

36" RUMFORD

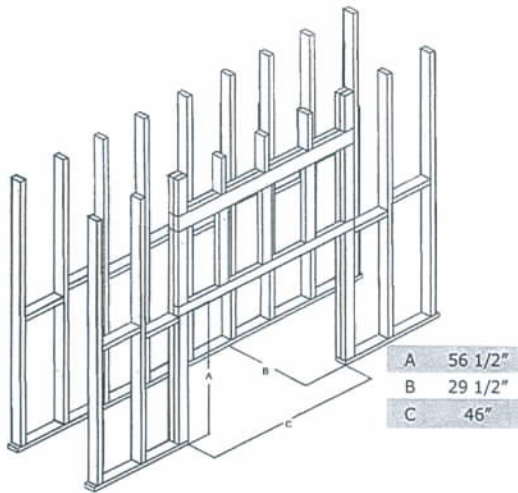


Description:

DIMENSIONS	
Overall Width	44"
Overall Height	79.125"
Overall Depth	28.5"
Firebox Height	46.625"
Smoke Chamber Height	32.5"
Opening Width	38.5"
Opening Height	43.125"
Firebox Depth	22.5"
Damper Size	30"
Number of Firebrick	140
Veneer Surface Area (sq ft)	N/A
FireRock Adhesive Mortar	12
Weight (lbs)	2350

Technical Resources

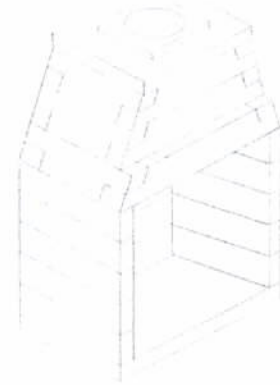
Framing Dimensions



Block Photo



Line Drawing



Model	FireRock Masonry Chimney	Metal Chimney - UL103	Wood Burning	Gas Burning	Firebrick Lined	UL 127 Compliant	Residential	Commercial	Indoor	Outdoor
Rumford 36"	X	X	X	X	X	X	X	X	X	X

Accessories

FireRock Adhesive Mortar (mandatory)
 Solid Block Chimney
 Simpson DuraChimney II Metal Chimney
 Offset Block
 Adaptor Block

Brick Flange
 Installation Kit
 Full Firebrick
 Split Firebrick
 Outside Air Kit

Cast Iron Damper
 Arched Lintel
 Height Extension Kit
 Black Metal Rain Cap

Notes:

20080912FR36RF

Intertek

**LISTING INFORMATION OF Fire Rock Models Rumford Series 30, 36, 42, 48 Solid Fuel
Factory Built Fireplace**

SPEC ID: Fire Rock Models Rumford Series 30, 36, 42, 48 Sol

**Fire Rock Products LLC
3620 Avenue C
PO Box 272
Fairfield, AL 35064**

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Fire Rock fireplaces are modular refractory masonry units designed for field assembly. The assembly is built on a structurally adequate non-combustible base. The units consist of interlocking pre-cast parts which fit together using a temperature resistant mortar supplied with the units. The system includes all parts necessary for the assembly of a complete firebox, smoke dome, and chimney assembly. Alternately, the chimney may be substituted with a listed factory-built chimney tested to 1700°F. The parts of the system are cast using a mixture consisting predominantly of volcanic pumice aggregate. Each piece is designed for a specific part of the fireplace such that only one means for complete assembly is possible. A pumice top plate is installed at the smoke dome top, and either supports the Fire Rock chimney blocks or may be fitted with an adapter for installing a listed factory-built chimney. The fire chamber is lined with 1-1/4-in-thick firebrick. Once assembled, the exterior may be finished with stucco, brick veneer, or enclosed with combustible construction (clearances to combustibles must conform with this report).

<u>Attribute</u>	<u>Value</u>
Architecture Code	10 30 00 Fireplaces and Stoves
Listed or Inspected	LISTED
Report Number	3153477MID-006
Criteria	ULC S610 M87 (1998)
Criteria	UL 127 (2008)
Fuel Type	Solid Fuel - Wood
Fuel Type	Solid Fuel - Coal
Intertek Services	Certification
Listing Section	FACTORY-BUILT FIREPLACE
Test Type	Solid Fuel Factory Built Fireplace
Test Original Issue Date	October 30, 2008

ICC-ES Evaluation Report**ESR-2599**

Issued April 1, 2010

This report is subject to re-examination in one year.www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

DIVISION: 10—SPECIALITIES**Section: 10305—Manufactured Fireplaces****REPORT HOLDER:**

FIRE ROCK PRODUCTS, LLC
312 23RD STREET NORTH
BIRMINGHAM, ALABAMA 35203
(205) 939-8400
www.firerock.us

EVALUATION SUBJECT:

FIRE ROCK MODULAR REFRACTORY FIREPLACE AND CHIMNEY SYSTEMS: FIRE ROCK CONVENTIONAL FIREPLACE SERIES MODELS 36, 42, AND 48; FIRE ROCK B-VENT FIREPLACE SERIES MODELS 30, 36, 42, AND 48; FIRE ROCK LITE-ROCK FIREPLACE SERIES MODELS 30, 36, AND 42; FIRE ROCK VENT-FREE FIREPLACE SERIES MODELS 30VF, 36VF, AND 42 VF; AND EMBERLOCK OUTDOOR FIREPLACE SERIES MODELS 30, 36, AND 42

1.0 EVALUATION SCOPE**Compliance with the following codes:**

- 2006 *International Building Code*® (IBC)
- 2006 *International Residential Code*® (IRC)
- 2006 *International Mechanical Code*® (IMC)
- 2006 *International Fuel Gas Code*® (IFGC)

Property evaluated:

Fire resistance

2.0 USES

The Fire Rock Modular Fireplace and Chimney Systems are wood- or gas-burning fireplaces that are constructed in the field using prefabricated blocks.

3.0 DESCRIPTION**3.1 Solid-Fuel Burning Fireplaces:**

3.1.1 Fire Rock Conventional Model Fireplace Series with Refractory Chimney: Fire Rock Conventional fireplace and chimney systems are constructed using modular refractory masonry units designed for field assembly. The units consist of interlocking precast parts that are fitted together in the field using a premixed mortar called Fire Rock adhesive mortar, supplied with the units, to construct a wood-burning fireplace and chimney system. The parts are manufactured using a proprietary mixture of

volcanic pumice aggregate and aluminate cement. High-temperature refractory bricks, a minimum of 1¹/₄ inches (32 mm) thick, are provided to line the interior of the firebox. The fireplace and chimney systems are available in models and sizes noted in Table 1 and shown in Figure 1.

3.1.2 Emberlock Outdoor Model Fireplace Series with Refractory Chimney: The Emberlock Outdoor Model is recognized for outdoor use only. The fireplace and chimney systems are constructed using the same elements described in Section 3.1.1 above, and are available in models and sizes noted in Table 1 and shown in Figure 2.

3.1.3 Fire Rock Lite-Rock Fireplace Series with Factory-Built Chimney:

3.1.3.1 General: The Fire Rock Lite-Rock system consists of the Fire Rock Conventional fireplaces described in Section 3.1.1 of this report, with a factory-built chimney. All conditions of fireplace manufacture and installation noted in Sections 3.1.1 and 4.3 of this report apply, except as noted in Section 3.1.3.2. These fireplace and chimney systems are available in models and sizes noted in Table 1 and shown in Figure 3.

3.1.3.2 Factory-Built Chimney: The Lite Rock system uses a factory-built chimney acceptable to Fire Rock that is listed and labeled as complying with UL 103. The factory-built chimney must comply with Type HT requirements of UL 103 and be labeled "Type HT" and "Residential Type and Building Heating Appliance Chimney." Factory-built chimneys used with this system are limited to a maximum height of 66 feet (20 m) and a minimum height of 15 feet (4.6 m). Chimneys must be installed and terminated in accordance with the Fire Rock Products and chimney manufacturer's installation instructions and under the terms of the manufacturer's listing for use with open-faced, masonry fireplaces. A minimum 2-inch (51 mm) clearance to combustibles must be maintained, or the minimum clearance to combustibles specified in the factory-built chimney manufacturer's installation instructions, whichever is greater.

3.2 Fire Rock Vent-Free Unvented Gas Appliance Enclosures:

Fire Rock Vent-Free models 30VF, 36VF, and 42 VF are enclosures consisting of materials similar to those used for the Fire Rock solid-fuel burning fireplaces. The enclosures are recognized as complying with ANSI Z21.91 and are for use with unvented decorative gas logs listed and labeled as complying with ANSI Z21.11.2, and having a maximum heat input of 40,000 Btu/h (11 700 W). The gas logs must be factory-equipped with a listed oxygen-depletion safety

shutoff system (ODS) and must comply with IFGC Section 621. The enclosure must only be installed within a room that has another primary source of heat, and use of the units is prohibited in locations defined in IRC Section G2406.2 and IFGC Section 303.3. Combustion air must be provided in accordance with IRC Section M1702 and IFGC Section 621.5. The room in which the units are installed must have a free-air volume equal to or greater than 50 cubic feet per 1000 Btu/h (4.8 m³/kW) of the aggregate input rating of all appliances within the room. Glass doors must not be used with these units.

The base, sides, rear and top of the firebox consist of preformed refractory components that interlock together to form the enclosure. Installation of the firebox is as described in Section 4.3 of this report. The vent-free firebox dimensions are shown in Table 1 and Figure 5.

3.3 Fire Rock B-Vent Gas Appliance Fireplace Series:

3.3.1 General: The fireplace of this system is as described in Section 3.1.1, except that decorative gas logs listed in accordance with ANSI Z 21.60 are provided with the fireplace box for connection to a listed Type B gas vent as described in Section 3.3.2. These fireplace and Type B gas vent systems are available in models and sizes noted in Table 1 and shown in Figure 4.

3.3.2 Gas Vent: The Fire Rock B-Vent system uses any nominally 10-inch-diameter, listed Type B gas vent acceptable to Fire Rock and complying with Chapter 8 of the IMC and Chapter 5 of the IFGC, as specified in the Fire Rock B-Vent Gas Appliance System installation instructions.

3.4 Mortar:

Mortar used with the fireplace and chimney systems is Fire Rock Adhesive Mortar.

4.0 DESIGN AND INSTALLATION

4.1 General:

The fireplaces must be installed in accordance with this report, the manufacturer's instructions and the applicable code. A copy of the fireplace manufacturer's published installation instructions and, if applicable, the factory-built chimney or gas vent installation instructions, must be available at the jobsite at all times during installation.

4.2 Design:

Installation is limited to Seismic Design Categories A, B, and C. Structural design calculations and construction plans prepared by a licensed design professional, where required by the statutes of the jurisdiction in which the project is to be constructed, are required to determine the requirements for the fireplace foundation and anchorage of the fireplace to the foundation.

When installation is on wood floor construction, the licensed design professional must determine the requirements for support and anchorage for the combined gravity and seismic loading. In addition, the calculated long-term deflection of the wood members supporting the fireplace must not exceed the values shown in Table 1604.3 of the IBC for floor members. Under the IRC, an engineered design approach must be provided in accordance with Section R301.1.1.3 of the IRC.

4.3 Installation:

4.3.1 General: For all models except B-Vent, Lite Rock, and Vent-Free, a noncombustible foundation, adequate to support all required loads, is necessary and must be deemed adequate and in compliance by the code official. Fire Rock B-Vent models, Fire Rock Lite-Rock models and

Fire Rock Vent-Free models may be supported by combustible materials. Fire Rock Lite-Rock models may be erected on a noncombustible supporting system that raises the Fire Rock baseplate 8 inches (203 mm) above the combustible floor. Fire Rock B-Vent and Vent-Free models may be erected directly on the combustible floor. Each system must be installed in accordance with the published manual that is included with each kit (*Installation and Specification Manual*). Each of these manuals includes specific instructions as to the setting of the base, walls, smoke chamber and chimney. Fireplace units are assembled on the foundation by installing the base hearth plate, firebox wall sections, damper assembly and smoke chamber. The refractory components are joined together with the Fire Rock Adhesive Mortar supplied by Fire Rock Products, LLC. Fire Rock Adhesive Mortar is mixed with water until smooth and without dry spots, and is then poured into a mortar application bag and applied to the face of one adjoining component of each joint. The mortar is laid in a bead of at least 1 inch (25.4 mm) on each surface that comes in contact with another component surface. After setting of a component, the mortar must be able to be seen at the surface of the joint, and subsequently must be smoothed. If the mortar is not visible, the component must be removed and additional mortar applied. The mortar must not be applied at temperatures below 40°F (4.4°C). The firebox sidewalls, back wall, and hearth must be covered with a minimum 1¹/₄-inch-thick (32 mm) refractory brick that complies with ASTM Standard 1261, using the mortar supplied with the fireplace units.

4.3.2 Clearance to Combustibles: For all fireplace models described in this report, except as specifically noted elsewhere in this report, minimum clearance from the fireplace opening to side walls is 28 inches (711 mm). Combustible trim around the opening must be kept at least 12 inches (305 mm) from the opening. Combustible mantles must be at least 16 inches (406 mm) above the opening, for a mantle having a maximum 8-inch (203 mm) depth. A noncombustible hearth extension is necessary and must extend a minimum of 24 inches (610 mm) in front and 8 inches (203 mm) beyond each side of the fireplace opening. Clearances from firebox and smoke chamber to combustible materials or framing of the backwall and sidewalls must be at least 1 inch (25.4 mm). Clearances from smoke chamber to front wall and from smoke chamber top to framing must be at least 1 inch (25.4 mm).

The fireplaces have not been tested for use with doors. If doors are required by the code official, the fireplace must be operated with the doors in the fully open position.

4.3.3 Refractory Chimney Systems: The refractory masonry chimney system is supported on the top of the smoke chamber. It is assembled by stacking the refractory chimney components and mortaring all joints. Fire Rock Adhesive Mortar is applied in all joints as described in Section 4.3.1 of this report. The chimney may be installed using Fire Rock Offset Blocks for the purposes of offsetting the flue from directly above the firebox. The Offset Blocks are made from the same material described in Section 3.1.1 of this report and are mortared together as described in Section 4.3.1. Chimneys may include offsets with a maximum horizontal distance of 40 inches (1016 mm). At a maximum, every fifth offset chimney block must be supported by noncombustible materials, such as a concrete block wall. Where required by the code official, details of the support wall construction must be provided.

The portion of the chimney exposed to the exterior must be covered with material such as brick veneer in accordance with the applicable code. A brick ledge

chimney section may be used to support the brick veneer if the installed height of the brick veneer is less than 20 feet (6.1 m). Brick veneer must be anchored to the chimney in accordance with Section 1405.5 of the IBC. Terminations must comply with Sections 716 and 2113.9 of the IBC and Section R1003.9 of the IRC. Where required by the code official, an approved spark arrester complying with Section 2113.9.1 of the IBC and Section R1003.9.1 of the IRC must be used. Chimney fireblocking complying with Section 2113.20 of the IBC and Section R1003.19 of the IRC must be used.

For installations with vertical chimneys, the chimney is installed with zero clearance to combustibles. When offset blocks are used, materials above the offset chimney must be installed with a minimum 1-inch (25.4 mm) clearance to combustibles.

4.3.4 Unvented Gas Appliance Enclosure Installation:

The unit must be anchored in accordance with IRC Section M1307.2 and IFGC Section 301.12. When installed as described in Section 4.3.1, the firebox may be installed on combustible construction and at zero clearance to combustible construction on sides, back and top. Minimum clearances from the firebox opening are 6 inches (152 mm) to sidewalls and 12 inches (305 mm) to combustible mantles having a minimum 8-inch (203 mm) depth.

4.3.5 Type B-Vent Installation: Fire Rock B-Vent installation includes additional components from Fire Rock fireplace units, including the following: Draft Diverter, Chimney Flap Safety Device, Safety Shut-off Switch, Draft Hood Connector, High Temperature Wiring Harness, and a chimney base with a 10-inch-diameter (254 mm) vent, as well as a specific gas log appliance sized to the firebox. Each component must be installed as described in the *B-Vent Installation and Specification Manual* included with each B-Vent kit. The Fire Rock B-Vent model is then finished by adding sections of 10-inch-inside-diameter (254 mm) Type B venting to adequately clear the roof or chase structure in accordance with the vent manufacturer's instructions and the local code.

5.0 CONDITIONS OF USE:

The Fire Rock modular refractory fireplace and chimney systems described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The fireplace assemblies must be installed in accordance with the manufacturer's published installation instructions, this report and the applicable code. In the event of a conflict between this report and the manufacturer's published installation instructions, this report governs.
- 5.2 Structural design and calculations from a registered design professional, where required by the statutes of the jurisdiction in which the project is to be constructed, must be provided to the code official to justify the supporting structure for all applicable loads, including gravity, wind and earthquake loading, and applicable load combinations per IBC Section 1605.
- 5.3 The design of the anchorage of completed units on other than foundations on grade is beyond the scope of this report. Structural design and calculations from a registered design professional must be submitted to the code official for approval.
- 5.4 Installation of fireplace and chimney systems described in this report is limited to Seismic Design Categories A, B, and C.
- 5.5 Combustion air must be provided as specified in Chapter 7 of the IMC, for all except unvented appliances.
- 5.6 Placement of Emberlock Outdoor fireplace models on property must be subject to code official approval.
- 5.7 The fireplace and chimney products are manufactured at the Fire Rock Products facility located in Fairfield, Alabama, under a quality control program with inspections by Intertek Testing Services (AA-647) for all products, except that PFS Corporation (AA-652) does the inspections for the Fire Rock Type B-Vent Gas Appliance Enclosure system.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Field-constructed Fireplace Systems Using Prefabricated Blocks (AC375), dated June 2007.

7.0 IDENTIFICATION

The components of the fireplace and chimney are supplied to the jobsite on shrink-wrapped pallets bearing a label with the Fire Rock Products, LLC, name and address, the model number, and the evaluation report number (ESR-2599). A permanent label must be attached to the fireplace and to the vented or unvented enclosure, bearing the Fire Rock Products, LLC, name; the serial number; the clearance to combustibles; other information required by UL 127; the evaluation report number (ESR-2599); and the name and/or logo of the inspection agency (Intertek Testing Services NA, Inc., or PFS Corporation).