

Warning:
Only our approved burners that are included with the units can be used.



Equipped with Safety Pilot System / Remote Control Valve

B-vented Gas Appliances with Masonry Firebox

Models MGFP39/44/49

Equipped with Safety Pilot System / Remote Control Valve

⚠ WARNING:

If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or death.

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

WHAT TO DO IF YOU SMELL GAS:

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone and follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency, or the gas supplier.

IMPORTANT: READ THESE INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION OF THIS APPLIANCE.

The logs and burner must be permanently installed in and are only for use in this appliance. This appliance must be connected to a working flue meeting the requirements of the ANSI Z21.50 standard.

Solid-fuels shall not be burned in this appliance.

This appliance must be vented vertically through the roof. This appliance is not for installation in manufactured or mobile homes. The installation, including provisions for combustion, ventilation air, and required minimum permanent vent opening, must conform with the National Fuel Gas Code (ANSI Z223.1/NFPA 54) and applicable local building codes. **This gas appliance is designed to burn with yellow flames; thus adequate ventilation is absolutely necessary.**

⚠ WARNING:

This gas appliance must not be connected to a chimney fuel servicing a solid fuel burning appliance.

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

Installer: Leave these instructions with the consumer.

Consumer: Retain for future reference.



We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.



Report No. 08-154






ICC Evaluation Services
Report No. 2401

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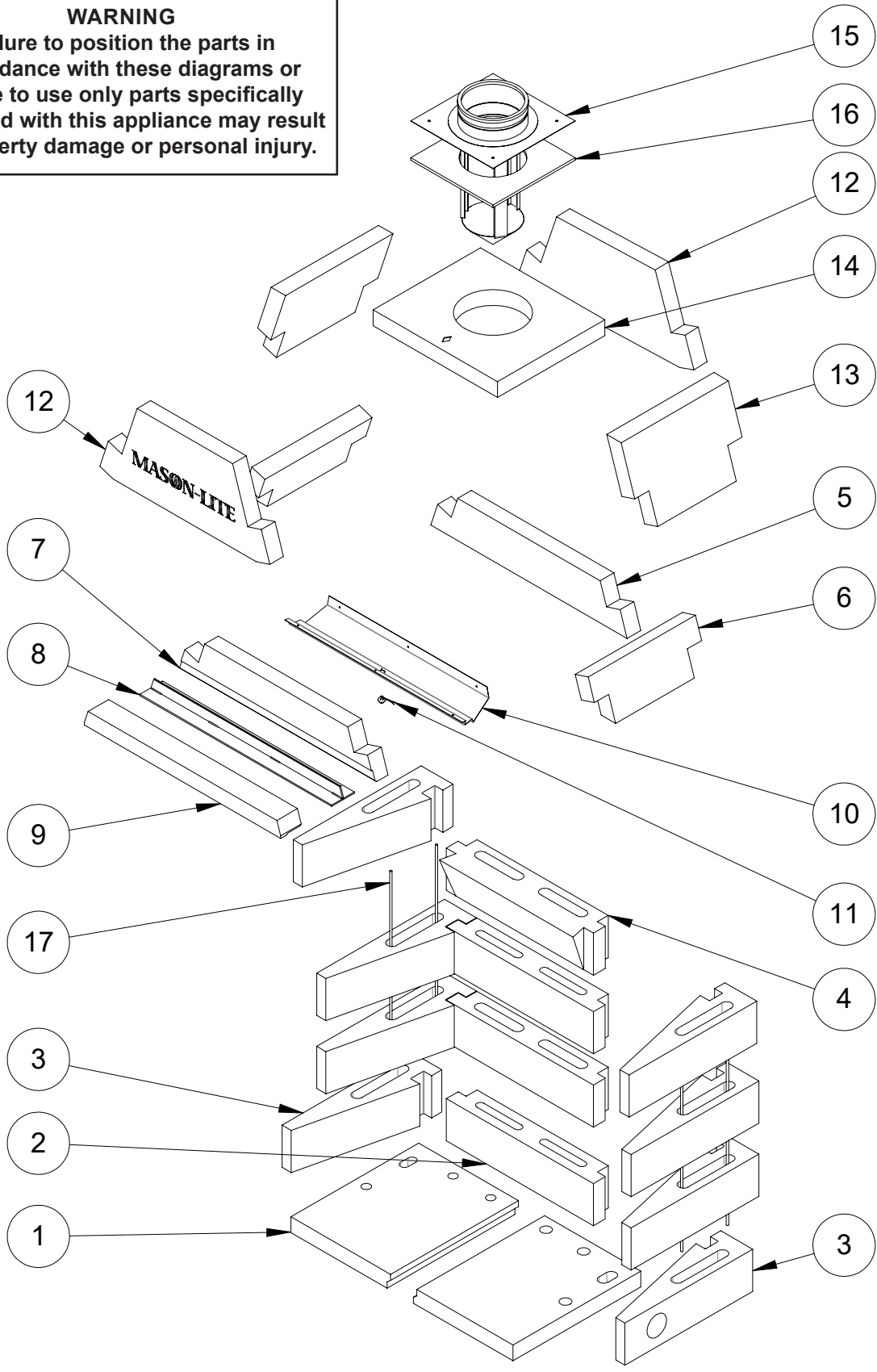
Below is a sample picture of the rating plate that is located inside the lower dome side of your appliance. Model Number, Date Of Manufacture and Serial Number should be stamped on the plate where indicated.

 <p>6391 Jurupa Ave. Riverside, CA 92504</p>	<p>DO NOT REMOVE THIS LABEL</p> <p>See MFI's installation and operating instructions for this model. Contact local building officials about restrictions and installation specifications in your area.</p>	<p>Tested & Listed By  Report No. 08-154</p>	
<p>LARR No. 25924</p>	<p>DATE OF MFG. <input type="text"/></p>	<p>SERIAL No. <input type="text"/></p>	
<p>MODEL No.: <input type="checkbox"/> MGFP-39 <input type="checkbox"/> MGFP-44 <input type="checkbox"/> MGFP-49</p>	<p>GAS TYPE: <input type="checkbox"/> NG <input type="checkbox"/> LP</p>		
<p>WARNING: THIS FIREPLACE HAS BEEN TESTED FOR USE ONLY WITH APPROVED GLASS DOORS. TO REDUCE RISK OF FIRE OR INJURY, CONSULT OWNER'S MANUAL.</p> <p>THIS FIREPLACE IS DESIGNED FOR USE ONLY WITH THE ANSI Z21.50 DECORATIVE GAS LOGS AND BURNER TESTED AND APPROVED FOR THIS FIREPLACE. Consult instructions included with this firebox for further information.</p>	<p>WARNING: For listed chimneys</p> <p>Min.: 14 in. (356 mm) sections maximum</p> <p>IMPORTANT: Refer to pipe manufacturer's instructions.</p>	<p>FIREPLACE CLEARANCES TO COMBUSTIBLES:</p> <p>FRONT, REAR.....0" (0 mm)</p> <p>FLOOR.....0" (0 mm)</p> <p>HINGE ABOVE OPENING TOP.....8" (200 mm)</p> <p>OR TRIM TO OPENING SIDES.....12" (300 mm)</p> <p>SIDE WALL.....20" (500 mm)</p> <p>TENSION BEYOND SIDES.....12" (300 mm)</p> <p>INSULATION FROM FIREBOX.....0" (0 mm)</p> <p>FOR MANTEL CLEARANCES CONSULT OWNER'S MANUAL</p>	
<p>THIS APPLIANCE NEEDS FRESH AIR FOR SAFE OPERATION AND MUST BE INSTALLED SO THERE ARE PROVISIONS FOR ADEQUATE COMBUSTION AND VENTILATION AIR.</p> <p>This appliance is not for installation in manufactured or mobile homes.</p>			
<p>The installation, including provisions for combustion, ventilation air, and required minimum permanent vent opening, must conform with the National Fuel Gas Code (ANSI Z223.1/NFPA 54) and applicable local building codes.</p>			
<p>WARNING: This gas appliance must not be connected to a chimney fuel servicing a solid fuel burning appliance.</p>			
<p>WARNING: THIS FIREPLACE IS NOT INTENDED FOR BURNING SOLID FUELS.</p>			

Appliance Parts List

Figure 1

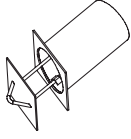
WARNING
Failure to position the parts in accordance with these diagrams or failure to use only parts specifically approved with this appliance may result in property damage or personal injury.



See Page 8 and 9 for framing anchoring components.

MGFP39/44/49 Appliance Parts List

Optional Outside Ø4" Combustion Air Kit
Model No.: MFP4-AK



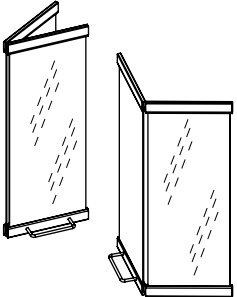
(Ø4" Ducting not included)

ITEM NO.	DESCRIPTION	QTY.
1	HEARTH BTM	2
2	REAR WALL	3
3	SIDE WALL	8
4	DOWNDRAFT DIVERTER	1
5	DOME, REAR, LOWER	1
6	LOWER SIDE DOME	2
7	LOWER DOME FRONT	1
8	T-BAR, STEEL	1
9	LINTEL	1
10	SPILL SWITCH CHANNEL	1
11	SPILL SWITCH	1
12	DOME, FRONT-REAR	2
13	UPPER SIDE DOME	2
14	DOME TOP	1
15	10 in DOWNDRAFT DIVERTER/ANCHOR PLATE	1
16	INSULATION BLANKET (NOT INCLUDED)	1
17	#3 REBAR (Ø3/8") x 36"	4



MFP(39,44,49)SHBL- Herringbone
MFP(39,44,49)FRBL- Running Bond

Refractory Firebrick Liners
 (Herringbone Pattern shown, also available in Running Bond - see Pg.27)



Only the following doors have been tested and approved for use with this fireplace:
 Crown-Breckinridge
 or
 McKenzie-Pendelton

Warning:
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* ITEMS NOTED ARE SOLD SEPARATELY.

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

Triple Burner Gas Log Sets

MODELS:

MLGB24	24" Natural Gas Burner for the MGFP39
MLGB24P	24" Propane Gas Burner for the MGFP39
MLGL24	24" Log Set for the MGFP39
MLGB30	30" Natural Gas Burner for the MGFP44
MLGB30P	30" Propane Gas Burner for the MGFP44
MLGL30	30" Log Set for the MGFP44
MLGB39	39" Natural Gas Burner for the MGFP49
MLGB39P	39" Propane Gas Burner for the MGFP49
MLGL39	39" Log Set for the MGFP49

SPECIFICATIONS:

These gas burner systems must be installed only in a wood burning fireplace with the minimum firebox dimensions and venting requirements met (see table on this page). This appliance is designed to burn with yellow flames; adequate ventilation is absolutely necessary.

Table 1 - Product Specifications

Burner P/N	Dimensions				BTU Rating				Included in
	Width *		Depth	Height	Nat Gas		LP Gas		
	Front	Rear †			High Setting	Low Setting	High Setting	Low Setting	
MLGB24(P)	35"	25"	15"	17"	65k	21k	50k	22k	MGFP39
MLGB30(P)	39"	28"	15"	17"	65k	21k	50k	22k	MGFP44
MLGB39(P)	47"	32"	15"	17"	75k	22k	60k	23k	MGFP49

* These required widths allow for proper centering of the burner.

† Rear width is at corresponding depth.

Table 2 - Technical Data

Specification	Value	Qty
Burner system battery type	AA Battery	4
Remote transmitter battery type	12V Battery	1

Warning:

Only our approved burners that are included with the units can be used.

Product Overview

Introduction

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

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

Product Overview

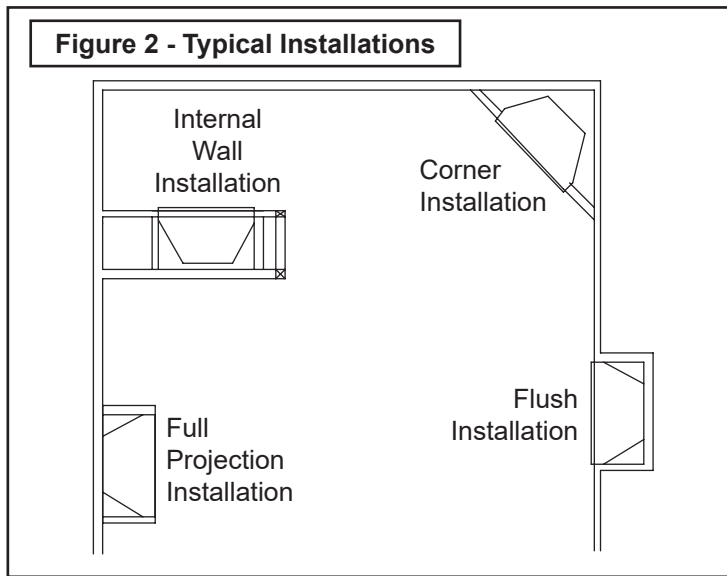
Mason-Lite Appliances are designed as factory-built blocks to be assembled on-site. These appliances may be installed on either combustible or non-combustible floors. In order to function, the system requires a 10" B-vent chimney.

The main components of the Mason-Lite Appliance are:

- Mason-Lite Firebox, Smoke Dome and Refractory Liners
- Gas burner, logs and control system.
- 10" Diameter B-vent

Careful step-by-step instructions for each phase of the installation procedure will be given for the Mason-Lite appliance. 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
- Set up and use of the gas burner system.
- Choice of materials and craftsmanship in appliance and hearth finishing.



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

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

WARNING! Under no circumstances should you allow children to remain unattended while a fire is burning in the appliance! Be sure to keep all objects – furniture, drapes, rugs, etc. at least 48" (48 inches) away from the opening of the appliance!

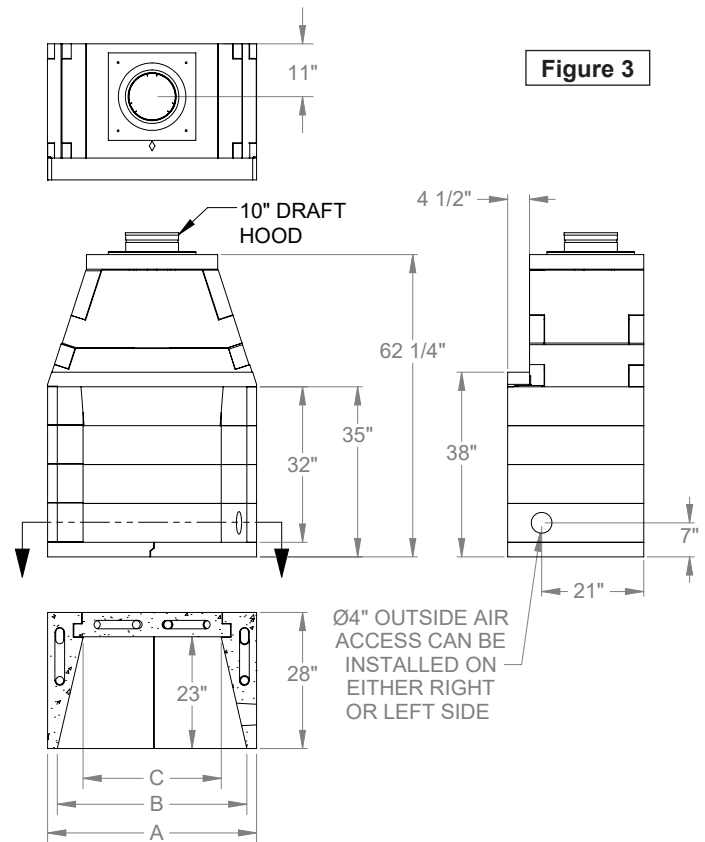
Attention: You may need a residential building permit to install a Mason-Lite Appliance. Consult local jurisdictions before you get started!

The MASON-LITE gas appliance is not designed to serve as a primary heat source, rather, the appliance was expressly created as a supplemental source of heat. This unit is designed for use with the provided gas burner and approved logs only.

Testing and listing for the MASON-LITE gas appliance has been undertaken by PFS Test Laboratories, Inc. to ANSI Z21.50.

Under no circumstances should the MASON-LITE gas appliance be considered for other than in-residence buildings of conventional construction.

These components make up the MASON-LITE gas appliance and in the following pages, you will learn how they work together to create an exceptional unit that will give years of service and pleasure!



Overall Dimensions MASON-LITE Appliances

Model	A	B	C	D
MGFP39	43"	39"	30-1/4"	27-3/4"
MGFP44	48"	44"	35-1/4"	32-3/4"
MGFP49	53"	49"	40-1/4"	37-3/4"

Required Gas Pressure

The minimum inlet gas supply pressure for the purpose of input adjustment is 5" of water column (w.c.) for natural gas.

The maximum inlet gas supply pressure is 10.5" w.c. for natural gas. The minimum inlet gas supply pressure for the purpose of input adjustment is 11" of water column (w.c.) for propane gas. The maximum inlet gas supply pressure is 13" w.c. for propane gas.

Testing the Gas Supply System

The gas appliance and its required individual shut-off valve must be disconnected from the gas supply piping system while performing any tests of the piping system at pressures in excess of 1/2 psig.

The gas appliance must be isolated from the gas supply piping system by closing its individual manual shut-off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig.

This is accomplished by closing the gas supply line valve required by NFPA 54.

A appliance screen must be replaced after service and be in place when the appliance is in operation and, unless other provisions are provided, the screen shall have an opening for introduction of combustion air.

When glass appliance doors are used, operate the gas appliance with the doors open. Use only doors rated for this appliance.

Important

To comply with building code acceptances, and for safe operation and proper performance of this appliance, use ONLY MASON-LITE parts and accessories.

Use of other controls, parts, and accessories which are not designed for use with MASON-LITE gas appliances is prohibited and will void all warranties, certifications, listings, and building code approvals, and may cause property damage, personal injury, or loss of life.

The burner included with this gas appliance is non-convertible and only meant to be used with the gas listed on the rating plate.

GUIDELINES FOR USE:

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

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

It is the responsibility of the distributor, subcontractor and/or the general contractor – whoever shoulders the liability for installation of this product – to see to it that the work is in complete compliance with the guidelines and instructions in this manual.

Note that the general contractor is the party accountable for seeing that adequate clearances are provided from all firebox surfaces per specifications in this manual.

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

The Mason-Lite is Designed for Use Only with:

- The supplied burner and log system
- Plumbed LPG or Natural Gas.

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

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!

Clearance to Combustibles

The distance to be maintained from the surfaces of the appliance 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	Particle board
Mill board	Plywood paneling	

Maintain the following minimum clearances:

Unit front, sides, rear	0"	(0 mm)
Combustible floor Requires 1/2" Cement Board under unit	0"	(0 mm)
Sheathing or trim to opening sides	8"	(203 mm)
Combustible sheathing above opening top	8"	(203 mm)
Mantel above opening	12"	(305 mm)
Opening to side wall	20"	(508 mm)
Insulation from firebox	0"	(0 mm)

Due to high temperatures, never install this appliance in a recreational vehicle, in high traffic areas, drafty areas, or where curtains, furniture, clothing, or other flammable objects are less than 36" from the front or side and 42" from the top of the appliance.

CAUTION: This gas appliance attains high temperatures. Keep children and adults away from hot surfaces to avoid ignition of clothing and/or burns. Even after the appliance is shutdown it will remain hot for a time afterward. Allow the surface to cool before touching it.

Carefully supervise young children when they are in the room with the appliance.

All appliance openings for both combustion air and exhaust must remain open and unobstructed at all times when the appliance is in operation.

The MASON-LITE appliance has been designed, tested and approved for zero clearance to combustible floors.

Be certain that the MASON-LITE appliance is installed with the finished fire brick floor of the appliance so that it is at least 4-1/2" (four and a half inches) above the combustible floor system.

Warning to the structural engineer and/or building contractor: It is your responsibility to be certain that the appliance can be properly supported by the combustible floor system on which the appliance will rest. Be advised that this engineering equation will be in addition to any live or dead weights that the floor has to carry.

Mason-Lite Appliance & Chimney Systems

Before Getting Started...

Even if you consider yourself an expert in the field of appliance installation, we at Masonry Fireplace Industries caution you to take the time to totally familiarize yourself with the instructions to follow.

We can assure you that there will be information that will make the installation go smoother and, above all, safer, for everyone concerned. At the least, reading these procedures will save you time and, at the most, it will prevent any malfunction that could result in property damage or serious injury.

Do not start the installation until you have checked out all the local, regional, state and national rulings, laws and codes as they apply to appliances and appliance installations. Every community is different so do not assume that because you know the requirements for one locality, it will be the same in the next. Avoid bureaucratic hassles and do your homework **WELL BEFORE** you start your project!

- 1) The MASON-LITE gas appliance is designed to be installed with a B-vent metal chimney system, UL 103 chimney. Such chimney systems are acceptable where any traditional masonry fireplace has been specified. Note that the chimney system must always vent to the outside of the building.
- 2) This Mason-Lite appliance 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 appliance. Appliances 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 a manufacturer's control when it comes to the operation of the appliance. The manufacturer cannot be responsible for "smoke free" operation, nor can the manufacturer take on the responsibility for problems with surrounding construction; chimneys that have not been built at the right heights; system drafts caused by faulty mechanical systems; adverse weather conditions or any other inclement environmental situations over which the manufacturer has no control.
- 5) Inspect all appliance & 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 appliance. You must follow these chimney instructions.

Chimney System Heights

When installed, the maximum overall height of the Appliance is 40'-0" (forty feet). The minimum installed height of the completed appliance is 14' 0" (fourteen feet), given that the chimney is straight. If the chimney includes one or more offset sections, the measurement is 17' 0" (seventeen feet).

Supporting Floor Systems

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

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

For appliance support foundations installed on concrete refer to Appendix I and II (pages 31 & 32) for specific instructions.

Rebar locations

Lay-out the position of the appliance 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 appliance to wood floor construction is required. Refer to **Figure 9** 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 4 thru 6 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 that additional floor joists may be required to support the weight of the firebox and chimney. Where the floor joists run parallel to the front of the firebox, anchorage can be accomplished in like manner as shown in Figure 4 using blocking between the floor joist.

For floors supported by I-Joists, the method of anchorage is illustrated in Figures 5 and 6. Figure 9 illustrates the general arrangement of anchorage to floor framing.

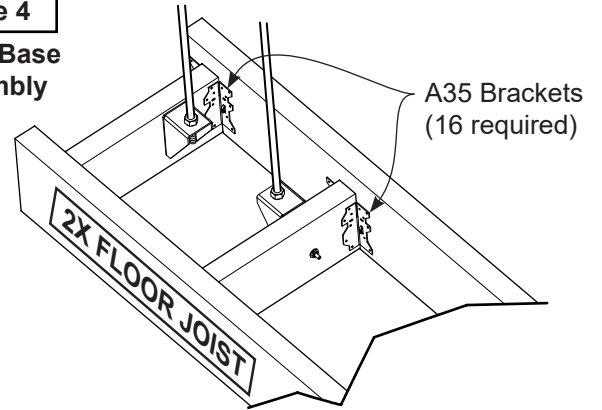
It is important to take into consideration that the load for the Mason-Lite Appliance must be considered as additional dead load that will have to be supported by the floor framing. Additional floor joists or I-joists may be required as determined by the licensed design professional.

The dead weights for the appliance 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 appliance installation.

As stated above, it is desirable to place additional framing for alignment of anchor rods. Refer to Figure 7 for anchor rod locations.

Figure 4

Metal Base Assembly



EXAMPLE ONLY

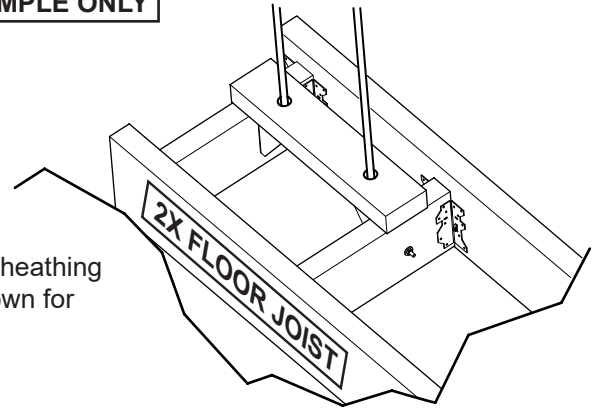


Figure 5

I-Joist Anchoring Top View

Simpson Strong-Tie A-35 or equivalent

Example Only

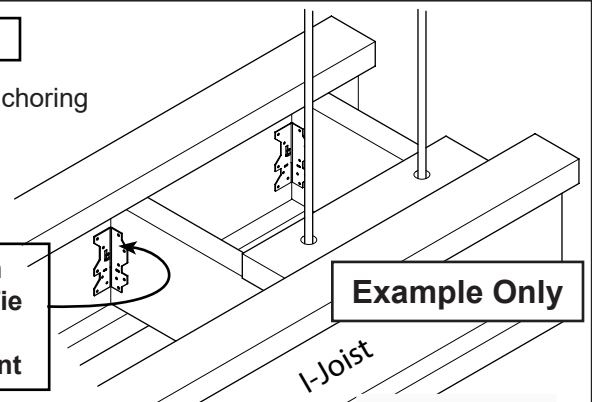
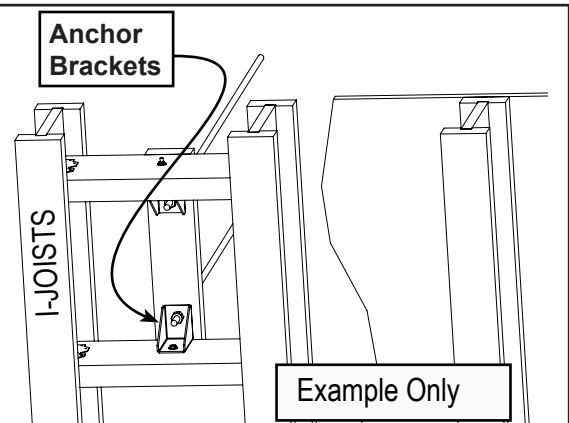


Figure 6

I-Joist Anchoring Bottom View

Anchor Brackets

Example Only



MASON-LITE Weight Determination

The following are dead load weight estimates for the Mason-Lite Appliance.

Table I			
Appliance Model	MGFP39	MGFP44	MGFP49
Appliance Weight	1,194 lbs.	1,250 lbs.	1,359 lbs.
Mortar, Rebar & Ready Mix Concrete	350 lbs.	357 lbs.	364 lbs.
Firebrick Lining	333 lbs.	345 lbs.	356 lbs.
Draft Hood	17 lbs.	17 lbs.	17 lbs.
Floor Area	42" x 28" (8.12 ft ²)	48" x 28" (9.33 ft ²)	53" x 28" (10.30 ft ²)

Other Weight Considerations:

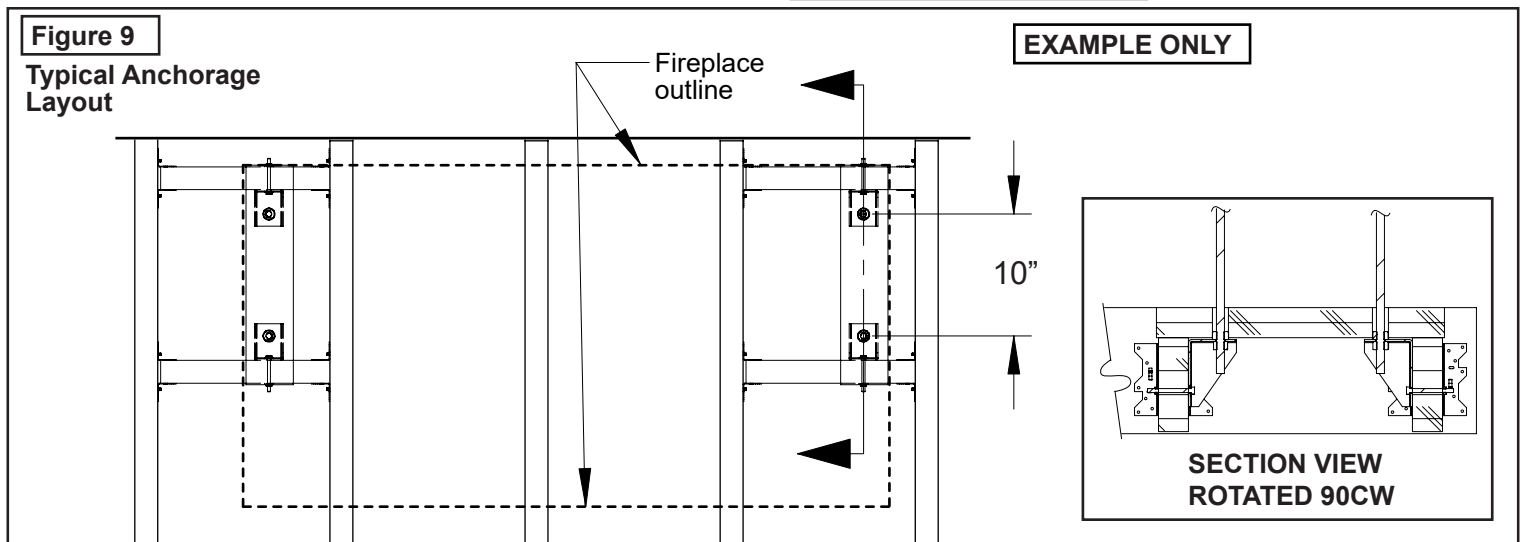
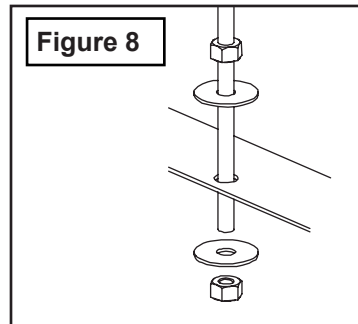
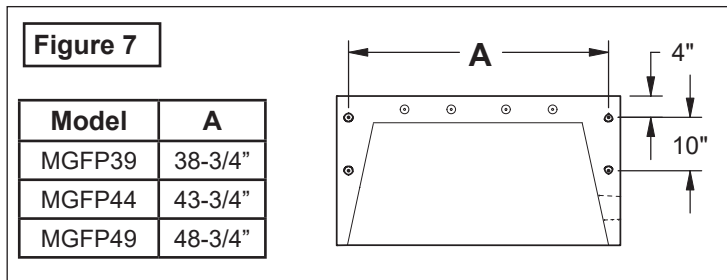
- 1) Appliance finished facing (surround): This information needs to be obtained from the contractor.
- 2) Weight of metal flue: See chimney manufacturer's weight specifications. Some chimney systems can weigh up to 50 lbs per lineal foot.

Table II - Deflection Limits			
Construction	L	S or W	D + L ₁
Floor Members	1/360	---	1/240

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

Note that MASON-LITE cannot accept responsibility for structural floor support details. All drawings are presented as 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.

ATTENTION: Figure that these totals for the dead loads are in addition to the actual live load as well as other dead load requirements for the specified site's proposed floor. Only the MASON-LITE weights are known. Other weights are estimates and are subject to material choices of the installer or owner.



What You Will Need

You will find that the MASON-LITE Appliance is designed to be completely assembled on-site, consisting of interlocking precast parts. The parts of the appliance are made of Mason-Lite'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 is required but not supplied. You may purchase it from any chimney manufacturer or MFI. Also, an optional combustion air inlet MFP4-AK can be obtained from MFI.

Refractory Firebrick Liners also need to be installed. These should be a minimum of 1-1/2" thick. The liner will be applied within the walls and hearth area of the firebox. These are available from MFI.

Tools needed for installations:

- One 4' level
- Roto-hammer with 1/2" drill bit (needed for concrete slab install only)
- Drill motor with mixer blade (to mix Mason-Lite Mortar)
- Two empty 5 gallon buckets (to mix Mason-Lite Mortar)
- One wheelbarrow and shovel to mix concrete.
- Grout bag
- Triangular masonry trowel
- Rubber hammer
- Sponge and water bucket to wipe down and moisten parts prior to applying mortar.

Materials needed for concrete slab installations

MGFP39:

Six (6) pieces 3/8" rebar x 36" long (included with unit)

Six (6) pieces of rebar x 12" long (included with unit)

MGFP44/49:

Eight (8) pieces 3/8" rebar x 36" long (included with unit)

Eight (8) pieces of rebar x 12" long (included with unit)

ALL UNITS:

- Epoxy for securing rebar in footing / foundation.
- Three (3) - 90 lb. bags of Ready-Mix Concrete with 1/4" or smaller aggregate.

Materials needed for wood floor installations

MGFP39:

1/2" Cement Board

Six (6) pieces 3/8" rebar x 36" long (included with unit)

MGFP-44/49:

1/2" Cement Board

Eight (8) pieces 3/8" rebar x 36" long (included with unit)

ALL UNITS:

Three (3) - 90 lb. bags of ready mix concrete with 1/4" or smaller aggregate.

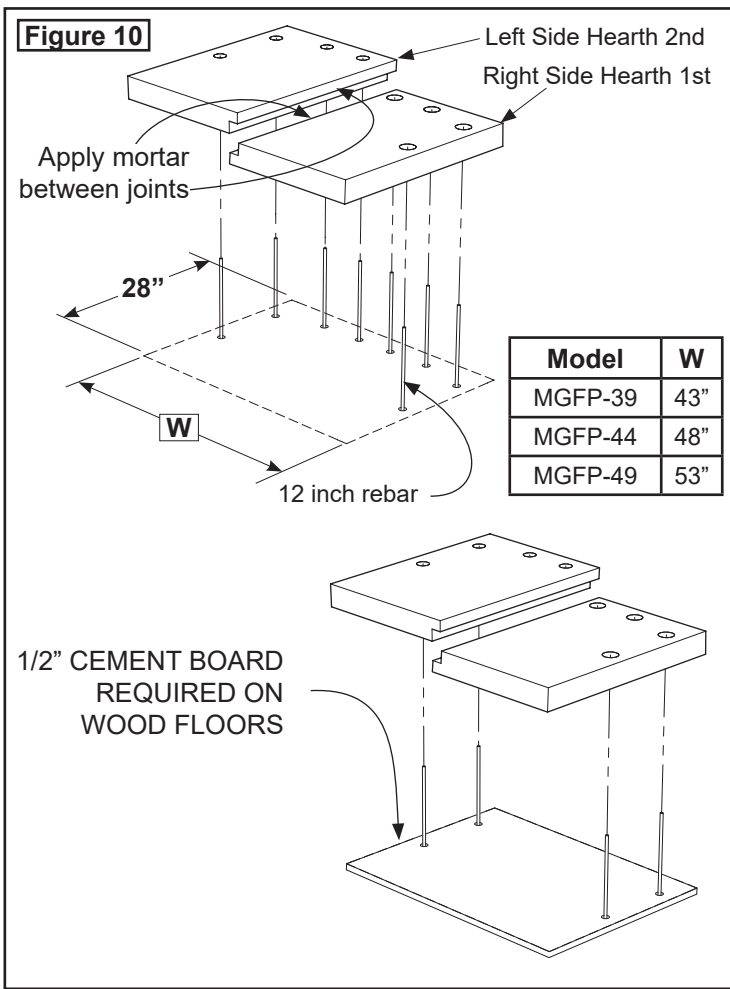
SURFACE CRACKS - The MASON-LITE FIRE-PLACES are manufactured using high quality materials. During the drying process, surface cracking may occur. These small cracks (under 1/16" will not affect the appliance safety or performance). During the assembly process, fill surface cracks with thin-set mortar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

Field Assembly Procedures

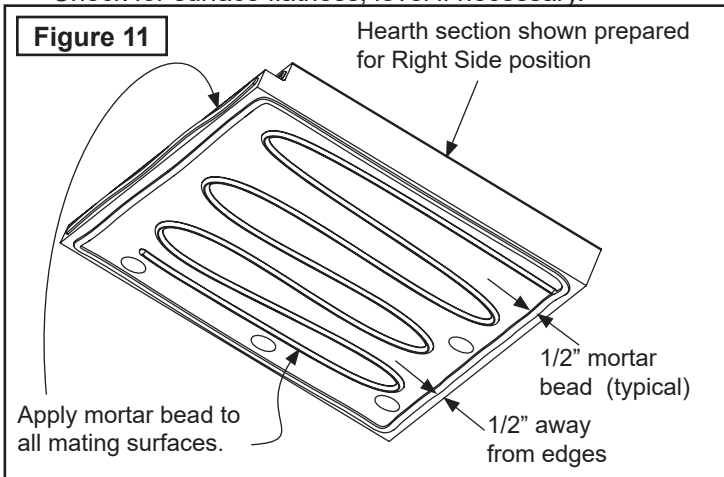
- a) Mixing the MASON-LITE mortar – The mortar comes premixed and should be dry. Be sure to use clean water and work it up into a mixture that is pasty but not lumpy. If it's too thin and the surfaces don't stay moist, the components will not adhere. Load the mixture into a standard grout bag.
- b) Apply about 1/2" (one-half inch) thread of mortar. The mortar bead should be approximately 1/2" (one-half inch) 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!
- c) 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.
- d) Make sure components are level. It's extremely important that you pay careful attention to how you are assembling the Mason-Lite Appliance 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 appliance that will not be plumb or level. Use wood shims instead. **You will find these small wood shims supplied with the Mason-Lite Appliance** and 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.

Appliance Assembly Procedures

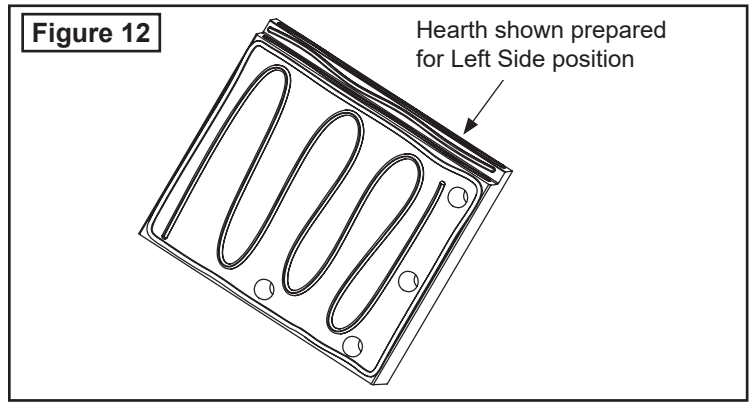
1. Place the Mason-Lite appliance hearth on the floor where the appliance is to be installed. For concrete slabs, supporting floor needs to be rated at ASTM 90.
2. Draw an outline of the hearth area based on the dimensions shown in **Figure 10**. Position Hearth slabs and mark rebar center locations. Drill 4 inches into concrete slab and secure the 8 pieces of 12 inch rebar with epoxy. For other than concrete slabs, draw an outline of the hearth area based on the dimensions in Figure 9 taking special consideration on the position of where the all-thread studs will be located in relation to the anchoring locations. All-thread rods should stick up through the holes on the hearth slabs.



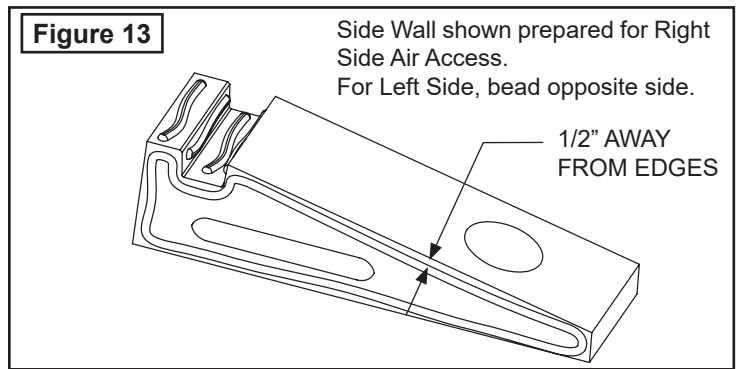
- Mix a batch of mortar and prepare Right Side Hearth bottom surface to be bonded as shown in **Figure 11**.
- Align Right Side Hearth to the outline created. The overall width should allow for an approximate gap of 1/8" between slabs for the additional mortar to unite the remaining slab. Check for surface flatness, level if necessary.



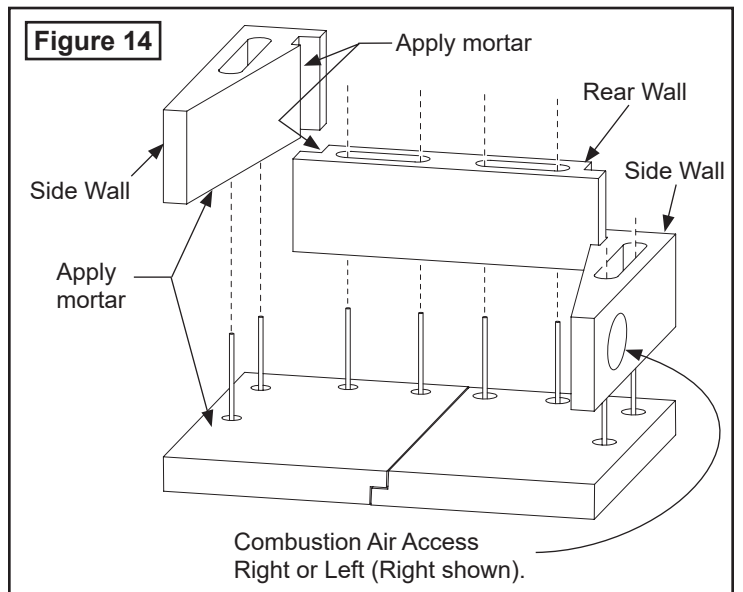
- Apply mortar to the remaining Hearth except this time apply beading on surface to be facing floor as shown in **Figure 12**.



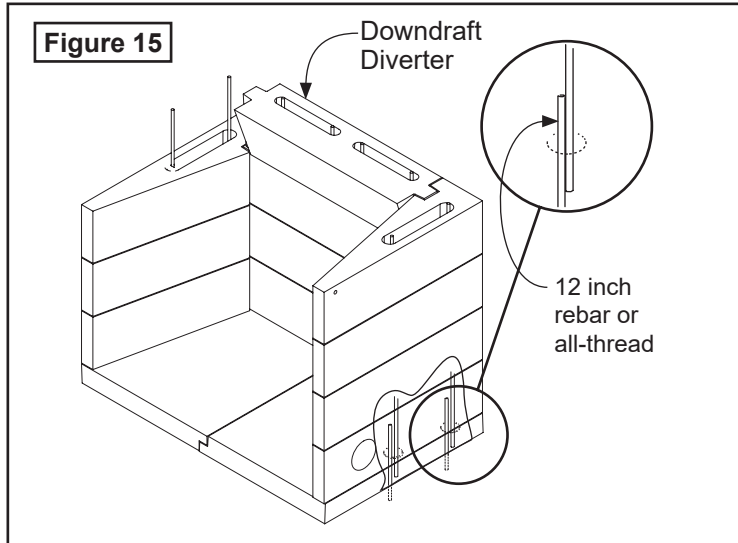
- Before installing side walls, confirm placement of outside combustion air access (if required), this can be installed either side depending on which side is accessible to outside combustion air (all diagrams in this manual show the combustion air inlet hole on the right side). Prepare side wall and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



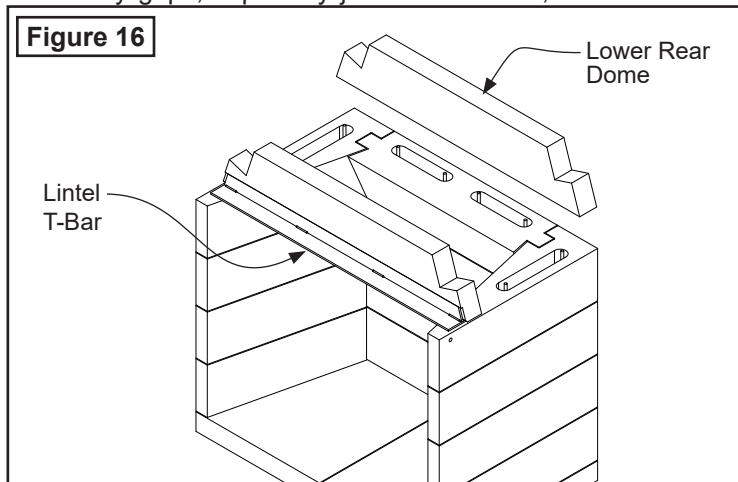
- Keep the assembly of the next sections of the firebox side walls moving up, keeping components moist, mixing mortar as you need it and threading the mortar appropriately as you stack each section, one onto the next. Constantly check for squareness and levelness while building each course of block.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



- Install Downdraft Diverter and final row of Side Walls (**Figure 15**). Then place #3 rebar (8 each, 36 inch long) vertically through the cells until they reach bottom. Position them adjacent to the rebar or all-thread sticking up from the hearth.
- All components must be level. Mix approx. 2 cu. ft. of Ready-Mix Concrete. Fill all cells with Ready-Mix Concrete mix.

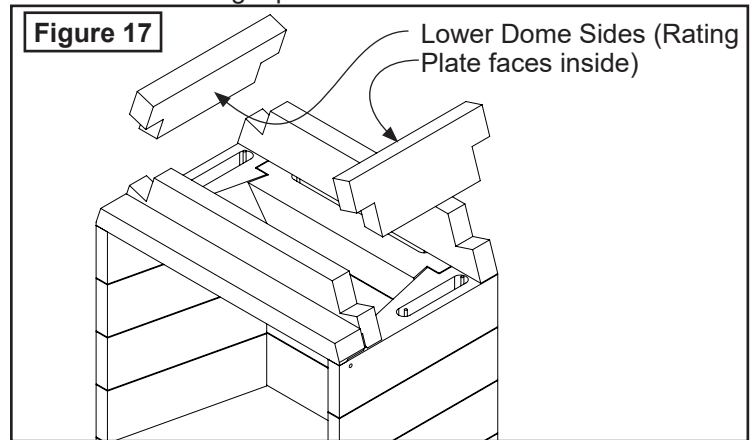


- Set the Lintel and Lower Rear Dome as shown in **Figure 16**. Check that all is level. If adjustments are needed, use shims and fill gaps with an appropriate amount of mortar. **Note:** Although you are cautioned to use MASON-LITE mortar sparingly because it does have such holding power, you should look over the firebox assembly at the end and fill in any gaps, especially joint connections, with the mortar.



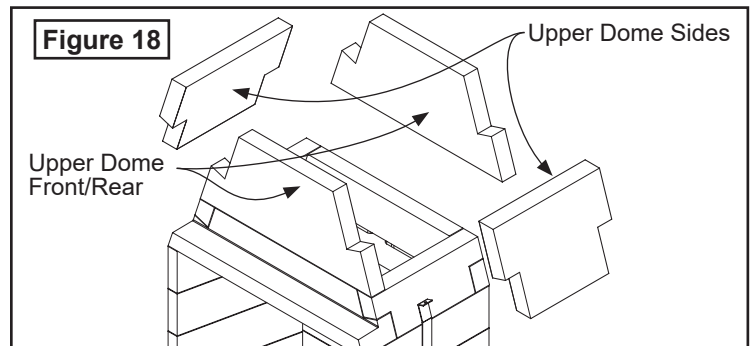
Important: Adjustments can only be made while the mortar is still wet when correcting for squareness and leveling.

- Assemble Lower Dome Sides as shown in **Figure 17**. The beveled face lines up with the inward angles of the lintel sides. Resulting top surfaces should be level.



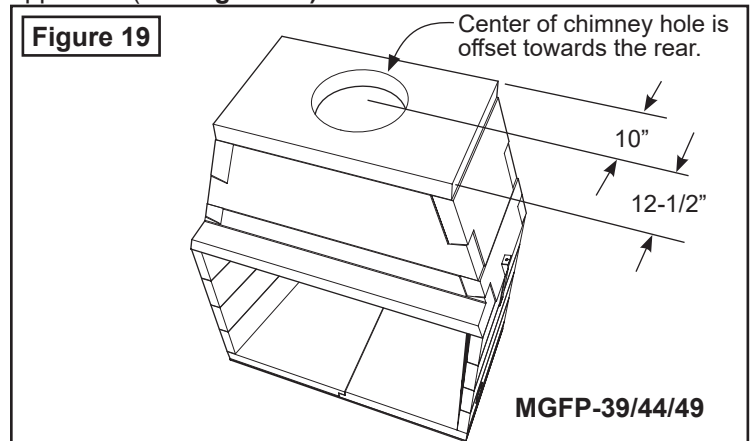
- Verify that the smoke dome side, front and rear walls are aligning correctly and that the surfaces are smooth and uniform. Make sure connections are covered with an adequate amount of mortar. Remember that you have the option of using shims but they must be removed and any holes filled. Make any adjustments to the appliance alignment before continuing to the next step.

- Assemble Upper Dome and Dome Sides as shown in **Figure 18**. Check your assembly here. If things are proceeding as they should be, the finished top surface should be flat and level.



- Finally, set the Dome Top into position. 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".

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 appliance (see **Figure 19**).



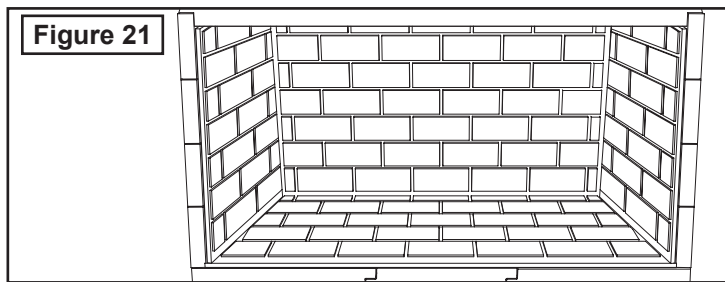
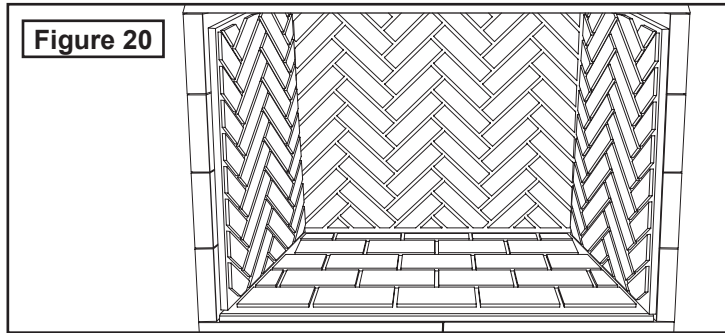
Mason-Lite Firebrick Liner

The firebrick lining is not supplied as part of your Mason-Lite appliance but can be purchased from MFI. They are available in split herringbone and full running bond patterns. (see Figures 20 and 21)

You also have the option to have custom firebrick installed, but it must be at least 1-1/2" thick.

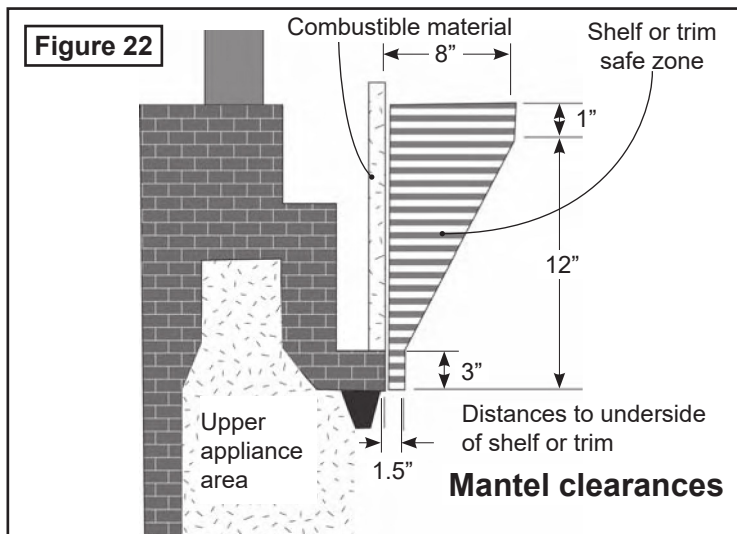
Before you install the lining, you will need to drill all the required gas and electrical line feeds and the combustion air supply access holes.

Disclaimer: Masonry Fireplaces Industries cannot be held liable for the way firebrick or firebrick mortar performs. It is not unusual for heat stress cracks to appear on the firebrick or firebrick mortar during the life of the appliance.



Appliance Finishes & Combustible Trim Clearances

1. Mantel and Mantel Shelf Clearances – As with any radiant heat appliances, all Mason-Lite Appliances must comply with building code safety clearances, per units that have openings of 6 sq. ft. (six square feet) or greater. You must keep combustibles such as trim 8" away from the firebox opening (for mantel clearances, see **Figure 22**).



Attention: The manufacturer suggests that when building out a appliance, that the owner and installer opt for complete safety. MFI, therefore, advises that combustible mantel shelves feature clearances that are more than the 12" (twelve inch) minimum equal to the projection of the shelf. As a guide, figure that a 10" (ten inch) wide shelf should be 20" (twenty inches) above the appliance opening.

2. Walls That Adjoin – Safety codes and all practical outlooks insist that your appliance cannot be installed closer than 2 ft. (two feet) to any walls in the room the appliance is housed in or to any walls of adjoining rooms.
3. Caution in Regards to Combustibles – If any part of the appliance or objects in the room (curtains, rugs, paint, cushions, etc.) start to show warping or discoloration due to heat from the appliance, it is time to take immediate action. Each installation requires a different set of circumstances to deal with the problem, but one thing is certain: do not use the appliance until you have figured out how to address the problem. You are facing a potential fire hazard. The manufacturer of the MASON-LITE gas appliance cannot be responsible for the make-up of material on the exterior of the appliance you have chosen, nor can MFI be held responsible for the materials in a room that may be responding negatively to heat. However, in almost all cases, there is a solution to the problem, either by making adjustments to airflow or the room itself.

Installing Outside Air

1. Be mindful that outside, fresh air is not required for the operation of the Mason-Lite Appliance. However, local building codes may require combustion air and it is an excellent choice in some situations, especially in weather conditions where homes are very well insulated and tightly sealed. Check local building codes for specific requirements.
2. Install Outside Air Kit - MFP4-AK into the Mason-Lite Firebox either through the side wall opening provided. The tubing that goes out of the firebox wall must feed into a flexible metal conduit as the source for outside combustible air. It can go straight out through an outside wall or into a ventilated crawl space. If crawl space is used, check codes for proper termination.
3. Be sure that you carefully check the source of the outside air before you choose the site for your air intake. You don't want a place where snow will collect, where bushes or trees will be growing or a location that is too close to any other structure.
4. The suggested maximum height for the air intake tubing is 50 ft. (fifty feet) above the hearth. That height is if the intake finishes off at a minimum of 3 ft. (three feet) below the chimney cap level.
5. Install a screened termination cap to keep out animals.
- 6.

Mason-Lite Chimney Systems

Overview

This Mason-Lite gas appliance may be installed with an approved 10" B-vent chimney system. A metal chimney adapter is required to attach the chimney to the top of the firebox. This can be purchased from FMI: part number MFP-DD.

Installers are cautioned to put the chimney system together exactly as instructed and shown in chimney manufacturer's guide. Any variations may have serious consequences resulting in an accident or malfunction. If instructions are not followed, the warranty on the product will become null and void.

Note that the most important aspect of the installation is the maintenance of minimum required clearances to combustible materials. Those specific installation requirements must be followed with great precision as you are dealing with the potential of fire hazard if the correct combustible limit is not met and maintained. When you look at the drawings provided in this section, you will see that actual installations may vary due to individual design preferences. That is to be expected.

Design and framing specifics may vary from the drawing to installation. Clearances to combustibles is a stringent requirement.

WARNING:

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

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

- Designed for installation in accordance with National Fire Protection Standard
- Meets requirements of NFPA 211
- Designed in accordance with BOCA Basic National Codes
- Meets Uniform Building Codes.

General Chimney Requirements for Height and Clearance

When installed, the **maximum** overall height of the chimney system from bottom of appliance to the top/termination chimney is 40 feet. The **minimum** installed height of the completed Chimney System is 14 feet with a straight flue stack, 17 feet if the chimney includes one or two offset sections.

Throughout the length of the chimney – along the outer periphery of the flue you must have at least 1" (one inch) of clearance all around the circumference. When the chimney is passing through a living space, it must be completely closed off. A "live" chimney is never allowed to be within reach of humans; the chimney must be completely designed to be hidden from view and protected, away from human interaction.

Note that it is acceptable for the chimney's firestop space and roof flashing to come in direct contact with common construction materials, such as drywall, flooring, paneling, plywood, millboard,

particle board and a variety of normal framing materials. Always follow the specific installation requirements of your selected chimney manufacturer.

Determining Finished Height for Appliance

Overview

Figuring out the exact height of the Mason-Lite Appliance you are about to install is relatively easy if you follow a few simple steps. It is a matter of determining the number of chimney sections and the chimney components that will be required for the installation. Bear in mind that the minimum height of the MASON-LITE once installed is 14'0" (fourteen feet) and that it is higher if offsets are used. Here is how to calculate the height of the completed appliance:

1. First, ascertain the height of the chimney. This includes the distance from the very top of the smoke dome to where the top of the flue ends. That is where the smoke leaves the flue.
2. Aside from the chimney sections, include all the components that you will be using in your installation - anchor plate damper, firestop spacers, stabilizers, and offsets.
3. Create a Component Height Chart by measuring each component and completing the following:

Anchor Plate	=	4 "
Firestop Spacers	=	-----
Support box	=	-----
Stabilizers	=	-----
Offsets	=	-----
Pipe Sections	=	-----

(Stabilizer – Must be present on vertical chimneys every 30 feet and on offset chimneys every 10 feet.)
4. Take the total height of every component that will be included in your installation and then subtract that from the desired total height you wish the finished appliance system to be.
5. You will need to refer to the chimney manufacturer's information in order to figure out the available lengths and the quantity of the sections that you will need.

The Special Case of Offset Installation

Overview

Special, detailed installation instructions must be given for the proper handling of offsetting for the chimney system. Maximum offset is 30 degrees off of vertical and there should be no more than one offset sequence per chimney system. Under no circumstances should two offsets be attached to comprise a 60 degree offset configuration. Always maintain at least 2" (two inches) of clearance around all offset installation for air space and necessary clearance from combustibles.

Working with Floors and Ceilings

It is quite probable that when your installation must pass through a floor or ceiling, you will have to opt for a 30 degree angle in which case you are advised to use a firestop spacer. Should

the length of the chimney below the floor or ceiling be less than 10' (ten feet), support the chimney at the juncture of the floor/ceiling with a stabilizer. As in all phases of chimney component installation, you will want to be sure you are making allowances at every juncture for the 2" (two inch) clearance space from combustibles.

Background Information on Offset Installation

1. When obstructions are present, it will be necessary to offset sections of the chimney using the 30 degree offset component and, for every offset component, two elbow components.

One elbow begins the installation procedure and the second elbow is used to finish off each section. In all likelihood, a 30 degree offset elbow will probably be the first hardware used off the top of the anchor plate damper.

Note: Under no circumstances should you use an offset elbow in place of a return elbow. They have distinct purposes in the configuration of the offset installation and they cannot be interchanged, part for part.

2. Depending on the configuration you are contending with, you may either attach the elbows and offset piping together or you may need to insert sections of the vertical chimney. Whatever the scenario, you cannot allow sections of the chimney to measure more than 20' (twenty feet) between the elbows.
3. Assuming you have sections of vertical pipe that are more than 10' (ten feet) measuring between elbows, you must insert – at midpoint – a chimney stabilizer. When installing the stabilizer, pull out the support straps with a good amount of tension and hammer to the frame.
4. If your offset sections go over 6' (six feet) in length, you will need to give added support using a sheet metal screw – a # 8 x 1/2" is recommended. The screw will be fastened underneath the joint.
5. To ensure a tight fit for the screw, drill a hole that is 1/8" (one-eighth inch) in diameter right at the chimney joint's underside. Be sure that you position the drill at the very center of where the joint overlaps. Be very careful not to drill through the inner casting; drill only through the outer chimney.

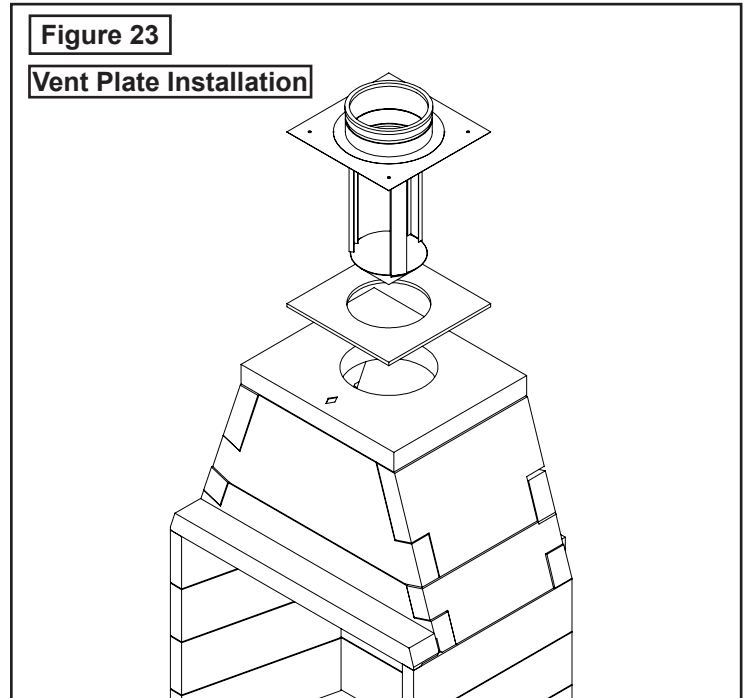
Installing Vent Plate and Chimney System

Before installing your B-Vent to the Mason-Lite Firebox you must install a steel vent plate. The vent plate must be installed in the vertical (open) position on the outside of the vent pipe and is designed to close-off the chimney in the event the pipe is removed or fails, thus alerting the operator of a problem.

Next, attach the masonry anchor plate (supplied). The anchor plate is pre-drilled with holes for four (4) cement wedge-anchors.

1. Place the plate and mark the top of the firebox. Then remove the plate to carefully pre-drill holes for the wedge anchors.
2. Using the supplied vent plate, apply a 1/4" (one quarter inch) bead of gasket cement around the base damper lead pipe. Apply ceramic rope gasket on to the gasket cement.

3. Apply balance of gasket cement in a 1/4" (one quarter inch) bead on top of smoke dome top approx. 3" (3 inches) outside of outlet hole. Install damper on top of unit pressing damper into cement. Attach using four (4) #8 cement wedge-anchors.



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

Installing the valve/control box assembly

1. Fasten the valve/control box assembly to a stud such that the control switch is facing in the desired direction and flush with the future location of the finished wall or other enclosure.
2. Install the two 'D' batteries into the battery holder within the control box.
3. Run the wires for the spill switch through the small hole in the upper wall. Important: This control box must remain accessible and removable for service after installation.

Installing Spill Switch and Baffle assembly

1. Connect the blade connectors on the spill switch wires to the matching wires from the valve/ control box assembly coming through the upper hole in the firebox.
2. Center the Smoke Shelf with the spill switch sensor closest to the front of the appliance.
3. Use six (6) Tapcon screws to fasten the Smoke Shelf in place as shown in Figure 26.
4. Seal any remaining gaps with high temp silicone (Figure 27).

Important: This baffle assembly and only this the supplied assembly (with spill switch) must be properly installed for the safe operation of this gas appliance.

Venting Installation

A “B-type” venting system must be connected to the appliance for venting to outside of building. The following section is provided as a guide to a standard B-type vent installation.

Standing codes requirements concerning B-type vent installations may vary within your state, province or local codes jurisdiction. Therefore, it is recommended that you check with your local building codes for specific requirements or in absence of local codes, follow Section 7.0 of the current National Fuel Gas Code ANSI Z223.1/NFPA 54 for Category I systems using double wall B-1 vent pipe.

This gas appliance must be vented to the outdoors only and may not be terminated into an attic space or into a chimney flue servicing a solid fuel burning appliance.

This appliance may be vented through a manufactured chimney system or a masonry chimney using a B-vent adapter or a chimney liner system if the system is listed, inspected and approved by local codes and/or building authorities. The examples shown in Fig. 24 are typical of most B-vent installations and codes practices.

Example 1: Shows the minimum allowable system height and lateral offset for an inclination of 60° or greater.

Code specifies that offsets of 60° or greater are considered horizontal and must follow the 75% rule for lateral to total vertical system height.

Codes also allows only one offset in the total system when at 60° or greater.

The total vertical height in this example represents the minimum height of 8 ft. and therefore the allowable lateral is 6 ft. when the 75% rule applies.

If the lateral length must exceed 75% then the system must be sized in accordance with the Category I venting tables.

Example 2: Shows a multiple offset each at a 45° inclination.

Multiple offsets are permitted if they do not exceed a 45° inclination. The total lengths of the two offsets are not required to meet the 75% allowable rule.

Example 3: Shows a single offset at 45° of inclination and therefore the lateral length at 10 ft. of offset does not have to meet the 75% rule.

In each case the offsets must be supported and firestops must be positioned wherever the vent must pass through a sub-floor, ceiling joist or an attic overhang.

The vent pipe must terminate vertically into a listed type vent cap and extend a sufficient height through an approved roof flashing, roof jack or a roof thimble. At all points the listed clearances must be maintained.

Vent terminations must be located in accordance with height and proximity rules of NFPA No. 54.

These rules apply to vents at 12” diameter or less and require a minimum height in accordance with the roof pitch and a minimum of 8 ft. distance from a vertical wall or obstruction (see Fig. 25).

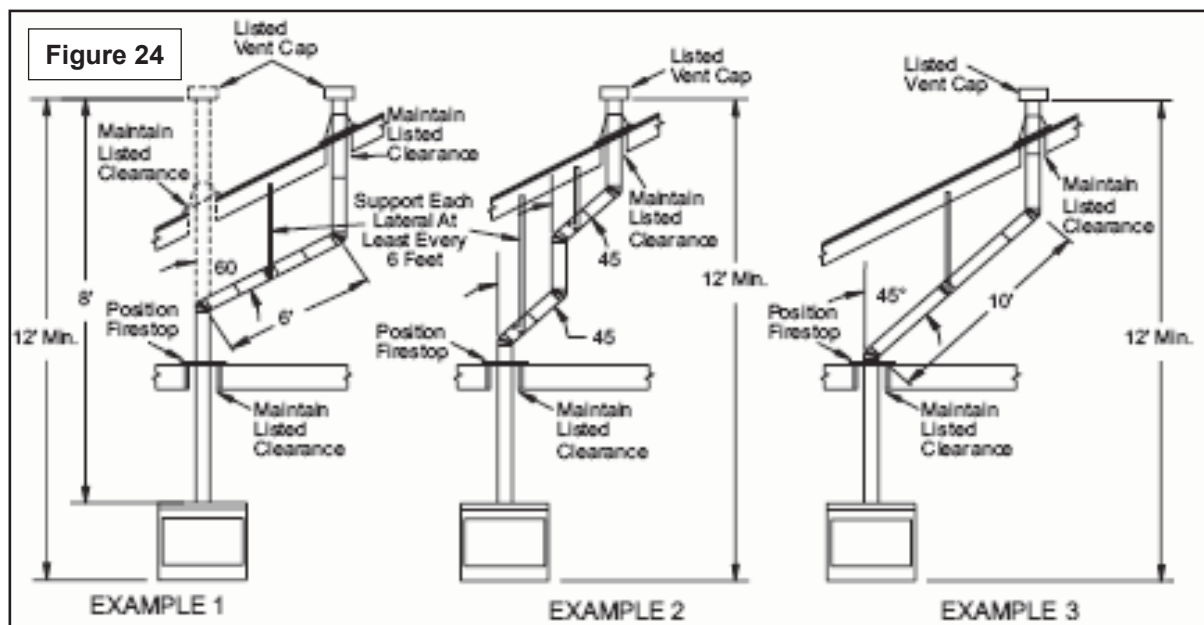
If venting horizontally through a side wall becomes necessary, a listed thimble approved for use with B-type vent must be used. Check with your local codes before venting through a side wall.

Some codes areas allow the use of existing B-type vent systems if the system is at or above the recommended diameter of the flue.

The flue connection must be made using listed B-type connectors and the existing system must be code inspected for damage and proper installation.

It is not recommended that this appliance be common vented with an existing gas burning appliance. However, if it becomes necessary to common vent this appliance, the venting system must be sized and configured in accordance with the common venting guides Appendix G of the current National Fuel Gas Code NFPA No. 54/ANSI Z223.1.

Note: Before connecting this appliance to an existing vent system or a common venting system, consult with your local architect, planner, or building official.



Specifying Chimney Heights

If the horizontal distance from the mid-point of the chimney to the peak of the roof ridge is less than 10 feet, the top of the chimney must be at least 2 feet above the roof ridge. This is called the “2 foot in 10 foot” rule.

If the horizontal distance from the chimney’s center measured across to the ridge of the roof is more than 10 feet, the top of the chimney still needs to be at least 2 feet above a point measured from a distance of 10 feet horizontally along the roof.

Though there are many configurations in meeting these requirements, chimney height cannot be less than 3 feet above the roof at the edge of the chimney.

If the roof is flat, the chimney must extend no less than 3 feet from where it intersects the roof. If the chimney is entering the roof at an angle, measure the shorter angle where the chimney intersects the roof which should be at least 3 feet.

Note: The previous guidelines do not take into consideration outside conditions which may require a higher chimney due to foliage, other buildings, power lines and weather conditions in your area. Follow the chimney manufacturer’s installation guide for further information.

Figure 25

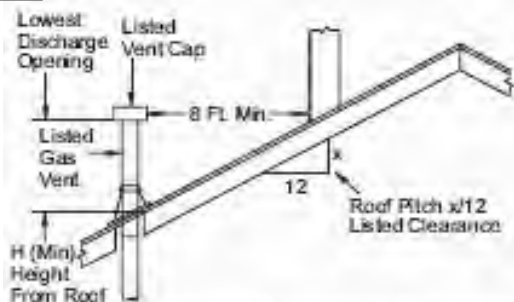


TABLE 2

Gas vent systems using vent caps listed by underwriters laboratories may terminate in accordance with this vent termination table

ROOF PITCH	MINIMUM HEIGHT	
	FEET	METERS
FLAT TO 7/12	1	0.3
OVER 7/12 TO 8/12	1.5	0.46
OVER 8/12 TO 9/12	2	0.61
OVER 9/12 TO 10/12	2.5	0.76
OVER 10/12 TO 11/12	3.25	0.99
OVER 11/12 TO 12/12	4	1.22
OVER 12/12 TO 14/12	5	1.52
OVER 14/12 TO 16/12	6	1.83
OVER 16/12 TO 18/12	7	2.13
OVER 18/12 TO 20/12	7.5	2.29
OVER 20/12 TO 21/12	8	2.44

Chimney Termination Units

You will be installing at or possibly near the top of the chimney chase flashing. A top termination unit is the essential piece of equipment in keeping sparks out of the atmosphere. Before installing this important piece of equipment, you will have to make a judgment call as to whether or not the termination unit – like all the other exterior exposed chimney components, for that matter – should be painted in order to protect it/them from rusting and weathering. Particularly if you are installing the appliance and chimney near water or in a high humidity area, the manufacturer recommends a top quality, rust-proof paint especially formulated for metal. Follow the paint manufacturer’s directions, applying the paint well before you are scheduled to install the round top termination unit or any of the flashings or flues that will be exposed to outside weather conditions.

Venting terminals shall not be recessed into walls or siding. This appliance, when installed, must be electrically grounded in accordance with local codes and in the absence of local codes, with the National Electrical Code, ANSI NFPA 70, or the Canadian Electrical Code, CSA C22.1.

Important Pre-installation Information

Before you begin, review the information and safeguards below regarding the installation and operation of the gas Appliance.

This appliance may only be connected to the gas supply listed on the label. Never use propane gas in a gas appliance designed for natural gas or natural gas in a gas appliance designed for use with propane gas.

The gas appliance must be installed by an MFI Certified or other qualified professional installer. The installation, including provisions for combustion and ventilation air, must conform with local codes, or, in the absence of local codes, with the latest edition of the National Fuel Gas Code, ANSI Z223.1, and NFPA54.

Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

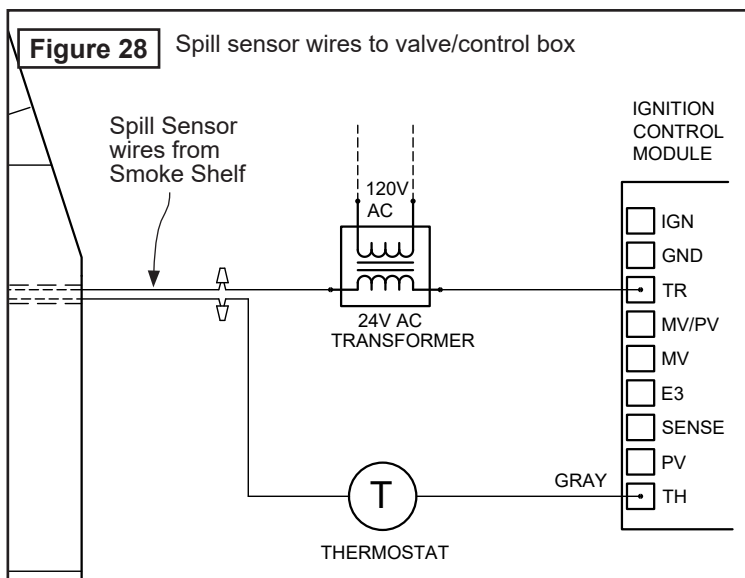
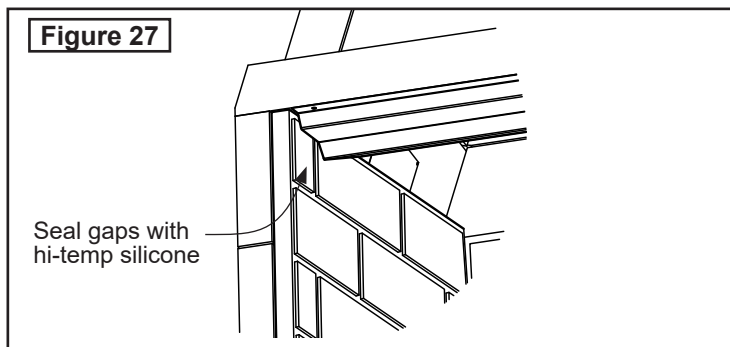
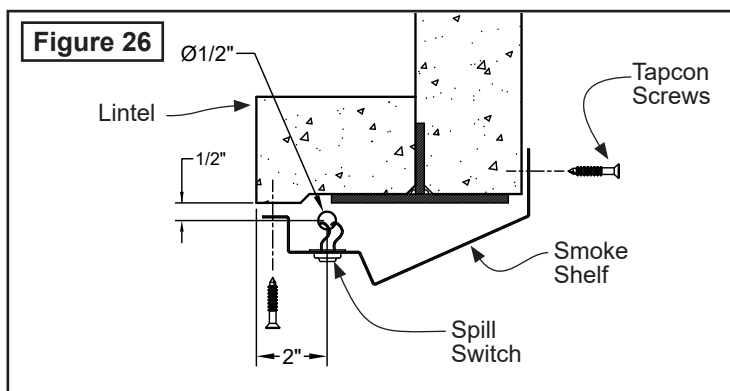
The appliance must have a gas supply line that has been installed by a qualified technician in accordance with all local codes.

The gas supply line must be 1/2” minimum interior diameter. If the gas line to the appliance is longer than 5’, a larger diameter line may be necessary.

Burner P/N	BTU* (x 1000)	Orifice Drill Size (top/front)		Included in
		Nat	LP	
MLGB24 (N) (P)	60	28/48	47/56	MGFP39
MLGB30 (N) (P)	90	19/41		MGFP44
MLGB39 (N) (P)	84		40/55	MGFP49

*Nominal BTU based on gas inlet pressure. Nominal gas inlet pressure for natural gas is 5” W.C.

Owner's Operation & Precautions



Installers of the Mason-Lite are urged to call the attention of appliance owners to the following precautions. The installer should hand-deliver this owner's manual to the owner or leave behind with the unit after the installation is complete.

Warning: Use only the included appliance grate or manufacturer approved replacement.

Warning: Do not attempt to operate your appliance without a fire safety screen installed.

CAUTION: Use only the logs that come with this gas appliance. The manufacturer cautions against using chemical chimney cleaners. **Never burn solid fuel in this appliance under any circumstance.**

1. First Lighting of the Mason-Lite – After construction is completed, all elements of the appliance 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. Do not let the fire burn for more than one hour. After this first lighting – when the appliance has started to “cure” ***Do not set another fire for at least 24 hours.***
2. Second Lighting – With the second lighting you can let the fire burn two hours – no more.
3. After First and Second Lighting – When the appliance has been properly cured with careful “maiden” firings, you will be able to run the burner for as long as you like.

Attaching the Burner and the Grate

1. Unpack the burner assembly and place the rear legs of the burner into the brackets in the back of the firebox.
2. Thread the pilot lines from the burner pilot assembly and through the hole in the lower side of the firewall to the valve/control box assembly and attach to the valve.
3. Connect the supplied flex connector from the output of the valve, through the hole and to the burner.
4. Connect the second flex connector from the input of the valve to the gas stub down stream from the required manual shut-off valve.
5. Insert a one-way screw into the hole in the front of each bracket and tighten with a long (min. 12”) screw driver until contact is made with the grate leg and the grate is permanently locked in place.

IMPORTANT: Once installed the burner cannot be removed.
6. Fill in the holes you have drilled around the gas piping with the regular MASON-LITE mortar.

Note: The required 1/8” NPT up stream pressure tap is built into the valve (**Figure 33**).

CAUTION: CHECK ALL CONNECTIONS FOR GAS LEAKS USING A HALF-AND-HALF SOAPY WATER SOLUTION.

IF A LEAK IS DETECTED TIGHTEN CONNECTIONS AND TEST AGAIN.

NEVER USE AN OPEN FLAME TO CHECK FOR GAS LEAKS.

Placing the Logs

1. Place the back bottom log on the grate behind the top burner and as far forward (against the top burner) as possible without touching the pilot. The flat side should be down and the heat chambers facing the back of the appliance (**Figure 35**).
2. Place the front log on the grate in front of the top burner pipe with the flat down and the heat chambers toward the burner pipe and the log as far forward as possible while keeping the back parallel with the burner pipe (**Figure 36**).
3. Place top logs across the front and back logs in the order and positions shown in **Figure 40**.

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.

FOR YOUR SAFETY, READ BEFORE LIGHTING

Do not use this gas appliance if any part has been underwater. Immediately call for a qualified professional service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

The Mason-lite burner system has a pilot which can be lit by hand using a match or lighter. When lighting the pilot, follow these instructions exactly.

BEFORE LIGHTING, smell all around the burner area for gas. Be sure to smell next to the floor as some gas is heavier than air and will settle on the floor. **IF YOU SMELL GAS, FOLLOW THE INSTRUCTIONS ON THE COVER (P. 1).**

TO LIGHT THE APPLIANCE WITH THE WALL SWITCH

Move the ON-REMOTE-OFF wall switch to the **ON** position (**Figure 41**). This transmits a rapid series of sparks at the pilot head and will ignite the gas.

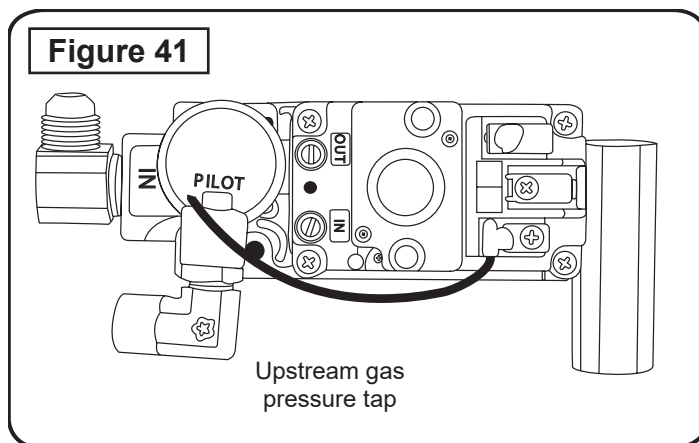
TO SHUT DOWN THE GAS APPLIANCE USING THE WALL SWITCH

Move the switch to the OFF position (**Figure 41**). The gas flow will cease, and all flames (main burner and pilot) will go out (see important note below).

OPERATING THE BURNER USING THE REMOTE

Move the wall switch to the REMOTE position and follow the instructions included in the remote kit for lighting and shutting down the attached burner.

IMPORTANT: Do not allow the appliance opening to be blocked in any way while operating the appliance. The appliance may be operated with a Mason-Lite screen installed and drawn.



MAINTAINING THE PILOT

Your gas appliance is equipped with a safety pilot that will shut off the gas supply in case the pilot is not burning or functioning properly. Regularly verify that the pilot is adjusted properly with the pilot flame hitting the electrodes as shown in **Figure 42**. If the pilot will not stay lit, call your local gas utility or gas supplier.

TO CHECK UPSTREAM GAS PRESSURE

Unscrew the four (4) screws above and below the control panel face, then pull the control panel out far enough to expose the test ports on the valve (**Figure 41**). Unscrew the port marked IN part way and test.

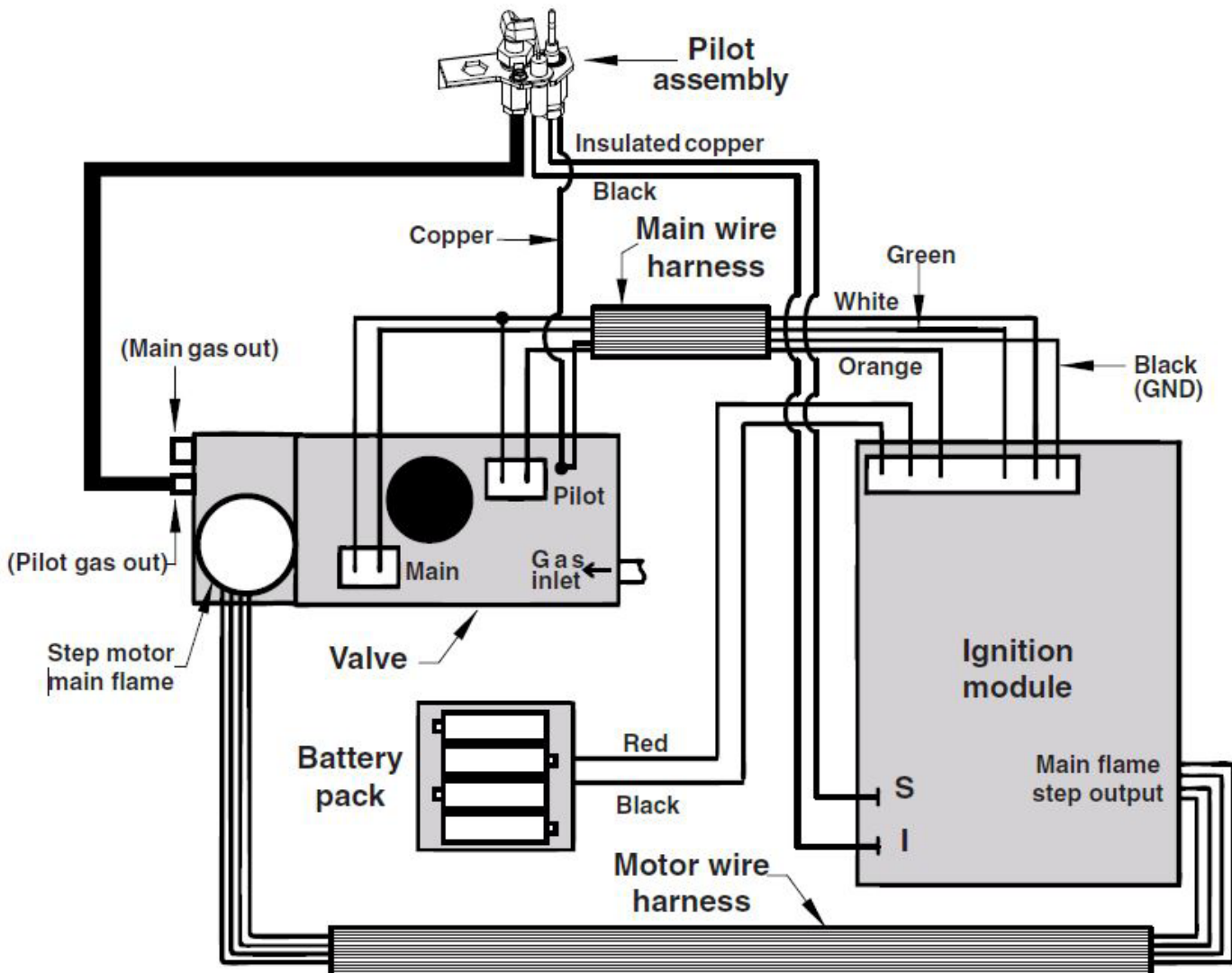
CAUTION: Do not kink the flex connectors coming from the valve while accessing it.

Note: Pilot flame should encircle top of electrodes. See instructions cover for example of proper main burner flame pattern.

Appliance OPERATING SAFETY INFORMATION

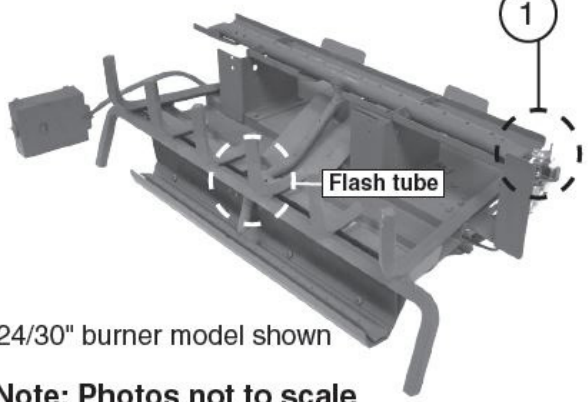
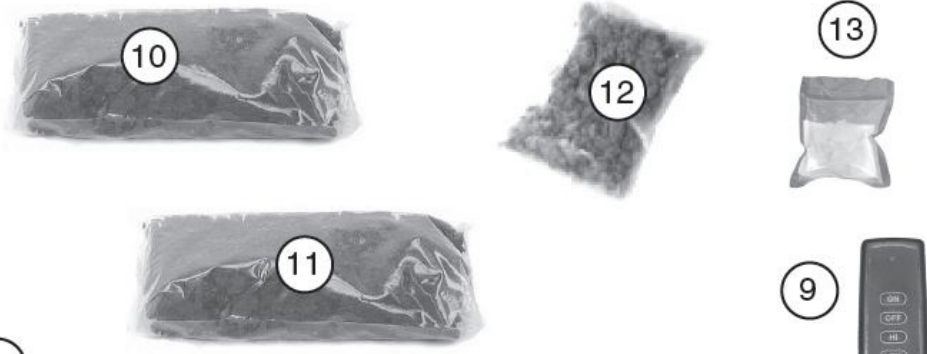
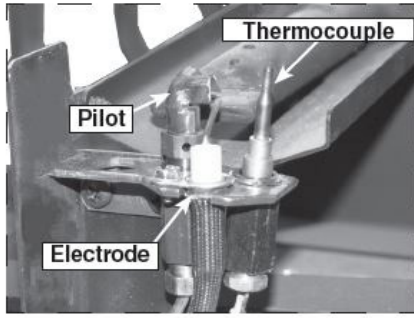
- A. Adults shall be present when this gas appliance is operating. This unit shall not be left burning when unattended or while anyone is sleeping.
- B. Keep the area of the gas burner system clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
- C. DO NOT use this appliance if any part has been underwater. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been underwater. Attempted operation may result in fire or explosion resulting in property damage, personal injury or loss of life.
- D. A appliance screen must be in place when the system is burning. Provisions for adequate combustion air must be maintained. Unless other provisions for combustion air are provided, the screen shall have an opening(s) for introduction of combustion air. Combustion air is adequate when all flames curl into the appliance and away from the screen. When a glass appliance enclosure (door) is used, leave the doors fully open when the system is in operation.
- E. Do not remove the rating plates or the warning tags. These are an integral safety and identification component of this appliance.
- F. Be sure to read the CLEANING AND SERVICING and FLAME DESCRIPTION sections.

WIRING DIAGRAM



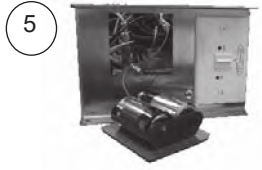
Burner & Logs Parts List

Before beginning installation, be sure the burner system is complete by comparing its contents with this Parts List. Parts may differ depending upon the size of the set purchased. Be sure you know the model number and size of your set when ordering replacement or optional parts and accessories.

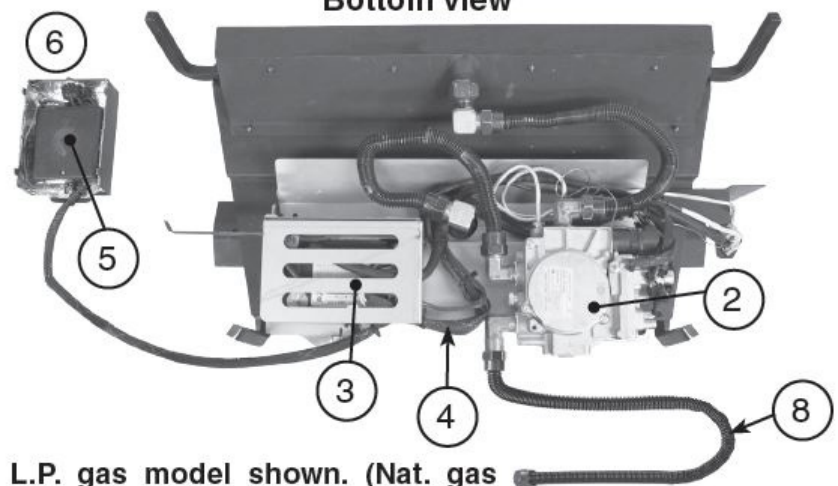


Remote transmitter and switch box batteries included with burner system.

24/30" burner model shown
Note: Photos not to scale



Receiver pre-assembled into control box.



Contact MFI for replacement parts and accessories as listed in these parts lists.

L.P. gas model shown. (Nat. gas model configuration slightly varies.)

Item	Description	18/20" model		24/30" model		33/39" model	
		Part No.	Qty.	Part No.	Qty.	Part No.	Qty.
1.	Pilot assembly (natural) or Pilot assembly (propane)	PAC-12 PAC-12P	1 1	PAC-12 PAC-12P	1 1	PAC-12 PAC-12P	1 1
2.	Control valve (natural) or Control valve (propane)	SV-47 SV-47P	1 1	SV-47 SV-47P	1 1	SV-47 SV-47P	1 1
3.	Control module / remote receiver	IMP-6	1	IMP-6	1	IMP-6	1
4.	Main & motor harness assembly	WH-02	1	WH-02	1	WH-02	1
5.	Battery box	BAT-02	1	BAT-02	1	BAT-02	1
6.	Switch box assembly (includes battery box, switch, heat shield)	SBA-02	1	SBA-02	1	SBA-02	1
7.	Decorative heat shield	HS-42	1	HS-42	1	HS-42	1
8.	Flex connector (w/ adapter), 1/2" O.D. x 24"	CK-5-24SP	1	CK-5-24SP	1	CK-5-24SP	1
9.	Remote transmitter (only)	AT-2VA-1	1	AT-2VA-1	1	AT-2VA-1	1
10.	Lava fyre coals	LFC-6	1	LFC-6	1	LFC-6	1
11.	Lava granules	LF-5	1	LF-5	1	LF-5	1
12.	Glowing embers	EM-21B	1	EM-21B	1	EM-21B	2
13.	Bryte coals	EM-11	1	EM-11	1	EM-11	2
14.	Damper clamp	DC-1	1	DC-1	1	DC-1	1

Burner Installation

The burner system must be installed by a qualified professional service technician. Instructions must be followed carefully to ensure proper performance and full benefit from the burner system. Check to be sure the burner system is designed and labeled for the type of gas (natural or propane gas) supplied to the appliance. Appliance floor must be level, clean, and smooth (see Appliance SAFETY INFORMATION section).

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.

REFER TO THE PARTS LIST WHEN FOLLOWING THESE INSTRUCTIONS. 24/30 burner model shown here.

1. MAKE SURE THE Appliance GAS SUPPLY IS TURNED OFF.
2. Locate the gas-supply stub inside the appliance and remove the cap, if attached (reference Fig. 12-1). **CAUTION:** When removing the cap, make sure the stub does not turn, loosening the connection inside the wall.
3. Place the burner system in the appliance. Center the burner from left to right in the appliance. (Reference Fig. 12-2 for orientation.) Note: Ensure the porcelainized panel is clean of all dust. Use a clean soft cloth if necessary. See Fig. 12-3.
4. Be sure gas to the appliance is off. Remove the adapter connected to the flex connector (pre-installed on the burner system). Attach the adapter to the gas-supply stub using a pipe compound resistant to all gasses. Tighten securely. Then attach the open end of the flex connector to the adapter. Tighten securely (see Fig. 12-1).
5. LEAK TEST: Turn on the appliance gas supply, and test at all connections for leaks using the appropriate soapy water solution. If bubbles appear, a leak is present. Turn off the gas and tighten at all connections. Repeat until no leaks are present. If a leak persists, turn off the gas supply and contact the local gas company or dealer. NEVER USE A FLAME TO CHECK FOR LEAKS.
6. At this stage the burner system batteries are to be installed. Reference the INSTALLING/REPLACING BATTERIES section for details.
7. Place the switch box on its side, at the rear left corner of the appliance. It should rest with its bottom as near as possible and facing the appliance wall. It must not be placed directly next to the burner pan area to avoid damage to the batteries. See Fig. 12-2 & Fig. 12-4.
Important: Ensure that the box wire remains away from the burner system and its flame during operation.
CAUTION: THE SWITCH BOX WILL BE HOT DURING AND AFTER OPERATION.
8. Place the decorative heat shield over the switch box as shown in

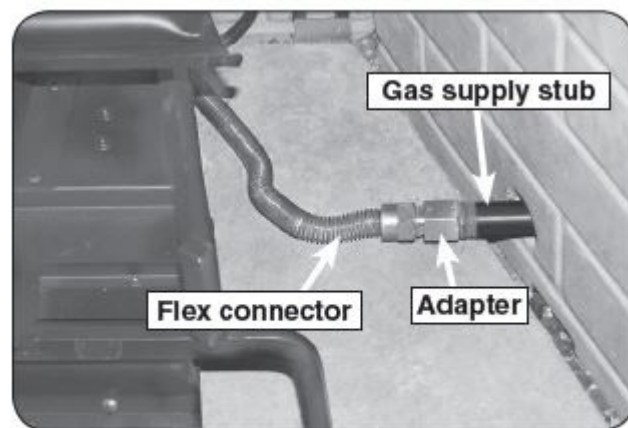


Fig. 12-1 Connect gas supply



Fig. 12-2 Place switch box

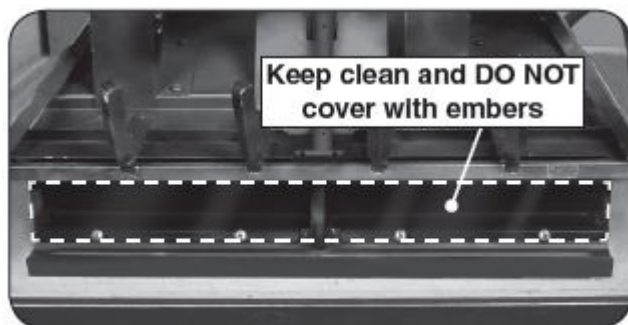


Fig. 12-3 Ensure a clean panel

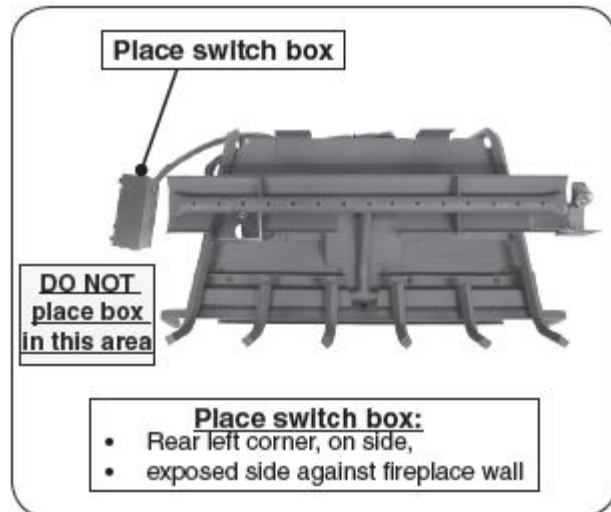


Fig. 12-4 Proper box placement

Fig. 13-1.

CAUTION: THE DECORATIVE HEAT SHIELD WILL BE HOT DURING AND AFTER OPERATION.

LIGHTING TEST

Prior to proceeding with installation, perform a lighting test (see lighting instructions for lighting your burner). Allow the unit to completely cool after testing.

LAVA GRANULES/COALS (DECORATIVE)

1. Spread the supplied lava granules on the floor of the appliance, around the front and sides of the burner system (see Fig. 13-2). The lava granules may be placed around the switch box. Leave the front of the switch box clear for control access.
2. Repeat this process for the supplied lava coals (on top of the already placed lava granules).
Note: DO NOT place any lava media on the burner system, or behind it.



Fig. 13-1 Place heat shield



Fig. 13-2 Place lava media

IMPORTANT

For all valves, the air **MUST** be purged from the gas line before the pilot will light and burn properly. The time needed to purge will depend on the length of the gas line to the unit and the amount of time since the unit or gas line was last used. It may take several minutes before all the air is purged and the pilot will light and burn properly. Reference the **LIGHTING INSTRUCTIONS** section in this manual.

LOG SET, GLOWING EMBERS, AND BRYTE COALS PLACEMENT

Read all safety warnings and important information in this manual and the instructions supplied with the log set to ensure proper placement.

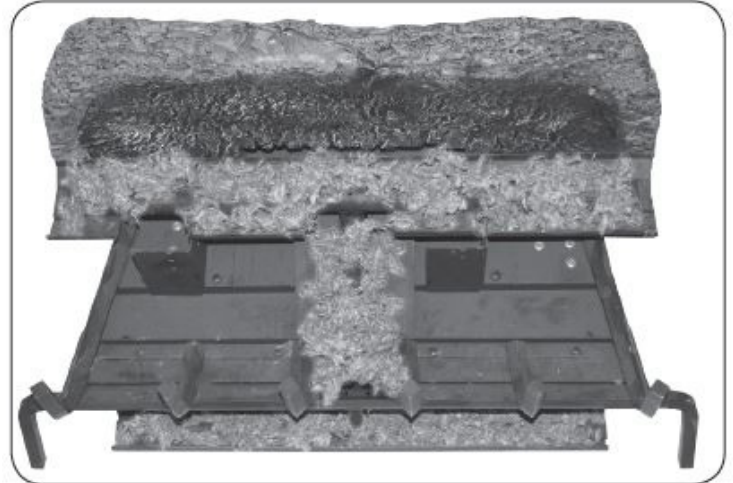
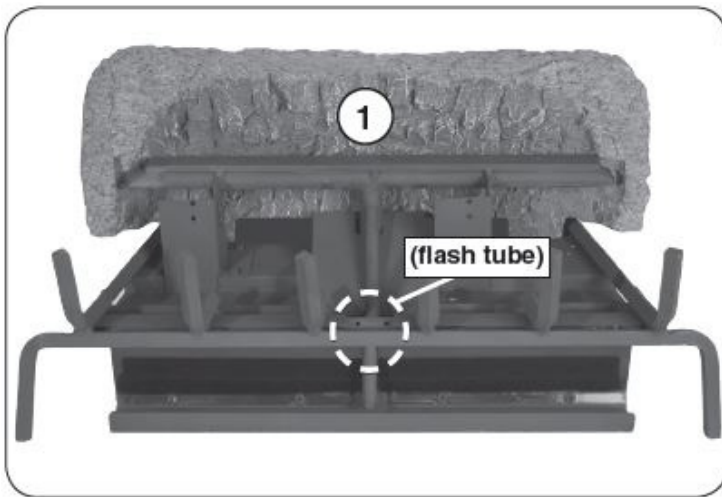
DO NOT add any additional embers to this setup. Any additional embers will cause unsafe operation. Your log set design may slightly vary from the images shown here, but initial placement is the same.

Generic Placement Steps

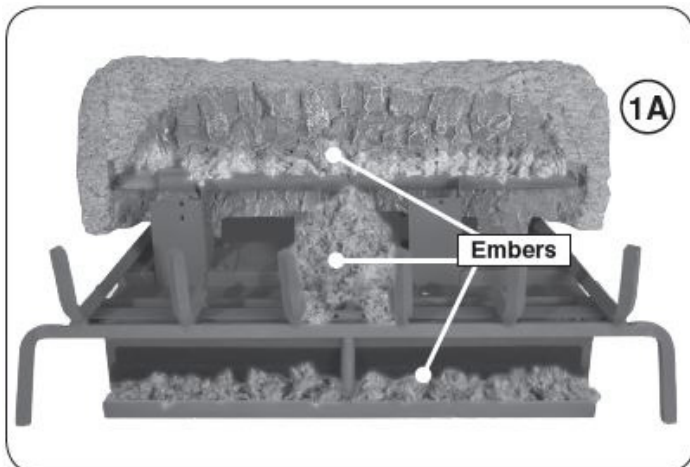
Important: DO NOT place any embers on top of the flash tube to ensure proper operation.

Begin with the bottom log and ember placement shown below. To complete log placement continue to the instruction supplied with your log set.

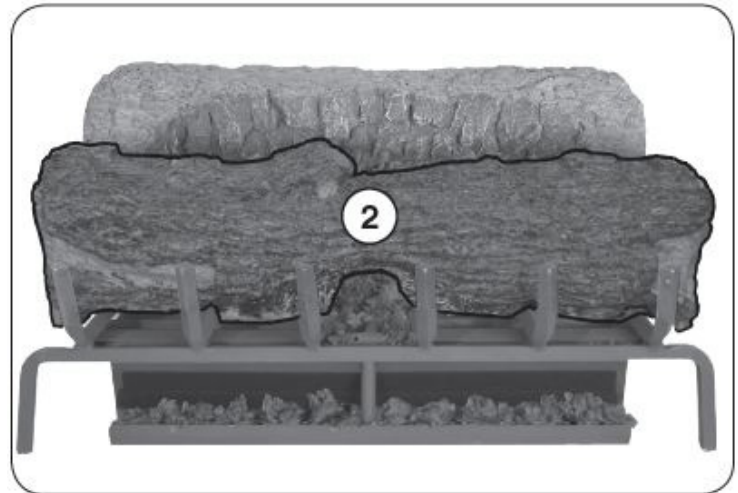
Place the rear log (log #1) as shown. The log should rest flat between the rear brackets and top burner.



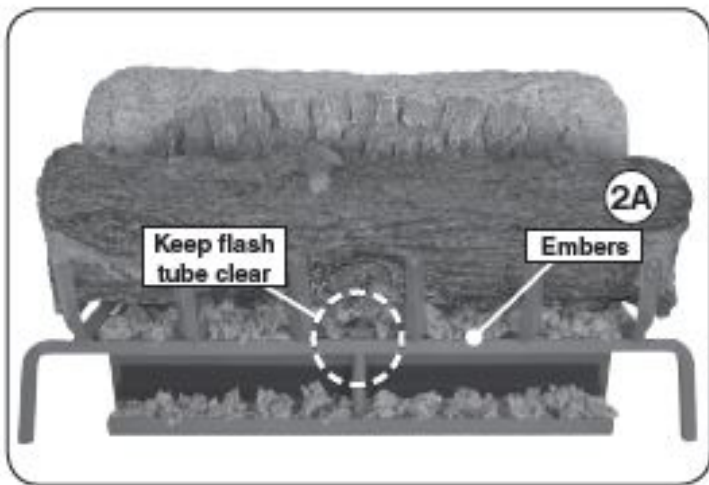
Place the glowing embers (supplied with burner) evenly in the areas shown. Break up any clumps that may have developed during shipment. Keep some embers for future placement along the front log.



Ember placement detail.

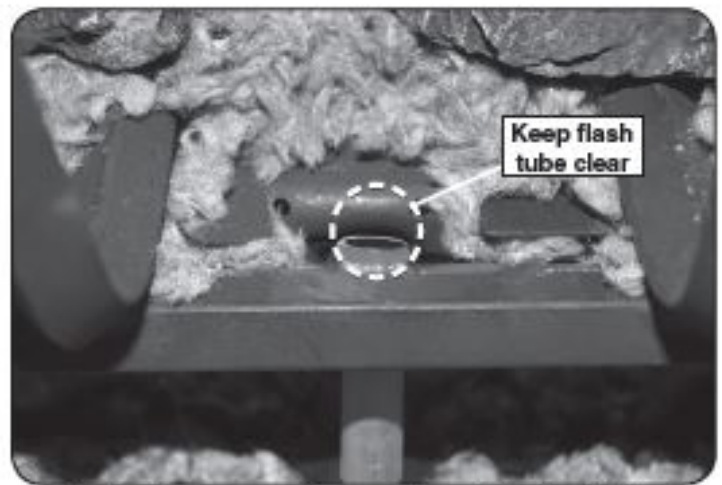


Place the front log (log #2) as shown. Rest the log with its back against the burner assembly behind it. DO NOT place it forward or on top of the grate fingers.

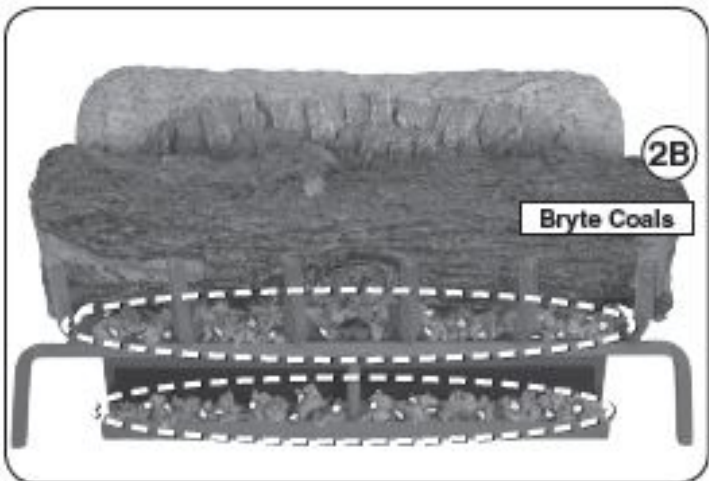


Place the remaining glowing embers evenly in the area along the front log as shown.

Store any excess embers.



DO NOT place any embers on top of the flash tube to ensure proper operation. **Keep the area shown above clear at all times.**



Separate half of the supplied bryte coals into small pieces, and evenly place them over the glowing embers in the middle ember bed as shown. Repeat this process for the remaining (second half) of bryte coals over the bottom ember bed.

FOLLOW THE INSTRUCTIONS INCLUDED WITH YOUR SPECIFIC LOG SET TO COMPLETE LOG PLACEMENT.

Important: Adequate ventilation is absolutely necessary! Adequate spacing between the logs is **NECESSARY and MUST be maintained**. If you experience an accumulation of black carbon (soot) on your logs it is an indication of incomplete combustion and you must correct the log placement. If significant sooting continues, stop using this gas log set. Read the instructions supplied with the log set completely and carefully.

CAUTION: **BURN HAZARD!** Logs will remain hot for some time after use. If you need to reposition any log to maintain the proper layout, use heat-resistant gloves or allow logs adequate time to cool before handling.

INSTALLING/REPLACING BATTERIES

CAUTION: Ensure the unit is connected to the gas line and has been tested for leaks before you insert batteries.

CAUTION: Turn off the remote and/or burner and allow the unit to completely cool prior to any battery replacements.

Important: Prior to inserting batteries, always apply a small amount of dielectric grease to both ends of each battery. This will ensure conductivity and prevent moisture from affecting the contact.

Important: Low/dead batteries will affect burner system operation. Replace batteries any time the burner will not turn on.

REMOTE TRANSMITTER BATTERY

The remote transmitter requires one 12V battery to operate (included). Locate the transmitter, remove the lid (found on rear), and properly insert the new battery as marked. Re-secure the lid. See Fig. 16-1.

SWITCH BOX BATTERIES

Important: Always replace the decorative heat shield over the switch box after battery replacement.

The burner system requires 4 AA batteries to operate (included). Locate the switch box and turn it over. Detach the battery box from the Velcro. Use a small Phillips screwdriver to remove the screw found on the bottom of the battery box, then remove the battery lid. Properly insert the new batteries as marked. See Fig. 16-2.

Replace the battery lid using the screw, replace the battery box onto the Velcro, and re-position the switch box in the fireplace.



Fig. 16-1 Transmitter battery

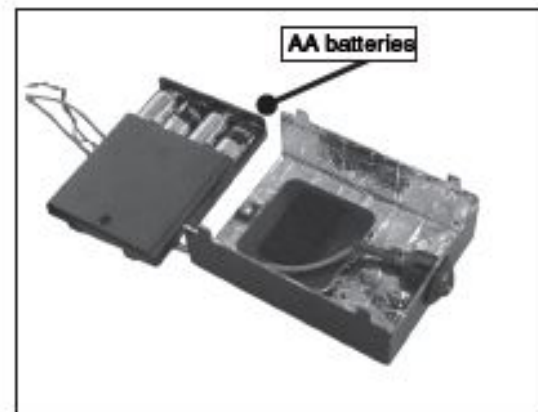


Fig. 16-2 Switch box batteries

LIGHTING INSTRUCTIONS

FOR YOUR SAFETY, READ BEFORE LIGHTING

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This appliance is equipped with an ignition device that automatically lights the pilot. DO NOT attempt to light the pilot by hand.
- B. **BEFORE OPERATING**, smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS

- Do not light any appliance.
 - Do not touch any electric switch; do not use any phone in your building.
 - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions. If you cannot reach your gas supplier, call the fire department.
- C. Use only the control system or remote to light the pilot. This valve will not operate if the pilot is not lit and stable.
- D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water. Attempted operation may result in fire or explosion resulting in property damage, personal injury or loss of life.

REMOTE LIGHTING

CAUTION: DO NOT attempt to light the pilot by hand.

Note: If the remote does not function, and batteries with an adequate power level are installed, refer to the SYNCING THE REMOTE section.

Note: Steps 1 and 2 may not be required if previously done during an earlier lighting.

1. Locate the ON/OFF switch at the front of the switch box. Press the switch to the OFF (O) position. See Fig. 17-1.
2. Locate the OFF/REMOTE slide actuator on the left rear of the burner. Slide the actuator to the right / REMOTE position. See Fig. 17-2.
3. Locate the remote transmitter and press the ON button (see Fig. 17-3). The system will beep and the ignition sequence will begin.

The igniter will begin to spark. After the pilot lights and is established, the valve will automatically open and the burner will light. Adjust to the desired setting with the remote transmitter. See the REMOTE OPERATING INSTRUCTIONS section for details.

Note: The ignition sequence will take approximately 5 seconds.

WARNING: If pilot fails to light within 10 seconds, press the OFF button on the remote transmitter or slide the OFF/REMOTE slide actuator (left) to OFF to turn off the system. Allow five (5) minutes for any gas in the unit to dissipate, then repeat steps 2 & 3 above. IF YOU SMELL GAS, SEE STEP B ABOVE.

If the pilot fails to light after several tries, turn all control/remote system components to OFF and contact a qualified professional service technician.

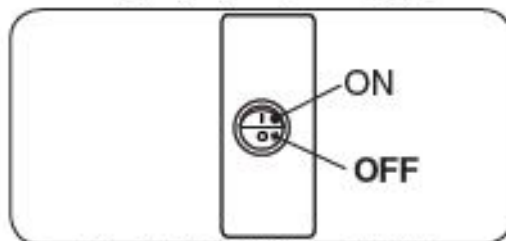


Fig. 17-1 Switch box, ON/OFF

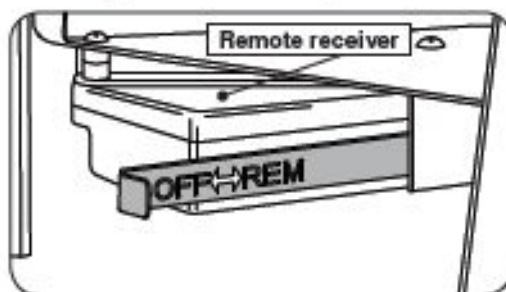


Fig. 17-2

OFF/REMOTE slide actuator (left rear of burner)

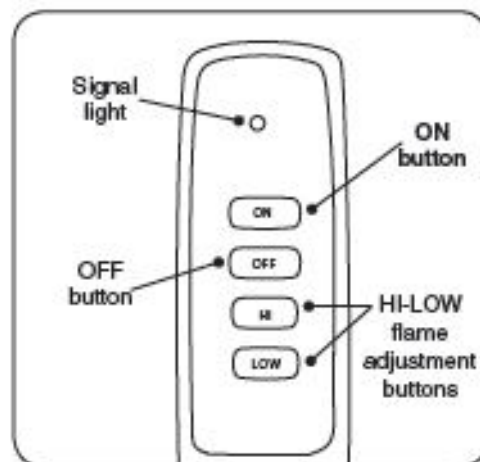


Fig. 17-3 Remote transmitter detail

LIGHTING INSTRUCTIONS (cont.)

MANUAL LIGHTING

CAUTION: DO NOT attempt to light the pilot by hand.

1. Locate the OFF/REMOTE slide actuator on the left rear of the burner. Slide the actuator to the left / OFF position. See Fig. 19-1.
2. Locate the ON/OFF switch at the front of the switch box. Press the switch to the ON (I) position. See Fig. 19-2. The igniter will begin to spark. After the pilot lights and is established, the valve will automatically open and the burner will light.

Note: The ignition sequence will take approximately 5 seconds.

WARNING: If the pilot fails to light within 10 seconds, turn OFF the system. Allow five (5) minutes for any gas in the unit to dissipate, then repeat step 2 above. IF YOU SMELL GAS, SEE STEP B AT BEGINNING OF LIGHTING INSTRUCTIONS.

If the pilot fails to light after several tries, turn the system OFF and contact a qualified professional service technician.

Note: In manual mode, the remote transmitter will not operate the burner system.

SHUTTING DOWN

- For remote shut down, press the OFF button on the remote transmitter.
If remote is unavailable, slide the OFF/REMOTE slide actuator (on left rear of burner) to the left / OFF position.
- For manual shutdown, press the ON/OFF switch on the front of the switch box to the OFF (O) position.

Note: If the system needs to be relit immediately after shutting down, the thermocouple will require 20 seconds to cool down before the system can reignite.

PILOT APPEARANCE

Periodically check the pilot for proper flame pattern. The pilot flame should encircle the thermocouple, and is preset at the factory (see Fig. 19-3).

If the pilot flame burns incorrectly; shut down completely and contact a qualified professional service technician.

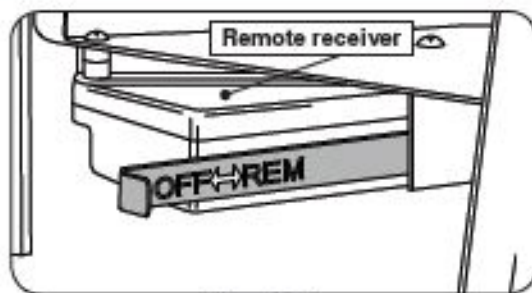


Fig. 19-1

OFF/REMOTE slide actuator (left rear of burner)

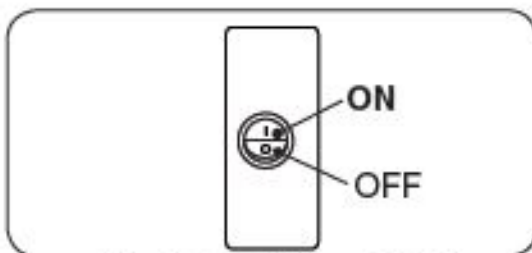


Fig. 19-2 Switch box, ON/OFF

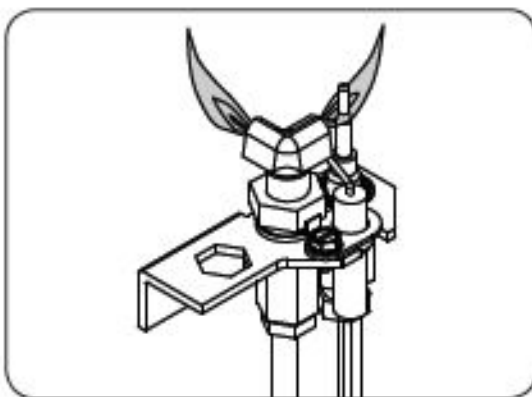


Fig. 19-3 Proper pilot flame

REMOTE OPERATING INSTRUCTIONS

ORIENTATION

Prior to remote transmitter use, light the appliance per the REMOTE LIGHTING section. The remote transmitter will only operate the unit when it is in the remote mode. Familiarize yourself with the transmitter buttons, as illustrated in Fig. 21-1.

Identify the four transmitter buttons (used with this system):

- **ON BUTTON:** Turns the system ON.
- **OFF BUTTON:** Turns the system OFF.
- **HI BUTTON:** When the system is on, this button is used to increase the flame to the desired height.
- **LOW BUTTON:** When the system is on, this button is used to decrease the flame to the desired height.

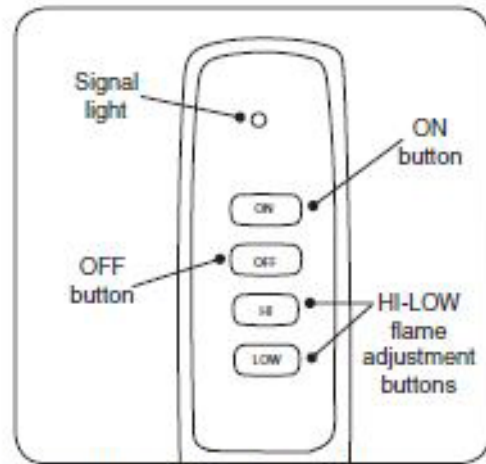


Fig. 21-1 Remote transmitter detail

FLAME HEIGHT

Seven flame height levels are available. Press the HI or LOW buttons to enter the Flame Height mode. Pressing the HI or LOW button once will increase or decrease the flame height by 1 of 7 increments. See Fig. 21-1.

1. Follow the lighting instructions to light the pilot. The pilot flame should encircle the generator tip which is preset at the factory (**Figure 32**). Ordinarily, the pilot will not require field adjustment.
2. If adjustment is necessary, remove the cap screw (**Figure 32**) and turn the smaller gas adjustment screw inside counterclockwise to increase the pilot flame and clockwise to decrease the pilot flame. Replace cap screw.

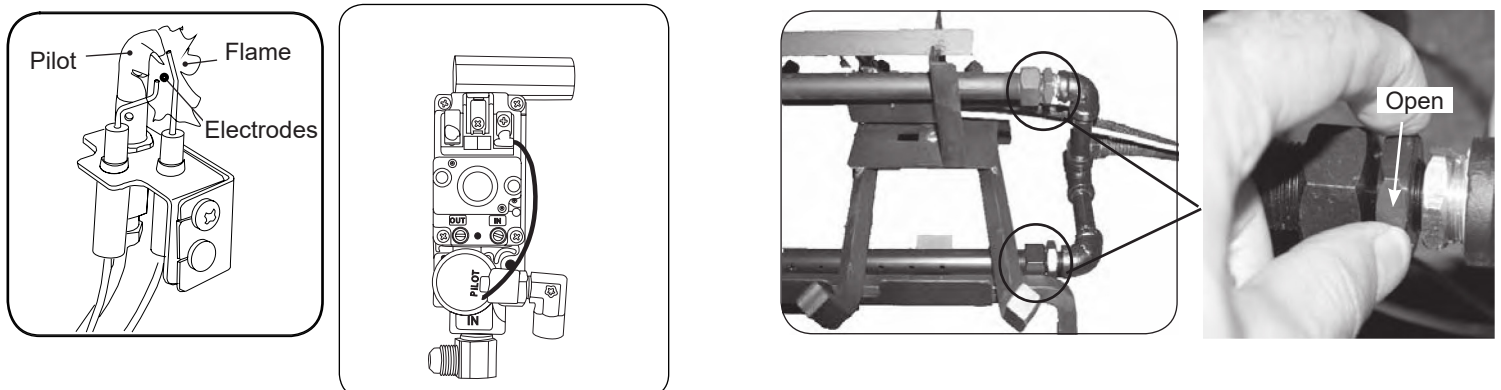
Note: This burner system is equipped with an APK-01 valve assembly.

Placing the Decorative Lava Rock

If desired, open the bag of lava rock and pour its contents around the base of the grating in an attractive pattern. Do not place the Lava Rock on the logs or grate.

Adjusting Air Mixers

Burners are equipped with air mixers for the top and front burners. Adjust the size and color of the flame by opening (turn outward) or closing (turn inward) as shown below.



CLEANING AND SERVICING

Note: Servicing may be necessary to ensure proper pilot operation and proper burn characteristics.

Always shut off the gas to the appliance while performing service work.

Allow the appliance to cool before servicing.

Installation, service, and repair must be done by an NFI Certified or other qualified professional service technician. The appliance should be examined before use, and must be inspected at least annually to prevent burner shutdown, sooting, odors, etc. It must be checked for clean burning operation and proper pilot appearance, with the correct tools to service this unit. More frequent servicing may be required. It is imperative that all control components and compartments, burner(s), air shutters, and circulating air passageways of the appliance be kept clean and free of all obstructions (as applicable).

In addition, a periodic examination and cleaning of the solid-fuel-burning appliance venting system should be conducted by a qualified professional service technician.

Any safety screen or guard removed for servicing must be replaced prior to operating this appliance.

Replace batteries as needed. See INSTALLING/REPLACING BATTERIES section for details.

Verify proper operation after servicing.

If, after a period of use, the flames start to exhibit unusual shapes and behavior, or the burners fail to ignite smoothly, the burner may require cleaning or servicing. If this happens, it is recommended to contact the nearest dealer to get the appliance serviced.

Do not remove the rating plates or the warning tags. These are an integral safety and identification component of this appliance.

We recommend following these instructions at the beginning of each appliance season and as needed throughout the year, depending on your usage pattern and the environmental conditions in your home. More frequent cleaning and maintenance may be necessary when burning propane gas than with natural gas.

SYNCING THE REMOTE SYSTEM

Note: Syncing the remote system will cause the burner to ignite.

Ensure the burner system is off and completely cool.

The remote receiver (found on the rear of the burner assembly) has a sync button (see Fig. 25-1).

Locate the OFF/REMOTE switch actuator on the left rear of the burner. Slide the actuator to the right / **REMOTE** position, then press the sync button and release. One beep will be heard. Then press and hold the **ON** button on the remote transmitter, until 4 rapid beeps are heard and the pilot begins to spark. The remote system is now synced.

If ignition is not desired, press OFF on the remote to shut off.

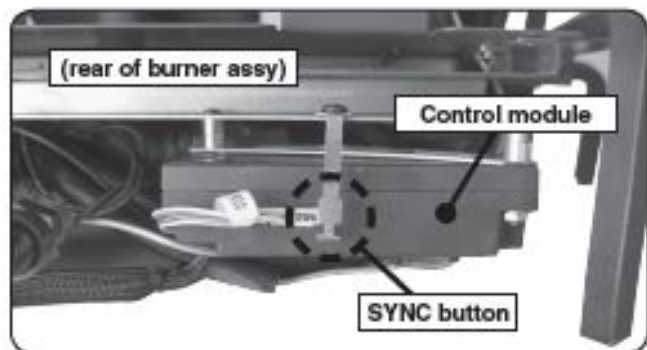


Fig. 25-1 Sync detail

FLAME DESCRIPTION

Observe the flames. The top and middle burner flames should be blue at the base and a combination of blue/yellow at the body and at the tips. The top flames should be approximately 3-5" above the logs, with the center flame being the tallest. The middle flames should be approximately at or below the top of the front log. The ember flames should be 1/4" to 1" above the embers (See 25-2 for example.)



Fig. 25-2 Flame appearance

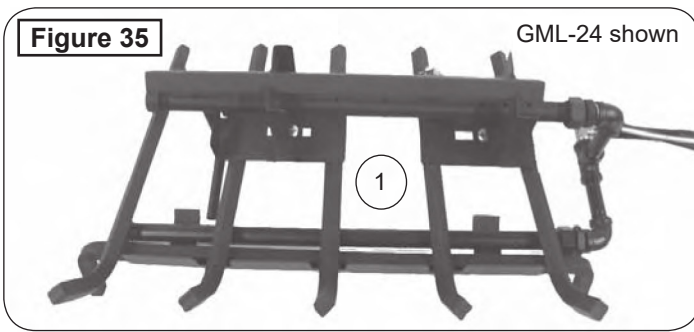
TROUBLESHOOTING

POSSIBLE CAUSE	SOLUTIONS
1 BURNER SHUTTING DOWN DURING OPERATION	
A. Insufficient or excessive gas pressure	A1. Check gas pressure (Read D.- F. of IMPORTANT PRE-INSTALLATION AND FIREPLACE SAFETY INFORMATION section, & check with local gas company). A2. Other gas appliances may be on the same gas line, dropping gas pressure to log set. Check pressures with everything operating to ensure adequate pressure.
B. Log placement	B. Reference the LOG PLACEMENT section in this manual for recommended log positioning.
C. Flue area, fireplace, or damper dirty from soot	C. Clean around, above, and under damper thoroughly. Clean fireplace, removing loose material, including soot and creosote.
D. Fireplace too small for unit	D. Ensure minimum requirements are met (see SPECIFICATIONS section).
E. Pilot flame lifting off thermocouple/generator	E. Check gas pressure (see section A1).
F. Pilot (remote compatible)	F. Contact your dealer for instructions on replacement.
G. Blockages on burner	G. Vacuum any lava granules or material that may have fallen onto burner port area.
2 PILOT WILL NOT LIGHT	
A. Pilot flame lifting off thermocouple/generator	A. Check gas pressure (see Section 1, A1 of this table).
B. Electronic spark not lighting pilot	B. Check to ensure sparking when activated. Note: You may need to turn or press igniter several times to ignite pilot. See LIGHTING INSTRUCTIONS for your control valve.
C. Igniter electrode wire loose	C. Check wiring and reconnect any loose wiring.
D. Gas supply off/manual shutoff valve closed	D. Turn on gas supply or open manual shutoff valve.
E. Air in gas line	E. Bleed gas supply line and repeat LIGHTING INSTRUCTIONS until air is removed.
F. Pilot hood blocked	F. Check for debris or dirt / Clean pilot
G. Dead batteries (if applicable)	G. Replace batteries as needed.
3 LOW FLAME HEIGHT	
A. Gas pressure	A. Check gas pressure (see Section 1, A1 of this table).
B. Valve not fully open	B. Open valve fully.
C. Blockage or kink in flex connector kit, plumbing, or burner orifice	C. Clean out blockage. If flex connector is kinked, replace it.
D. Remote set on low flame (if option available)	D. Adjust flame with remote transmitter.
4 BURNER NOT BURNING EVENLY	
A. Burner ports clogged	A. Clean burner ports.
B. Top burner lights; bottom burner has delayed ignition.	B1. Check gas pressure. Can be caused by too small of a gas line (see Section 1, A1 of this table). B2. Low propane tank level. Vacuum burner tube for soot blockage and fill propane tank.

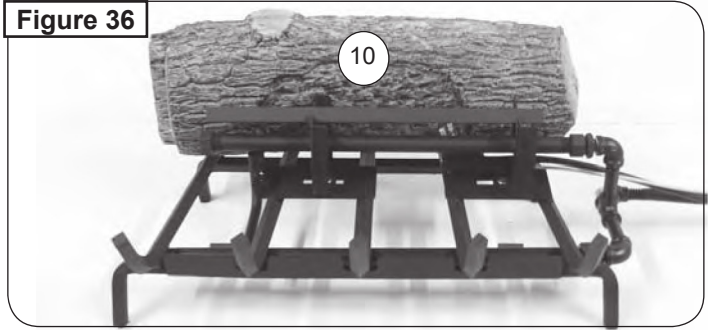
TROUBLESHOOTING (Cont.)

POSSIBLE CAUSE	SOLUTIONS
5 ODORS	
A. Gas leak	A. Shut off gas, if possible. Follow instructions on front page. Have a qualified professional installer or the gas company correct all leaks.
B. New home, new carpet, or new paint	B. When these odors are drawn into the fireplace, this may cause objectionable odors. Thoroughly ventilate the area before restarting your log set.
C. Damper closed	C. Ensure that damper is open.
6 SMOKING AND/OR SOOTING	
A. Poor draft or downdraft	A. Check for chimney blockage. Be sure chimney is at least 3' taller than anything within 10' of it in all directions. If not, consult a chimney sweep. A chimney cap or fan may help.
B. Damper closed	B. Ensure that damper is open.
C. Burner is positioned too close to front of firebox	C. Move burner system to the center of the firebox.
D. Improper media placement	D. See INSTALLATION section for proper media placement.
E. Air mixer on propane set closed (if applicable)	E. Open air mixer completely.
F. Air shutters blocked (if applicable)	F. Air shutters are blocked with debris. Vacuum debris away from air shutter.
G. Log placement	G. See solution in Section 1, B.
H. Using natural-gas burner on propane gas or propane burner on natural gas	H. If gas listed on nameplate does not match gas you are burning, shut down burner system immediately. Call dealer.
I. Adding any accessories to burner system	I. Shut down burner system and take off any accessories that do not belong with the system.
7 PILOT WILL NOT STAY LIT	
A. Valve won't hold	A. Contact your dealer for instructions on replacement.
B. Pilot hood not aimed at thermocouple	B. Pilot hood bent; replace pilot or angle pilot hood properly so pilot flame hits thermocouple.
C. Pilot line bent / kinked at connection to valve	C. Replace pilot line.
D. Thermocouple is loose	D. Tighten thermocouple nut at gas control valve. (Do not over tighten.)
E. Thermocouple cracked or worn out	E. Replace thermocouple.
F. Excessive down draft	F. Install chimney cap / Outside chimney too close to other peaks / Check chimney flue for proper height / Poorly designed chimney.
8 BURNER WILL NOT TURN ON	
A. Low/dead batteries in remote transmitter AND/OR switch/receiver box (if applicable)	A. Replace batteries as needed.
9 FLAME AT AIR MIX / ORIFICE (PROPANE MODELS)	
A. Burner ports clogged	A. Clean burner ports.
B. Gas pressure	B. Check gas pressure (see Section 1, A1 of this table).
10 BURNER TURNS OFF AFTER EXTENDED USE	
A. Thermal safety device activated (select models only)	A. Turn off unit and allow to cool completely. Turn unit back on. (Burner will function when system is at a safe temperature.)
B. Module overheating	B1. Turn off and allow to cool. B2. Check for proper venting. B3. Do not use this burner with doors closed (if present).

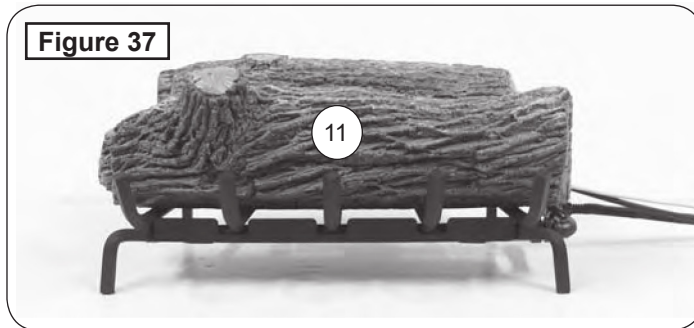
Log Placement



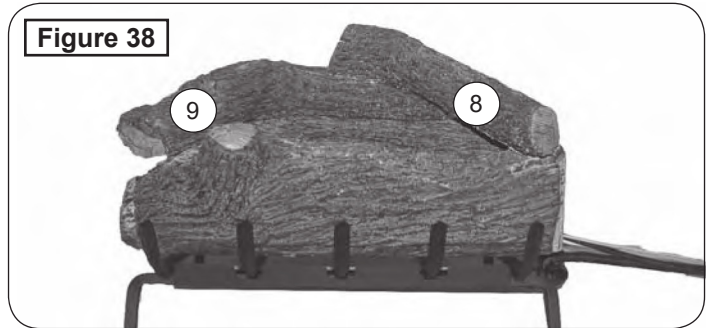
Start with the grate/burner assembly in place



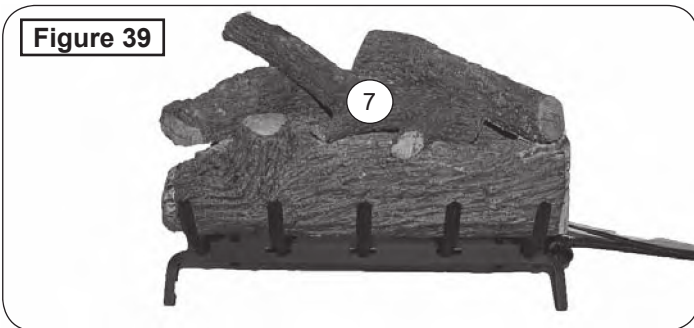
Place back bottom log



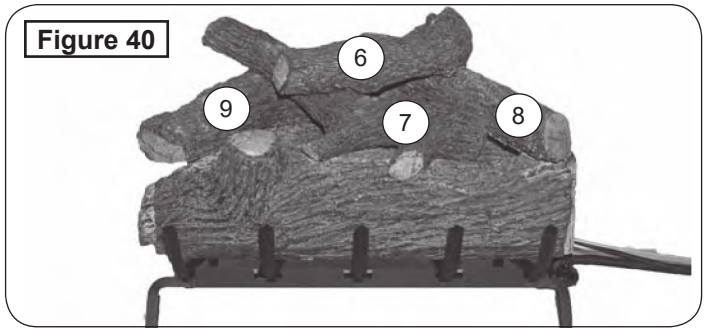
Place front bottom log



Place back top logs (#8 and #9)



Place front top log (#7)



All logs in place

Maintenance

Once installed and operating properly, the Mason-lite gas appliance requires very little maintenance.

You should inspect the appliance, chimney, burner and control annually for the following:

- 1. Excessive Sooting** - Some sooting of the logs is normal and adds to the natural appearance of burned wood. If soot accumulates, you may brush the soot off with a stiff brush. Logs may also be cleaned by allowing them to heat up, then spraying them with water where soot has accumulated.
- 2. Debris around the control** - Inspect the control and pilot to be sure it is free of any dirt or debris.
- 3. Insects and burner blockage** - Check the burner ports and the air-mixer, if present, to make sure they are free from debris. Blocked burner ports and orifices may result in poor flame distribution or flame at air mixer (if equipped). Reference SOLUTION, to symptoms 2-4, of **Troubleshooting**.

Service

Maintenance and Service

It is recommended that a qualified professional service technician be called to service the gas appliance and its venting system at least annually or should service be required. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc.

WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

Troubleshooting

It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean. The Troubleshooting section of these instructions serves as a guide for ensuring optimum performance of the gas appliance.

PROBLEM	CAUSE	SOLUTION
1. Pilot will NOT stay lit.	a. Pilot generator may not be producing sufficient millivolts.	a. Check with a millivolt meter. Should be 250 millivolts or more.
	b. Pilot flame making a blowing sound	b. Pilot needs adjusting (see "Checking and Adjusting the Pilot" on page 22).
	c. Generator wire leads attached to the wrong terminals on the valve.	c. Connect leads per wiring diagram, previous page.
	d. Defective thermo-magnetic safety in valve.	d. Replace valve.
2. Pilot Burning. No Gas to Burner.	a. Safety valve not turned to the ON position after lighting pilot.	a. Turn to ON position.
	b. Wire leads are not properly connected to valve or switch terminals.	b. Attach all wire leads tightly to proper terminals (See wiring diagram, previous page).
	c. Voltage to pilot generator too low.	c. See section 1a above.
	d. Defective valve.	d. Replace valve.
3. Appliance Not burning properly.	a. Low flame/uneven flame.	a. Check for low gas pressure; minimum operating pressures of 5" W.C. at manifold.
4. Appliance will not shut OFF.	a. Control Switch lead wires to the valve may be shorted together or on wrong terminals.	a. See wiring diagram, previous page. System takes 15-20 seconds to complete shutdown (nominal).
5. Frequent pilot outage.	a. Pilot flame is out of adjustment.	a. See section 1b above.
	b. Down drafts from the chimney, extinguishing the pilot.	b. Check draft. Consult with a qualified chimney expert.
6. Appliance shuts down during operation.	a. Improper venting causing spill switch to trip repeatedly.	a. Check draft. Consult with a qualified chimney expert. Consider installing a combustion air kit.
	b. Spill switch improperly mounted.	b. See section on "Installing Spill Switch and Baffle Assembly" on page 21.
	c. Smoke Diverter not in place.	c. Install Smoke Diverter with Spill Switch per instructions.
7. Excessive soot on logs.	a. Yellow flame impingement.	a. Open air shutter on front burner or main burner as needed.

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).

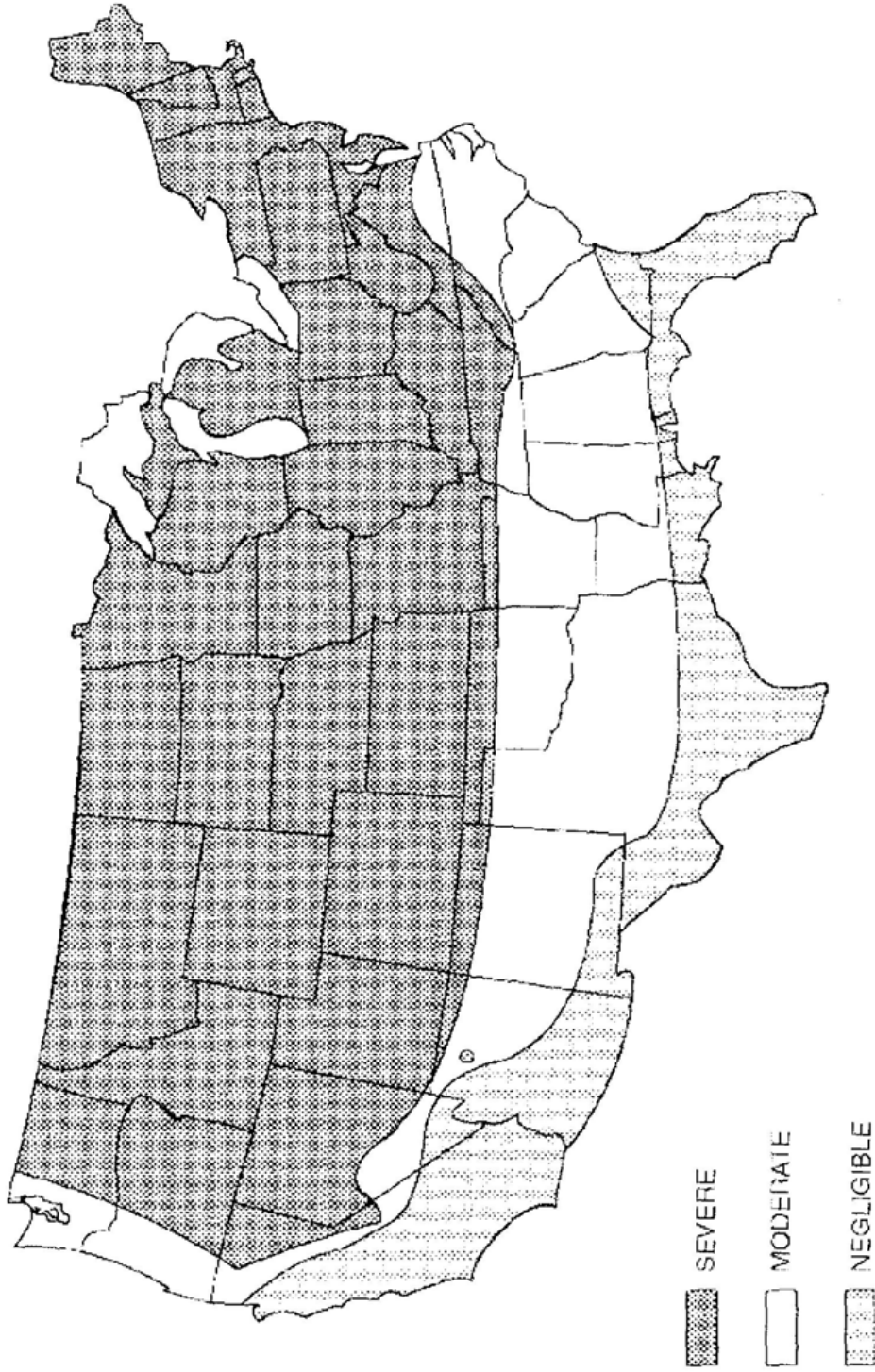
TABLE R402.2 MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE

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

- 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.

Lifetime Limited Warranty

MASON-LITE APPLIANCE

Masonry Fireplaces Industries, Inc. (MFI) warrants all Mason-Lite Appliances to be free from defects in materials that adversely affect appliance performance for the lifetime of the product from the date of purchase, subject to the terms and conditions of this limited warranty. MFI does not warrant accessory chimney, outside air ducts and devices not manufactured by MFI.

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

Coverage under this warranty is subject to the following conditions and exclusions:

- This warranty is null and void when the appliances are not installed pursuant to the installation instructions provided by MFI or local building codes have not been followed completely.
- Glass is warranted against thermal breakage only and only on models that are manufactured by MFI with a glass front. On Direct Vent models the safety glass or safety screen must be kept in front of this glass when appliance is in use. Safety screen must be used on all models when in use.
- This warranty does not apply to any component or part that shows evidence of misuse, abuse, improper installation, accident or lack of regular maintenance. MFI is not responsible for misuse or mishandling of component parts.
- This warranty does not apply to any damage sustained to the appliance while in transit.
- Neither MFI, nor any affiliate thereof, is responsible for any labor costs or indirect costs incurred for the replacement of defective components. Any covered component that, in our judgment, is defective shall be repaired, replaced or refunded at MFI's option.
- Nothing in this warranty makes MFI, or any affiliate thereof, liable in any respect for any injury or damage to the building or structure in which the appliance has been installed or to the persons or property therein arising out of the use, misuse, or installation of properly manufactured MFI products.
- The appliance must be used in accordance with operating instructions. The grate or andirons must be installed when using the appliance.

NEITHER MFI, NOR ANY AFFILIATE THEREOF, SHALL BE HELD LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES ARISING OUT OF THE USE OF THE APPLIANCE. ALL SUCH DAMAGES AND EXPENSES ARE HEREBY EXCLUDED. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

If a component is found to be defective under the terms of this warranty, the party this warranty is extended to shall notify MFI, 6391 Jurupa Ave., PO Box 4338, Riverside, CA 92514 in writing, by registered mail, within thirty (30) days following the discovery of the defect within the lifetime warranty period. The letter shall include proof of purchase and state the (1) date of purchase, model number and serial number ; (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.

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

THE FOREGOING WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, TERMS OR CONDITIONS, EXPRESS OR IMPLIED EITHER IN FACT OR BY OPERATION OF LAW. MFI HEREBY DISCLAIMS ALL GUARANTEES AND WARRANTIES, EXPRESS OR IMPLIED, BEYOND THE WARRANTIES SET FORTH HEREIN, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

Revision date: 1/29/2015

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