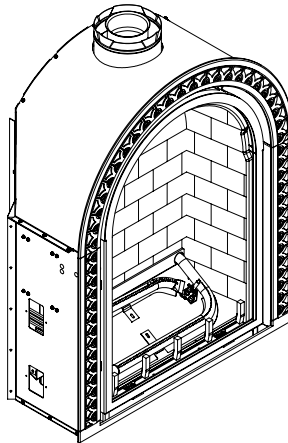




## CHELSEA

### OPEN HEARTH TRUE ARCHED GAS DIRECT VENT FIREPLACE



## Model M-27 INSTALLATION & OPERATING INSTRUCTIONS MANUAL

DOCUMENT NO. M27-0905

**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

- Open windows.
- Do not touch electrical switches.
- Do not try to light any appliance.
- Extinguish any open flame
- Do not use the 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.

In the Commonwealth of Massachusetts:

- Installation must be performed by a licensed plumber or gas fitter;
- A CO<sub>2</sub> detector shall be installed in the room where the appliance is installed.

#### WARNING

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

#### WARNING

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.

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

#### FOR YOUR SAFETY

A qualified installer, service agency, or the gas supplier must perform installation and service.

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

#### WARNING

Do not operate this appliance with the glass removed, cracked or broken. A licensed or qualified person should do replacement of glass.

#### WARNING

Mendota gas fireplaces are heat producing appliances. Do not burn wood, paper or other materials in this fireplace. This fireplace is designed as a supplement heat source. It is advisable to have an alternative primary heat supply.

The installation must conform with local codes or, in the absence of local codes, with the current National Fuel Gas Code, ANSI Z223.1, or the current Natural Gas and Propane Installation Code, CSA B149.1

#### CAUTION

**THESE INSTRUCTIONS ARE TO REMAIN WITH THE HOMEOWNER.**

## **SAFETY AND WARNING INFORMATION**

**READ and UNDERSTAND** all instructions carefully before starting the appliance. **FAILURE TO FOLLOW** these instructions may result in a possible fire hazard and will void the warranty.

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

**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 underwater.

**THIS UNIT IS NOT FOR USE WITH SOLID FUEL.**

Installation and repair should be **PERFORMED** by a qualified service person. The appliance and venting system should be **INSPECTED** before initial use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding, material, etc. It is **IMPERATIVE** that the unit's control compartment, burners, and circulating air passageways **ARE KEPT CLEAN** to provide for adequate combustion and ventilation air.

Always **KEEP** the appliance clear and free from combustible materials, gasoline, and other flammable vapors and liquids.

**NEVER OBSTRUCT** the flow of combustion and ventilation air. Keep the front of the appliance **CLEAR** of all obstacles and materials for servicing and proper operation.

Due to high temperature, the appliance should be **LOCATED** out of traffic areas and away from furniture and draperies. Clothing or flammable material **SHOULD NOT BE PLACED** on or near the appliance.

Children and adults should be **ALERTED** to the hazards of high surface temperature and should **STAY AWAY** to avoid burns or clothing ignition. Young children should be **CAREFULLY SUPERVISED** when they are in the same room as the appliance.

These units **MUST** use one of the vent systems described in the Installing Your Fireplace section of the Installers Guide. **NO OTHER** vent systems or components **MAY BE USED**.

This gas fireplace and vent assembly **MUST** be vented directly to the outside and **MUST NEVER** be attached to a chimney serving a separate solid fuel-burning appliance. Each gas appliance **MUST USE** a separate vent system. Common vent systems are **PROHIBITED**.

If the vent-air intake system is disassembled for any reason, reinstall per the instructions provided for the initial installation.

The vent system assembly for this fireplace must be periodically examined by a qualified service agency.

**INSPECT** the external vent cap on regular basis to make sure that no debris is interfering with the airflow. The flow of combustion and ventilation air not to be obstructed

**DO NOT** abuse the glass door by striking the glass, slamming the door shut, etc.

Use only authorized parts and materials obtained from Johnson Gas Appliance Company when replacing defective or damaged glass.

**DO NOT USE** abrasive cleaners on the glass door assembly. **DO NOT ATTEMPT** to clean the glass door when it is hot.

Turn off the gas before servicing this appliance. It is recommended that a qualified service technician perform an appliance check-up at the beginning of each heating season.

**DO NOT** place furniture or any other combustible household objects within 36 inches of the fireplace front.

# SPECIFICATIONS

## MODEL M-27

	<u>High Fire</u>	<u>- Adjustable to -</u>	<u>Low Fire</u>
BTUH. (MODEL M-27)	NAT. GAS	27,000	6,750
BTUH. (MODEL M-27)	LP GAS	25,000	7,000



**NOTE: LP CONVERSION KIT #HA-48-00025 IS INCLUDED WITH THIS FIREPLACE.**

MAIN ORIFICE [0-2000ft (610 m)]: REAR BURNER: #45 NAT. GAS [#56 L.P. GAS] – FRONT BURNER: #51 NAT. [#59 LP]

OVERALL EFFICIENCY: ..... EXCEEDS D.O.E. EFFICIENCY REQUIREMENTS (A.F.U.E.) FOR DIRECT VENT

WALL HEATERS.

CO-AXIAL DIRECT VENT FLUE: ..... 4" INNER, 6 5/8" OUTER

TOTAL WEIGHT: ..... 175 POUNDS

SAFETY: ..... AGA CERTIFIED PILOT GENERATOR, MILLIVOLT SYSTEM  
ACTIVATED WITH SWITCH, THERMOSTAT OR REMOTE CONTROL.

### APPLIANCE CERTIFICATION AND TESTING AGENCY

INTERTEK TESTING SERVICES, ICBO#AA647-4

Certified under ANSI Z21.88 (2002) • CSA 2-33 (2002) "Vented Gas Fireplace Heaters" not for use with solid fuel. Approved for bedroom installations and mobile homes. UL307B approved for "mobile homes, after first sale of home, not for recreational vehicles."

**GAS REQUIREMENTS** ..... **SUPPLY PRESSURE:** GAS INLET: 1/2" N.P.T.  
NAT. GAS: **7" W.C.** (5" W.C. MIN., 11" W.C. MAX.)  
L.P. GAS: **11.0" W.C.** (11" W.C. MIN., 13" W.C. MAX.)

**ELECTRICAL REQUIREMENTS** ..... 115 VOLT, LESS THAN 1.4 amps (for blower operation only)

**APPROVED VENT SYSTEMS** ..... DURAVENT

### MINIMUM CLEARANCES TO COMBUSTIBLE CONSTRUCTION

UNIT TO FLOOR	0in. (0mm)	GLASS EDGE TO ADJACENT SIDEWALL	12in. (305mm)
UNIT TO ENCLOSURE SIDEWALL	0in. (0mm)	VENT PIPE TOP TO COMBUSTIBLES	2in. (51mm)
UNIT TO ENCLOSURE BACK WALL	1in. (25mm)	VENT PIPE SIDES TO COMBUSTIBLES	1in. (0mm)
UNIT TOP TO ENCLOSURE CEILING	1-5/8in. (38mm)	VENT PIPE BOTTOM TO COMBUSTIBLES	1in. (0mm)
UNIT TOP TO ROOM CEILING	27-1/2in. (699mm)		
8" MANTLE ABOVE DISCHARGE AIR OPENING	13in. (330 mm)		

THIS FIREPLACE INCLUDES A SEALED COMBUSTION SYSTEM, 7-PIECE CERAMIC FIBER LOG SET & COALS, FIREBRICK LINED FIREBOX, NEO-CERAM GLASS, PIEZO IGNITER, DUAL BLOWERS, AGA CERTIFIED SAFETY SYSTEM, and WALL THERMOSTAT.

OPTIONS: BLACK, NATURAL IRON, SWEDISH NICKEL, 24K GOLD FILIGREE, OR CAST IRON DECORATIVE FRONTS.

**CAUTION**  
**THESE INSTRUCTIONS ARE TO**  
**REMAIN WITH THE HOMEOWNER.**

This appliance may be installed in an aftermarket, permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes.

This appliance is only for use with the type(s) of gas indicated on the rating plate. A conversion kit is supplied with this appliance.

**NOTE:** This installation must conform to local codes. In the absence of local codes, you must comply with the **National Fuel Gas Code, ANSI Z223.1-latest edition** in the U.S.A. and the Natural Gas and Propane Installation Code, **CSA B149 Installation Codes** in Canada.

**WARNING:** Do not operate this appliance with the glass removed, cracked or broken. A licensed or qualified person should do replacement of glass.

## **CONGRATULATIONS**

You are the owner of a world-class heat producing gas direct vent sealed combustion fireplace.

This elegant, highly efficient Fireplace will be a constant source of comfort and fascination. It will be the focal point of beauty and interest in your home.

The Mendota Gas Fireplace is a true heating appliance incorporating the traditional aesthetics of fireplace fire viewing with the controllability and fuel efficiency of a home gas furnace. Of particular interest is the low fuel consumption and brilliant fire viewing afforded by the realistic HearthGlo wood fire-like combustion system.

Carefully read the following instructions prior to actual installation. Proper Mendota Gas Fireplace installation and operation will give you years of safe, trouble free comfort and enjoyment.

If you have any questions regarding installation or operation of your Mendota Fireplace please contact your local dealer.

### **...CAUTION...**

Due to high temperatures, the Fireplace should be located out of traffic and away from furniture and draperies. Children and adults should be alerted to the hazards of high surface temperature and should stay away to avoid burns or clothing ignition. Young children should be carefully supervised when they are in the same room as the Mendota Gas Fireplace.

Clothing or other flammable material should not be placed on or near the Fireplace.

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

The Mendota Gas Fireplace is a powerful and efficient heating unit. It has been designed as a major source of supplemental heat. As with any mechanical appliance there can be component shut downs. It is advisable to have an alternate heat supply.

Installation, repair and any adjustments to logs or burner must be done by a qualified service person. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, carbon build-up, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean. The burner and pilot flames and logs should be visually checked periodically.

DO NOT use this appliance if any part has been under water or exposed to moisture corrosion. Immediately call a qualified service technician to inspect the Fireplace and replace any part of the control system and any gas control, which has been under water. DO NOT use this fireplace if the burner does not light immediately. Turn unit off and call Mendota approved service person if there is any delay in burner light off.

It is Johnson Gas Appliance Company's policy that no responsibility is assumed by the Company or by any of its employees or representatives for any damages caused by an inoperable, inadequate, or unsafe condition which is the result, either directly or indirectly, of any improper operation, installation or servicing procedures.

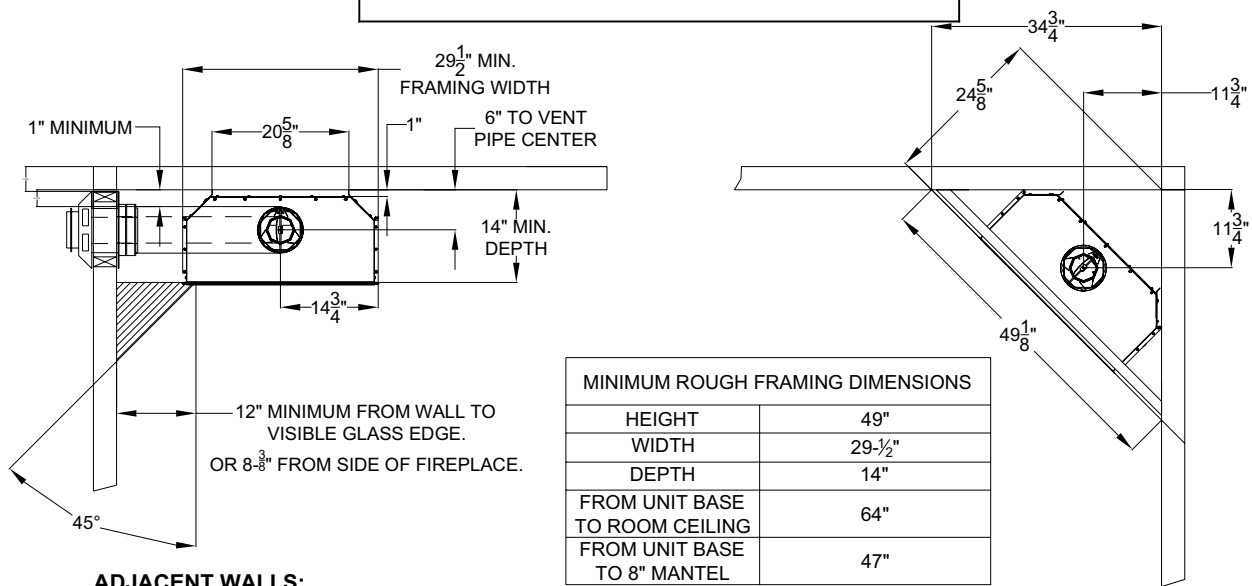
### **Building Permit and Installation Inspection Approval Requirements**

All installations of Mendota Fireplaces and Inserts must comply with all the requirements stated in this Installation and Operating Instructions Manual. The Dealer and/or installer must also obtain all required Building Permits and Inspection Approval from the local building inspection department or the local body having jurisdiction. In order to validate warranty coverage, Mendota may require facsimile copies of the Building Permit and Inspection Approval forms. Failure to provide adequate proof that the installation conforms to all local requirements and the requirements stated in the Installation and Operating Instructions Manual will void all applicable warranty.

<b>INSTALLER: THESE INSTRUCTIONS ARE TO REMAIN WITH HOMEOWNER.</b>
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# M-27 GAS DIRECT VENT FIREPLACE GENERAL APPLIANCE SPECIFICATIONS

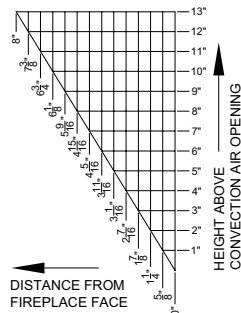
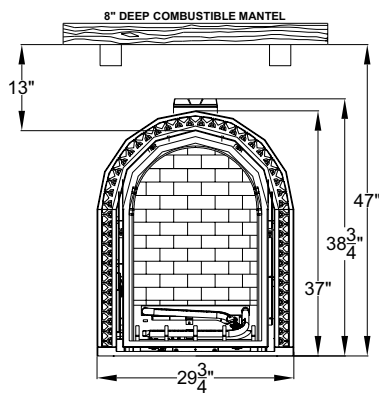
Figure 1: General Appliance Specifications



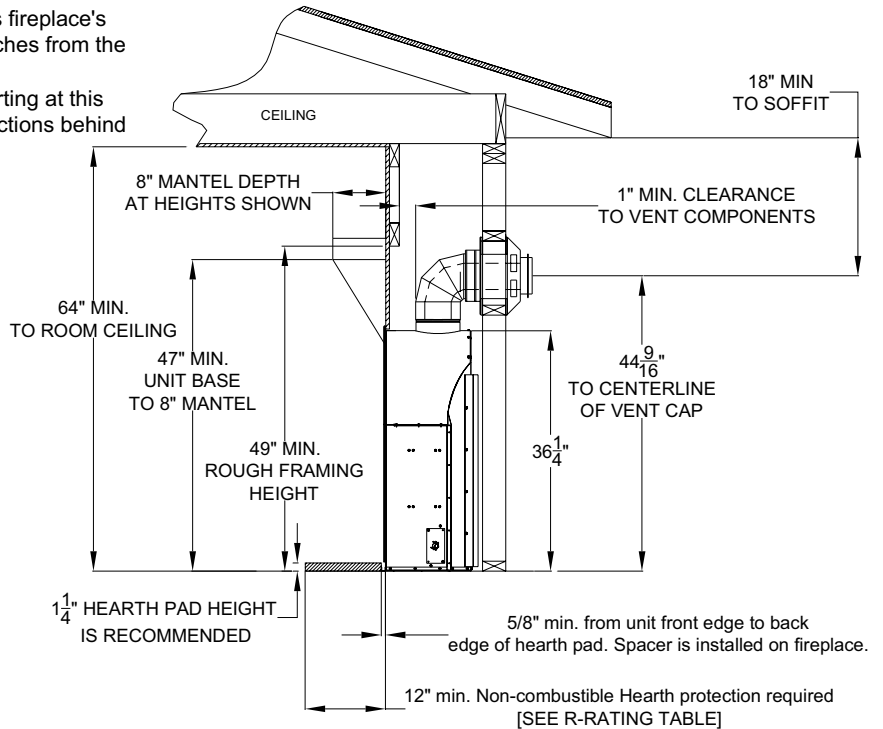
## ADJACENT WALLS:

A wall perpendicular to and in front of this fireplace's glass door surface must be at least 12 inches from the side edges of the visible glass.

A wall at 45° to the glass surface and starting at this Fireplace's outer edge is permitted. Projections behind this wall (in shaded area) are permitted.



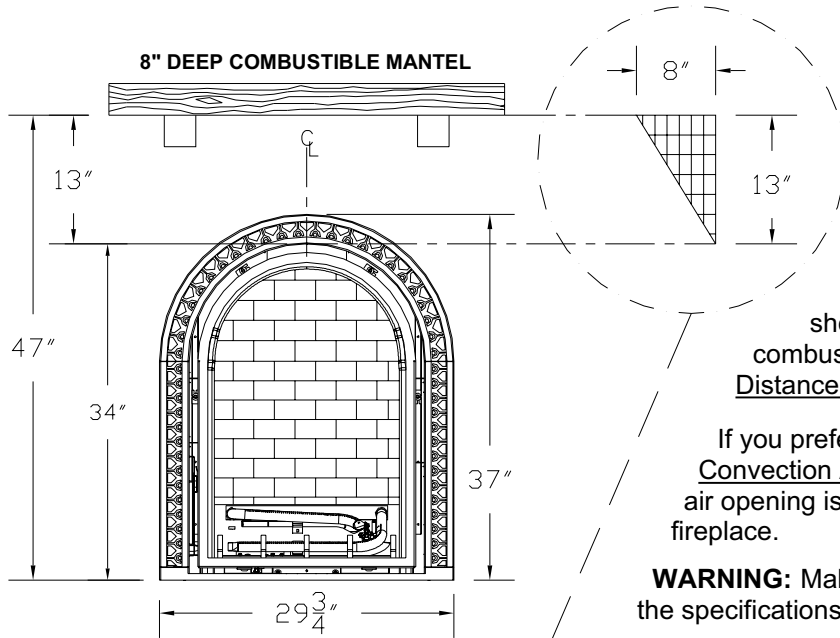
APPROVED MANTEL PROFILE



**NOTE:** For every 1" this fireplace is raised off the floor, the non-combustible hearth protection pad may be reduced by 2". If this fireplace is raised off the floor more than 6", No hearth protection pad is required.

## MANTEL CLEARANCES

Mantel Clearances for this fireplace may be measured from **the top of the convection air opening** or **the floor level of this fireplace**.



The location that is referenced normally to measure mantel clearances is the Top of the Convection Air Opening. For ease, however, measure up from the floor level of this fireplace. The chart and diagram, in this page, provide all the reference dimensional information necessary in determining the distance a combustible mantel may protrude out from the face surface of this fireplace. The Chart, at left, shows the Distance From Fireplace Face the combustible mantel may protrude outward at a Distance Up From Floor Level of this Fireplace.

If you prefer to take measurements from the Top of the Convection Air Opening, note that the Top of the convection air opening is 34 inches up from the floor level of this fireplace.

**WARNING:** Make proper use of this chart. Do not compromise the specifications contained in this chart.

Failure to adhere to proper clearances required to combustibles may cause spontaneous combustion of the mantel and may result in property damage, personal injury or loss of life.

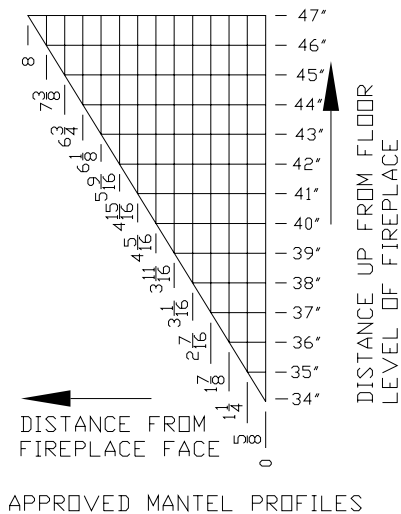
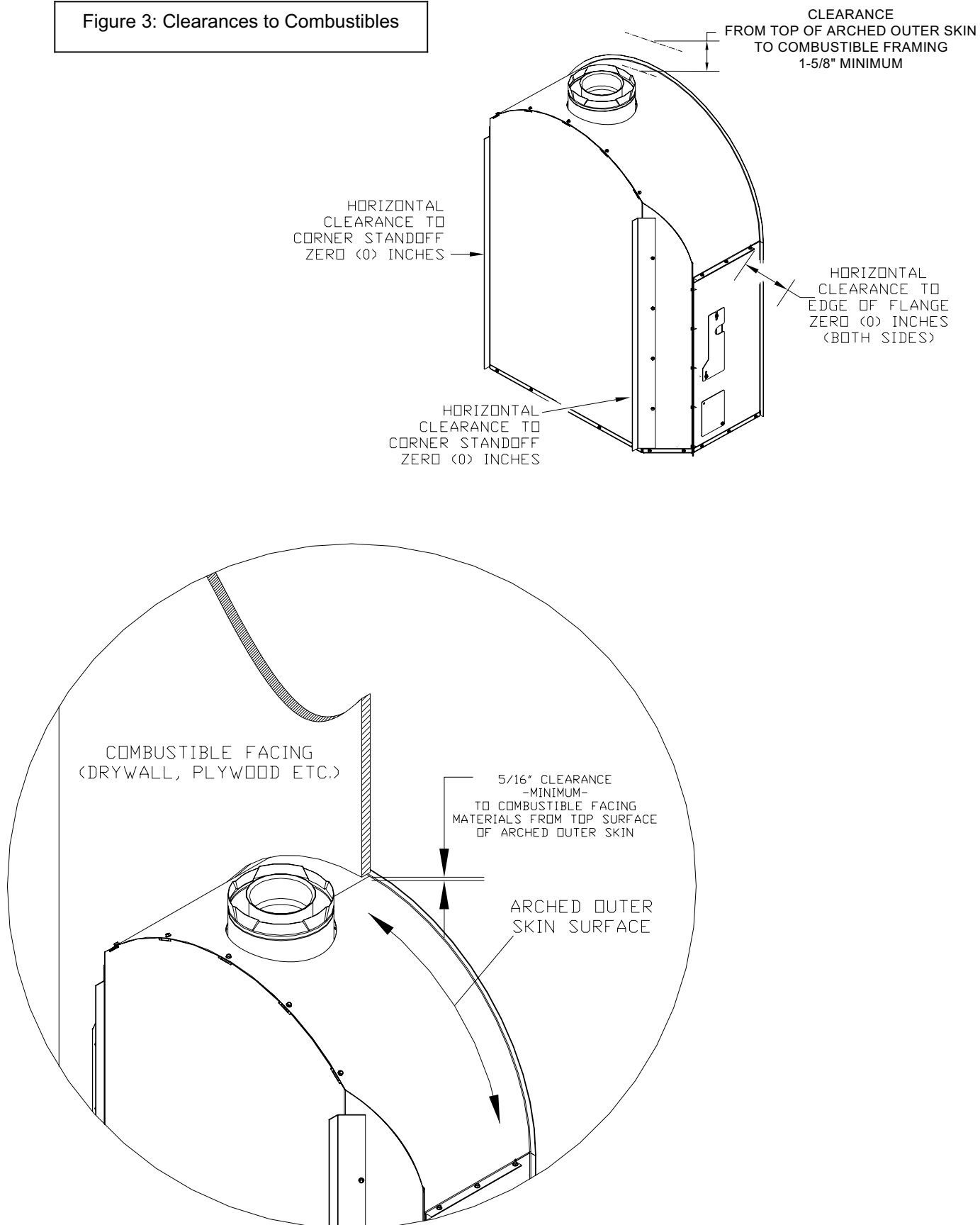


Figure 2: Mantel Clearances

# CLEARANCES TO COMBUSTIBLES FROM APPLIANCE SURFACES

Figure 3: Clearances to Combustibles



## Planning the Installation

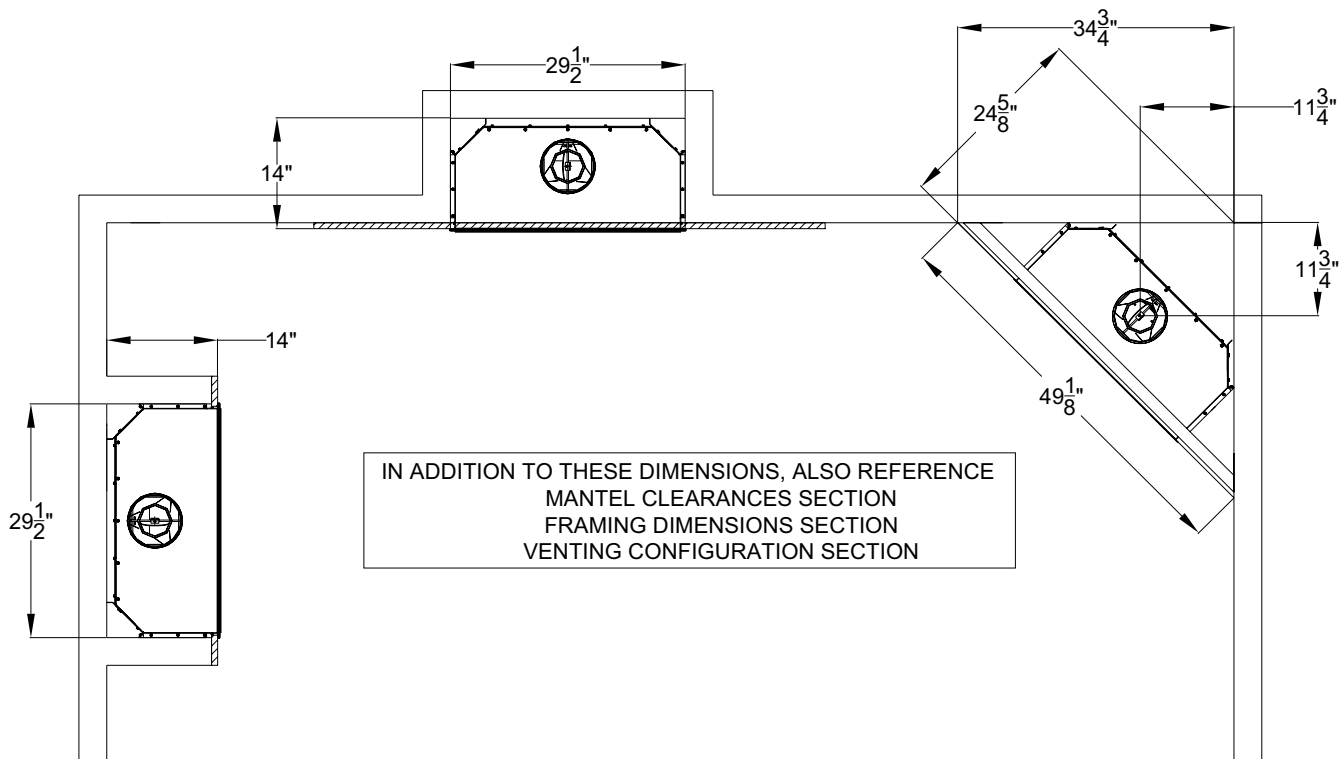
When planning on appliance installation, it is necessary to determine the following information before installing:

- Where the appliance is to be installed.
- The vent system configuration to be used.
- Gas supply piping.
- Electrical Wiring.
- Framing and finishing details.
- Whether accessories such as a wall switch, remote control, and ceiling fan are desired.

### Selecting Appliance Location

When selecting a location for your appliance, it is important to consider the required clearances to walls. See Figure 1: General Appliance Specifications and Figure 3: Clearances to Combustibles.

Figure 4: Planning Installation



### **WARNING FIRE RISK- ODOR RISK**

- Install appliance on hard metal or wood surfaces extending full width and depth of this fireplace.
- Do NOT install this fireplace directly on carpeting, vinyl or any combustible material other than wood. Construct chase to all clearance specifications in manual.
- Locate and install appliance to all clearance specifications in manual.



## **FRAMING DIMENSIONS**

Minimum Rough Framing Dimensions		
	DESCRIPTION	DIMENSION (INCHES)
A	Width	29-1/2
B	Height	49
C	DEPTH (assumes that 3/4" thick drywall is used as facing material reduce depth for thicker facing materials. See Facing Materials Section.)	13-1/4
D	Vent opening width	9-1/4
E	Vent opening height	10-1/4

### **Rough Framing Height**

The Rough Framing Height must be maintained to allow this fireplace and the 90-degree elbow connected directly to the top, on certain vent systems, to slide into the framing cavity. Once the fireplace is positioned inside the framed cavity, a secondary nailer stud should be added at a minimum height of 38 inches above the floor level of this fireplace. The nailer stud will allow for securing facing materials.

### **Special consideration for vertical vent systems**

If a straight-up vertical vent system is being considered, the top plate on the front wall of the chase will need to be notched to allow the proper 1" clearance from the top plate to the vertical vent pipe. Furthermore, all framing headers and members that are located within the 1" clearance requirement to the vent stack or vent components must be positioned on edge (on the 1-1/2" edge) to allow proper clearance to the vent stack or component. See Figure 6.

### **Constructing the Appliance Chase**

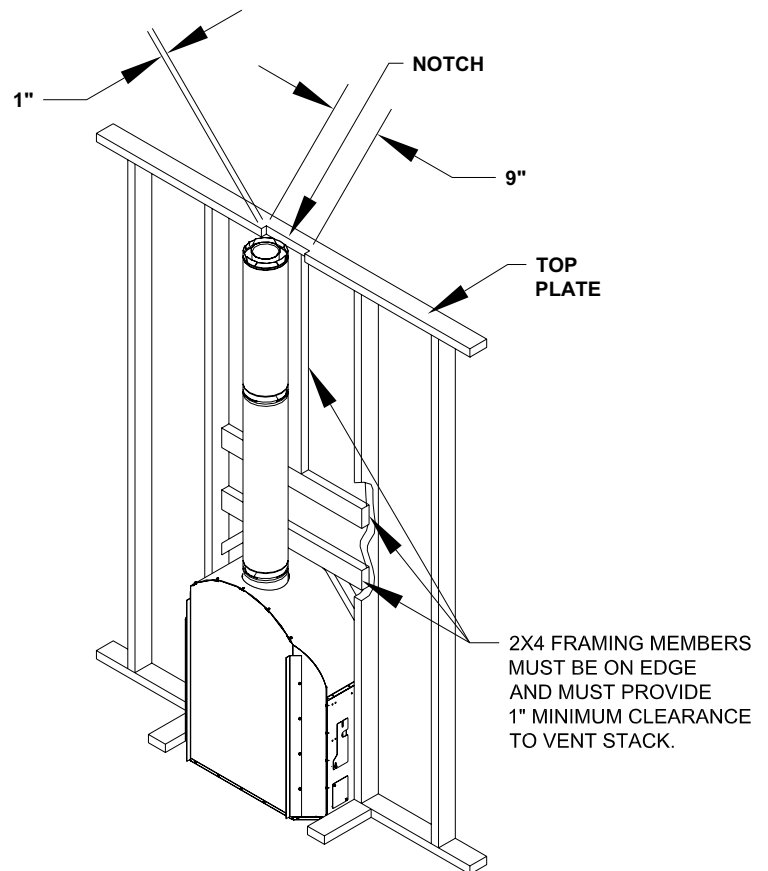
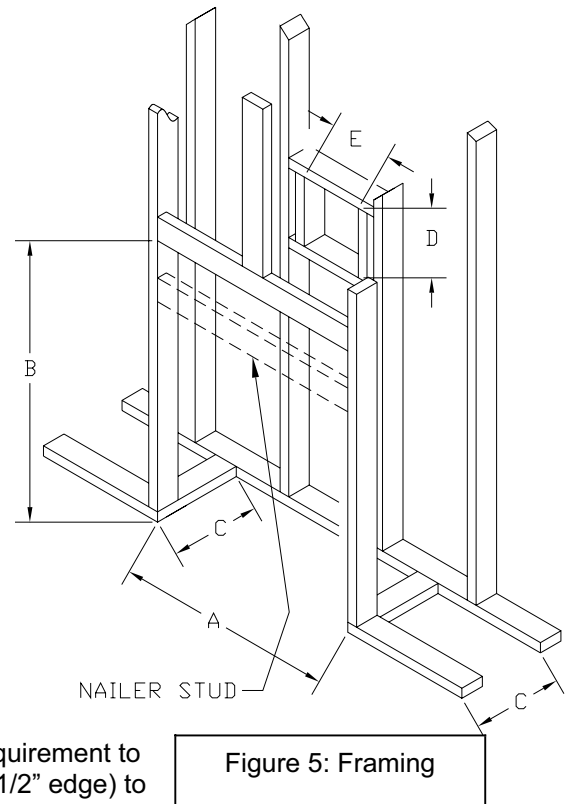
A chase is a vertical box-like structure built to enclose this fireplace and its vent system. Vertical vents that run on the outside of a building may be, but are not required to be, installed inside a chase.

Construction of the chase may vary with the type of building. These instructions are not substitutes for the requirements of local building codes. Local building codes **MUST** be adhered to.

Chases should be constructed in the manner of all outside walls of the home to prevent cold air drafting problems. The chase should not break the outside building envelope in any manner.

Wall, ceiling, base plate and cantilever floor of the chase should be insulated. Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, in regions where cold air infiltration may be an issue, the inside surfaces of the chase may be sheet rocked and taped for maximum air tightness.

To further prevent drafts, the firestops should be caulked with high temperature caulk to seal the gaps. Gas line holes and other openings should be caulked with high temp caulk or stuffed with unfaced insulation. If the appliance is being installed on a cement slab, a layer of plywood may be placed underneath this fireplace to prevent conducting cold up into the room.



## ELEVATED FRAMING DIMENSIONS

This fireplace may be installed in an elevated position by created an elevated deck and an appropriate framed enclosure.

**NOTE:** This fireplace may be elevated but **MUST** allow a minimum of 64" distance between this fireplace's floor level and the ceiling.

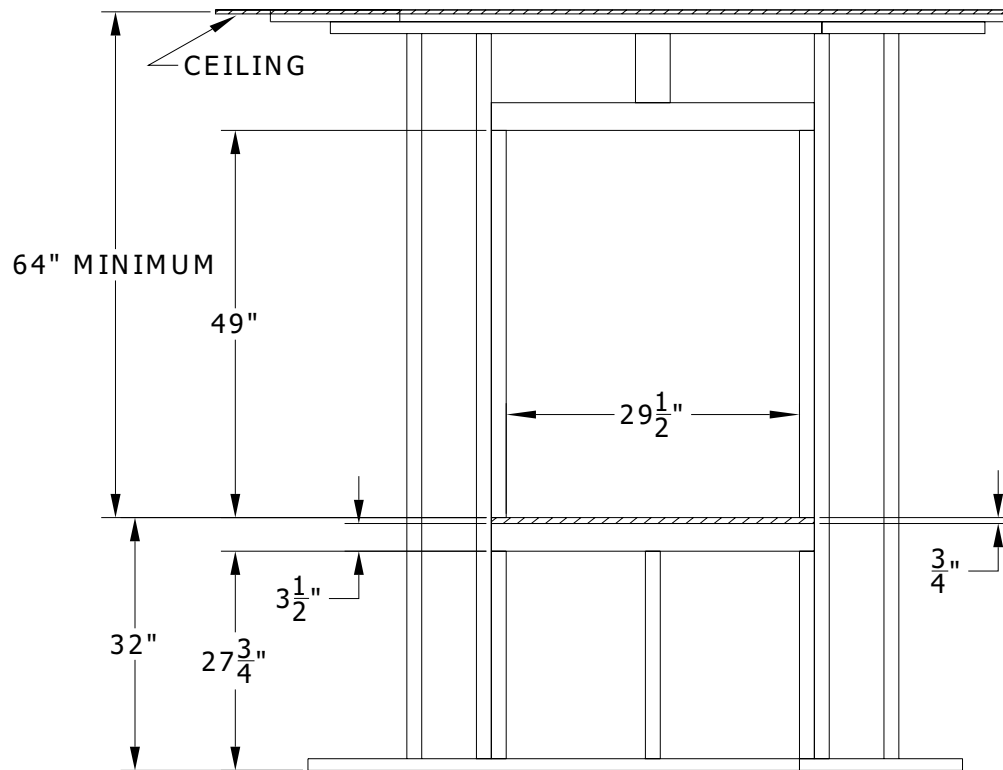


Figure 7: Elevated Framing Dimensions

## **GENERAL INFORMATION**

Your Mendota Gas Fireplace has a state-of-the-art co-axial direct vent, sealed combustion system. This advanced and highly efficient system brings in outside air for combustion, has a separate exhaust vent and efficiently heats and recirculates room air. The Mendota system maintains high air quality, maximizes efficiency and assures proper operation in today's "air-tight" homes.

### **SAFETY AND STRUCTURAL CONCERNS:**

The M-27 Fireplace must be installed and serviced by a Mendota approved serviceperson. Any adjustments to burner, pilot, logs or coal bed must be made by a Mendota approved service person. Pilot system voltage must be checked with a voltmeter. Pilot system thermopile must register a minimum of 325 mV on a voltmeter. If pilot goes out, always wait five (5) minutes before attempting to relight pilot, always open glass door before lighting pilot light.

### **VENTING REQUIREMENTS:**

This Mendota Fireplace can be vented using DURAVENT brand coaxial pipe (4"X6-5/8") off the top. Use only Mendota specified vents and vent caps when installing your fireplace. Closely follow venting locations, directions and requirements. Observe the restrictions relating to vent position on exterior of home (see Figure 12). Be sure all vent pipe sections are fully twist-locked and leak-proof. Be sure 1000 ° Silicate Stove Sealant is used on the inner pipe joints of all Simpson DuraVent pipe components and all adjustable pipe sections.

### **WARNING: ALWAYS REMOVE THE GLASS DOOR WHEN LIGHTING THE PILOT.**

The burners must light immediately & the flame must travel promptly and smoothly around "curves" and light entire burner. The flame must not "lift" off burner. DO NOT operate unit if burner does not light immediately or if flame lifts off burner.

The Mendota Direct Vent Fireplace may be placed within 12 inches of adjacent sidewalls. The fireplace may be placed directly on concrete or wood flooring. If the appliance is to be installed on carpeting, vinyl or other combustible material other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance. An 8" combustible mantel may be installed at a minimum of 13" above top of the heat outlet (47" up from the floor level of this fireplace) and no more than 8" out from wall at that height. Non-combustible (marble, brick, stone, etc.) mantels or mantels with steel protector plate on underside can be installed at any desired height above decorative front.

Never block off convection air openings or paths. Always use Mendota decorative fronts and Mendota approved vent systems and vent caps.

A non-combustible hearth protector with a total insulation rating of R-1 is required when installing this fireplace directly on the floor and must extend a minimum of 12" in front of the fireplace. For every 1 inch the fireplace is raised off the floor, the depth of the hearth protector may be reduced by 2 inches. If fireplace is raised off the floor 6" or more, no hearth protector is required.

### **HEATING PERFORMANCE:**

Mendota Gas Built-in Fireplaces are true, high efficiency gas heaters. With its high heat output the Mendota Fireplace will heat a large area of your home if situated to maximize heat/ air circulation. Air movement options for maximizing heat circulation that can be considered are through-the-wall grills or floor grills, the continuous operation of central heating furnace blowers, or ceiling fans. **The most efficient method for overall heat distribution within a single room is a ceiling fan.** The heat output of the Fireplace can be reduced to a low 6,750 BTUH by turning off the Rear Burner and turning the Hi/Lo pressure regulator knob on the gas valve, counter clockwise, from "Hi" to "Lo". Blower can be turned down or turned off to reduce heat output.

### **AESTHETIC CONSIDERATIONS:**

Burning or static fireplaces are a major aesthetic focus in any room. Locate your gas fireplace as you would a television set. The Mendota Hearth Gas Fireplace will be a continuing source of comfort and fascination. Corner installations will afford you the greatest potential for viewing in many rooms. We suggest installing this Mendota Fireplace a minimum of 12 inches above the floor by utilizing an elevated hearth. This fireplace may be installed in an elevated position as long as 64 in. minimum distance is provided between the floor level of this fireplace and the room's ceiling surface.

### **ELECTRICAL REQUIREMENTS:**

Dual Blowers are included in this Mendota Direct Vent Fireplace. A 115-volt electrical service must be supplied at the fireplace location at the time of installation. It must be electrically grounded in accordance with local codes, or in their absence, with the current edition of the National Electric Code ANSI/NFPA 70. Use of a wall switch control in the power supplied to this fireplace is allowed.

**NOTE:** The blower output can be adjusted with the rheostat. There will be delays in blower operation during "heat-up" (approx. ½hr.) and extended blower operation during "cool-down" (approx. ½ hr.).

Thermostat wire should be run from desired thermostat (or "on/off" switch) location to the main gas valve (located on the left side) – see thermostat installation section.

## GAS SUPPLY REQUIREMENTS

Correct gas pressure and proper gas supply line sizing is imperative to the successful performance of your Mendota gas fireplace. Be sure the gas supplier or plumber carefully checks for correct gas pressure and gas line sizing when installing the fireplace.

- It is critical to carefully check for gas leaks when hooking up the fireplace -- check with soap & water solution.
- Be sure to install "approved" flex gas line with brass-to-brass fittings to prevent gas leaks at connections.
- Gas supply piping must include a drip leg to eliminate the possibility of contaminants entering the gas train.
- Adhere strictly to local and national codes for entire installation.
- Correct gas pressure and proper gas supply line sizing is imperative to the

### GAS SUPPLY LINE SIZING

The Mendota Gas Fireplace comes equipped with a 1/2" N.P.T. Female inlet on a Street Elbow. Gas supply piping must enter the Fireplace cabinet on the left side.

An approved manual shut-off ball valve is supplied in the fireplace. The appliance and its individual shut-off valve must be disconnected from the gas supply piping system during any pressure testing of that system at test pressures in excess of 1/2 PSIG (3.5 kPa).

The appliance must be isolated from the gas supply piping system by closing its manual shut-off ball valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 PSIG (3.5 kPa).

A proper gas line diameter must be selected to run from the supply regulator to the Fireplace. Refer to the following table for proper gas pipe diameters. Strictly adhere to the correct pipe sizes.

**WARNING:** Never use any type of pipe thread sealants or compounds on the seats of flare or compression connections.

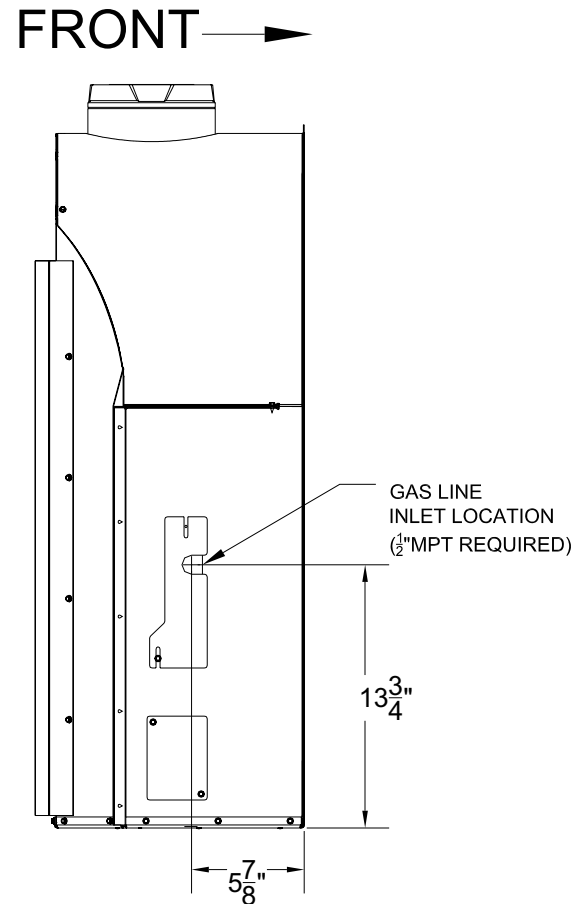


Figure 8:  
Gas Supply

PIPE LENGTH (FEET)	SCHEDULE 40 PIPE INSIDE DIA.		TUBING, TYPE L OUTSIDE DIA.	
	NAT.	L.P.	NAT.	L.P.
0-10	1/2" (1.3 cm)	3/8" (1.0 cm)	1/2" (1.3 cm)	3/8" (1.0 cm)
10-40	1/2" (1.3 cm)	1/2" (1.3 cm)	5/8" (1.6 cm)	1/2" (1.3 cm)
40-100	1/2" (1.3 cm)	1/2" (1.3 cm)	3/4" (2.0 cm)	1/2" (1.3 cm)
100-150	3/4" (2.0 cm)	1/2" (1.3 cm)	7/8" (2.3 cm)	5/8" (1.6 cm)
150-200	3/4" (2.0 cm)	1/2" (1.3 cm)	7/8" (2.3 cm)	3/4" (2.0 cm)

**NOTE:** Some areas allow coated stainless steel (CSST), copper tubing or galvanized pipe - check with local approval agencies and codes. NEVER use plastic pipe.

### GAS PRESSURE CHECKING REQUIREMENTS

Inlet and manifold gas pressure checking taps are located on gas valve. A qualified installer shall take pressure measurements at these ports to verify and set the correct gas pressures during initial installation.

**NOTE:** Check for gas leaks with soap and water solution.

## **GAS PRESSURE REQUIREMENTS**

### **ONE MAJOR CAUSE OF OPERATING PROBLEMS WITH GAS APPLIANCES CAN BE IMPROPER GAS PRESSURE!**

Problems such as changes in flame color or configuration, gas pilot or burner outages, intermittent operation, changes in heat output, excessive burner noise, etc. are nearly always the result of changes in gas pressure or improper gas pressure at the time of the installation. The most important item to check during the installation and the first thing to check when problems occur is gas pressure!

Gas supplies normally enter a residence at 1/2 PSI (13" - 15" W.C.) (3 KPA). A pressure regulator is then placed outside the residence, near the gas meter, which drops this pressure to 7" W.C. (1.8 KPA) (Nat. Gas). This "inches to inches" regulator is of adequate capacity to service the gas appliances (such as dryer, furnace, etc.). If this regulator's capacity is not sufficient to add the Gas Fireplace, an additional "inches to inches" regulator must be installed for the Fireplace. EXCEPTION: Some codes allow 2-PSI (1.4KPA) supplies to enter the residence, in which case "pounds to inches" regulators are used.

The following table provides information on correct gas pressure requirements. Be sure your gas supplier or plumber carefully follows this table.

### **GAS PRESSURE REQUIREMENTS**

	DESIRED INLET PRESSURE	MINIMUM INLET PRESSURE	MAXIMUM INLET PRESSURE	MANIFOLD OUTLET PRESSURE	AIR SHUTTER POSITION*
NATURAL GAS	7.0" W.C. (1.75 kPa)	5.0" W.C. (1.12 kPa)	11" W.C. (2.61 kPa)	3.5" W.C. (0.87 kPa)	0 - 1/8 " OPEN (3 mm)
L.P. GAS	11.0" W.C. (2.75 kPa)	11" W.C. (2.75 kPa)	13.0" W.C. (3.24 kPa)	10.0" W.C. (2.5 kPa)	1/4" OPEN MIN. (5 mm)

TURN GAS VALVE HI-LO KNOB TO "HIGH" POSITION. GAS PRESSURES MAY VARY PLUS OR MINUS 5%.

**\*NOTE:** For high altitude (above 2,000 feet) some variations in air shutter settings may be required.

Manifold pressure must be taken at the "MANIFOLD PRESSURE" tap and inlet pressure at the "INLET PRESSURE" tap **with the burner operating** by a qualified installer.

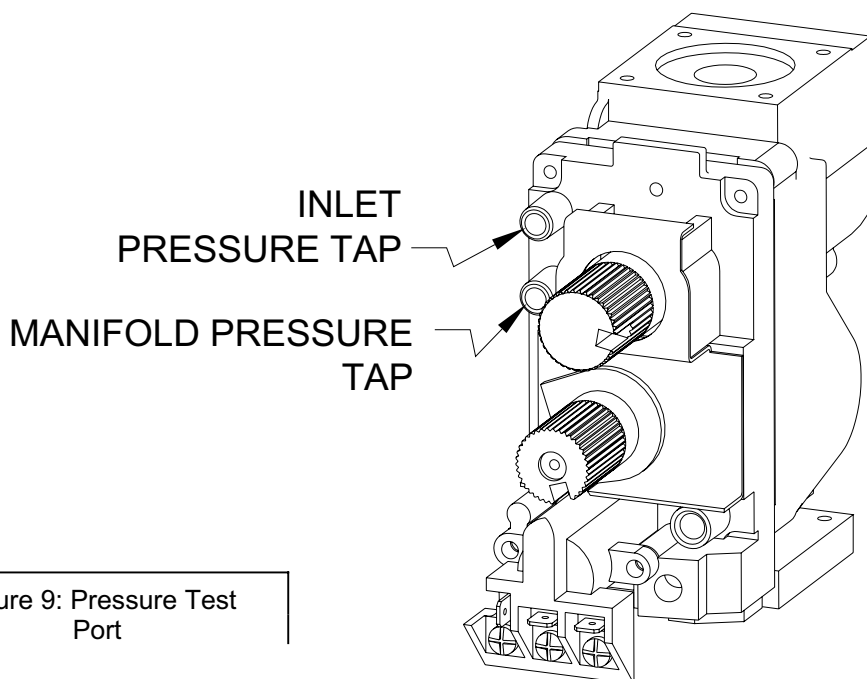


Figure 9: Pressure Test Port

## GENERAL INSTALLATION INSTRUCTIONS

**CAUTION:** Each installation must conform to all local, state and national codes. Refer to the national fuel gas code and local zoning and code authorities for details on installation requirements. The Mendota Fireplace must be vented to the outside in accordance with the latest edition of the National Fuel Gas Code. In the absence of local codes, the installation must conform to the most current edition of the National Fuel Gas Code ANSI Z223.1, also known as NFPA 54. NOTE: The Mendota M-27 Fireplace is approved for mobile home and bedroom installations.

**CAUTION:** The Mendota M-27 Fireplace may be installed in a manufactured (mobile) home after the first sale of the home. Manufactured home (mobile home) installation must conform with the Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280, or, when such a standard is not applicable, the Standard for Manufactured Home Installations, ANSI A225.1/NFPA 501A, or CSA Z240.4-Gas Equipped Mobile Housing. Consult your local building official. Note: For mobile home installations unit must be bolted to the floor and properly grounded.

**The M-27 Fireplace must be installed by a qualified service person.**

1. After selection of the desired fireplace location, prepare the rough opening using framing dimensions on page 10. Be sure to also prepare opening to allow for co-axial vent).
2. Check to make certain all venting requirements and locations are being followed.
3. This Fireplace is designed for installation into rough framing. **NOTE:** FRAMING MATERIAL ABOVE FIREPLACE MUST MAINTAIN CORRECT CLEARANCE TO FIREPLACE AND VENT PIPES.

**WARNING: One-inch clearance to sides & below and 2 inches clearance on top of horizontal sections and elbows.**

4. NOTE: A removable panel in the enclosure for future visual inspection of flue connection is recommended.
5. Have an electrician install a 115-Volt supply to the junction box on lower right side of the fireplace cabinet. Connect wires using wire nuts. Make sure the grounding wires are properly connected and that the installation conforms to all local and national wiring codes.
6. Have gas supplier or qualified plumber install gas supply line to fireplace and connect to the ½" female connector. Be sure gas and plumbing instructions (see Page 12 and 13) and all local and national codes are carefully followed.

**IMPORTANT:** Any safety screen, guard, glass, grill etc. removed for servicing this fireplace must be replaced prior to operating this fireplace.

### **BLOWER OPERATION**

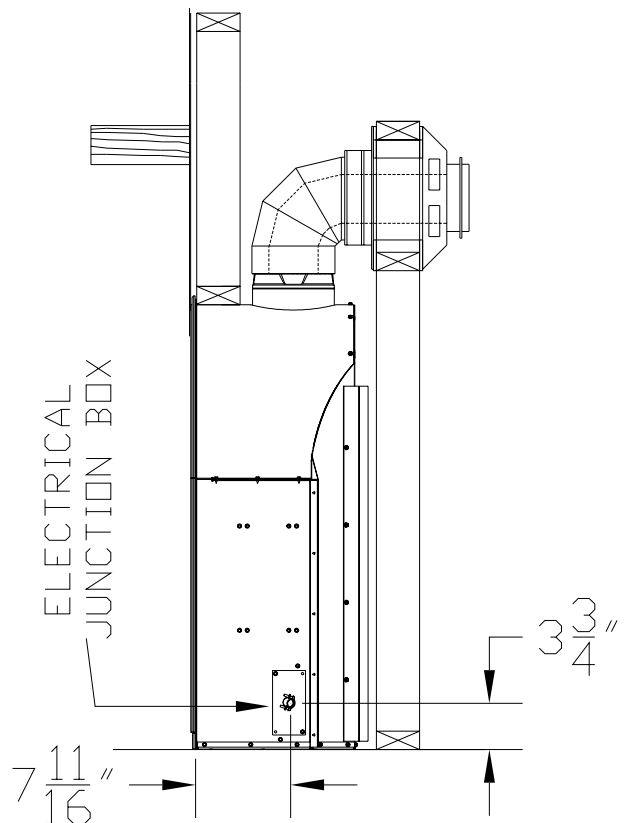
The blower output can be regulated with the rheostat (included).

NOTE: There will be a time delay in blower operation during "heat-up" (approx. ½ hour) and extended blower operation during "cool-down" of unit (approx. ½ hour).

### **OPERATION DURING POWER OUTAGES**

The fireplace is designed to operate during power outages. The blower will not operate during the power outage.

Figure 10: Junction Box



## **GENERAL FLUE VENTING INSTRUCTIONS**

The Mendota Fireplace must be vented using the Mendota approved vent system components. Approved brands of vent components include DuraVent vent pipes and venting components. All warranties will be voided and serious fire, health or other safety hazards may result from any of the following actions: Installation by unauthorized personnel; installation of any damaged component; unauthorized modification of vent system; installation of any components not approved by Mendota; failure to meet all clearance requirements; failure to properly twist-lock and positively seal all components. Consult local building codes before beginning the installation.

### **WARNING**

Always maintain required clearances (air spaces) to combustibles to prevent a fire hazard. Do not fill air spaces with insulation. Check installation instructions for minimum clearance requirements between the outer walls of the vent pipe and nearby combustible surfaces. Be sure to check the vent termination clearance requirements from decks, windows, soffit, gas regulators, air supply inlets, and public walkways, as specified in these installation instructions and local building codes.

**SAFETY PRECAUTIONS FOR THE INSTALLER:** 1) Wear gloves and safety glasses for protection; 2) Exercise extreme caution when using ladders or on rooftops; and 3) Be aware of electrical wiring locations in walls and ceilings.

This gas appliance and vent system must be vented directly to the outside of the building, and never attached to a chimney serving another solid fuel or gas burning appliance. Each direct vent gas appliance must have its own separate vent system. Common vent systems are prohibited.

To assure proper venting performance of this high-performance Mendota Direct Vent Fireplace, it is critical that all brands of vent pipe sections are sealed tightly and leak-proof. This means that all pipe sections must be carefully rotated into the fully "twist-locked" position.

**We strongly recommend that fixed length pipe sections be used in place of telescoping sections whenever possible.**

**Note:** When using vent pipe and components that do not incorporate a fiberglass or graphite gasket at the inner exhaust tube joints, you must use Milpak 1000F silicate stove sealant (#65-06-00909). Aluminum foil tape may be used on the outer (air intake) pipe joint but is not mandatory. Local Codes may vary. Contact your dealer for proper materials.

**Do not separate telescoping sections. They must be used as complete assemblies.**

### **COMPONENT "TWIST-LOCK" CONNECTION PROCEDURE**

DuraVent and American Metals pipe and fittings are designed with special twist-lock connections. Twist-lock procedure is as follows: four (4) indentations, located on the female ends of pipes and fittings are designed to slide straight in to the male ends of the adjacent pipes and fittings, by orienting the four pipe indentations so that they match and slide into the four entry slots on the male ends.

Push the pipe sections completely together then twist-lock one section clockwise, approximately  $\frac{1}{4}$  turn until the two sections are fully locked. The female locking lugs will not be visible from the outside on the black pipe or fittings. They may be located by examining inside of the female ends.

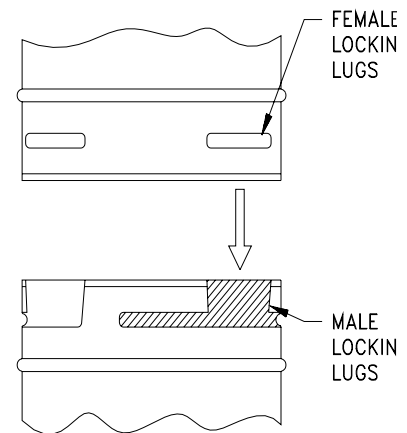


Figure 11: Twist-Lock Piping

# EXTERIOR VENT LOCATIONS AND RESTRICTIONS

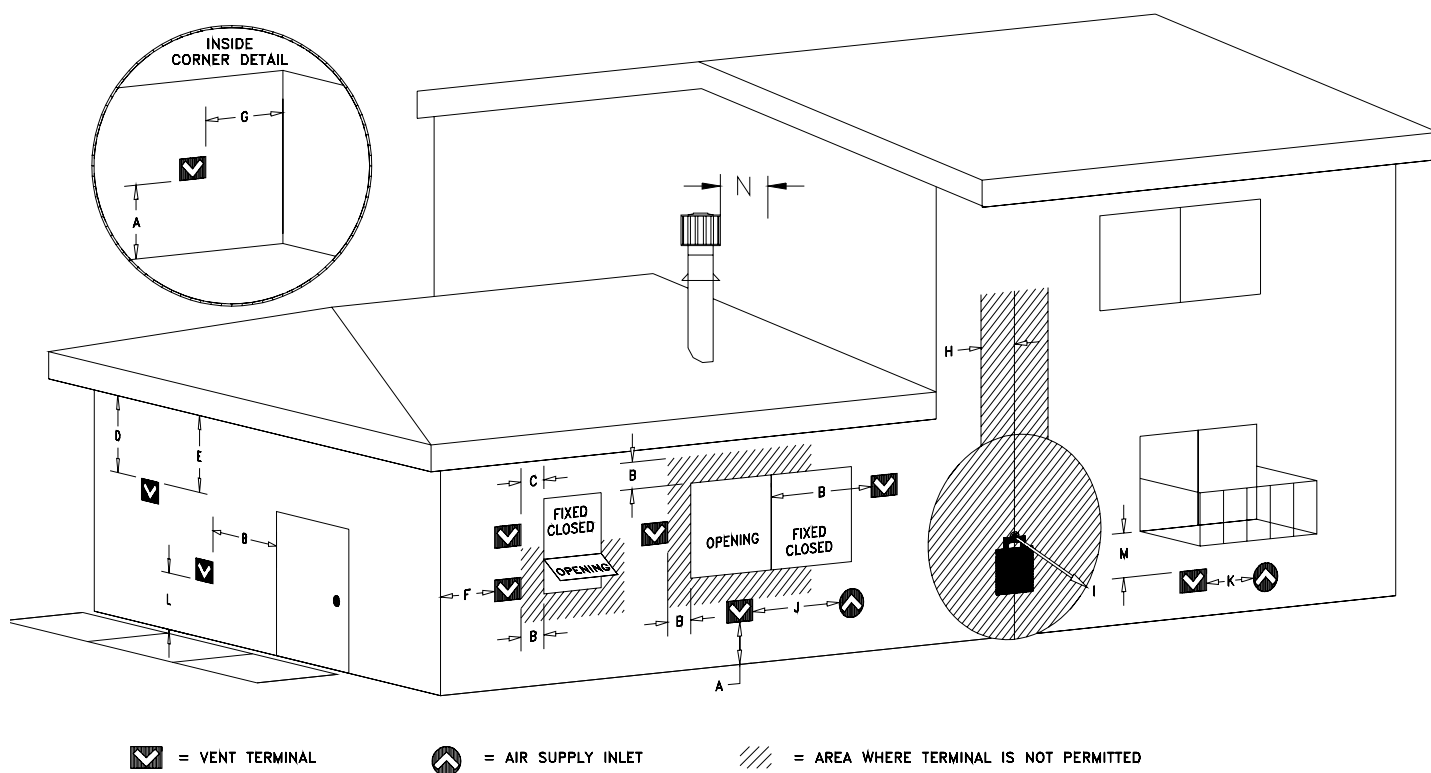


Figure 12: Exterior Vent

## ALL MEASUREMENTS FROM CENTER LINE OF VENT CAP

✓ - Vent Terminal

⊕ - Air Supply Inlet

≡ - Area where terminal is not permitted

A =	Clearance above grade, veranda, porch, deck, or balcony (*12 inches (30 cm) minimum). Vinyl surfaces require 24" min.	H =	*Not to be installed above a meter/regulator assembly within 3 feet (90 cm) horizontally from the center-line of the regulator
B =	Clearance to window or door that may be opened (*12 inches (30 cm) minimum).	I =	*Clearance to service regulator vent outlet *3 feet (92 cm) minimum.
C =	*Clearance to permanently closed window (minimum 12 inches (30 cm) recommended to prevent condensation on window)	J =	*Clearance to non-mechanical air supply inlet to building or the combustion air inlet to any other appliance. 12 inches (30 cm) minimum.
D =	*Vertical clearance to ventilated or soffit located above the terminal from the center-line of the terminal (12 inches (30 cm) minimum) Vinyl surfaces require 24" min (60 cm).	K =	*Clearance to a mechanical air supply inlet 6 feet (1.8 m) minimum
E =	*Clearance to unventilated soffit (12 inches (30 cm) minimum) Vinyl surfaces require 24" min (60 cm)	L =	† Clearance above paved side-walk or a paved driveway located on public property (*7 feet (2.1 m) minimum)
F =	Clearance to outside corner - 7 inches (18 cm).	M =	Clearance under veranda, porch, deck, or balcony (*12 inches (30 cm) minimum ‡)
G =	Clearance to inside corner - 12 inches (30 cm). Vinyl surfaces require 24" min (60 cm).	N =	Minimum 24" horizontal clearance to any surface, such as an exterior surface, for vertical terminations.

† A vent shall not terminate directly above a sidewalk or paved driveway, which is located between two single-family dwellings and serves both dwellings.

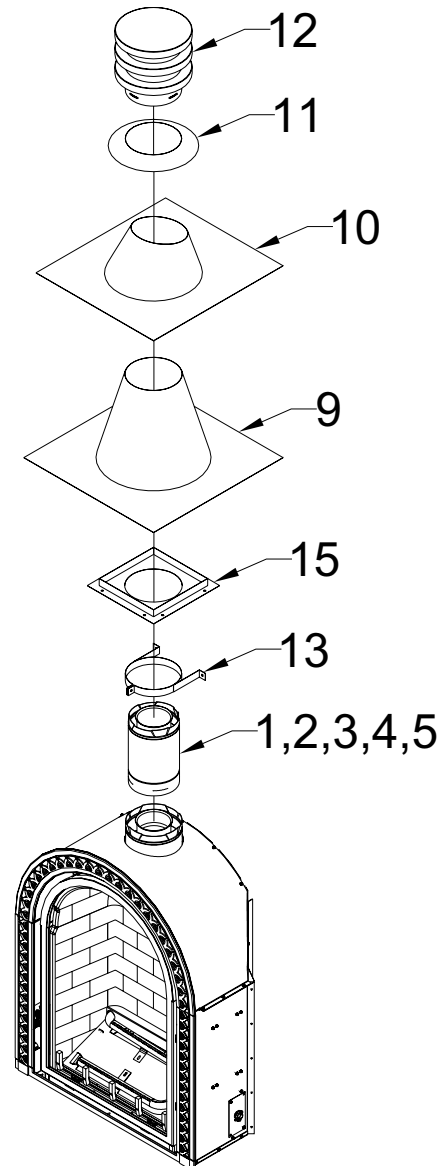
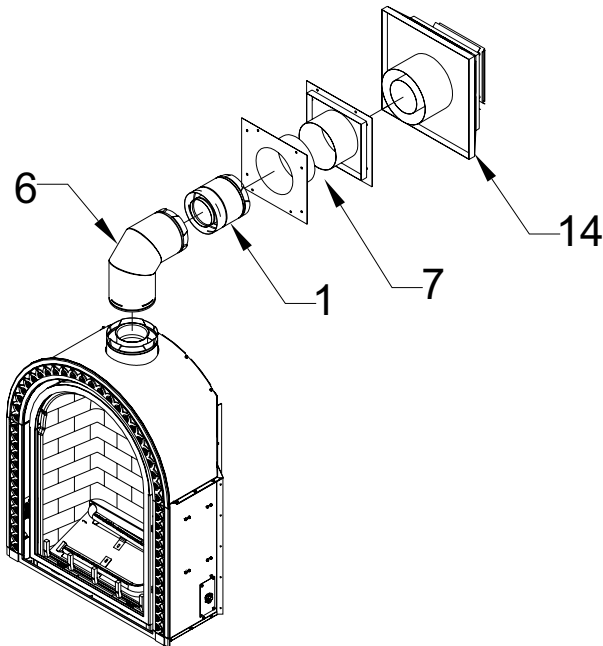
‡ Only permitted if veranda, porch, deck, or balcony is fully open on a minimum of two sides beneath the floor.

\* As specified in CGA B1:19 Installation Codes (1991). **Note:** Local codes or regulations may require different clearances.



## FLUE VENTING COMPONENTS IDENTIFICATION

ITEM	DESCRIPTION
1	6" or 7" PIPE (DuraVent 6"/Amerivent 7")
2	12" VENT STACK
3	24" VENT STACK
4	36" VENT STACK
5	48" VENT STACK
6	90° GALVANIZED ELBOW
	45° GALVANIZED ELBOW
7	ADJUSTABLE WALL THIMBLE
8	ATTIC INSULATION SHIELD 12"
9	ROOF FLASHING (0/12 TO 6/12)
10	ROOF FLASHING (7/12 TO 12/12)
11	STORM COLLAR
12	VERTICAL VENT CAP
13	SUPPORT BAND
14	HORIZONTAL VENT CAP
15	FIRE STOP SPACER



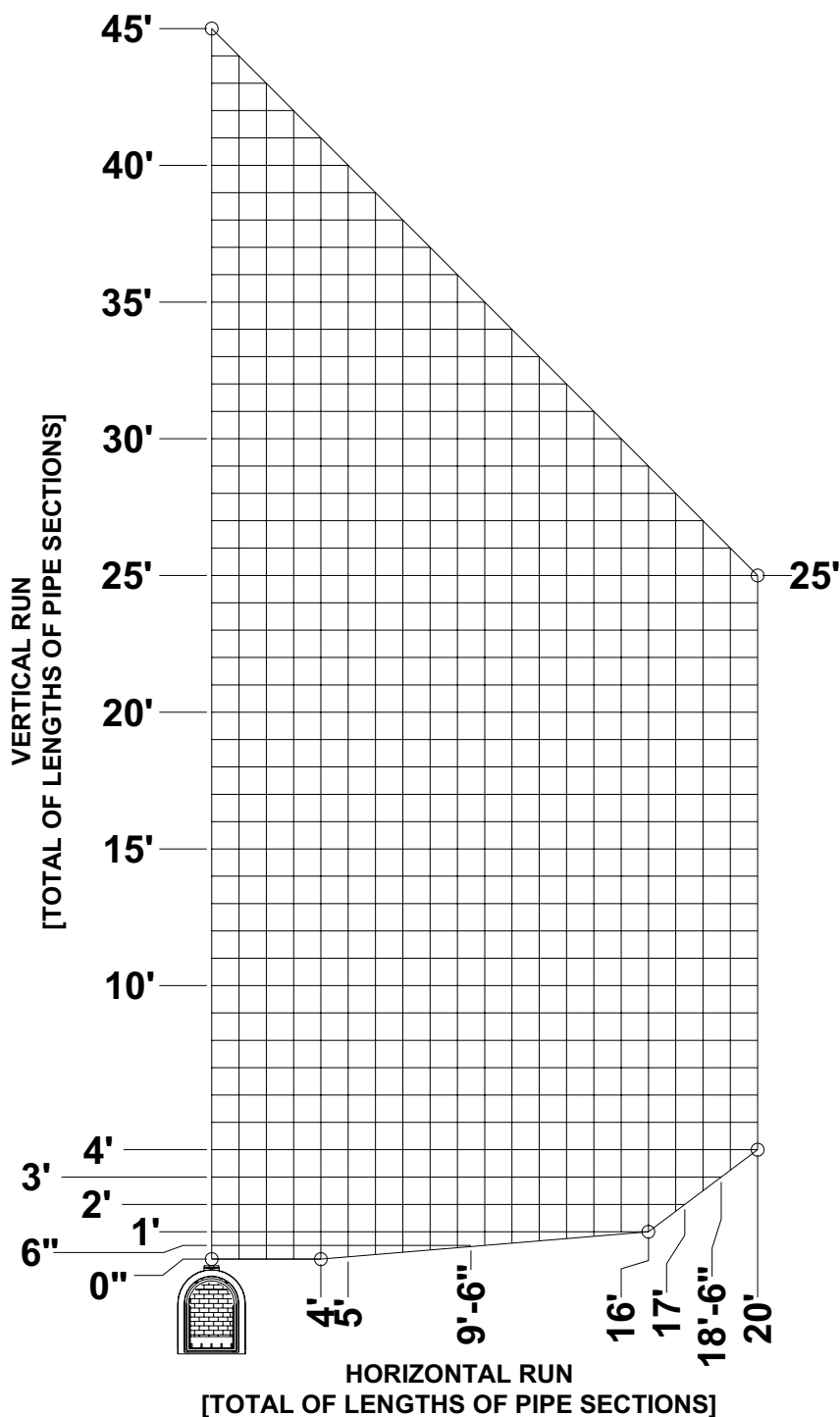
**Figure 13: Flue Venting Components**

**DO NOT SEPARATE TELESOPING SECTIONS.  
USE TELESOPING SECTIONS AS COMPLETE ASSEMBLIES.**

# MASTER FLUE VENTING REQUIREMENTS CHART

NOTE: THIS CHART IS APPLICABLE TO BOTH NATURAL GAS AND LPG INSTALLATIONS.

Figure 14



## IMPORTANT NOTES:

1. 4 feet maximum horizontal pipe run allowed with a 90-degree elbow connected directly to this fireplace's flue starter collar.
2. 20 feet maximum horizontal run allowed only if the first vertical section connected directly to the top of this fireplace is more than 4 feet long.
3. Two 45-degree elbows may be connected directly to the top of this fireplace to create a horizontal offset. 20 feet maximum horizontal run allowed with this offset configuration only if the first vertical section connected directly to the last 45-degree elbow is more than 4 feet long.

# **IMPORTANT VENTING CONFIGURATION NOTES**

See Figure 14 [MASTER FLUE VENTING REQUIREMENTS CHART].

## **MAXIMUM HORIZONTAL RUN**

- A. Maximum Horizontal Run allowed is 20 feet if a vertical starter section that is between 4 feet to 25 feet is connected directly to this fireplace's flue starter collar and only one 90 degree elbow is used.
- B. Maximum Horizontal Run allowed is 4 feet if a 90-degree elbow is connected directly to this fireplace's flue starter collar.

## **MAXIMUM VENT SYSTEM LENGTH**

- A. Combined total length of all straight pipe sections in the vent system shall be less than 45 feet if using only one 90-degree elbow or equivalent.
- B. Combined total length of all straight pipe sections in the vent system shall be less than 42 feet when using two 90-degree elbows or equivalent.
- C. Combined total length of all straight pipe sections in the vent system shall be less than 34 feet when using three 90-degree elbows or equivalent.

## **HOW TO CALCULATE THE VENT SYSTEM LENGTHS**

For calculation purposes and usage of charts in this manual, simply add the lengths of all individual straight pipe sections. For example: if you use two 2-foot lengths and one 4-foot length, the total vent system length will be  $2+2+4 = 8$  feet.

## **USING 90 DEGREE ELBOWS**

A single 90° vertical-to-horizontal elbow is already calculated into the allowable maximum 20' horizontal run. The Venting Requirements Chart (Figure 14) assumes that for all horizontal runs calculated, one 90-degree elbow is used within the venting system. **Each additional 90° elbow reduces the maximum horizontal distance by 3'.**

If you plan to use more than one 90-degree elbow within the vent system, first use the Venting Requirements Chart (Figure #14) and calculate the maximum horizontal run you are allowed based on the first vertical section connected directly to the fireplace. From this maximum horizontal run calculated, subtract 3 feet for each additional 90-degree elbow you will use.

**CAUTION:** If a vertical-to-horizontal discharge elbow or a horizontal-to-horizontal discharge elbow is enclosed within a wall, floor or ceiling, a top air space clearance of 3" must be maintained. Be sure to maintain 1" air space to any combustibles (2" above horizontal runs).

**Example 1:** By using three total 90° elbows the maximum horizontal distance has been reduced to 14 ft. ( $3 - 1 = 2$  elbows  $\times 3' = 6'$ ; 20' Max. - 6' of elbows = 14' of horizontal run).

**Example 2:** If the first vertical section connected directly to the Fireplace is between 4 feet and 25 feet long, you are allowed a maximum 20 feet of horizontal run. If you plan to use two (2) 90-degree elbows in the entire system, subtract three (3) feet from the 20 feet maximum horizontal run calculated. Your maximum allowed horizontal run would then be 17 feet. Similarly, if you plan to use three (3) 90-degree elbows, subtract 6 feet; from the 20 feet maximum horizontal run calculated to yield a 14 feet maximum allowed horizontal run in that venting system.

## **USING 45-DEGREE ELBOWS**

Two 45-degree elbows may be used in place of one 90-degree elbow. On 45-degree runs, one foot of diagonal pipe is equal to 8-1/2 inches horizontal run and 8-1/2 inches vertical run. Two 45-degree elbows may be connected directly to the vent starter adapter on this fireplace to create an offset to provide the required clearances to combustible framing or sheathing materials.

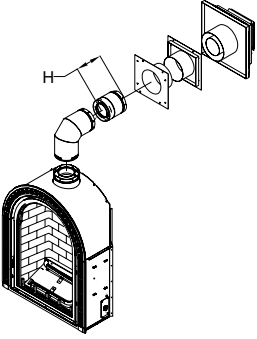
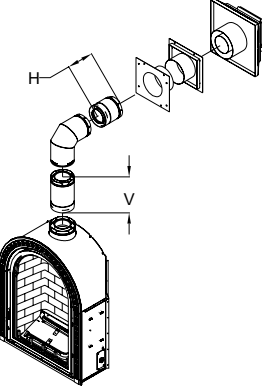
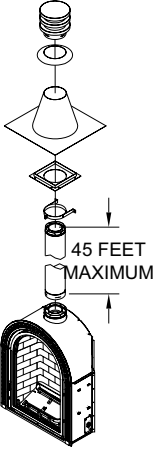
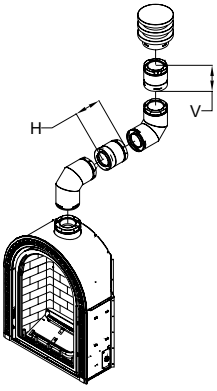
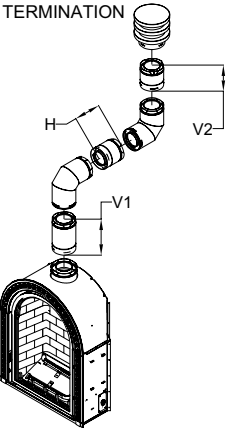
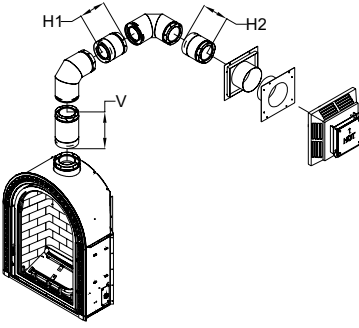
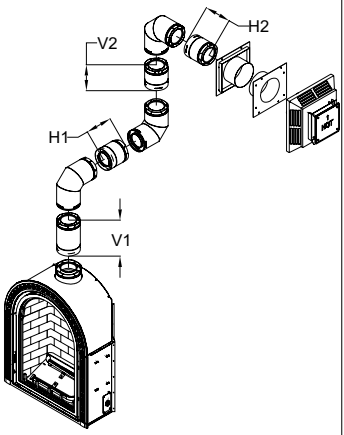
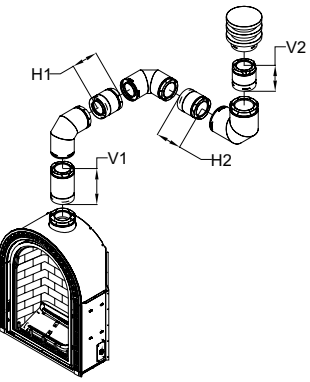
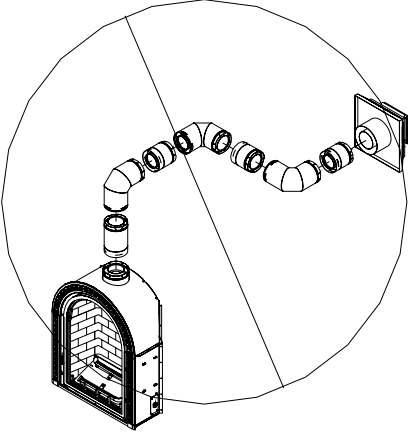
Two 45-degree elbows may be connected directly to the top of this fireplace to create a horizontal offset. 20 feet maximum horizontal run allowed with this offset configuration only if the first vertical section connected directly to the last 45-degree elbow is more than 4 feet long. For maximum allowable horizontal distances with the 45-degree offsets, see the Master Venting Configuration Chart.

**Note:** Each 45° elbow reduces the maximum horizontal distance by 1½'.

**SUPPORT:** Horizontal runs of pipe will require one vent support for every 3 ft. of pipe.

APPROVED VENT SYSTEMS  
QUICK REFERENCE CHART

Figure 15: Vent Systems

<p>ZERO VERTICAL HORIZONTAL TERMINATION</p>  <p><b>APPROVED</b></p>	<p>VERTICAL RISE HORIZONTAL TERMINATION</p>  <p><b>APPROVED</b></p>	<p>STRAIGHT UP, VERTICAL VENTING</p>  <p><b>APPROVED</b></p>
<p>ZERO VERTICAL DUAL 90° ELBOWS VERTICAL TERMINATION</p>  <p><b>APPROVED</b></p>	<p>VERTICAL RISE DUAL 90° ELBOWS VERTICAL TERMINATION</p>  <p><b>APPROVED</b></p>	<p>VERTICAL RISE DUAL 90° ELBOWS HORIZONTAL TERMINATION</p>  <p><b>APPROVED</b></p>
<p>VERTICAL RISE TRIPLE 90° ELBOWS HORIZONTAL TERMINATION</p>  <p><b>APPROVED</b></p>	<p>VERTICAL RISE TRIPLE 90° ELBOWS VERTICAL TERMINATION</p>  <p><b>APPROVED</b></p>	<p>THREE HORIZONTAL DISCHARGE 90° ELBOWS <b>NOT APPROVED!</b></p>  <p><b>NOT APPROVED!</b></p>

## **ZERO RISE HORIZONTAL TERMINATION**

**The M-27 Fireplace must be installed by a qualified Mendota approved serviceperson.**

A Maximum Horizontal Run allowed is 4 feet if a 90-degree elbow is connected directly to this fireplace's flue starter collar.

When a 90-degree elbow is connected directly to this fireplace, the horizontal centerline of the 90° elbow will be 44-9/16" inches up from the floor level of this Fireplace.

See Figure 14, MASTER FLUE VENTING REQUIREMENTS CHART and Figure 16 and Figure 17 below.

Use "fixed" pipe sections in place of adjustable pipe sections whenever possible. 1000° sealant must be used on ALL inner pipe joints that do not have factory installed gasket material.

Always maintain 1" clearance from vent pipe sides and bottom to combustibles, 2" clearance on top of pipe on horizontal runs and on top of horizontal discharge elbows. Do not fill air spaces with insulation or other material.

1. Position fireplace in desired location. See Figure 12 for guidelines on proper vent cap placement on the exterior of home. Check to determine if wall studs are in the way when venting system is attached. If this is the case, you may want to adjust the fireplace location or modify the exterior wall framing to allow the vent system to penetrate the wall.
2. Measure from the floor level of the fireplace up 44-9/16 inches [add 1/4" rise for every foot of horizontal run] and mark wall directly at the center of where the vent pipe will penetrate the exterior wall.
3. Cut and frame a 9-1/4" wide x 10-1/4" high opening in the wall. The hole must be positioned so the vent system will run level or have a 1/4" rise per foot of run AND be perpendicular to the wall. The height of the opening must be located to meet all local and national building codes. Do not allow the termination to be easily blocked or obstructed. If wall being penetrated is non-combustible material, i.e. masonry block, brick, etc., a 7-inch diameter hole is acceptable.
4. Attach the 90-degree elbow to the fireplace starter adapter. Attach a horizontal section to the 90-degree elbow. Be sure all vent component connections are in their fully twist-locked position and are leak-proof. Be sure 1000° sealant is used on the inner pipe joints of all pipe sections manufactured by Simpson DuraVent.
5. The length of the horizontal piece that fits through the wall will be determined by the location of the fireplace relative to the wall. For a normal installation where this fireplace is installed directly against an exterior wall constructed using 2x4 lumber or 2x6 lumber, only a 6" horizontal section is required. There MUST be a minimum of 1" air space clearance to combustibles from all vent components (2" above horizontal runs and horizontal discharge elbows).
6. **A wall thimble must always be used when penetrating combustible wall materials.**
7. From the exterior of the home, slide the horizontal vent cap over the end of the horizontal pipe and tightly secure the cap to the wall with screws. Seal with a high quality caulking.

**NOTE:** Combustible wall thickness must be 4" to 8" maximum

**NOTE:** Venting terminal should not be recessed into wall or siding.

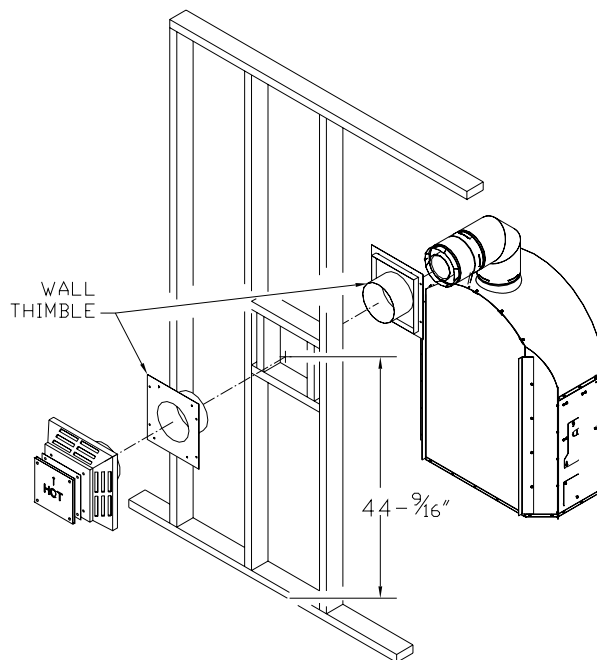


Figure 16: Horizontal Termination

### **ZERO VERTICAL HORIZONTAL TERMINATION H = 4 FEET, MAXIMUM**

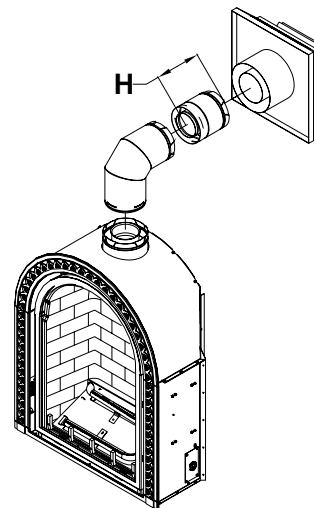


Figure 17

## VERTICAL RISE HORIZONTAL TERMINATION

The minimum vertical section required to be connected directly to the starter adapter on this fireplace is 48 inches when used with a maximum horizontal run of 20 ft. If the total length of the vertical sections connected directly to the starter adapter on this fireplace is between 4 feet and 25 feet, you are allowed a maximum 20 feet horizontal run. For other venting configurations within these maximum limits, see Figure 14.

Combined total length of all pipe sections (include restriction of elbows) in the vent system shall be less than 45 feet if using only one or two 90-degree elbows or equivalent;

**NOTE:** The horizontal run of vent pipe must be level or have a ¼" rise for every 1' of run toward the termination. Never allow the vent to run downward. This will cause high temperatures and the possibility of a fire.

### **This M-27 Fireplace must be installed by a qualified Mendota service person**

1. Position fireplace in desired location. See Figure for guidelines on proper vent cap placement on exterior of home. Check to determine if wall studs are in the way when vent system is attached. If this is the case you may want to adjust the fireplace location.
2. Locate position where vent pipe will pass through any ceilings and will penetrate the outside wall. Since vent pipe sections "overlap" we suggest pre-assembling and measuring the total vent pipe run so you can more accurately locate the point where the vent pipe will penetrate the outside wall (See Figure 12). Be sure all vent components are properly twist locked and leak-proof. Be sure 1000° sealant is used in the inner pipe joints of all pipe sections manufactured by Simpson DuraVent.
3. Cut and frame a 9-1/2" wide x 10" high opening in the outside wall openings and 9" x 9" opening in ceiling openings. The outside wall hole must be positioned so the vent system will run level or have a ¼" on rise AND be perpendicular to the wall. The height of the opening must be located to meet all building codes and not allow the termination to be easily blocked or obstructed. A ceiling fire stop spacer is required at any floor (ceiling) opening.
4. Connect vent pipe to the fireplace adapter on top of fireplace vent outlet.

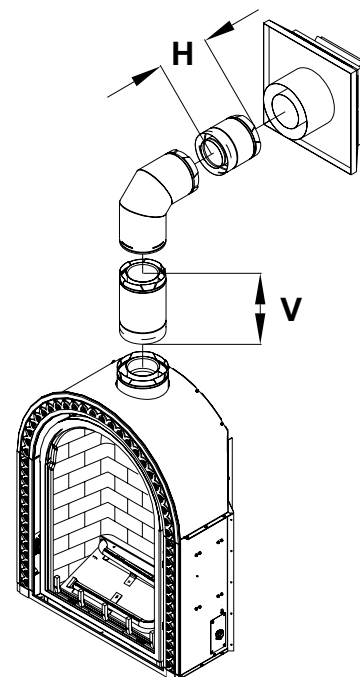
**NOTE:** DO NOT SEPARATE TELESOPING SECTIONS.  
THEY MUST BE USED AS COMPLETE ASSEMBLIES.

5. The horizontal pipe must end flush with the exterior wall of the home. Horizontal pipe will require a proper support every 3 ft. of vent pipe. THERE MUST BE A MINIMUM OF 1" CLEARANCE TO COMBUSTIBLES FROM ALL VENT PIECES (2" above horizontal runs).
6. **A wall thimble must always be used when penetrating combustible wall materials.**  
**NOTE:** Combustible wall thickness must be 4" to 8" maximum.
7. From the exterior of the home, slide the horizontal vent cap over the end of the horizontal pipe and tightly secure the vent cap to the wall with screws. Seal with high quality caulking.  
**NOTE:** Venting terminal (Vent Cap) should not be recessed into wall or siding.

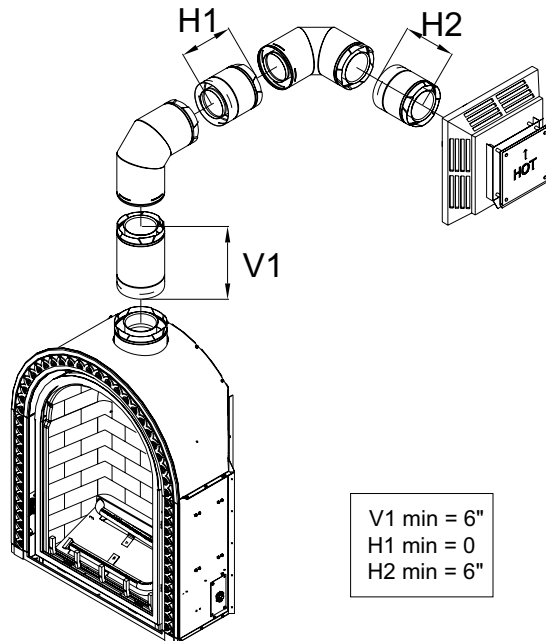
Figure 18

V	H
6"	9'6"
12"	16'
2'	17'
3'	18'6"
4'- 25'	20'
For V greater than 25', see Figure 6 on Page X	

### **ONE (1) 90° ELBOW TOP VENT HORIZONTAL TERMINATION**



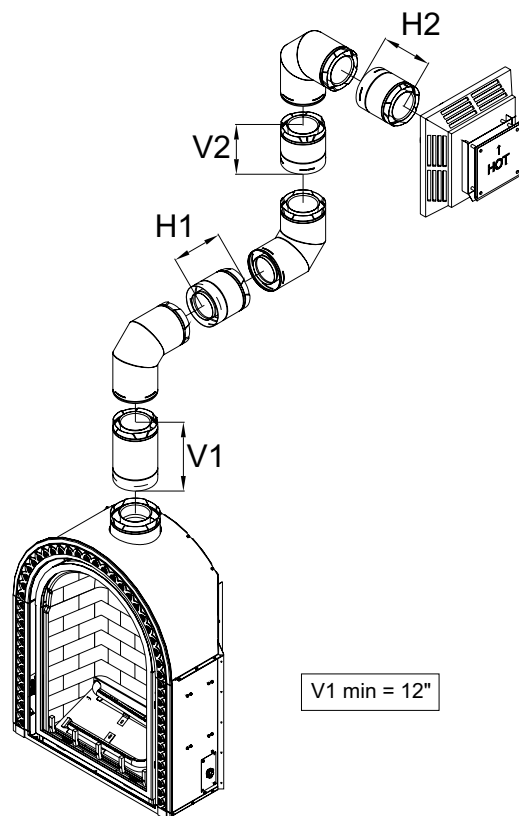
**TWO(2) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
HORIZONTAL TERMINATION**



**Figure 19**

V	H max	V2 max
6"	6' 6"	42'-H-V1
12'	13'	42'-H-V1
2'	14'	42'-H-V1
3'	15' 6"	42'-H-V1
4'-25'	17'	42'-H-V1
FOR V GREATER THAN 25', SEE FIGURE 6 ON PAGE X		

**THREE (3) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
HORIZONTAL TERMINATION**



**Figure 20**

V1	H1 + H2 max	V1 + H1 + V2 + H2 max
12"	10'	42'-H-V1
2'	11'	42'-H-V1
3	12' 6"	42'-H-V1
4'-25'	14'	42'-H-V1
FOR V GREATER THAN 25', SEE FIGURE 6 ON PAGE X		

## **VERTICAL THROUGH-THE-ROOF VENTING**

The maximum vertical run of vent pipe is 45 ft. from the top of the fireplace. The fireplace will support a run of a maximum of 45 ft. Maintain 1" air space clearances on all sides of vents (2" above horizontal runs).

If an offset is required directly on top of the fireplace, two 45° elbows may be connected directly to the top of this fireplace to create a horizontal offset then to run upwards vertically. Doing so will continue to allow the use of the 45 feet maximum vertical run.

<b>The M-27 Fireplace must be installed by a qualified Mendota approved serviceperson.</b>
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1. Place the fireplace in its desired location. Drop a plum bob from the ceiling to the position of the fireplace flue exit. Mark the location where the vent will penetrate the ceiling. Drill a small hole at this point. Next, drop a plum bob from the roof to the hole previously drilled in the ceiling. Mark and drill the spot where the vent will penetrate the roof. Determine if ceiling joists, roof rafters or other framing will obstruct the venting system. You may wish to relocate the fireplace or to offset, to avoid cutting load bearing members.
2. Cut and frame a 9" x 9" opening in the ceiling centered on the hole drilled in Step No. 1.
3. To determine the length of the vent pipe required, measure the distance from the fireplace flue outlet to the ceiling, the ceiling thickness, the vertical rise in the attic or second story and allow sufficient vent height above roofline. For two story installations, fire stops are required at each floor level. If an offset is needed in the attic, additional pipe and elbows will be required.
4. Assemble the desired lengths of vent pipe and elbows to reach from the fireplace flue outlet. Ensure that all vent pipe and elbow connections are in their fully twist-lock position and that inner pipe joints (DuraVent only) are sealed and are leak-proof. Maintain 1" airspace clearances to combustibles (2" above horizontal runs). Cut a 9" x 9" opening in the roof, centered in the small drilled hole placed in the roof in No. 1. The opening should be a sufficient size to meet all clearance requirements. Continue to assemble lengths of pipe and elbows necessary to reach up through the roofline. Galvanized pipe and elbows may be utilized in the attic, as well as above the roofline. The galvanized finish is desirable above the roofline due to its higher corrosive resistance.
  - a) If an offset is necessary, it is important to support the vent pipe every 3 ft. to avoid excessive stress on the elbows and possible separation. Wall straps are available for this purpose.
  - b) Whenever possible, use 45° elbows instead of 90° elbows. The 45° elbow offers less restriction to the flow of flue gases and intake air. If a 90° elbow is necessary there must be a minimum of one pipe section rise from the 90° elbow to the vent cap. A maximum of three 90° elbows are allowed per installation.
6. Slip the flashing over the pipe sections protruding through the roof. Secure the base of the flashing to the roof with roofing nails and seal flashing to roof. Ensure the roofing material overlaps the top edge of the flashing. Verify you have at least the minimum clearance to combustibles at the roofline.
7. Continue to add pipe sections until the pipe and the vent cap meet the minimum building code requirements, as outlined in No. 8 on the following page.

- |  |
|--|
| <ol style="list-style-type: none"><li>a) For multi-story vertical installation, a ceiling fire stop is required at the second floor and any subsequent floors. The opening should be framed to 9" x 9" inside dimensions as described in step No. 5.</li><li>b) Any occupied areas above the first floor, including closets and storage spaces, which the vertical vent passes through, must be enclosed. The enclosure may be framed and sheet rocked with standard construction materials, however, be sure to maintain minimum allowable clearances between the outside of the vent pipe and the combustible surfaces of the enclosure.</li></ol> |
|--|



8. Height "H" of top of vent cap can be determined as follows:

ROOF PITCH	"H" DIMENSION	
	FEET	METERS
FLAT to 6/12	2	.6
7/12 to 9/12	2	.6
10/12 to 12/12	4	1.2
13/12 to 16/12	6	1.8
17/12 to 21/12	8	2.4

9. Complete installation with storm collar and vent cap.

Figure 22

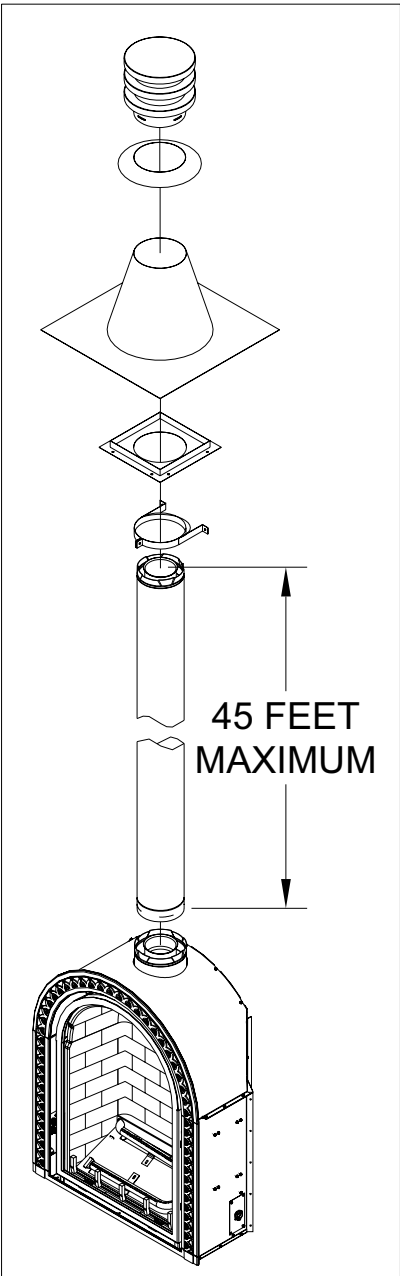
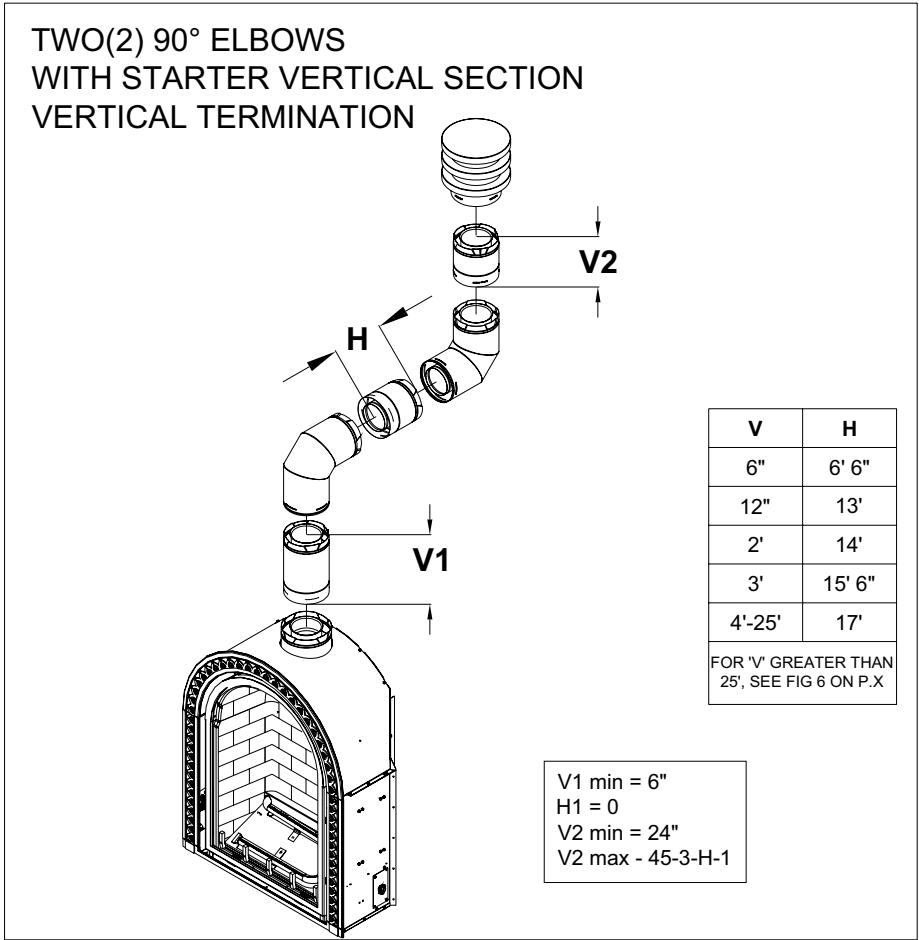
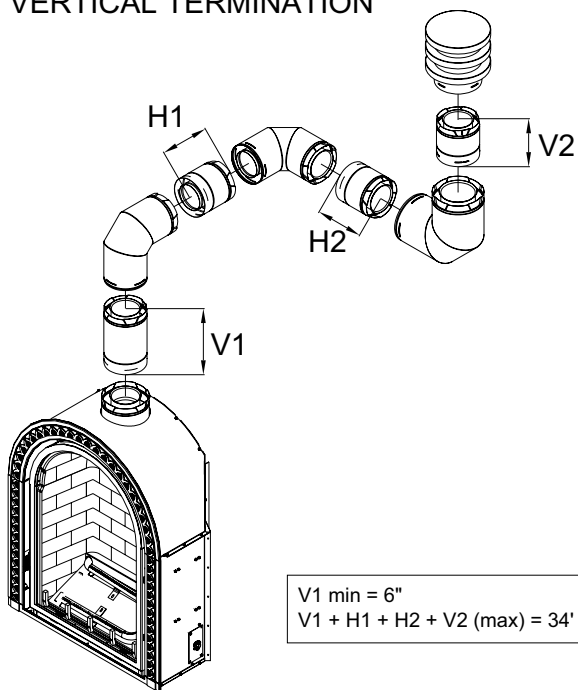


Figure 21



THREE(3) 90° ELBOWS  
WITH STARTER VERTICAL SECTION  
VERTICAL TERMINATION



V1	H1 + H2 max	V1 + H1 + V2 + H2 max
6"	6' 6"	34'
12"	10'	34'
2'	11'	34'
3'	12' 6"	34'
4'-25'	14'	34'

FOR V GREATER THAN 25', SEE  
FIGURE 6 ON PAGE X

Figure 23

## M-27 DOOR OPERATION

### TO REMOVE DOOR

1. Use the tool to disconnect the spring latches from the glass frame. Insert tool into hole in latch, pull towards you and up to disengage latch. **There are four spring latches, two on top and one on each side.**
2. With both hands, rotate glass frame away from unit a few inches.

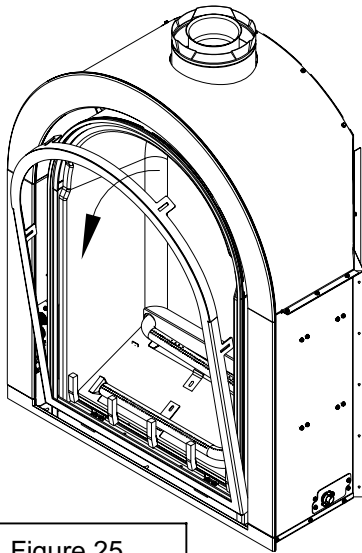


Figure 25

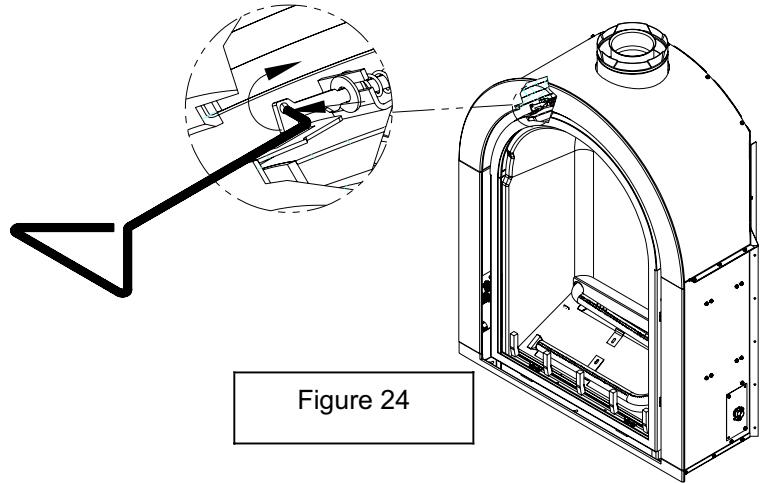


Figure 24

3. Pull glass frame straight up and away from unit.

Figure 26

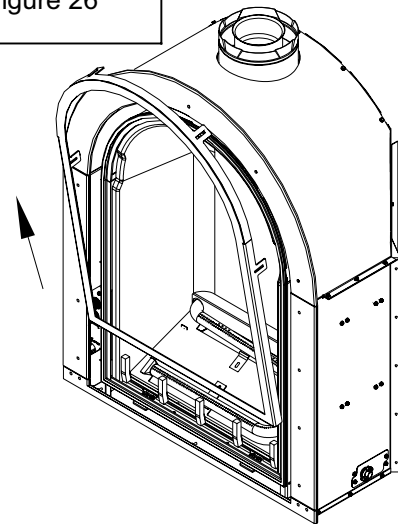


Figure 26

4. Door is now free from unit.

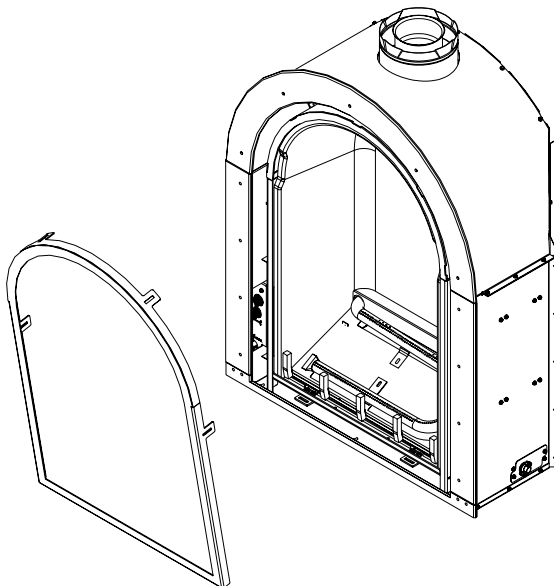


Figure 27

## TO REPLACE DOOR

1. Line up tabs on glass frame with slots in glass clips on firebox. Insert tabs into slots.

Figure 28

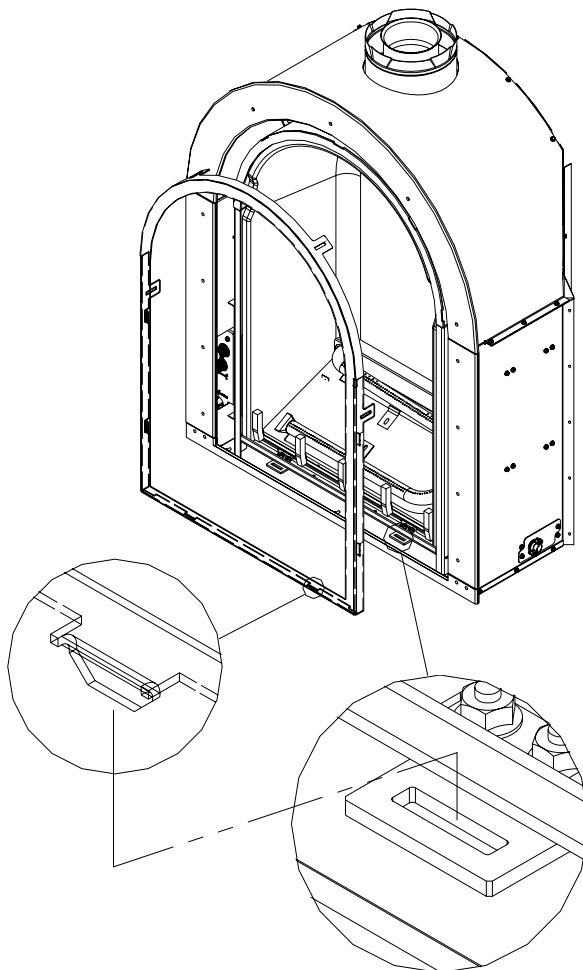
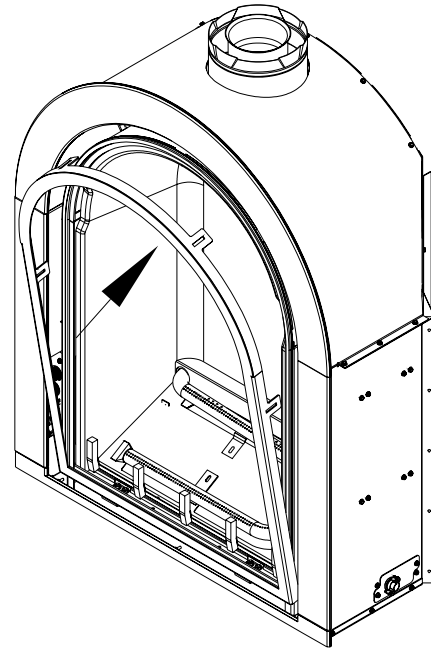


Figure 29

2. After door has been placed into slots, rotate door towards firebox until gasket seal is touching the firebox frame.

3. Use the tool provided to connect the spring latches to the glass frame. Insert tool into hole in spring latch, pull latch up and towards you, then down into slot in glass frame until it catches.

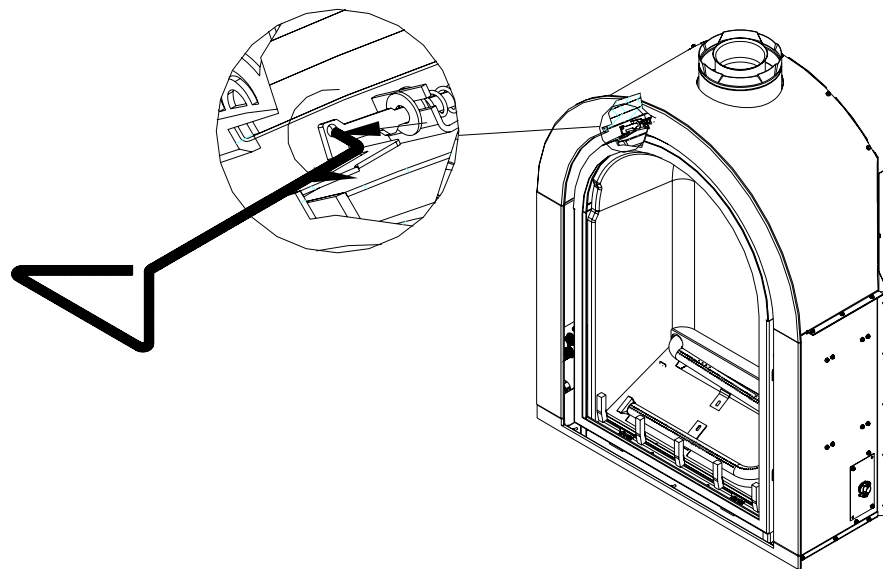


Figure 31

4. Door is now connected and sealed to unit.

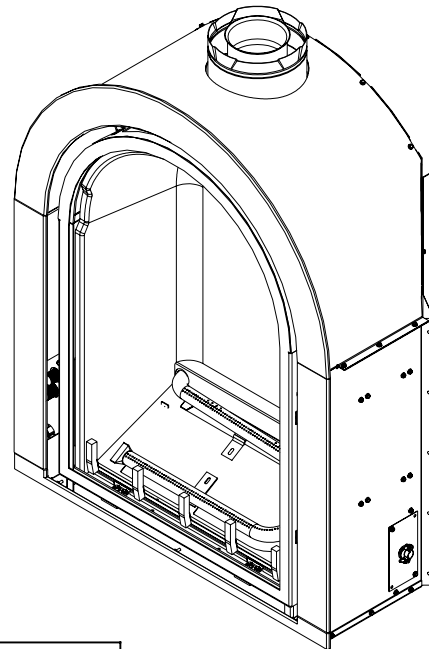
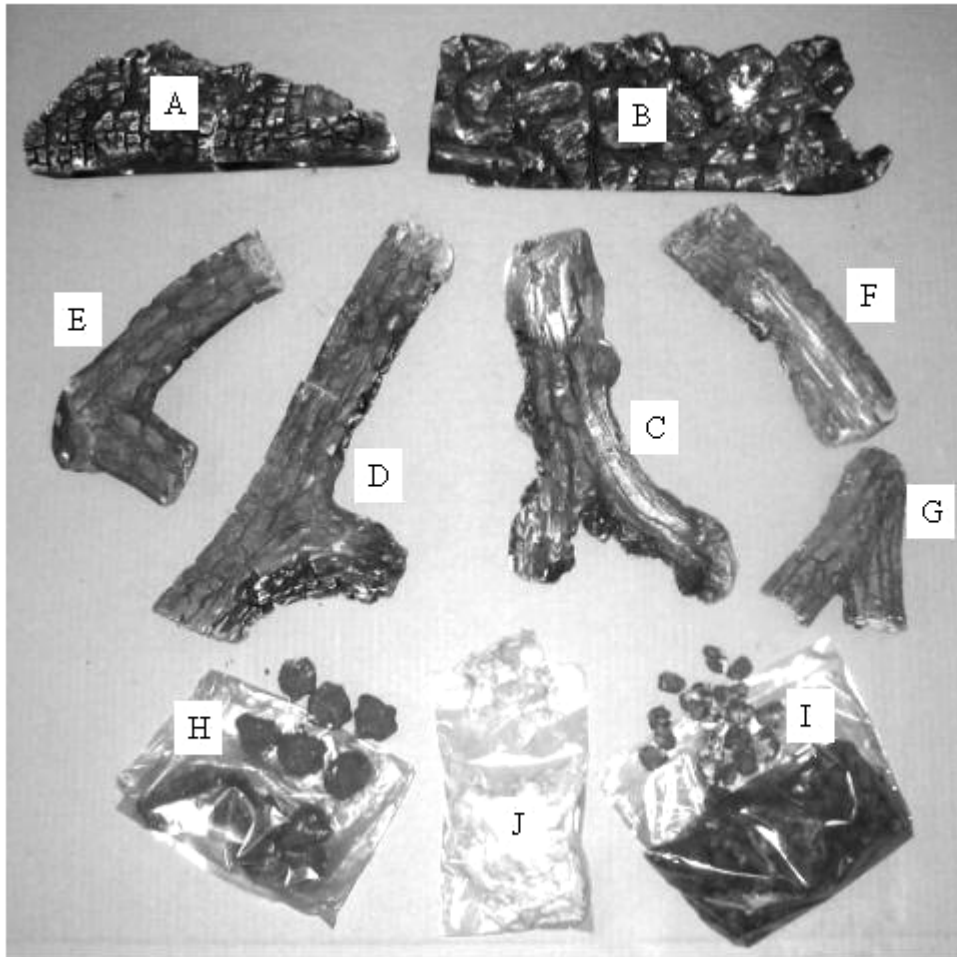


Figure 32

## **M-27 LOG SET INSTALLATION INSTRUCTIONS**

1. Cut the clear tapes and outer plastic wrap using a sharp utility knife or equivalent. Locate the 2 bags of coals, glowing embers and the log pieces. Identify each log piece numbered A through G and the Large Chunk coals (H), Small coals (I) and Glowing Embers (J) per the diagram show on this page.



LOG SET PARTS IDENTIFICATION	
KEY	DESCRIPTION
A	REAR LOG
B	MAIN EMBER BED
C	MAIN LOG – RIGHT
D	MAIN LOG – LEFT
E	LEFT REAR LOG
F	RIGHT REAR LOG
G	RIGHT FRONT LOG
H	LARGE CHUNK COALS
I	SMALL COALS
J	GLOWING EMBER (ROCKWOOL)

**CAUTION:** HANDLE LOG PIECES WITH CARE. LOGS ARE FRAGILE.

Identify the REAR LOG PINS and the MAIN EMBER BED PINS that are pressed onto the Burner Air box.

