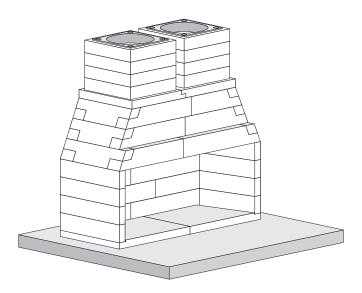


OVERSIZED CONVENTIONAL FIREPLACE INSTALLATION, SPECIFICATION AND OPERATION MANUAL

LISTED MASONRY FIREPLACE SYSTEM MODEL FIREROCK 60" AND 72" MODULAR FIREPLACE

UL 127 COMPLIANT



IMPORTANT: Read the entire manual before beginning construction.

Contents of this manual may change without prior notification

IMPORTANT: This manual contains product usage guidelines, in-field application rules, installation steps, and operating and maintenance instructions for the FireRock Oversized Conventional pre-engineered masonry fireplace kit. This manual should become the property of and be reviewed by all current and future users of this product. It is the responsibility of the general contractor and the installer to ensure that the instructions set forth in this manual are followed exactly. It is also the responsibility of the general contractor to provide adequate clearance to combustibles (see page 18) from all fireplace surfaces as specified herein.

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

▲ WARNING

If the information in this manual (including installation instructions) is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or loss of life.

Installer: Leave this manual with the appliance.

Consumer: Keep these instructions for future use.

MANUFACTURING: ADMINISTRATIVE:

3620 Avenue C 1500 1st Ave N #75 Birmingham, AL 35064 Birmingham, AL 35203

PHONE: (205) 639-5000 TOLL-FREE: (888) 876-1025 FAX: (888) 886-3473

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IMPORTANT SAFETY INFORMATION

NOTE: This is important safety information for the installation of this fireplace. For safety information regarding the operation of this fireplace, see pages 36-38.

The FireRock Oversized Conventional fireplace is a modular system designed to be assembled in field using FireRock Adhesive Mortar. Each component is designed for a specific part of the firebox, smoke chamber, and flue design, and therefore only one means of assembly is possible. A minimum 1 ¼" thick firebrick lining is required (compliant with ASTM 1261).



Any application other than the "intended use" stated herein is in violation of the manufacturer's instructions and is hereby prohibited. Such violations may cause immediate hazard, property damage, or loss of life, and will void all liabilities to the manufacturer and will void all warranties, explicit or implied.

Read the installation and operating instructions carefully and in full to be sure you understand them prior to installation. If the information in this manual (including installation instructions) is not followed exactly, a fire or explosion may result, causing property damage, personal injury, or loss of life.

- 1. Check local building codes pertaining to fireplaces and fireplace installation. All installations must comply with local, regional, state and national building codes and regulations.
- 2. Maintain the stated minimum clearance to combustibles (see page 18) and do not violate any specific installation requirement.
- 3. Do not pack required air spaces with insulation or other materials.
- 4. Foundations and footings must meet local building code and be approved by the local building authority. For any foundation design and load requirements, check with a structural engineer.
- 5. This fireplace is not designed to sit directly on or abut a combustible surface or floor system.
- 6. Ensure that an adequate supply of replacement air from outside of the house is accessible to the fire to support normal combustion. It is the responsibility of the builder or contractor to supply adequate combustion air.
- 7. Do not use a fireplace insert or other product not specified for use with a fireplace with the reflective properties of this product.
- 8. This fireplace has not been tested for use with doors. To reduce the risk of fire or injury, do not install doors.
- 9. Do not burn construction debris of any kind in this fireplace.
- 10. Do not burn small branches or twigs that exceed the volume of a normal fire (see pages 37-38). Overfiring can permanently damage the system.
- 11. Only vented gas logs that are listed by ANSI Z21.60 can be used in this fireplace.
- 12. This fireplace has not been tested with an unvented gas log set. Do not install an unvented gas log set in this fireplace.

INTENDED USE STATEMENT

NOTE: Illustrations in this manual are not to scale and are intended to show "typical" installations. The 72" Oversized Conventional model with 4 courses is shown throughout this manual, unless otherwise noted. Nominal dimensions are given for design and framing reference only, since actual installations may vary due to job specific designs and preferences. Always maintain the stated minimum clearance to combustibles and do not violate any specific installation requirement.

The fireplaces and chimney system are tested and listed by Intertek Testing Service to UL 127 and UL 103.

The FireRock fireplace is designed to burn wood, gas, or coal. Use solid wood, processed solid fuel fire logs, natural gas, propane, or coal fuel only. Only vented gas logs that are listed by ANSI Z21.60 can be used in this fireplace.

▲ WARNING

Burning some fuels (such as charcoal) can be hazardous due to the possibility of producing carbon monoxide, which is both invisible and odorless. Overexposure to carbon monoxide can lead to illness and death. It is strongly recommended to install smoke and carbon monoxide detectors wherever fireplaces are in use.

This fireplace is intended for use as a supplemental heat source only and is not intended for heavy use as a primary heating system. Overfiring, abusive burning, or mistreatment will void any warranty claims.

Do not use a fireplace insert or other product not specified for use with a fireplace with the reflective properties of this product.

The fireplace must sit on a concrete pad or slab that is designed to bear the total weight of the fireplace and chimney. This pad or slab should provide for the noncombustible hearth extension substrate needed to support the code required noncombustible hearth extension finish materials. This fireplace is not designed to sit directly on or abut a combustible surface. Installing this fireplace directly on a combustible surface may result in a fire or explosion, causing property damage, personal injury, or loss of life.

This product is designed to work with the FireRock Solid Block masonry flue system or any appropriately sized, UL 103 compliant, metal prefabricated flue system. The metal flue system manufacturer must offer an Anchor Plate specifically designed for the purposes of attaching the metal flue to the masonry fireplace. Installation of the chimney must conform to the manufacturer's installation instructions.

The 60" and 72" models are listed to be installed with 4, 5, or 6 courses. Installations with 5 or 6 courses are noted through this manual as "A" (5 courses) and "B" (6 courses). Each course is 8 \(\frac{5}{8} \)" tall, so the overall firebox height will vary based on the type of install.

Recommended minimum overall height for the Oversized Conventional fireplace and FireRock masonry chimney system for an indoor application is 15' for a straight, vertical chimney. Maximum overall height is 65'.

For heights above 65', consult a structural engineer for additional structural support. These heights do not reflect information regarding metal flue. Any UL 103 metal flue can be used on FireRock fireplaces. See metal flue manufacturer's installation instructions for information relating to height requirements/restrictions. For outdoor applications, there is no minimum height requirement.

NOTICE

Any fireplace insert must be approved, in writing, by FireRock Products, LLC. Failure to heed this warning could result in failure of this product and/or the insert product.

Always obtain necessary permits from proper authorities in local jurisdictions and comply with all local building codes.

INTENDED USE STATEMENT

(CONTINUED)

All work performed on, near, and adjoining the fireplace and chimney installation must meet or exceed the specifications and requirements in this manual and the prevailing local building code. Subsequent renovations and/or additions of cabinets and storage spaces in the enclosure surrounding the fireplace are also limited to the specifications in this manual and to the prevailing local building code.

Modifications to fireplace components not mentioned in this manual may void warranty claims, listing and approvals, and could result in an unsafe and potentially dangerous installation. Alterations to the firebox are allowed with prior written approval and instruction from FireRock. The installer indemnifies, will defend and hold harmless the manufacturer from all claims and losses, and under no circumstances will manufacturer be liable for damages of any kind or nature, whether foreseeable or not, arising out of or relating to any modifications of the fireplace by the installer.

▲ WARNING

This fireplace has not been tested for use with doors. To reduce the risk of fire or injury, do not install doors. Using this fireplace with doors installed may result in a fire or explosion, causing property damage, personal injury, or loss of life.

The FireRock Oversized Conventional fireplace is approved for Indoor and Outdoor use. Maintain stated clearance to combustibles for indoor and outdoor use.

MATERIALS AND EQUIPMENT LIST

REQUIRED MATERIALS & EQUIPMENT

- Concrete (for pad/foundation)
- Clean water
- Trowel
- 5 gallon bucket
- Level
- Plastic shims
- FireRock Adhesive Mortar
- Damper (for interior applications)
- Firebrick
- Masonry chimney block or UL 103 metal pipe with required accessories

OPTIONAL MATERIALS & EQUIPMENT

- Rebar (to fill hurricane holes in masonry chimney blocks)
- CMU block
- Outside air kit
- Log lighter
- Noncombustible stone or veneer (for outdoor applications)

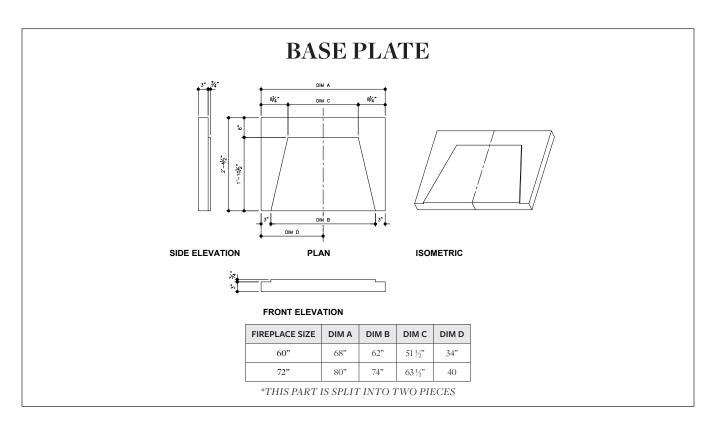
OVERSIZED CONVENTIONAL* MASONRY FIREPLACE SYSTEM COMPONENTS

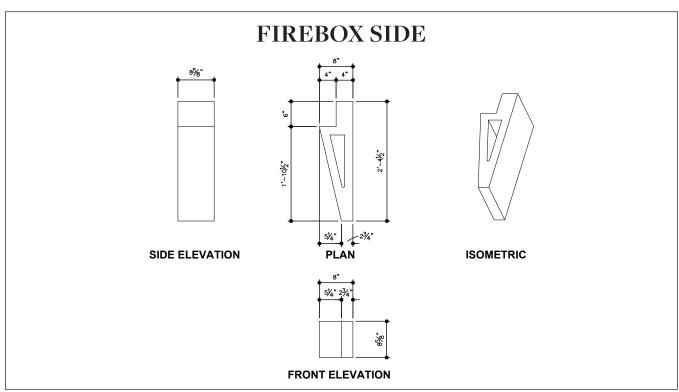
	60"	72"
34" Base plate	2	
40" Base plate		2
Firebox side	8	8
22 ¾" Back wall (Courses 1 & 3)	2	2
25 1/4" Back wall (Courses 2 & 4)	2	2
34 ¾" Back wall (Courses 2 & 4)	2	
37 1/4" Back wall (Courses 1 & 3)	2	
46¾" Back wall (Courses 2 & 4)		2
49 ¼" Back wall (Courses 1 & 3)		2
37" Radius Throat Front		1
43" Radius Throat Front		1
68" Radius Throat Front	1	
37" Square Throat Back		1
43" Square Throat Back		1
68" Square Throat Back	1	
Throat Side	2	2
24 5/16" Smoke Chamber Front/Back	2	
30 5/16" Smoke Chamber Front/Back		2
30 11/16" Smoke Chamber Front/Back	2	
31 5/16" Smoke Chamber Front/Back	2	
31 11/16" Smoke Chamber Front/Back	2	
36 11/16" Smoke Chamber Front/Back		2
37 5/16" Smoke Chamber Front/Back		2
37 11/16" Smoke Chamber Front/Back		2
Smoke Chamber Side	4	4
26" Chimney Base	2	
32" Chimney Base		2
TOTAL	36	38

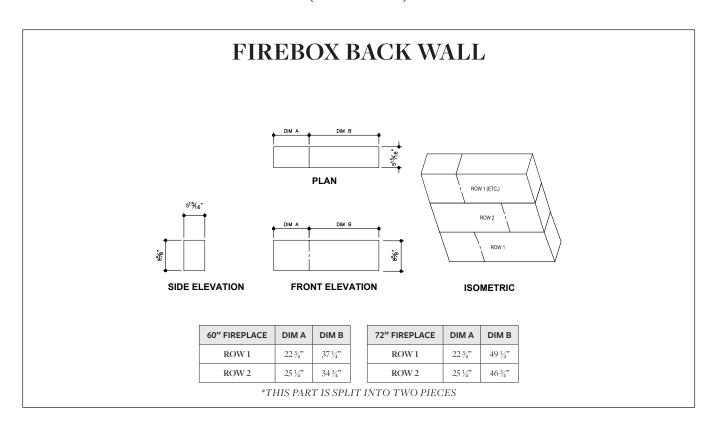
 $See\ page\ 8\text{-}13\ for\ component\ specifications$

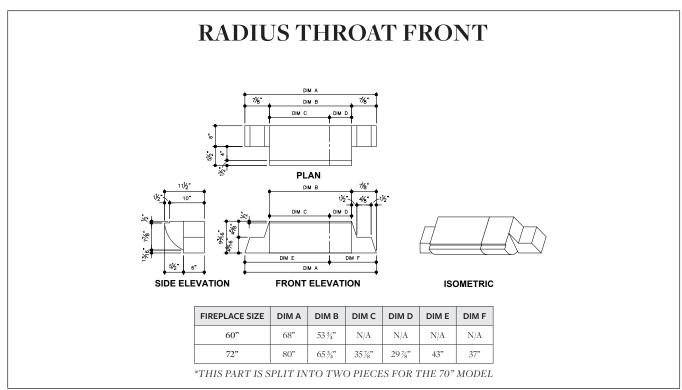
NOTE: Some of the components of this fireplace are extremely heavy and should not be lifted by one person. Because of this, realize that building this fireplace is at minimum a two-man job.

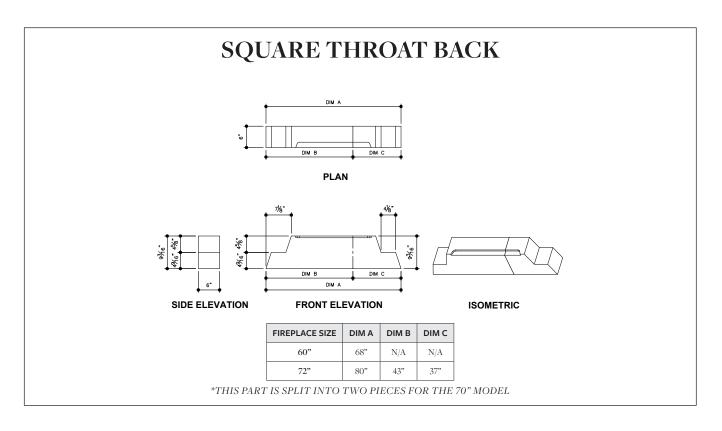
^{*}This component list lists the components for the standard 4 course model. Install variations with 5 or 6 courses will have additional back wall and firebox side pieces to achieve the desired height.

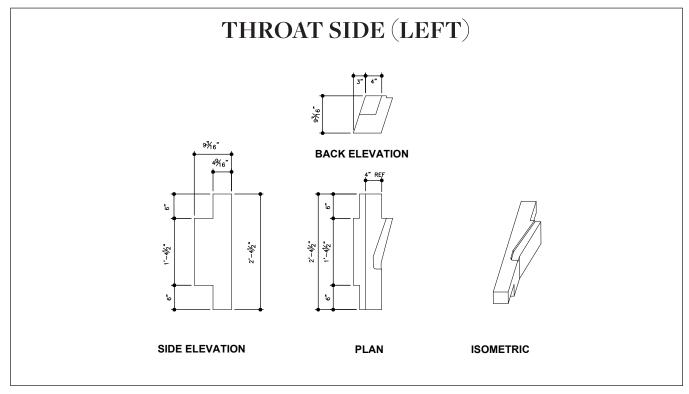


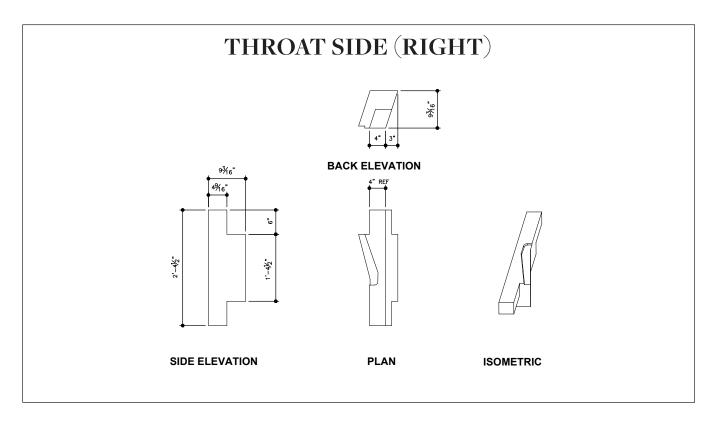


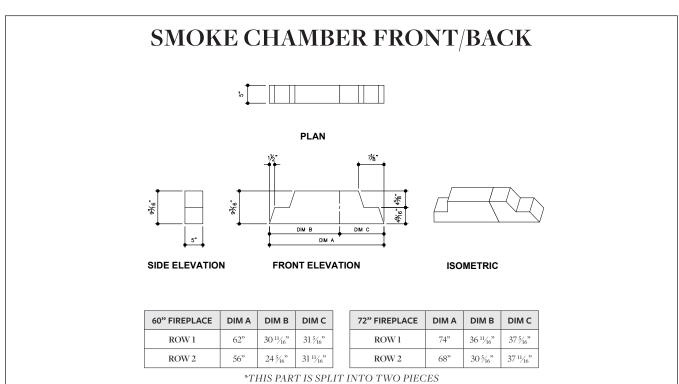


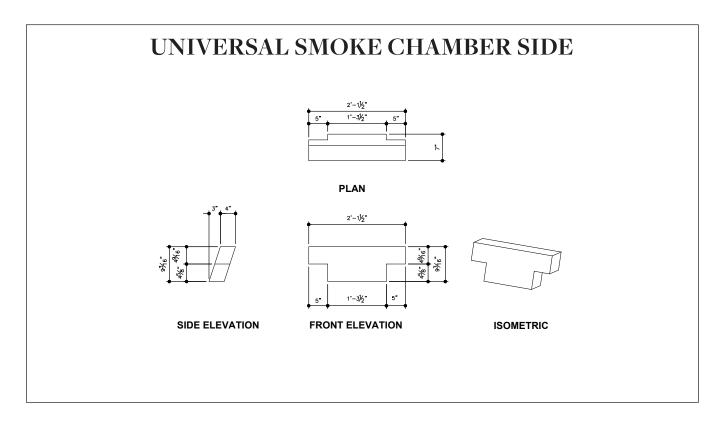


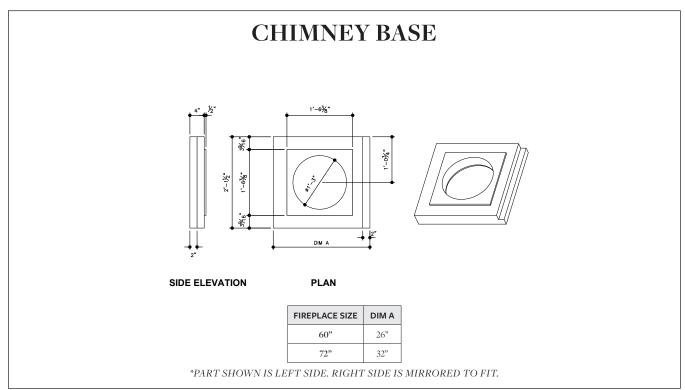


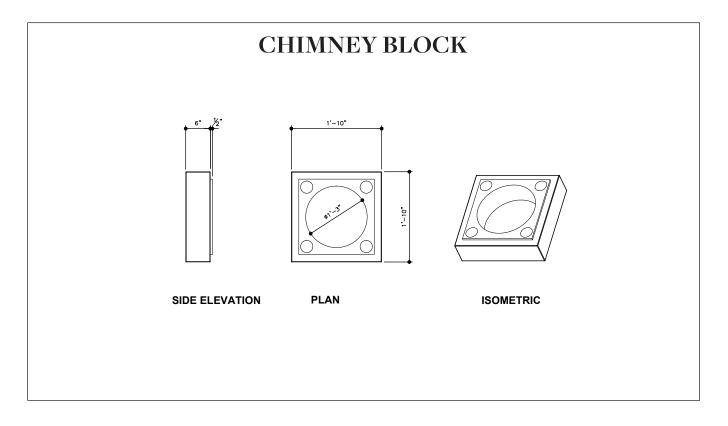












INSTALLATION CONSIDERATIONS

A. COMBUSTION AIR + SMOKE DRAW

Always ensure that an adequate supply of replacement air from outside of the house is accessible to the fire to support normal combustion. Fireplaces consume large volumes of air during the normal firing process and will only draft properly when they are installed according to the instructions, in an appropriate location, and with the proper chimney height. Installing the fireplace according to the installation instructions, choosing a proper location, and determining an appropriate chimney height is the responsibility of the designer and the general contractor.

▲ WARNING

Failure to provide an adequate air supply for the unit can result in the emission of smoke, sparks, or hazardous gases into the house, and in some cases may result in a fire or explosion, causing property damage, personal injury, or loss of life.

Outside air kits can be installed in all FireRock fireplaces to supplement combustion air. Determining that the building's internal air pressures are conducive to positive fireplace drafting and whether an outside air kit should be included in the installation is the responsibility of the designer and the general contractor.

In the event the home is tightly sealed, i.e. spray foam insulation or house wrap, an outside air kit may not provide all the air required to support combustion and the proper flow of combustion gases up the chimney. The manufacturer is not responsible for any smoking or related problems that may result from the lack of adequate combustion air supply flowing into the house. It is the responsibility of a builder/contractor to ensure that adequate air supply has been provided for the fireplace.

Avoid placing a fireplace in an area near tall trees or buildings that can reduce air flow pressure and/or produce down drafts. FireRock Products, LLC does not warrant drafting and is not responsible for it.

Refer to page 32 for more information on using an outside air kit with a FireRock pre-engineered masonry fireplace kit.

B. TERMINATIONS

The termination of the chimney above the roof must extend at least 3' above the highest point where it passes through the roof, and at least 2' higher than any portion of a building within 10'.

The FireRock Solid Chimney Block system is approved for use with properly sized rain caps, chimney pots, and other decorative features.

If using a UL 103 listed metal chimney, refer to the metal flue manufacturer for approved chimney caps, shrouds and covers, and rain caps. FireRock does not manufacture these components and therefore defers to the manufacturer's instructions.

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. When in doubt about a component's usability, consult your FireRock distributor or authorized FireRock representative for advice. You may also call the FireRock Technical Support Desk toll-free at 888.876.1025.

INSTALLATION CONSIDERATIONS

(CONTINUED)

D. GAS LINE APPLICATIONS

The FireRock 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 Z21.60. The decorative gas appliance should be installed in accordance with the National Fuel Gas Code, ANSI Z223.

▲ WARNING

Only vented gas logs that are listed by ANSI Z21.60 can be used in this fireplace. This fireplace has not been tested with an unvented gas log set. To reduce the risk of fire or injury, do not install an unvented gas log set into this fireplace.

E. LOG LIGHTER

A log lighter can be used with your FireRock fireplace as either a flush mount (installed before the firebrick) or top mount. FireRock recommends the log lighter be installed by a professional plumber. See manufacturer's instructions for directions on how to install.

HINTS

- If this is your first FireRock 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 go together. Then disassemble and erect using FireRock Adhesive Mortar.
- 2. Use a level to ensure all components are level by course and plumb as you erect your fireplace and chimney.
- 3. Ensure your base plate is level and at a proper elevation so the <u>finished hearth height</u> (including firebrick lining) is correct in relationship to your finished floor height.
- 4. Realize that this is at minimum a two-man job. Some of these components are too heavy for one person to lift.
- 5. Always install in accordance with local codes.

WARNOCK HERSEY LISTING LABEL



LISTED MASONRY FIREPLACE SYSTEM MODEL FireRock SERIES FIREPLACE 60" 72" CONVENTIONAL FIREBOX CERTIFIED TO UL-127

WHI-

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 AND SMOKE CHAMBER TO SIDEWALL	1"	MASONRY CHIMNEY TO JOISTS OR CHASSE	0"

EXPOSED SURFACES

OPENING TOP TO COMBUSTIBLE MANTLE (8")	16"	FIREPLACE OPENING 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 OR CHASSE	0"
HEARTH EXTENSION FRONT:*	20"	HEARTH EXTENSION BEYOND SIDES:	8"

SEE FIRE ROCK'S INSTALLATION AND OPERATING INSTRUCTIONS FOR THIS MODEL
*ADDITIONAL FLOORING PROTECTION IS REQUIRED AS DETERMINED BY THE HEIGHT OF THE
UNIT. SEE FIREROCK INSTALLATION MANUAL FOR FLOORING PROTECTION SPECS.

REFER TO THE INTERTEK DIRECTORY OF BUILDING PRODUCTS

(HTTPS://BPDIRECTORY.INTERTEK.COM) FOR DETAILED INFORMATION.

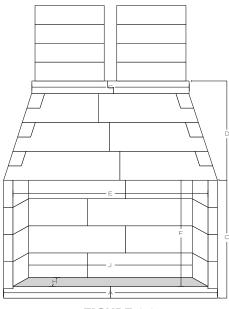
WARNINGS

- USE SOLID WOOD, PROCESSED SOLID FUEL FIRE LOGS, NATURAL GAS, PROPANE, OR COAL FUEL ONLY
- DO NOT USE A FIREPLACE INSERT OR OTHER PRODUCTS NOT SPECIFIED FOR USE WITH THIS PRODUCT
- THIS FIREPLACE HAS NOT BEEN TESTED WITH GLASS DOORS. TO REDUCE RISK OF FIRE OR INJURY DO NOT INSTALL GLASS DOORS
- WHEN BURNING GAS IN THE FIREPLACE, ADJUST DAMPER TO FULLY OPEN POSITION
- ONLY VENTED GAS LOG SETS WHICH ARE LISTED ARE TO BE INSTALLED IN THIS FIREPLACE. DO NOT OPERATE AN UNVENTED GAS LOG SET IN THIS FIREPLACE.

MANUFACTURED BY: FIRE ROCK PRODUCTS, LLC: 3620 AVENUE C: BIRMINGHAM, AL 35064

FIREPLACE DIMENSIONS

DIMENSION



A	OVERALL WIDTH	68"	68"	68"	80"	80"	80"
	OVERALL DEPTH		28.5"	28.5"	28.5"	28.5"	28.5"
С	FIREBOX HEIGHT	37.5"	46.125"	54.75"	37.5"	46.125"	54.75"
D	SMOKE CHAMBER HEIGHT	31.5"	31.5"	31.5"	31.5"	31.5"	31.5"
Е	OPENING WIDTH*	62.5"	62.5"	62.5"	74.5"	74.5"	74.5"
F	OPENING HEIGHT*	33.75"	42.375"	51"	33.75"	42.375"	51"
G	WIDTH AT CHIMNEY BASE	50"	50"	50"	62"	62"	62"
Н	FIREBOX DEPTH	22.5"	22.5"	22.5"	22.5"	22.5"	22.5"
J	WIDTH AT REAR	52"	52"	52"	64"	64"	64"

60"

60" - A

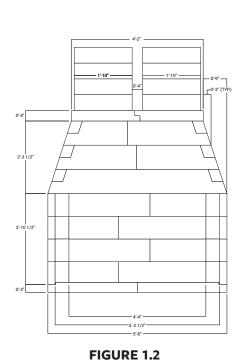
60" - B

FIGURE 1.1

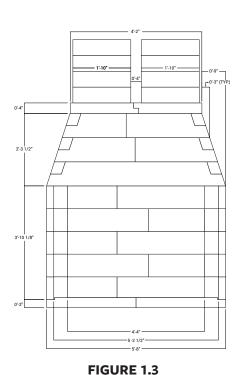
 $*before\ firebrick\ lining$

72" - A

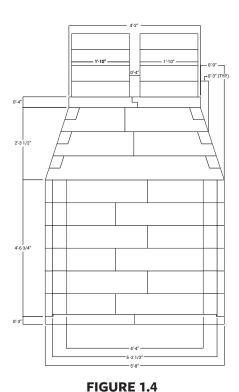
72" - B



60" OVERSIZED CONVENTIONAL: 4 COURSES



60" - A OVERSIZED CONVENTIONAL: 5 COURSES



60" - B OVERSIZED CONVENTIONAL: 6 COURSES

CLEARANCE TO COMBUSTIBLES

Opening to Side wall	28"	
Opening to Combustible Trim	12'	MANTLE
Opening to Combustible Mantle with 8" Depth	16"	TILE/MARBLE 16"
Noncombustible Hearth Extension	20" front, 8" each side	28" 12" TRIM
Firebox and Smoke Chamber to Combustibles or Framing	1"	8" HEARTH EXTENSION
Smoke Chamber to Front Wall and Smoke Chamber Top to Wood Framing	1"	FIGURE 2.1

▲ WARNING

Failure to maintain stated minimum clearance to combustibles may result in a fire or explosion, causing property damage, personal injury, or loss of life.

NOTE: "Combustibles" are defined as "normal construction materials" and are considered to be: wood framing materials, particle board, mill board, plywood sub-flooring, plywood paneling, wood flooring, and drywall.

The fireplace must sit on a concrete pad or slab that is designed to bear the total weight of the fireplace and chimney. This pad or slab should provide for the noncombustible hearth extension substrate needed to support the code required noncombustible hearth extension finish materials.

All fireplaces should have a noncombustible hearth that extends 20" beyond the front of the firebox and 8" to either side. Approved noncombustible materials include brick, tile, or stone that is properly supported, with no combustible material against the underside.

The 60" and 72" Conventional models require extra floor protection in addition to the 20" full depth hearth extension listed. The amount of additional floor protection is dependent upon the opening height of the firebox, and must be constructed of a noncombustible material with a minimum R-value of 0.30. For our standard sized firebox, an additional 36" beyond the hearth is required; for 1 height extension kit, 48" is required; and for 2 height extension kits, 60" is required (see pages 21-22 for more information).

▲ WARNING

Do not pack required air spaces with insulation or other materials. Using insulation or other materials in required air spaces may result in a fire or explosion, causing property damage, personal injury, or loss of life.

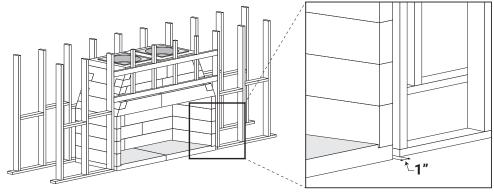
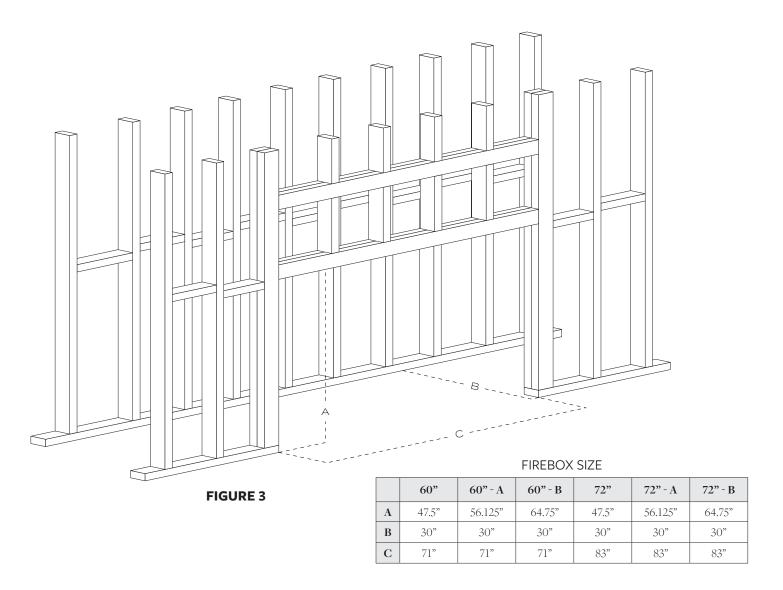


FIGURE 2.2

ROUGH FRAMING DIMENSIONS



The numbers listed are the framing dimensions recommended by FireRock, which add $\frac{1}{2}$ " of air space to the required clearances. Always maintain the stated minimum clearance to combustibles for this unit.

▲ WARNING

Failure to maintain stated minimum clearance to combustibles on page 18 may result in a fire or explosion, causing property damage, personal injury, or loss of life.

For ease of installation, it is recommended to not install framing header until after firebox is installed.

Rough framing dimension "A" includes the 3 ¾" thick base plate. Dimension "A" should be reduced by 3 ¾" if the base plate is eliminated to create a "flush hearth." A raised hearth requires additional rough opening height for dimension "A" equal to the height of the raised hearth detail.

STEP 1: FOUNDATION

▲ WARNING

This fireplace is not designed to sit directly on or abut a combustible surface. Installing this fireplace directly on a combustible surface may result in a fire or explosion, causing property damage, personal injury, or loss of life.

CONCRETE PAD WITH HEARTH EXTENSION DIMENSIONS

	DEPTH	WIDTH
60"	50"	76"
72"	50"	88"

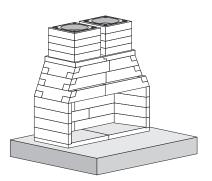
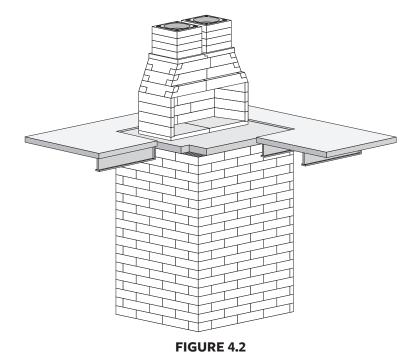


FIGURE 4.1
CONCRETE SLAB



CONCRETE PAD SUPPORTED BY MASONRY (CMU) TOWER

The FireRock fireplace must be erected on a noncombustible base with a noncombustible 20" hearth extension in front of the firebox opening and at least 8" on either side of the firebox opening (Figure 2.1 on page 18). There are 2 types of foundations that can be used in this type of installation.

- 1. Concrete Slab (Figure 4.1)
- 2. Concrete Pad Supported by Masonry (CMU)
 Tower (Figure 4.2): Typically used when the fireplace is placed over a basement or crawl space.
 The noncombustible pad is best made from a 6" thick concrete slab with #4 rebar tied together at maximum 12" intervals, center poured on top of corrugated metal. Concrete pad must be supported by a full masonry tower with no combustible underpinnings to withstand the weight of the firebox and flue system.

▲ WARNING

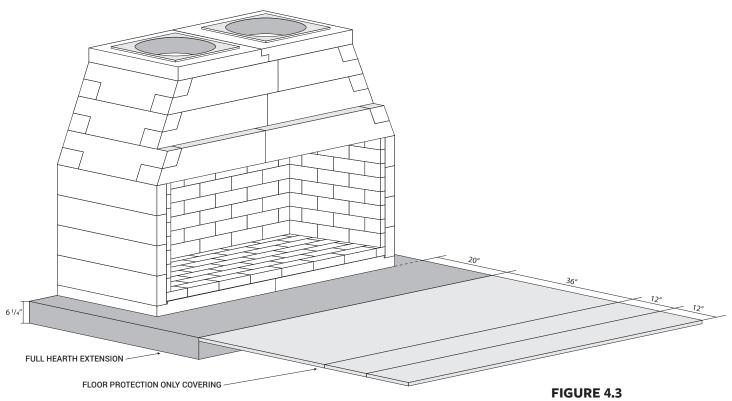
Foundations and footings must meet local code and be approved by the local building authority. For any foundation design and load requirements, check with a structural engineer. Failure to ensure adequate foundations can cause significant property damage. It is the responsibility of the general contractor to ensure adequate foundations.

NOTE: Use of the FireRock base plate is optional for either of the above foundation types (concrete slab or concrete pad)

STEP 1: FOUNDATION (CONTINUED)

FLOORING REQUIREMENTS

The 60" and 72" Conventional models require extra floor protection in addition to the 20" full depth hearth extension listed. The amount of additional floor protection is dependent upon the opening height of the firebox, and must be constructed of a noncombustible material with a minimum R-value of 0.30. For our standard sized firebox, an additional 36" beyond the hearth is required; for 1 height extension kit, 48" is required; and for 2 height extension kits, 60" is required.



FIREBOX WITH FULL HEARTH EXTENSION + FLOOR PROTECTION

	i						
		FULL H	EARTH EXTE	NSION	FLOOR	PROTECTIO	N ONLY
FIREBOX SIZE	COURSES	THICKNESS	WIDTH	DEPTH	THICKNESS	WIDTH	DEPTH
60" (W) x 33 3/4" (H)	4	6 1/4"	76"	20"	R-value = 0.30	76"	36"
60" (W) x 42 3/8" (H)	5	6 1/4"	76"	20"	R-value = 0.30	76"	48"
60" (W) x 51" (H)	6	6 1/4"	76"	20"	R-value = 0.30	76"	60"
72" (W) x 33 ¾" (H)	4	6 1/4"	88"	20"	R-value = 0.30	88"	36"
72" (W) x 42 3/8" (H)	5	6 1/4"	88"	20"	R-value = 0.30	88"	48"
72" (W) x 51" (H)	6	6 1/4"	88"	20"	R-value = 0.30	88"	60"

 $See\ page\ 22\ for\ calculations\ to\ determine\ acceptable\ alternate\ materials$

STEP 1: FOUNDATION (CONTINUED)

HOW TO DETERMINE IF ALTERNATE FLOOR PROTECTION MATERIALS ARE ACCEPTABLE

All floor protection materials must be noncombustible (i.e., metals, brick, stone, mineral fiber boards, etc.). Any organic materials (i.e., plastics, wood, paper products, etc.) are combustible and must not be used. The floor protector specified may include some form of thermal designation as R-value (thermal resistance), k-factor (thermal conductivity), or C-factor (thermal conductance).

PROCEDURE:

STEP 1 CONVERT SPECIFICATION TO R-VALUE:

- i. R-value given no conversion needed
- ii. k-factor is given with a required thickness (T) in inches: $R = 1/k \times T$
- iii. C-factor is given: R = 1/C

STEP 2 DETERMINE THE R-VALUE OF THE PROPOSED ALTERNATIVE FLOOR PROTECTOR

- i. Use the formuli in Step 1 to convert values not expressed as "R."
- ii. For multiple layers, add R-values of each layer to determine overall R-value.

STEP 3 DETERMINE WHETHER THE ALTERNATE IS ACCEPTABLE

i. If the overall R-value of the system is greater than the R-value of the specified floor protector, the alternate is acceptable.

EXAMPLE:

The specified floor protector should be $\frac{3}{4}$ " thick material with a k-factor of 0.84. The proposed alternate is 4" brick with a C-factor of 1.25 over $\frac{1}{8}$ " mineral board with a k-factor of 0.29.

STEP 1 CONVERT SPECIFICATION TO R-VALUE:

- i. Use the formulas above to convert specification to R-value.
 - $R = 1/k \times T = 1/0.84 \times 0.75 = 0.893$

STEP 2 DETERMINE THE R-VALUE OF THE PROPOSED ALTERNATIVE FLOOR PROTECTOR

- 4" brick with c-factor of 1.25
 - R = 1/C = 1/1.25 = 0.8
- ½" mineral board with a k-factor of 0.2
 - » $R = 1/k \times T = 1/0.29 \times 0.125 = 0.431$
- Calculate total R-value
 - » R-value of 4" brick + R-value of $\frac{1}{8}$ " mineral board = 0.8 + 0.431 = 1.231

STEP 3 DETERMINE WHETHER THE ALTERNATE IS ACCEPTABLE

i. Compare the proposed system total R-value of 1.231 to the specified R-value of 0.893. Because the R-value of the proposed system is greater than required, the system is acceptable.

STEP 2: MIXING AND APPLYING MORTAR

FIREROCK ADHESIVE MORTAR

FireRock Adhesive Mortar <u>must</u> be used when building the FireRock fireplace for your FireRock warranty to be valid. Use of other mortar will void your FireRock warranty

This mortar is available from your FireRock dealer or distributor. 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 typical joint provider.

MIXING THE MORTAR

Mix FireRock Adhesive Mortar with clean water according to the instructions on the bag until it results in a "toothpaste" consistency, free of lumps or dry pockets. Be sure it is not too thin or runny to ensure maximum strength. Use only clean water when mixing FireRock Adhesive Mortar. Do not use spirits or anti-freeze agents. Do not apply if temperatures are below 40 °F or will be within a 24 hour period.

APPLYING THE MORTAR

It is appropriate to use a trowel or grout bag to apply the mortar to firebox and smoke chamber joints. These joints should be **COMPLETELY COVERED BY \frac{1}{2}" - 1" OF MORTAR** (Figure 5.1) and the components stacked so as to result in a $\frac{1}{16}$ " to $\frac{1}{8}$ " joint. The excess mortar should push (ooze) out and be scraped away.

BUTTERING THE JOINTS

At each level of the firebox, smoke chamber, and masonry chimney it is important to go back and "butter" all joints. This procedure involves a final smoothing of any excess mortar, inside and out, sealing all joints and ensuring a "no-leak" installation (Figure 5.2).

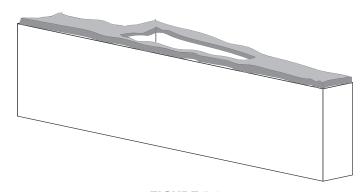
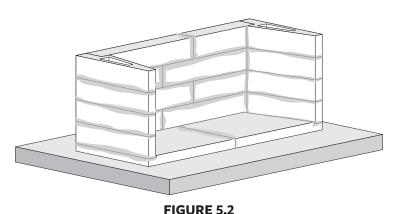


FIGURE 5.1
SIDE BLOCK WITH MORTAR APPLIED TO TOP FACE



FIREBOX WITH BUTTERED JOINTS

STEP 3: FIREBOX ASSEMBLY

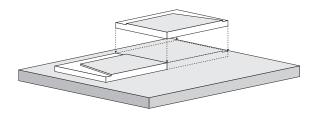


FIGURE 6.1

2 PIECE BASE PLATE ON CONCRETE SLAB

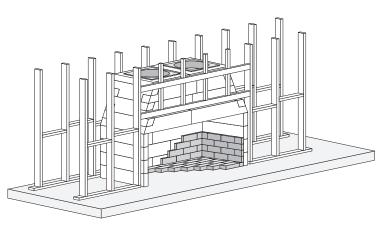


FIGURE 6.2

FLUSH HEARTH

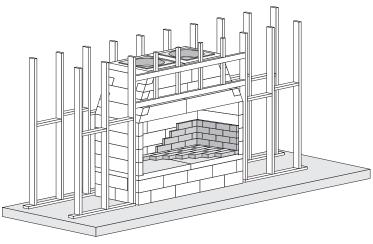


FIGURE 6.3

RAISED HEARTH

BASE PLATE

A two-part base plate is included with this fireplace kit. The base plate must be placed on a level noncombustible surface. It is very important that your base plate be square to the room, properly centered, and level. Mark out the position of the base plate on the supporting floor system. Apply a layer of mortar to the area and set the base plate pieces, mortaring the two pieces together using FireRock Adhesive Mortar (Figure 6.1).

Whether using a flush hearth or a raised hearth, a noncombustible hearth must extend at least 20" out in front of the finished firebox opening and 8" beyond the finished sides of the opening (Figure 2.1 on page 18).

FLUSH HEARTH (FIGURE 6.2)

If the design calls for a flush hearth, you can omit the base plate from the assembly instructions and build the side walls directly on the concrete pad or slab. In the event you opt not to use the base plate, carefully chalk lines where the base plate would be to ensure proper placement of your firebox.

With a flush hearth, the firebrick floor of the firebox will be applied directly to the concrete slab or pad. This makes the finished firebrick floor approximately 2 ½" above the top of the slab or pad.

RAISED HEARTH (FIGURE 6.3)

If the design calls for a raised hearth, the base plate should be set on a noncombustible platform that is built up to the desired hearth height.

When calculating the hearth height, be sure to account for both the $3\frac{3}{4}$ " base plate and $2\frac{1}{2}$ " thick firebrick floor, in addition to the height of the platform.

STEP 3: FIREBOX ASSEMBLY (CONTINUED)

BACK WALL AND SIDE BLOCKS

Side blocks and back blocks are next. Completely cover each component with mortar $\frac{1}{2}$ " - 1" thick where it will lie or butt up against another component. You will begin by placing a back block on the base plate (Figure 6.4). Next, place the corresponding side blocks (Figure 6.5), again completely covering each edge of a component that butts up to another component (including the base plate) with $\frac{1}{2}$ " - 1" of mortar. Use your level to ensure level and plumb placement of each component.

NOTE: Each course of the back wall is made up of two pieces - one long and one short. Back blocks should be stacked in a staggered joint pattern (Figure 6.6), and mortared together.

Continue to build each course of the firebox, making sure all surfaces are plumb and level and firebox position is correct (Figure 6.7).

Butter all joints inside and out (see page 23).

LEVELING AND ALIGNING COMPONENTS

It is important that each course of the firebox is level and flush with adjoining components. FireRock mortar is not intended to create a mortar joint of any thickness for leveling purposes. Leveling and alignment adjustments should be made by the use of small shims. Be sure to remortar any gaps resulting from the shims to maintain a leak-free seal.

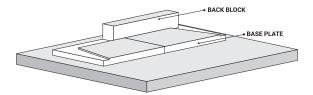
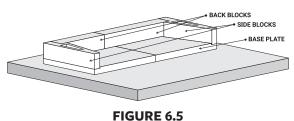


FIGURE 6.4

BASE PLATE + 1 BACK BLOCK



1 COURSE

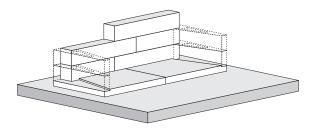
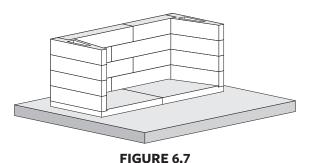


FIGURE 6.6
STAGGERED JOINT PATTERN



FULLY ASSEMBLED FIREBOX

STEP 4: THROAT AND DAMPER ASSEMBLY

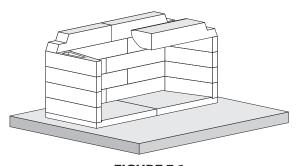


FIGURE 7.1
THROAT ASSEMBLY

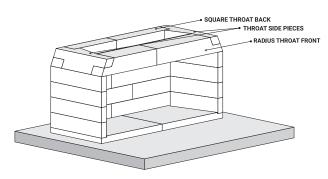


FIGURE 7.2
ASSEMBLED THROAT

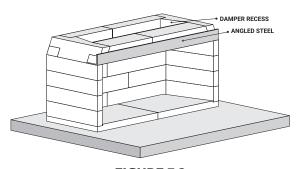


FIGURE 7.3

DAMPER RECESS + ANGLED STEEL

THROAT (FIGURE 7.1)

Begin building the throat by placing the radius throat front and square throat back. Remember to completely cover each component with mortar $\frac{1}{2}$ " - 1" thick where it will lie or butt up against another component. Given the curvature of our radius throat front to aid in smoke draw, be careful when placing this piece, as it can roll. Mortar and place the throat left and throat right pieces to secure it in place.

NOTE: On the 72" model, both the radius throat front and the square throat back are split into two pieces, and must be mortared together (Figure 7.1).

A piece of 6" x 6" x $\frac{1}{2}$ " angled steel (purchased separately) should be installed next. The length of this angled steel piece corresponds with the overall width of your firebox model. It should be installed <u>beneath</u> the radius throat front, across the top of the firebox opening - angle up to hold the radius throat front pieces in place (Figure 7.3).

SETTING THE DAMPER (60" ONLY)

Upon setting the 4 throat components, a recess (Figure 7.3) is formed for the purpose of locating the damper. The 60" model supports a 54" cast iron damper.

Place the damper in the recess and over the smoke chamber opening. The damper's operating plate should face toward the rear of the fireplace. If necessary, use mortar to tack the four corners of the damper into place.

Do <u>not</u> mortar all the way around the damper to create an air tight seal, as it is important the damper be able to expand and contract.

NOTE: The 72" model does not support a damper in the throat. Two top-seal dampers should be used instead.

NOTE: A damper is not required for outdoor installations.

STEP 5: SMOKE CHAMBER ASSEMBLY

SMOKE CHAMBER

The front and back of the smoke chamber are also split into two pieces and can only be positioned one way. See Figure 8.3 and Figure 8.4 for specific dimensions for the 60" and 72" model, respectively.

The side pieces are identical.

Remember to completely cover each component with mortar ½" - 1" thick where each edge of each component will lie or butt up against another component.

Align the smoke chamber flush with the back wall of the fireplace, leaving an approximately 3" "ledge" on top of the radius throat front. This ledge allows space for a framing header to maintain the required 1" clearance.

Be sure to check for and maintain plumb and level installation of these components.

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

The final component of the smoke chamber is the chimney base. Both the 60" and 72" Oversized Conventional fireplace kits require two chimney flues. As such, two interlocking chimney bases are included. Completely cover the tops of all 4 smoke chamber components with ½" - 1" of mortar before placing these final components and mortaring them together. Be sure both chimney bases are level front-to-back and side-to-side.

"Butter" all joints to ensure a no-leak seal.

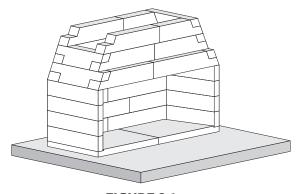
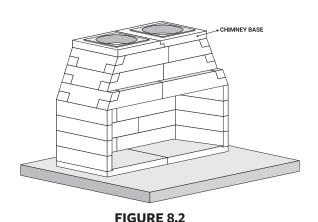


FIGURE 8.1
SMOKE CHAMBER ASSEMBLY



COMPLETED FIREBOX AND SMOKE CHAMBER

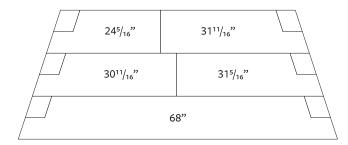
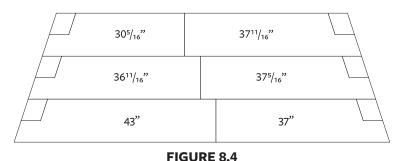
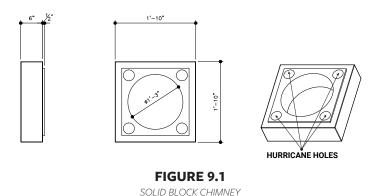


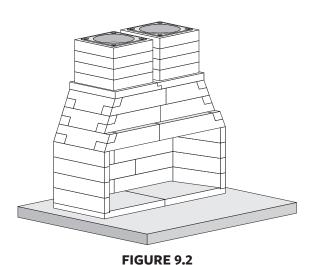
FIGURE 8.360" THROAT/SMOKE CHAMBER STACKING PATTERN



72" THROAT/SMOKE CHAMBER STACKING PATTERN

STEP 6: CHIMNEY ASSEMBLY





60" CONVENTIONAL FIREPLACE WITH 4 CHIMNEY BLOCKS

SOLID BLOCK CHIMNEY

FireRock Solid Block Chimney (Figure 9.1) may be installed from this point. Completely cover each chimney block component with $\frac{1}{2}$ " - 1" of mortar, resulting in a $\frac{1}{16}$ " - $\frac{1}{8}$ " joint. "Butter" all joints to give a smooth appearance and ensure a leak-free joint. The inside face of the chimney should also be "buttered" to ensure a no-leak seal, as well as to prevent smoke obstruction caused by excess mortar build up.

For masonry chimney, mortar should be used at a rate of 1 bag for every 6 blocks.

SOLID BLOCK CHIMNEY SPECIFICATIONS

- Overall width: 22" x 22"
- Overall height: 6"
- Weight: 75 lbs
- UL 127 compliant
- 0" clearance unless offset, then 1" clearance above offset

To increase the solid block chimney's strength even more, insert rebar and mortar into the "hurricane" holes (see Figure 9.1).

NOTE: Solid Block Chimney is required if your plans call for a Brick Flange (see page 31). Refer to local building codes for minimum and maximum height requirements

REQUIRED CLEARANCES: The FireRock Solid Block Chimney system is listed for 0" clearance to normal construction materials and may be enclosed in a wood chimney chase at 0" clearance to wood framing members.

^{*}If using a metal chimney, refer to page 35

STEP 6: CHIMNEY ASSEMBLY (CONTINUED)

OFFSET BLOCKS

Each offset block provides a maximum offset of $2\frac{5}{8}$ ". Offset direction may be left, right, back, or in a spiral pattern for "twisting" flues (see Figure 9.4).

Completely cover each offset block component with 1" of mortar, resulting in a $\frac{1}{16}$ " - $\frac{1}{8}$ " joint. "Butter" all joints to give a smooth appearance and ensure a leak-free joint. The inside face should also be "buttered" to ensure a no-leak seal, as well as to prevent smoke obstruction caused by excess mortar build up.

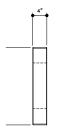
Stack blocks in a stair step fashion, allowing the flue to rise at an angle of 30° off vertical.

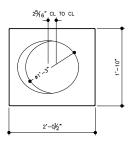
When building offset blocks sequences, check the interior flue alignment to avoid creating overhanging ledges on the inside of the flue. These internal overhangs will inhibit smoke draw.

- Overall width: 24.5" x 22"
- Overall height: 4"
- Weight: 60 lbs
- Vertical offset: 4"
- Horizontal offset: 2 5/8"
- Max horizontal offset: 40"
- Offset angle: 30°
- 1" clearance (vertical offset) after offset block is used
- Every 5th offset block must be supported by noncombustible materials, such as a concrete block wall

REQUIRED CLEARANCES: When offset blocks are used, a 1" clearance to combustibles must be adhered to for all offset blocks and all blocks above the offset.

A firestop is required wherever a chimney passes between one zone of a building to another (e.g., when passing through a ceiling into an attic area or between two floors). In each instance, there must be a sealed area around the chimney





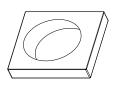


FIGURE 9.3
OFFSET BLOCK

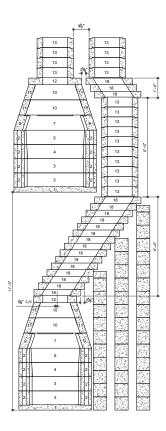


FIGURE 9.4
INSTALLATION WITH OFFSET BLOCKS
(SEE FIGURE 14 ON PAGE 34 FOR MORE DETAILS)

formed from a noncombustible material to avoid creating a chaseway allowing a fire to penetrate the attic or in between floors. The firestop should be made of either galvanized steel not less than 26 gauge thick or other noncombustible sheet material not more than ½" and have the strength and bearing surface to maintain the required 1" clearance to combustibles. The firestop should be installed on the underside of the ceiling/floor framing and secured in place with nails or screws. Failing to include firestops between floors may result in a fire or explosion, causing property damage, personal injury, or loss of life.

STEP 7: FIREBRICK INSTALLATION

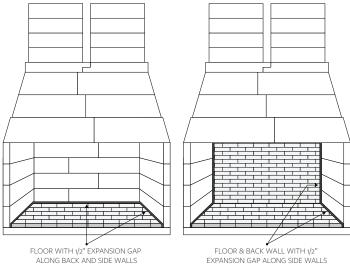
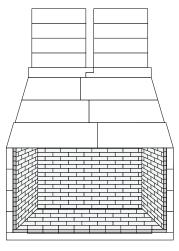


FIGURE 10.1

FIGURE 10.2



FULLY BRICKED FIREBOX COVERING EXPANSION GAPS

FIGURE 10.3

A $1\frac{1}{4}$ " minimum firebrick (ASTM 1261) lining is required to meet the standard. Thicker firebrick (compliant with ASTM 1261) may be used as an option and is encouraged for a sturdier wall. For a sturdier construction, FireRock recommends using a minimum $2\frac{1}{2}$ " brick for the floor and back wall and $1\frac{1}{4}$ " brick for side walls to maintain true opening widths. The same FireRock Adhesive Mortar used for the firebox and chimney should be used to affix the firebrick to the inner wall of the firebox.

Follow the installation instructions below when laying your firebrick.

FIREBRICK INSTALLATION

- 1. Mix mortar according to package instructions.
- 2. Apply a skim coat of mortar approximately $\frac{1}{16}$ " thick to the back wall to remove air gaps and provide added heat protection.
- 3. Using a trowel, apply mortar to the face and sides of the firebrick to achieve a joint thickness of $\frac{1}{16}$ " $\frac{1}{8}$ ", unless otherwise noted.
- 4. Start applying the firebrick at the front edge of the floor and work your way back leaving approx. ½" gap off the back and side walls (Figure 10.1) this space allows for heat expansion and is to be left empty of mortar. For the floor only, FireRock recommends a brick to brick joint.

NOTICE: Failure to leave an expansion gap can result in firebrick cracking.

- 5. Apply firebrick to the back wall. Cover the expansion gap on the floor with the overlap of brick, leaving it free of mortar. Leave a ½" expansion along both side walls (Figure 10.2).
- 6. Apply firebrick to side walls, starting at front of box and moving back, covering the expansion gaps along the floor and back wall with the overlap of brick, but leaving it free of mortar (Figure 10.3).

FireRock makes no claims as to the performance of firebrick or firebrick mortars except those manufactured by FireRock. It is typical for heat stress cracks to appear in the firebricks after use. The National Fire Protection Association Standard 211 says your fireplace and flue should be inspected at least once a year.

BRICK FLANGE

The FireRock Brick Flange (Figure 11.1) is a component that allows a true brick or stone veneer above the roofline (maximum 20 vertical feet of standard brick or equivalent).

Most local building codes do not allow masonry to be supported by combustible material. Our brick flange is designed to carry the weight of a brick or stone veneer only where you see it. If applying a brick or stone veneer to the chimney block above the roofline, a brick flange must be used.

This brick flange is installed in the chimney stack approximately 12" below the low side of the roof penetration (Figure 11.1).

The brick flange is cast with a male and female nesting mechanism to ensure a no-leak seal.

Maximum weight: 7,566 lbs.

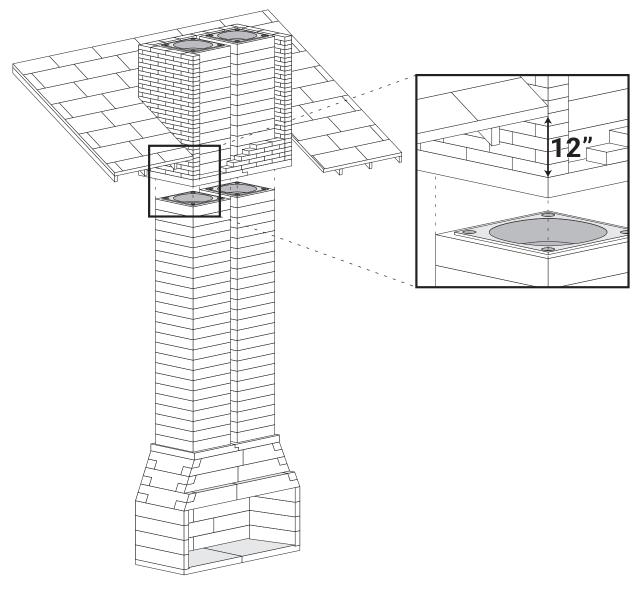


FIGURE 11.1

OUTSIDE AIR KIT INSTALLATION

Outside air kits are an optional accessory that can be added to a FireRock fireplace to supplement combustion air. Outside air kits should be installed and used in accordance with requirements of the standard for fireplaces under national code NFPA 211. Follow manufacturer's instructions for installation instructions and refer to local building code for proper sizing; UL 127 standard says the cross-sectional area of the air inlet must be 50% of the cross-sectional area of the flue or 25 in², whichever is smaller.

Figure 12 below shows approximate placement of an outside air kit within the FireRock fireplace. Install in the side wall of the fireplace as far forward as possible in the third course of firebrick. Cuts can be made prior to installation of side blocks.

NOTICE

FireRock recommends running two (2) outside air kits for oversized units to ensure adequate supplement combustion air is supplied.

NOTICE

FireRock recommends a licensed HVAC installer run the intake pipe.

▲ WARNING

The outside air kit must terminate near a fresh air source. Do not terminate in a closed space (e.g., an attic, crawl space, or basement) or near combustibles. Failure to terminate the outside air kit near an open fresh air source can cause smoke and hazardous gases to fill the house.

▲ WARNING

Do not use combustible material in the construction of a passageway for an outside air kit. Using combustible materials in the construction of the passageway may result in a fire or explosion, causing property damage, personal injury, or loss of life.

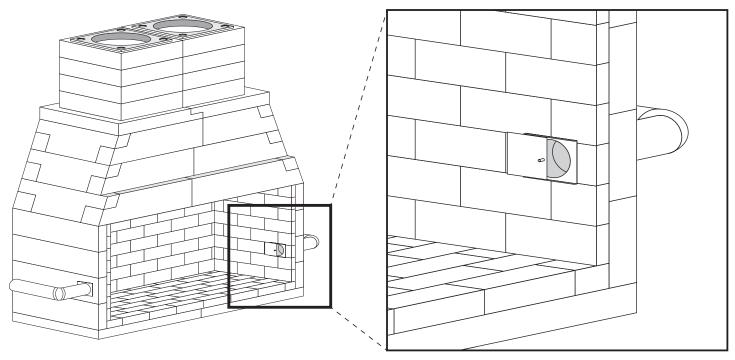


FIGURE 12

TYPICAL GYPSUM BOARD APPLICATION

This fireplace is designed to be installed so a 3" ledge is left on top of the radius throat front. This ledge allows space for a framing header to maintain the required 1" clearance and at the same time align flush with the room face of the firebox.

▲ WARNING

Failure to maintain stated minimum clearance to combustibles on page 18 may result in a fire or explosion, causing property damage, personal injury, or loss of life.

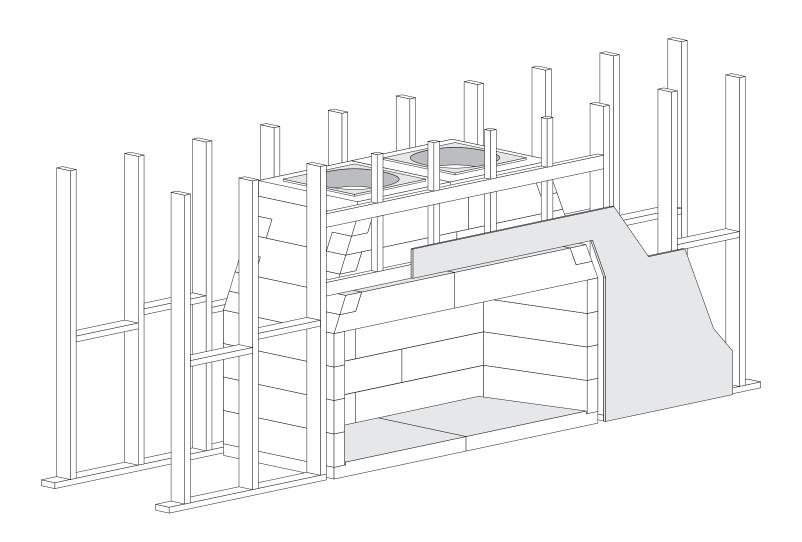


FIGURE 13

MULTI-FLOOR STACKING DIAGRAM

*shown with Conventional units

CHIMNEY CLEARANCES

THE CHIMNEY HAS BEEN TESTED AND IS APPROVED FOR "ZERO TOLERANCE" TO FRAMING WHEN VERTICAL.

1" CLEARANCE REQUIRED FOR ALL OFFSET BLOCK AND ANY CHIMNEY BLOCK ABOVE AN OFFSET.

CHIMNEY STACK

THE CHIMNEY SHOULD BE STACKED IN A LEVEL POSITION USING THE CHIMNEY NESTING FEATURES. THE INSIDE FACE OF THE CHIMNEY SHOULD BE "BUTTERED" TO ENSURE A NO-LEAK SEAL.

NOTE:

PLANS SHOWN ARE TO BE USED FOR GENERAL CONSTRUCTION GUIDELINES. NUMBER OF OFFSET BLOCKS (18)
USED, CHIMNEY BLOCKS (22) USED AND PLACEMENT OF UNITS ARE
SUBJECT TO CHANGE BASED ON DISTANCE BETWEEN THE TWO UNITS (11'-O" THIS DRAWING).

OFFSET THE CENTER OF THE FIRST OFFSET BLOCK (18) $1-\frac{1}{8}$ " FROM THE CENTER OF THE CHIMNEY BASE (12) TO ALIGN FLUES.

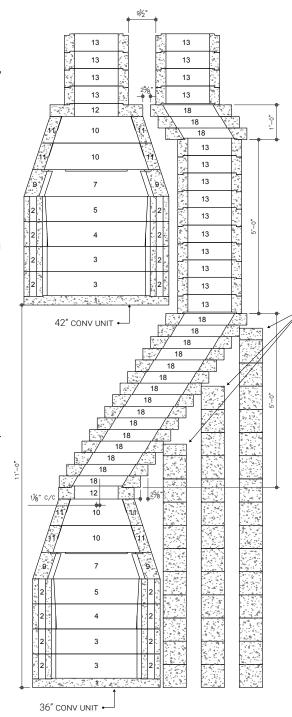


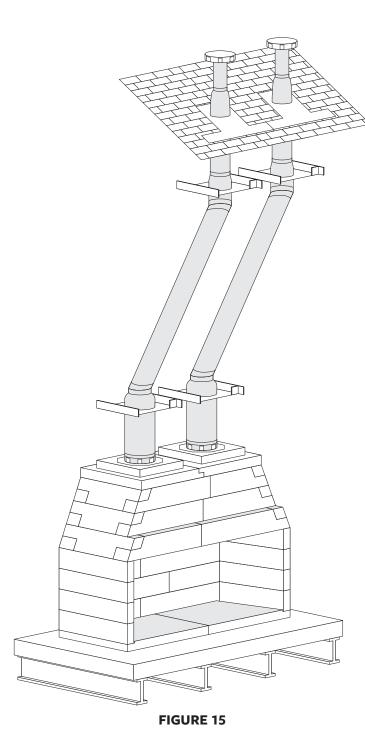
FIGURE 14

MINIMUM REQUIREMENT: EVERY 5TH
OFFSET BLOCK MUST BE SUPPORTED BY
NON-COMBUSTIBLE MATERIAL (CMU
TOWER THIS DRAWING). ADDITIONAL
SUPPORTS RECOMMENDED.

 $2^{-5}/8$ " MAX OFFSET PER BLOCK MAX HORIZONTAL OFFSET = 40"

#	COMPONENT NAME					
1	Base Plate					
2	Firebox Side					
3	Firebox Back - Straight Back Block					
4	Firebox Back - Level 3					
5	Firebox Back - Level 4					
6 Radius Throat Front						
7	7 Square Throat Back					
8	Throat Left Side					
9	Throat Right Side					
10 Smoke Chamber Front And Back						
11 Universal Smoke Chamber Sides						
12	Chimney Base					
13	Chimney Block					
17	Chimney Cap					
18	Offset Block					

METAL CHIMNEY INSTALLATION



Any metal chimney that carries a UL 103 compliance designation may be used with your FireRock fireplace and chimney system.

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

▲ WARNING

A firestop is required wherever a chimney passes between one zone of a building to another (e.g., when passing through a ceiling into an attic area). In each instance, there must be a sealed area around the chimney to avoid creating a chaseway allowing a fire to penetrate the attic or in between floors. Failing to include firestops between floors may result in a fire or explosion, causing property damage, personal injury, or loss of life.

Refer to the metal flue manufacturer for framing dimensions and assembly instructions. FireRock does not manufacture these components and therefore defers to the manufacturer's instructions.

All local building codes must be adhered to.

Refer to metal flue manufacturer for number of offsets, approved chimney shrouds, clearance to combustibles and any other information specific to that flue system.

▲ WARNING

This fireplace has not been tested for use with a chase above the roof. If your design calls for a chase above the roofline, refer to metal flue manufacturer's installation instructions for approval, clearance to combustibles, etc.

OPERATING INSTRUCTIONS

This section of the manual is to help you get maximum efficiency and maximum smoke (particulate) reduction from your FireRock fireplace. If you experience any difficulty or have any questions concerning your fireplace, contact your dealer/distributor or FireRock's Technical Support Desk (888.876.1025).



IMPORTANT SAFETY INFORMATION

- These fireplaces are not intended to heat an entire home or to be used as a primary heat source. They are designed to
 ensure homeowner comfort by providing supplemental heat to the room. Overfiring, abusive burning, or mistreatment of
 the fireplace unit can cause permanent damage to the unit and may result in a fire or explosion, causing property damage,
 personal injury, or loss of life.
- 2. Use solid wood, processed solid fuel fire logs, natural gas, propane, or coal fuel only. Burning some fuels (such as charcoal) can be hazardous due to the possibility of producing carbon monoxide, which is both invisible and odorless. Overexposure to carbon monoxide can lead to illness and death. It is strongly recommended to install smoke and carbon monoxide detectors wherever fireplaces are in use.
- 3. Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to "freshen up" a fire in this fireplace. Keep all such liquids well away from the fireplace while it is in use.
- 4. When the fireplace is in use, the fireplace damper must be set in the fully open position. Failure to open the damper during use can cause smoke and hazardous gases to fill the house.
- 5. Young children should be carefully supervised when there is a fire burning in the fireplace. When the fireplace is in use, components can become extremely hot, and may cause burns or other personal injuries if touched.
- 6. Keep clothing, furniture, fabrics, gasoline, liquids with flammable vapors, and all other combustible materials at a safe distance from the fireplace when in use.
- 7. During use, portions of the fireplace, including, but not limited to, the hearth and side walls, can become hot. Maintain a safe distance from the fireplace during operation. Touching hot surfaces may cause burns or other personal injuries.
- 8. Excessive ash should be removed before each use and 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.
- 9. Before servicing your fireplace, allow all parts of the fireplace system to cool. Failure to let the fireplace system cool before servicing may cause burns or other personal injuries.
- 10. The fireplace and chimney should be inspected each year prior to the heating season to determine if creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8" or more) it should be removed to reduce the risk of chimney fire.
- 11. To avoid the risk of damaging fireplace materials and increasing the risk of spreading a fire, do not use the fireplace to cook or warm food.

OPERATING INSTRUCTIONS

(CONTINUED)

PREPARING YOUR NEW FIREPLACE FOR ITS FIRST FIRE

Once your new fireplace is installed, it is critical that the refractory elements be dry before firing of the unit. It is recommended that the completed fireplace rest in a dried environment a minimum of 28 days after installation is complete. This will allow for curing. Not allowing the unit to fully cure can result in cracking of the fireplace components, which can compromise the integrity of the unit and may result in a fire or explosion, causing property damage, personal injury, or loss of life.

Once fully cured, follow the steps below before your first fire:

- 1. Purchase 2 Duraflame logs.
- 2. Cut off 1/3 of one log and burn.
- 3. Wait 2 days and burn remaining 2/3 of first log.
- 4. Wait another 2 days and burn the entire second log.
- 5. Wait another 2 days.

Following the process detailed above removes any excess moisture from the unit to prevent against cracks in the fireplace components.

USING YOUR FIREPLACE

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

Use solid wood, processed solid fuel fire logs, natural gas, propane, or coal fuel only. The manufacturer's recommendation for peak performance is to burn seasoned hardwood (wood that has been cut and dry for 6 – 12 months) and place wood from side to side in the firebox, but ensure no wood is touching the side walls. Always keep the top of the flame below the lintel.

The maximum recommended fire load is 12-16 pounds of dry firewood at one time (about 3-5 cured hardwood logs of approximately 3"-6" in diameter). Refuel as fire burns down by adding only 1-2 logs at a time.

If processed solid fuel logs are used, do not poke or stir the logs while they are burning. Use only fire logs that have been evaluated for application in a fireplace and refer to fire log warnings and caution markings on packaging prior to use.

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.
- 2. Twist 4 5 pieces of non-colored newspaper in a roll and place on the floor or grate of the firebox.
- 3. Lay several pieces of kindling (small splits of dry pine or other softwoods) on top of the newspaper.
- 4. Place 3 5 pieces of firewood on top of the kindling (maximum load).
- 5. Light the newspaper.

BUILDING A FIRE WITH 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.
- 2. Lay several pieces of kindling (small splits of dry pine or other softwoods) across the log grate or andirons.
- 3. Place 3 5 pieces of firewood on top of the kindling (maximum load).
- 4. A key near the front of the fireplace or on the hearth controls the gas to the log lighter. Turn the key on and light the log lighter with a long fireplace match. Once the logs are burning well, turn the log lighter off.

OPERATING INSTRUCTIONS

(CONTINUED)

OVERFIRING

These fireplaces are not intended to heat an entire home or to be used as a primary heat source. They are designed to ensure homeowner comfort by providing supplemental heat to the room. Overfiring, abusive burning, or mistreatment of the fireplace unit can cause permanent damage to the unit and will invalidate your FireRock warranty.

Building fires using materials other than those detailed on pages 36-37 or loading the fireplace beyond its maximum load constitutes overfiring. Other examples of overfiring include:

- Burning construction materials, lumber, pine branches and brush, or cardboard boxes
- Burning small diameter twigs or branches or other small combustible materials so that the total volume of materials exceeds the recommended maximum load
- Use of artificial wax base logs, trash, or other chemicals or chemically treated combustibles

DISPOSAL OF ASHES

Clean the firebox of excessive ash (i.e., touches the bottom of the grate) before each use. 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.

INSPECTION AND CLEANING

Thoroughly inspect the fireplace and chimney system prior to use each season. Check for any obstructions, such as debris, nests, leaves, etc. Have your chimney cleaned by a professional chimney sweep if you have doubts about your ability to do it yourself.

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 during cooling while combustion by-products ascend up the chimney. This condensed creosote accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

The fireplace and chimney should be inspected each year prior to the heating season to determine if creosote build-up has occurred. If a significant layer of creosote has accumulated ($\frac{1}{8}$ " or more) it should be removed to reduce the risk of chimney fire. Failure to remove excessive creosote from the fireplace may result in a fire or explosion, causing property damage, personal injury, or loss of life.

KEEP THIS INFORMATION FOR YOUR RECORDS

FIREROCK TERMS & CONDITIONS OF SALE

- **1. ENTIRE AGREEMENT:** Fire Rock Products, LLC ("FireRock") agrees to sell certain Goods (as defined below) to you ("Buyer") on the following terms and conditions of sale (these "Terms and Conditions"), which supersede any additional or inconsistent terms of Buyer. As used herein, "Buyer" includes the contractor and the ultimate purchaser of the home or other building into which the Goods are installed. These Terms and Conditions and the order or other contract documents to which they are attached constitute the entire agreement between FireRock and Buyer with respect to the Goods (collectively, this "Agreement"), and the terms and conditions of this Agreement prevail over any of Buyer's general terms and conditions of purchase regardless of whether or when Buyer has submitted its purchase order or such terms. Fulfillment of Buyer's order does not constitute acceptance of any of Buyer's terms and conditions and does not serve to modify or amend this Agreement. This Agreement may not be modified, amended or waived in any way except in writing signed by an authorized representative of FireRock. FireRock makes no representations, except for the representations set forth in these Terms and Conditions, and Buyer acknowledges and agrees that Buyer has and will not rely on any other representations.
- **2. GOODS:** FireRock manufactures and sells masonry fireplaces and other products, but these Terms and Conditions are limited to the masonry fireplaces purchased by Buyer from FireRock (the "Goods") and do not apply to other products offered by FireRock, which are subject to separate terms and conditions.
- **3. DELIVERY:** All shipping dates are approximate. All prices are F.O.B. the location of FireRock's facility, unless otherwise specified by FireRock. Acceptance of shipment by designated shipper, delivery to Buyer's representative or designee, or mailing of an invoice to Buyer, whichever first occurs, shall constitute "Delivery." Upon payment in full, title shall pass to Buyer. In no event shall Buyer be entitled to make any deduction from any payment due hereunder by reason of loss or damage in transit. Upon the written request of Buyer, FireRock, at its sole discretion and Buyer's expense, may agree as a service to Buyer to process Buyer's claim against the carrier for any loss or damage in transit, provided that such claim is received by FireRock within two (2) days of delivery of the Goods to Buyer. Any such claims must be accompanied by a delivery receipt, signed by carrier's agent at time of delivery, on which receipt the loss or damage has been noted. In the absence of directions, the Goods will be shipped by the method and via the carrier selected by FireRock. Delivery by truck will be made to the nearest points reasonably accessible by truck as determined by the driver. Buyer will unload and store, or furnish and pay for any necessary labor to unload and store, the Goods, and neither FireRock, the carrier, nor the driver have any obligation to unload or store the Goods. Buyer shall note loss or damage on truck shipments upon the delivery ticket returned to FireRock, or such claims shall be waived.
- **4. TERMS OF PAYMENT:** Payment terms shall be as described in the applicable order, invoice or other contract documents to which these Terms and Conditions are attached; provided, however, if such payment terms are not covered in such documents, payment for the Goods are due net cash thirty (30) days from the date of the invoice. Buyer may be required to pay a percentage of the purchase price for the Goods as a deposit for certain custom Goods or new builders or customers whose credit has not been approved by FireRock, which is due and payable upon execution of the applicable order (a "Deposit"). If, at any time or for any reason, FireRock shall have cause to question Buyer's ability to pay, FireRock may demand such assurances of Buyer's ability to pay as FireRock shall deem necessary in its sole discretion, including payment in advance for all shipments. If Buyer fails within ten (10) days of FireRock's demand to provide FireRock with such assurance, FireRock shall be entitled to suspend its performance, cancel any order then outstanding, receive reimbursement for its reasonable and proper cancellation charges, and may proceed to collect, without limitation, (a) any sums due and owing, (b) its reasonable cancellation charges and (c) all damage resulting from Buyer's default. In the event of an assignment for the benefit of Buyer's customers or creditors, bankruptcy or insolvency of Buyer, or in the event of any proceeding brought against Buyer, voluntarily or involuntarily, under bankruptcy or any insolvency laws, FireRock shall be entitled to cancel any order then outstanding at any time and shall receive reimbursement for its reasonable and

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proper cancellation charges. If Buyer fails to make payment for the Goods when due, Buyer's account shall be deemed delinquent and Buyer shall be liable to FireRock for a service charge of eighteen percent (18%) per annum or the maximum allowed by law, whichever is greater, on any unpaid amount; provided that, in addition to the foregoing, FireRock shall also be entitled to (w) suspend its performance, (x) cancel any order then outstanding, (y) receive reimbursement for its reasonable and proper cancellation charges and (z) proceed to collect, without limitation, any sums due and owing, its reasonable cancellation charges, and all damage resulting from Buyer's default. Buyer shall be liable to FireRock for all costs and expenses of collection, including court costs and reasonable attorneys' fees.

- **5. SECURITY INTEREST:** As collateral security for the payment of the purchase price of the Goods, Buyer hereby grants to FireRock a lien on and security interest in and to all of the right, title and interest, to and under the Goods, wherever located, and whether now existing or hereafter arising or acquired from time to time, and in all accessions thereto and replacements or modifications thereof, as well as all proceeds (including insurance proceeds of the foregoing). The security interest granted under this provision constitutes a purchase money security interest under the Alabama Uniform Commercial Code.
- **6. CANCELLATIONS, CHANGES AND RETURNS:** Except as otherwise provided in this Agreement, the order and purchase of the Goods under this Agreement are not subject to cancellation, change or return unless agreed to in writing by an authorized representative of FireRock. At FireRock's option, Buyer may be charged for any costs incurred by FireRock prior to or as a result of such cancellation, change or return. In the event of any change, FireRock shall be entitled to revise its prices and delivery dates to reflect such change. Any Deposit paid to FireRock is non-refundable.
- **7. DELAY IN OR PREVENTION OF PERFORMANCE:** FireRock shall not be liable for any expense, loss or damage resulting from delay in delivery or prevention of performance caused by fires, floods, storms, acts of God, strikes, labor disputes, labor shortages, lack of or inability to obtain materials, fuels, supplies or equipment, civil unrest, domestic or international acts of terrorism, riots, accidents, transportation delays, acts or failures to act of any government or of Buyer, or any other cause whatsoever, provided that such cause is beyond the reasonable control of FireRock, and FireRock shall have such additional time for performance as may be reasonably necessary under the circumstances and may adjust the price to reflect increases occasioned by such delay. Acceptance by Buyer of any of the Goods shall constitute a waiver by Buyer of any claim for damages on account of any delay in delivery of the Goods.
- **8. EXCLUSIVE WARRANTY:** Buyer acknowledges that FireRock makes no representation or warranty with respect to the Goods, except for the representations and warranties set forth on Exhibit A, which is incorporated into this Agreement by reference.
- **9. LIMITATION OF WARRANTY:** IF ANY GOOD IS INSTALLED OTHER THAN IN STRICT CONFORMANCE WITH THE PUBLISHED INSTALLATION INSTRUCTIONS, THE WARRANTY IS VOID AND THERE SHALL BE NO WARRANTY FOR SUCH GOOD.
- **10. OPERATING WARRANTY SERVICE:** To obtain warranty service authorization, Buyer must contact the "FireRock Technical Service Department" in writing at 1500 1st Avenue North #75, Birmingham, AL 35203, or at such address as may be posted at www.firerock.us, within thirty (30) calendar days after Buyer purchases the Goods from FireRock or its authorized distributor. Dated proof of original purchase from FireRock or its authorized distributor will be required. FireRock is not responsible for Goods received from Buyer without a warranty service authorization. To obtain warranty service authorization, Buyer must provide photographic evidence of the claimed defect or have the Goods inspected by an approved FireRock inspector, as determined by FireRock in its sole discretion. Buyer agrees to permit inspection of the Goods by an approved FireRock inspector. FireRock shall, at its sole discretion, decide the place of performance.
- 11. WARRANTY DISCLAIMER: IF THE GOODS DO NOT OPERATE AS WARRANTED PURSUANT TO THE EXPRESS

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LIMITED WARRANTY IN EXHIBIT A, BUYER'S SOLE REMEDY SHALL BE THE REMEDY SET FORTH IN THE EXPRESS LIMITED WARRANTY IN EXHIBIT A. TO THE FULLEST EXTENT ALLOWED BY LAW, THE EXPRESS LIMITED WARRANTY IN EXHIBIT A IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, TERMS OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, WARRANTY OF TITLE, OR WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. FIREROCK NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE SALE, INSTALLATION, MAINTENANCE OR USE OF THE GOODS.

FIREROCK SHALL NOT BE LIABLE UNDER THE WARRANTY SET FORTH IN EXHIBIT A IF ITS TESTING AND INSPECTION DISCLOSE THAT THE ALLEGED DEFECT OR MALFUNCTION IN THE GOODS DOES NOT EXIST OR WAS CAUSED BY BUYER'S OR ANY OTHER PERSON'S MISUSE, NEGLECT, IMPROPER INSTALLATION OR TESTING, UNAUTHORIZED ATTEMPTS TO REPAIR OR MODIFY THE GOODS, NORMAL WEAR AND TEAR, OR ANY OTHER CAUSE BEYOND THE RANGE OF ITS INTENDED USE, OR BY ACCIDENT, FIRE, LIGHTNING, OTHER HAZARDS, OR ACT OF GOD. THE WARRANTY SET FORTH IN EXHIBIT A DOES NOT APPLY WHEN THE MALFUNCTION OR DEFECT RESULTS FROM INSTALLATION OF THE GOODS OTHER THAN IN FULL COMPLIANCE WITH THE GOODS' INSTALLATION AND SPECIFICATION MANUAL AND APPLICABLE BUILDING CODES, OR THE USE OF THE GOODS IN CONJUNCTION WITH ACCESSORIES, OTHER PRODUCTS, OR ANCILLARY OR PERIPHERAL EQUIPMENT AND FIREROCK DETERMINES THAT THERE IS NO DEFECT WITH THE ACTUAL GOODS.

- 12. LIMITATION OF LIABILITY: TO THE FULLEST EXTENT ALLOWED BY LAW, FIREROCK ALSO EXCLUDES FOR ITSELF, ITS SUPPLIERS AND THEIR RESPECTIVE SHAREHOLDERS, MEMBERS, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, AND ITS AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, ANY LIABILITY, WHETHER BASED IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHER LEGAL THEORY, FOR INCIDENTAL, CONSEQUENTIAL, INDIRECT, SPECIAL, OR PUNITIVE DAMAGES OF ANY KIND, OR FOR THE LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF PROPERTY, OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONSEQUENCE WITH THE SALE, INSTALLATION, MAINTENANCE, USE, PERFORMANCE, FAILURE, OR INTERRUPTION OF THE GOODS, EVEN IF SUCH PARTIES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT SHALL FIREROCK'S AGGREGATE LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT OR THE SALE OF THE GOODS, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, EXCEED THE AMOUNT PAID TO FIREROCK BY BUYER FOR THE APPLICABLE GOODS SOLD HEREUNDER.
- **13. INDEMNIFICATION:** FIREROCK SHALL NOT BE LIABLE FOR AND BUYER AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS FIREROCK FOR ALL LOSS, DAMAGE, PERSONAL INJURY (INCLUDING DEATH), PROPERTY DAMAGE, OR OTHER LIABILITY ARISING IN WHOLE OR IN PART FROM THE NEGLIGENCE (INCLUDING GROSS NEGLIGENCE) OR WILLFUL MISCONDUCT OF BUYER, ITS EMPLOYEES, AGENTS, CONTRACTORS, SUCCESSORS, HEIRS AND ASSIGNS.
- **14. TERMINATION:** In addition to any remedies that may be provided under this Agreement, FireRock may terminate this Agreement with immediate effect upon written notice to Buyer, if Buyer: (a) fails to pay any amount when due under this Agreement; (b) has not otherwise performed or complied with this Agreement, in whole or in part; or (c) becomes insolvent, files a petition for bankruptcy or commences or has commenced against it proceedings relating to bankruptcy, receivership, reorganization or assignment for the benefit of creditors.

KEEP THIS INFORMATION FOR YOUR RECORDS

- **15. CONTROLLING LAW:** This Agreement and all rights and obligations hereunder shall be governed by, and construed in accordance with, the laws of the State of Alabama without regard to its conflicts of laws provisions.
- **16. ARBITRATION; DISPUTE RESOLUTION; PRESERVATION OF FORECLOSURE REMEDIES:** All disputes, claims or controversies (individually or collectively, a "Dispute") between FireRock and Buyer arising out of, or relating to, the transactions contemplated by this Agreement, including without limitation any claim based on or arising from an alleged tort, shall be resolved by binding arbitration in accordance with Title 9 of the U.S. Code and the Commercial Arbitration Rules of the American Arbitration Association (the "AAA"), and judgment on the award rendered by the arbitrators may be entered in any court having jurisdiction thereof. The Dispute shall be arbitrated in Birmingham, Alabama. Defenses based on statutes of limitation and similar doctrines shall be applicable in any such proceeding, and the commencement of an arbitration proceeding under this Agreement shall be deemed the commencement of an action for such purposes. The arbitrator shall selected in accordance with the Commercial Arbitration Rules of the AAA. The AAA shall designate a panel of ten (10) potential arbitrators knowledgeable in the subject matter of the Dispute. Each of FireRock and Buyer shall designate, within thirty (30) days of the receipt of the list of potential arbitrators, one of the potential arbitrators to serve, and the two arbitrators so designated shall select a third arbitrator from the eight remaining candidates. Notwithstanding the foregoing, FireRock reserves the right to resolve or bring any Dispute in the federal courts of the United States of America or the courts of the State of Alabama in each case located in Jefferson County, and Buyer irrevocably submits to the exclusive jurisdiction of such courts in any such Dispute.
- **17. WAIVER:** No waiver of any provision, right or remedy contained in this Agreement is binding on, or effective against, FireRock unless expressly set forth in writing and signed by an authorized representative of FireRock. Waiver by FireRock of any breach shall be limited to the specific breach so waived and shall not be construed as a waiver of any subsequent breach.
- **18. ASSIGNMENT:** Buyer may not assign this Agreement or any rights or obligations therein without the prior written consent of FireRock. Any attempted assignment in contravention of this Paragraph shall be void. No assignment or delegation relieves Buyer of any of its obligations under this Agreement. Notwithstanding the foregoing, if Buyer is a contractor, Buyer may assign this Agreement to the ultimate purchaser of the home or other building into which the Goods are installed.
- **19. TAXES:** Unless otherwise indicated in this Agreement, FireRock's prices do not include sales, use, excise or other similar taxes. Consequently, in addition to the price specified, the amount of any present or future such tax shall be paid by Buyer, or in lieu thereof, Buyer shall provide FireRock with all tax-exemption certificates required by the taxing authorities, at the time of sale.
- **20. CUMULATIVE REMEDIES:** All remedies of FireRock set forth herein shall be cumulative and shall be in addition to any other remedies available to FireRock, whether at law, equity or otherwise.
- **21. SEVERABILITY:** If any provision or part of a provision contained in this Agreement is held by a court of competent jurisdiction to be contrary to law or public policy, the remaining provisions of the Agreement shall remain in full force and effect.
- **22. CONSTRUCTION:** No provision of this Agreement may be construed against FireRock as the drafting party.
- **23. SURVIVAL:** Provisions of this Agreement which by their nature should apply beyond their terms will remain in force after any termination or expiration of this Agreement.

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TERMS AND CONDITIONS OF SALE EXHIBIT A: EXPRESS LIMITED WARRANTY MASONRY FIREPLACES – EXPRESS LIMITED WARRANTY

FireRock warrants to the original Buyer (including, if the original Buyer is a contractor, the original purchaser of a new, or the current owner of an existing, home or other building into which the Goods are installed) that the fireplace purchased from FireRock (the "Fireplace") will be free from material defects in materials, under normal use, for twenty (20 years). Material defects must adversely affect safety or performance of the Fireplace and expressly excludes drafting, smoking, or puffing of the Fireplace, which are affected by factors beyond the control of FireRock. The warranty period begins on the proven date of purchase of the Fireplace.

FireRock's sole obligation under this express limited warranty shall be, at FireRock's discretion, option and expense, to either: (1) provide a replacement Fireplace or part; or (2) if a replacement Fireplace or part is not reasonably available, refund the purchase price paid for the Fireplace or part. Labor charges or indirect charges for repair or replacement of the Fireplace or part shall be the responsibility of Buyer. FireRock warrants any replaced Fireplace or part for a period of ninety (90) days from shipment, or through the end of the original warranty, whichever is longer. All Fireplaces or parts that are replaced become the property of FireRock. This express limited warranty does not cover hardware, footing, vents, ducting or accessories.

TO THE FULLEST EXTENT ALLOWED BY LAW, THIS EXPRESS LIMITED WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, TERMS OR CONDITIONS, EXPRESS OR IMPLIED, EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, WARRANTY OF TITLE, OR WARRANTY AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. FIREROCK NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER WARRANTY OR LIABILITY IN CONNECTION WITH THE SALE, DELIVERY, INSTALLATION, MAINTENANCE OR USE OF THE GOODS.

Color matching cannot be guaranteed. Any sample, model, description or illustration shown to or viewed by Buyer was for illustrative purposes only and shall not be deemed to create an express warranty that the Goods shall conform identically in all respects to such sample, model, description or illustration.

If you have any questions, please contact the FireRock's Technical Service Department at 205-639-5000.

