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Obadiah's • 406-300-1776



## INSTALLATION AND OPERATION INSTRUCTIONS

### GRAND MERIDIAN MASONRY FIREBOX

#### MODELS

MM33, MM39, MM44, MM49, MM63



Report No. 08-154

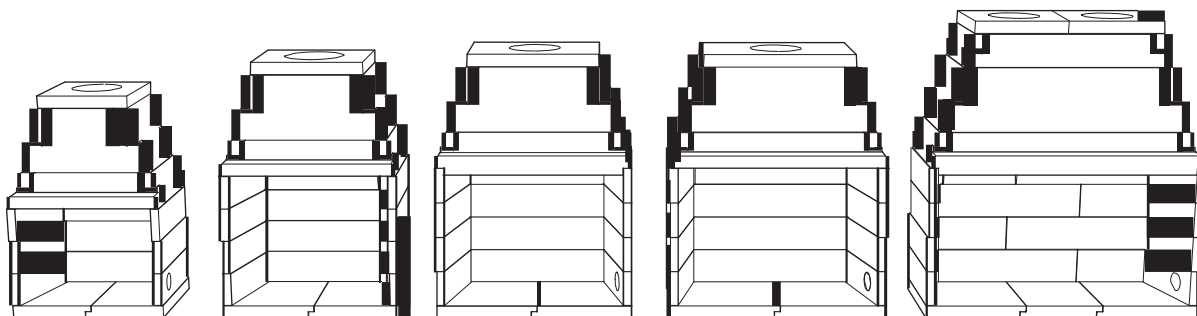


ICC Evaluation Services  
Report No. 2401



P125160 01

P/N 125160-01 Rev. B 02/14/14



**IF FIREPLACE IS TO BE INSTALLED DIRECTLY ON ANY COMBUSTIBLE MATERIAL, A METAL BASE IS REQUIRED.**

#### 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 it with your other important papers.

This fireplace is approved for use as a wood burning fireplace or for use with a vented gas log approved to ANSI Z21.60 or Z21.84 standards. It has not been tested or approved for unvented gas logs.

This wood burning fireplace complies with UL127 standard as a FACTORY BUILT APPLIANCE.

**⚠ WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

**INSTALLER:** Leave this manual with the appliance.  
**CONSUMER:** Retain this manual for future reference.

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

For more information, visit [www.Astria-US.com](http://www.Astria-US.com)

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## SAFETY

**IMPORTANT: Check local codes before installing this fireplace.**

Before beginning the installation of the fireplace, read these instructions through completely.

- This INNOVATIVE HEARTH PRODUCTS, LLC (IHP) fireplace and its components are safe when installed according to this installation manual. Unless you use IHP components, which have been designed and tested for the fireplace system, you may cause a fire hazard.
- The IHP warranty will be voided by and IHP disclaims any responsibility for the following actions.
  - a. Modification of the fireplace, components, doors, air inlet system and damper control.
  - b. Use of any component part not manufactured or approved by IHP in combination with an IHP fireplace system.

Proper installation is the most important step in ensuring safe and continuous operation of the fireplace. Consult the local building codes as to the particular requirements concerned with the installation of all factory built fireplaces.

**⚠ WARNING: Do not install a fireplace or other products not specified for use with this fireplace.**

**This fireplace is not intended to be used as a substitute for a furnace to heat an entire home. Use for supplemental heat only.**

### FOR YOUR SAFETY

- Do not store or use gasoline or any other flammable vapors or liquids in the vicinity of this or any other appliance.
- Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.
- Do not place clothing or other flammable materials on or near the appliance.
- Never leave children unattended when a fire is burning in the fireplace.

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

**⚠ WARNING: Always leave glass doors fully opened or fully closed when operating fireplace.**

**⚠ WARNING: If fireplace is to be installed on combustible material, a Metal Base must be used. See Accessories on page 33.**

# SAFETY

## Continued

**⚠ 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 OPTIONAL GLASS DOORS FROM CROWN-BRECKINRIDGE OR MCKENZIE-PENDELTON ONLY.**

### **GUIDELINES FOR USE:**

All current and future users of IHP 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 that it works 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 for all firebox surfaces per specifications in this manual.

### **The Grand Meridian is Designed for Use Only with:**

- Solid Wood Logs
- Plumbed LPG or Natural Gas Log Lighter.
- Plumbed ANSI Z21.60 or Z21.84 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 or Z21.84 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 Grand Meridian 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 and can be purchased from the manufacturer.

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.**

# SPECIFICATIONS

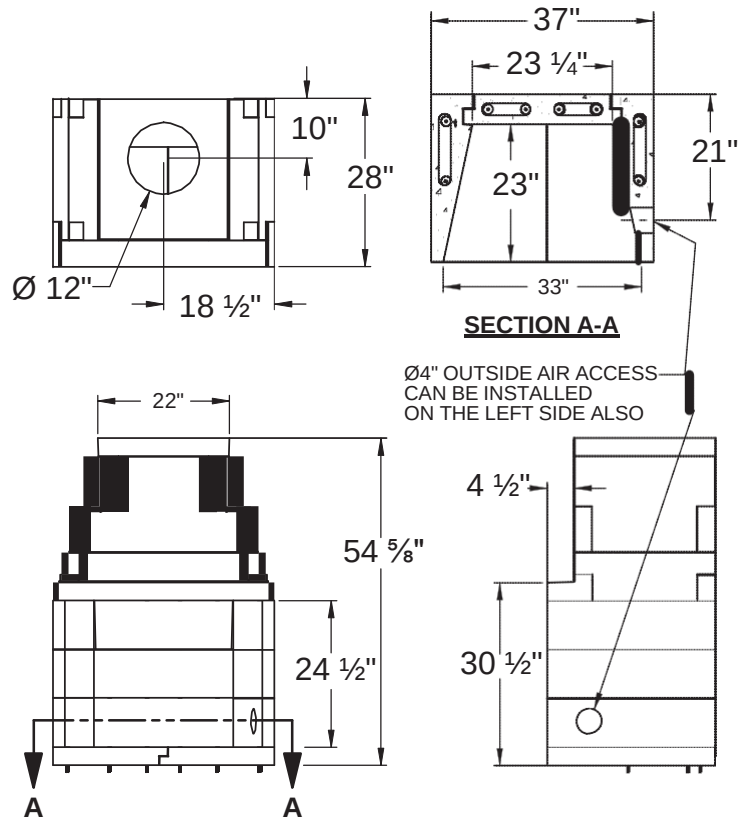


**Figure 1: MM33 Fireplace Overall Dimensions**

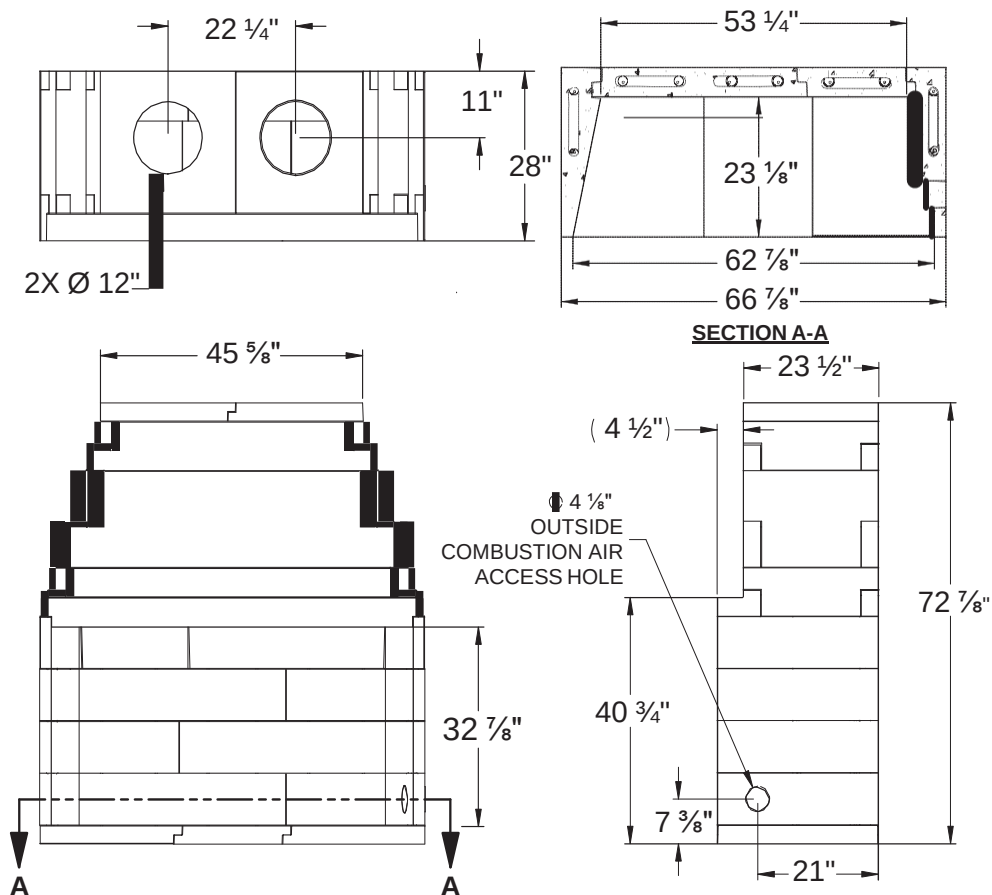
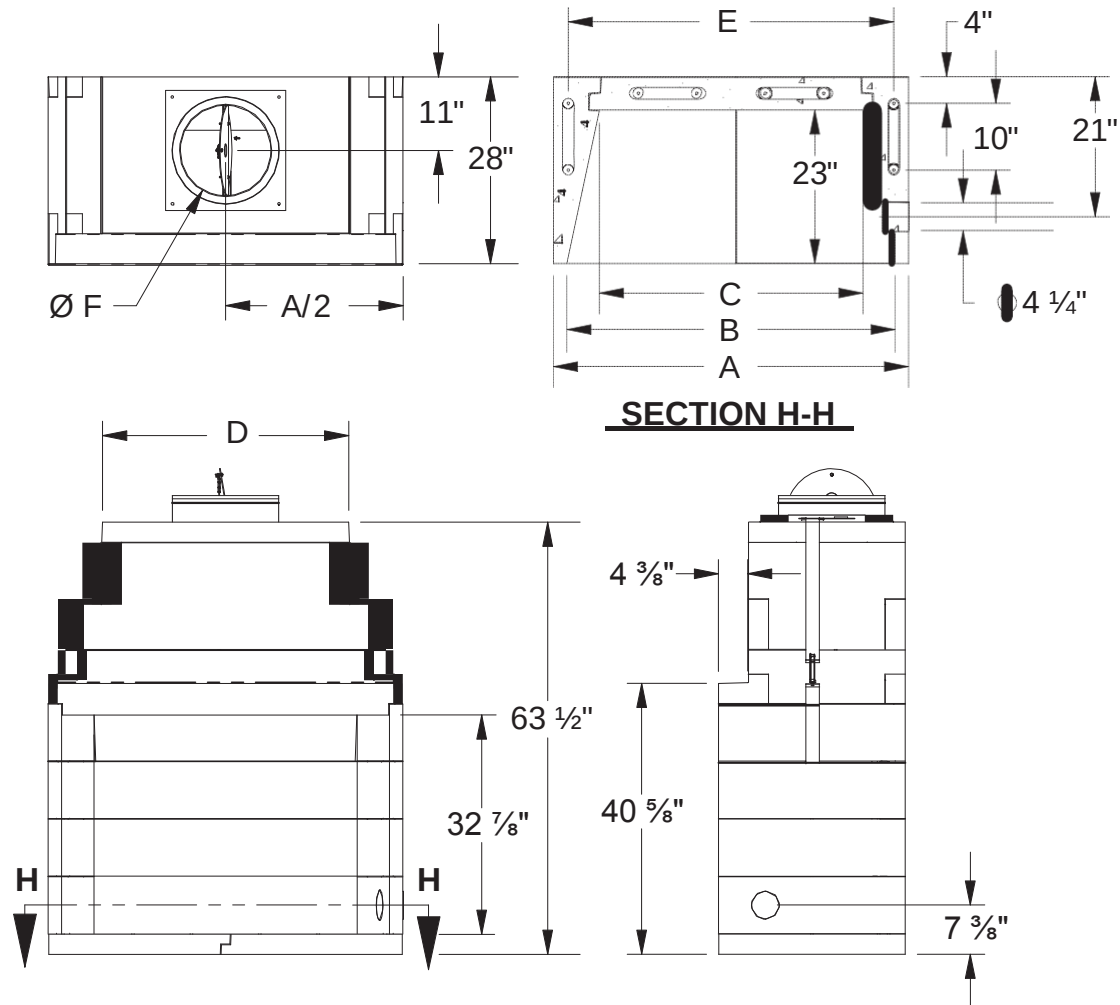


**Figure 2: MM63 Fireplace Overall Dimensions**

# SPECIFICATIONS

Continued



| Fireplace Overall Dimensions |     |     |         |         |         |                   |
|------------------------------|-----|-----|---------|---------|---------|-------------------|
| Model                        | A   | B   | C       | D       | E       | F                 |
| MM39                         | 43" | 39" | 29 1/4" | 27 3/4" | 38 3/4" | $\varnothing 12"$ |
| MM44                         | 48" | 44" | 34 1/4" | 32 3/4" | 43 3/4" | $\varnothing 12"$ |
| MM49                         | 53" | 49" | 39 1/4" | 37 3/4" | 48 3/4" | $\varnothing 12"$ |

Figure 3: MM39/44/49 Fireplace Overall Dimensions

# PRODUCT OVERVIEW

## INTRODUCTION

**Thank you for your purchase. We appreciate your business!**

Please carefully read and follow all instructions in this manual. **Pay special attention to all warnings and safety information.**

Following these safety, care, and operation instructions will help ensure many years of dependable and enjoyable service from your fireplace.

**Register your product online today!**

To help us keep you up-to-date on product information and offers, please take a few moments to register your product online at [www.Astria.US.com](http://www.Astria.US.com) (**Owner Resources/Product Registration**).

**Please read and understand these instructions before installing or operating.**

## PRODUCT OVERVIEW

The Grand Meridian 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 Grand Meridian Fireplace:

- Combustible or Non-Combustible Floor
- Non-Combustible Raised Platform
- Firebox and Smoke Dome
- IHP chimney system required.

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

Careful step-by-step instructions for each phase of the installation procedure will be given for the Grand Meridian 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.

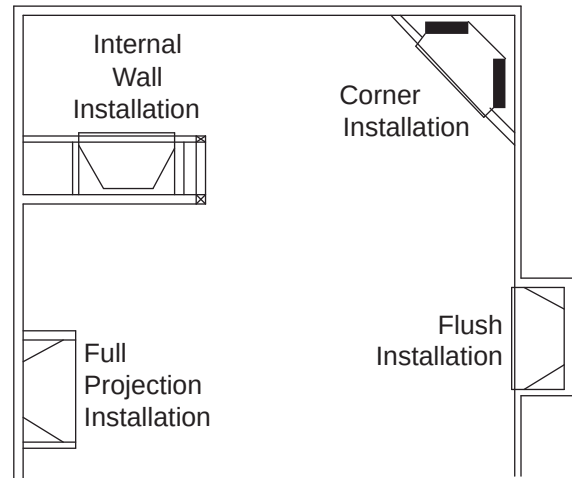


**Figure 4: Typical Installations**

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 these Grand Meridian Fireplaces has been undertaken by the PFS Corporation.

**ATTENTION:** You may need a residential building permit to install a Grand Meridian Fireplace. Consult local jurisdictions before you get started!

If asked, advise the local authorities that the IHP Fireplace is designed for installation per the National Fire Protection Association Standard for Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances (NFPA211).

When choosing the location of your IHP Fireplace, keep in mind you must maintain 2" minimum clearance 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. In the case of an island installation, outside air accessibility may be obtained through sub flooring, see Optional Outside Air Kit on page 12.

# PRE-INSTALLATION PREPARATION

## SELECTING LOCATION

To determine the safest and most efficient location for the fireplace, you must take into consideration the following guidelines:

1. The location must allow for proper clearances (see Figures 6 and 7).
2. Consider a location where fireplace will not be affected by drafts, air conditioning ducts, windows or doors.
3. A location that avoids cutting of joists or roof rafters will make installation easier.
4. An outside air kit is available with this fireplace (see Optional Outside Air Kit on page 12).

## MINIMUM CLEARANCE TO COMBUSTIBLES

The distance to be maintained from the surfaces of the fireplace to combustibles must be observed. Below is a list of the most common combustible materials to name a few:

|                |                  |            |
|----------------|------------------|------------|
| Drywall        | Wood Flooring    | Plywood    |
| Sub-Flooring   | Wood Framing     | Mill Board |
| Particle Board | Plywood Paneling |            |

### Maintain the following clearances:

|                                               |              |
|-----------------------------------------------|--------------|
| Unit sides, rear, Dome sides, rear & top..... | 2" min.      |
| Combustible Floors (MM33,39,44,49).....       | 6" min.      |
| Combustible Floors (MM63 only).....           | 8" min.      |
| Combustible Sheathing above opening top..     | 18" min.     |
| Sheathing or trim to opening sides.....       | 8" min.      |
| Mantel above Opening.....                     | see Figure 5 |
| Opening to sidewall.....                      | 24"          |
| Hearth extension beyond front.....            | 20"          |
| Hearth extension beyond sides.....            | 12"          |
| Insulation from firebox.....                  | 2"           |

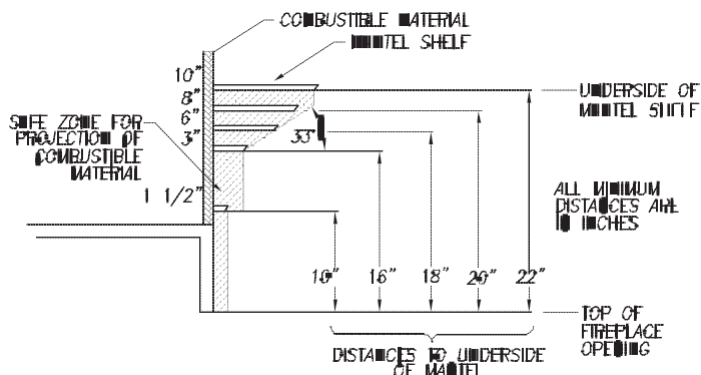


**Figure 5: Mantel Clearances to Combustible Material**

**⚠ WARNING: Do not pack required air spaces with insulation or other materials.**

## Minimum/Maximum Chimney Height for Residential Installation

Minimum height of chimney, measured from base of fireplace to flue gas outlet of termination, is 14 feet for straight flue or 17 feet for a flue with one elbow set. Maximum distance between elbows is 6 feet. For systems with two elbow sets, minimum height is 22 feet. Maximum height of any system is 40 feet. This measurement includes fireplace, chimney sections and height of termination assembly at level of the flue gas outlet (see Figure 20, page 16).

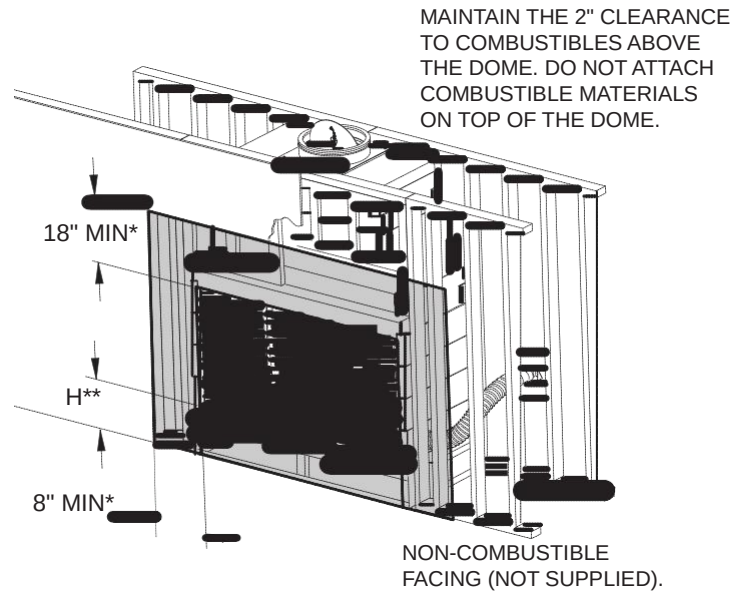
## FRAMING

1. Frame opening for fireplace using dimensions shown in Figures 6 and 7.
2. If fireplace is to be installed directly on carpeting, tile (other than ceramic) or any combustible material other than wood flooring, fireplace must be installed upon a metal extending full width and depth of fireplace.
3. Set fireplace directly in front of this opening and slide unit back until nailing flanges touch side framing.
4. Check level of the fireplace and shim with sheet metal if necessary.
5. Before securing fireplace to prepared framing, ember protector (provided) must be placed between hearth extension (not supplied) and under bottom front edge of fireplace to protect against glowing embers falling through. If fireplace is to be installed on a raised platform, a Z-type ember protector (not supplied) must be fabricated to fit your required platform height. Ember protector should extend under fireplace a minimum of 1 1/2". Ember protector should be made of galvanized sheet metal (26 gauge minimum to prevent corrosion).
6. Using screws or nails, secure fireplace to framing through flanges located on sides of fireplace.

# PRE-INSTALLATION PREPARATION

*Continued*

**⚠ WARNING:** Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.



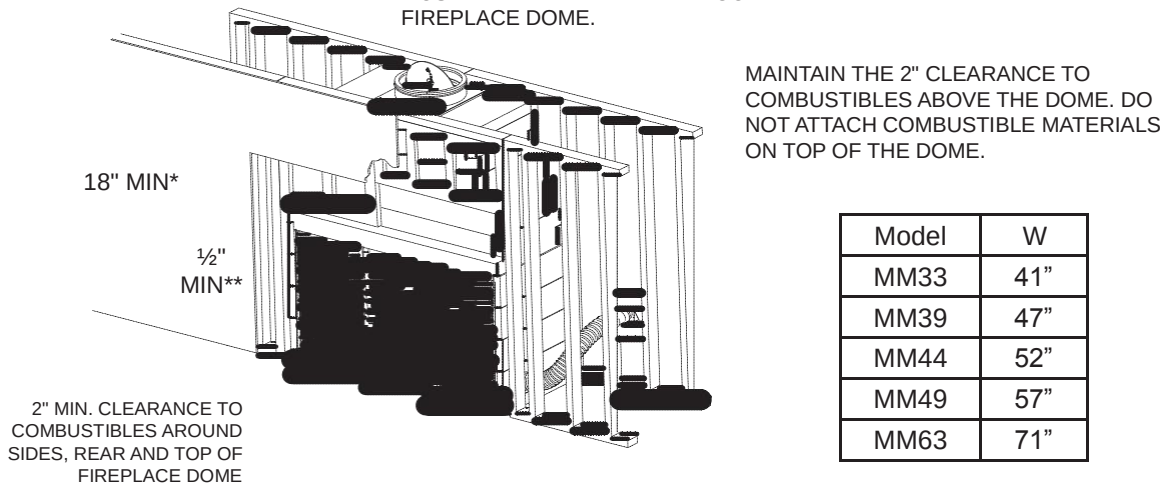
| Condition        | Dim. H** |
|------------------|----------|
| with 6" platform | 10"      |
| with 8" platform | 12"      |
| without platform | 3"       |

\* MINIMUM CLEARANCE TO COMBUSTIBLE MATERIALS.  
 \*\* MEASURED FROM FLOOR TO TOP OF FIREBRICK LINER.

**Figure 6: Framing Dimensions for Combustible Floor Systems**

\*\*IF METAL FRAMING IS USED MAINTAIN A ½ INCH MIN. AIR SPACE FROM TOP OF LINTEL.

\*IF WOOD FRAMING IS UTILIZED IT MUST BE HELD 18" MIN. FROM TOP OF LINTEL AND 2" MIN. CLEARANCE MUST BE MAINTAINED ALL AROUND FIREPLACE DOME.



| Model | W   |
|-------|-----|
| MM33  | 41" |
| MM39  | 47" |
| MM44  | 52" |
| MM49  | 57" |
| MM63  | 71" |

**Figure 7: Framing Dimensions for Non-Combustible Floor Systems**

# PRE-INSTALLATION PREPARATION

*Continued*

| Model | A     |
|-------|-------|
| MM33  | 70 ½" |
| MM39  | 82 ½" |
| MM44  | 84 ¼" |
| MM49  | 86"   |
| MM63  | 91"   |

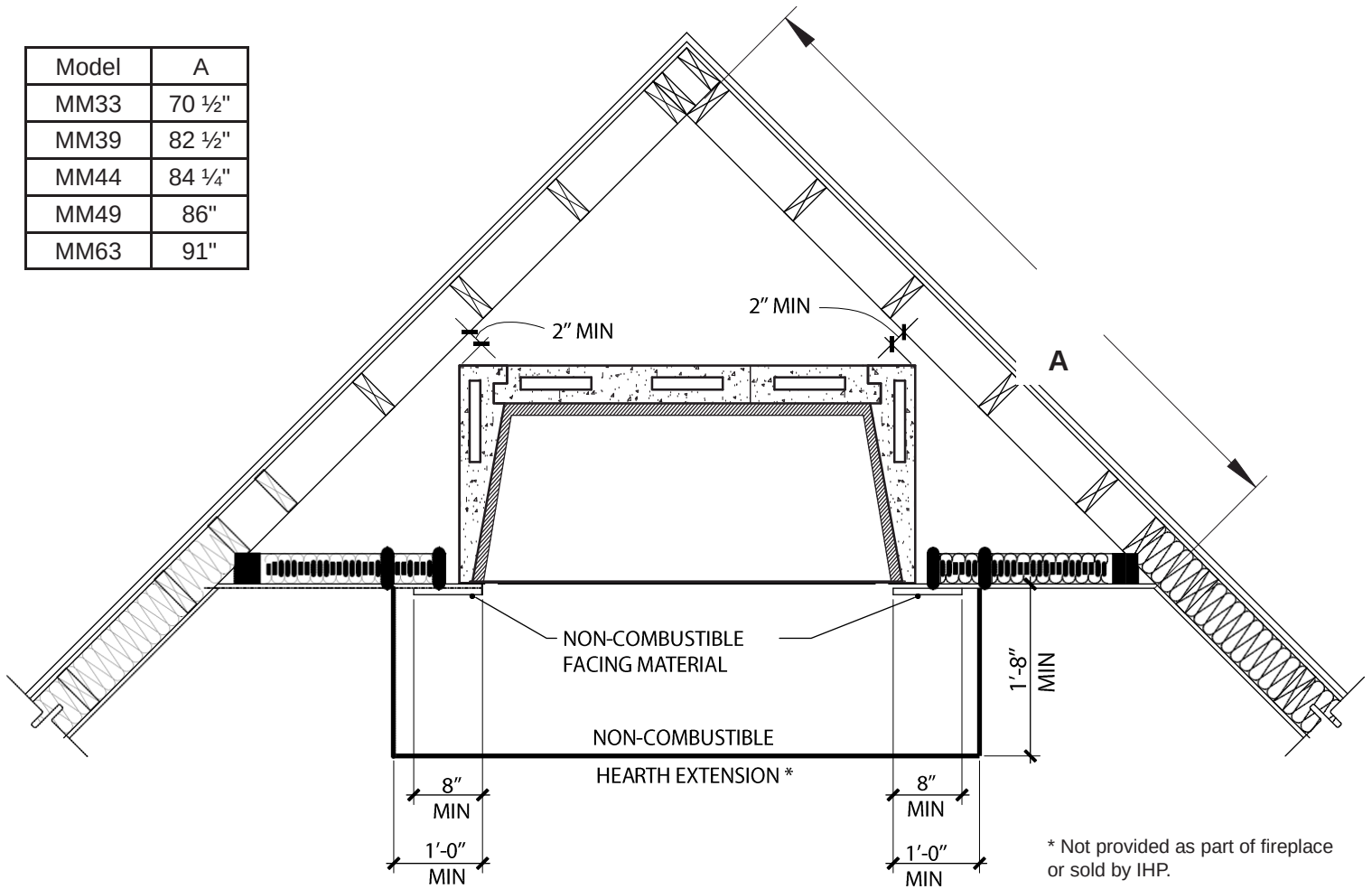


**Figure 8: Corner Installation for Combustible Floor Systems**

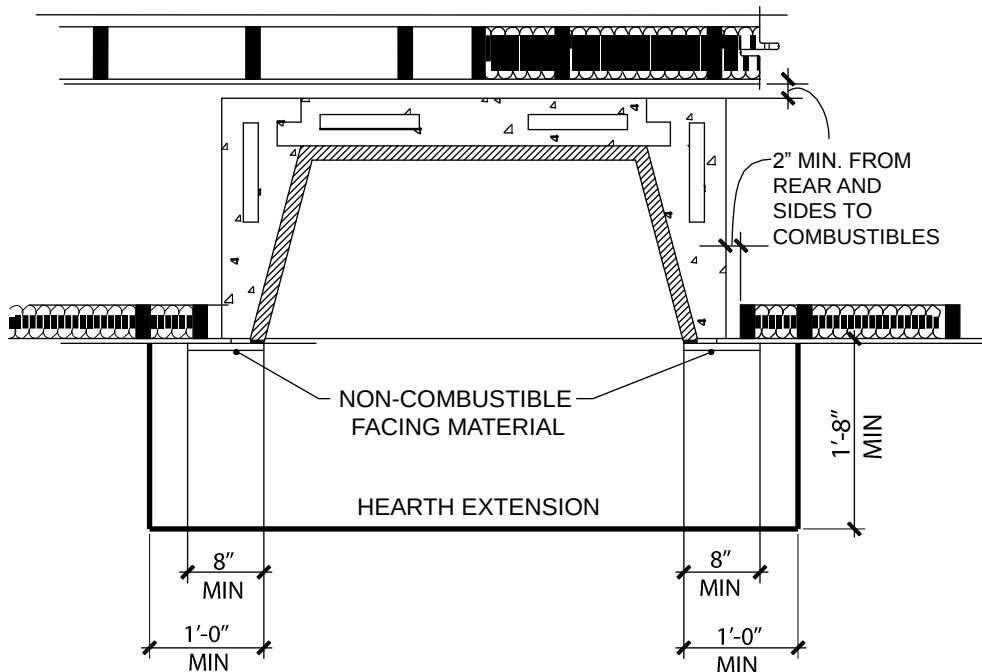


**Figure 9: Top View for Combustible Floor Systems**

# PRE-INSTALLATION PREPARATION

Continued

## MANTEL AND MANTEL SHELF CLEARANCES

As with any radiant heat fireplace, the Grand Meridian fireplaces must comply with building code safety clearances, per units that have openings of 6 sq. ft. or greater. For Mantel clearances see Figure 5, page 7. Walls that Adjoin – Safety codes and all practical outlooks insist that your fireplace cannot be installed closer than 2 ft. 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. IHP cannot be responsible for the make-up of material on the exterior of the fireplace you have chosen, nor can IHP 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.

## HEARTH EXTENSION

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. All hearth extensions must be made of code-rated, non-combustible materials such as tile, brick, marble, concrete or stone. 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 Figures 8 and 9 (page 9). These relative dimensions are also covered by code.

If a raised hearth extension is being installed, it must be constructed of non-combustible material and any material under the structure must also be non-combustible.

If using a raised hearth or metal base plate, note that a combustible wood header must be no closer than 2" to the top of the dome (see Figure 6, page 8).

**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.

These Grand Meridian Fireplaces have been designed with clearance to combustible floors as indicated in Page 8. Cover any part of the combustible floor system left exposed with 1" (one inch) thick ceramic fiber insulation rated up to 2,100° F.

**ATTENTION:** It is critical to abide by the clearances listed in this manual for all components specified as it allows for movement of hot air from the fireplace into interior areas of the chimney chase. Also, be certain that the chimney system be installed as stated below. Prior to starting the installation, check with local, regional or state codes for any restrictions or required permits regarding your fireplace installation.

**NOTE:** It is required that ember protector strips must be laid on the fiber of the non-combustible raised platform (see Figure 10). These are included with the Metal Base accessory.

**⚠ WARNING: Hearth extension is to be installed only as shown in Figure 10.**

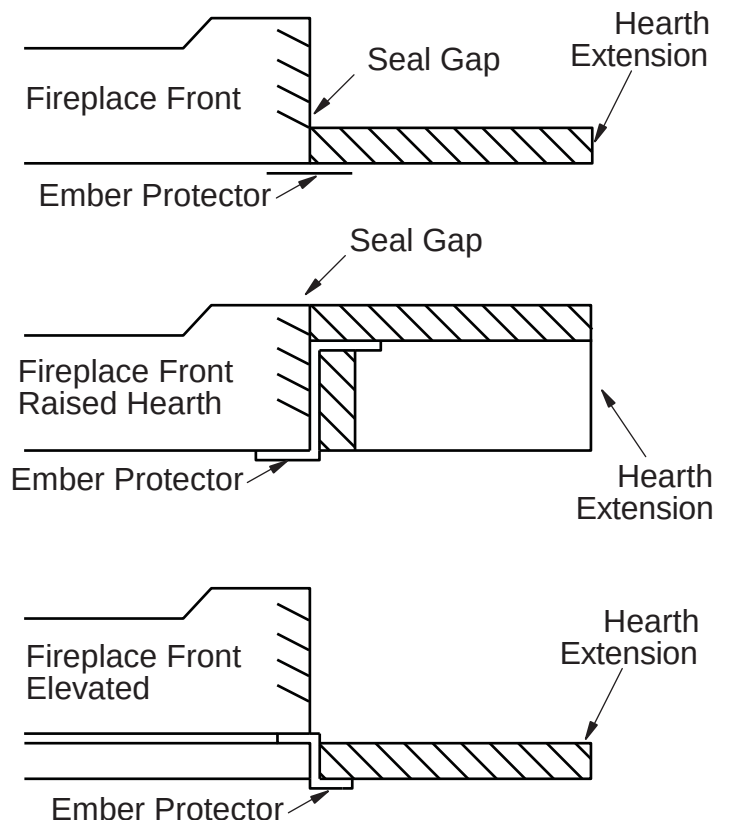


Figure 10 - Hearth Extension

# PRE-INSTALLATION PREPARATION

*Continued*

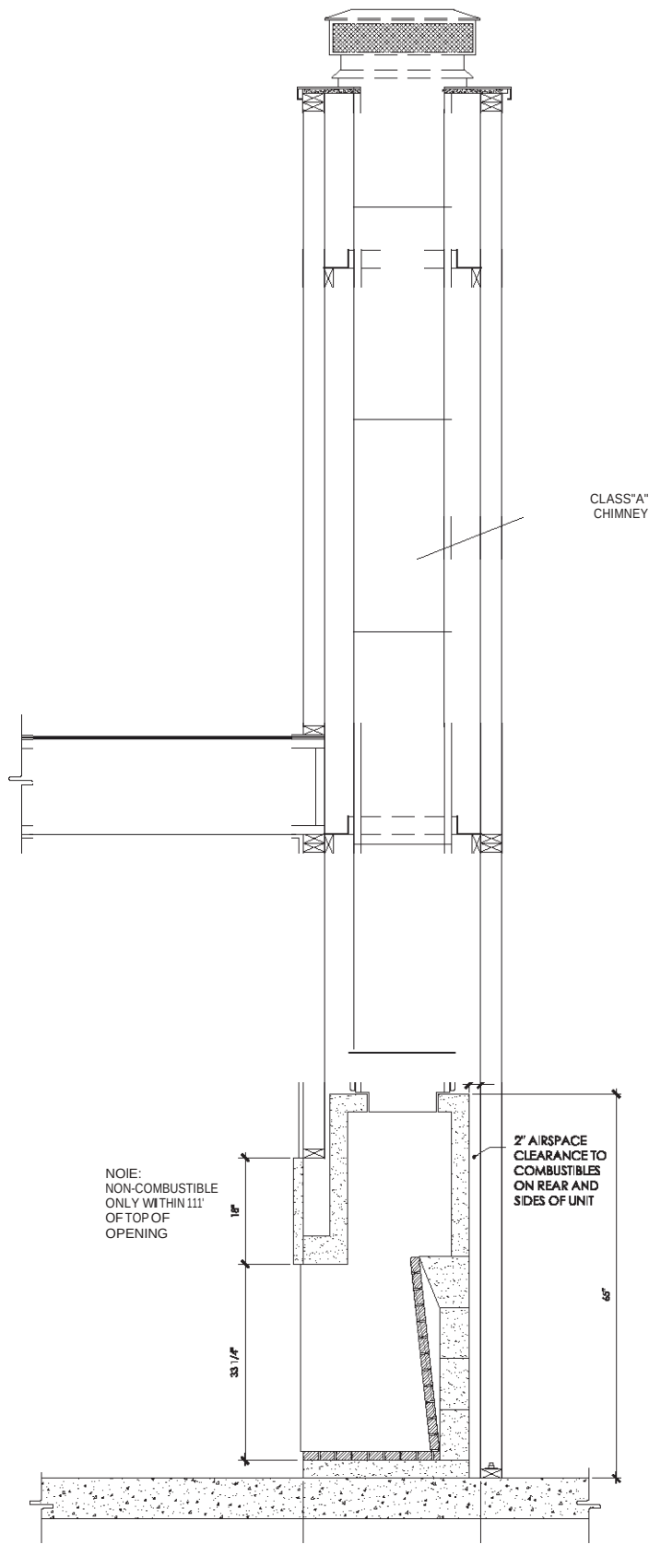


**Figure 11: Non Combustible Floor**

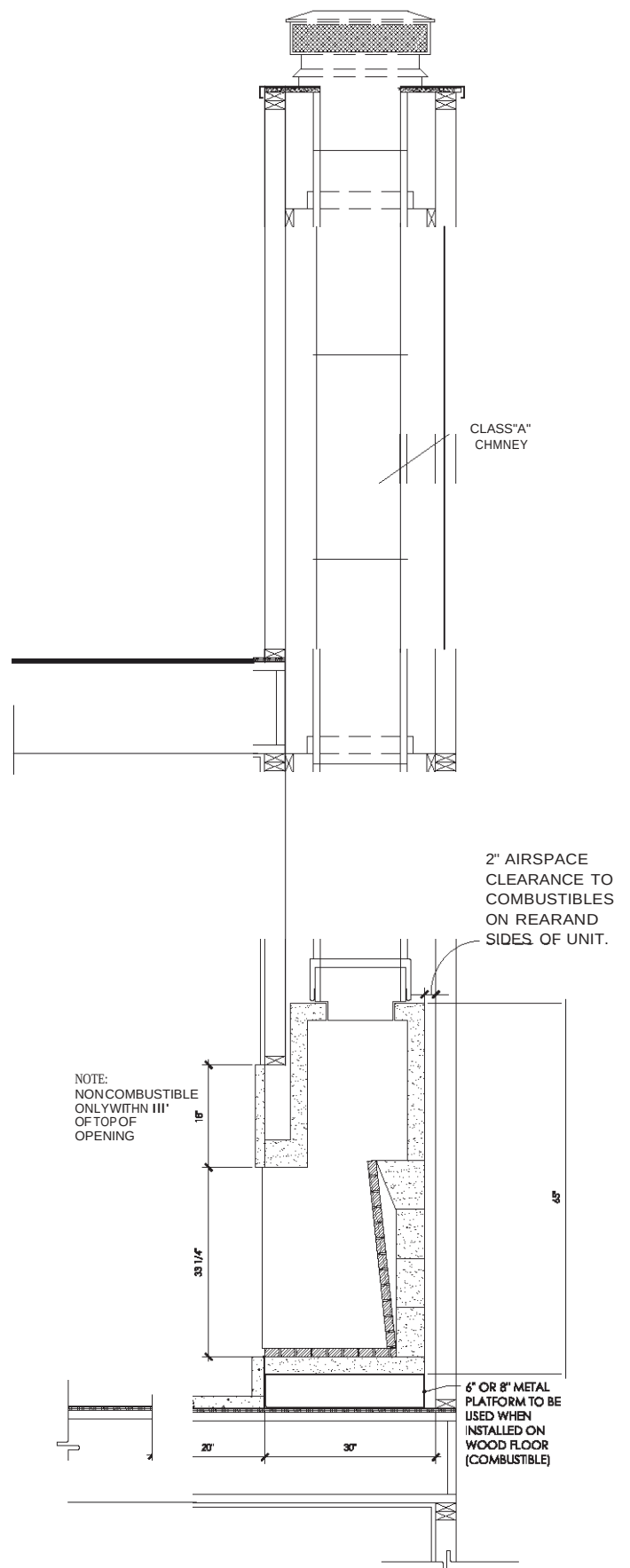


**Figure 12: Combustible Floor**

# VENTING INSTALLATION

## OPTIONAL OUTSIDE AIR KIT (MODEL MM4AK)

The Grand Meridian Fireplace needs enough replacement air to function properly and some local building codes may require outside combustion air to be provided. If no replacement 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.

The installation of an outside air kit should be performed during the rough framing of the fireplace due to the nature of its location. Outside combustion air is accessed through a vented crawl space or through a sidewall (Figure 13). If crawl space is used, check local codes for proper termination.

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.

Install Combustion Air Kit into the firebox through the side wall opening provided. A 4" dia. hole will also be required through the firebrick side lining (see Figure 12). The tubing that goes out of the firebox wall must feed into a flexible metal conduit as the source for outside combustible air. Install a screened termination cap to keep out small animals.

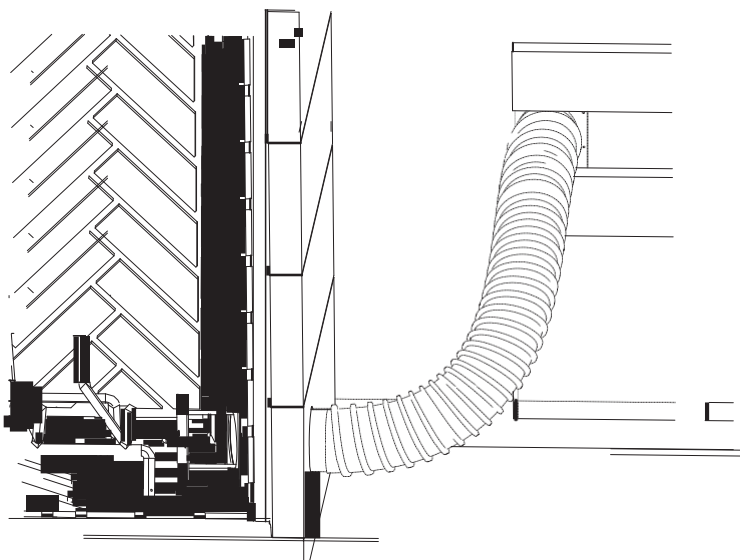


**Figure 12 - Outside Air Kit Installation**

Secure to Collars with Metal Tape, Screws or Straps (Min. of 1/4" x 20" in size)

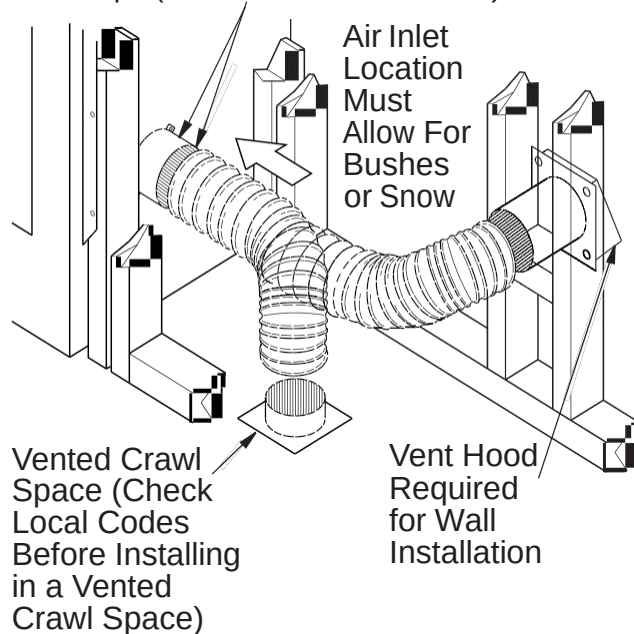


**Figure 13 - Outside Air Kit Venting**

**CAUTION:** Combustion air inlet ducts shall not terminate in attic space.

The maximum height for the air vent can not exceed 3 feet below the flue gas outlet of the termination.

## FACTORY BUILT CHIMNEY SYSTEMS

- 1) The Grand Meridian is designed to be installed with IHP Metal Chimney System.
- 2) This Grand Meridian fireplace is intended as a supplemental heat source only. It is not intended as a primary heat source.
- 3) It is the responsibility of the contractor/installer (not the manufacturer) to ensure that adequate combustion air is provided for proper function of this fireplace. Fireplaces take up a large volume of replacement air from outside the house and if the house is of airtight construction, smoke spillage may occur if proper draft is not achieved.
- 4) There are many conditions beyond the manufacturer's control regarding improper fireplace operation. The manufacturer cannot ensure "smoke free" operation, nor can the manufacturer take on the responsibility for problems with surrounding construction; chimneys that have not

# VENTING INSTALLATION

*Continued*

been built at the correct heights; system drafts caused by faulty mechanical systems; adverse weather conditions or any other environmental situations over which the manufacturer has no control.

- 5) Inspect all fireplace & chimney components for evidence of damage prior to starting installation. Consult your local distributor for replacement parts if necessary.
- 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 these chimney instructions.
- 7) Caution is urged if it is decided to add insulation material to any part of the Grand Meridian Fireplace or Chimney system, be certain that the insulation material is kept at least 2" 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" clearance.
- 8) Air spaces around firebox must remain open. DO NOT fill these open spaces with insulation or packing material of any kind.

| LINEAL GAIN     |                                    |            |
|-----------------|------------------------------------|------------|
| PART NO.        | DESCRIPTION                        | GAIN       |
| MM33            | Fireplace                          | 54 5/8"    |
| MM39<br>MM44/49 | Fireplace                          | 63 1/2"    |
| MM63            | Fireplace                          | 73"        |
| 12-12DM         | Pipe Section                       | 10 5/8"    |
| 18-12DM         | Pipe Section                       | 16 5/8"    |
| 24-12DM         | Pipe Section                       | 23 5/8"    |
| 36-12DM         | Pipe Section                       | 34 5/8"    |
| 48-12DM         | Pipe Section                       | 46 5/8"    |
| RLT-12D         | Round Termination                  | 7 3/4"*    |
| STL-12D         | Square Chase-Top with Slip Section | 7" to 15"* |

\* The lineal gain for the terminations is measured to the flue gas outlet height.

## CHIMNEY PIPE

The IHP chimney system consists of 12", 18", 24", 36" and 48" snap-lock, double-wall pipe segments, planned for maximum adaptability to individual site requirements. Actual lengths gained after fitting overlaps must be taken into consideration (lineal gain) and are given in the lineal gain chart (see Figure 14). Lineal Gain is the actual measurable length of a part after two or more parts are connected.

**⚠ WARNING:** The opening in the collar around the chimney at the top of the fireplace must not be obstructed. Never use blown insulation to fill the chimney enclosure.

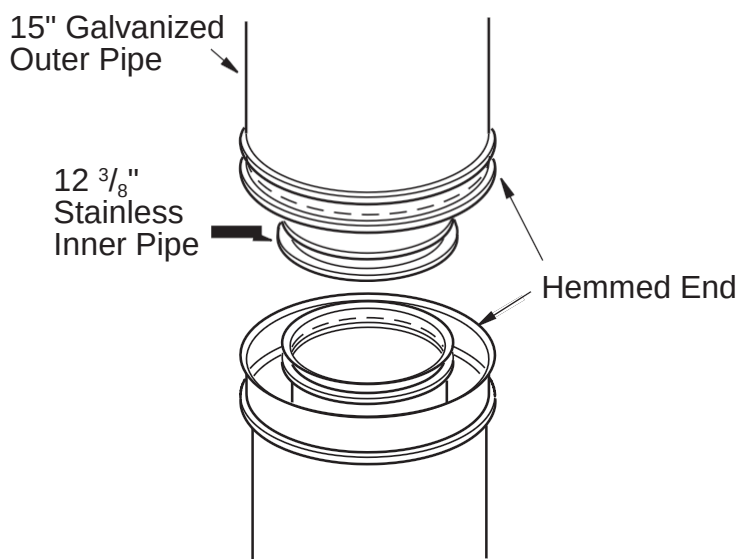


**Figure 14 - Lineal Gain**

# VENTING INSTALLATION

Continued

## ASSEMBLY AND INSTALLATION OF DOUBLE WALL CHIMNEY SYSTEM

Each double wall chimney section consists of a galvanized outer pipe, a stainless steel inner flue pipe and a wire spacer. The pipe sections must be assembled independently as the chimney is installed. When connecting chimney directly to the fireplace, the inner flue pipe section must be installed first with the lanced side up. The outer pipe section can then be installed over the flue pipe section with the hemmed end up. Press down on each pipe section until the lances securely engage the hem on the fireplace starter. The wire will assure the proper spacing between the inner and outer pipe sections.

Continue to assemble chimney sections as outlined above, making sure that both the inner and outer pipe sections are locked together. When installing double wall snap-lock chimney together, it is important to assure the joint between the chimney sections is locked. Check by pulling chimney upward after locking. The chimney will not come apart if properly locked. It is not necessary to add screws to keep the chimney together (exception, see Figure 15).

| OFFSET<br>A                      | RISE<br>B                         | CHIMNEY LENGTH |     |     |     |     |
|----------------------------------|-----------------------------------|----------------|-----|-----|-----|-----|
|                                  |                                   | 12"            | 18" | 24" | 36" | 48" |
| 4 <sup>3</sup> / <sub>8</sub> "  | 16 <sup>3</sup> / <sub>8</sub> "  | ELBOW SET ONLY |     |     |     |     |
| 9 <sup>3</sup> / <sub>4</sub> "  | 25 <sup>1</sup> / <sub>2</sub> "  | 1              |     |     |     |     |
| 12 <sup>3</sup> / <sub>4</sub> " | 30 <sup>3</sup> / <sub>4</sub> "  |                | 1   |     |     |     |
| 15"                              | 34 <sup>3</sup> / <sub>4</sub> "  |                |     | 1   |     |     |
| 18"                              | 40"                               | 1              | 1   |     |     |     |
| 21 <sup>1</sup> / <sub>4</sub> " | 46 <sup>1</sup> / <sub>4</sub> "  |                |     |     | 1   |     |
| 23 <sup>3</sup> / <sub>4</sub> " | 49 <sup>1</sup> / <sub>4</sub> "  |                | 1   | 1   |     |     |
| 27 <sup>3</sup> / <sub>4</sub> " | 56 <sup>3</sup> / <sub>4</sub> "  |                |     |     |     | 1   |
| 30"                              | 60 <sup>3</sup> / <sub>4</sub> "  |                | 1   |     | 1   |     |
| 33"                              | 66"                               |                |     |     |     | 1   |
| 36"                              | 71"                               |                | 1   |     |     | 1   |
| 38 <sup>1</sup> / <sub>4</sub> " | 75"                               |                |     |     | 2   |     |
| 41 <sup>1</sup> / <sub>4</sub> " | 80 <sup>1</sup> / <sub>4</sub> "  | 1              | 1   |     | 1   |     |
| 45"                              | 86 <sup>3</sup> / <sub>4</sub> "  |                |     |     | 2   |     |
| 46 <sup>3</sup> / <sub>4</sub> " | 89 <sup>1</sup> / <sub>2</sub> "  | 1              | 1   |     |     | 1   |
| 51"                              | 97"                               |                |     |     | 1   | 1   |
| 53 <sup>1</sup> / <sub>4</sub> " | 101"                              |                |     |     | 2   |     |
| 56 <sup>1</sup> / <sub>4</sub> " | 106 <sup>1</sup> / <sub>4</sub> " |                |     |     |     | 2   |
| 59 <sup>1</sup> / <sub>4</sub> " | 111 <sup>1</sup> / <sub>2</sub> " |                | 1   |     | 1   | 1   |
| 61 <sup>3</sup> / <sub>4</sub> " | 115 <sup>1</sup> / <sub>2</sub> " | 1              |     |     |     | 2   |
| 64 <sup>3</sup> / <sub>4</sub> " | 120 <sup>3</sup> / <sub>4</sub> " |                | 1   |     |     | 2   |
| 68 <sup>1</sup> / <sub>4</sub> " | 127"                              |                |     |     | 2   | 1   |
| 70"                              | 130"                              | 1              | 1   |     |     | 2   |
| 74 <sup>1</sup> / <sub>4</sub> " | 137 <sup>1</sup> / <sub>2</sub> " | 1              |     |     | 2   | 1   |
| 76 <sup>3</sup> / <sub>4</sub> " | 141 <sup>1</sup> / <sub>2</sub> " |                | 1   |     | 2   | 1   |
| 79 <sup>3</sup> / <sub>4</sub> " | 146 <sup>3</sup> / <sub>4</sub> " |                |     |     | 4   |     |

OFFSET CHART (22-50 FT. SYSTEM HEIGHT)

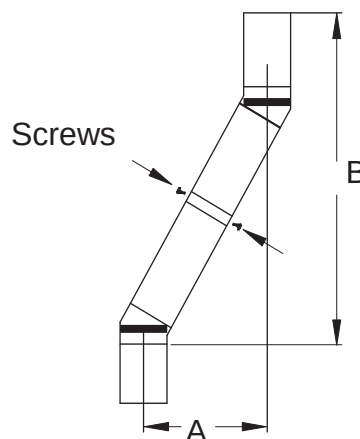


Figure 15 - Elbow Offset

## USING ELBOW OFFSETS (30E-12DM)

1. To achieve desired offset, you may install combinations of 12", 18", 24", 36" and 48" length of double wall pipe (see offset chart and Figure 15).
2. Chimney weight above offset rests on return elbow. Straps must be securely nailed to rafters or joists (see Figure 16, details A and B).
3. Maximum length of pipe between supports (return elbow or 12S-12DM) is 6' of angle run. Maximum of two 6' angle run sections per chimney system (see Figure 17, page 16).
4. All pipe connections between the offset and return must be secured with two screws on the outer pipe only (see Figure 15). Do not penetrate the inner stainless.

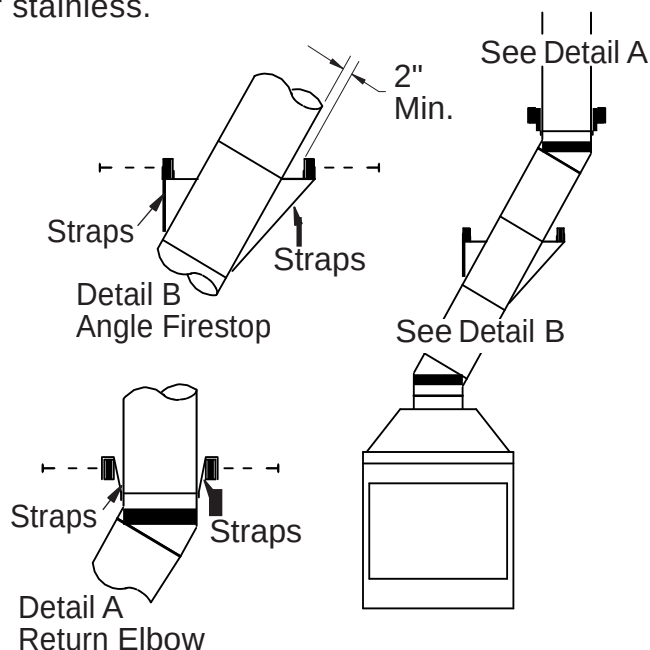


Figure 16 - Ceiling Support Pipe 12S-12DM

# VENTING INSTALLATION

Continued

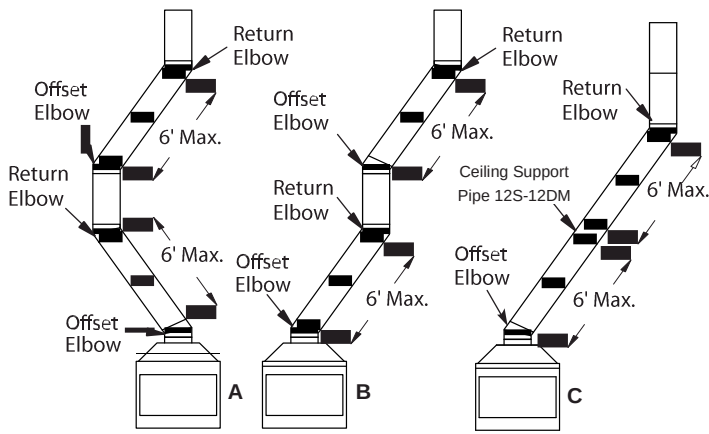


**Figure 17 - Typical Offset Terminations**

## FIRESTOP SPACERS (FS-10)

Firestop spacers are required at each point where the chimney penetrates a floor space. Their purpose is to establish and maintain the required clearance between the chimney and the combustible materials. When the pipe passes through a framed opening into a living space above, the firestop must be placed onto the ceiling from below as shown in Figure 18.

They 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 19.

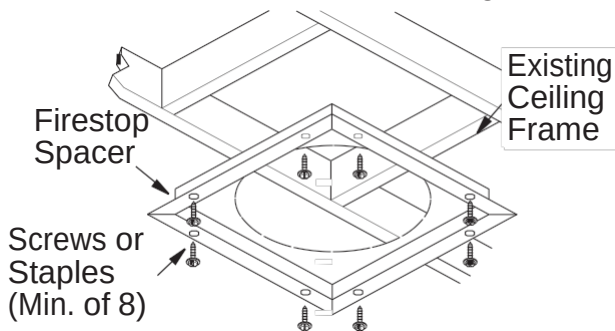


**Figure 18 - Firestop Spacer with Living Space Above Ceiling**

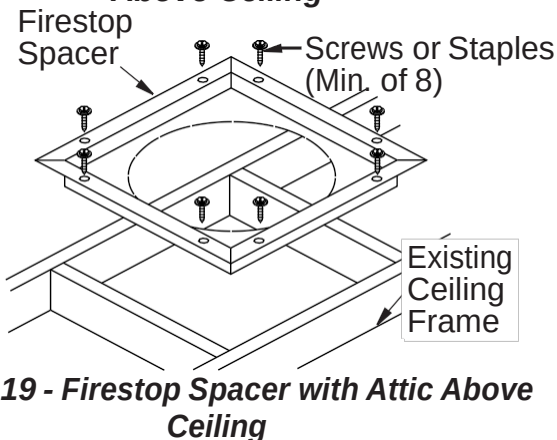
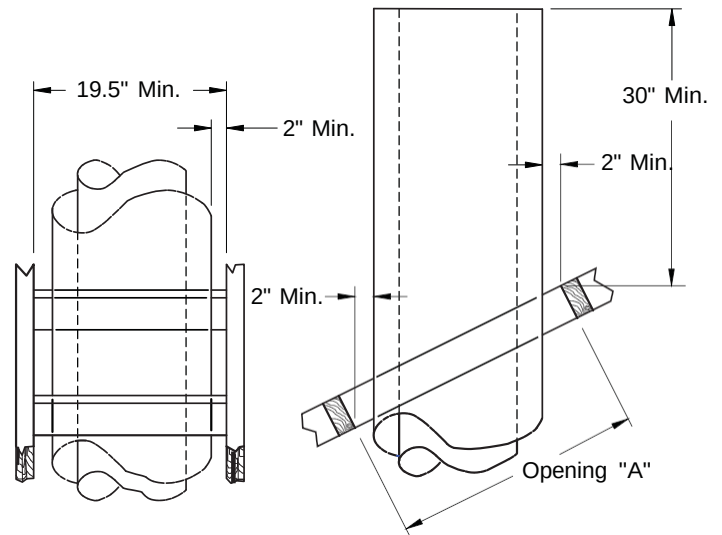


**Figure 19 - Firestop Spacer with Attic Above Ceiling**

## PENETRATING ROOF

To maintain a 2" clearance to the pipe on a roof with a pitch, a rectangular opening must be cut.

1. Determine center point through which pipe will penetrate roof.
2. Determine center point of roof. Pitch is distance the roof drops over a given span, usually 12". A 6/12 pitch means that roof drops 6" for each 12" measured horizontally down from roof rafters.
3. Use roof opening chart (Figure 20) to determine correct opening length and flashing required.
4. Remove shingles around opening measured. Cut out this section.
5. Add next sections of pipe until end penetrates roof line. Check to see that proper clearances are maintained. Extend chimney by adding sections of double wall pipe until pipe is minimum of 30" above highest point of roof cutout. Termination and chimney must extend a minimum of 36" above highest point where it passes through roof.



| Pitch      | Slope | Opening "A" Max. | Used Flashing Model No. |
|------------|-------|------------------|-------------------------|
| Flat       | 0°    | 19.5"            | V6F-10DM                |
| 0-6/12     | 26.6° | 22"              | V6F-10DM                |
| 6/12-12/12 | 45.0° | 27"              | V12F-10DM               |

**Figure 20 - Roof Opening Measurements**

# VENTING INSTALLATION

Continued

## FLASHING INSTALLATION (V6F-10DM OR V12F-10DM)

Determine the flashing to be used with the roof opening chart. Slide flashing over pipe until base is flat against roof. Replace as many shingles as needed to cover exposed area and flashing base. Secure in position by nailing through shingles (see Figure 21). DO NOT NAIL THROUGH FLASHING CONE.

### Installing Flashing on a Metal Roof

When installing the flashing on a metal roof, it is required that putty tape be used between the flashing and the roof. The flashing must be secured to the roof using #8 x 3/4" screws and then sealed with roof coating to prevent leakage through the screw holes. A roof coating must also be applied around the perimeter of the flashing to provide a proper seal.

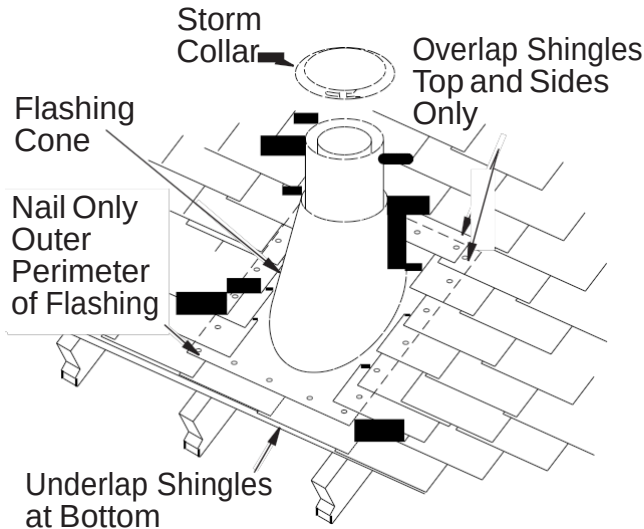


Figure 21 - Flashing Installation

### Storm Collar Installation (SC2-1)

Place storm collar over pipe and slide down until it is snug against the open edge of the flashing (see Figure 22). Apply waterproof caulk around the perimeter of the collar to provide a proper seal.

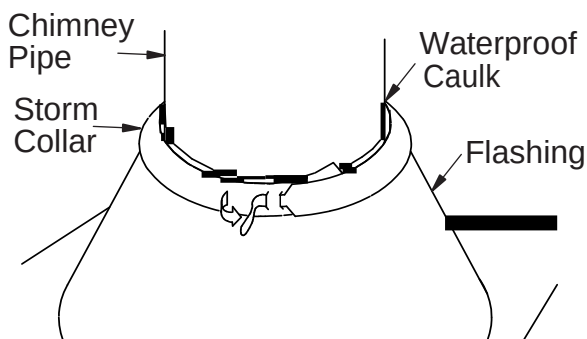


Figure 22 - Storm Collar

## TERMINATIONS/SPARK ARRESTOR

The fireplace system must be terminated with the listed round top or chase terminations. In any case, refer to the installation instructions supplied with the termination.

**CAUTION:** Do not seal openings on the rooftop flashing. Follow the installation instructions provided with the termination

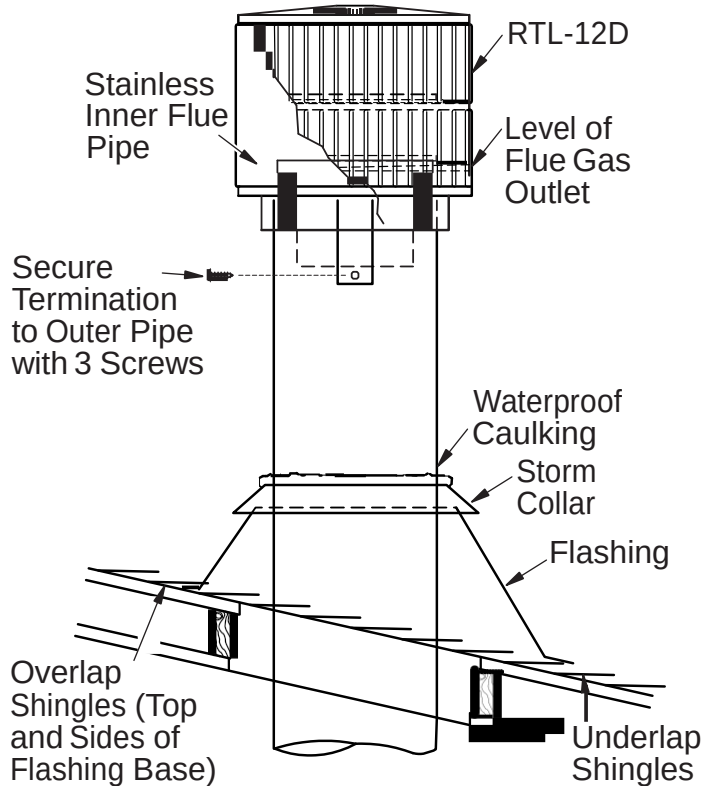


Figure 23 - Termination

being used.

## CHASE INSTALLATIONS

Instructions for chase installations are included with the chase style termination chosen. In a multiple chase installation, be sure to provide adequate distance between terminations to prevent smoke spillage from one termination to another. We suggest that terminations be separated at least 24", center to center and stacked at a vertical height difference of 18" (see Figure 24, page 17).

# VENTING INSTALLATION

*Continued*

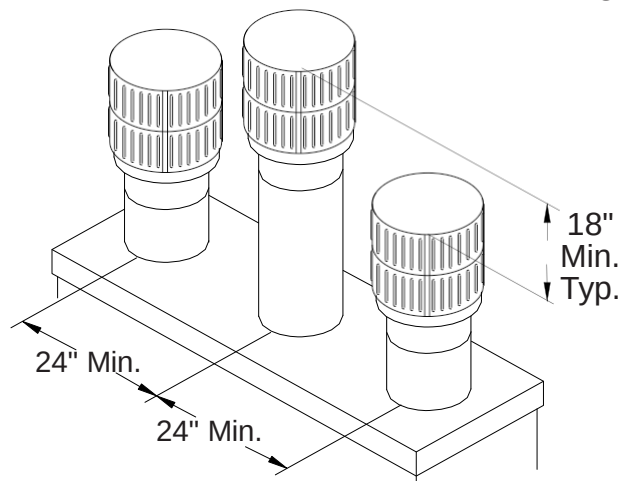


**Figure 24 - Multiple Chase Installation**

## 10 FOOT RULE

All flue gas outlet chimney terminations must extend a minimum of 3 feet in height above the highest point where it passes through the roof and must be at least 2 feet above the highest point of the roof that is within a horizontal distance of 10 feet (see Figure 25).

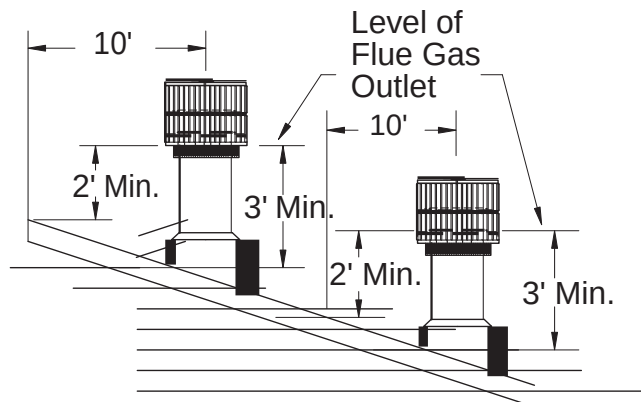


**Figure 25 - 10 Foot Rule**

## OPTIONAL GAS LINE INSTALLATION

You may elect to add a vented decorative gas appliance (gas log) to your Grand Meridian 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/NFPA 54. This gas pipe provision should only be used on a decorative gas appliance.

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.

Fill in the holes you have drilled around the gas piping with the regular mortar.

Follow the Gas Log manufacturer's instructions.

## OPTIONAL ELECTRICAL CONNECTION INSTALLATION

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.

## FINISHING FIREPLACE

Combustible materials, such as wallboard, gypsum board, sheet rock, drywall, plywood, etc. may not make direct contact with sides and top around the fireplace face. See clearance requirements in Figures 8 and 9 on page 9. It is important that combustible materials do not overlap the face itself. Brick, glass, tile or other noncombustible materials may overlap the front face provided they do not obstruct essential openings. When overlapping with a noncombustible facing material, use only noncombustible mortar or adhesive.

## MASONRY (PRECAST) CHIMNEY

Masonry Chimney may be used instead of the IHP Chimney System. Parts come in 14" Diameter and can be obtained by IHP. See *Accessories* on page 35.

# SUPPORTING FLOOR SYSTEM INSTALLATION

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 Grand Meridian 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 42 & 43) for specific instructions.

## REBAR LOCATIONS

Lay-out the position of the fireplace and drill holes where the rebar will be located. Secure the #3 rebar 4 inches into the 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 29 on page 20 for anchorage dimensions. Four anchors are required to attach to the sub-flooring framing.

## 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 26 thru 28 depending upon the type of floor framing. Final method of anchorage is 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: 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 in like manner as shown in Figure 26 using blocking between the floor joist.*

For floors supported by I-Joists, the method of anchorage is illustrated in Figures 27 and 28, page 19. Figure 31, page 20 illustrates the general arrangement of anchorage to floor framing.

It is important to take into consideration that the load for the Grand Meridian Fireplace must be considered as additional dead load that will have to be supported by the floor framing. Additional floor joists or I-joists may be required as determined by the licensed design professional.

The dead weights for the fireplace are noted in Table I. 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 29, page 20 for anchor rod locations.

Attach the firebox side wall anchors to steel support frame by inserting all-thread rods through holes on the bottom flange on the steel support frame as shown in Figure 32 and 33, page 21. Secure with two Ø 2" o.d. x Ø 9/16" i.d. x 0.10" Washers and two 1/2"-13 UNC Nuts.

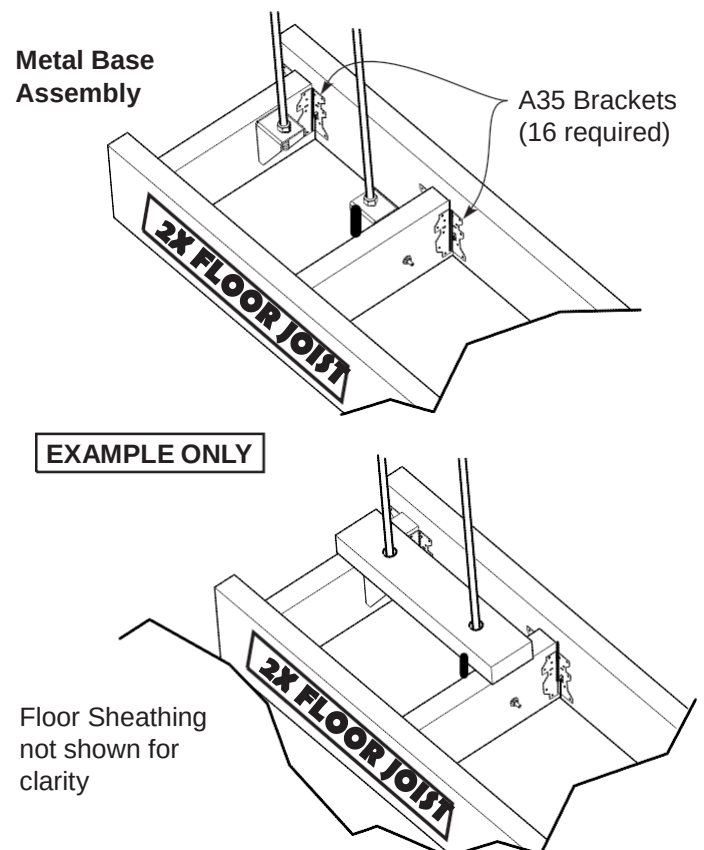


**Figure 26 - Floor Joist Installation**

# SUPPORTING FLOOR SYSTEMS INSTALLATION

Continued

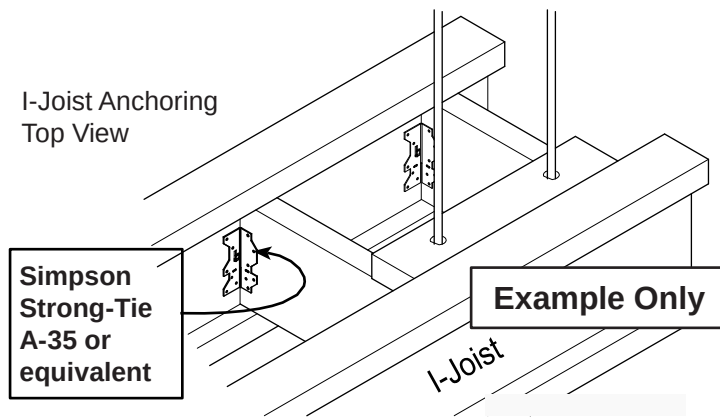


Figure 27 - Floor Joist Installation

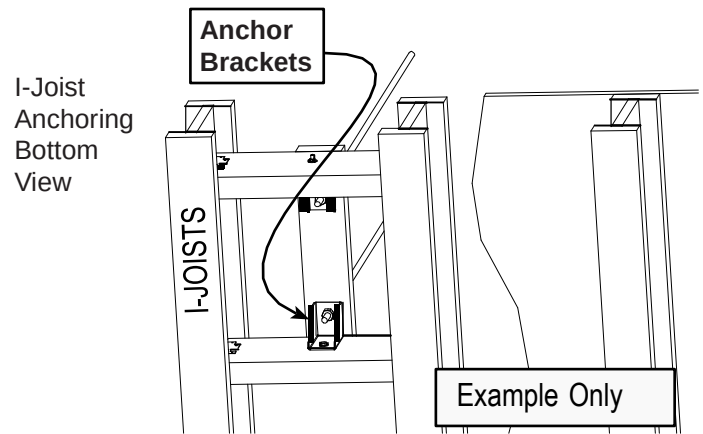


Figure 28 - Floor Joist Installation

## WEIGHT DETERMINATION

The following are dead load weight estimates for the Grand Meridian Fireplace.

| Table I                            |                                     |                                      |                                      |                                       |                                    |
|------------------------------------|-------------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|------------------------------------|
| Fireplace Model                    | MM33                                | MM39                                 | MM44                                 | MM49                                  | MM63                               |
| Fireplace Weight                   | 835 lbs.                            | 1,194 lbs.                           | 1,250 lbs.                           | 1,359 lbs.                            | 1,704 lbs.                         |
| Mortar, Rebar & Ready Mix Concrete | 200 lbs.                            | 350 lbs.                             | 357 lbs.                             | 364 lbs.                              | 370 lbs.                           |
| Firebrick Lining                   | 290 lbs.                            | 333 lbs.                             | 345 lbs.                             | 356 lbs.                              | 435 lbs.                           |
| Damper/Anchor Plate                | 17 lbs.                             | 17 lbs.                              | 17 lbs.                              | 17 lbs.                               | 21 lbs.                            |
| Steel Platform                     | 89 lbs.                             | 94 lbs.                              | 96 lbs.                              | 100 lbs.                              | 132 lbs.                           |
| Floor Area                         | 37" x 28"<br>(7.2 ft <sup>2</sup> ) | 42" x 28"<br>(8.12 ft <sup>2</sup> ) | 48" x 28"<br>(9.33 ft <sup>2</sup> ) | 53" x 28"<br>(10.30 ft <sup>2</sup> ) | 67" x 28"<br>(13 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 or Masonry Chimney System: See chimney manufacturer's weight specifications. Some chimney systems can weigh up to 50 lbs per lineal foot.

| Table II - Deflection Limits |       |        |                    |
|------------------------------|-------|--------|--------------------|
| Construction                 | L     | S or W | D + L <sub>1</sub> |
| Floor Members                | I/360 | ---    | I/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 IHP cannot accept responsibility for structural floor support details. All drawings are presented as mere illustrations 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.

# SUPPORTING FLOOR SYSTEMS INSTALLATION

Continued

| Model | A       |
|-------|---------|
| MM33  | 32 3/4" |
| MM39  | 38 3/4" |
| MM44  | 43 3/4" |
| MM49  | 48 3/4" |
| MM63  | 62 3/4" |

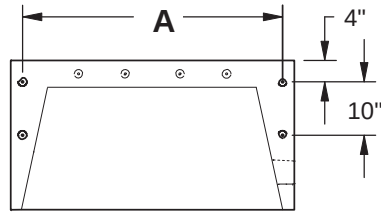


Figure 29 - Anchorage Dimensions

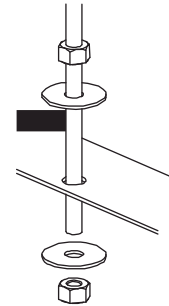


Figure 30 - Hardware

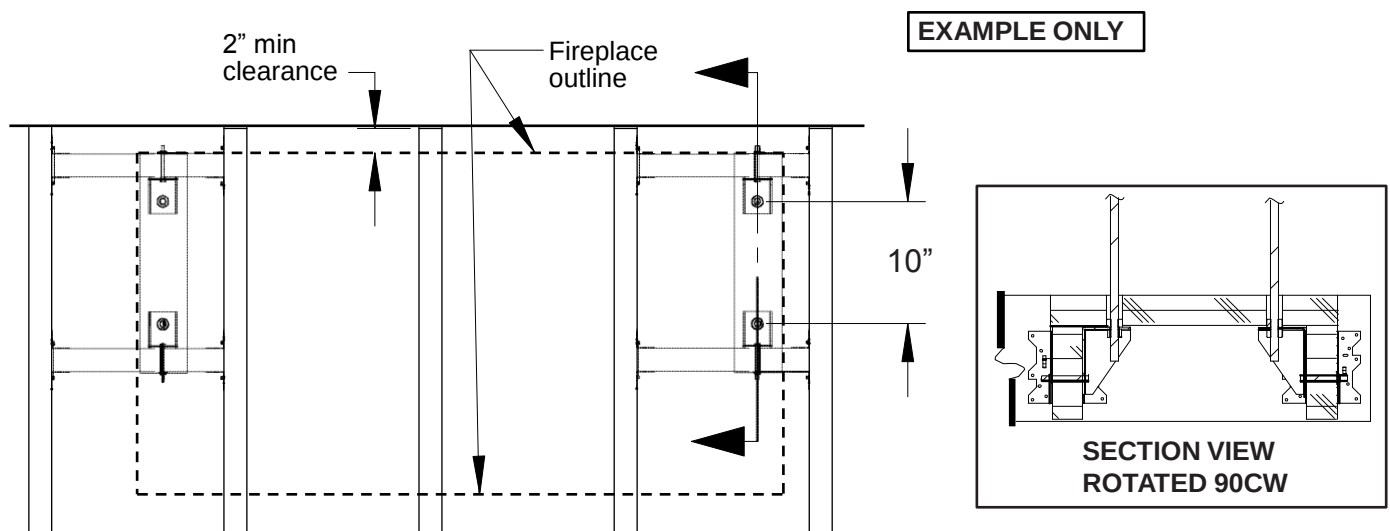


Figure 31 - Typical Anchorage Layout

## COMBUSTIBLE FLOOR INSTALLATION

### 8" METAL BASE (MMB63)

The Metal Base (MMB63) ensures the minimum **8" clearance** above combustible flooring is maintained with Grand Meridian Model MM63.

A layer of 1/2" minimum Cement Board (Not Included) is required on the top and mid section below as shown in Figure 32, page 21. The required sizes are shown in the table below.

| 1/2" Thick Cement Board Dimensions |     |     |     |     |
|------------------------------------|-----|-----|-----|-----|
| Model                              | A1  | A2  | B1  | B2  |
| MM63                               | 67" | 28" | 60" | 23" |

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

### EMBER PROTECTOR STRIPS:

Ember protector strips (included with Metal Base Kit) are required between the front of the Fireplace Hearth and Hearth Extension. A minimum thickness of 26 gauge metal strip at least 4" wide 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 (Figure 10, page 10).

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

# COMBUSTIBLE FLOOR INSTALLATION

Continued

## MATERIALS INCLUDED:

- 8 -  $\frac{3}{8}$ " Rebar x 12" Long
- 4 -  $\frac{3}{8}$ " Rebar x 6" Long
- 4 -  $\frac{3}{8}$ " Bolts x 2 $\frac{1}{2}$ " Long
- 28 - Washer
- 28 - Nuts
- 4 - Floor Joist Brackets
- 2 - Ember Protector Strips
- 1 - Insulation Blanket

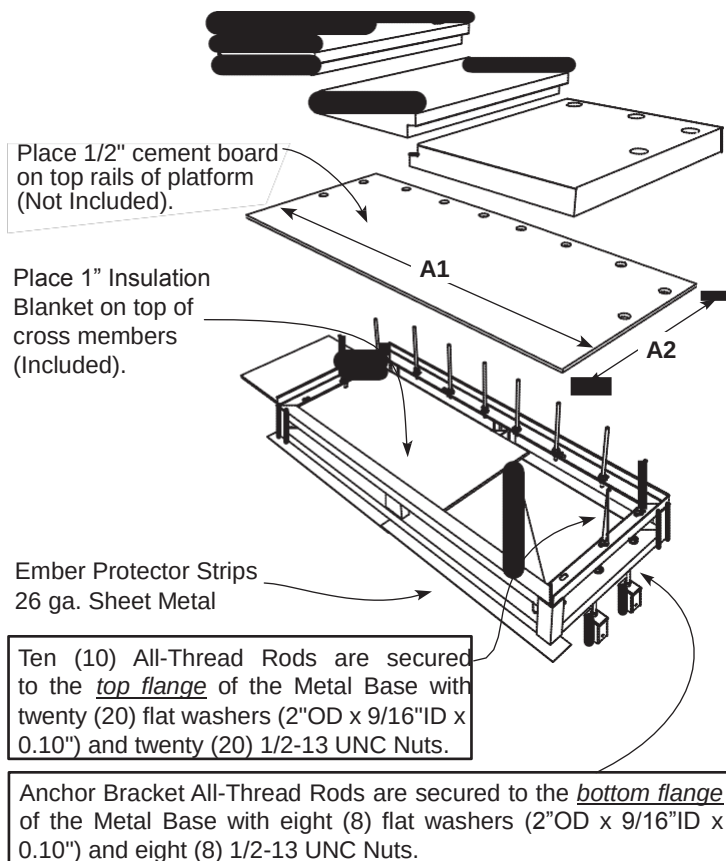


Figure 32 - MMB63 Metal Base Assembly

## 6" METAL BASE (MMB33,MMB39, MMB44, AND MMB49)

The Metal Base ensures the minimum **6" clearance** above combustible flooring is maintained.

| Grand Meridian Model | Use Metal Base Model |
|----------------------|----------------------|
| MM33                 | MMB33                |
| MM39                 | MMB39                |
| MM44                 | MMB44                |
| MM49                 | MMB49                |

A layer of 1" thick Insulation Blanket (Included) is required on the top and mid-section of the Metal Base as shown in Figure 33. The required sizes are shown in the following table:

| 1/2" Thick Cement Board Dimensions |     |     |
|------------------------------------|-----|-----|
| Model                              | A1  | A2  |
| MM33                               | 37" | 28" |
| MM39                               | 43" | 28" |
| MM44                               | 48" | 28" |
| MM49                               | 53" | 28" |

**NOTE:** The insulation (concrete) board chosen must meet a thermal conductivity rating  $\geq 0.4$  Btu-in/hr-ft<sup>2</sup>-F°.

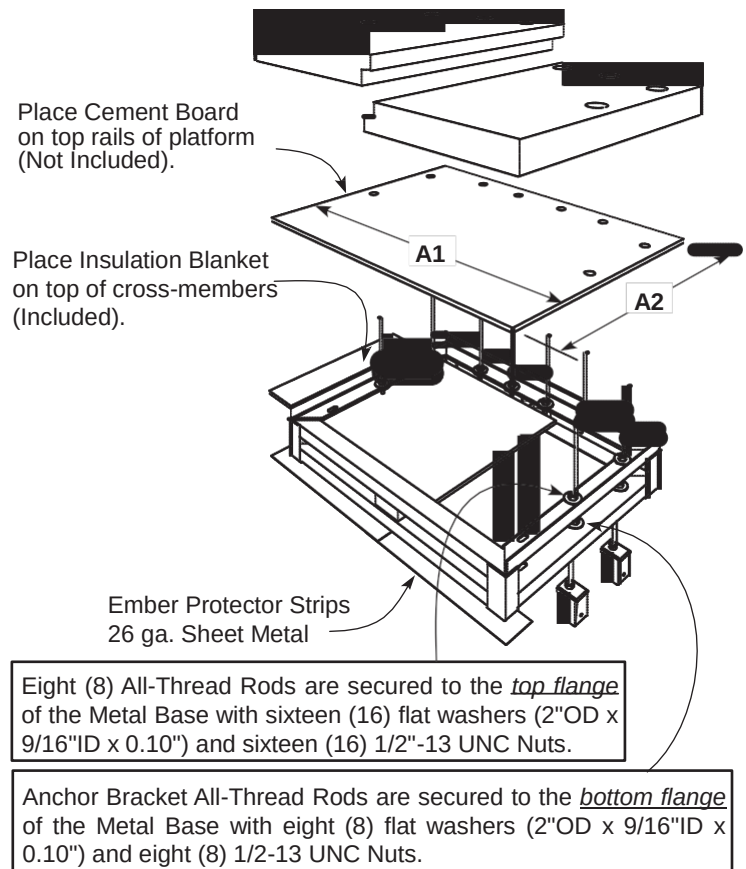


Figure 33 - MMB33, MMB39, MMB44 and MMB49 Metal Base Assembly

# FIREPLACE INSTALLATION

You will find that the Grand Meridian Fireplace is designed to be completely assembled on-site, consisting of interlocking precast parts. Included is a thin-set type mortar for bonding. The parts of the fireplace are made of IHP's incredibly strong blend of specialty cement and a light weight aggregate.

**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 installation of an anchor plate/damper for either masonry chimney or pre-fabricated chimney is required but not supplied. See *Accessories* on page 33.

The installation of a seismic strap kit is required but not supplied. See *Accessories* on page 33.

An optional outside air kit can be used. See *Accessories* on page 33.

Refractory Firebrick Liners also need to be installed. These should be a minimum of 1½" thick. The liner will be applied within the walls and hearth area of the firebox. See *Accessories* on page 33.

## TOOLS NEEDED FOR INSTALLATION:

- One 4 ft. level
- Roto-hammer with ½" drill bit
- Drill motor with mixer blade to mix Mortar
- Two empty 5 gallon buckets to mix Mortar
- One wheelbarrow and shovel to mix concrete
- Grout bag
- Triangular masonry trowel
- Rubber hammer
- Sponge and 2 water buckets to wipe down and moisten parts prior to applying mortar

## MATERIALS NEEDED FOR INSTALLATION:

- Epoxy for securing rebar in footing / foundation
- Three (3) - 90 lb. bags of ready mix concrete with ¼" or smaller aggregate

## MATERIALS INCLUDED:

### MM33, MM39, MM44, MM49:

- 8 - ⅝" Rebar x 28" Long
- 8 - ⅝" Rebar x 12" Long
- 1 - 50 lb. bucket Mortar
- 20 - Small Wood Shims

### MM63:

- 10 - ⅝" Rebar x 36" Long
- 10 - ⅝" Rebar x 12" Long
- 2 - 50 lb. bucket Mortar
- 20 - Small Wood Shims

## FIELD ASSEMBLY PROCEDURES

Mixing the mortar – The mortar comes pre-mixed and should be dry. Be sure to use clean water and work it up into a mixture that is pasty but not lumpy. If it's too thin and the surfaces don't stay moist, the components will not adhere. Load the mixture into a standard grout bag.

When applying, use about ½" thread of mortar. The mortar bead should be approximately ½" away from all edges. 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 by wiping them down with a clean wet sponge.

Some mortar will "ooze out" when placing components together, this is normal. Wipe excess away with a trowel. Do not cover component surfaces completely with mortar. 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.

Make sure components are level. Checking levelness after each layer. It's extremely important that you pay careful attention to how you are assembling the Grand Meridian 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, this will only result in a fireplace that will not be plumb or level. Use wood shims instead. **You will find these small wood shims supplied with the Fireplace and**

# FIREPLACE INSTALLATION

## Continued

you can nudge them in between openings to achieve the precision you need in making component adjustments. Once you have removed any shims, you will want to cover any gaps that may have resulted with the mortar.

### Assembly Instructions

1) Place the hearth base on top of your non-combustible floor or metal base. For concrete slabs, supporting floor needs to be rated at ASTM 90.

a) **Combustible Floor Installations:** Mix up a batch of mortar and adhere hearth slabs to the cement board (see Figure 32 & 33, page 21). All-thread rods should stick up through the holes on the hearth slabs.

b) **Non-combustible Floor Installations:** Draw an outline of the hearth area based on the dimensions shown in pages 4 and 5. Position Hearth slabs and mark rebar center locations. Drill 4 inches using Roto-hammer into concrete slab and secure the 8 pieces (10 pieces for MM63) of 12" long rebar with epoxy. See Figure 34 & 35.

2) Mix a batch of mortar and prepare Right Side Hearth bottom surface to be bonded as shown in Figure 36.

3) Align Right Side Hearth to the outline created. The overall width should allow for an approximate gap of 1/8" between slabs for the additional mortar to unite the remaining slab. Check for surface flatness, level if necessary.

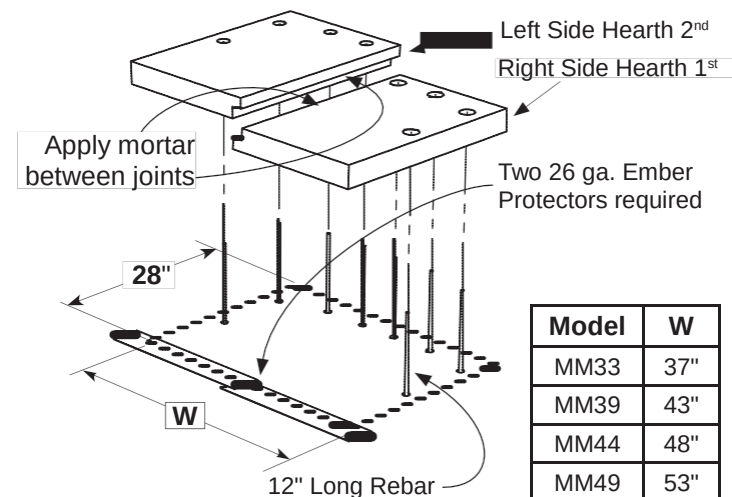


**Figure 34 - Positioning Hearth Base For MM33,39,44,49**

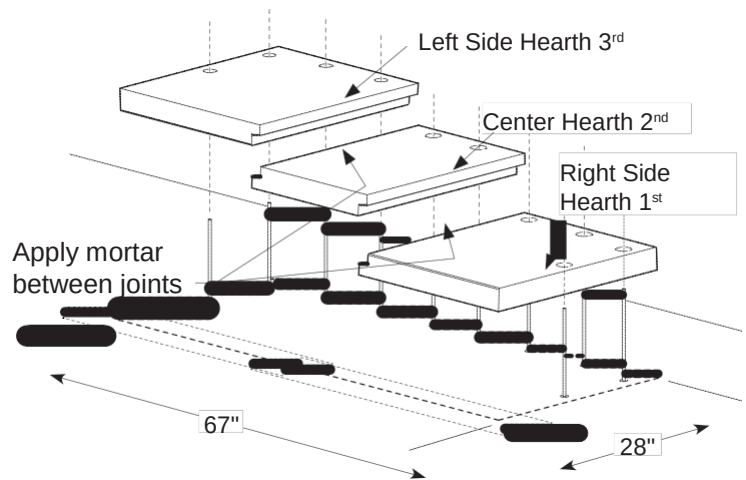


**Figure 35 - Positioning Hearth Base for MM63**

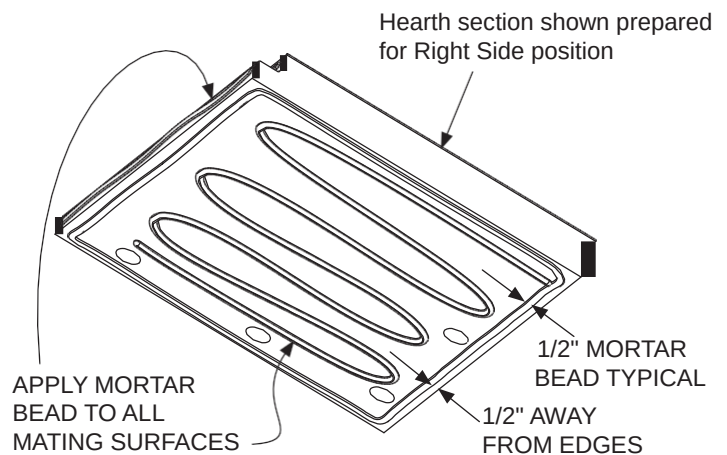


**Figure 36 - Preparing Hearth Base**

4) Repeat step 3 for Left Side Hearth.

5) Before installing side walls, confirm placement of outside air kit (if required). This can be installed either side depending on which side is accessible to outside combustion air (all diagrams in this manual show the combustion air inlet hole on the right side). Prepare side wall and rear wall mating surfaces with the prepared mortar and begin assembly as shown in Figure 37.

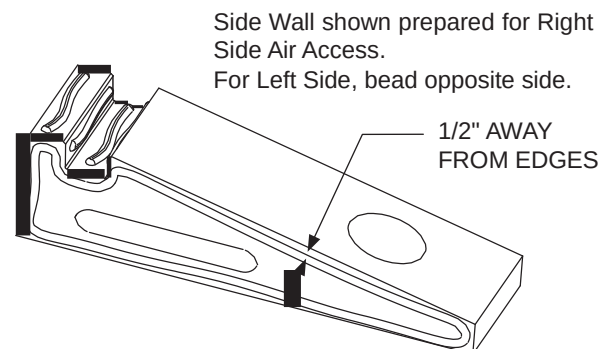


**Figure 37 - Preparing Side and Rear Wall Pieces**

# FIREPLACE INSTALLATION

*Continued*

6) Assemble the first layer as shown in Figure 38 and 39. Continue to the next layer sides and rear pieces, 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 piece, make certain that you adhere the mortar at each and every joint. See chart below for the number of layers for need for this step.

| Grand Meridian Model | Number of Layers |
|----------------------|------------------|
| MM33                 | 2                |
| MM39                 | 3                |
| MM44                 | 3                |
| MM49                 | 3                |
| MM63                 | 3                |

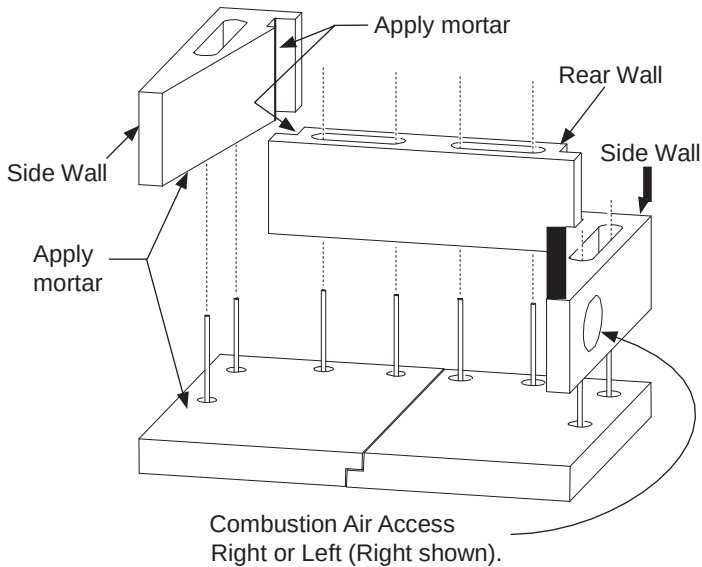


**Figure 38 - Layering walls and sides for MM33,39,44,49**

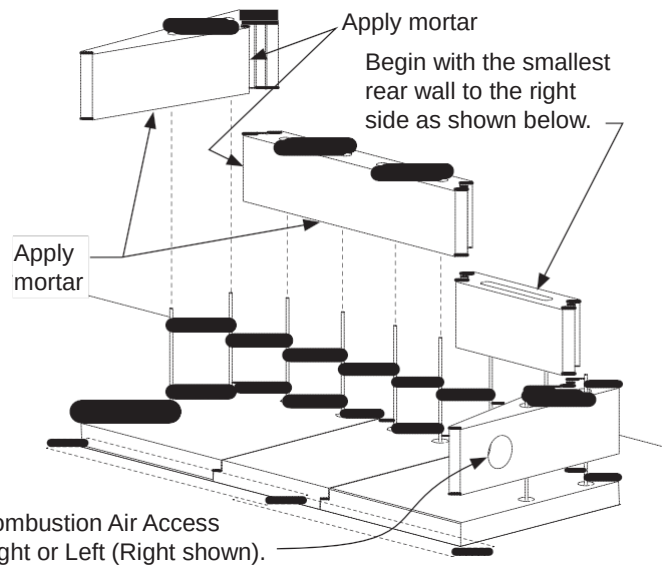


**Figure 39 - Layering walls and sides for MM63**

**MM63:** Rear Walls are staggered on every row as shown in Figures 40.

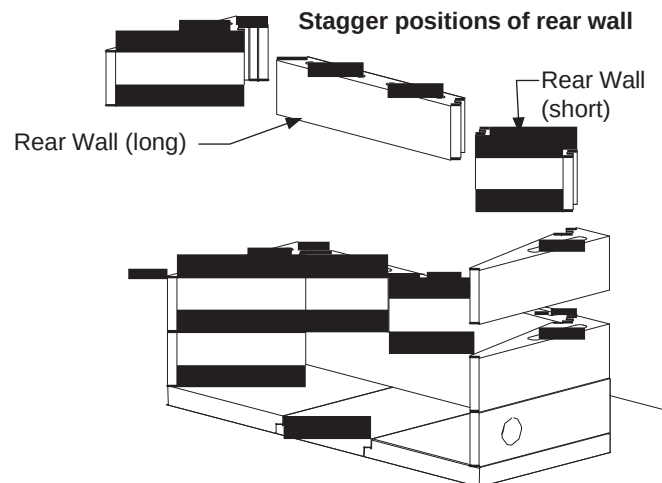
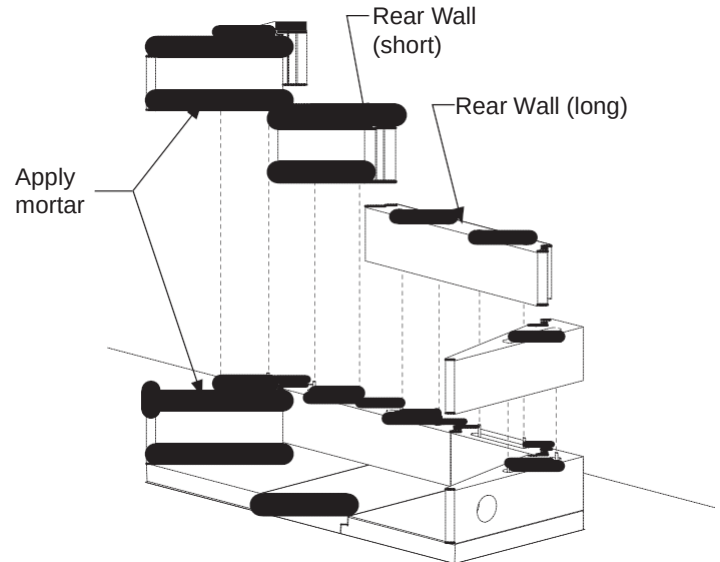


**Figure 40 - Staggering walls and sides for MM63**

# FIREPLACE INSTALLATION

*Continued*

7) Insert 28" long rebar (8 total, included with fireplace) vertically through the cells, into the holes in the hearth, adjacent to the rebar and/or all-thread sticking up from the hearth (Figure 42). Mix approximately 2 cu. ft. of Ready-Mix Concrete (not included) and fill all cells in walls and rear of firebox completely (Figure 41).

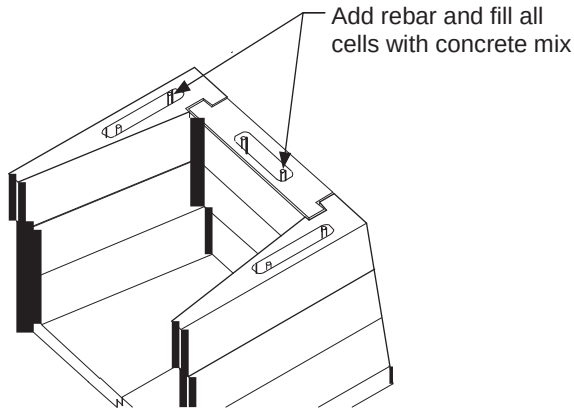


**Figure 41- Inserting Rebar and adding Ready Mix Concrete**

8) Attach Lower Seismic Straps to rebar closest to the front as shown in Figure 42.

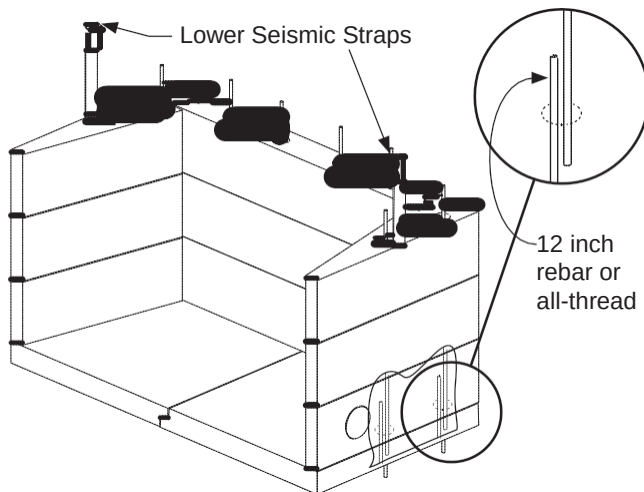


**Figure 42 - Attaching Lower Seismic Straps**

9) Install Downdraft Diverter and final row of Side Walls (Figure 43). All components must be level. Mix approximately 2 cu. ft. of Ready-Mix Concrete and fill all cells with Ready Mix Concrete mix.

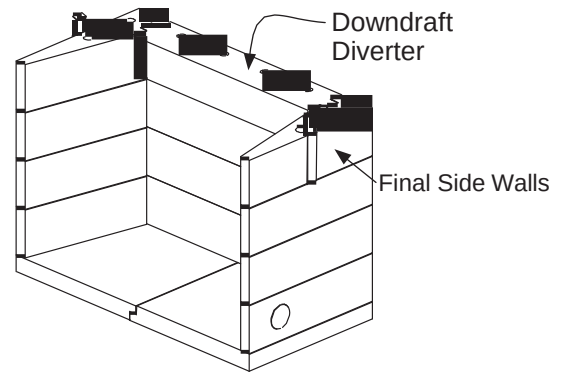


**Figure 43 - Attaching Downdraft Diverter and Side walls**

10) Set the Lintel and Lower Rear Dome in place as shown in Figures 44. Check that all is level. If you need to make adjustments, use 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.

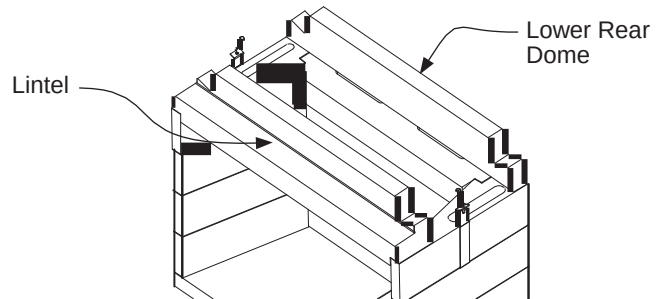


**Figure 44 - Attaching Lower Rear Dome and Lintel**

# FIREPLACE INSTALLATION

## Continued

**NOTE:** Although you are cautioned to use 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.

**IMPORTANT:** Adjustments can only be made while the mortar is still wet when correcting for squareness and leveling.

11) Assemble Lower Dome Sides as shown in Figure 46. The beveled face lines up with the inward angles of the lintel sides. Top surfaces should be level.

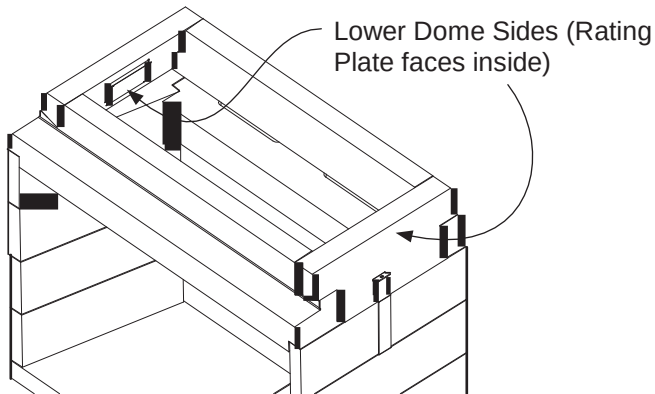


**Figure 45 - Attaching Lower Dome Sides**

As you are connecting each component, be certain you are following the instructions given previously for using mortar. Stop to look at the smoke dome side, front and rear walls to see that they are aligning correctly and that the surfaces are smooth and uniform. Make sure connections are covered with an adequate amount of mortar. Remember that you have the option of using shims but they must be removed and any holes filled. Make any adjustments to the fireplace alignment before continuing to the next step.

12) Assemble Upper Dome and Dome Sides as shown in Figure 46. Check your assembly here. If things are proceeding as they should be, the finished top surface should be flat and level.

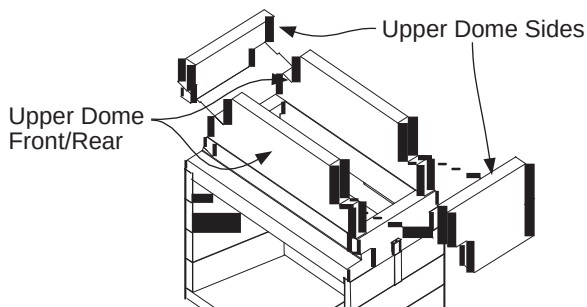


**Figure 45 - Attaching Upper Dome & Sides**

13) **MM63 ONLY:** Position Middle Domes so that outer faces are flush to the lower dome as shown in Figure 46. Carefully install Dome Middle Sides as shown in Figure 46.

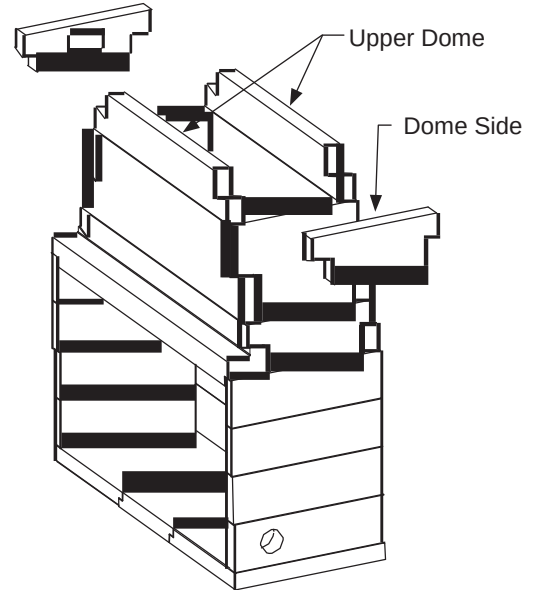


**Figure 46 - Attaching Middle Dome**

14) Finally, set the Dome Top into position (Figure 47, page 27). Be sure that it is flush in every direction as you place it on the crest of the smoke dome wall assembly. After this is done, proceed to section on Installing Damper and Chimney System on page 28.

**NOTE:** The chimney hole on the Dome Top is not centered from front to back - it should be offset closest to the rear of the fireplace (see Figure 46).

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

# FIREPLACE INSTALLATION

*Continued*

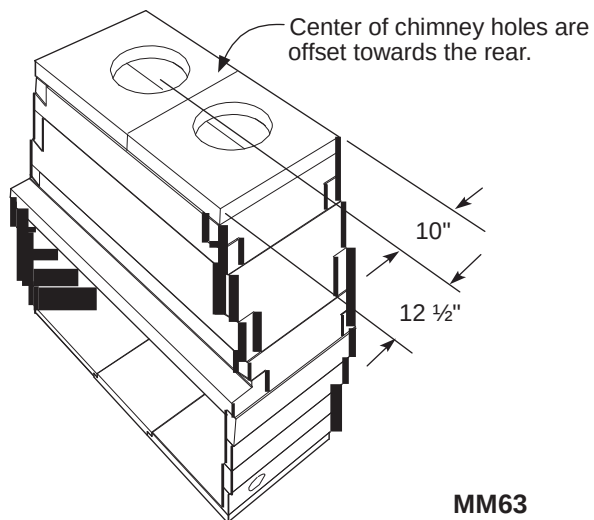
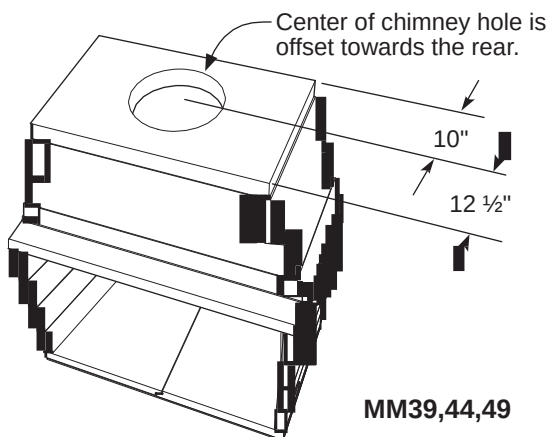
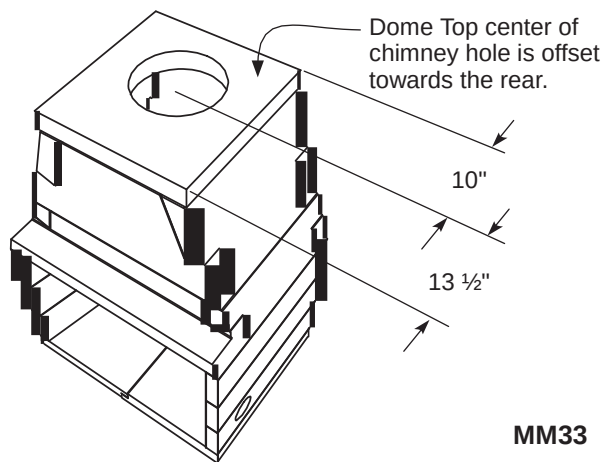


**Figure 46 - Attaching Middle Dome**

# FIREPLACE INSTALLATION

*Continued*

## INSTALLING DAMPER / ANCHOR PLATE (MM12AP) FOR PRE-FABRICATED CHIMNEY SYSTEM

All chimney systems must be installed with an integrated Damper System / Anchor Plate installed on top of the fireplace. Installers are cautioned to put the chimney system together exactly as instructed in the *Venting Installation* on page 12. 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.

Apply a 1" thick ceramic fiber blanket (Included) to the bottom of the anchor plate.

Apply balance of gasket cement in a 1/4" bead on top of smoke dome approximately 1 1/2" around periphery of chimney hole. Install damper assembly on top of unit pressing damper and insulation blanket into cement (Figure 47). Secure with four 3/16" X 1 3/4" masonry screws (included).

Place chimney adapter onto top of damper plate and center in opening using gasket supplied with adapter.

Attach adapter with screws supplied by carefully drilling holes into damper plate.

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 cannot be reduced during course of construction. For the safe operation of the finished fireplace, these clearances must be followed when building the framework for the chimney system.

**NOTE:** *The most important aspect of the installation is maintaining the minimum required clearances to combustible materials according to the chimney pipe manufacturer's recommendations, otherwise a potential fire hazard may occur.*

**⚠ WARNING:** Do not interchange chimney parts with any other parts except those specifically required by IHP otherwise a potential hazardous condition may be created.

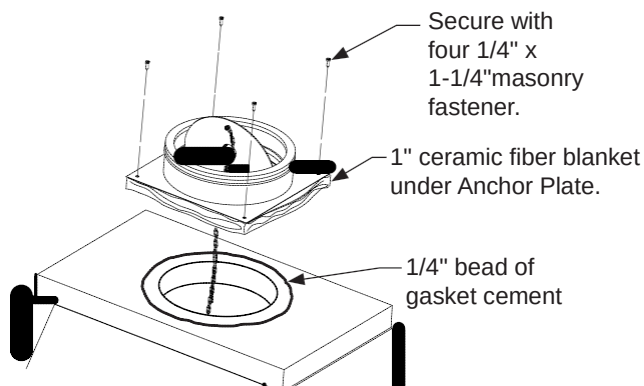


**Figure 47 - Installing Anchor Plate**

# FIREBRICK INSTALLATION

Refractory Firebrick lining must be installed. There are two options. You can obtain pre-fabricated Modular Firebrick Liner from IHP (see [Accessories](#) on page 33) or custom firebrick lining can be installed.

## MODULAR FIREBRICK LINING

If using IHP Module Firebrick Liners, simply use an extra bag of the mortar we supply. Install Hearth panel first, rear panel next and side panels last. Consider if brackets for grates will be required also if pre-drilling is required for gas lines, electrical or if the outside combustion air kit is to be installed. 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 48).

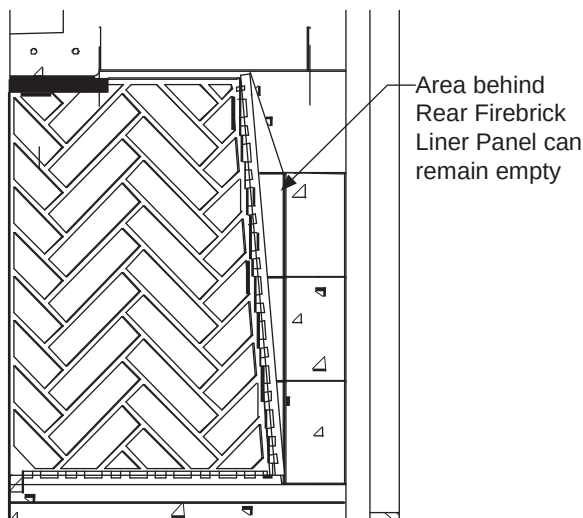


**Figure 48 - Position of Rear Panel**

## CUSTOM FIREBRICK LINING

*Custom* Firebrick lining is can be obtained by IHP. If a custom firebrick pattern is desired, it is required that the masonry fire rated bricks be a minimum of 1 1/8" thick. The pattern for the firebrick lining is exclusively your choice. Before you install the lining, remember to consider any holes your contractor may need to drill for gas, electrical or combustion air kit access holes.

Please use a certified mason to lay-in the brick. He will follow the proper instructions from the fireplace liner manufacturer and also understand the type of adhesive or cement he is to use.

Make sure the fireplace is installed with the finished firebrick floor of the fireplace so that it is at least 11" above the combustible floor system.

Disclaimer: IHP wishes to express that as the manufacturer of the Grand Meridian 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. IHP cannot be responsible for this and other wear and tear to the firebrick and mortar.

# OPERATION AND MAINTENANCE GUIDELINES

## FIREPLACE GRATES AND SCREENS

grate will be required for safe operation. The fire-

ries on page 33) or if choosing an alternate, it must be sized to 50% of the hearth maximum. Additionally. A fireplace screen must be installed for safety.

## GLASS DOORS

**IMPORTANT:** Only Crown-Breckinridge or McKenzie-Pendelton Doors by Portland-Willamette ([www.portwill.com](http://www.portwill.com)) are approved for use with this fireplace.

For installation Instructions, see separate instructions included with doors.

Glass doors are optional with the fireplace. When fireplace is in operation, doors must be fully opened or fully closed position only or a fire hazard may be created (see Figure 49).

A fireplace equipped with glass doors operates much differently than a fireplace with an open front. A fireplace with glass doors has a limited amount of air for combustion.

Excessive heat within the fireplace can result if too large a fire is built or if combustion air gate is not completely open. The following tips should be followed to assure that both the fireplace and glass door retain their beauty and function properly. Both the flue damper and glass doors must be fully opened before starting fire. This will provide sufficient combustion air and maintain safe temperatures in firebox.

**IMPORTANT:** The glass must be allowed to warm slowly and evenly. The tempered glass will withstand a gradual temperature rise to 375 °F, without sustaining any damage. Temperatures as high as this or higher are not likely to occur with normal use. Such materials as pitch/wax laden logs, very dry mill end lumber and large amounts of paper or cardboard boxes can create an excessively hot fire and should not be burned in this fireplace. Always keep the fire well back from the doors and never allow flames to contact the glass.

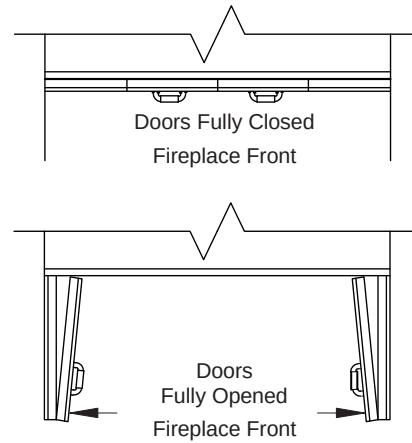


**Figure 49 - Bi-Fold Glass Doors**

**⚠ WARNING:** Fireplaces equipped with glass doors should be operated only with doors fully opened or doors fully closed. Doors, if left partly open, may draw gas and flame out of the fireplace opening creating risks of both fire and smoke.

### Cleaning Glass

Clean glass with any commercial glass cleaner or soap and water. Do not use any abrasive material to clean glass. Do not clean glass with any cool water if glass is still hot from the fire and smoke.

## OWNER'S OPERATION & PRECAUTIONS

**⚠ 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.

First Lighting of the Grand Meridian – 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.

# OPERATION AND MAINTENANCE GUIDELINES

## Continued

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" in diameter. With the second lighting you can let the fire burn two hours – no more.

After First and Second Lighting – When the fireplace has been properly cured with 1st and 2nd lighting, you will be able to add a full fuel load to the fireplace 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" ) to 8" in diameter.

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.

Do not "over burn" – Always remember, your Grand Meridian 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.

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

## STARTING A FIRE AND BASIC OPERATION

Before starting a fire in your fireplace, open the damper to its' fully open 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.

## ANNUAL FIREPLACE MAINTENANCE

Your fireplace and chimney require seasonal and monthly tune-ups". Like any piece of well-built equipment, the Grand Meridian 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. Start at the top, looking for birds' nests, leaves or any other obstructions. Also check the spark arrestor, 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 arrestor, 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.

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

## OPERATION AND MAINTENANCE GUIDELINES

### *Continued*

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 Grand Meridian 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.

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.

Always allow the fireplace to completely cool before you work on it, which means, of course, shutting off all gas and electrical connections, also.

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.

The flue damper must be in the OPEN position whenever there is heat in the fireplace.

## REPLACEMENT PARTS

**Note:** Use only original replacement parts.

This will protect your warranty coverage for parts replaced under warranty.

Contact authorized dealers of this product. To locate a dealer in your area contact IHP at 1-800-655-2008. You can also visit our web site at [www.Astria.US.com](http://www.Astria.US.com).

When calling your dealer, have ready:

- your name
- your address
- model and serial numbers of your fireplace
- how fireplace was malfunctioning
- purchase date

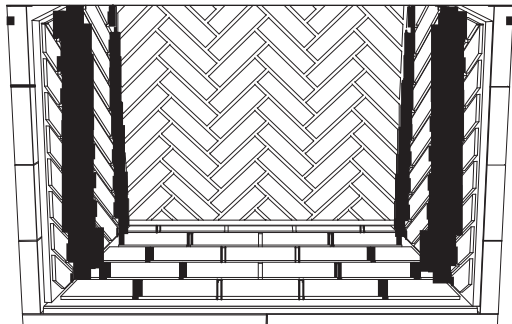
Usually, we require that the part is returned to the factory.

## TECHNICAL SERVICE

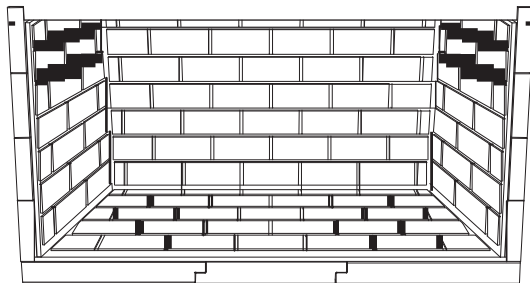
You may have further questions about installation, operation, or troubleshooting. Please contact your IHP dealer for any questions or concerns a. When calling your dealer please have your model and serial numbers of your fireplace ready. You can also visit our web site at [www.Astria.US.com](http://www.Astria.US.com).

## ACCESSORIES

Purchase these accessories from your local dealer. If they can not supply these accessories, call IHP at 1-800-655-2008 for referral information. You can also write to the address listed on the back page of this manual.



***Herringbone***



***Running Bond***

### BRICK PANELS

MM33SHBL - HERRINGBONE  
MM33FRBL - RUNNING BOND  
MM39SHBL - HERRINGBONE  
MM39FRBL - RUNNING BOND  
MM44SHBL - HERRINGBONE  
MM44FRBL - RUNNING BOND  
MM49SHBL - HERRINGBONE  
MM49FRBL - RUNNING BOND  
MM63SHBL - HERRINGBONE  
MM63FRBL - RUNNING BOND

### SEISMIC STRAP KIT

MM115

### MASONRY ARCH

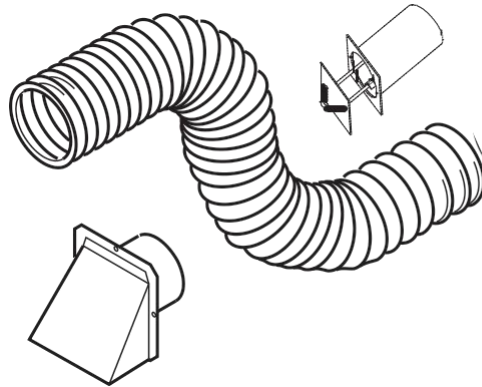
MMARC

### METAL BASE KIT

MMB33  
MMB39  
MMB44  
MMB49  
MMB63

### MORTAR - 50 LB. BUCKET

MM525



### 4" OUTSIDE AIR KIT

MM4AK

### DAMPER / ANCHOR PLATE KIT

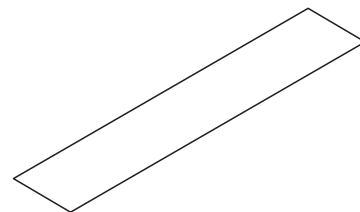
MM12AP - For use with IHP Chimney Systems

### GRATES

MMG3 - Fits MM33 & MM39  
MMG4 - Fits MM44  
MMG5 - Fits MM49  
MMG6 - Fits MM63

### SCREEN ASSEMBLIES

MMS1 - Fits MM39 & MM44  
MMS2 - Fits MM49 & MM63  
MMS3 - Fits MM33

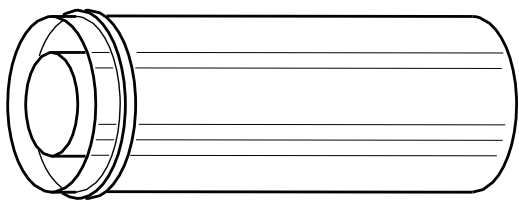


### EMBER PROTECTOR

20093

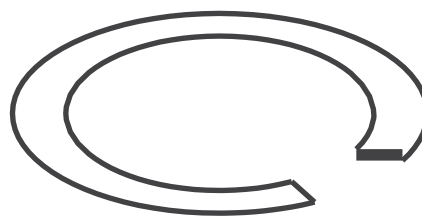
## ACCESSORIES

*Continued*



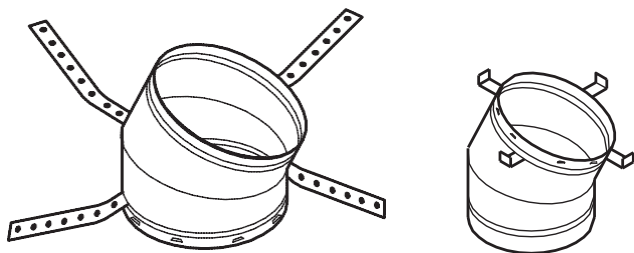
### DOUBLE WALL PIPE

12-12DM, 18-12DM, 24-12DM, 36-12DM AND 48-12DM



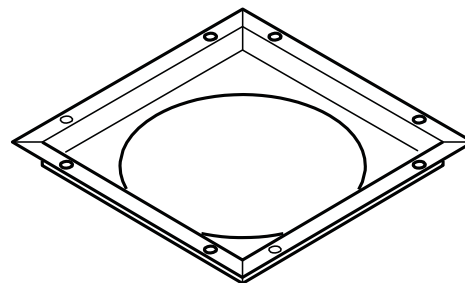
### STORM COLLAR

SC2-1



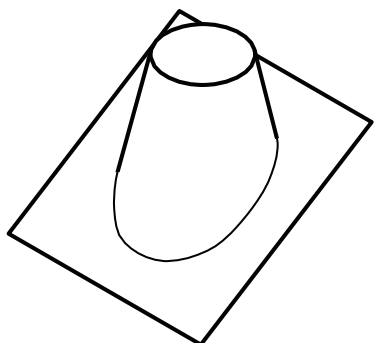
### 30° OFFSET AND RETURN

30E-12DM



### FIRESTOP SPACER

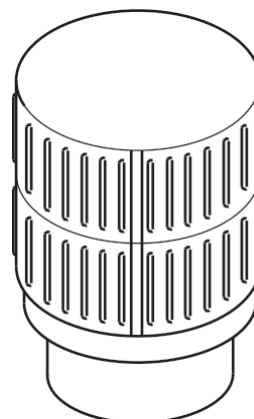
FS-10



### ROOF FLASHING

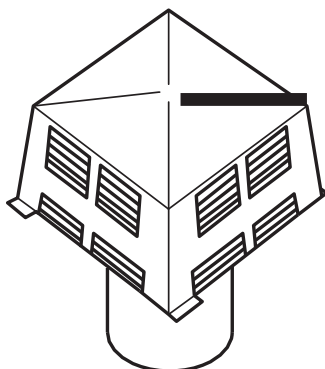
V6F-10DM - 0 TO 6/12 PITCH

V12F-10DM - 6/12 TO 12/12 PITCH



### ROUND TOP TERMINATIONS

RLT-12D



### SQUARE CHASE-TOP TERMINATION

STL-12D

STL-12DMP - Black

### CHIMNEY SUPPORT

12S-12DM

# **ACCESSORIES**

*Continued*

## **MASONRY (PRECAST) CHIMNEY**

### **14" DIAMETER**

MCLS814K - 12 Sections, 8" each (8 ft total)

MCLS814P - 6 Sections, 8" each (4 ft total)

MCL814 - Inner Liner

MCS814 - Outer Liner

MCL414 - Inner Liner, 4" High (Starter)

MCSBL814 - Brick Ledge

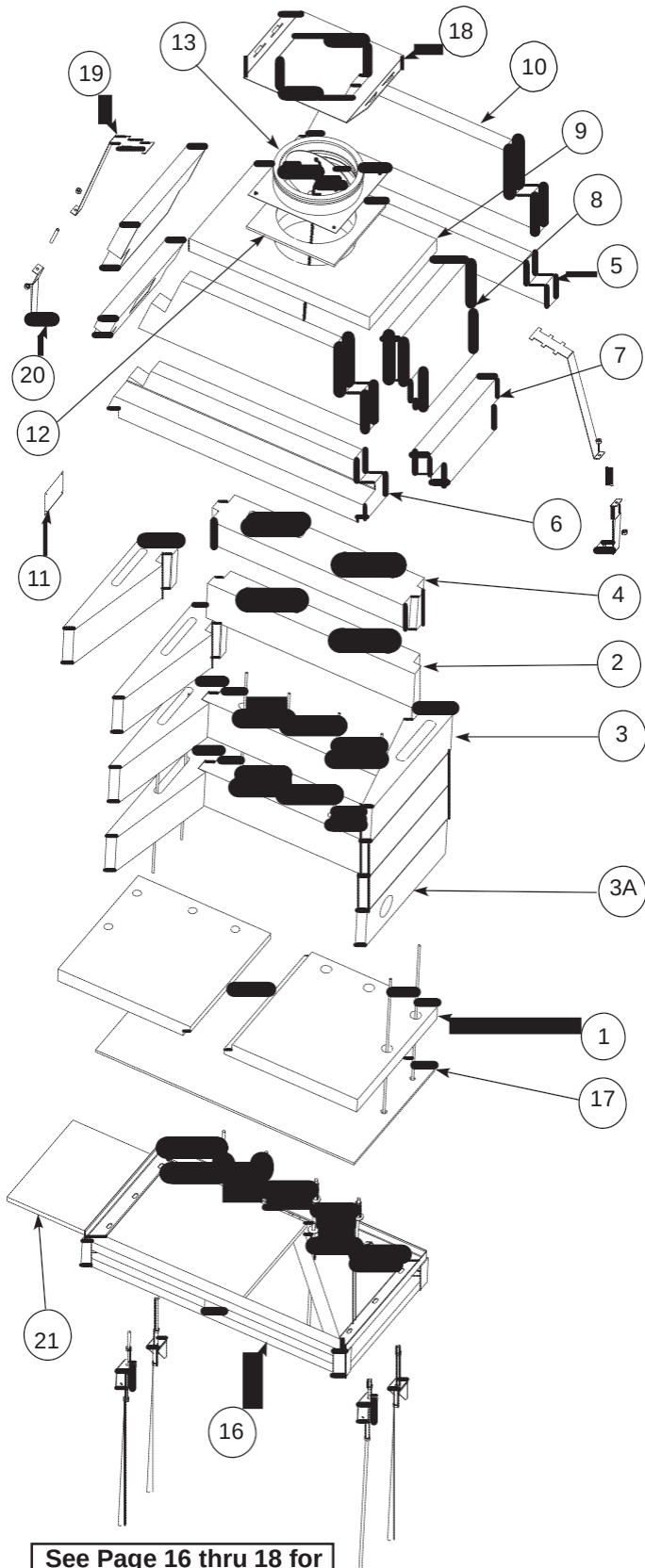
MCSOS814 - Offset Elbow Section

MC14AP - Anchor Plate / Damper

# PARTS

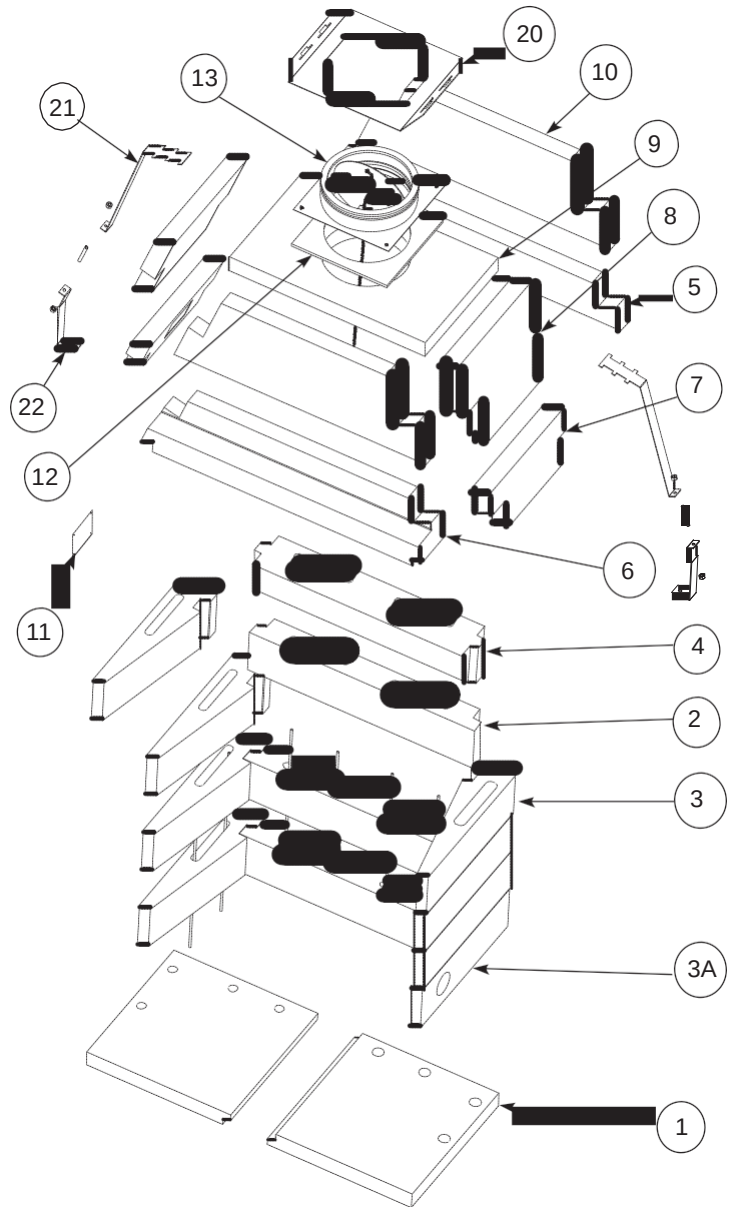
MODELS MM39, MM44 AND MM49

## Combustible Floor Systems



See Page 16 thru 18 for  
combustible floor and  
framing anchoring  
illustrations.

## Non-Combustible Floor Systems



## PARTS

This list contains replaceable parts used in your firebox. When ordering parts, follow the instructions listed under Replacement Parts on page 32 of this manual.

| ITEM | P/N                              | DESCRIPTION                                      | QTY |
|------|----------------------------------|--------------------------------------------------|-----|
| 1    | MFP39-1<br>MFP44-1<br>MFP49-1    | HEARTH (Left or Right)                           | 2   |
| 2    | MFP39-2<br>MFP44-2<br>MFP49-2    | REAR WALL                                        | 2   |
| 3    | MFP39-3<br>MFP44-3<br>MFP49-3    | SIDE WALL                                        | 5   |
| 3A   | MFP39-3A<br>MFP44-3A<br>MFP49-3A | SIDE WALL (with Ø4" Outside Combustion Air Hole) | 1   |
| 4    | MFP39-4<br>MFP44-4<br>MFP49-4    | SMOKE SHELF (Downdraft Diverter)                 | 1   |
| 5    | MFP39-5<br>MFP44-5<br>MFP49-5    | DOMES REAR - LOWER                               | 1   |
| 6    | MFP39-6<br>MFP44-6<br>MFP49-6    | LINTEL                                           | 1   |
| 7    | MFP39-7<br>MFP44-7<br>MFP49-7    | DOMES SIDE - LOWER                               | 2   |
| 8    | MFP39-8<br>MFP44-8<br>MFP49-8    | DOMES SIDE - UPPER                               | 2   |

| ITEM | P/N                                    | DESCRIPTION                        | QTY |
|------|----------------------------------------|------------------------------------|-----|
| 9    | MFP39-9<br>MFP44-9<br>MFP49-9F         | DOMES TOP Ø12"                     | 1   |
| 10   | MFP39-10<br>MFP44-10<br>MFP49-10       | DOMES FRONT/ REAR - MIDDLE         | 2   |
| 11   | 125086-01                              | RATING PLATE                       | 1   |
| 12   | 125179-01†                             | INSULATION BLANKET                 | 1   |
| 13   | MM12AP*                                | Ø12" DAMPER / ANCHOR PLATE         | 1   |
| 14   | MM4AK*                                 | Ø4" OUTSIDE AIR KIT                | 1   |
| 16   | MMB39*<br>MMB44*<br>MMB49*             | 6" METAL BASE                      | 1   |
| 17   | NOT SUPPLIED                           | CEMENT BOARDS                      | 2   |
| 18   | 125171-01#                             | 12" COLLAR, SEISMIC STRAP          | 1   |
| 19   | 125172-01#                             | SEISMIC STRAP, UPPER               | 2   |
| 20   | 125173-01#                             | SEISMIC STRAP, LOWER               | 2   |
| 21   | 125178-02§<br>125178-03§<br>125178-04§ | INSULATION<br>MM39<br>MM44<br>MM49 | 1   |

† ITEMS INCLUDED IN THE MM12AP\*

# ITEMS INCLUDED IN THE MM115\*

§ ITEMS INCLUDED IN METAL BASE KIT (ITEM 16)\*

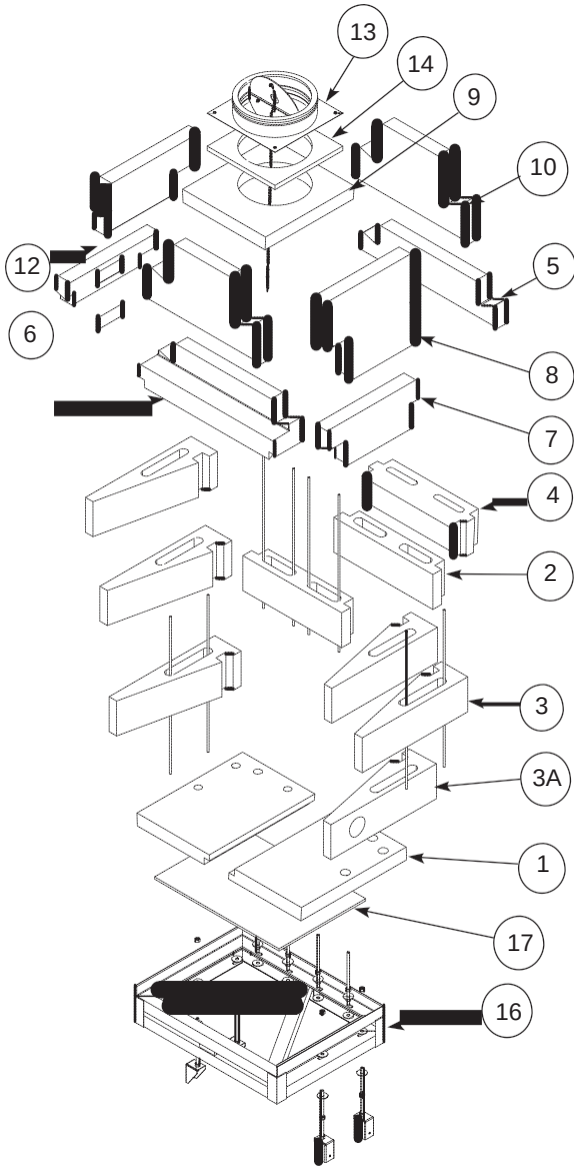
\* ITEMS NOTED ARE SOLD SEPARATELY

ITEMS INDICATED AS "NOT SUPPLIED" CAN BE OBTAINED FROM YOUR LOCAL HARDWARE STORE.

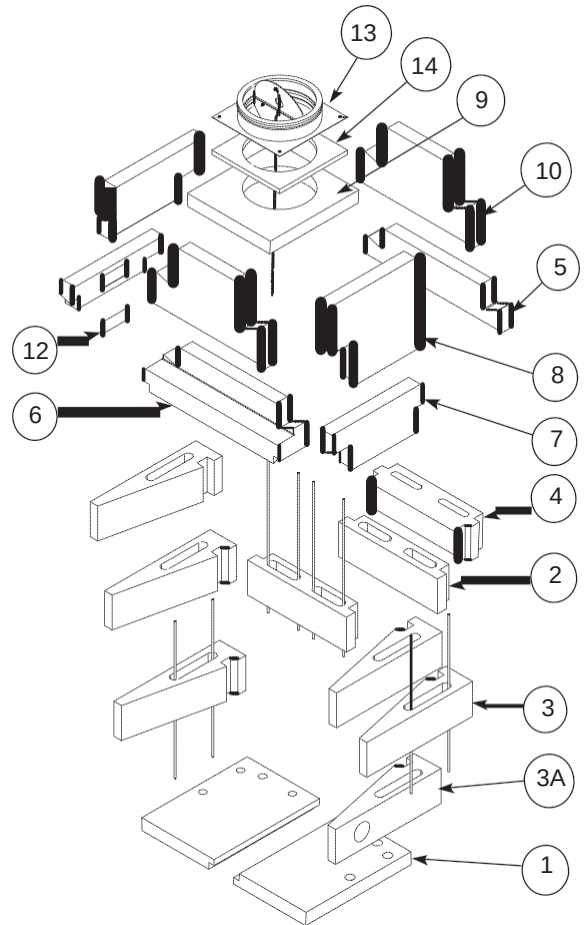
# PARTS

MODELS MM33

## Combustible Floor Systems



## Non-Combustible Floor Systems



See Page 16 thru 18 for combustible floor and framing anchoring illustrations.

## PARTS

This list contains replaceable parts used in your firebox. When ordering parts, follow the instructions listed under Replacement Parts on page 32 of this manual.

| ITEM      | PART NUMBER            | DESCRIPTION                                      | QTY |
|-----------|------------------------|--------------------------------------------------|-----|
| 1         | MFP33-1                | HEARTH (Left or Right)                           | 2   |
| 2         | MFP33-2                | REAR WALL                                        | 2   |
| 3         | MFP33-3                | SIDE WALL                                        | 5   |
| 3A        | MFP33-3A               | SIDE WALL (with Ø4" Outside Combustion Air Hole) | 1   |
| 4         | MFP33-4                | DOWNDRAFT DIVERTER                               | 1   |
| 5         | MFP33-5                | DOME REAR - LOWER                                | 1   |
| 6         | MFP33-6                | LINTEL                                           | 1   |
| 7         | MFP33-7                | DOME SIDE - LOWER                                | 2   |
| 8         | MFP33-8                | DOME SIDE - MIDDLE                               | 2   |
| 9         | MFP33-9                | DOME TOP FOR 12" IHP PIPE                        | 1   |
| 10        | MFP33-10               | DOME FRONT/REAR - MIDDLE                         | 2   |
| 12        | 125086-01              | RATING PLATE                                     | 1   |
| 13        | MM12AP*                | Ø12" DAMPER / ANCHOR PLATE                       | --- |
| 14        | 125179-01 <sup>†</sup> | INSULATION BLANKET                               | --- |
| 15        | MM4AK*                 | Ø4" OUTSIDE AIR KIT                              | --- |
| 16        | MMB33*                 | STEEL SUPPORT PLATFORM 6" HIGH                   | 1   |
| 17        | NOT SUPPLIED           | CEMENT BOARD                                     | --- |
| NOT SHOWN | 125178-01 <sup>§</sup> | INSULATION BLANKET                               | 1   |

<sup>†</sup> ITEMS INCLUDED IN THE MM12AP

\* ITEMS NOTED ARE SOLD SEPARATELY

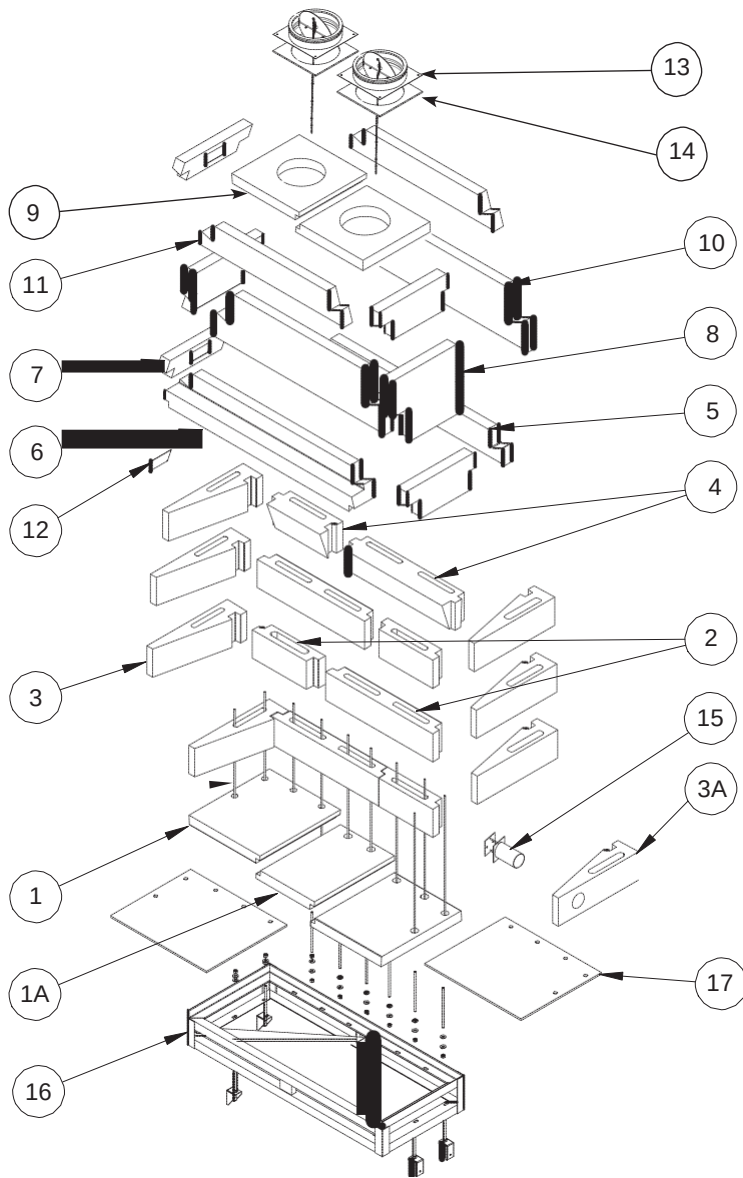
<sup>§</sup> ITEMS INCLUDED IN METAL BASE KIT (ITEM 16)\*

ITEMS INDICATED AS "NOT SUPPLIED" CAN BE OBTAINED FROM YOUR LOCAL HARDWARE STORE.

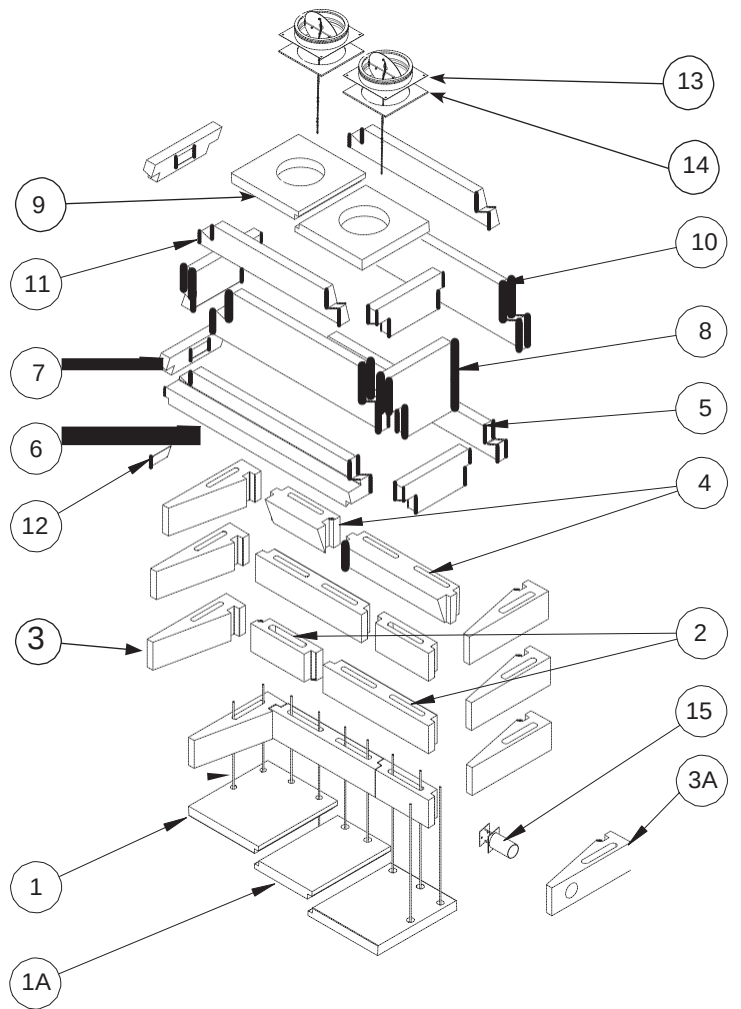
# PARTS

## MODELS MM63

### Combustible Floor Systems



### Non-Combustible Floor Systems



See Page 16 thru 18 for combustible floor and framing anchoring illustrations.

## PARTS

This list contains replaceable parts used in your firebox. When ordering parts, follow the instructions listed under Replacement Parts on page 32 of this manual.

| ITEM      | PART NUMBER  | DESCRIPTION                                      | QTY    |
|-----------|--------------|--------------------------------------------------|--------|
| 1         | MFP63-1      | HEARTH (Left or Right)                           | 2      |
| 1A        | MFP63-1A     | HEARTH CENTER                                    | 1      |
| 2         | MFP63-2      | REAR WALL (2 PIECES)                             | 3 sets |
| 3         | MFP63-3      | SIDE WALL                                        | 7      |
| 3A        | MFP63-3A     | SIDE WALL (with Ø4" Outside Combustion Air Hole) | 1      |
| 4         | MFP63-4      | DOWNDRAFT DIVERTER (2 PIECES)                    | 1 set  |
| 5         | MFP63-5      | DOME REAR - LOWER                                | 1      |
| 6         | MFP63-6      | LINTEL                                           | 1      |
| 7         | MFP63-7      | DOME SIDE - LOWER & UPPER                        | 4      |
| 8         | MFP63-8      | DOME SIDE - MIDDLE                               | 2      |
| 9         | MFP63-9F     | DOME TOP FOR DUAL 12" IHP PIPE (2 PIECES)        | 1 set  |
| 10        | MFP63-10     | DOME FRONT/REAR - MIDDLE                         | 2      |
| 11        | MFP63-11     | DOME FRONT/REAR - UPPER                          | 2      |
| 12        | 125086-01    | RATING PLATE                                     | 1      |
| 13        | MM12AP*      | Ø12" DAMPER / ANCHOR PLATE                       | 2      |
| 14        | 125179-01†   | INSULATION BLANKET                               | 2      |
| 15        | MM4AK*       | 4 INCH DIA. OUTSIDE AIR KIT                      | 1      |
| 16        | MMB63*       | STEEL SUPPORT PLATFORM 8" HIGH                   | 1      |
| 17        | NOT SUPPLIED | CEMENT BOARD                                     | 1      |
| NOT SHOWN | 125178-05    | INSULATION BLANKET                               | 1      |

† ITEMS INCLUDED IN THE MM12AP\*

\* ITEMS NOTED ARE SOLD SEPARATELY

§ ITEMS INCLUDED IN METAL BASE KIT (ITEM 16)\*

ITEMS INDICATED AS "NOT SUPPLIED" CAN BE OBTAINED FROM YOUR LOCAL HARDWARE STORE.

## 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).

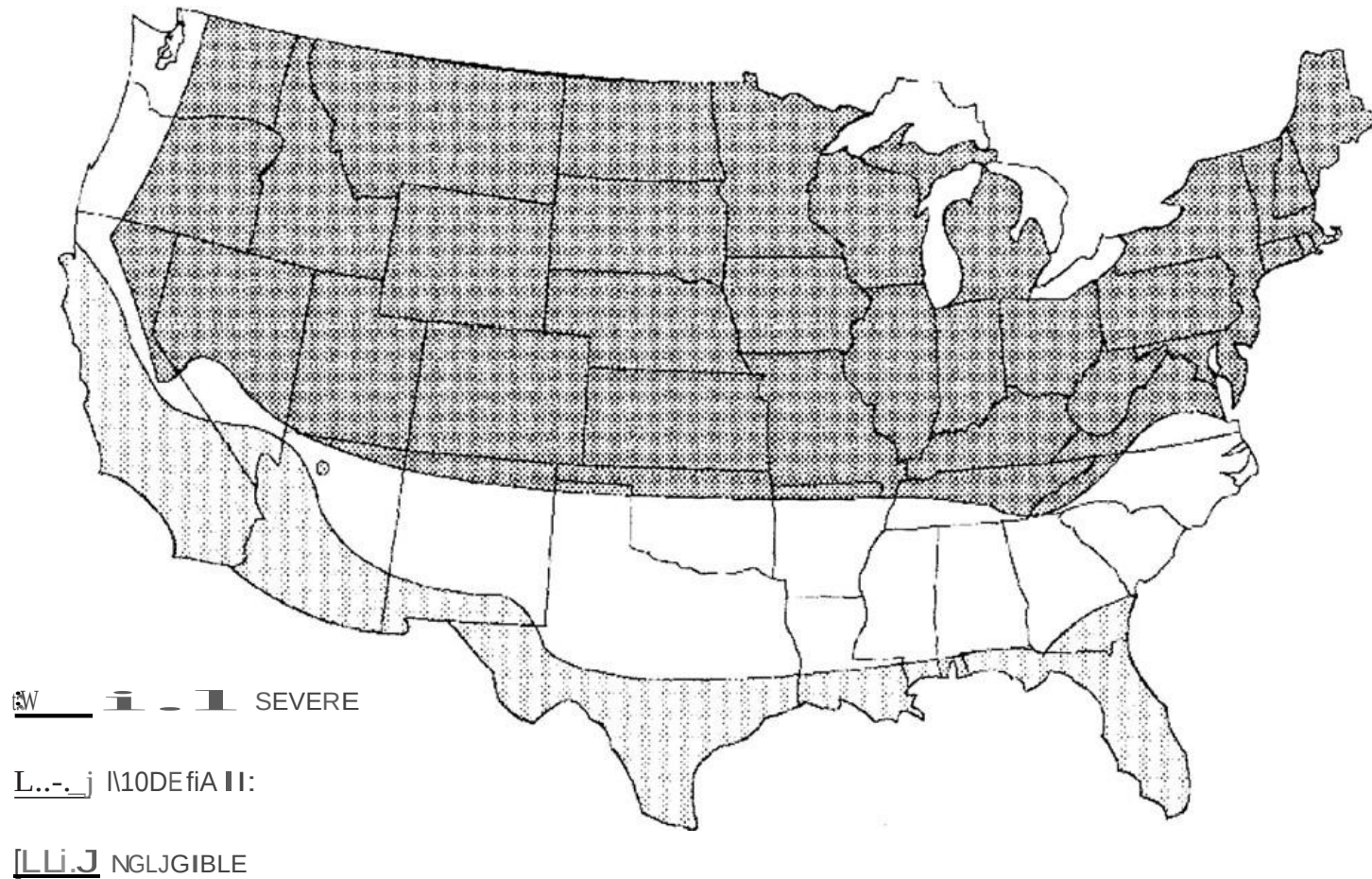
**TABLE R402.2 MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE**

| 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



- Alaska and Hawaii are classified as severe and negligible, respectively.
- 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.

# WARRANTY

## KEEP THIS WARRANTY

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

Model (located on product or identification tag) \_\_\_\_\_

Serial No. (located on product or identification tag) \_\_\_\_\_

Date Purchased \_\_\_\_\_

Keep receipt for warranty verification.

### IHP LIMITED WARRANTIES

#### New Products

IHP warrants all Grand Meridian 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. IHP does not warrant accessory chimney, outside air ducts, gas control or burner system, ceramic logs, and devices not manufactured by IHP. Valves and electronic parts are only covered for one year parts and labor per the log set manufacturer's warranty.

This warranty covers only products manufactured by IHP, 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, IHP 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 IHP, 1508 Elm Hill Pike Suite 108, Nashville, TN 37210 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.

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

IHP is not responsible for misuse or mishandling of component parts. Nothing in this warranty makes IHP, 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 IHP product.

IHP, 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 IHP 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.

IHP 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 IHP. Accessory orders will be accepted by mail, or you may call to order Monday through Friday from 8:00 a.m. to 5:00 p.m. (Central Standard Time) at: 1-800-655-2008.

Innovative Hearth Products reserves the right to make changes at any time, without notice, in design, materials, specifications, prices and also to discontinue colors, styles and products. Consult your local distributor for fireplace code information.



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