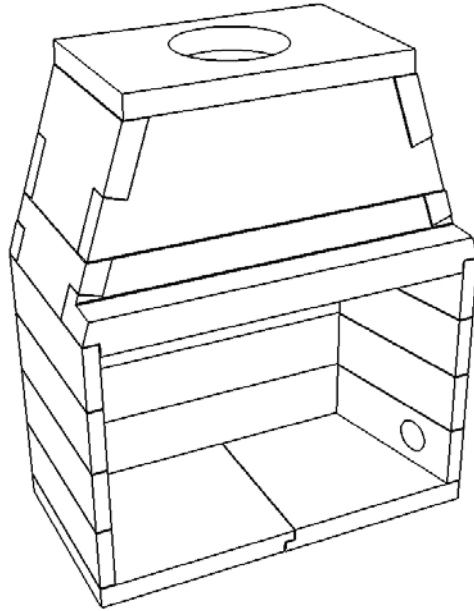


# Mason-Lite™ Fireplace

## Instructions

A product of Masonry Fireplace Industries, LLC



## Masonry Firebox

### MASON-LITE MODELS 39, 44, and 49 MANUAL

THIS WOOD-BURNING FIREPLACE COMPLIES WITH UL127 STANDARD AS A FACTORY-BUILT APPLIANCE.

WARNING: THIS FIREPLACE IS APPROVED FOR USE AS A WOOD BURNING FIREPLACE. IT HAS NOT BEEN TESTED OR APPROVED FOR UNVENTED GAS LOGS.

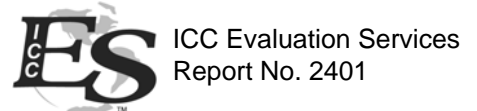
WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE INJURY, PROPERTY DAMAGE OR LOSS OF LIFE. REFER TO THIS MANUAL FOR ASSISTANCE OR ADDITIONAL INFORMATION. CONSULT A QUALIFIED INSTALLER OR LOCAL DISTRIBUTOR.

#### SAVE THIS BOOK

This book is valuable. In addition to instructing you on how to install and maintain your appliance, it also contains information that will enable you to obtain replacement parts or accessory items when needed. Keep with your other important papers.



OMNI-Test Laboratories, Inc.  
Report No. 328-F-01-2, 328-F-04-2



Do not store gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

### Revision Table


<b>Rev.</b>	<b>Date</b>	<b>Description</b>	<b>By</b>	<b>Apprv.</b>	<b>Apprv. Date</b>
1	09/11/08	Initial release	CB	BH	09/11/08
2	10/02/08	Add ICC ES Logo	CB	BH	10/03/08

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**DO NOT REMOVE THIS LABEL**

See MFI's installation and operating instructions for this model.  
Contact local building officials about restrictions and installation specifications in your area.



315 WEST 3RD ST.  
SANTA ANA, CA 92701

DATE OF MFG.  SERIAL No.



Beaverton  
Oregon USA

Tested & Listed By

OMNI-Test Laboratories, Inc.  
Report No. 328-F-01-2, 328-F-04-2  
ICC Evaluation Services Report No. 2401

MODEL No.:	<b>MFP-39</b>	<b>MFP-44</b>	<b>MFP-49</b>
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**⚠ WARNING:** THIS FIREPLACE HAS NOT BEEN TESTED FOR USE WITH GLASS DOORS. TO REDUCE THE RISK OF FIRE OR INJURY, DO NOT INSTALL GLASS DOORS.

**⚠ THIS FIREPLACE IS DESIGNED FOR USE ONLY WITH SOLID WOOD LOGS, PLUMBED LPG OR NG LOG LIGHTERS OR PLUMBED ANSI Z21.60 DECORATIVE GAS LOGS.** Consult instructions included with this firebox for further information.

**⚠ WARNING:** Install only approved, listed UL 103 Chimney as follows: MFP-39 & MFP-44 can use either DM12-12", DESA 12", UL103-12" or UL103-14" chimneys. MFP-49 uses UL103-14". Refer to chimney mfg. installation instructions.

**FIREPLACE CLEARANCES TO COMBUSTIBLES:**

UNIT FRONT, SIDES, REAR.....	2" (50 mm)
COMBUSTIBLE FLOOR.....	6" (150 mm)
COMBUSTIBLE SHEATHING ABOVE OPENING TOP.....	8" (200 mm)
SHEATHING OR TRIM TO OPENING SIDES.....	8" (200 mm)
MANTLE ABOVE OPENING.....	12" (300 mm)
OPENING TO SIDE WALL.....	24" (600 mm)
HEARTH EXTENSION BEYOND FRONT.....	20" (500 mm)
HEARTH EXTENSION BEYOND SIDES.....	12" (300 mm)
INSULATION FROM FIREBOX.....	2" (50 mm)

<b>MANTEL CLEARANCES</b>	<b>MANTEL ABOVE OPENING:</b>
0" - 3" : 1-1/2" MAX. PROJ.	MIN. - 3" SHEATHING OR TRIM
3" - 12" : 1-1/2" - 8" MAX. PROJ.	TO OPENING SIDES - 8"

THIS APPLIANCE NEEDS FRESH AIR FOR SAFE OPERATION AND MUST BE INSTALLED SO THERE ARE PROVISIONS FOR ADEQUATE COMBUSTION AND VENTILATION AIR.

Max. overall height of fireplace is 40 feet. Minimum installed height of complete system is 14 feet with a straight flue stack, 17 feet with one or more offset sections.

**LISTED MASONRY FIREPLACE SYSTEM COMPLIES WITH APPLICABLE REQUIREMENTS OF UL127**

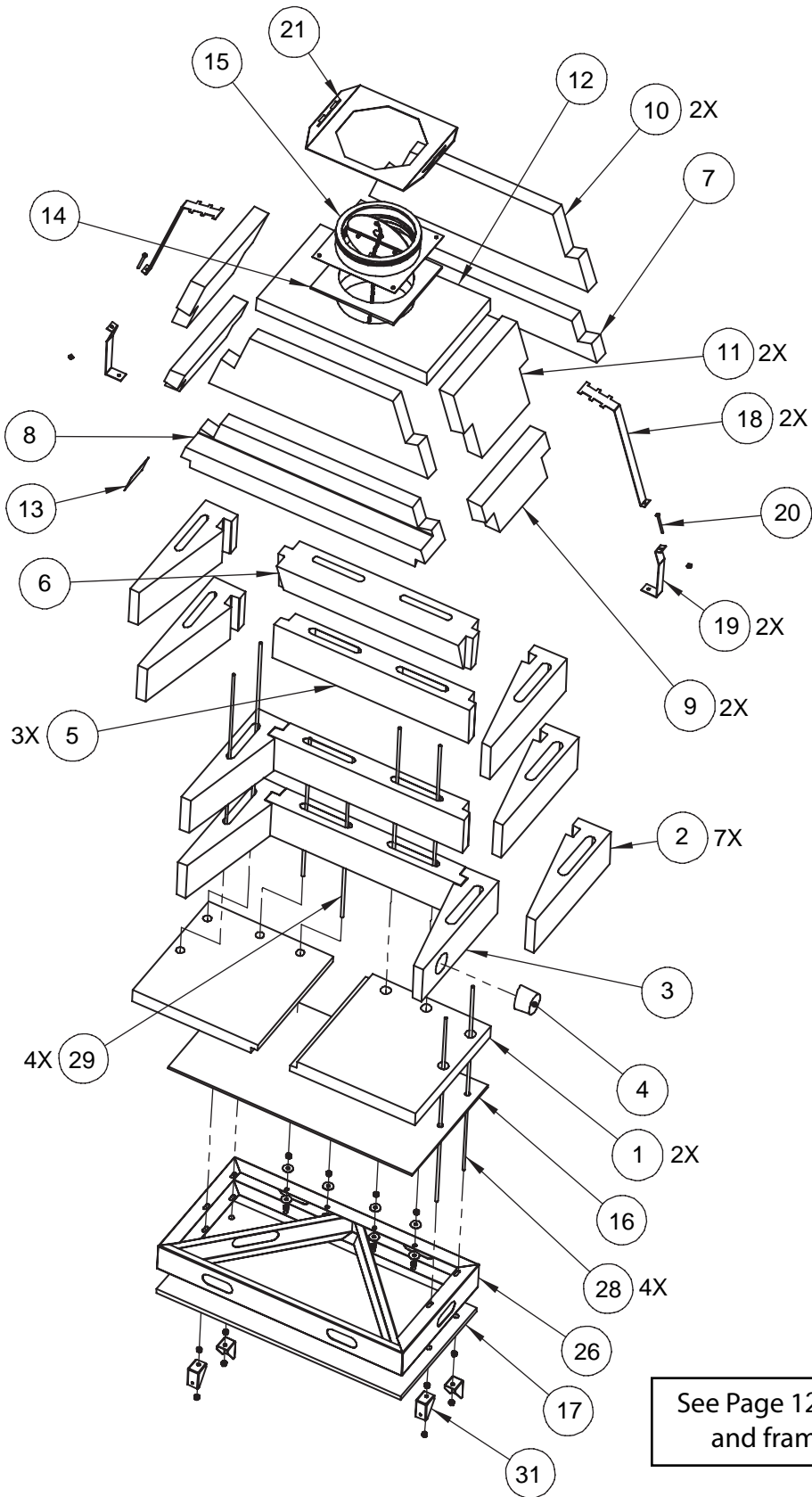
Fireplace is designed for installation per the National Fire Protection Association Standard for Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances (NFPA 211).

**⚠ WARNING:** 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 FIREPLACE.

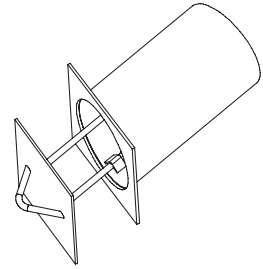
# Fireplace Parts Diagram for Combustible Floors

Figure 1

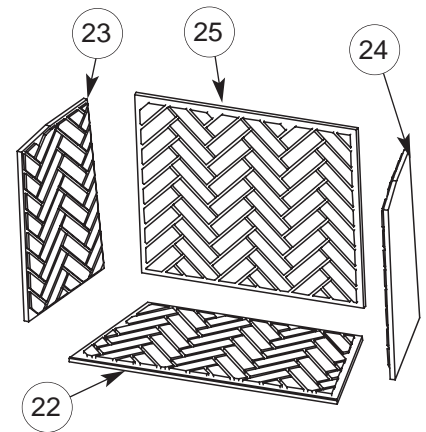
**MFP-39/44/49**  
**Exploded Parts Diagram**  
**For Combustible Floor Systems**



32 **Optional Outside**  
**Combustion Air Kit**  
**Model No.: MFP4-AK**



(Ø4" Ducting not included)



**Refractory Firebox Liners**

Herringbone Pattern shown  
 Also available in Running Bond

MFP39SHBL - Herring 39"  
 MFP44SHBL - Herring 44"  
 MFP49SHBL - Herring 49"

MFP39FRBL - Running Bond  
 MFP44FRBL - Running Bond  
 MFP49FRBL - Running Bond

See Page 12 thru 14 for combustible floor  
 and framing anchoring illustrations.

# Fireplace Parts Matrix for Combustible Floors

Mason-Lite Parts Matrix for Combustible Floor Systems			MFP-39	MFP-44	MFP-49
ITEM NO.	P/N	DESCRIPTION	QTY	QTY	QTY
1	MFP39-1	HEARTH BTM 39	2		
	MFP44-1	HEARTH BTM 44		2	
	MFP49-1	HEARTH BTM 49			2
2	MFP49-3	FIREBOX SIDE	7	7	7
	MFP49-3A	FIREBOX SIDE w / AIR INLET	1	1	1
	MFP095	COMBUSTION AIR PLUG	1	1	1
5	MFP39-2	FIREBOX REAR 39	3		
	MFP44-2	FIREBOX REAR 44		3	
	MFP49-2	FIREBOX REAR 49			3
6	MFP39-4	DOWNDRAFT DIVERTER 39	1		
	MFP44-4	DOWNDRAFT DIVERTER 44		1	
	MFP49-4	DOWNDRAFT DIVERTER 49			1
7	MFP39-5	FIREBOX UPPER REAR 39	1		
	MFP44-5	FIREBOX UPPER REAR 44		1	
	MFP49-5	FIREBOX UPPER REAR 49			1
8	MFP39-6	LINTEL 39	1		
	MFP44-6	LINTEL 44		1	
	MFP49-6	LINTEL 49			1
9	MFP39-7	DOVE SIDE LOWER	2		
	MFP44-7	DOVE SIDE LOWER		2	
	MFP49-7	DOVE SIDE LOWER			2
10	MFP39-10	DOVE FRONT/REAR 39	2		
	MFP44-10	DOVE FRONT/REAR 44		2	
	MFP49-10	DOVE FRONT/REAR 49			2
11	MFP49-8	DOVE SIDE UPPER	2	2	2
	MFP39-9	DOVE TOP 39	1		
	MFP44-9	DOVE TOP 44		1	
12	MFP49-9	DOVE TOP 49			1
	MFP050	RATING PLATE	1	1	1
	MFP144	1" FIBERGLASS INSULATION BLANKET	1	1	1
15	MFP118-12	Ø12 IN ANCHOR PLATE / DAMPER ASSY	1 or	1 or	
	MFP118-14	Ø14 IN ANCHOR PLATE / DAMPER ASSY	1	1	1
16	MFP372	CONCRETE BOARD, 1/2" x 43 x 28	1		
	MFP370	CONCRETE BOARD, 1/2" x 48 x 28		1	
	MFP368	CONCRETE BOARD, 1/2" X 53 X 28			1
17	MFP373	CERAMIC FIBER BOARD, 1" x 43 x 28	1		
	MFP371	CERAMIC FIBER BOARD, 1" x 48 x 28		1	
	MFP369	CERAMIC FIBER BOARD, 1" x 53 x 28			1
18	MFP117	SEISMIC STRAP, UPPER	2	2	2
	MFP115	SEISMIC STRAP, LOWER	2	2	2
	MFP119	SEISMIC STRAP HARDWARE PACK	1	1	1
	MFP116-12	COLLAR, SEISMIC STRAP, 12 IN FLUE	1 or	1 or	n/a
22	MFP116-14	COLLAR, SEISMIC STRAP, 14 IN FLUE	1	1	1
	MFP230	LINER, HEARTH, HERRINGBONE, MFP-39	1		
	MFP231	LINER, HEARTH, HERRINGBONE, MFP-44		1	
	MFP124	LINER, HEARTH, HERRINGBONE, MFP-49			1
23	MFP128	LINER, SIDE, LH, HERRINGBONE, MFP-49	1	1	1
	MFP132	LINER, SIDE, RH, HERRINGBONE, MFP-49	1	1	1
25	MFP234	LINER, REAR, HERRINGBONE, MFP-39	1		
	MFP235	LINER, REAR, HERRINGBONE, MFP-44		1	
	MFP236	LINER, REAR, HERRINGBONE, MFP-49			1
26	MFP237	6" METAL BASE MFP39	1		
	MFP238	6" METAL BASE MFP44		1	
	MFP239	6" METAL BASE MFP49			1
27	MFP240	HEARTH EXTENSION MFP39	1		
	MFP241	HEARTH EXTENSION MFP44		1	
	MFP242	HEARTH EXTENSION MFP49			1
28	MFP365	ALLTHREAD, 1/2-13 X 36	4	4	4
	MFP364	ALLTHREAD, 1/2-13 X 48	4	4	4
	MFP49-11	#3 REBAR (Ø3/8") x 36"	8	8	8
31	MFP363	ANCHOR BRACKET	4	4	4
	MFP4-AK	OPTIONAL COMBUSTION AIR KIT (DUCT NOT INCLUDED)	A/R	A/R	A/R

PROVIDED AS PART OF THE  
 CHIMNEY SYSTEM  
 (BY OTHERS)  
  
 (MAY ALSO BE PURCHASED  
 SEPARATELY FROM MFI)

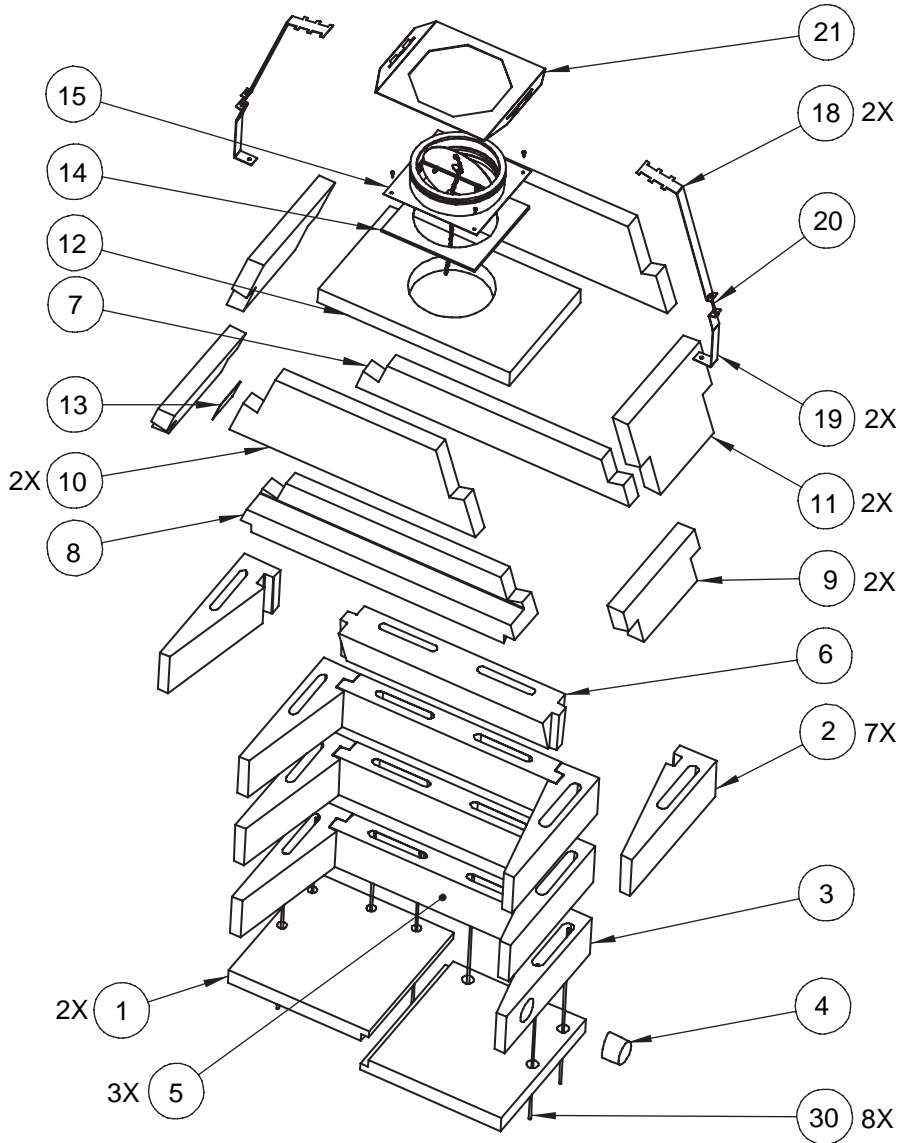
OPTIONAL KIT:  
 SEISMIC STRAP SHALL BE USED  
 ON SEISMIC DESIGNED  
 CATEGORIES D, E & F.

MUST BE USED WITH CORRESPONDING 6" METAL BASE  
 (REQUIRED FOR COMBUSTIBLE FLOORS)  
 IF FIELD CONSTRUCTED (BY OTHERS), FOLLOW  
 INSTRUCTIONS GIVEN ON PAGE 7, FIG.5 & PAGE 8, FIG.7

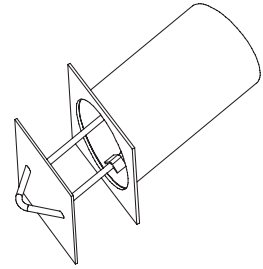
# Fireplace Parts Diagram for Non-Combustible Floors

Figure 2

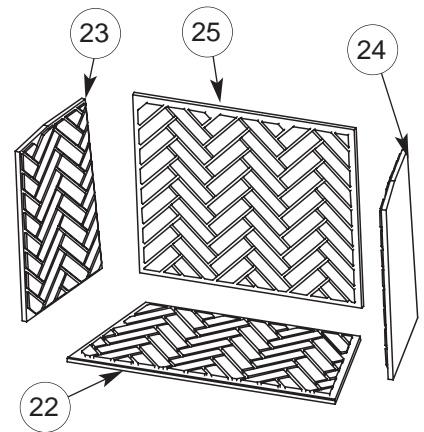
**MFP-39/44/49**  
**Exploded Parts Diagram**  
**For Non-Combustible Floor Systems**



32 **Optional Outside**  
**Combustion Air Kit**  
**Model No.: MFP4-AK**



(Ø4" Ducting not included)



**Refractory Firebox Liners**

Herringbone Pattern shown  
 Also available in Running Bond

MFP39SHBL - Herring 39"  
 MFP44SHBL - Herring 44"  
 MFP49SHBL - Herring 49"

MFP39FRBL - Running Bond  
 MFP44FRBL - Running Bond  
 MFP49FRBL - Running Bond

See Page 16 for concrete  
 slab floor illustrations.

# Fireplace Parts Matrix for Non-Combustible Floors

Mason-Lite Parts Matrix for Non-Combustible Floor Systems			MFP-39	MFP-44	MFP-49
ITEM NO.	P/N	DESCRIPTION	QTY	QTY	QTY
1	MFP39-1	HEARTH BTM 39	2		
	MFP44-1	HEARTH BTM 44		2	
	MFP49-1	HEARTH BTM 49			2
2	MFP49-3	FIREBOX SIDE	7	7	7
	MFP49-3A	FIREBOX SIDE w / AIR INLET	1	1	1
	MFP095	COMBUSTION AIR PLUG	1	1	1
5	MFP39-2	FIREBOX REAR 39	3		
	MFP44-2	FIREBOX REAR 44		3	
	MFP49-2	FIREBOX REAR 49			3
6	MFP39-4	DOWNDRAFT DIVERTER 39	1		
	MFP44-4	DOWNDRAFT DIVERTER 44		1	
	MFP49-4	DOWNDRAFT DIVERTER 49			1
7	MFP39-5	FIREBOX UPPER REAR 39	1		
	MFP44-5	FIREBOX UPPER REAR 44		1	
	MFP49-5	FIREBOX UPPER REAR 49			1
8	MFP39-6	LINTEL 39	1		
	MFP44-6	LINTEL 44		1	
	MFP49-6	LINTEL 49			1
9	MFP39-7	DOVE SIDE LOWER	2		
	MFP44-7	DOVE SIDE LOWER		2	
	MFP49-7	DOVE SIDE LOWER			2
10	MFP39-10	DOVE FRONT/REAR 39	2		
	MFP44-10	DOVE FRONT/REAR 44		2	
	MFP49-10	DOVE FRONT/REAR 49			2
11	MFP49-8	DOVE SIDE UPPER	2	2	2
12	MFP39-9	DOVE TOP 39	1		
	MFP44-9	DOVE TOP 44		1	
	MFP49-9	DOVE TOP 49			1
13	MFP050	RATING PLATE	1	1	1
14	MFP144	1" FIBERGLASS INSULATION BLANKET	1	1	1
15	MFP118-12	Ø12 IN ANCHOR PLATE / DAMPER ASSY	1 or	1 or	
	MFP118-14	Ø14 IN ANCHOR PLATE / DAMPER ASSY	1	1	1
16	MFP372	CONCRETE BOARD, 1/2" x 43 x 28	1		
	MFP370	CONCRETE BOARD, 1/2" x 48 x 28		1	
	MFP368	CONCRETE BOARD, 1/2" X 53 X 28			1
17	MFP373	CERAMIC FIBER BOARD, 1" x 43 x 28	1		
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	MFP369	CERAMIC FIBER BOARD, 1" x 53 x 28			1
18	MFP117	SEISMIC STRAP, UPPER	2	2	2
19	MFP115	SEISMIC STRAP, LOWER	2	2	2
20	MFP119	SEISMIC STRAP HARDWARE PACK	1	1	1
21	MFP116-12	COLLAR, SEISMIC STRAP, 12 IN FLUE	1 or	1 or	
	MFP116-14	COLLAR, SEISMIC STRAP, 14 IN FLUE	1	1	1
22	MFP230	LINER, HEARTH, HERRINGBONE, MFP-39	1		
	MFP231	LINER, HEARTH, HERRINGBONE, MFP-44		1	
	MFP124	LINER, HEARTH, HERRINGBONE, MFP-49			1
23	MFP128	LINER, SIDE, LH, HERRINGBONE, MFP-49	1	1	1
24	MFP132	LINER, SIDE, RH, HERRINGBONE, MFP-49	1	1	1
25	MFP234	LINER, REAR, HERRINGBONE, MFP-39	1		
	MFP235	LINER, REAR, HERRINGBONE, MFP-44		1	
	MFP236	LINER, REAR, HERRINGBONE, MFP-49			1
30	MFP49-11	#3 REBAR (Ø3/8") x 36"	8	8	8
32	MFP4-AK	OPTIONAL COMBUSTION AIR KIT (DUCT NOT INCLUDED)	A/R	A/R	A/R

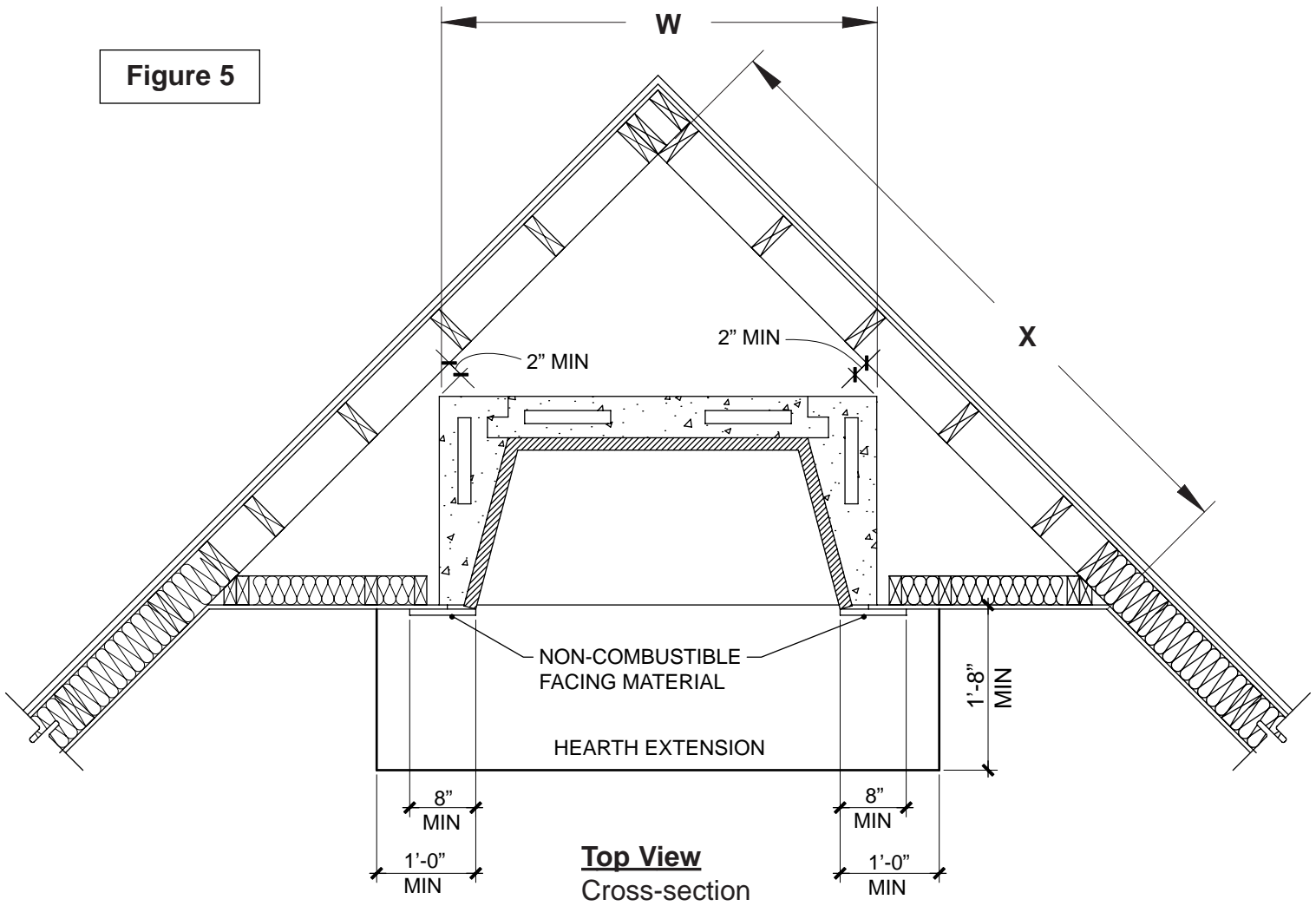
PROVIDED AS PART OF THE CHIMNEY SYSTEM (BY OTHERS)  
(MAY ALSO BE PURCHASED SEPARATELY FROM MFI)

OPTIONAL KIT: SEISMIC STRAP SHALL BE USED ON SEISMIC DESIGNED CATEGORIES D, E & F.



# Fireplace Framing Dimensions (Combustible Floor Systems)

**Figure 5**



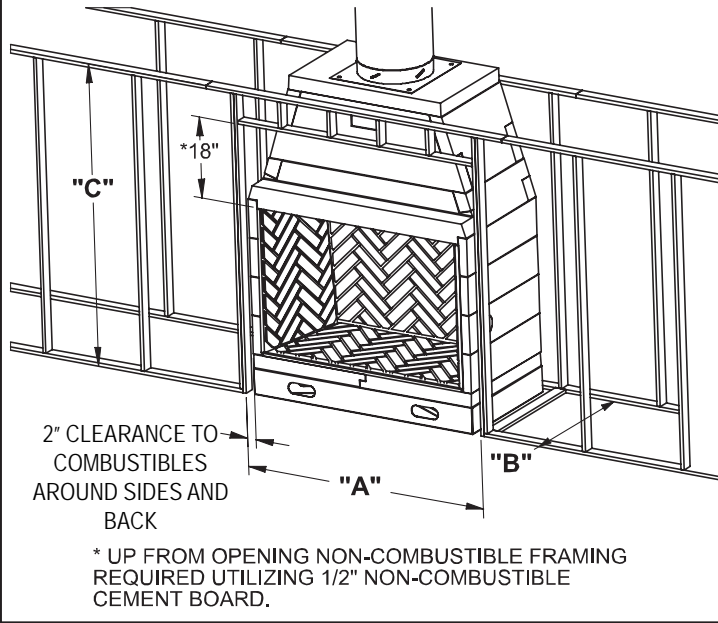
Model	W	X
MFP-39	43"	82-1/2"
MFP-44	48"	84-1/4"
MFP-49	53"	86"

Where the flooring material at the opening of the fireplace is combustible, it is required that the hearth extension be covered with a non-combustible material. The extension should be set flush against the front of the fireplace front and measure 20" minimum at the front and 12" minimum beyond the sides of the fireplace opening as shown in Figure 5 and 7.

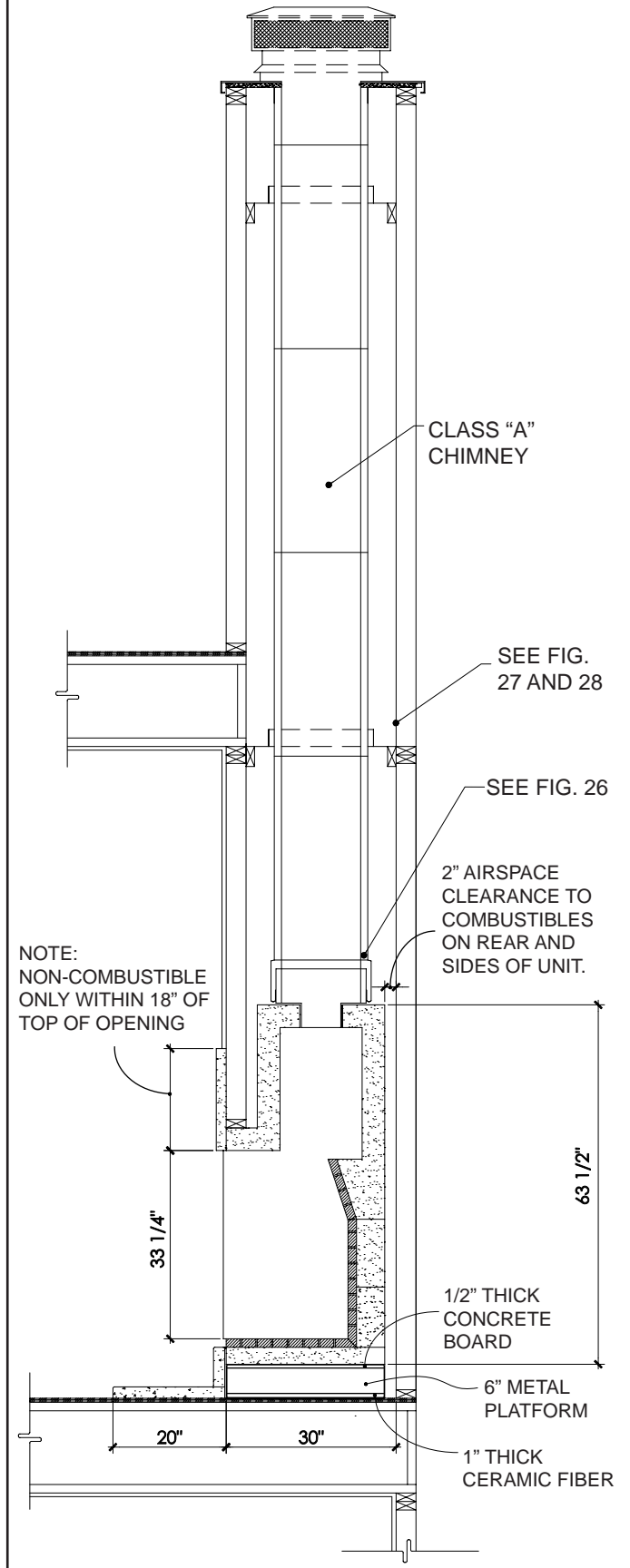
In the event that a raised hearth extension is being installed, it must be constructed of non-combustible material and also that the material laid under the structure be non-combustible too.

# Fireplace Framing Dimensions (Combustible Floor Systems)

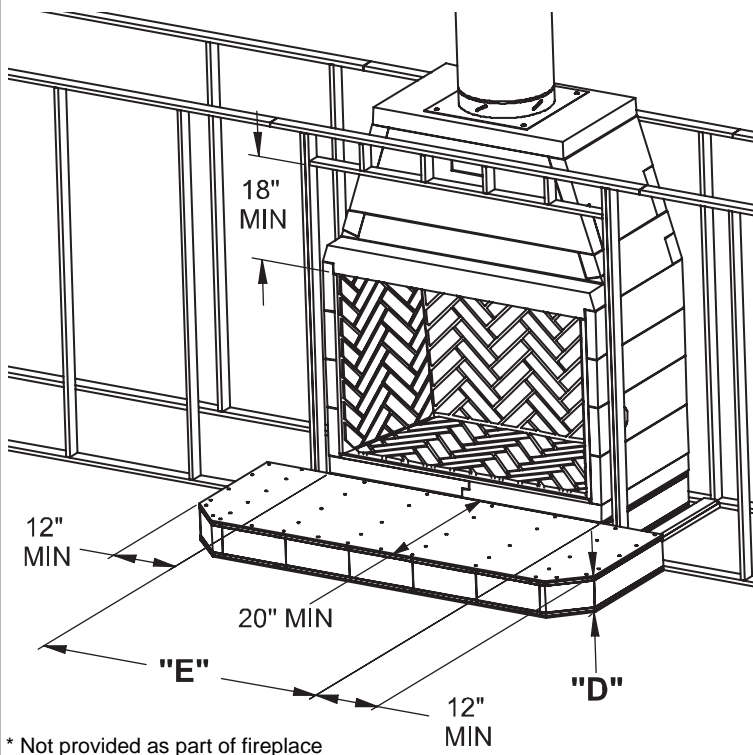
**Figure 6 - Combustible Floor**



**Figure 8**



**Figure 7 - Non-Combustible Hearth Extension (by others\*)**



MODEL	D	E
MFP-39	7-1/4"	43"
MFP-44	7-1/4"	48"
MFP-49	7-1/4"	53"

## Safety Information

**WARNING:** THIS FIREPLACE HAS NOT BEEN TESTED FOR USE WITH AN UNVENTED GAS LOG SET. TO REDUCE THE RISK OF FIRE OR INJURY, DO NOT INSTALL AN UNVENTED GAS LOG SET INTO FIREPLACE.

**WARNING:** THIS FIREPLACE HAS BEEN TESTED FOR USE WITH AN OPTIONAL GLASS DOOR UTILIZING CERAMIC GLASS. TO REDUCE THE RISK OF FIRE OR INJURY, FOLLOW GLASS DOOR MANUFACTURERS RECOMMENDATIONS.

**WARNING:** Install only approved, listed UL 103 Chimney as follows:  
MFP-39 & MFP-44 can use either UL103-12" or UL103-14" chimneys. MFP-49 requires UL103-14".  
MFP-39 & MFP-44 also may use DESA/FMI chimney DM12-12".  
Chimney maximum height: 40 feet  
Chimney minimum height: 14 feet (with offset = 17 feet)  
2 offsets maximum.

**Important:** Follow the chimney pipe manufacturer's instructions on the installation of their specific flue system.

### **GUIDELINES FOR USE:**

All current and future users of Mason-Lite™ Fireplaces are charged with the responsibility for full knowledge of the information contained within this manual which includes:

- Strict requirements for assembly
- Detailed instructions for installation
- Cautionary guidelines for use
- On-going maintenance instructions

It is the responsibility of the distributor, subcontractor and/or the general contractor – whoever shoulders the liability for installation of this product – to see to it that the work is in complete compliance with the guidelines and instructions in this manual. Note that the general contractor is the party accountable for seeing that adequate clearances are provided from all firebox surfaces per specifications in this manual.

**DO NOT USE A FIREPLACE INSERT OR OTHER PRODUCTS NOT SPECIFIED FOR USE WITH THIS FIREPLACE.**

### **The Mason-Lite™ is Designed for Use Only with:**

- Solid Wood Logs
- Plumbed LPG or Natural Gas Log Lighter.
- Plumbed ANSI Z21.60 Decorative Gas Log.

**DO NOT USE OR STORE GASOLINE OR OTHER FLAMMABLE LIQUIDS OR GASES IN OR NEAR THE FIREPLACE!**

**ATTENTION:** A fire or an explosion could occur causing property damage, injury or loss of life if you do not follow the information in this manual!

**NOTE:** THIS MANUAL MUST BE REPRODUCED ONLY IN ITS ENTIRETY.

### **Before Beginning the Installation**

Read these instructions carefully before beginning the installation of this fireplace. Also, if installing an ANSI Z21.60 Decorative Gas Log, read the gas log appliance manufacturer's literature regarding sizing and suitability for the installation into this Enclosure prior to installation.

### **Statement of Intended Use:**

The Mason-Lite™ Masonry Fireplace is a modular refractory masonry unit designed for field assembly. The firebox is constructed using pre-cast, interlocking refractory blocks. The blocks are then secured to each other using Mortar. The system includes all parts necessary for the assembly of a complete masonry fireplace. In addition to the basic enclosure, a standard 1-1/8" thick, high temperature refractory brick is required to line the interior of the firebox.

These fireplaces are not intended to serve as a primary heat source, rather, the fireplace was expressly created as a supplemental source of heat. The unit is designed for use with solid fuels such as cord wood.

### **WARNING:**

Any application other than the "Intended Use" as stated above is in violation of the manufacturer's instructions and is hereby prohibited. Such violation 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.

## Introduction

We extend a warm welcome from all of us at Masonry Fireplace Industries, LLC. (MFI), proud manufacturers of Mason-Lite™ Fireplaces. Thank you for Choosing MFI.

You may have thought long and hard before you chose the fireplace which would grace your home. Rest assured that every component of the Fireplace has been tested to ensure long-term durability.

## Product Overview

Mason-Lite™ Fireplaces are designed as factory-built blocks to be assembled on-site. These fireplaces may be installed on either combustible or non-combustible floors. In order for the fireplace to be installed on a combustible floor though, it is necessary that the fireplace be supported on a platform or sub-floor that is non-combustible.

The Four Components of the Mason-Lite™ Fireplace:

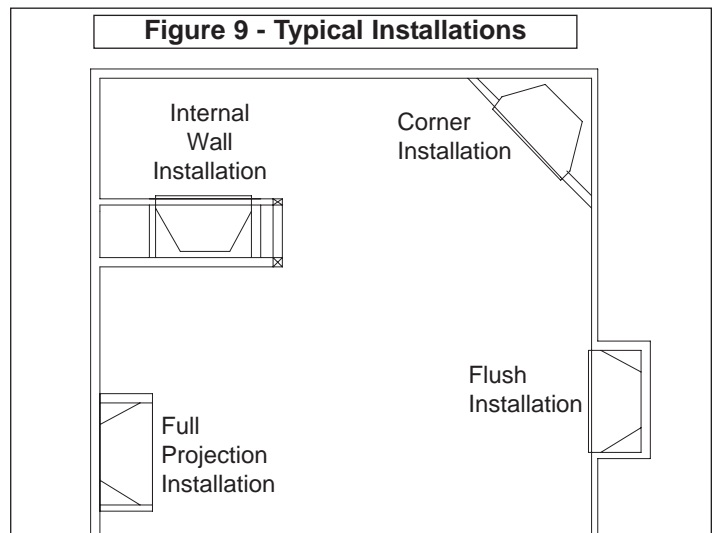
- Combustible or Non-Combustible Floor
- Non-Combustible Raised Platform
- MASON-LITE Firebox and Smoke Dome
- Approved Metal Chimney per installation instructions (see page 21)

**Important:** Follow the chimney pipe manufacturer's instructions on the installation of their specific flue system.

In order to function, the system requires an approved metal chimney. See further details in the sections that follow.

Careful step-by-step instructions for each phase of the installation procedure will be given for the Mason-Lite™ conventional radiant heat fireplaces. Those instructions generally fall into the following categories:

- Spacing and clearance as it relates to combustible materials.
- Familiarity of installation for all components.
- The strength of the floor on which it rests.
- Chimney system measurements.
- Choice of materials and craftsmanship in fireplace and hearth finishing.



Note that each of these topics will be covered in detail and that the installer is expected to understand each phase completely before going on to subsequent instructions.

**Attention:** Be advised that all the illustrations in this manual are for general reference only. Do not scale drawings. Actual design elements will vary from case to case. Pay attention to specified minimum clearances to combustibles.

Testing and listing for the Mason-Lite™ Fireplace has been undertaken by OMNI-Test Laboratories, Inc. (Report No.328-F-01-2) to UL 127.

**Attention:** You may need a residential building permit to install a Mason-Lite™ Fireplace. Consult local jurisdictions before you get started!

If asked, advise the local authorities that the Mason-Lite™ Fireplace is designed for installation per the National Fire Protection Association Standard for Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances (NFPA 211).

## Fireplace Heights

When installed, the maximum overall height of the Mason-Lite is 40 feet. The minimum installed height of the completed MASON-LITE is 14 feet with a straight flue stack, 17 feet if the chimney includes one or two offset sections.

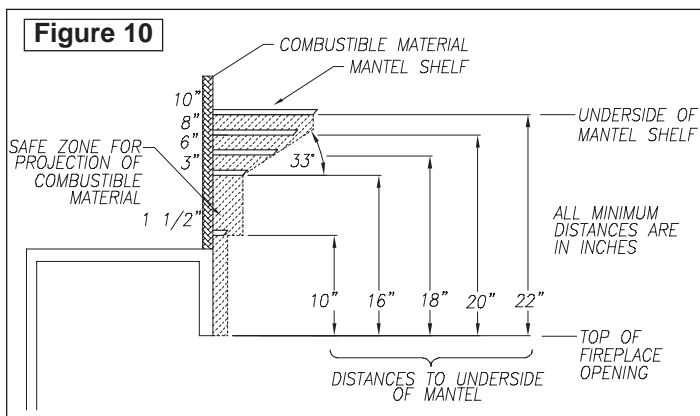
## Clearance to Combustibles

Nothing is more important than paying strict attention to giving clearance between fireplace surfaces and surrounding "combustibles" the most common of which are:

- Drywall
- Wood flooring
- Plywood sub-flooring
- Framing materials
- Particle board
- Mill board
- Plywood paneling

### Maintain the following clearances:

Unit front, sides, rear:	2" (50mm)
Combustible Floor:	6" (150mm)
Combustible Sheathing above opening top:	8" (200mm)
Sheathing or trim to opening sides:	8" (200mm)
Mantle above opening:	(refer to <b>Fig. 8</b> )
Opening to sidewall:	24" (500mm)
Hearth extension beyond front:	20" (500mm)
Hearth extension beyond sides:	12" (300mm)
Insulation from firebox:	2" (50mm)



### Combustible Floor Clearances

MFP-39/44/49 Mason-Lite™ Fireplaces have been designed with clearance to combustible floors at a minimum of **6" (six inches)** as provided by the metal base.

Be certain to cover any part of the combustible floor system left exposed with 1" (one inch) thick ceramic fiber insulation. This insulation material must be rated to 2100°F.

### Understanding clearance to combustibles:

There is a build-up of considerable amount of radiant heat on the outer surfaces of the Mason-Lite™ Fireplace. It's critical that proper clearances to combustibles be maintained so that this radiant heat is maintained to safe limits.

The Mason-Lite™ Steel Platform, the 1/2" concrete board above, the 1" ceramic fiber blanket or board below the platform and the 2" clearance for front, back, and sides provide the temperature safety margin to combustible materials.

Under the Mason-Lite™ base plate, hot air continues to build up within the Non-Combustible Raised Platform. The air is moved out from the rear of the area of the raised platform due to heat convection. The stream of hot air continues to move along the outside of the back wall of the Mason-Lite™ Firebox and Smoke Dome. It travels through a space that is 2" (two inches) that is left between the Fireplace and the actual wall that is behind the Mason-Lite™ unit.

Note that the hot air then travels up the back of the MASON-LITE unit where it enters into the chimney chase cavity where it naturally rises and dissipates through the chase area.

**Attention:** It is critical to abide by the clearances listed in this manual for all components specified as it covers the movement of hot air moving from the MASON-LITE Firebox into interior areas of the chimney chase. Also, be certain that all metal flue and flue components are listed Class A for solid fuel.

### Mason-Lite Fireplace & Chimney System

Before getting started, please be advised to take the time to totally familiarize yourself with the instructions to follow. We can assure you that there will be information that will make the installation go smoother and, above all, safer, for everyone concerned.

At the least, reading these procedures will save you time and, at the most, it will prevent any malfunction that could result in property damage or serious injury.

Do not start the installation until you have checked out all the local, regional, state and national rulings, laws and codes as they apply to fireplaces and fireplace installations.

Every community is different so do not assume that because you know the requirements for one locality, it will be the same in the next. Avoid bureaucratic hassles and do your homework **WELL BEFORE** you start your project!

- 1) The Mason-Lite™ is designed to be installed with a listed UL-103 Class A, Metal Chimney System or optional Desa/FMI DM-12-12" system approved for Models MFP39/44 only.
- 2) Be advised that the heat from the Mason-Lite™ fireplace is intended as a supplemental heat source only. It is not designed to take the place of a primary heat source.
- 3) Note that it is the responsibility of the contractor installer (not the manufacturer) for seeing to it that there is the right amount of air present for the function of the fireplace. Fireplaces take up a large volume of replacement air from outside the house and in the event that the house is tightly sealed because of energy efficient features, the contractor/installer must make adequate plans so that there is no smoking and that there is enough replacement combustion air from the outside.
- 4) There are many conditions beyond a manufacturer's control when it comes to the operation of the fireplace.

The manufacturer cannot be responsible for "smoke free" operation, nor can the manufacturer take on the responsibility for problems with surrounding construction; chimneys that have not been built at the right heights; system drafts caused by faulty mechanical systems; adverse weather conditions or any other inclement environmental situations over which the manufacturer has no control.

- 5) When taking possession of a product from your distributor, pay strict attention to the condition of said product. If any component of the fireplace or chimney appears to have manufacturing or shipping damage, immediately consult your distributor.
- 6) Under no circumstances should you make any adjustments or modifications to the chimney system during the installation procedure. If you do, you are not only liable for negating the warranty, but you could very well cause a serious malfunction of the fireplace. **You must follow your chimney manufacturer's instructions.**
- 7) Caution is urged if it is decided to add insulation material to any part of the Mason-Lite™ Fireplace or Chimney System, be certain that the insulation material is kept at least 2" (two inches) away from any part of the system. When using insulation or vapor barrier materials, cover with a layer of plywood, particle board or gypsum board to maintain the specified 2" (two inch) clearance.
- 8) Air spaces around firebox must remain open. DO NOT fill these open spaces with insulation or packing material of any kind.

## Supporting Floor Systems:

**It is the ultimate responsibility of the installer to ensure that proper concrete slab supports are used.**

**WARNING to the licensed design professional and/or building contractor:** It is your responsibility to be certain that the Mason-Lite can be properly supported by the combustible floor system on which the fireplace will rest.

For fireplace support foundations installed on concrete refer to Appendix I and II (pages 24 & 25) for specific instructions.

### Rebar locations

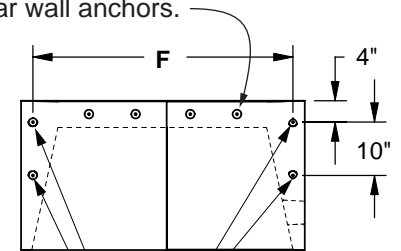
Lay-out the position of the fireplace and drill holes where the rebar will be located. Secure eight #3 rebar 4 inches into concrete foundation with ITW Epoxy or Simpson Epoxy. Follow manufacturer's instructions for installation of rebar into slab.

### Wood Floor:

Anchorage of fireplace to wood floor construction is required. Refer to Figure 11 for anchorage locations. Four anchors are required to attach to the sub-flooring framing.

**Figure 11** For other than floor framing anchor rods, see Figure 16 for method of connecting firebox rear wall anchors.

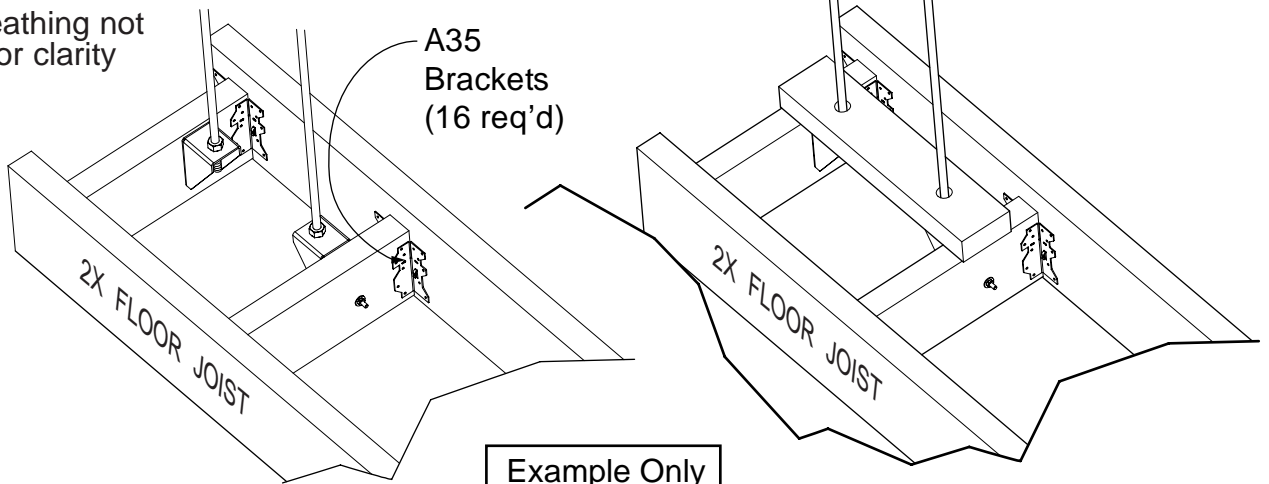
Model	F
MFP-39	38-3/4"
MFP-44	43-3/4"
MFP-49	48-3/4"



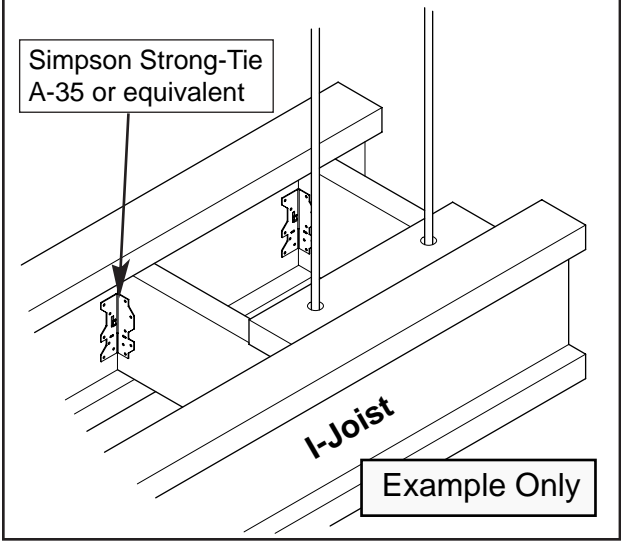
Floor framing anchor rods see Figure 17 for support of anchor rods by the steel support frames.

**Figure 12 - Standard Floor Joist Anchoring**

Floor Sheathing not shown for clarity



**Figure 13 I-Joist Anchoring - Top View**



**Crawl Space or Upper Floor:**

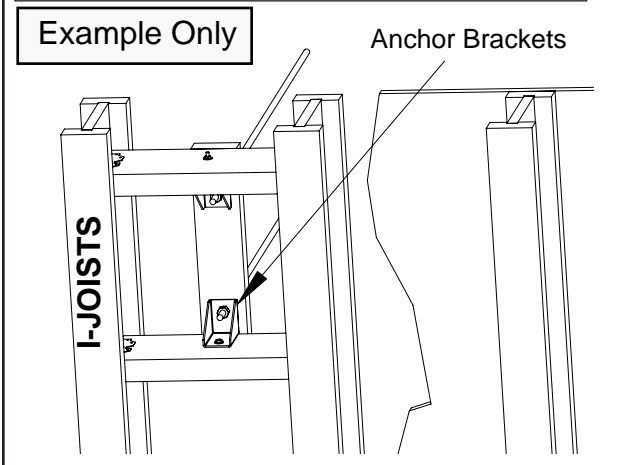
For installation of firebox over combustible crawl spaces or upper floors, anchorage of the firebox is required. Illustrations of examples of possible anchorage methods are shown in Figures 12 thru 15 depending upon the type of floor framing. Final method of anchorage to be determined by licensed design professional.

For conventional framing where the floor joists are parallel with the sides of the firebox, the addition of floor joists to align with the anchor brackets allows the brackets to be directly connected to the floor joists. Note that additional floor joists may be required to support the weight of the firebox and chimney. Where the floor joists run parallel to the front of the firebox, anchorage can be accomplished as shown in Figure 12 using blocking between the floor joist.

For floors supported by I-Joists, the method of anchorage is illustrated in Figures 13 and 14.

Figure 15 illustrates the general arrangement of anchorage to floor framing.

**Figure 14 I-Joist Anchoring - Bottom View**



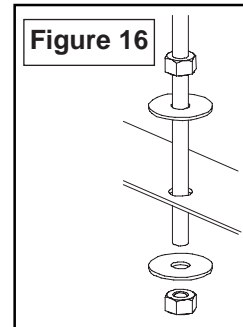
It is important to take into consideration that the load for the Mason-Lite Fireplace must be considered as additional dead load that will have to be supported by the floor framing. The weights are noted in Table I for each MASON-LITE unit model. Additional floor joists or I-joists may be required as determined by the licensed design professional. In addition, the calculated long term deflection of the wood members supporting the fireplace shall not exceed the values shown in Table II.

It is the task and responsibility of the general contractor/installer to see that the proper reinforcement for weight loads are made by a licensed design professional prior to the fireplace installation.

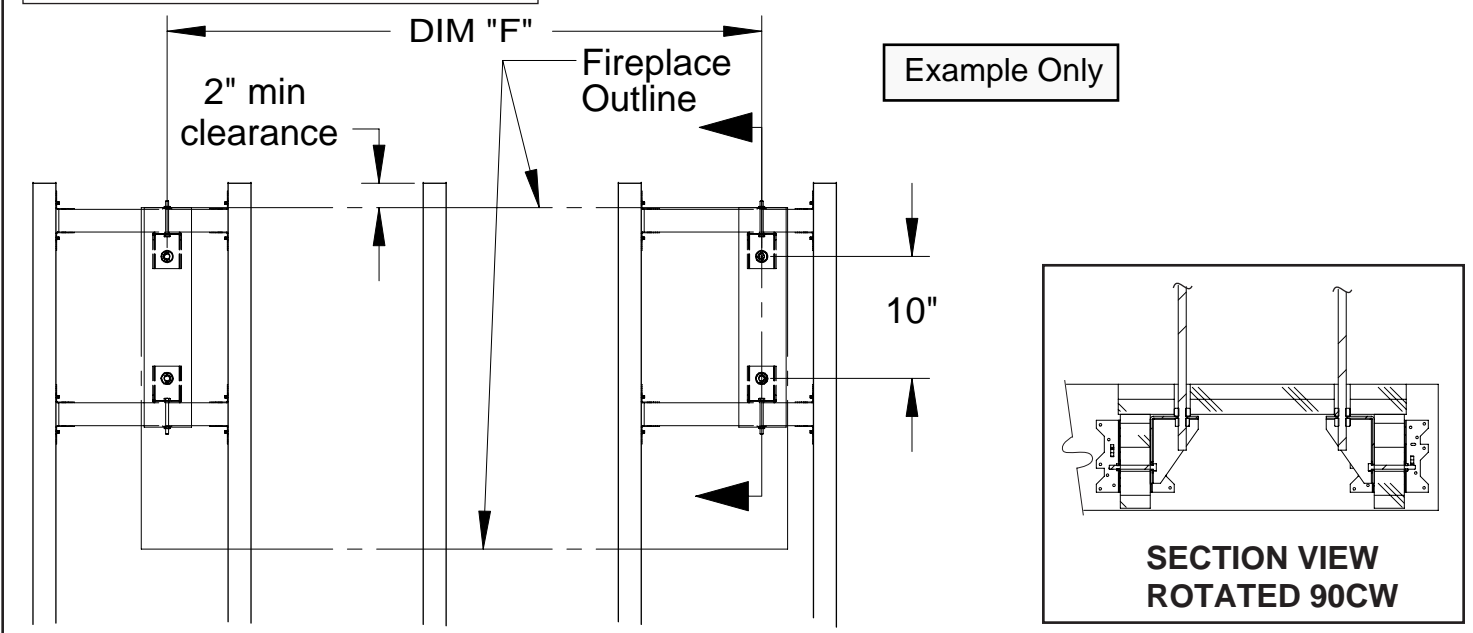
As stated above, it is desirable to place additional framing for alignment of anchor rods. Refer to Figure 11, Page 12 for anchor rod dimensions.

Attach the firebox rear wall anchors to steel support frame by inserting all-thread rods through holes on the top flange of the steel support frame as shown in Figure 16. Secure with two  $\varnothing 2"$  o.d. x  $\varnothing 9/16"$  i.d. x 0.10" Washers and two 1/2-13 UNC Nuts.

**Figure 16**



**Figure 15 Typical Anchorage Layout**



**MASON-LITE Weight Determination**

The following are dead load weight estimates for each Mason-Lite™ Fireplace.

Table I			
	MFP-39	MFP-44	MFP-49
Fireplace	1,110 lb	1,230 lb	1,320 lb
Damper/Anchor Plate, Firebrick & Mortar	350 lb	350 lb	350 lb
Steel Platform	80 lb	90 lb	100 lb
Floor Area	42" x 28" (8.12 ft <sup>2</sup> )	48" x 28" (9.33 ft <sup>2</sup> )	53" x 28" (10.30 ft <sup>2</sup> )

**Other Weight Considerations:**

1. Fireplace finished facing (surround): This information needs to be obtained from the contractor.
2. Weight of metal flue: See chimney manufacturer's weight specifications. Some chimney systems can weigh up to 50 lbs. per lineal feet.

Estimate the total weight to be supported, use the weight of the fireplace plus;

1. Fireplace finish facing surround
2. Weight of metal flue

Table II - Deflection Limits			
Construction	L	S or W	D +L <sub>1</sub>
Floor members	l/360	---	l/240

<sup>1</sup> For wood structural members having a moisture content of less than 16 per cent at time of installation and used under dry conditions, the deflection resulting from L + 0.5D is permitted to be substituted for the deflection resulting from L + D.

Note that MASON-LITE cannot accept responsibility for structural floor support details. All drawings are presented as merely illustration to indicate the presence of the underlying floor system. It is the responsibility of the general contractor/installer to consult with a local licensed design professional for guidance in building a proper floor support system.

**IMPORTANT:** Remember to tighten up nuts below the floor after fireplace installation to take up any slack in the threads.

**Mason-Lite™ Component for combustible floors:**

**6" Metal Base**

The Mason-Lite Metal Base ensures the minimum 6" (six inch) clearance above combustible flooring is maintained.

A layer of 1/2" minimum Concrete Board is required on the top surface of the Metal Base.

A layer of 1" minimum Ceramic Fiber Blanket or Board is required underneath the Metal Base.

**Note:** It is imperative that your choice of an insulation board must meet a thermal conductivity rating equal to or greater than 0.4 Btu-in/hr-sq.ft.-degree F.

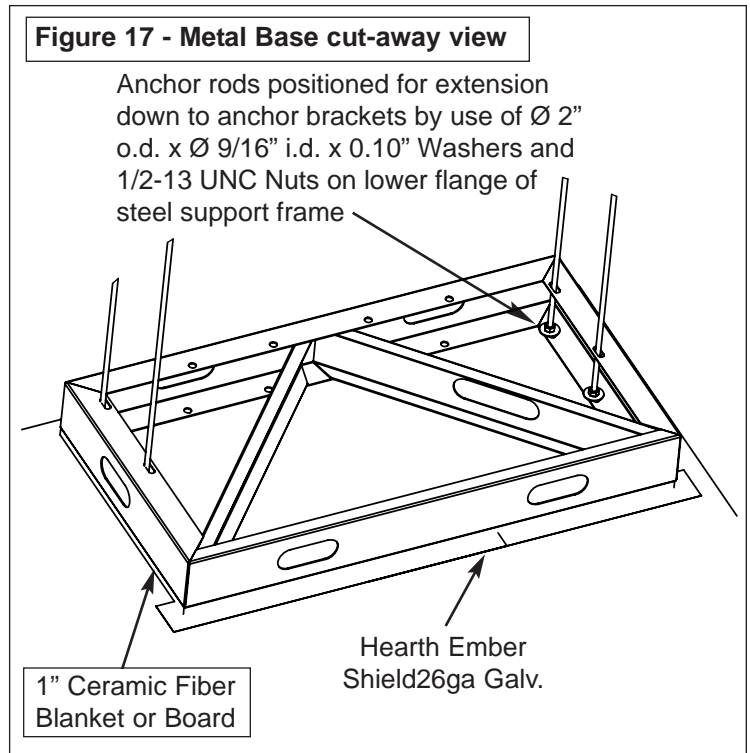
When choosing the location of your Mason-Lite Fireplace, keep in mind you must maintain 2" (two inch) minimum clearances from Left, Right and Rear of Fireplace to surrounding structure.

Also, when choosing a location, consider outside air requirements to determine if it will be on the left or right side of the Fireplace.

**Hearth Ember Shield:**

Metal safety stripping is required between the front of the Fireplace Hearth and Hearth Extension (not supplied). A 26 gauge galvanized 4" wide metal strip can be used. The length needs to extend 2 inches beyond each side of the fireplace opening. If two strips are used, make sure they overlap at least two inches in the middle. The strip is placed about 2" into the underside of the platform at the front.

**Note:** When using an on-site-constructed hearth extension, you may use a sand-cement grout between the hearth and extension.



## The Firebox and Smoke Dome

### Overview

You will find that the MASON-LITE Fireplace is designed for complete assembly at your construction site with all necessary items delivered, consisting of interlocking precast parts. You will need a thin-set type mortar for bonding. The parts of the fireplace are made of Mason-Lite's incredibly strong blend of specialty cement and a light weight aggregate.

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**IMPORTANT!** When applying mortar, it is imperative that the concrete blocks be maintained moist (not soaking) so they don't absorb the water out of the mortar and cause adhesion to fail. Frequently run a damp sponge to the parts before mortar is applied!

---

The design of the fireplace calls for the installation of an anchor plate/damper system which can be purchased from any chimney manufacturer or MFI. Also, an optional combustion air inlet **MFP4-AK** can be obtained from MFI. A Refractory Firebrick Liner also needs to be installed. This should be a minimum of 1-1/8" (one and one-eighth inches) thick. The liner will be applied within the walls of the firebox.

### Additional Materials Required:

- 1) Thin set mortar - (45 lb. bucket) p/n MFP501
- 2) Masonry sanded grout - 2 cu/ft.
- 3) #3 Rebar - 4 ea - 36" long.
- 4) All-thread bars - 4 ea. - 48" long.

### SURFACE CRACKS

MASON-LITE FIREPLACES are manufactured using high quality materials. During the drying process, surface cracking may occur. These small cracks (under 1/16" will not effect the fireplace safety or performance). During the assembly process, fill surface cracks with thin-set mortar and brush when drying for a smooth surface finish.

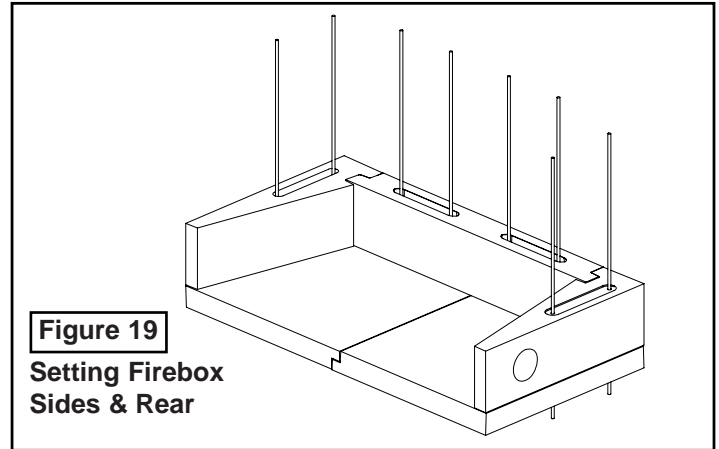
## Field Assembly Procedures

- 1) Mixing the MASON-LITE mortar – You will require a 45 pound bucket of MASON-LITE mortar which should be more than enough to adequately affix all the fireplace components. The mortar is premixed and dry and is to be used to adhere all the fireplace components. Be sure to use clean water and work it up into a mixture that is pasty but not lumpy. If it is too thin, and if the concrete pre-cast components are not maintained moist, the components will not adhere. Some trial and error may be necessary for the proper consistency of the mortar mix. You will want to apply the mixture with a standard grout bag.
- 2) Assembly of the Components – Once you have found the proper consistency of the mixture, load it into the grout bag and then place the components together applying the mixture directly to the components where they come together. As a rule, you can figure that you should lay down about ½" (one-half inch) of a thread of mortar. The line of mortar should be approximately ½" (one-half inch) away from all the edges of each separate component. The mortar has a considerable amount of holding power so do not overload the components with too much mortar. **Keep the components moist at all times!**
- 3) You will notice that some mortar will "ooze out" when you place the next component on top of or next to the component you previously placed. This is to be expected it means the two pieces have properly bonded -- and you will want to swipe the excess away with a trowel. It is never intended that the surfaces of the MASON-LITE components are to be completely covered with mortar.
- 4) Do not apply the mortar in thick bands even if the component you are working with is larger than the rest. You will want to apply "stripes" of mortar in these situations.
- 5) Making Sure Components Are Level – It is extremely important that you pay careful attention to how you are assembling the Mason-Lite Fireplace since every component builds on the next. If you have to make any kind of an adjustment, do not try to do it "by loading an opening" with mortar. That is completely unacceptable, resulting in a fireplace that will not be plumb or level. What you are advised to do is make use of wood shims. You will find these small wood shims supplied with the Mason-Lite Fireplace and you can nudge them in between openings to achieve the precision you need in making component adjustments.
- 6) Once you have inserted any shims, you will want to cover any gaps that may have resulted with the grout.

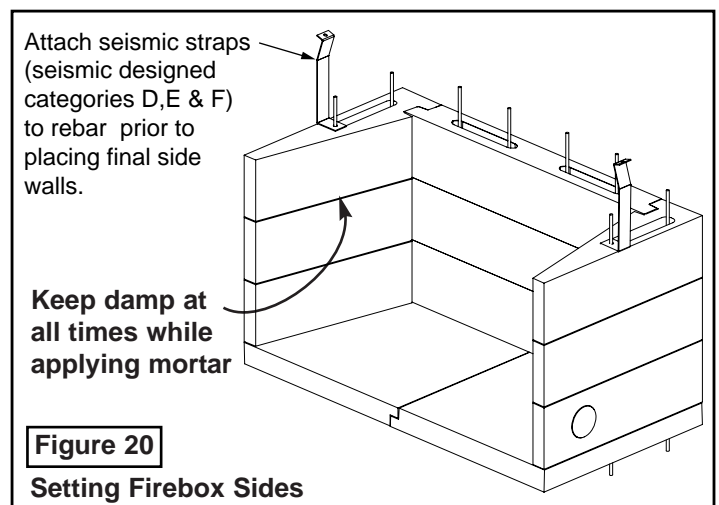
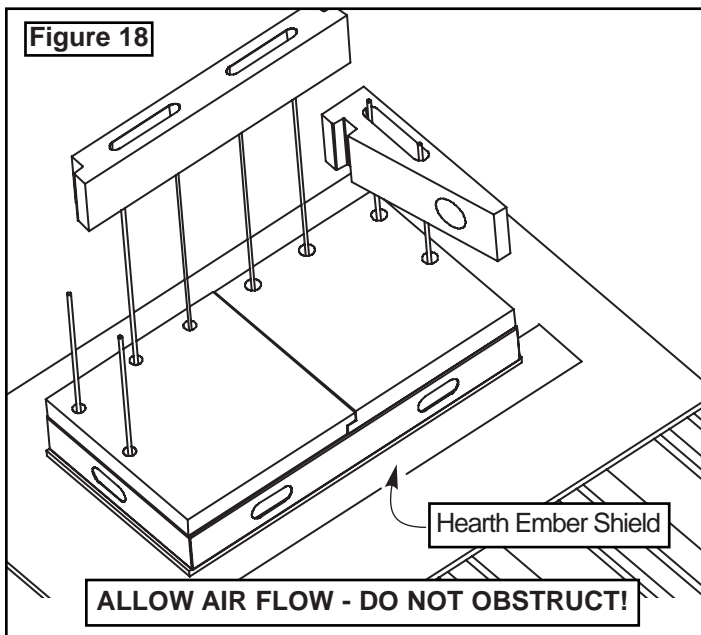
## Fireplace Assembly Procedures

- 1) Place the Mason-Lite™ Fireplace hearth base on top of your non-combustible floor or metal base. For concrete slabs, supporting floor needs to be rated at ASTM 90.
- 2a) Combustible Floor Installations: Mix up a batch of mortar and place the 1" ceramic fiber and raised platform on it.
- 2b) Non-combustible Floor Installations: Mix a batch of mortar and place on concrete slab making sure full contact is achieved.
- 3) For now, ignore any angle on the base that may be slightly off. You can better make an adjustment to the firebox when you have finished installing the side wall and the back wall. That is covered in this section, further down in # 7. Confirm placement of outside combustion air side block (if required), either right or left side. All diagrams in this manual show the combustion air inlet hole on the right side.
- 4) Now you are ready to move the firebox back wall and side wall into position (see Figure 18). Hold off on mixing the mortar and simply dry set these components for the time being. Take a piece of chalk or a pencil and outline their position.
- 5) Now, you can remove the components that you have set into place. Damp sponge the surfaces to be bonded. Take care not to smear or erase the previous markings. Following the tracing you have done, squeeze out the mortar in beaded 1/4" (one-quarter inch) lines along where the side wall and back wall will sit. Be very careful that you apply the mortar along the connecting joints where the side wall and back wall components come together.

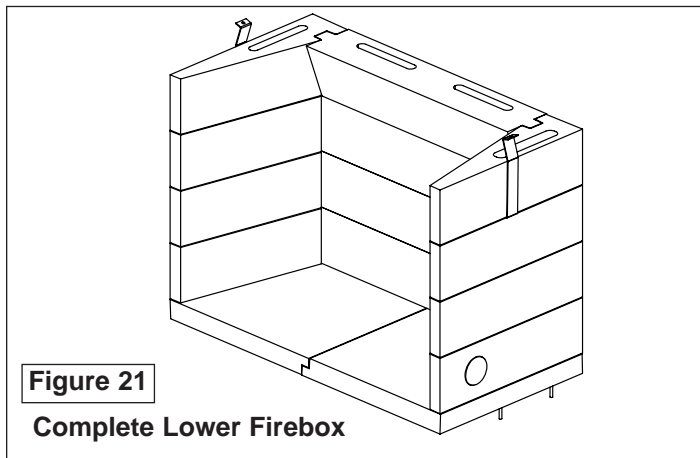
- 6) Keep the assembly of the next sections of the firebox side wall and back wall moving up, keeping components moist, mixing mortar as you need it and threading the mortar appropriately as you stack each section, one onto the next. Constantly check for squareness and levelness while building each course of block. As you complete each section, make certain that you adhere the mortar at each and every joint.



- 7) When you have arranged all the components into place and you are working on the top rear firebox, set the sloped downdraft diverter inward. Check that all is level. If you need to, you can make some adjustments in the top surface of the box assembly simply by using a shim or shims. Place one or more of these shims between the lowest wall component and the top surface of the base plate. Once you are satisfied with the degree of levelness, you can address any gap that may have occurred with an appropriate amount of mortar.
- 8) Although you are cautioned to use MASON-LITE mortar sparingly because it does have such holding power, you should look over the firebox assembly at the end and fill in any gaps, especially joint connections, with the mortar. Needless to say, you must make adjustments to be sure the fireplace is level and square while the mortar is still wet.

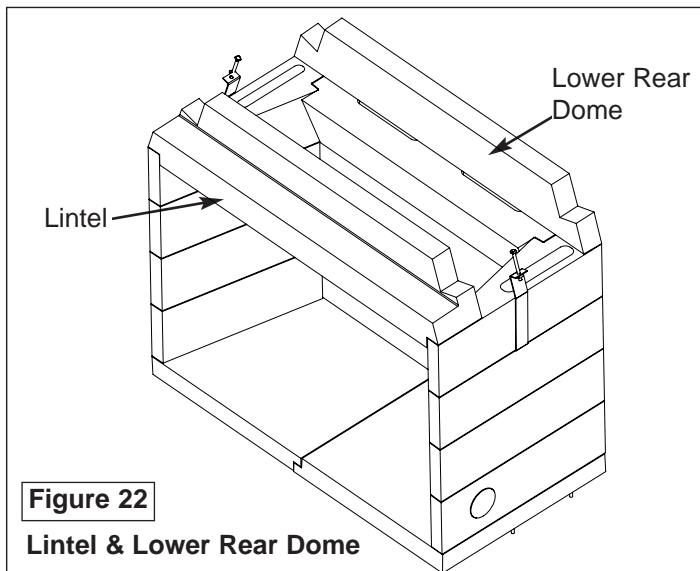


- 9) This is the time to add #3 rebar and fill the firebox rear and side cells with mortar mix. Mix approx. 2 cu/ft. of sanded mortar mix. Put 25% in cells and place #3 rebar vertically in corners of each cell. Make sure the bars are into the hearth and at least 1/2" (one-half inch) below top of firebox top surface. Finish filling cells.

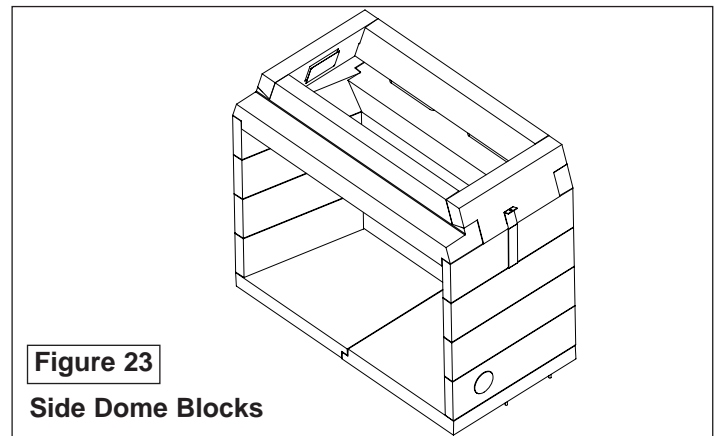


**IMPORTANT!** Keep in mind that, when applying the mortar, you must frequently run a damp sponge to the parts before mortar is applied!

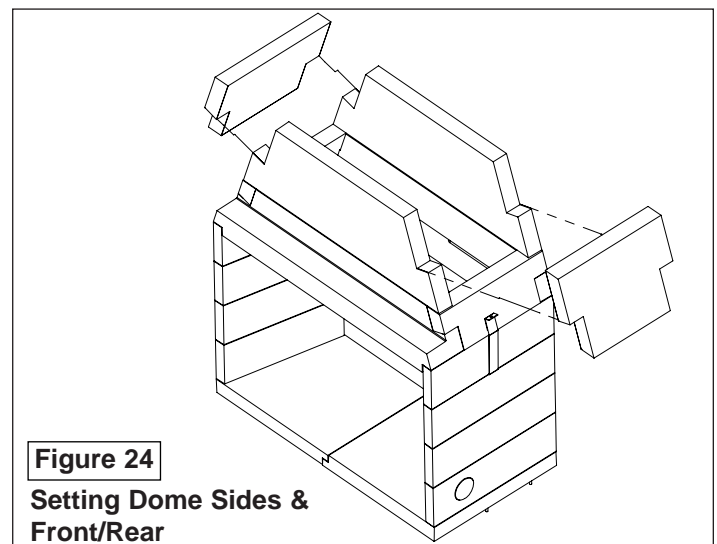
- 10) Now you are ready to start the smoke dome assembly. Making sure it fits snugly, set the lintel and check for alignment. Remove and bead-in mortar on top of an assembled firebox.
- 11) Now take the lower rear dome positioned so that the beveled face lines up with the inward angle of the back wall of the firebox. Shim vertical if required.
- 12) Lower side dome blocks are next to mortar and these should be placed on top of the firebox side wall. Position side blocks flush from the outside face of the firebox side wall.
- 13) Now position the front/rear smoke dome parts on top of dome. These parts require care in leveling, noting the parts have a slight bevel. Check for vertical with level.



- 14) As you are connecting each MASON-LITE component, be certain you are following the instructions given previously for using MASON-LITE mortar. Stop to look at the smoke dome side walls and back wall to see that they are aligning correctly, that the surfaces are smooth and uniform and be certain that you are covering connections with an adequate amount of mortar. Remember that you have the option of using shims and covering them with mortar if you need to make any adjustment to the fireplace alignment or finishing.



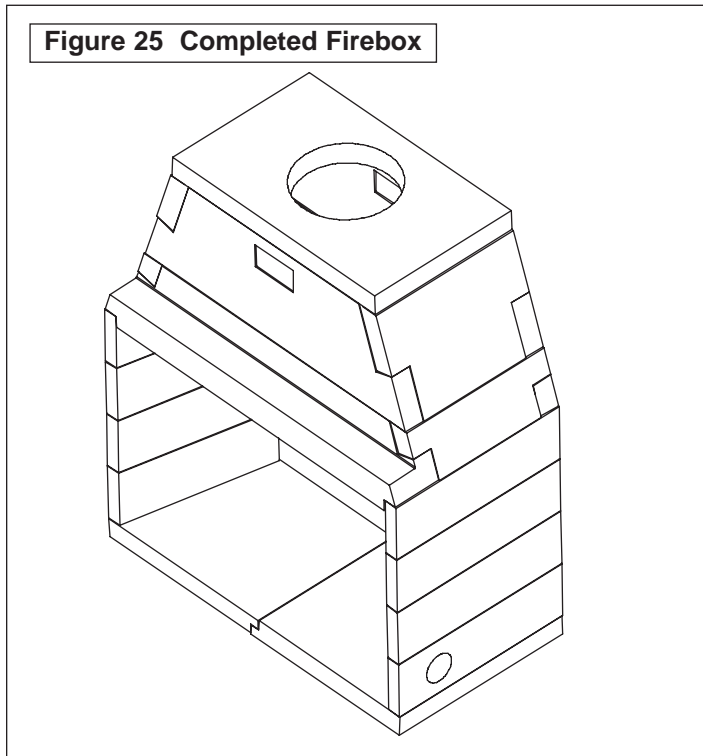
- 15) Place upper dome sides in place on right and left side. Mortar and finish level.



- 16) Check your assembly here. If things are proceeding as they should be, the finished top surface should be flat and level.
- 17) Now you can set the smoke dome top plate into position. Be sure that it is flush in every direction as you place it on the crest of the smoke dome wall assembly. You will note that the flue hole in the plate is positioned in the center of the smoke dome from side to side but it is actually more toward the back of the top plate. So, make a point to see that the flue hole in the top plate is closer to the back wall of the smoke dome assembly.

Seal Anchor Plate using a 1" thick ceramic fiber blanket. Complete the Anchor Plate assembly by securing with (4) 1/4-inch masonry anchors as shown in Figure 26.

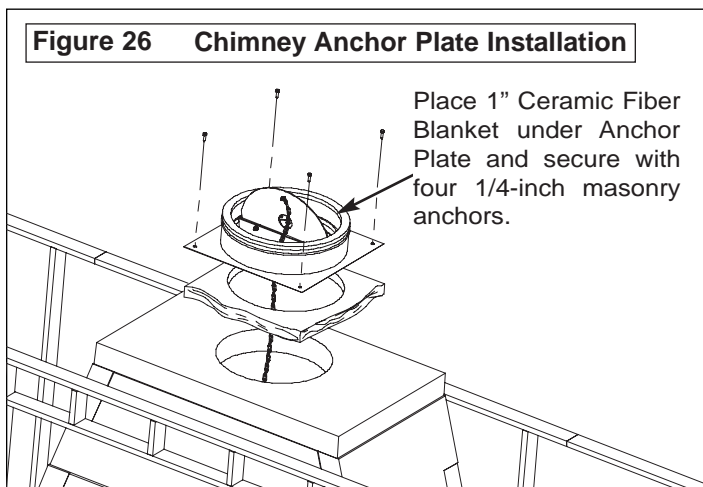
18) Now that you have completed the smoke dome assembly, all the components should stack up for a smooth transition into the flue components. Setting the smoke



**Figure 25 Completed Firebox**

dome completes the MASON-LITE Firebox and Smoke Dome assembly. You are now ready to begin the installation of the necessary fire brick lining and the flue components.

**WARNING: DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS.**



**Figure 26 Chimney Anchor Plate Installation**

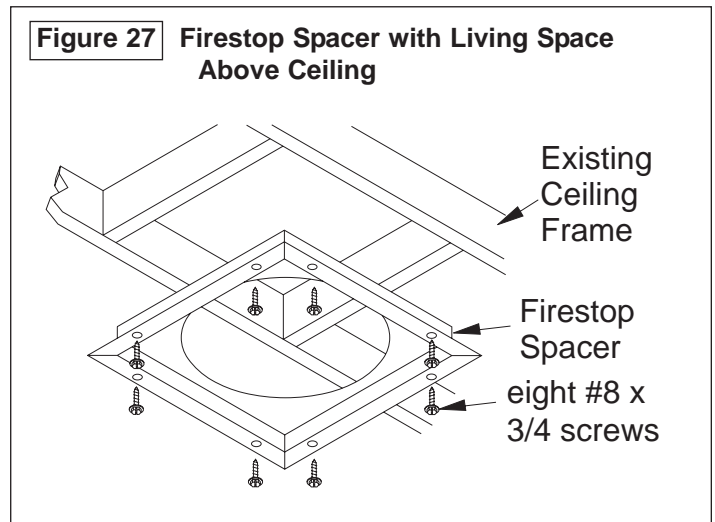
Place 1" Ceramic Fiber Blanket under Anchor Plate and secure with four 1/4-inch masonry anchors.

## Firestop Radiation Shield

A **Firestop Radiation Shield** is required in multistory installations at each floor penetration above that where the Support Box is located.

Firestop Radiation Shields also provide complete separation from one floor space to another or attic space as required by most codes. When the double wall pipe passes through a framed opening into an attic space, the firestop must be placed into an attic floor as shown in Figure 28.

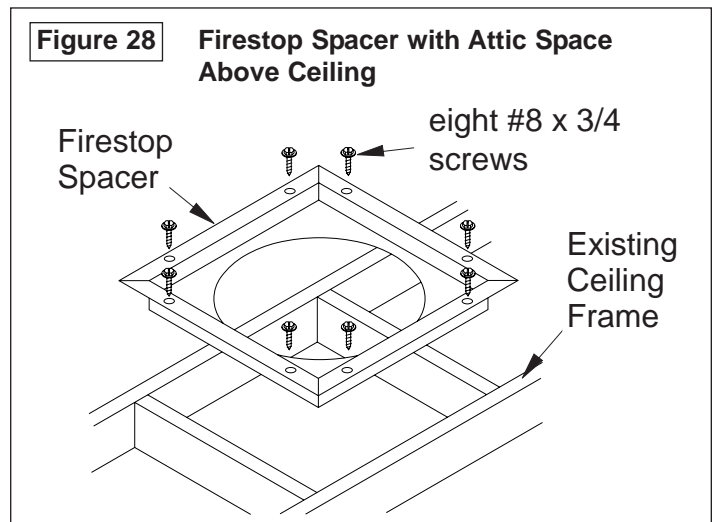
Follow your chimney manufacturer's instructions on specific guidelines pertaining to their chimney and Firestop Radiation Shield installation instructions.



**Figure 27 Firestop Spacer with Living Space Above Ceiling**

Existing Ceiling Frame

Firestop Spacer  
eight #8 x 3/4 screws



**Figure 28 Firestop Spacer with Attic Space Above Ceiling**

eight #8 x 3/4 screws

Firestop Spacer

Existing Ceiling Frame

# Mason-Lite™ Firebrick Liners

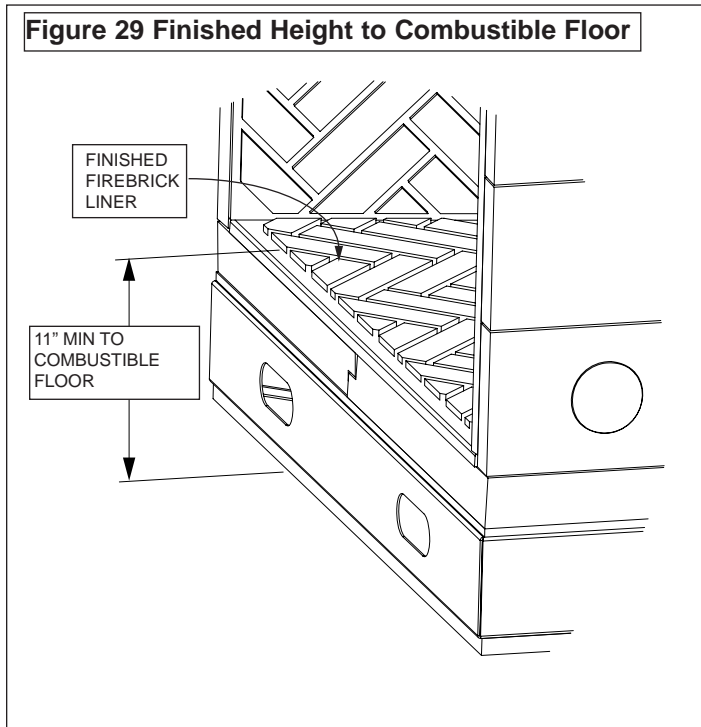
## Custom Firebrick Lining

Custom Firebrick lining is not supplied by Masonry Fireplace Industries (MFI). There is, however, the option of modular pre-fabricated panels that can be obtained from MFI. See exploded parts page for details.

If custom firebrick lining is desired, 1-1/8" inch thick liners will be required. The pattern for the fire brick lining is exclusively your choice. Before you install the lining, remember to consider any holes your contractor may need to drill for gas, electrical and combustion air kit access holes.

Please use a certified mason to lay-in the brick if using standard 1-18" thick firebox lining brick. He will follow the proper instructions from the fireplace liner manufacturer and what type of adhesive or cement he is to use.

Make sure the fireplace is installed with the finished fire brick floor of the fireplace so that it is at least 11" (eleven inches) above the combustible floor system.

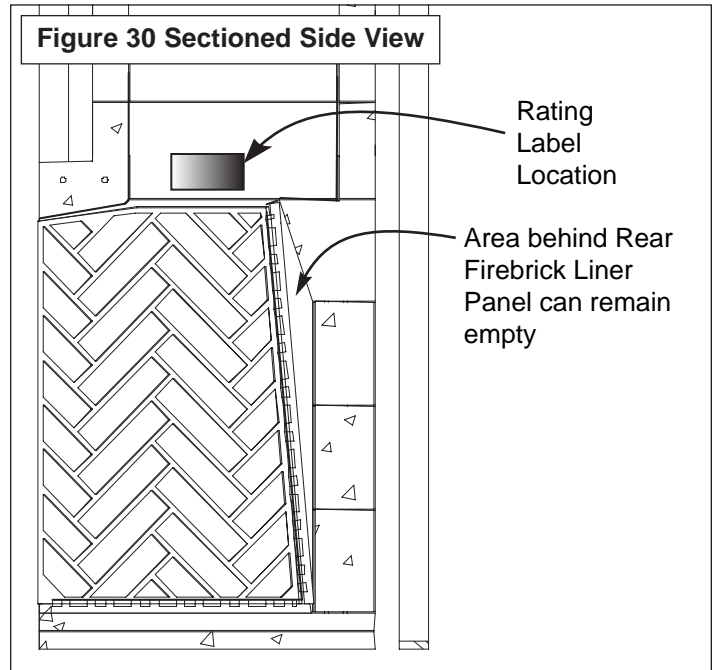


**Disclaimer:** Masonry Fireplace Industries wishes to express that as the manufacturer of Mason-Lite Fireplaces, they cannot take any liability or responsibility for the way the firebrick or the firebrick mortar performs. It is not unusual in the course of the life of the firebrick, or the firebrick mortar, for heat stress cracks to appear. MFI cannot be responsible for this and other wear and tear to the fire brick and mortar.

## Modular Firebrick Lining

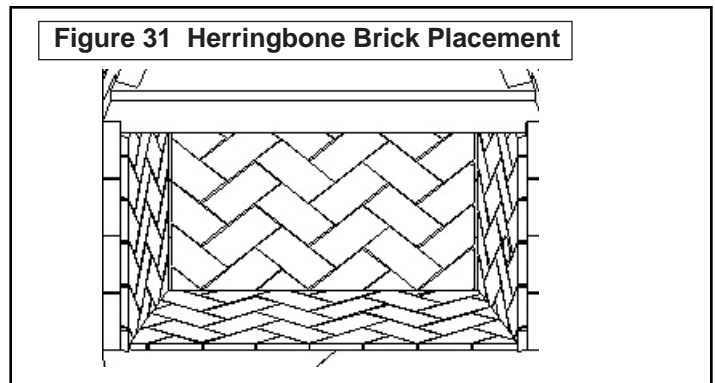
If using our Mason-Lite™ Firebrick Liners, simply use an extra bucket of the mortar we supply.

The rear Liner Panel is straight from the bottom to the top front edge of the Downdraft Diverter edge. The space behind does not have to be filled (**Figure 30**).

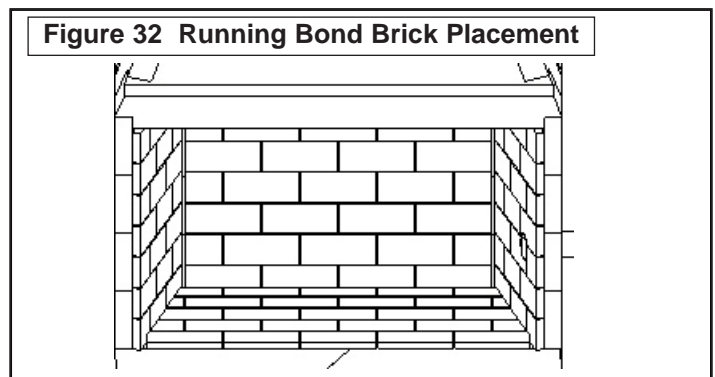


The following Firebrick Liners are available from MFI:

- MFP39SHBL - Herring Bone
- MFP44SHBL - Herring Bone
- MFP49SHBL - Herring Bone



- MFP39FRBL - Running Bond
- MFP44FRBL - Running Bond
- MFP49FRBL - Running Bond



## Fireplace Finishes and Combustible Trim Clearances

Hearth Material & Dimensions – Strict codes rule the types of materials that you can select for your Mason-Lite Fireplace's hearth as well as the hearth's length and width. All hearth extensions must be made of code-rated, non-combustible materials such as tile, brick, concrete or stone. MASON-LITE Fireplaces usually have an opening of approximately 8 sq. ft. (eight square feet) that translates to a hearth extension of about 20" (twenty inches) at the fireplace's opening and about 12" (twelve inches) extension at each side. These relative dimensions are also covered by code. Note that it is required that metal safety strips must be laid on the floor of the non-combustible raised platform. These should be 26 gauge and measure 4" (four inches) wide. They need to extend half way under the platform and half way under the hearth extension material (see **Figure 5**).

**Attention:** You will note that there will be a gap between the fireplace front and the extension of the non-combustible hearth material. Be certain that you seal this with non-combustible material.

## Mantle and Mantle Shelf Clearances

As with any radiant heat fireplace, all MASON-LITE Fireplaces must comply with building code safety clearances, per units that have openings of 6 sq. ft. (six square feet) or greater. For Mantel clearances see **Figure 10**.

Walls that Adjoin – Safety codes and all practical outlooks insist that your fireplace cannot be installed closer than 2 ft. (two feet) to any walls in the room the fireplace is housed in or to any walls of adjoining rooms.

Caution in Regards to Combustibles – If any part of the fireplace or objects in the room (curtains, rugs, paint, cushions, etc.) start to show warping or discoloration due to heat from the fireplace, it is time to take immediate action. Do not use the fireplace until you have figured out how to address the problem. You are facing a potential fire hazard.

MFI cannot be responsible for the make-up of material on the exterior of the fireplace you have chosen, nor can MFI be held responsible for the materials in a room that may be responding negatively to heat. However, in almost all cases, there is a solution to the problem, either by making adjustments to airflow or the modifications to the room itself.

## Installing Outside Air

- 1) The Mason-Lite Fireplace needs enough make-up air to function properly and some local building codes may require outside combustion air to be provided. If no make-up air is provided, improper flue drafting may occur, creating negative pressure whereby smoke may enter the home, especially in homes that are very well insulated and tightly sealed. Check local building codes for specific requirements.
- 2) Install Combustion Air Kit MFP4-AK into the MASON-LITE Firebox through the side wall opening provided. The tubing that goes out of the firebox wall must feed into a flexible metal conduit as the source for outside combustible air. It can go straight out through an outside wall or into a ventilated crawl space. If crawl space is used, check codes for proper termination.
- 3) Be sure that you carefully check the source of the outside air before you choose the site for your air intake. You don't want a place where snow will collect, where bushes or trees will be growing or a location that is too close to any other structure.
- 4) Install a screened termination cap to keep out animals.

## Adding a Gas Pipe

You may elect to add a vented decorative gas appliance (gas log) to your Mason-Lite Fireplace. If so, follow the installation instructions from the Decorative Gas Appliance manufacturer. Familiarize yourself with requirements for installation as outlined by the National Fuel Gas Code, ANSI Z223.1. This gas pipe provision should only be used on a decorative gas appliance.

- 1) You can route the gas piping practically anywhere in the firebox – the floor, back wall or side walls. You will just need a masonry drill; the instructions from the gas appliance manufacturer will be very straightforward.
- 2) Fill in the holes you have drilled around the gas piping with the regular MASON-LITE mortar.
- 3) Follow the Gas Log manufacturer's instructions.

## Adding Electrical Connection

Like the gas line, electrical feed lines can be run through the floor, back wall, or side walls. Follow local building and electrical code requirements.

## MASON-LITE Chimney Systems:

The Mason-Lite Fireplace requires the following chimney system(s):

All chimney systems must be installed with an integrated damper/base plate installed on top of unit. Installers are cautioned to put the chimney system together exactly as instructed and shown in chimney manufacturer's guide. Any variations may have serious consequences resulting in an accident or malfunction. If instructions are not followed, the warranty on the product will become null and void.

Note that the most important aspect of the installation is the maintenance of minimum required clearances to combustible materials. Those specific installation requirements must be followed with great precision as you are dealing with the potential of fire hazard if the correct combustible limit is not met and maintained.

**WARNING:** If you do not use chimney manufacturer's parts and/or if you do not follow exact instructions for installation of chimney components, you may be responsible for fireplace malfunction, an accident or a fire hazard.

**Attention:** Be advised that your choice of Chimney System meets the following standards and requirements:

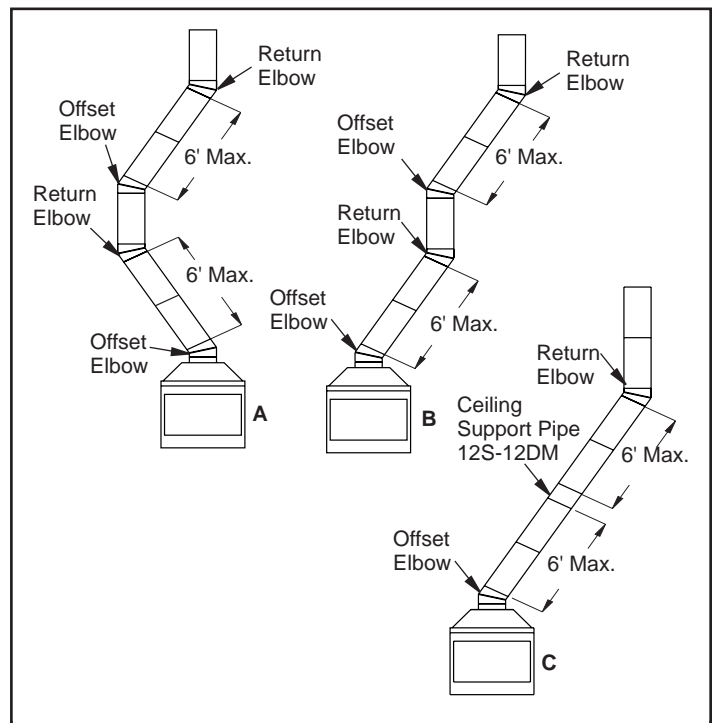
- Designed for installation in accordance with the National Fire Protection Standard and UL103. Meets requirements of NFPA 211.
- Designed in accordance with ICC Codes.

Assuming you have sections of vertical pipe that are more than 10' (ten feet) measuring between elbows, you must insert – at midpoint – a chimney stabilizer. When installing the stabilizer, pull out the support straps with a good amount of tension and hammer to the frame.

## Installing Damper and Chimney System

The Damper System/Anchor Plate assembly is required for the installation of these chimney systems. Consult the Chimney System manufacturer's instructions.

- 1) Using the Damper/Anchor Plate Assembly, apply a 1/4" (one-quarter inch) bead of gasket cement around the base of the Anchor Plate. Apply ceramic blanket gasket to the gasket cement.
- 2) Apply balance of gasket cement in a 1/4" (one-quarter inch) bead on top of smoke dome top approx. 3" (3 inches) outside of outlet hole. Install damper on top of unit pressing damper into cement. Attach using (12) #8 cement fasteners.
- 3) Place chimney adapter onto top of damper plate and center in opening using gasket supplied with adapter.
- 4) Attach adapter with screws supplied by carefully drilling holes into damper plate.



Mason-Lite model	Chimney System
<b>MFP-39</b>	UL103-12" or DM12-12"
<b>MFP-44</b>	UL103-12" or DM12-12"
<b>MFP-49</b>	UL103-14"

- 5) Attach damper chain stop on center rear of lintel 3" (three inch) vertical from opening using (3) #8 cement fasteners.

**Attention:** Clearance to combustible construction can not be reduced during course of construction. For the safe operation of the finished fireplace, these clearances must be followed when building the framework to house the chimney system:

## Finishing Your Installation

To complete your fireplace installation, a fireplace grate is required for safe operation and must be used. The Fireplace Grate needs to be sized to 50% of the hearth maximum. Additionally, a fireplace screen must be installed for safety. These items are available from your MFI dealer using the following part numbers:

Model	Fireplace Grate	Screen Assembly
<b>MFP-39</b>	10024	10025
<b>MFP-44</b>	10022	10023
<b>MFP-49</b>	10020	10021

## Mason-Lite Owner's Operation & Precautions

Installers of the Mason-Lite are urged to leave the owner's manual with the unit after installation is complete.

**WARNING:** Do not attempt to operate your fireplace without a fire safety screen installed.

**CAUTION:** The manufacturer cautions against using chemical chimney cleaners. Never use charcoal or coal in the fireplace under any circumstances

- 1) First Lighting of the Mason-Lite – After construction is completed, all elements of the fireplace and chimney system must be completely dry. This means that the unit must stand without any firing for a minimum of 28 days. Only after that period of time can a first lighting take place. The first fire must be small and well-controlled, started with a small amount of kindling. Add no more than eight pounds of wood, preferably small logs not more than 3" (three inches) in diameter. You will probably burn no more than three to four of these small logs. Do not let the fire burn for more than one hour. After this first lighting – when the fireplace has started to "cure" Do not set another fire for at least 24 hours.
- 2) Second Lighting – Start the fire slowly and gradually as you did with the first lighting, but this time you can burn up to ten pounds of firewood, probably four to five logs that are 3" (three inches) in diameter. With the second lighting you can let the fire burn two hours – no more.
- 3) After First and Second Lightings – When the fireplace has been properly cured with 1st and 2nd lightings, you will be able to add a full fuel load to the MASON-LITE which is about 10 to 15 pounds of firewood at any given time. Consider that this typical fuel load is three to four dry hardwood logs that are about 6" (six inches) to 8" (eight inches) in diameter.
- 4) Without a grate for your firewood to rest on, you cannot get the air flow you need under the fire which makes for a hotter, more satisfying fire.
- 5) Don't "over burn" – Always remember, your Mason-Lite Fireplace is an elegant addition to your home. It is not an indoor incinerator! If you start to use the fireplace and begin a routine of "over burning," you can permanently and unalterably damage the unit. Under no circumstances should you be burning household trash, including chemicals and combustibles, cardboard boxes, your office papers, scrap lumber or stray branches from your yard, particularly pine.

## Starting a fire and basic operation

- 1) Starting a fire in the MASON-LITE starts with opening the damper in its widest position. Crumple some paper and place it on the log grate. Use some soft, dry wood as kindling and put it on top of the paper. Place some small logs or split logs atop the paper and kindling. Finish off the fuel load with a couple of hardwood logs or split logs – oak or hickory. Check to see that you're stacking the logs so that they will fall inside the grate as they burn. (To get the most out of your wood, it is recommended that you let it set and completely dry out for nine months to a year.) When you are satisfied with the arrangement of your wood load, light the paper which in turn will ignite the kindling, then the softer wood and finally, the harder wood logs. As the fire burns, you can carefully lay additional logs on the flame, but make sure you place them gently without forcing them into the opening.

**WARNING:** Burning of above mentioned materials will cause an unsafe condition and will void your warranty!

The Mason-Lite has been designed certified for use with ceramic glass doors. Installation of a door without ceramic glass will cause an unsafe condition that may result in a fire, serious injury, or death. Follow glass door manufacturer recommendation for application and installation.

## ANNUAL FIREPLACE MAINTENANCE

Your fireplace and chimney require seasonal and monthly "tune-ups". Like any piece of well-built equipment, the Mason-Lite Fireplace and chimney needs routine maintenance. The manufacturer recommends that inspection of the fireplace and chimney take place on a monthly basis during the heating season.

- 1) Start at the top, looking for birds' nests, leaves or any other obstructions. Also check the spark arrester, for creosote or soot build-up. Twice a year, you will want to clean the firebox and chimney yourself or hire a professional chimney sweep to do the job for you. If you elect to do it yourself, use a plastic, wood or steel brush for the inside of the chimney. For the spark arrester, scrub with a wire brush. To dismantle the chimney cap for cleaning of the flue, unscrew the four screws that hold it in place. For cleaning access from below, open the damper in the firebox. It is best to use a flexible handle chimney cleaning brush made especially for the job. If your fireplace system has any offset chimney sections, start cleaning with the flexible brush from the top of the section downward to the elbow. Then clean from the firebox up to the offset/return section. Be sure that you have covered the floor of the fireplace and out to the hearth with a damp sheet that has been taped securely in place. When all the soot has settled, remove the sheet and vacuum up – don't sweep the excess soot. Good, old-fashioned "elbow grease" is enough to remove the extraneous matter from the inside of the firebox and chimney. Never use any chemical cleaners as their residue could introduce a fire hazard after the task is completed.
- 2) Outside Inspection – During your once a month inspection of the firebox and chimney, make it a point to also check the outside of the chimney, the metal flashing and weather seals that surround it. If you find any cracks or openings around screws or nails, seal them to avoid any roof or chimney chase leaks.

## SURFACE CRACKS

The MASON-LITE FIREPLACES are manufactured using high quality materials. During the drying process, surface cracking may occur. These small cracks (under 1/16" will not effect the fireplace safety or performance). During the assembly process, fill surface cracks with thin-set mortar and brush when drying for a smooth surface finish.

- 3) Removal of Creosote and Soot Formation – Creosote vapors are known to form in the relatively cool chimney flues of slow burning fires, hence, creosote residue collects on the flue lining. Because of soot and creosote build-up, it is recommended that the fireplace and chimney cleaning be done twice a year. In colder climates, cleaning should be done more often.
- 4) Always allow the fireplace to completely cool before you work on it, which means, of course, shutting off all gas and electrical connections, also.
- 5) Be certain that you use only solid fuel in your fireplace. You may use a natural or LP gas log lighter as a method to start your wood fire.
- 6) The flue damper must be in the OPEN position whenever there is heat in the fireplace.

## **CUSTOMER SERVICE & PARTS REPLACEMENT:**

Parts and accessories may be purchased from your local dealer. Additional information is available from Masonry Fireplace Industries,.LLC.

Accessory orders will be accepted by mail, or you may call your order in Monday through Friday from 1:00 p.m. to 5:00 p.m. (Pacific Standard Time) at: (800)-345-7078.

## Appendix I

For installations regulated by the International Residential Code, the support foundation for the fireplace installed on concrete shall consist of a minimum of 6 inches thick reinforced concrete slab. The minimum specified compressive strength of  $f'_c$ , shall be as required in Table R402.2 of the International Residential Code (IRC). Concrete subject to moderate or severe weathering as indicated in Figure R301.2(3) of the International Residential Code (IRC) shall be air entrained as specified in Table R402.2 of the International Residential Code (IRC). The maximum weight of fly ash, other pozzolans, silica fume, slag or blended cements that is included in concrete mixtures for garage floor slabs and for exterior porches, carport slabs and steps that will be exposed to deicing chemicals shall not exceed the percentages of the total weight of cementitious materials specified in Section 4.2.3 of ACI 318. Materials used to produce concrete and testing thereof shall comply with the applicable standards listed in Chapter 3 of ACI 318.

For installations regulated by the International Building Code (IBC), the support foundation for the fireplace installed on concrete shall consist of a minimum of 6 inches thick reinforced concrete slab. The concrete strength and durability shall comply with Sections 1903, 1904 and 1905 of the International Building Code (IBC).

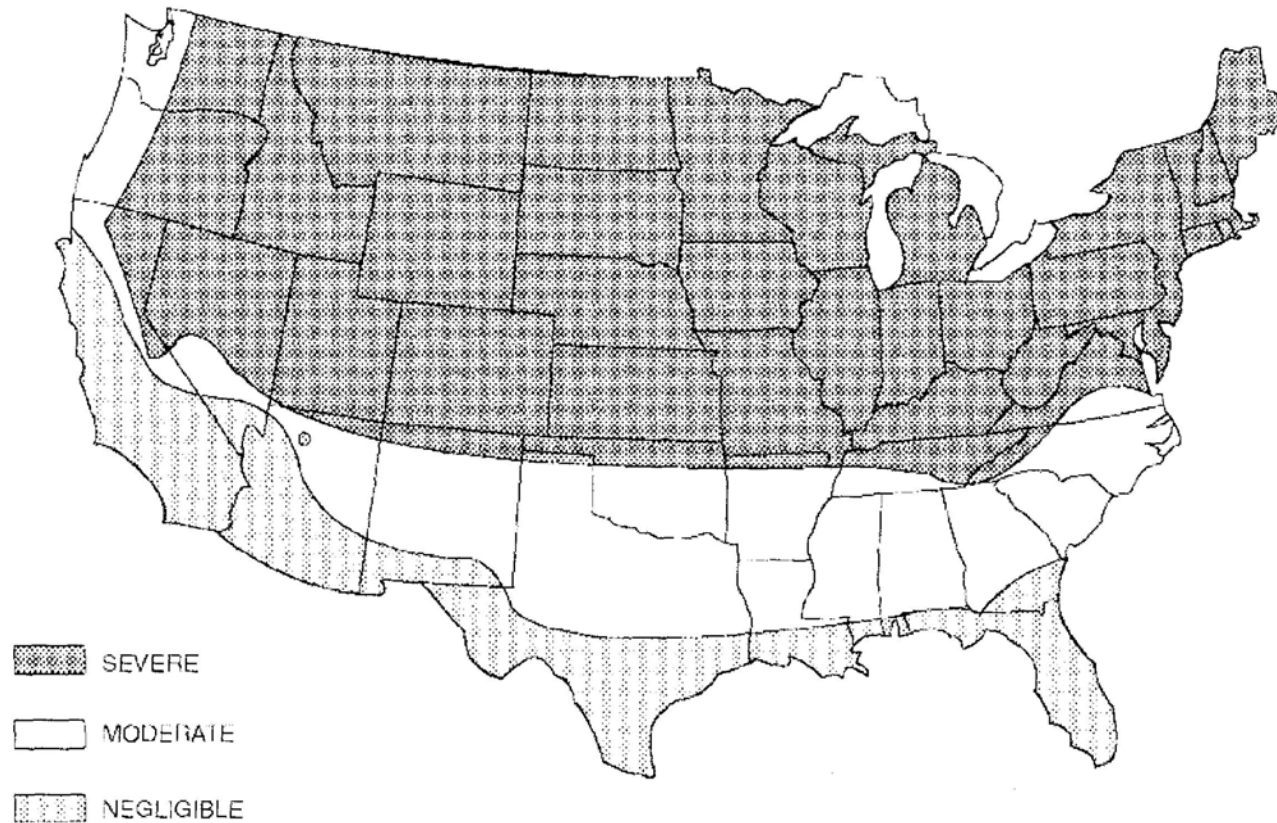
**TABLE R402.2 MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE**

TYPE OR LOCATION OF CONCRETE CONSTRUCTION	MINIMUM SPECIFIED COMPRESSIVE STRENGTH <sup>a</sup> ( $f'_c$ )		
	Weathering Potential <sup>b</sup>		
	Negligible	Moderate	Severe
Basement walls, foundations and other concrete not exposed to the weather	2,500	2,500	2,500 <sup>c</sup>
Basement slabs and interior slabs on grade, except garage floor slabs	2,500	2,500	2,500 <sup>c</sup>
Basement walls, foundation walls, exterior walls and other vertical concrete work exposed to the weather	2,500	3,000 <sup>d</sup>	3,000 <sup>d</sup>
Porches, carport slabs and steps exposed to the weather, and garage floor slabs	2,500	3,000 <sup>d,e,f</sup>	3,500 <sup>d,e,f</sup>

- a. Strength at 28 days psi.
- b. See Figure R301.2(3) for weathering potential.
- c. Concrete in these locations that may be subject to freezing and thawing during construction shall be air-entrained concrete in accordance with Footnote d.
- d. Concrete shall be air-entrained. Total air content (percent by volume of concrete) shall be not less than 5 percent or more than 7 percent.
- e. See Section R402.2 for maximum cementitious materials content.
- f. For garage floors with a steel troweled finish, reduction of the total air content (percent by volume of concrete) to not less than 3 percent is permitted if the specified compressive strength of the concrete is increased to not less than 4,000 psi.

## Appendix II

**FIGURE R301.2(3) WEATHERING PROBABILITY MAP FOR CONCRETE**



- a. Alaska and Hawaii are classified as severe and negligible, respectively.
- b. Lines defining areas are approximate only. Local conditions may be more or less severe than indicated by region classification. A severe classification is where weather conditions result in significant snowfall combined with extended periods during which there is little or no natural thawing causing deicing salts to be used extensively.

# Limited Warranty

## Mason-Lite™ Fireplace

Masonry Fireplaces Industries, LLC (MFI) warrants all MASON-LITE Fireplaces to be free from defects in materials that adversely affect fireplace performance for a period of ten (10) years from the date of purchase, subject to the terms and conditions of this limited warranty. MFI does not warrant accessory chimney, outside air ducts, gas control or burner system, ceramic logs, and devices not manufactured by MFI.

This warranty covers only products manufactured by MFI, specifically the modular concrete firebox, and NO WARRANTY, EXPRESS OR IMPLIED, EXTENDS TO ANY OF THE HARDWARE, FOUNDATION, VENTING, DUCTS, OR ACCESSORIES. THIS WARRANTY DOES NOT COVER DRAFTING, SMOKING, OR SOOTING OF THE FIREPLACE SYSTEM. Factors beyond the manufacturer's control may affect drafting, smoking, and sooting, MFI cannot guarantee these aspects of performance.

If a component is found to be defective under the terms of this warranty, the party this warranty is extended to shall notify MFI, 315 W. 3rd Street, Santa Ana, CA 92701 in writing, by registered mail, within thirty (30) days following the discovery of the defect within the warranty period. The letter shall contain (1) the date of purchase; (2) place of purchase; (3) address of installation; (4) name, address and phone number of the homeowner; and (5) a brief description of the defect.

MFI, or any entity thereof, is not responsible for any labor costs or indirect costs incurred for the replacement of defective components.

MFI is not responsible for misuse or mishandling of component parts. Nothing in this warranty makes MFI, or any entity thereof, liable in any respect for any injury or damage to the building or structure in which the fireplace has been installed or to the persons or property therein arising out of the use, misuse, or installation of properly manufactured MFI product.

MFI, OR ANY ENTITY THEREOF, SHALL NOT BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES ARISING OUT OF THE USE OF THE FIREPLACE. ALL SUCH DAMAGES AND EXPENSES ARE HEREBY EXCLUDED.

This warranty is null and void when the fireplaces are not installed pursuant to the installation instructions provided by MFI and local building codes have not been followed completely.

This warranty applies only to those fireplaces installed in the continental United States, Hawaii, Alaska and Canada. If any part of this warranty is found to be unenforceable,, the remaining parts shall remain in force and effect.

MFI HEREBY DISCLAIMS ALL GUARANTEES AND WARRANTIES, EXPRESS OR IMPLIED, BEYOND THE WARRANTIES SET FORTH HEREIN.

### CUSTOMER SERVICE & PARTS REPLACEMENT:

Parts and accessories may be purchased from your local dealer. Additional information is available from Masonry Fireplace Industries, L.L.C. Accessory orders will be accepted by mail, or you may call to order Monday through Friday from 1:00 p.m. to 5:00 p.m. (Pacific Standard Time) at: (800) 345-7078.

Please complete the following information for future reference and warranty verification:

**Date of Purchase** \_\_\_\_\_ **20** \_\_\_\_\_

**Model #** \_\_\_\_\_

**Serial #** \_\_\_\_\_