" (erect without mortar) your firebox to gain a better understanding of how the components fit together. Then disassemble and erect using mortar.
- Use a level to assure all components are level and plumb as you erect your fireplace and chimney.
- c. Assure your baseplate is level and at the proper elevation so the <u>finished</u> hearth height (including firebrick lining) is correct in relationship to your <u>finished</u> floor height.
- Realize that this is a TWO man job. Some of the components are too heavy for one man to lift

# e. ALWAYS INSTALL IN ACCORDANCE WITH LOCAL CODES.

# E. GAS LINE APPLICATIONS

The Fire Rock fireplace may be drilled through with an ordinary masonry drill bit to accommodate a natural gas connection. This natural gas connection may be used to 1) incorporate an automatic shut-off device and/or 2) comply with the Standard for Decorative gas appliances for installation in Vented Fireplaces, ANSI Z 21.60 or ANSI Z 21.11.2. The decorative gas appliance should be installed in accordance with the National Fuel Gas Code, ANSI Z 22.3.1.

# **CLEARANCE TO COMBUSTIBLES**

#### WITHIN ENCLOSURE AREA

UNIT TO NON-COMBUSTIBLE FLOOR	0"	SMOKE CHAMBER TO TOP FRAMING	1"
FIREBOX & SMOKE CHAMBER TO BACKWALL	1"	SMOKE CHAMBER TO FRONT WALL	1"
FIREBOX & SMOKE CHAMBER TO SIDEWALLS	1"	MASONRY CHIMNEY TO JOISTS	0"
EXPOSED SURFACES			
OPENING TOP TO COMBUSTIBLE MANTEL	22"	FIREPLACE OPENNING TO SIDEWALL	28"
COMBUSTIBLE TRIM ABOVE/AROUND OPENING	12"	SMOKE CHAMBER TO FRONT WALL	1"
SMOKE CHAMBER TOP TO FRAMING	1"	MASONRY CHIMNEY TO JOISTS	0"

No combustible mantel shall extend out from the wall more than 8 inches or be less than 22" above the opening.

Clearance requirements may be located on products tag.

If processed solid fuel logs are used:

# DO NOT POKE OR STIR THE LOGS WHILE THEY ARE BURNING. USE ONLY FIRELOG PRODUCTS WITH WARNINGS AND CAUTION MARKINGS ON PACKAGING PRIOR TO USE.

\*\*\* CAUTION \*\*\*

# WHEN USING A DECORATIVE APPLIANCE, THE FIREPLACE DAMPER MUST BE SET IN THE FULLY OPEN POSITION.

#### G. MAXIMUM / MINIMUM FIREBOX AND CHIMNEY HEIGHT

	OVERALL	MINIMUM	OVERALL	MAXIMUM	OVERALL
	FIREBOX HT	CHIMNEY HT	MINIMUM HT	CHIMNEY HT	MAXIMUM HT
30"	5'1"	19'	24'1"	60'	65'1"
36"	6'7"	19'	25'7"	60'	66′7″
42"	6′7″	19'	25′7″	60'	66'7"
48"	8'1"	19'	27'1"	60'	68'1"

### OPERATING INSTRUCTIONS

This section of the manual is to help you get maximum efficiency and maximum smoke (particulate) reduction from your Fire Rock fireplace. If you should experience any difficulty or have any questions concerning your fireplace, contact your dealer or the manufacturer for assistance.

The manufacturer's recommendation for peak performance and long catalyst life is to burn seasoned hardwood (wood dried 6 - 12 months) and place wood from side to side in the fireplace.

The manufacturer recommends that a log grate be used in your fireplace for maximum performance. The use of andirons is acceptable.

Building a fire for maximum efficiency: Because these fireplaces burn wood and extract heat so efficiently a large fire will not only waste energy it usually will result in the home being too warm for individual comfort.

The following steps will serve as a guide for operating your fireplace:

#### Building a fire without a log lighter:

- Open the damper by pushing the damper handle up toward the top of the fireplace. The damper handle is located in the top center of the firebox and extends down into the firebox.
- Twist 4 5 pieces of non-colored newspaper in a roll and place on the floor or grate of the firebox
- Lay several pieces of kindling on top of the newspaper.
- Place 3 or 4 pieces of firewood on top of the kindling.
- 5. Light the newspaper.

# Building a fire with a log lighter:

- Open the damper as explained above.
- Lay several pieces of kindling across the log grate or if no log grate is present, place the kindling on the floor of the firebox.
- Place 3 4 pieces of firewood on top of the kindling.
- A key on the front of the fireplace or on the hearth controls the gas log lighter. Turn
  the key on and light the log lighter with a long fireplace match. Once the logs begin to
  burn well, turn the log lighter off.

### OPERATING INSTRUCTIONS (cont.)

# Disposal of Ashes:

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground well away from all combustible materials, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

Creosote formation and need for removal:

When wood is burned slowly, it produces tar and other organic vapors that combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. The chimney should be inspected twice each year during the heating season to determine if creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8 inch or more) it should be removed to reduce the risk of chimney fire.

The use of grates and andirons in Fire Rock fireplaces is acceptable.

#### \*\*\* WARNING \*\*

THIS FIREPLACE HAS NOT BEEN TESTED FOR USE WITH DOORS TO REDUCE THE RISK OF FIRE OR INJURY, DO NOT INSTALL WITH DOORS

### \*\* CAUTION \*\*\*

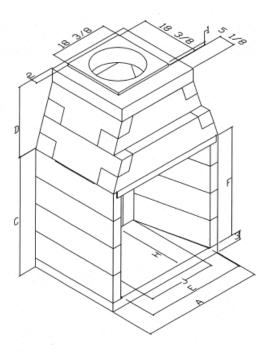
KEEP THE FRONT OF THE FIREPLACE CLEAR OF ALL COMBUSTIBLE MATERIALS

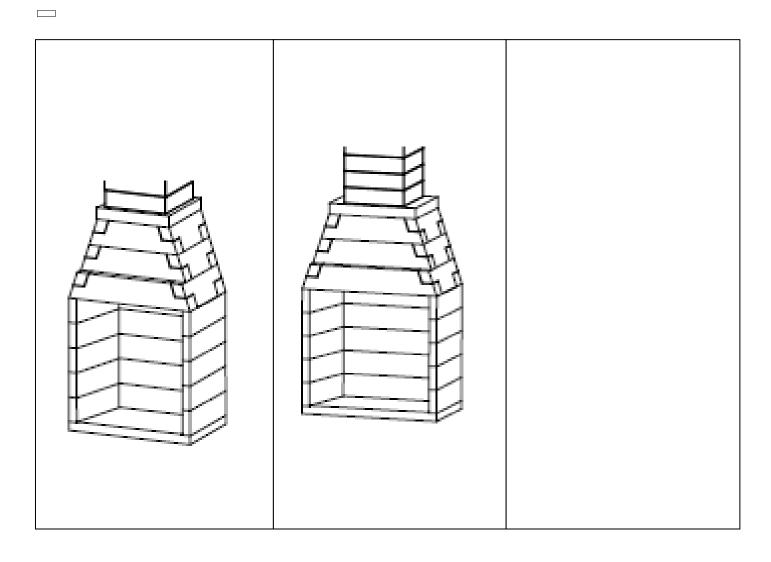
NEVER USE GASOLINE, GASOLINE TYPE LANTERN FUEL, KEROSENE CHARCOAL, LIGHTER FLUID, OR SIMILAR LIQUIDS TO START OR "FRESHEN-UP" A FIRE IN THIS FIREPLACE. KEEP ALL SUCH LIQUIDS WELL AWAY FROM THE FIREPLACE WHILE IT IS IN USE.

IF PROCESSED SOLID FUEL LOGS ARE USED: DO NOT POKE OR STIR THE LOGS WHIOLE THEY ARE BURNING. USE ONLY FIRE LOGS THAT HAVE BEEN EVALUATED FOR THE APPLICATION IN FIREPLACE AND REFER TO FIRE LOG WARNINGS AND CAUTION MARKINGS ON PACKAGING PRIOR TO USE.

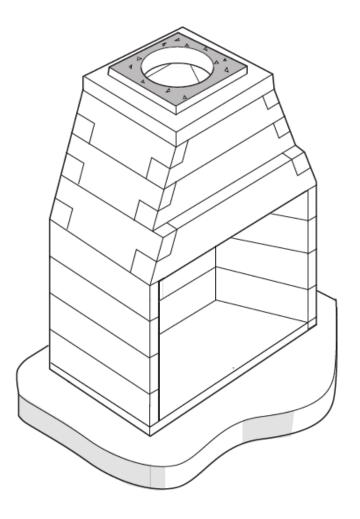
KEEP THES INSTRUCTIONS FOR FUTURE USE.

		30"	36"	42"	48"
A	OVERALL WIDTH	38"	44"	50"	56"
В	OVERALL DEPTH	28 ½"	28 1/2"	28 1/5"	28 1/3"
C	FIREBOX HEIGHT	38"	38"	38"	38"
D	SMOKE CHAMBER HEIGHT	23"	32 1/5"	32 1/5"	42"
E	OPENING WIDTH*	32 1/5"	38 1/5"	44 1/5"	50 1/2"
F	OPENING HEIGHT*	34"	34"	34"	34"
. 1	WIDTH AT CHIMNEY BASE	26"	26°	32"	32"
н	FIREBOX DEPTH	22 1/2"	22 1/2"	22 1/2"	22 1/2"
J	FIREBOX WIDTH AT REAR	22"	28"	34"	40"
1	MINIMUM FRAMING WIDTH	40"	46"	52"	58"
	HEIGHT TO 11T HEADER	48"	48"	48"	48"
	FRAMING DEPTH	29 1/5"	29 1/5"	29 1/5"	29 1/5"





<sup>\*</sup>Before fire brick lining



# STEP ONE - FOUNDATION

### \*\*\* NOTE\*\*\*

When used as an unvented gas appliance enclosure (page 21-22) no special foundation requirements apply.

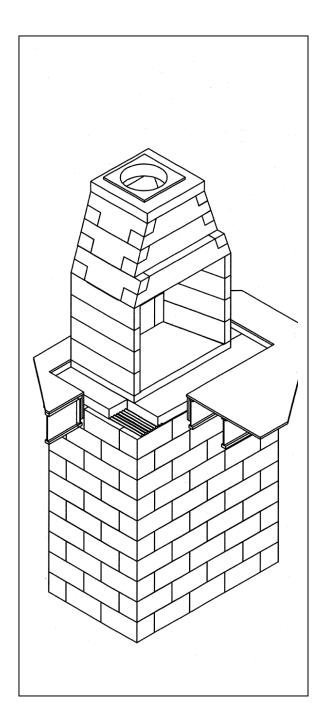
The Fire Rock fireplace must be erected on a non-combustible base with a non-combustible 24" hearth extension in front of the firebox opening and at least 8" on either side of the firebox opening.

A concrete slab installation can be achieved with or without the Fire Rock firebox baseplate. In order to achieve the correct finished hearth height you may elect to chalk line the outer dimensions and erect the side blocks directly on the slab.

#### \*\*\*NOTE\*\*\*

If an outside air kit is to be used in your installation, the cuts must be made in the side block before installation.

Local codes must be followed and supercede this manual.

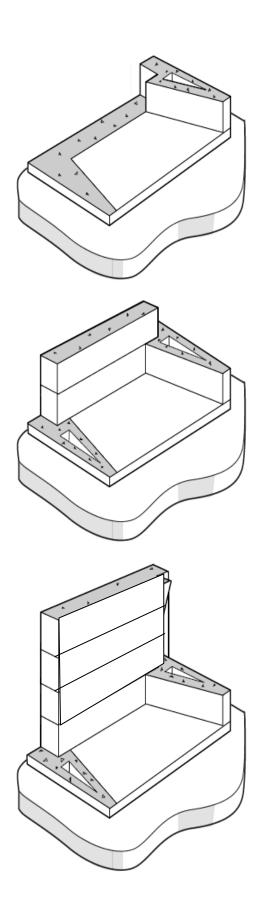


# FOUNDATION (cont.)

The non-combustible base is best made from a 6" concrete slab poured on top of corrugated metal suspended over concrete block (erected steel may be substituted). Once this decking is completed it is again up to you whether you use the Fire Rock base plate or not.

\*\*\*Framing Consideration\*\*\*

A rough opening in the floor system for a single box installation would be 72" wide and 54" deep.



# STEP TWO – FIREBOX ASSEMBLY

The base plate must be placed on a level non-combustible surface. It is very important that your base plate be square to the room, properly centered and level. In the event you opt not to use the base plate carefully chalk lines where the base plate would be to assure proper placement of your firebox.

Sides and backs are next. Place a bead of mortar at least one inch thick where each edge of each component will lie or butt up against another component. Use your level to assure level and plumb placement of each component.

You will begin by placing a sideblock on the baseplate at the side where you wish to begin. After placing a sideblock you will place the corresponding cornerback.

Figure 1

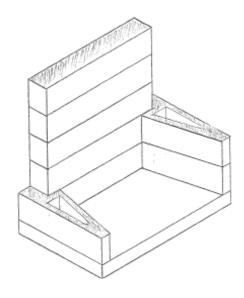
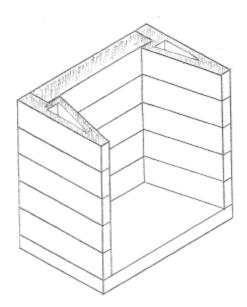


Figure 2



Courses
4
5
5
6

Please be sure all surfaces are plumb and level and firebox position is correct.

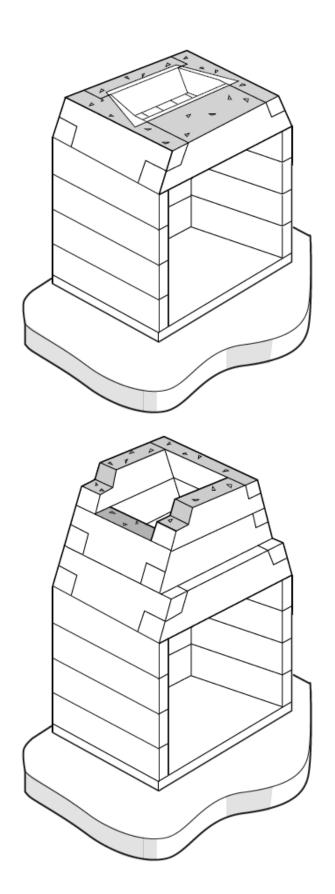
Butter all joints inside and out.

# \*\*\* Installation Hint \*\*\*

With the firebox complete and the smoke chamber not started you now have the easiest access to the lining of the firebox. You may want to take this opportunity to line the firebox with firebrick.

# \*\*\* NOTE \*\*\*

If you are erecting an unvented firebox enclosure, please skip to page 21.



# STEP THREE- SMOKE CHAMBER

A piece of 2" x 2" x 1/4" angle steel has been provided with your Fire Rock fireplace kit and should be installed across the top of the firebox opening. (angle up for maximum firebox opening, angle down for additional "smoke lip")

#### SETTING THE DAMPER

Upon setting the 4 throat components a recess is formed for the purpose of locating the damper.

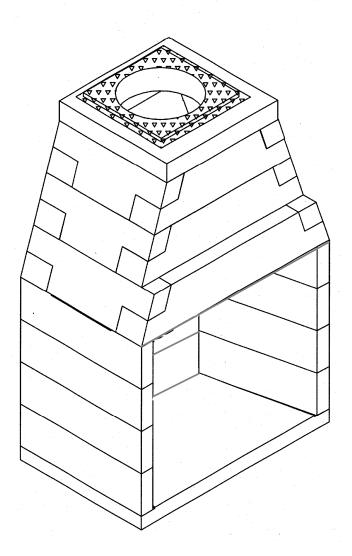
# DO NOT MORTAR THE DAMPER

Each fireplace uses a different size damper

30" Firebox	24" damper
36" Firebox	30" damper
42" Firebox	36" damper
48" Firebox	42" damper

The smoke chamber components can only be positioned one way. The fronts and backs are identical above the damper. Be sure to check for and maintain plumb and level installation of these components.

"Butter" all joints to give a smooth appearance and to assure a leak free joint.



# FIREBOX / SMOKE CHAMBER COMPLETION

The final component of the smoke chamber is the part that transitions from smoke chamber to chimney. Place a large bead of mortar before placing this final component and be sure it is level front to back and side to side.

The 15" flue hole should be positioned toward the back of the smoke chamber.

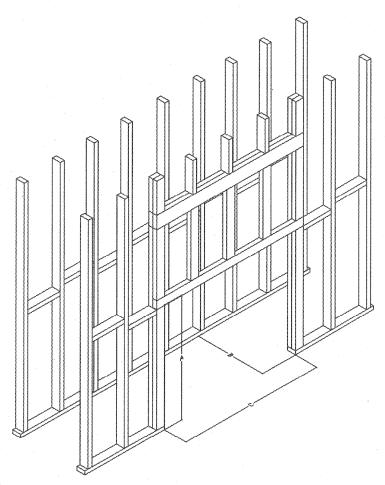
"Butter" all joints to assure a no leak seal.

# **CHIMNEY INSTALLATION**

Fire Rock "Solid Block Chimney" may be installed from this point, being sure enough mortar is used between each chimney block component that a no leak joint is created.

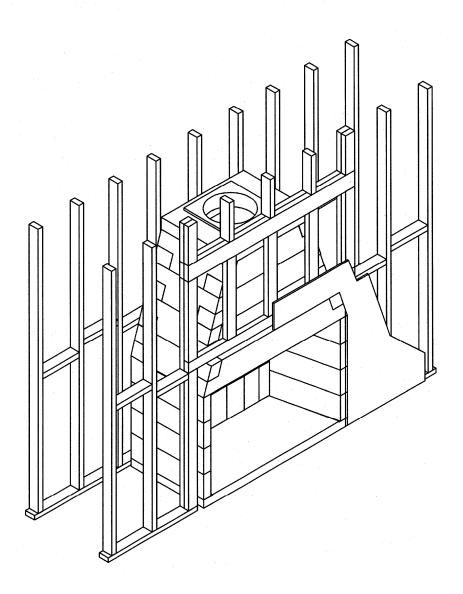
Metal chimney may be used as well, please refer "Metal Chimney Installation" page.

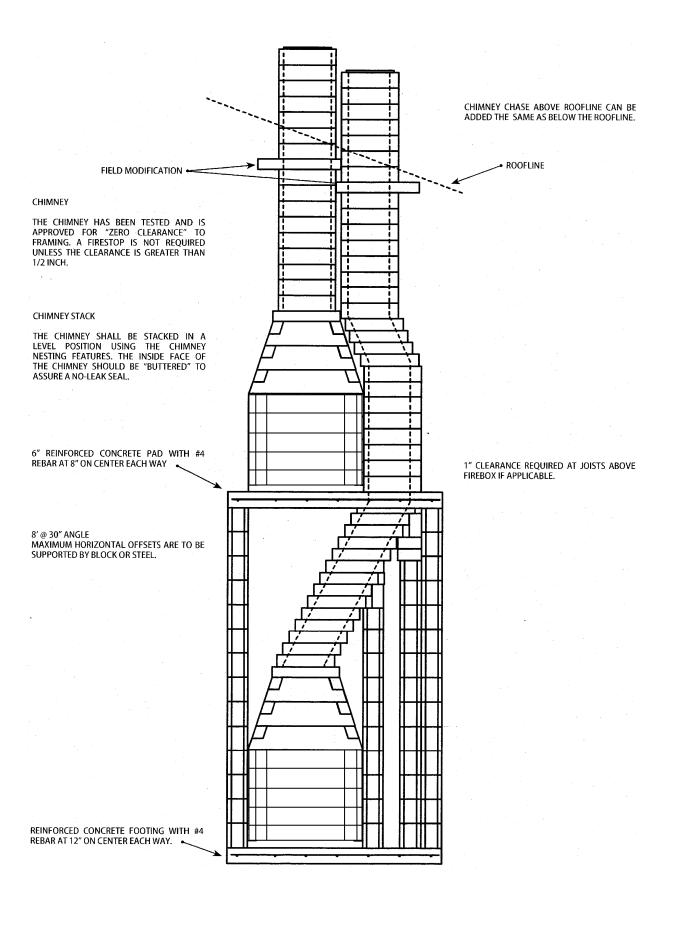
# FRAMING DIMENSIONS



	30	36	42	48
Α	48	56 5/8	56 5/8	62 1/4
В	29 1/2	29 1/2	29 1/2	29 1/2
С	<b>C</b> 40		52	58

# TYPICAL GYPSUM BOARD APPLICATION





# METAL CHIMNEY INSTALLATION

Any metal chimney that carries a U.L.103 compliance designation may be used with your Fire Rock fireplace and chimney system.

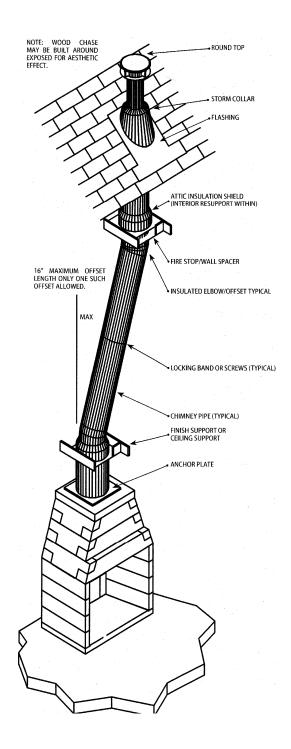
A conversion adaptor must be available from the metal chimney manufacturer and all necessary components including, but not limited to, fire stops, wall spacers, and insulating parts must be utilized as required by the manufacturer.

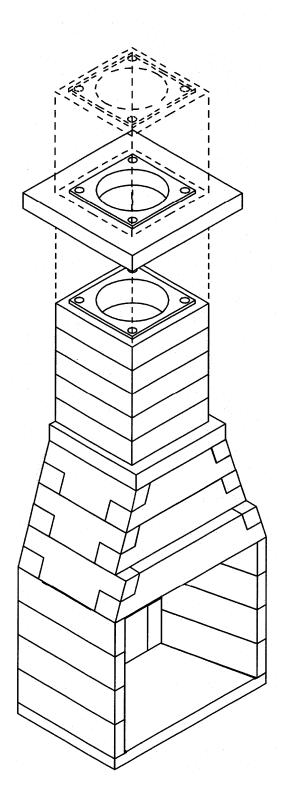
All local building codes must be adhered to as well.

Fire Rock recommends Simpson Dura Chimney II, but this product is not required in order to comply. Any UL-103 compliant venting may be used.

Please follow all instructions and recommendations as put forth in the manufacturer's installation manual, and use all necessary parts specified for use with the listed chimney system.

Manufacturer's instructions should be specific in terms of maximum offset, length and angle, use of joint bands and the need for supplemental support during installation to prevent undue stress on connected elbows.





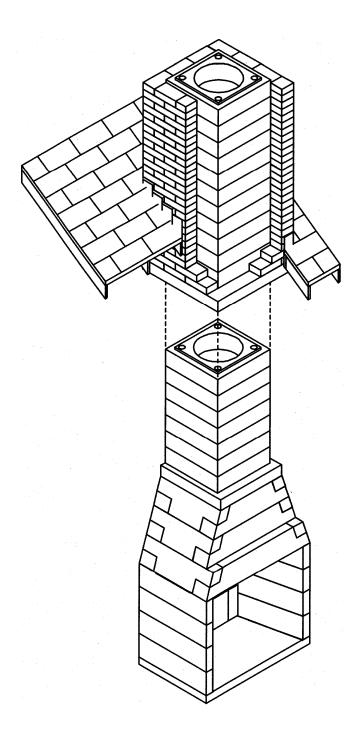
# **Bricking Flange**

The Fire Rock Bricking Flange is a component that allows a true brick or stone veneer above the roofline.

Most local building codes do not allow masonry to be supported by combustible material. Our bricking flange is designed to carry the weight of a brick or stone veneer only where you see it.

This bricking flange is installed in the chimney stack approximately 12" below the low side of the roof penetration.

The bricking flange is cast with a male and female nesting mechanism to assure a no leak seal.



FLASHING FOR THE BLOCK CHIMNEY SHOULD BE DONE BY A QUALIFIED ROOFER. CHIMNEY SHALL BE TERMINATED AT A POINT 2 FEET ABOVE 10 FEET HORIZONTAL FROM NEAREST ROOFLINE.

# VENTLESS FIREBOX ENCLOSURES For GAS DECORATIVE TYPE UNVENTED ROOM HEATERS

This page and the page immediately following in this manual provide information regarding the Ventless Firebox Enclosures for Gas Decorative Type Unvented Room Heaters as provided for in U.S. Test Standard IAS 2-97. Any installation of this Fire Rock product <u>must conform</u> with local codes or in the absence of local codes, with the National Fuel Gas Code, ANSI Z 223.1 (NFPA 54)

Testing provided by:



# FOR USE ONLY WITH DECORATIVE TYPE UNVENTED ROOM HEATERS

DO NOT BUILD A WOOD FIRE

Carefully review the instructions supplied with

The decorative type unvented room heater for the minimum fireplace requirement.

# DO NOT INSTALL THE APPLIANCE IN THIS FIREBOX UNLESS THIS FIREBOX MEETS THE MINIMUM DIMENSIONS REQUIRED

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

### PLEASE REMEMBER:

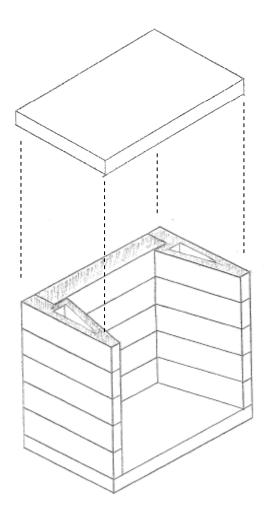
- 1. When the enclosure is yo be installed on carpeting, tile, or other combustible material other than wood flooring, the enclosure shall be installed on a metal or wood panel extending the full width and depth of the enclosure.
- 2. This product, when coupled with a correct unvented gas appliance, requires combustion air as well as ventilation. Be sure to have adequate combustion and ventilation air.
- 3. If replacement parts are needed please contact the manufacturer of the appliance.

# **CLEARANCES TO COMBUSTIBLES**

The Fire Rock Vent-free firebox must be installed with the following clearances to combustibles:

Unit to floor	0 in.	Unit to side framing	0 in.
Unit to backwall	0 in.	Unit top at rear to framing	0 in.
Unit top at front to framing	3.5 in.	Unit opening to ceiling or mantle	12 in.
		Unit opening to adjacent wall	6 in

The front surface at the bottom and sides must be covered with non-combustible material. The front surface at the top must be covered with non-combustible material that extends three (3) inches above the top of the structure. Any header above the top at the front of the unit must be non-combustible material.



# **VENT-FREE VERSION**

The Fire Rock Rumford fireplace look can also be achieved with a vent-free model.

The vent-free firebox assembles the same way as the traditional model.

The vent-free enclosure is available in 30", 36", 42" and 48" firebox openings.

\*\*\* CAUTION \*\*\*

THIS PRODUCT MUST BE
COMBINED WITH AN A.N.S.I.
APPROVED VENT-FREE GAS
LOG APPLIANCE. PLEASE
CONSULT WITH YOUR GAS
LOG DEALER TO BE SURE
YOUR GAS LOG APPLIANCE
IS DESIGNATED FOR "VENTFREE"
OPERATION.

	Vent-	Vent-	Vent-	Vent-				
Rumford Style	less	less	less	less	Vented	Vented	Vented	Vented
	30	36	42	48	30	36	42	48
38" Baseplate	2				1			
44" Baseplate		2				1		
50" Baseplate			2				1	
56" Baseplate				2				1
38" Top plate								
44" Top plate								
50" Top plate								
56" Top plate								
Firebox side	8	10	10	12	8	10	10	12
Backwall 30-4								
Backwall 30-3								
Backwall 30-1-2	4				4			
Backwall 36-4								
Backwall 36-3								
Backwall 36-1-2		5				5		
Backwall 42-4								
Backwall 42-3								
Backwall 42-1-2			5				5	
Backwall 48-4								
Backwall 48-3								
Backwall 48-1-2				6				6
38 Radius Throat front					1			
38 Throat Back					1			
44 Radius Throat front						1		
44 Throat Back						1		
50 Radius Throat front							1	
50 Throat Back							1	
56 Radius Throat front								1
56 Throat Back								1
Throat side					2	2	2	2
32 Smoke Chamber face					2	2		
38 Smoke Chamber face						2	2	2
44 Smoke Chamber face							2	2
50 Smoke Chamber face								2
Smoke Chamber side					2	4	4	6
Chimney Base, Large					1	1		
Chimney Base, Small							1	1
Total	14	17	17	20	22	29	29	36

