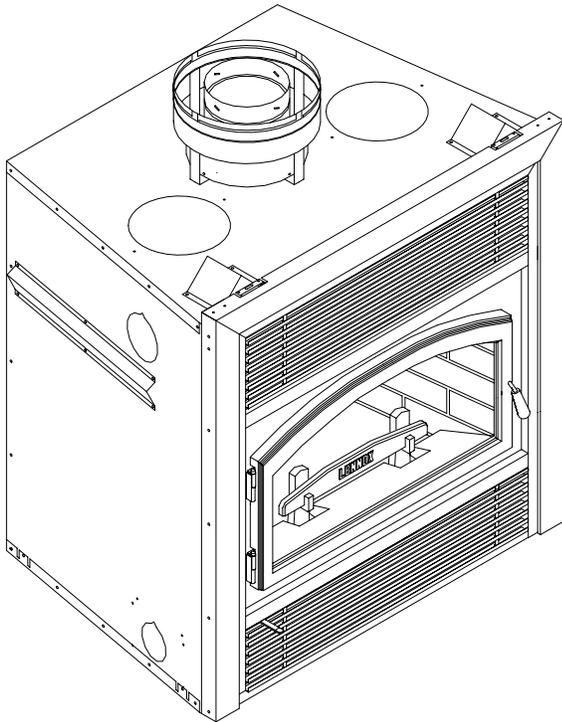


BRENTWOOD



Installation Instructions

This installation manual will help you obtain a safe, efficient, dependable installation for your fireplace and chimney system. Please read and understand these installation instructions before beginning your installation.

CAUTION: Do not attempt to modify or alter the construction of the fireplace or its components. Any modification or alteration of construction may void the warranty, listings and approvals of this system. In that case, Lennox Hearth product will not be responsible for damages. Install the fireplace only as described in these instructions.

PLEASE RETAIN THIS MANUAL
FOR FUTURE REFERENCE

WARNING: The fireplace cannot be operated without a door. Consult your dealer to select the correct door model of your choice.



Listed to standards ULC-S610
UL-127

LENNOX HEARTH PRODUCTS
1110 West Taft Avenue, Orange, CA 92865, USA

TABLE OF CONTENTS

	Page
1. SAFETY RULES	1
2. CERTIFICATION LABEL	2
3. THE FIREPLACE	3
3.1 INTRODUCTION	3
3.1.1 Parts Required	
3.1.2 Additional Equipment (optional)	
3.2 OPERATING THE BRENTWOOD	4
3.2.1 Fuel	
3.2.2 First Fires	
3.2.3 Building a Fire	
3.2.4 Primary Air and Air Boost Controls	
3.2.5 Accelerated Combustion	
3.2.6 Medium Combustion	
3.2.7 Slow Combustion	
3.2.8 Refuelling For Best Performance	
3.2.9 Smoking – Causes And Troubleshooting	
3.3 MAINTAINING YOUR BRENTWOOD	8
3.3.1 Creosote	
3.3.2 Chimney Maintenance	
3.3.3 Top Baffle Removal Prior to Cleaning The Chimney	
3.3.4 Dealing With a Chimney Fire	
3.3.5 Finish Door Casing Care	
3.3.6 Ashes	
3.3.7 Refractory Installation	
3.3.8 Door Installation	
3.3.9 Door Adjustment	
3.3.10 Glass Care – Replacement	
3.3.11 Glass Care – Cleaning	
3.3.12 Gasket Replacement	
3.4 FIREPLACE INSTALLATION	12
3.4.1 Locating The BRENTWOOD	
3.4.2 Hearth Extension Requirements	
3.4.3 Framing, Facing And Mantel	
3.5 HOT AIR DUCTING INSTALLATION	16
3.5.1 Gravity Kit	
3.6 OUTSIDE AIR KIT	19
3.6.1 Outside Air Kit Installation	
3.6.2 Chimney Outside Air Kit Installation	
4. THE CHIMNEY	21
4.1 CHIMNEY INSTALLATION NOTES	21
4.2 CHIMNEY INSTALLATION INSTRUCTIONS	22
4.3 OFFSET CHIMNEY INSTALLATION	25
4.4 ANGLED WALL RADIATION SHIELD	27
4.5 CHIMNEY SUPPORTS INSTALLATION	28
4.6 MULTIPLE TERMINATIONS	28
5. PARTS AND COMPONENTS LIST	30
6. OPTIONS	31
7. APPENDIX (Specifications, Clearances, Replacement Parts)	32

1. SAFETY RULES FOR OPERATING YOUR FIREPLACE MODEL BRENTWOOD

- Use only a Lennox Hearth Products glass door, specifically designed for the model BRENTWOOD fireplace.
- When cleaning the fireplace, the ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a non-combustible floor or on the ground outside the house, pending final disposal. If the ashes are disposed of by burial in soil or otherwise locally dispersed, they should be retained in the closed container until all cinders have thoroughly cooled.

Caution: Never use gasoline, kerosene, charcoal lighter fluid or similar liquids to start or rekindle a fire in this fireplace. Keep all such liquids well away from the fireplace at all times.

Caution: Keep combustible materials at least 48 inches away from the front of the fireplace opening.

Caution: Never leave children unattended when there is a fire burning in the fireplace.

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

3. THE FIREPLACE

3.1 INTRODUCTION

The BRENTWOOD fireplace is an energy efficient, heat circulating, close combustion fireplace. You will receive a lifetime of comfort and enjoyment from your fireplace provided it is installed, maintained and operated properly.

- Please read these instructions and retain this manual for future reference.
- Before beginning the fireplace installation, consult the local authorities to obtain your building permit and check your local building codes. Install the fireplace only as described in these instructions and using only Lennox Hearth Products components.
- The BRENTWOOD is not intended for use with a gas log. Failure to follow these instructions will void the certification and the warranty of the fireplace and may result in an unsafe installation.

3.1.1 Parts Required

- Fireplace model BRENTWOOD
- 6" diameter chimney model AC manufactured by Security Chimneys International only, including:
 - Chimney lengths
 - Elbows (where necessary)
 - Associated components as per these installation instructions

3.1.2 Additional Equipment (optional)

- Gravity venting system
- Outside air kit
- AC chimney outside air kit
- Panel for clean face option (only with gravity venting system)
- Rigid firescreen
- Fireplace fan kit

3.2 OPERATING THE BRENTWOOD

3.2.1 *Fuel*

The BRENTWOOD is designed to work best when fuelled with seasoned cordwood. Hardwoods are preferred to softwoods since the energy content of wood is relative to its density. Hardwoods will result in a longer burning fire and less frequent refuelling. A moisture content of 15% to 20% (seasoned) is recommended. Wood that has been cut and split and let to dry under a cover for a period of one year will usually meet that criteria. Excessively wet wood will be difficult to burn and will result in lower efficiency, increased creosoting and deposits on the glass and in the chimney. Excessively dry wood will burn well but will also have higher emissions and shorter burning time.

Do not burn scrap or garbage, treated wood or wood such as driftwood from the ocean which has been exposed to salt or other chemicals. Salt or chemicals can corrode the firebox and chimney. Do not burn large amounts of paper, cardboard, Christmas tree branches or building construction materials. Intense firing with these materials may overheat the fireplace, causing damage to the unit, a fire or even possibly igniting a chimney fire if the chimney is creosoted.

3.2.2 *First Fires*

Before using the fireplace make sure to remove the plastic wrapping on the door. Remove all remaining glue with mild soap.

The first 5 or 6 fires should be small fires of short duration (about 30 to 60 minutes). This will help cure the refractory bricks. The first fires may produce slight smoking due to drying of the paint and steel and any dust accumulated on the fireplace will burn off at this time. It may set off a smoke alarm located in the same room. For this reason the room should be well ventilated for the first few fires.

3.2.3 *Building a Fire*

To start a fire, place several crumpled up balls of newspaper in the firebox. Place small dry pieces of kindling on top of the paper, criss-crossing the kindling so that there are air spaces in between. Keep the fuel far back enough so that air can get underneath. Open the air controls fully and light the newspaper. Once the newspaper and the kindling is well ignited, close the door. Once the kindling fire is well established, cordwood can be added. (see Primary Air Combustion Control section for proper operation of the air controls)

The unit will burn best with 2-3 pieces of cordwood spaced 1 to 2 inches apart and allowing air to get under the fuel. Criss-crossing or arranging the fuel so that air can get underneath, will help the fire to get started easily. The unit should be operated with the air control fully open long enough to get the cordwood well ignited.

3.2.4 Primary Air and Air Boost Controls

There is no flue damper in the BRENTWOOD. As is common with air tight stoves, the combustion air control sets the flow of air entering the firebox. This allows for a more precise control of the fire. The combustion air control is located below the door on the left side. The main source of air (primary air) entering the firebox can be diminished by moving the air combustion control from left to right. The primary air is fully opened when the air control is completely moved to the left. The air control device can also be used to add an extra boost of air especially during fire start up and reloading of the unit. Pulling the air combustion control will induce an air boost at the base of the fire allowing an easier fire start up. When the fire is well established, the control can be pushed forward to shut down the air boost allowing for a longer burn time. The combustion air control should be in the closed position (primary air and air boost) when the fireplace is not in use. This will minimize air leakage up the chimney. The combustion air control should be opened before opening the door to minimize the possibility of back draft coming into the room.

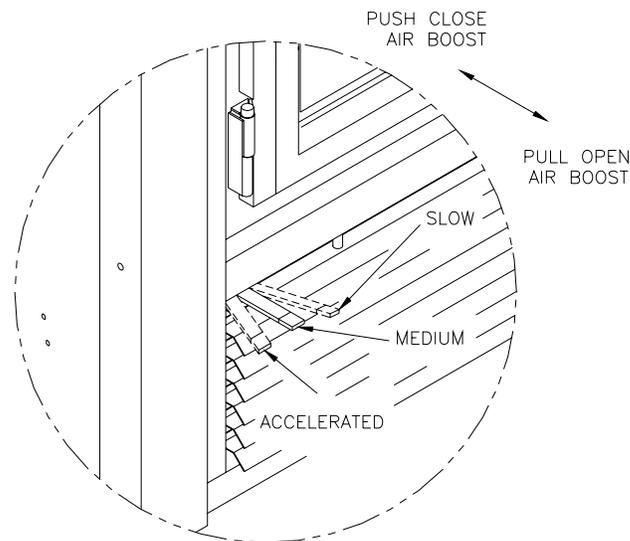


Figure 1

3.2.5 Accelerated Combustion

The maximum heat output for the BRENTWOOD is achieved by burning with the door closed and the combustion air opened and pulled back. By this method, the BRENTWOOD can produce up to 55,000 BTU of heat per hour. However, it will be necessary to reload with wood every one or two hours. This is the least efficient method of burning the BRENTWOOD.

Use caution when firing with the combustion air control wide open. Only burn cordwood in this manner. Small dry pieces of softwood and construction scraps will burn very intensely using this method and may damage the firebox.

3.2.6 Medium Combustion

This is the recommended mode of operating the BRENTWOOD and should be the one normally used since it will deposit the least amount of creosote on the glass and in the chimney. The combustion air control must be 3/4 closed and pushed forward to close the air boost. The precise setting will depend on many factors, including chimney length and the moisture content of the wood.

For instance, a long chimney will necessitate closing the damper more. To obtain the proper combustion, close the damper completely, then open it about 1/4" to 1/2". Three medium size pieces of wood should be burning on a bed of hot coals. The heat output will be approximately 30,000 BTU per hour and the loading time will be about every 3-4 hours. Softwoods may be burned using this method but the time will be substantially reduced.

3.2.7 Slow Combustion

When the air combustion control is completely closed, the fireplace is in a slow combustion phase. If the hearth is hot enough, slow combustion will not stop the fire, but there will be a noticeable change in the flame pattern. The flames will be slow and may appear dirty if the wood is too wet (moisture content of 20% and more). Do not allow the wood to burn without flame, since this will produce excessive creosote in the unit.

Creosote may accumulate on the glass door. This method of burning should be used only after operating the BRENTWOOD with the air control opened to produce a hot fire for about an hour or at medium pace for at least 3 hours. Slow combustion can be used at night in order to reduce the heat output and to prolong the burn. The loading time will be between 6-8 hours.

3.2.8 Refuelling For Best Performance

The BRENTWOOD fireplace will operate best if attention is given to operating the unit with the damper fully opened after refuelling in order to bring the firebox and the chimney system up to their optimum operating temperature. Combustion efficiency is relative to firebox temperature. A temperature of 500° C and up, with a visible flame, in the upper part of the firebox indicates a maximum efficiency. To obtain this temperature, the fireplace must be operated with the primary air and air boost controls fully opened during 10 to 20 minutes after reloading, depending on the heat and on the moisture content of the wood. Once you have reached the desired temperature, the air boost can be closed and the primary air set to a medium setting. You know you have reached the desired temperature when, closing the primary air control, you can see a flame at the top of the firebox. The benefit of this technique will be cleaner glass, less creosoting, greater efficiency and the most pleasing fire for your enjoyment. If your fireplace is equipped with a central forced air system, make sure the central blower is turned off during reloading to avoid smoking problems.

3.2.9 Smoking – Causes and Troubleshooting

To reduce the likelihood of smoking when opening the door, set the combustion air controls to the left before opening the door. Your fireplace has been designed and tested to provide smoke free operation. Occasionally, there may be a small amount of smoking upon lighting the fire, until the chimney heats up but this should not continue. If the fireplace continues to smoke it is probably for one of the following reasons:

A. Negative pressure in the house

As the fire burns, air goes up the chimney. This air must be replaced through leakage into the house or through the outside air duct. When operating the BRENTWOOD, open a nearby window temporarily to check if there is adequate air supply replacement.

B. Fans operating (e.g.: range hood)

These fans draw air out of the house and may actually cause a negative pressure in the house. Turn off all fans and open a nearby window to determine if this is the cause of the problem.

C. Wet wood

Wet or tarred wood will smoulder and smoke instead of burn properly.

D. Dirty or blocked chimney

Check to make sure the chimney is clear and clean.

E. Chimney not long enough

The minimum chimney height is 12 ft. not including the fireplace height. The chimney must extend at least 3 feet (915 mm) above its point of contact with the roof and at least 2 feet (610 mm) higher than any roof or wall within 10 feet (3 m) of it. When installed with offsets, the minimum chimney height is 15 ft. Additional height will increase draught and will decrease the tendency to smoke.

F. Poor chimney draft

With no fire, there should be sufficient draught to exhaust cigarette smoke introduced under the baffle. Chimneys installed against an outside wall without protection may generate back draught problems which will cause start-up problems. To prevent this, open a nearby window, roll up a piece of paper and light it. Then, hold it in the upper part of the firebox to warm up the chimney. Wait until the draught is sufficient, then start the fire.

G. Blower for central forced air kit operating

Make sure that the blower is at the "off" position when you open the fireplace door for reloading.

IMPORTANT NOTES

- A. Do not block the hot air vents to the fireplace as this will cause the fireplace to overheat.
- B. Never start a fire using gasoline, kerosene, charcoal lighter fluid or any other combustible liquid.
- C. Do not burn coal. The sulphur in coal will corrode the firebox.
- D. Do not burn driftwood which has been in the ocean or salt water. The salt will corrode the firebox and chimney.
- E. Do not burn wood in the area in front of the grate.
- F. Do not abuse the unit by burning paper, or cardboard or construction material such as pressed wood, plywood or lumber.
- G. Do not allow the wood to smoulder or burn without flame, since this will produce excessive creosote in the unit.

3.3 MAINTAINING YOUR BRENTWOOD

3.3.1 *Creosote*

When wood is burned slowly without a flame, it produces tar and other organic vapors which combine with expelled moisture to form a black deposit called creosote which accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire. If the creosote accumulation is large, a creosote fire in the chimney can damage the chimney and overheat the surrounding wood framing. Creosote formation in a chimney can be minimized by making sure there is always visible flame burning, avoid smouldering fires and by proper refuelling techniques.

3.3.2 *Chimney Maintenance*

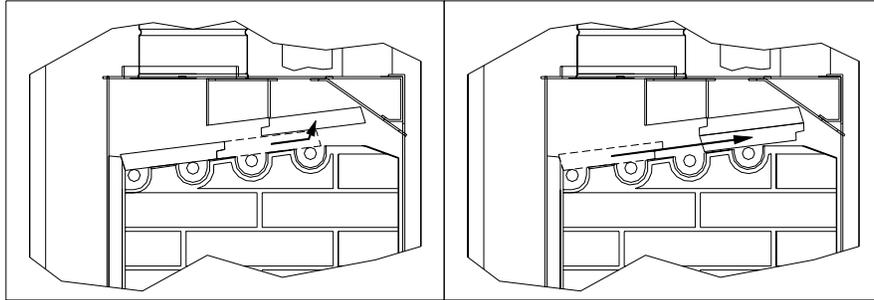
Regular chimney inspection and maintenance combined with proper operation will prevent chimney fires. Keep your chimney clean. Do not allow more than 1/16" creosote build up in your chimney. The amount of creosote will depend on variables such as frequency of use and type of fire. We recommend that you:

- A. Initially inspect the chimney system weekly. From this, you will learn how often it will be necessary to clean your chimney.
- B. Have your chimney cleaned by a qualified chimney sweep. If you wish to clean it yourself, we recommend using a stiff plastic or non-metallic brush. If a metal brush is used, its size should be slightly smaller than the flue to avoid damaging the chimney. Do not use a brush that will scratch the stainless steel interior of the chimney.
- C. Do not expect chemical cleaners to keep your chimney clean. The rain cap can be removed for inspection and/or cleaning of the chimney.

3.3.3 Top Baffle Removal Prior to Cleaning The Chimney

Before starting to clean your chimney, we recommend that you remove the top baffle to avoid creosote dust collection at the top of the baffle. Follow these steps to set the top baffle out of the way:

1. Remove the side refractory holder. They are located at the top of the refractory.
2. Lift the front baffle.
3. Slide the back baffle under the front baffle. You now have access to the chimney.



3.3.4 Dealing With a Chimney Fire

Regular chimney maintenance and inspection can prevent chimney fires. If you have a chimney fire, follow these steps:

1. Close the fireplace door and the combustion air controls.
2. Alert your family of the possible danger.
3. If you require assistance, alert your fire department.
4. If possible, use a dry chemical fire extinguisher, baking soda or sand to control the fire. Do not use water as it may cause a dangerous steam explosion.
5. Check outside to ensure that sparks and hot embers coming out of the chimney are not igniting the roof.
6. Do not use the fireplace again until your chimney and fireplace have been inspected by a qualified chimney sweep or a Fire Department Inspector.

3.3.5 Finish Door Casing Care

Use a glass cleaner and a soft cloth to polish the casing. Do not use abrasives such as steel wool, steel pads or an abrasive polish for they may scratch the casing's finish.

3.3.6 Ashes

Remove ashes only when the fire is out and the ashes are cold (24 to 48 hours after the fire is out).

3.3.7 Refractory Replacement

The intense heat of the fire will normally cause hairline cracks in the refractory. These cracks can be minimized by proper curing as described in "First Fires". They will not normally diminish the effectiveness of the refractory. If large cracks develop, then the refractory should be replaced. To replace the refractory bricks, follow these steps:

1. Remove the front refractories
2. Remove the bottom refractory
3. Remove the left side refractory
4. Remove the right side refractory
5. Remove the back refractory
6. Remove the front ceramic baffle
7. Remove the rear ceramic baffle

To install the new refractories, follow the above steps in reverse.

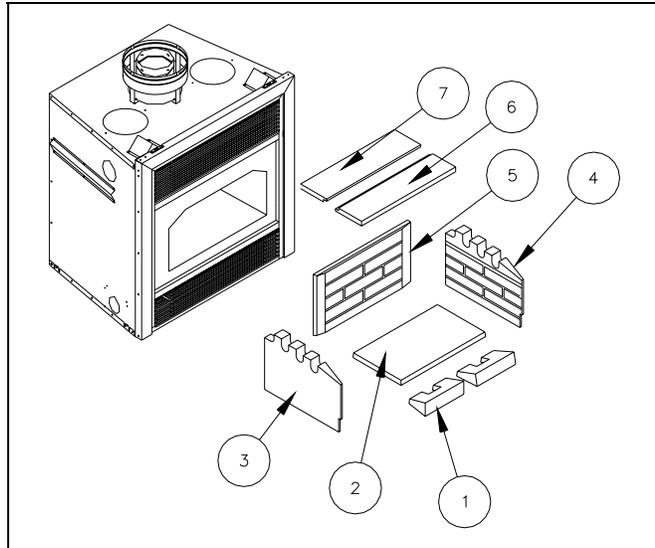


Figure 2

3.3.8 Door Installation

The door must be installed only when the installation of the BRENTWOOD is completed. All you have to do is fit the male part of the hinge, already on the door, to the female part, which is on the fireplace.

To remove the door, simply pull the door up from the hinges.

The door adjustment has been set at the factory. If the fit is still not perfect, you can adjust the door using the hinge screws.

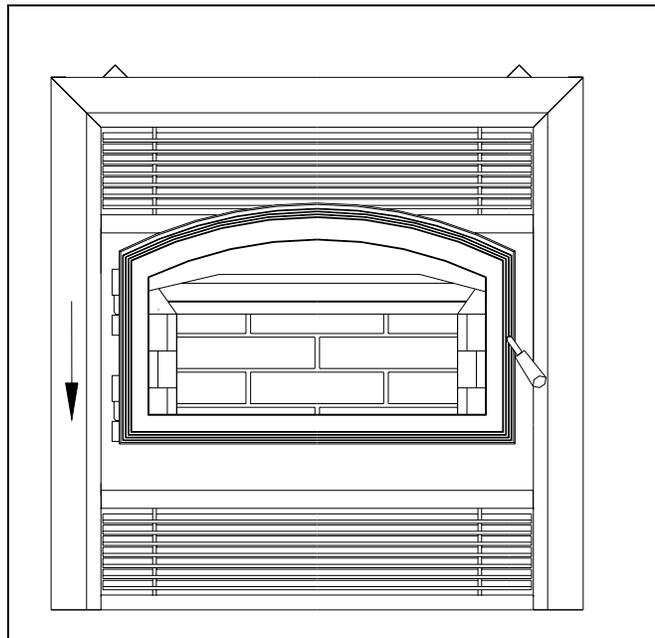


Figure 3

3.3.9 Door Adjustment

The door may need to be adjusted to be completely airtight. The gaskets' air-tightness can be adjusted using the adjustment screw located on the right side of the fireplace façade. (An Allen key #1/8 – not supplied - will be necessary for this adjustment)

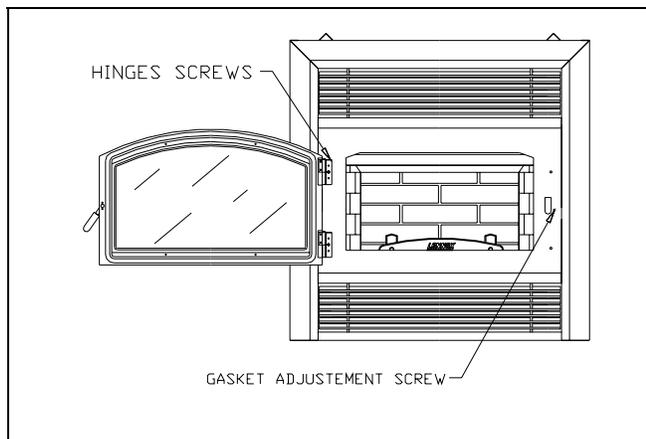


Figure 4

3.3.10 Glass Care - Replacement

The glass used for the BRENTWOOD is a high temperature ceramic glass (1400° F). If the glass breaks, it must be replaced with an identical ceramic glass. Tempered glass or ordinary glass will not withstand the high temperatures of the BRENTWOOD. Replacement glass should be purchased from a Lennox Hearth Products dealer (see “Replacement Parts”, page 34). Do not operate the unit with cracked or broken glass.

3.3.11 Glass Care - Cleaning

The BRENTWOOD is designed to keep the glass clean under normal operating conditions. If the BRENTWOOD is operated continuously with the combustion air controls closed, the glass will tend to get dirty unless the fuel, firebox and glass are maintained at hot temperatures (see "Refuelling For Best Performance"). To clean the glass, there are a number of specially designed cleaners. Your authorized Lennox Hearth Products dealer can recommend a suitable cleaner which is available in your area. Regular household glass cleaners will not clean creosote. Do not use abrasives such as steel pads, steel wool or oven cleaner as they will scratch the glass.

3.3.12 Gasket Replacement

Remove the door from the unit (see page 10) and lay it on a clean unabrasive surface. To replace the gasket, first remove all of the old gasket and gasket cement. Make sure that the surface is totally clean before applying new cement (a high temperature silicone caulking rated at 500°F, 260°C, is suitable) or adhesion problems may result. Apply gasket cement to the gasket channel and install the new gasket. This replacement part is available from your Lennox Hearth Products dealer in the following dimensions:

<u>Gasket</u>	<u>Length</u>	<u>Dimensions</u>
Around glass	69"	5/16" dia.
On door frame	73"	5/8" dia.

3.4 FIREPLACE INSTALLATION

3.4.1 *Locating The BRENTWOOD*

- A. The best location to install your fireplace is determined by considering the location of windows, doors, and the traffic flow in the room where the fireplace is located, allowing space in front of the unit for the hearth extension and the mantel, and taking into consideration the location of the hot air ducts (optional), outside air kit and chimney. If possible, you should choose a location where the chimney will pass through the house without cutting floor or roof joists (see fireplace dimensions page 13).
- B. Usually, no additional floor support is needed for the fireplace. The adequacy of the floor can be checked by first estimating the weight of the fireplace system. Weights are given in the appendix. Next, measure the area occupied by the fireplace which is normally 36" X 24 ½". Note the floor construction and consult your local building code to determine if additional support is needed.
- C. The BRENTWOOD may be installed directly on the floor or on a raised base (for proper guidelines, refer to "**Hearth Extension Requirements**") and a minimum of 6'8" measured from the base of the appliance to the ceiling is required.

3.4.2 *Hearth Extension Requirements*

The BRENTWOOD may be installed directly on a combustible floor; however, the combustible floor in front of the fireplace must be covered with a non-combustible material (tile, marble, stone, etc.).

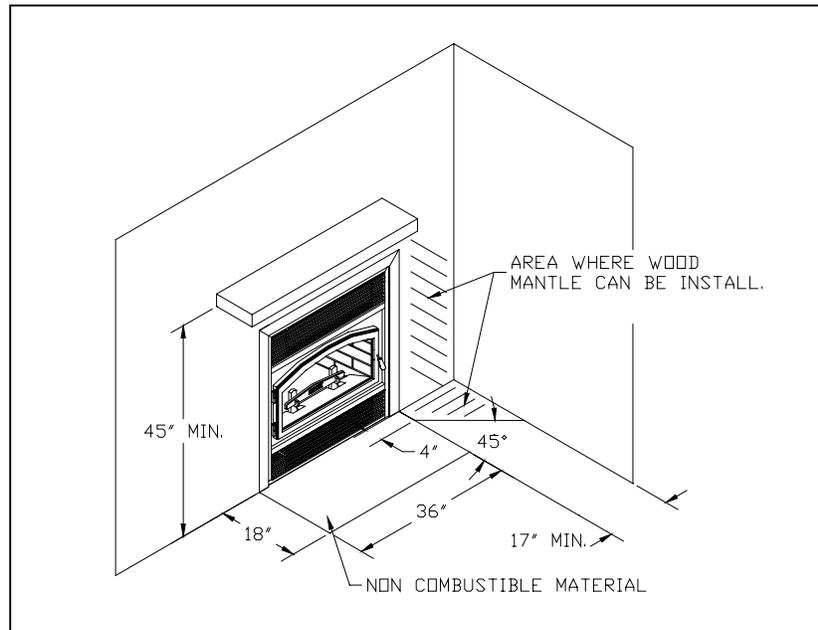


Figure 5

3.4.3 Framing, Facing And Mantel

The construction of the framing, facing, and mantel must be in accordance with the standards and the following illustrations (figures 6 to 10):

- A. Frame the fireplace using 2" x 3" or heavier lumber.
- B. **WARNING:** Combustible materials cannot be used in the space directly above the fireplace, except for the studs above the facade that support the facing and mantel. This area must remain empty for **a height of 6'8" (2032 mm) measured from the base of the appliance.**
- C. Frame the fireplace with vertical studs at the sides of the fireplace running from floor to ceiling (see figure 8). If combustible facing is to be used, position the studs back, from the front edge of the fireplace, a space the thickness of the facing material so that the facing can be installed flush with the fireplace facing. Frame headers between the vertical studs only as follows:
 - Place 2" x 3" or 2" x 4" headers, only along the upper part of the front, side and back faces. Do not put wood or any combustible material within the area above the fireplace except on the front facing.
 - Place headers only as required to support the facing and mantel.
- D. **WARNING:** The fireplace must not be in contact with any insulation or loose filling material. Cover the insulation with gyproc panels around the fireplace.

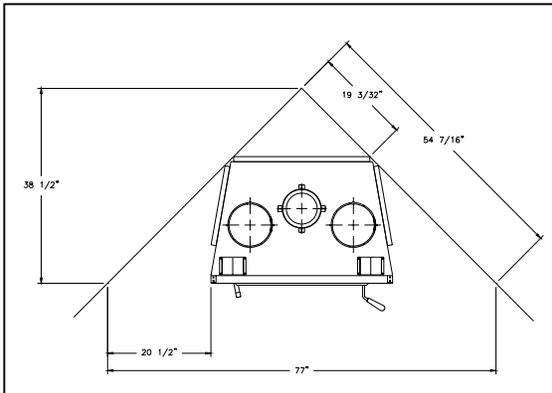


Figure 6

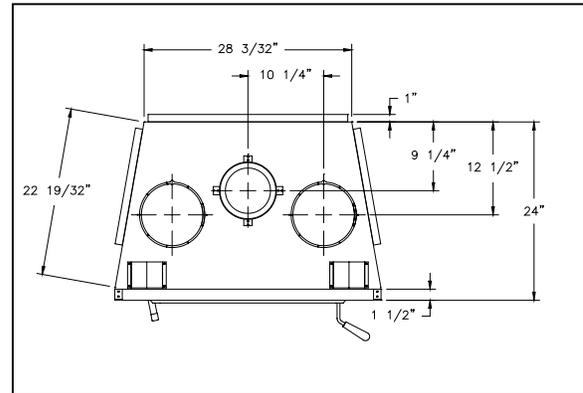


Figure 7

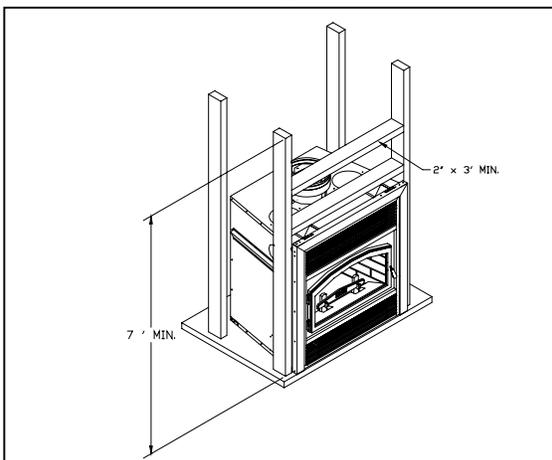


Figure 8

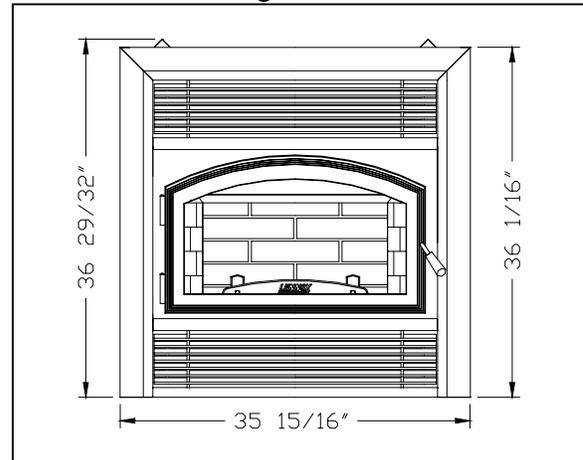


Figure 9

INSULATED CHASE CONSTRUCTION

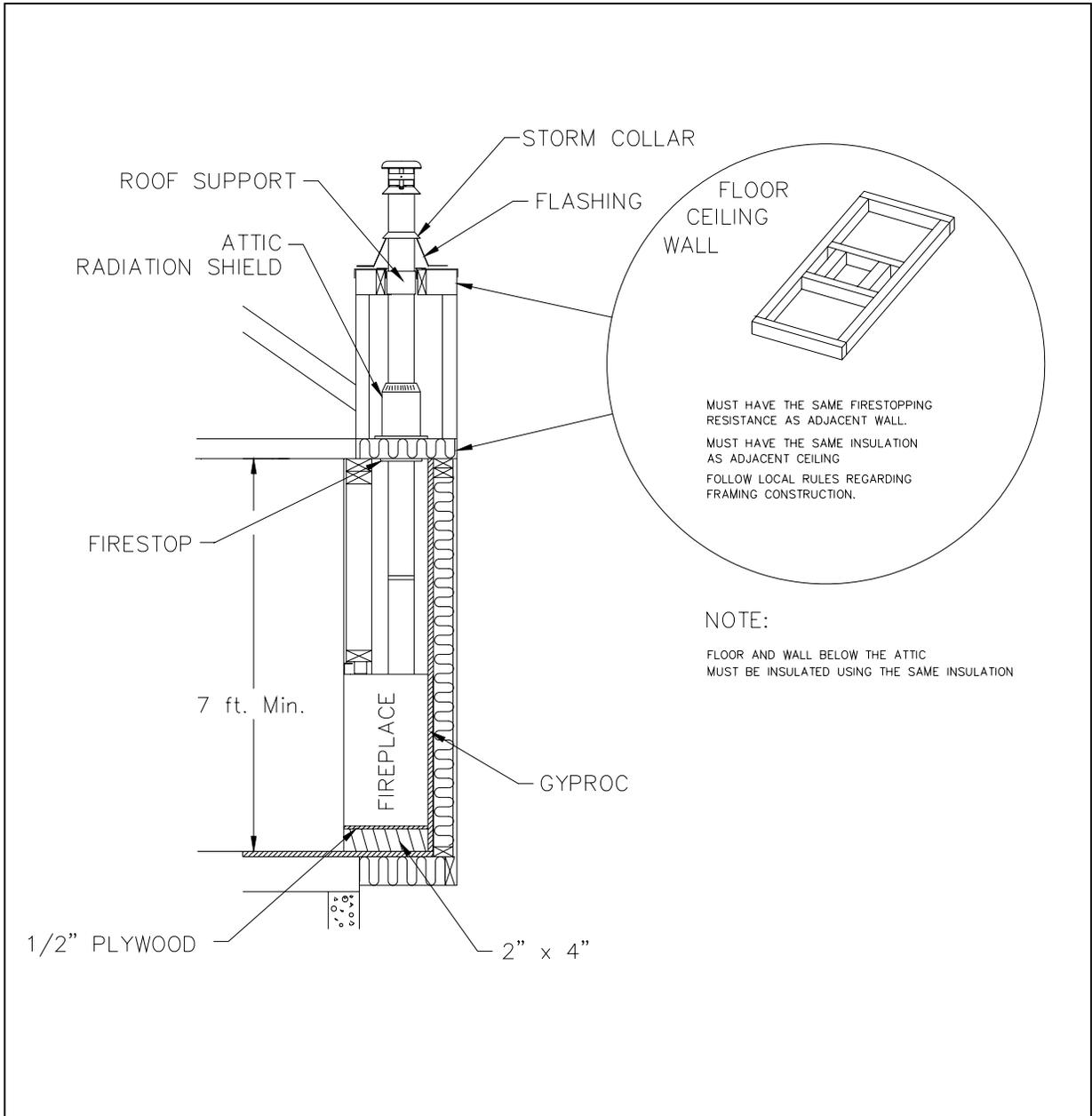


Figure 10

Facing

1. Combustible material must be installed flush with the fireplace. It may not project in front of and on the fireplace (i.e. the steel façade of the fireplace) (figure 11).
2. Non-combustible materials such as brick, stone or ceramic tile may project in front of and onto the fireplace facing (figure 12).

Mantel

The mantel must be installed at least 45" (1143 mm) above the base of the fireplace (figure 11).

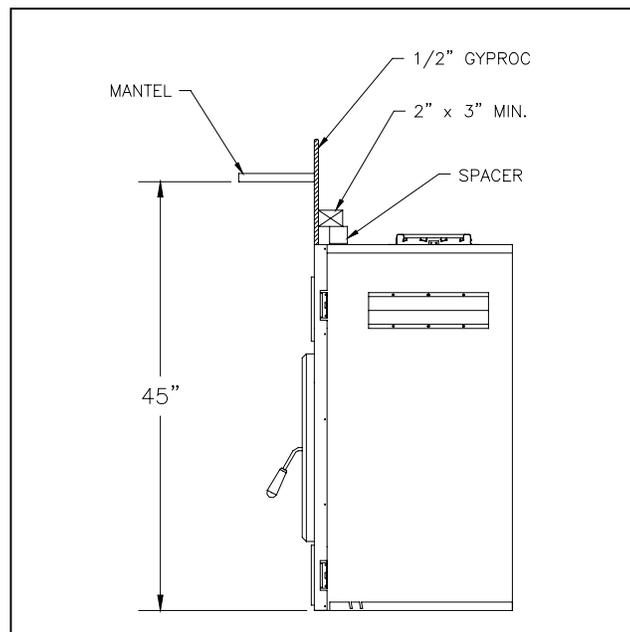


Figure 11

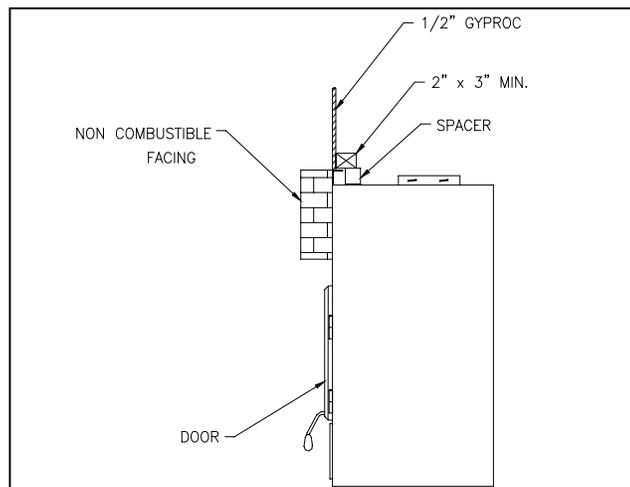


Figure 12

3.5 HOT AIR DUCTING INSTALLATION

Different hot air ducting systems can be installed with the BRENTWOOD:

- Gravity kit
- Forced air kit
-

3.5.1 *Gravity Kit*

Two kits are available:

1. Single hot air outlet including: (see Fig.13)
 - 2 6" lengths 8" I.D.
 - 1 hot air outlet kit (box, louver and frame)
 - 2 adaptors
2. Double hot air outlet including: (See Fig.14)
 - 2 telescopic lengths 8" I.D.
 - 2 90° elbows 8" I.D.
 - 2 hot air outlet kits (grill and frames)
 - 2 adaptors

NOTE : To install the single hot air outlet, the chimney must be offset towards the back using 2 – 30 deg. elbows back to back on the fireplace.

See components list page 30.

The only fan that can be used with the gravity kit is the UZY3.

The gravity kit allows you to block the upper louver of the fireplace. To do so, follow the steps below:

- a) Remove the upper louver from the fireplace.
- b) Install the black panel (BWCF) making sure that the insulation strip is installed inside.
- c) The fireplace façade can be covered with non-combustible material (fig. 17).

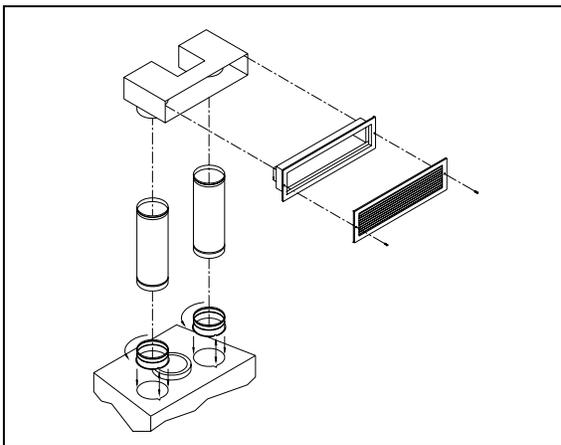


Figure 13

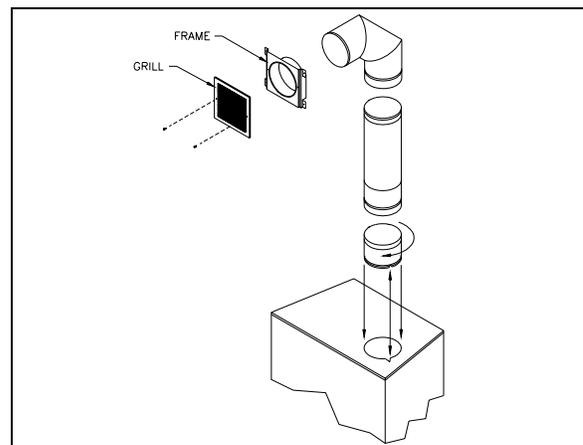


Figure 14

The safety rules for hot air ducting gravity kit installations are the following:

Minimum height*	68" (1727 mm)
Maximum length	See figures 15 & 16

- * The height of the louver must be measured from the base of the BRENTWOOD to the middle point of the louver.

The single outlet system is designed to be installed either flush with the front of the BRENTWOOD or extended out slightly from the face of the fireplace (if installing with a brick or thick facing for example). To extend the double outlet system, it will be necessary to purchase two adjustable lengths (7B26ZL2A). To extend the single outlet, it is necessary to install the insulation strip provided with the system. A maximum of 3 1/2" (89 mm) of extension is provided by the single outlet system (see figure 16).

When installing the double outlet system, the hot air outlets can be installed in the same room as the fireplace, or one or both of the outlets can be installed in adjacent or upper rooms. Installing the ducts at different elevations will tend to exhaust more heat out of the higher outlet (figure 15).

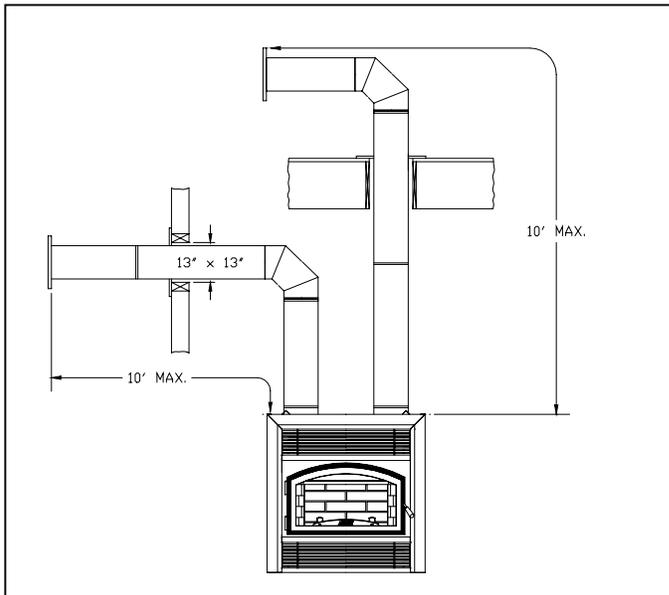


Figure 15

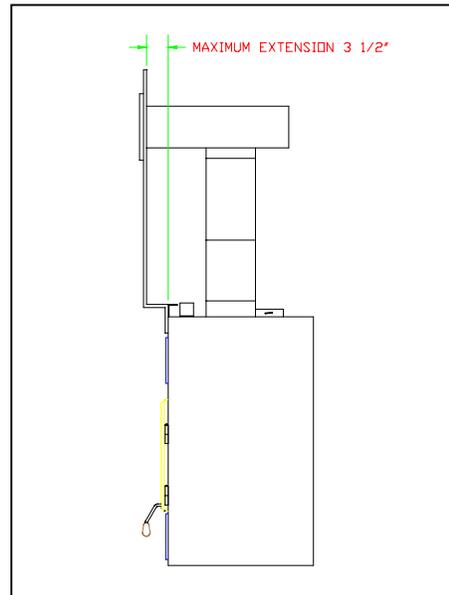


Figure 16

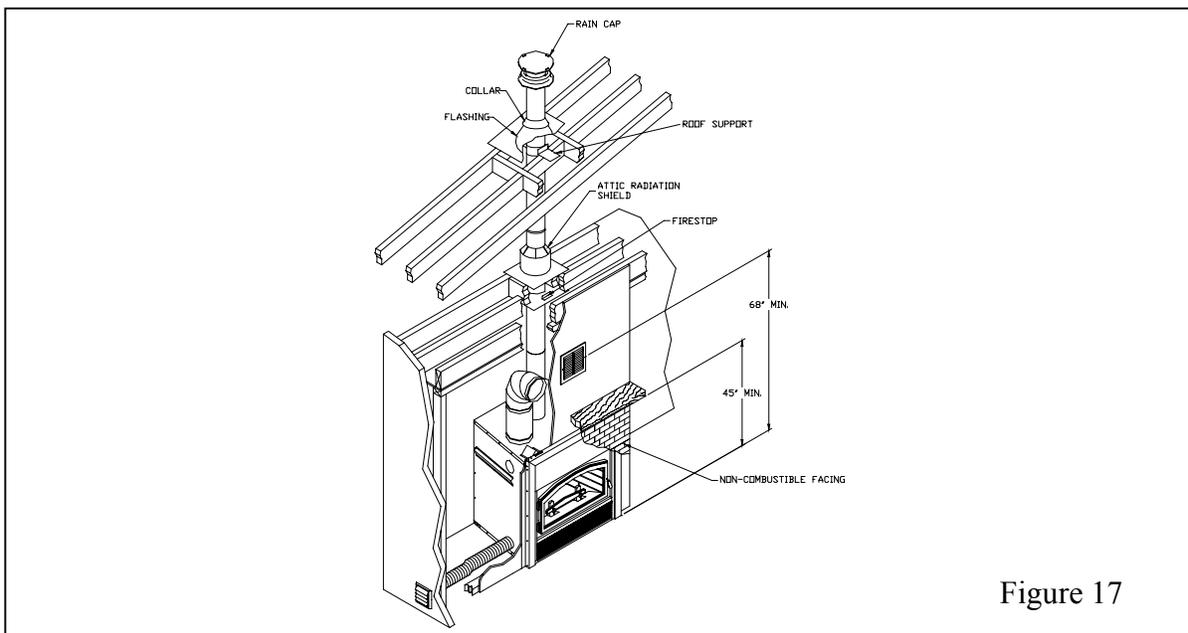


Figure 17

The duct system must be installed respecting the following:

1. Remove the plates closing up the 8" dia. holes on top of the fireplace. Then, cut the insulation in order to obtain two 8" dia. openings. Fix the adaptors on the fireplace openings by turning clockwise (figures 13 and 14).
2. Maintain at least a 2" (50 mm) clearance between the ducts and any combustible material; the required hole size is 13" x 13" (330 mm x 330 mm).

Exception #1: For the grills, the framing can be 10 ¾" x 10 ¾" (275 mm x 275 mm) to provide the clearance as required by the integral spacers on the double outlet duct system.

Exception #2: For the single outlet, the framing must be 8 ¼" x 32 ¼" (210 mm x 820 mm) or as required by the integrated spacers. At no time should any combustible facing material such as panelling cover over any part of the grill face.

3. The maximum number of elbows in a run of duct is two.
4. Maintain at least 6 ½" (160 mm) clearance from the outlet grill framing to a combustible ceiling, side wall or mantel.
5. When traversing a combustible wall or floor, a firestop must be installed at the wall or floor penetration. The hole size must be 13" X 13". (330 mm x 330 mm)
6. Do not connect the hot air ducts to a central heating system. Malfunction of the heating system's fan will cause the fireplace to overheat. A furnace duct is only single wall and not double wall as is required for the BRENTWOOD hot air exhaust. For this type of installation refer to "**Central Forced Air Kit**" on the next page.
7. Use only Lennox Hearth Products grills and components as described in this manual. Other grills or registers, for example, may be too restrictive and may overheat the fireplace or ceiling.
8. Do not use insulated flexible ducts as they will overheat.
9. Do not use tees or any other components than the ones specifically listed here.
10. All ducts must extend upwards or horizontally. Never route the ducting downwards.
11. The hot air outlet grills must be installed with the louvers pointing downwards in order to prevent overheating adjacent ceilings.
12. Always install the two outlet grills when using the double hot air outlet kit and blocking the upper louver of the fireplace.

3.6 **OUTSIDE AIR KIT (Optional)**

During operation, the fireplace requires fresh air for combustion and draws air out of the house. It may starve other fuel burning appliances such as gas or oil furnaces. As well, exhaust fans may compete for air, causing negative pressure in the house, resulting in smoke entering the house from the fireplace. This situation is aggravated in modern airtight houses. To overcome this problem, we strongly recommend that you **install an outside air assembly**. **Check with local authorities having jurisdiction in your area, it may be mandatory.**

NOTE: Should you decide not to install the outside air assembly, proceed as follows:

- Remove the bottom grill. The air box is located on front left and is on a slant.
- Unscrew the four screws holding the inside air box covering plate and remove it.

3.6.1 *Outside Air Installation*

The outside air assembly may be installed according to the following requirements :

- A) Duct length should be kept to a minimum. The maximum length of duct is 20 ft. (6.1 m) for a 4 in. dia. pipe (See note below).
- B) The air intake register must not be installed more than 10 ft. (3050 mm) above the base of the fireplace.
- C) The fresh air must come from outside the house. The air intake must not draw air from the attic, from the basement or garage.
- D) The air intake should be installed where it is not likely to be blocked by snow or exposed to extreme wind and away from automobile exhaust fumes, gas meters and other vents.
- E) The duct and register may be installed above or below floor level.

The following components are required :
- Outside air kit (UZI)
- 4" adapter for fireplace connection (supplied with the unit)

Make a 4 ¼" (110 mm) hole in the outside wall of the house at the chosen location. From outside, place the outside air register in the hole (open side down) and fasten the register to the wall, with screws as shown (see figure 18). Slip the pipe into the insulated sleeve. Place the insulated pipe over the register tube and over the fireplace's outside air connector (see figure 19). At each end, carefully pull back the insulation and plastic cover exposing the flexible pipe. Using the aluminium tape provided, wrap the tape around the joint between the flexible pipe and the air inlets. Carefully push the insulation and plastic cover back over the pipe. Using aluminium tape, fasten the plastic cover in place.

NOTE: We recommend not to exceed 20 feet of 4" flexible pipe. If you require a longer length we recommend that you use a 5" diameter flexible pipe for the complete run up to 30 feet and a 6" diameter pipe for a run of up to 40 feet.

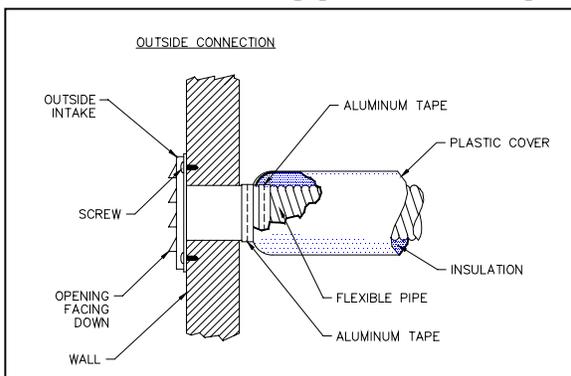


Figure 18

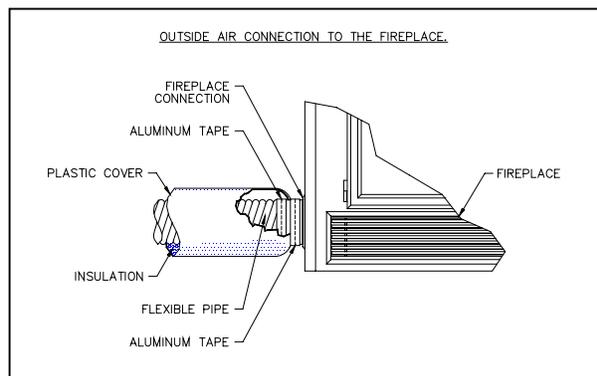


Figure 19

3.6.2 *AC CHIMNEY OUTSIDE AIR KIT (Optional)*

*** The outside air assembly for the AC (Air Cool) chimney is mandatory in some areas. Check with your local building authority for the requirements in your area.**

All required parts for outside air assembly are contained in the following kit: ACZIB

- 1) Install the outside air kit box and collar on the top of the unit. Install the flex 4" adaptor on the top of the outside air kit box.
- 2) Install the outside air register as described in the preceding section (3.6.1). Connect the outside air register to the 4" flex adaptor with the flex pipe. Respect the installation guidelines A) to E) from the preceding section (3.6.1).

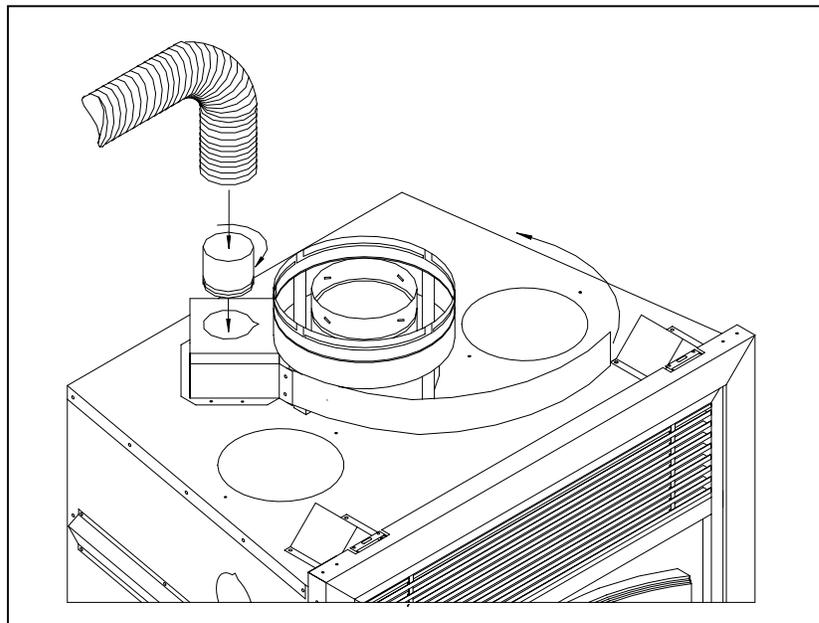


Figure 20
Chimney outside air kit installation

4. THE CHIMNEY

4.1 CHIMNEY INSTALLATION NOTES

1. Always install an interior chimney as it will provide better performance. In areas with continuous temperatures below -18°C (0°F), the use of an exterior chimney increases the likelihood of operating problems such as low draught, high rate of creosoting, and poor start-up characteristics. Exterior chimneys are also prone to down drafting and flow reversal. Installations, which are located on lower floors in the house, such as in a basement, in combination with outside chimney, are especially prone to flow reversal. If interior installation is impossible, install an AC chimney enclosed in an insulated chase.
2. The Security fireplace model BRENTWOOD can only be install with Security Chimneys International Ltd 6" diameter model AC (Air Cool) chimney system.
3. A chimney venting a fireplace shall not vent any other appliance.
4. The minimum chimney height is 12 ft. (3.7 m). In altitude, add 18" (450 mm) to the chimney for every 2000 feet (600 m) above sea level.
5. All chimney installations must include at least one support. The maximum length of chimney that can be supported by the fireplace is 26 ft. (8 m).
6. The chimney must extend at least 3 ft. (915 mm) above its point of contact with the roof and at least 2 ft. (610 mm) higher than any wall, roof or building within 10 ft. (3m) of it (Figure 21).
7. If the chimney extends higher than 5 ft. (1500 mm) above its point of contact with the roof, it must be secured using a roof brace.
8. A rain cap must be installed on top of the chimney. Failure to install a rain cap may cause corrosion problems.
9. Cut and frame square holes in all floors, ceilings, and roof that the chimney will go through to provide a 2" (50 mm) clearance between the chimney and any combustible materials. Do not fill this 2" space with insulation or any other combustible material.
10. Portions of the chimney which may extend through accessible spaces must be enclosed to avoid contact with combustible materials or damage the chimney.

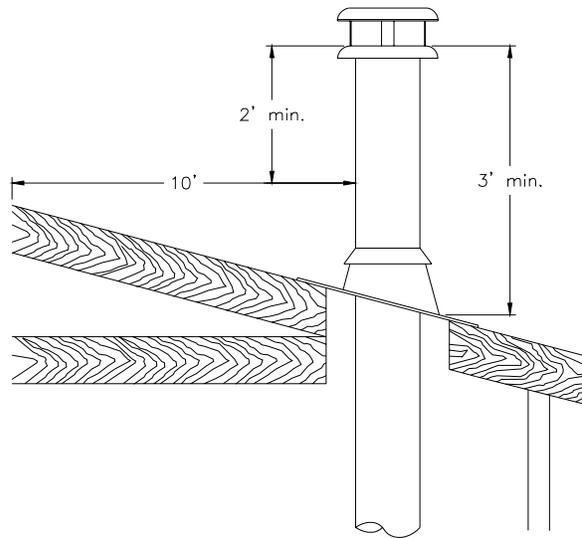


Figure 21

4.2 CHIMNEY INSTALLATION INSTRUCTIONS

1. Cut and frame the holes in the ceiling, floor and roof where the chimney will pass (see figure 22). Use a plumb bob to line up the center of the holes. The sizes are indicated in table 1 for the floor and ceiling holes and table 2 (page 24) for the roof holes.

CHIMNEY MODEL	SQUARE HOLE SIZE OPENING
AC	15 in.

Table 1

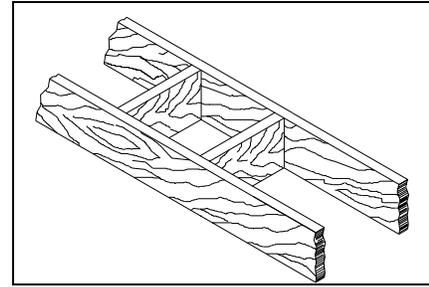


Figure 22

2. From below, install a firestop in each ceiling/floor separation through which the chimney will pass. At the attic level, install an attic radiation shield from above (figure 23).
3. Place the first chimney length on the fireplace. To lock it in place, turn $\frac{1}{4}$ of a turn clockwise. Continue installing chimney lengths making sure to lock each length in place.
4. Every time the chimney passes through a ceiling or a wall, install the appropriate firestop. When you reach the desired height, install the roof support. (Refer to instructions included with the support).
5. Then, put the roof flashing in place and seal the joint between the roof and the flashing with roofing pitch (see figures 25 & 26). For sloping roofs, place the flashing under the upper shingles and on top of the lower shingles. Nail the flashing to the roof, using roofing nails.
6. Place the spacers and the storm collar over the flashing, and tighten it with the bolt supplied. Finally, seal the joint between the storm collar and the chimney, using silicone caulking.
7. Install the chimney cap.

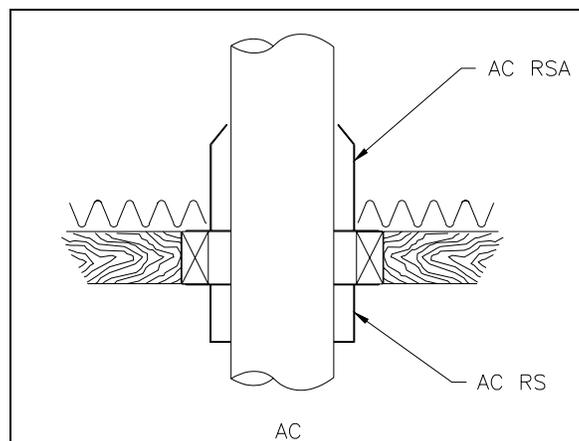


Figure 23

AC CHIMNEY INSTALLATION (AIR COOLED GALVALUME CHIMNEY)

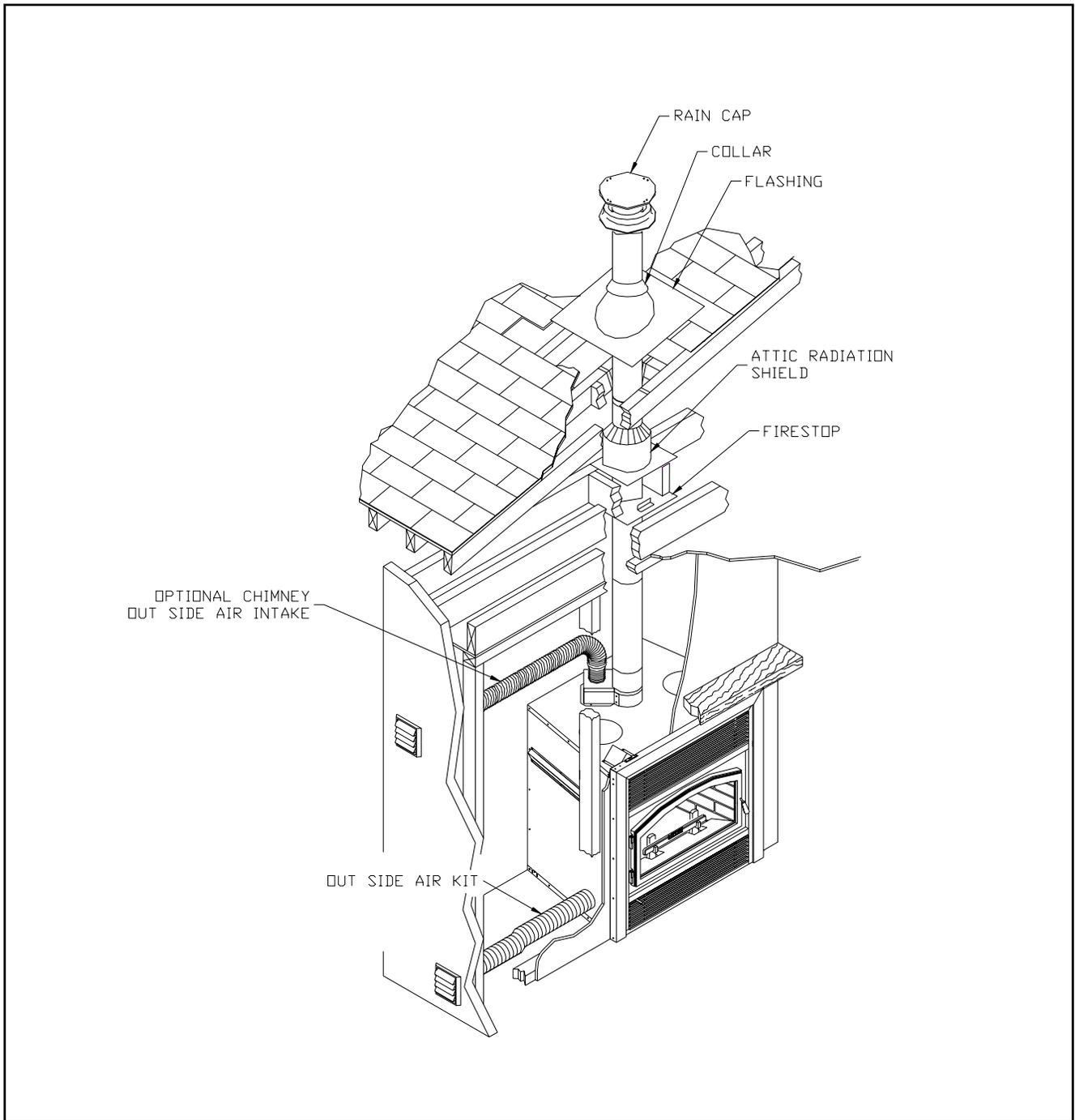


Figure 24

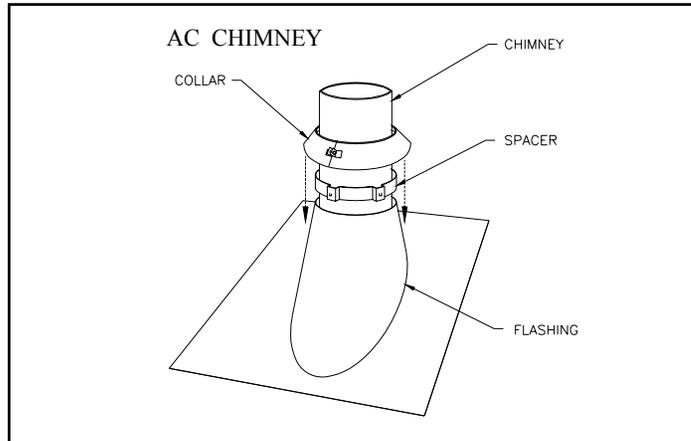


Figure 25

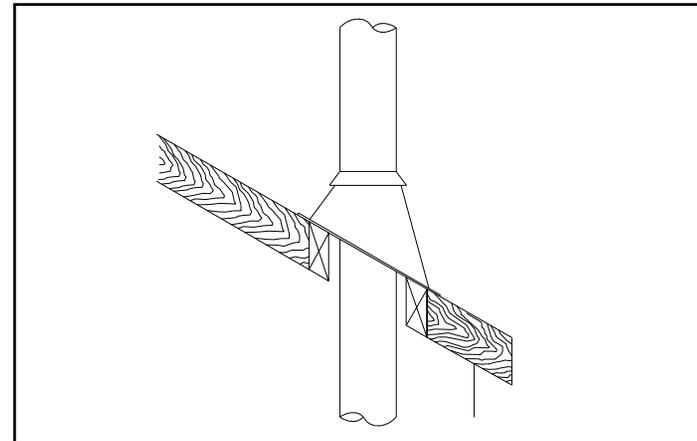


Figure 26

Table 2

ROOF DOWN SLOPE HOLE SIZE	
SLOPE	AC
Roof Pitch	6"
0 *	15" (380 mm)
2/12	15 3/8" (390 mm)
4/12	16 1/8" (410 mm)
6/12	16 7/8" (430 mm)
8/12	18 1/4" (465 mm)
10/12	19 5/8" (500 mm)
12/12	21 3/8" (545 mm)
* CROSS SLOPE HOLE SIZE	

4.3 OFFSET CHIMNEY INSTALLATION

The minimum chimney height when using elbows is:

Fireplace model	BRENTWOOD
Chimney model	AC
Vertical installation	12 ft. (3.66 m)
Two (2) elbows	15 ft. (4.57 m)
Four (4) elbows	17 ft. (5.18 m)

Table 3

After reaching the location requiring the elbow, proceed as follows:

AC Chimney

1. Install the first elbow. Turn it in the required direction. To lock it in place, turn 1/8 of a turn. Fasten the straps attached to the elbow to the surrounding frame, using nails or drywall screws.
2. Install the necessary chimney lengths to achieve the required offset. Lock the chimney lengths together. If penetrating a wall, use a wall radiation shield.
3. Use another elbow to turn the chimney vertically. Lock it to the chimney. Fasten the straps attached to the elbow to the surrounding framing using nails or drywall screws.
4. Use a plumb bob to line up the centre of the hole. Cut a hole for the chimney in the ceiling. Frame this hole as described previously.
5. From below, install a firestop. (see figure 23).
6. Continue with the regular installation.

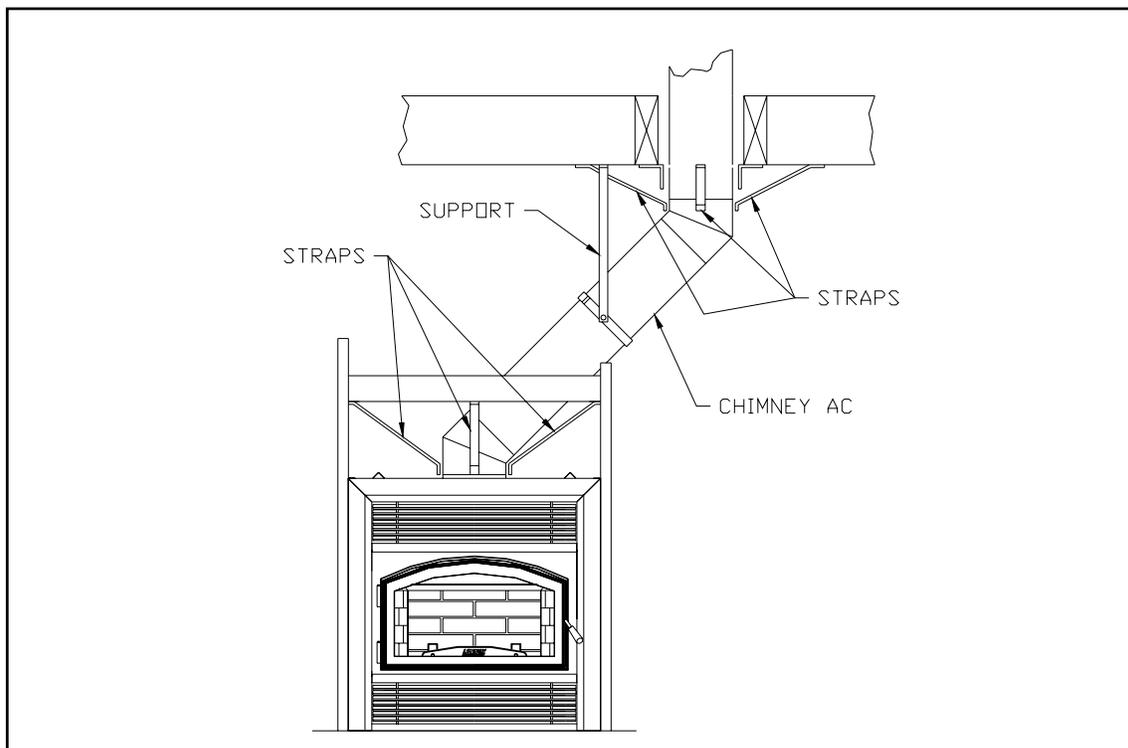
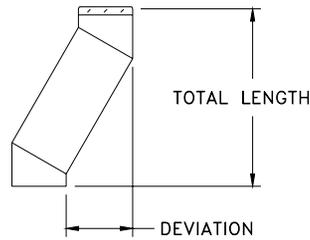


Figure 27



CHIMNEY	ELBOW	DEVIATION & LENGTH	ONE LENGTH BETWEEN ELBOWS					TWO LENGTHS BETWEEN ELBOWS				
			---	12"	18"	36"	48"	---	12" & 48"	18" & 48"	36" & 48"	48" & 48"
AC 6"	15°	DEVIATION	----	4 13/16" (122 mm)	6 1/8" (156 mm)	11" (280 mm)	14 1/8" (359 mm)	----	16 7/8" (429 mm)	18 7/16" (468 mm)	23" (584 mm)	26 3/16" (665 mm)
		LENGTH	----	27 11/16" (703 mm)	33 1/2" (851 mm)	50 7/8" (1292 mm)	62 1/2" (1588 mm)	----	72 5/8" (1845 mm)	78 7/16" (1992 mm)	95 3/4" (2432 mm)	107 3/8" (2727 mm)
	30°	DEVIATION	----	9 3/8" (238 mm)	12 3/8" (314 mm)	21 3/8" (543 mm)	27 3/8" (695 mm)	----	32 5/8" (829 mm)	35 5/8" (905 mm)	44 5/8" (1134 mm)	50 5/8" (1286 mm)
		LENGTH	----	25 3/4" (654 mm)	31" (787 mm)	46 1/2" (1181 mm)	57" (1448 mm)	----	66" (1676 mm)	71 1/4" (1810 mm)	86 7/8" (2207 mm)	97 1/4" (2470 mm)

Table 4

4.4 ANGLED WALL RADIATION SHIELD (ACRSM30, ACRSMI30)

When traversing a combustibile wall with the chimney at a 30°, an angled firestop or wall radiation shield must be installed. Only one is required.

In cold climate locations, we recommend that you use the insulated wall radiation shield since it will maintain the home's thermal barrier.

RSM+ and RSMI30, RSMI45		
CHIMNEY MODEL	ANGLE	HOLE SIZE
AC (6" dia.)	30°	380 mm x 972 mm (15" x 38 1/4")

Table 5

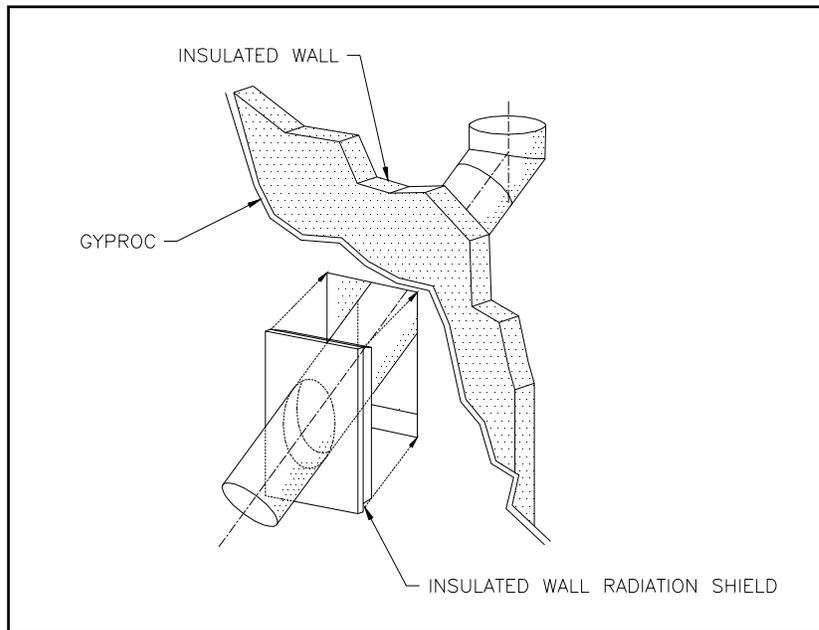


Figure 28

4.5 CHIMNEY SUPPORT INSTALLATION

Universal Roof Support

This support has two possible uses:

1. It may be used on a floor, ceiling or roof above an offset to support the chimney above the offset.
2. It may be used on a floor, ceiling or roof as a supplementary support

Table 6 gives maximum height of supported chimney.

NOTE: For the AC chimney, a support section may be used every 40 ft. (12 m) instead of the universal roof support (ST).

For roof support installation, refer to the instructions provided with the support.

Universal Offset Support

This support is used to support the chimney above an offset. When the chimney offset is used to traverse a wall this support may be used on the wall to support the chimney. The maximum heights are given in Table 6. For offset support installation, refer to the instructions provided with the support.

CHIMNEY MODEL	MAXIMUM HEIGHT OF SUPPORTED CHIMNEY	
	OFFSET SUPPORT	ROOF SUPPORT
AC (6" dia.)	40 ft. (12.19 m)	50 ft. (15.20 m)

Table 6

4.6 CHIMNEY CHASE AND MULTIPLE TERMINATIONS

For the purpose of this manual, a chimney chase is considered a part of the chimney system rather than part of a building. The termination must be placed a minimum of 18" (460 mm) above the chase.

For installations where more than one chimney is located in the same chase or within the same area, we suggest that their terminations be separated by at least 16" (410 mm) horizontally, and 18" (460 mm) vertically. This separation is to prevent smoke migrating from one chimney to another (see figure 28).

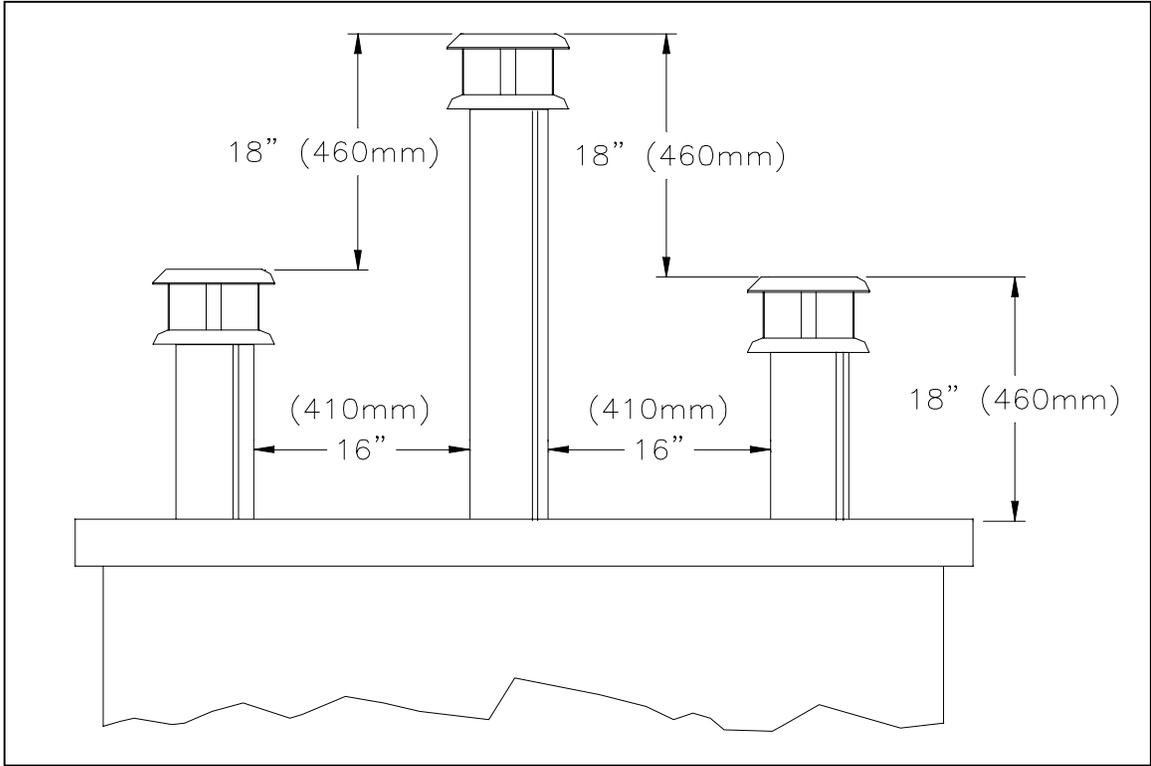


Figure 29

5. PARTS AND COMPONENTS LIST (AC Chimney)

<u>Description</u>	<u>Part No.</u>	<u>Catalog No.</u>
Lengths	6" dia.	
12" length	AC 6L12	H0472
18" length	AC 6L18	H0473
36" length	AC 6L36	H0474
48" length	AC 6L48	H0475
15° elbow	AC 6E15	H0476
30° elbow	AC 6E30	H0477
Rain cap	AC 6CPR	H0478
Spark arrester screen	PE+	H0479
Supports		
Offset support	XSO+	H0480
Support section	AC 6SL	H0481
Roof support	XST+	H0482
Roof brace	XBS2+	H0483
Wall band	XBM+	H0484
Firestop		
Telescopic attic radiation shield	ACRST	H0498
Firestop	AC BF	H0485
Radiation shield	AC RS	H0486
Attic radiation shield	AC RSA	H0487
Insulated wall radiation shield 30°	AC RSMI30	H0489
Outside air kit (chimney) (flex, insulation, outside register and coupling)	ACZIB	H0490
Flat roof flashing	ACF	H0494
Adjustable roof flashings		
1/12 - 7/12 (5° - 30°)	AC FA	H0495
8/12 - 12/12 (30° - 45°)	AC FB	H0496
Storm collar	AC FC	H0500

6. OPTIONS

<u>Gravity kit:</u>	<u>Part No.:</u>	<u>Catalog No.</u>
<u>Complete double ducting system including:</u> 2 elbows 90°, 2 telescopic lengths, 2 grill supports and 2 black grills	7B30ZK-1	H0501
<u>Complete single ducting system including:</u> 2 x 6" lengths, 1 decorative black frame and 1 black louver	7B26ZKS-1	H0502
<u>Complete single ducting system including:</u> 2 x 6" lengths, 1 decorative brass frame and 1 brass louver	7B26ZKSB-1	H0503
Black grill with support	7B30ZO	H0504
Brass grill for 7B30ZK	7B30ZGB	H0505
1 brass louver & 1 decorative brass frame	7B26ZKSLB	H0507
Elbow 90°, 8" dia.	7B26ZE90	H0508
Elbow 45°, 8" dia.	7B26ZE45	H0509
Telescopic length, 8" dia.	7B26ZLA	H0512
Adjustable length 8" dia. (2" - 5")	7B26ZL2A	H0513
Radiation shield	7B26ZR	H0514
<u>Fireplace:</u>		
Panel for clean face option	BWCF	H0518
Rigid firescreen	BWZN	H0519
Heat activated on/off pre-wired fan kit	UZY3	H0520
Outside air kit	UZI	H0521

7. APPENDIX

SPECIFICATIONS

Weight	385 lbs
Height	36"
Width	36"
Depth	24 1/2"
Chimney weight AC (6" dia.)	3.25 lb/ft.

CLEARANCE TO COMBUSTIBLES

The following clearances meet the minimum requirements for a safe installation

Side wall:	17" (324 mm) measured from the fireplace side
Ceiling:	6' 8" (2032 mm) measured from the base of the fireplace
Fireplace enclosure:	Bottom: 0" Side: 0" Back: 0" Top: Do not fill the space above the fireplace with any material (Except the wood framing. See page 13, Figure 8)
Chimney:	2" (50 mm)
Mantel:	45" (1143 mm) measured from the base of the fireplace

REPLACEMENT PARTS

Baffle refractory (2 pieces)	PR-ISO2205
Back refractory	PR-SR2203
Right side refractory	PR-SR2204D
Left side refractory	PR-SR2204G
Bottom refractory	PR-SR2201
Front refractory, right side	PR-SR2202D
Front refractory, left side	PR-SR2202G
Wood door handle	PR-SR2325
Door handle brass cap	POIGNE002
Ceramic glass panel :	PR-SR2222-1
Secondary air tube	PR-SR2271
Cast-iron log retainer supports (2)	PR-SR2324
Cast iron log retainer w/LENNOX logo	PR-SR2323