

E. CHIMNEY REQUIREMENTS

When planning your fireplace location, the chimney construction and necessary clearances must be considered. The fireplace system and chimney components have been tested to provide flexibility in construction. The following figures are the minimum distances from the base of the fireplace.

- | | |
|---|----------|
| 1. Minimum overall straight height | 18 ft. |
| 2. Minimum height with offset/return | 18.5 ft. |
| 3. Maximum height | 90 ft. |
| 4. Maximum chimney length between an offset and return | 20 ft. |
| 5. Maximum distance between chimney stabilizers | 35 ft. |
| 6. Double offset/return minimum height | 24 ft. |
| 7. Maximum unsupported chimney length between the offset and return | 6 ft. |
| 8. Maximum straight unsupported chimney height above the fireplace | 35 ft. |

1. Using Offsets and Returns

- a. To bypass any overhead obstructions, the chimney may be offset using a 30° offset/return (SL1130). Perform the following steps to determine the correct chimney component combination for your particular installation.
- b. An offset and return may be attached together or a chimney section(s) may be used between an offset and return.
 - 1) Measure how far the chimney needs to be shifted to enable it to avoid the overhead obstacle. See Figure 7, dimension "A" to determine chimney sections required to achieve the needed shift.
 - 2) After determining the offset dimension, refer to Table 1 and find the "A" dimension closest to but not less than the distance of shift needed for your installation.
 - 3) The "B" dimension that coincides with the "A" dimension represents the required vertical clearance that is needed to complete the offset and return.
 - 4) Read across the chart and find the number of chimney sections required and the model number of those particular chimney parts.
 - 5) Whenever the chimney penetrates a floor/ceiling, a firestop spacer must be installed.
 - 6) The effective height of the fireplace assembly is measured from the base of fireplace to top of starter collar. See Figure 6.

Offset/Returns Table 1 30° Offset Chart

A	B	SL1106	SL1112	SL1118	SL1136	SL1148
3 ⁷ / ₈ "	14 ¹ / ₂ "	-	-	-	-	-
6 ¹ / ₄ "	18 ⁵ / ₈ "	1	-	-	-	-
9 ¹ / ₄ "	23 ³ / ₄ "	-	1	-	-	-
12 ¹ / ₄ "	29"	-	-	1	-	-
14 ⁵ / ₈ "	33"	-	2	-	-	-
17 ⁵ / ₈ "	38 ¹ / ₂ "	-	1	1	-	-
21 ¹ / ₄ "	44 ⁵ / ₈ "	-	-	-	1	-
23 ⁵ / ₈ "	48 ³ / ₄ "	1	-	-	1	-
27 ¹ / ₄ "	55 ¹ / ₂ "	-	-	-	-	1
29 ⁵ / ₈ "	59"	1	-	-	-	1
32 ⁵ / ₈ "	64 ¹ / ₄ "	-	1	-	-	1
35 ⁵ / ₈ "	69 ¹ / ₂ "	-	-	1	-	1
38"	73 ⁵ / ₈ "	-	2	-	-	1
41"	78 ³ / ₄ "	-	1	1	-	1
44 ⁵ / ₈ "	85"	-	-	-	1	1
47"	89 ¹ / ₈ "	1	-	-	1	1
50 ⁵ / ₈ "	95 ¹ / ₂ "	-	-	-	-	2

WARNING!
Do not combine offsets to create an offset greater than 30° from vertical. This may create a fire hazard since the natural draft may be restricted.

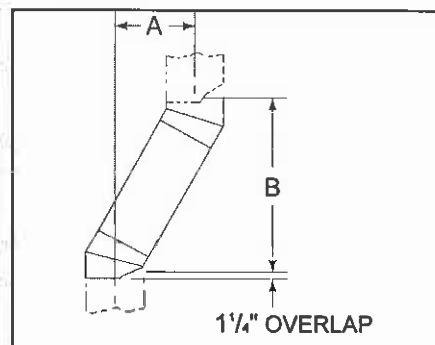


Figure 7 - Chimney Offset/Return

Example: Your "A" dimension from Figure 7 is 14¹/₂". Using Table 1 the dimension closest to, but not less than 14¹/₂" is 14⁵/₈" using a 30° offset/return. It is then determined from the table that you would need 33" (Dimension "B") between the offset and return. The chimney components that best fit your application are two SL1112s.

Proper assembly of air cooled chimney parts results in an overlap at chimney joints of 1¹/₄". Effective length is built into this table.

2. Chimney Height Requirements (above roof line)

- a. Major building codes specify a minimum chimney height above the roof top. These specifications are summarized in what is known as the *Ten Foot Rule*. This rule states:

"If the horizontal distance from the side of the chimney to the peak of the roof is ten feet or less, the top of the chimney must be at least two feet above the peak of the roof, but never less than three feet in overall height above the highest point where it passes through the roof.

"If the horizontal distance from the side of the chimney to the peak of the roof is more than ten feet, a chimney height reference point is established on the surface of the roof a distance of ten feet from the side of the chimney in a horizontal plane. The top of the chimney must be at least two feet above this reference point, but never less than three feet in height above the highest point where it passes through the roof." See Figure 8.

- b. These chimney heights are necessary in the interest of safety but do not ensure smoke-free operation. Trees, buildings, adjoining roof lines, adverse wind conditions, etc. may create a need for a taller chimney should smoking occur.

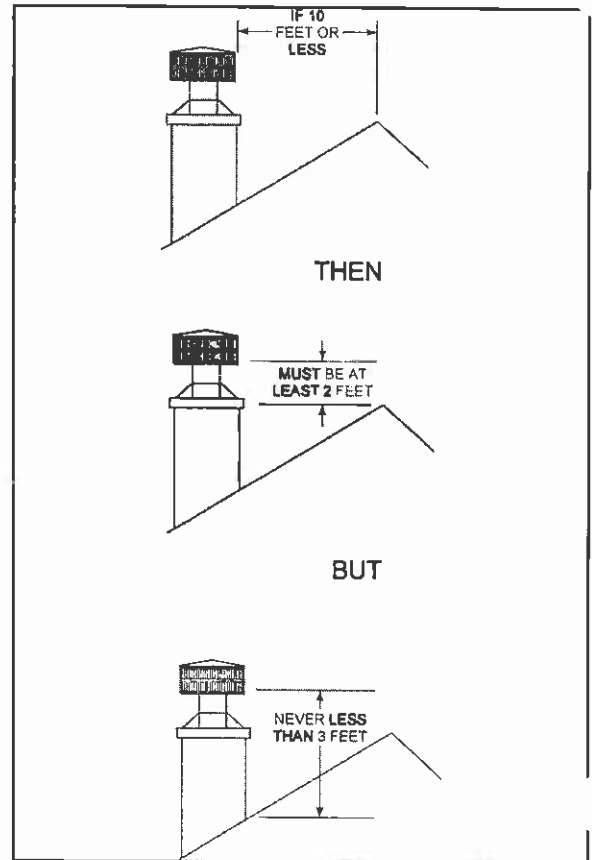


Figure 8 - Chimney Height

3. Number of Sections Required

To determine the chimney components needed to complete your particular installation, follow the steps below:

- a. Determine the total vertical height of the fireplace installation. This dimension is measured from the base of the fireplace assembly to the point where the smoke exits the termination cap.
- b. Subtract the effective height of the fireplace assembly from the overall height of the fireplace installation (measured from the base of the fireplace to the bottom of the termination cap).
- c. Refer to Table 2 to determine what components must be selected to complete the fireplace installation.
- d. Determine the number of firestop spacers, stabilizers, roof flashing, etc. required to complete the fireplace installation.

Table 2

HEIGHT OF CHIMNEY COMPONENTS	
Chimney Stabilizer	
SL11	4 ³ / ₄ "
Firestop Spacers	
FS538	0
FS540	0
Offsets/Returns	
SL1130	14 ¹ / ₂ "
Roof Flashing	
RF570	0
RF571	0
Chimney Sections*	
SL1106	4 ³ / ₄ "
SL1112	10 ³ / ₄ "
SL1118	16 ³ / ₄ "
SL1136	34 ³ / ₄ "
SL1148	46 ³ / ₄ "

(Dimensions reflect effective height)

F. INSTALLATION OF FIREPLACE

WARNING!

Before starting, do the following:

1. Wear gloves and safety glasses for protection.
2. Keep hand tools in good condition. Sharpen cutting edges and make sure tool handles are secure.
3. Always maintain the minimum air space required to the enclosure to prevent fire.

1. Positioning the Fireplace

This fireplace may be placed on either a combustible or noncombustible continuous flat surface. Follow the instructions for framing on pages 9 and 10. Slide the fireplace into position. **Be sure to provide the minimum air clearance at the sides and back of the fireplace assembly.**

2. Placing the Protective Metal Hearth Strips

Included with your fireplace you will find two metal hearth strips measuring approximately 28" x 4". These strips are used to provide added protection where the fireplace and the hearth extension meet.

Slide each metal strip 2" under the front edge of the fireplace. The individual pieces must overlap each other by 1" minimum in the middle of the fireplace to provide continuous coverage of the floor. See Figure 9. These metal strips should extend from the front and sides of the fireplace opening by 2".

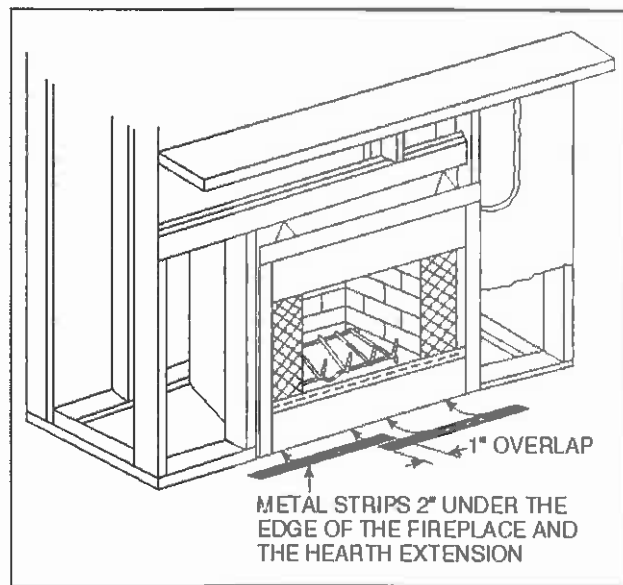


Figure 9 - Positioning the Metal Strips

3. Leveling the Fireplace

Level the fireplace side-to-side and front-to-back. Shim with noncombustible material, such as sheet metal, as necessary. Secure the fireplace (using the nailing flanges located on either side of the fireplace) to the vertical framing.

Important: To ensure proper fit of the glass doors, check the fireplace opening for square. Measure diagonal distances of the opening to make sure they are equal. If they are not equal, continue to shim the fireplace until those diagonals are equal.

4. Assembling Chimney Sections

Attach either a straight chimney section or an offset to the top of the fireplace (depending on your installation requirement). Chimney sections are locked together by pushing downward until the top section meets the stop bead on the lower section.

The inner flue is placed to the inside of the flue section below it. The outer casing is placed outside the outer casing of the chimney section below it. See Figure 10.

WARNING!

Carefully follow the instructions for assembly of the pipe and other parts needed to install this fireplace system. Failure to do so may result in a fire, especially if combustibles are too close to the fireplace or chimney and air spaces are blocked, preventing the free movement of cooling air.

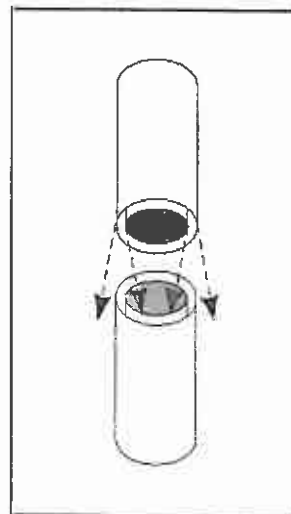


Figure 10
Assembling Chimney Sections

5. Installing Firestop Spacers

Mark and cut out an opening in the ceiling for the firestop spacer being utilized (17" x 17" for an FS538, 17" x 26" for an FS540). Frame the opening with the same dimension lumber used in the ceiling joists.

Install the firestop spacer.

These firestop spacers are designed to provide the minimum 2" air space required around the chimney. In all situations, the firestop spacers are to be nailed to the ceiling joists from the bottom or fireplace side, **EXCEPT** when the space above is an insulated ceiling or attic space. In this situation, the firestop spacer **must** be nailed from the top side to prevent loose insulation from falling into the required 2" air space around the chimney. See Figure 11.

CAUTION:

Firestop spacers must be used whenever the chimney penetrates a ceiling/floor area.

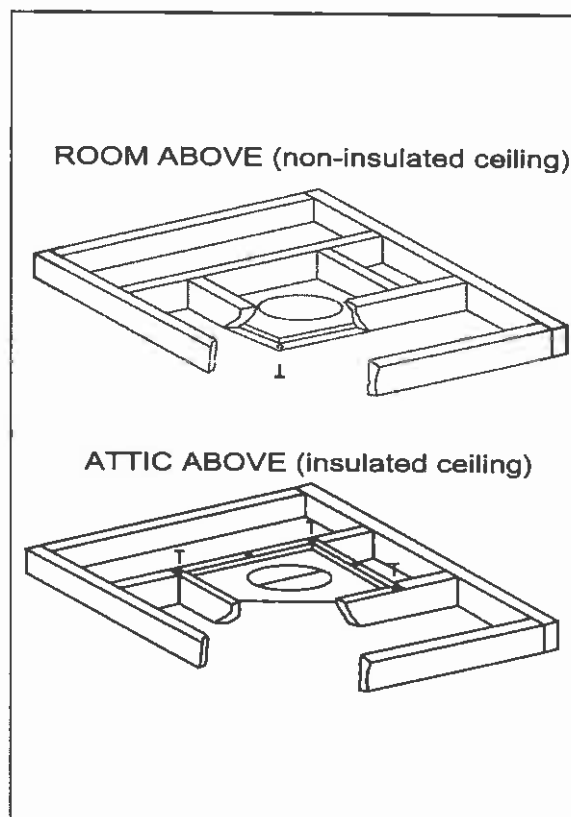


Figure 11
Installing the Firestop Spacer

6. Attic Insulation Shield

An insulation shield should be installed when there is a possibility of insulation coming into contact with the factory built chimney system. The insulation shield is installed by positioning it over the vertical chimney section where it penetrates a firestop spacer. The firestop spacer will support the insulation shield. See Figure 12.

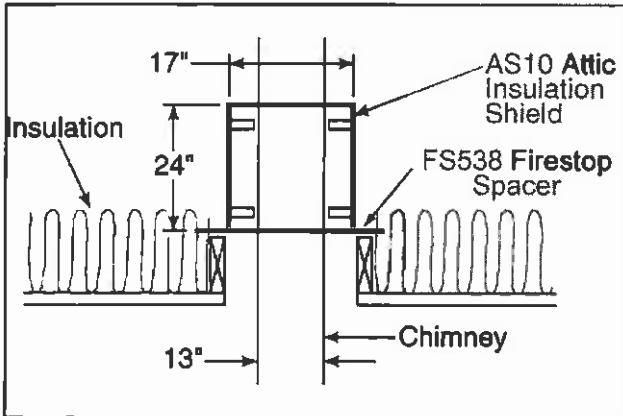


Figure 12 - Installing an Insulation Shield

7. Double-checking the Chimney Assembly

Continue assembling the chimney sections up through the firestop spacers as needed. While doing so, be aware of the height and unsupported chimney length limitations that are given on page 11 under "Chimney Requirements".

Check each section by pulling up slightly from the top to ensure proper engagement before installing the succeeding sections. If they have been connected correctly, they will not disengage when tested.

CAUTION:

Inner flue and outer liner sections cannot be disassembled once locked together. Plan ahead to ensure the proper installation height is achieved with the selected chimney components.

WARNING!

Maintain a minimum of 2" air clearance to all parts of the chimney system at all times! Failure to maintain this 2" air clearance will cause a structure fire.

8. Securing the Chimney System

When offsets and returns are joined to straight pipe sections, they must be locked into position with the screws provided (outer only), using the predrilled holes. To prevent gravity from pulling the chimney sections apart, the returns and the chimney stabilizers have straps for securing these parts to joists or rafters. See Figure 13.

NOTE: You must provide support for the pipe during construction and check to be sure inadvertent loading has not dislodged the chimney section from the fireplace or at any chimney joint.

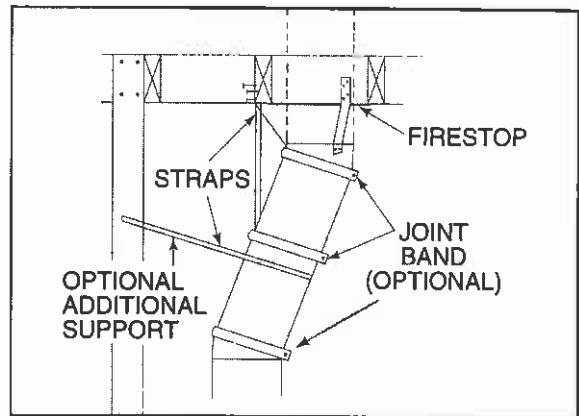


Figure 13 - Offset/Return with Stabilizer

WARNING!

When chimney sections exceeding six feet in length are installed between an offset and return, structural support must be provided to reduce off-center loading and prevent chimney sections from separating at the chimney joints.

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9. Marking the Exit Point of the Roof

Locate the point where the chimney will exit the roof by plumbing down to the center of the chimney. Drive a nail up through the roof to mark the center. See Figure 14.

10. Cutting out the Hole in the Roof

Measure to either side of the nail and mark the 17" x 17" or 17" x 26" opening required. This is measured on the horizontal; actual length may be larger depending on the pitch of the roof. Cut out and frame the opening. See Chapter 25 of the *Uniform Building Code for Roof Framing Details*.

Be sure to maintain a 2" minimum air space between the chimney section and the roof.

11. Assembling the Chimney Sections Through the Roof

Continue to add chimney sections through the roof opening, maintaining at least a 2" air space.

12. Installing the Roof Flashing

If a roof flashing is to be used, install the roof flashing appropriate to the roof pitch and install a round termination cap following the instructions shipped with the cap.

For chase installations you can use a round termination cap (TR11), a round telescoping termination cap (TR11T) or a square termination cap (ST1175). A chase installation must use a chase top. Chase tops are available from your Heatilator distributor. See page 20 for building a chase.

13. Installing the Outside Air Kit

The outside air kit is supplied as a standard feature with this fireplace and its use is highly recommended to minimize the effects of negative pressure within the structure. It is recommended to utilize the shortest duct run to optimize the performance of the outside air kit. The outside air kit inlet thimble should be positioned at least four feet above the ground level, in a manner that will not allow snow, leaves, etc. to block the inlet.

The outside air kit is installed on the left hand side of the fireplace. Remove the cover plate from the side of the fireplace assembly where the air kit is to be installed. See Figure 15 for handle location/operation.

14. Installing the Chimney Air Kit

When installing the chimney air kit, follow the instructions provided with this accessory.

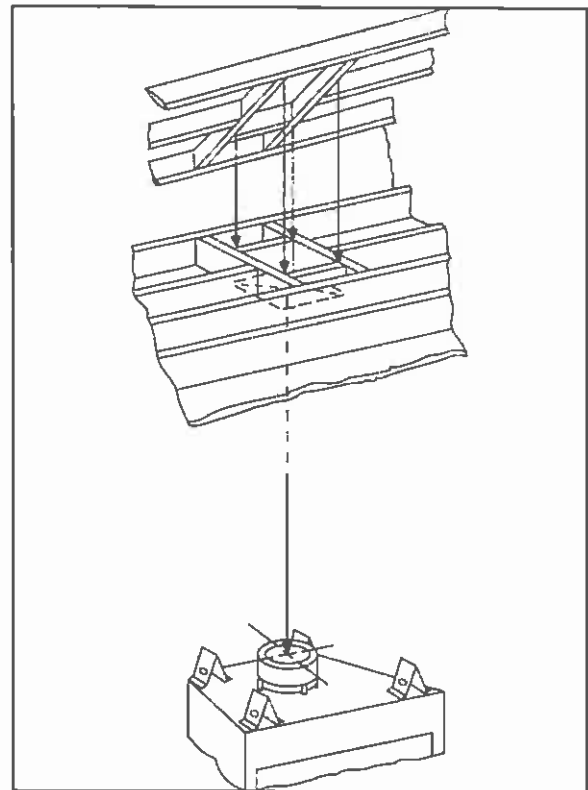


Figure 14 - Ceiling/Attic Construction

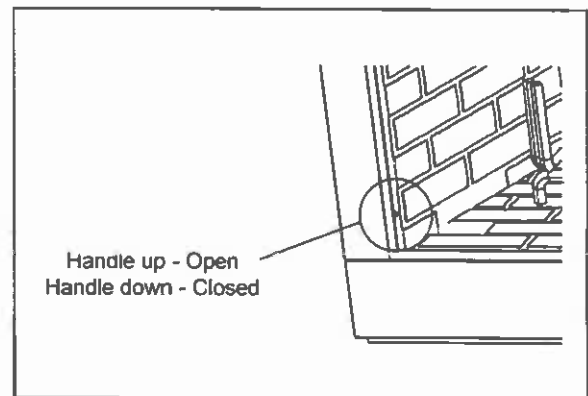


Figure 15 - Air Kit Handle Location

15. Completion of the Enclosure

Complete the fireplace enclosure, allowing space for outside air ducts and gas piping if desired. Electrical wiring should not come in contact with the fireplace. **A minimum clearance of 1½" must be maintained between the fireplace sides and the enclosure as well as the fireplace back and the enclosure.** See pages 9 and 10 for framing details.

NOTE: Use only a noncombustible material to finish the face of the fireplace below the level of the front standoffs. A noncombustible material such as USG MICORE CV230 Mineral Fiber Board, or USG DUROCK Cement Board is recommended for this purpose.

CAUTION:

When using a gas log set, the fireplace damper must be set in the fully open position. This ensures proper venting of combustion products.

16. Gas Log/Lighter Provisions

Knockouts are provided on both sides of the fireplace to allow for connection of a certified gas log lighter or a decorative gas appliance with a maximum input of 100,000 BTU/hour, incorporating an automatic gas shut-off device and complying with the **Standard for Decorative Gas Appliances for Installation in Vented Fireplaces, ANSI Z21.60**. The decorative gas appliance should be installed in accordance with the **National Fuel Gas Code, ANSI Z223.1-1980**. The side refractories are designed to allow ½" iron pipe to pass through. Use a noncombustible sealant to seal any opening between the gas pipe and refractory on the inside. Repack the insulation removed to seal around the gas pipe where it exits the side of the fireplace. A minimum 1½" air clearance must be provided around the ½" iron pipe for a minimum of 4 inches beyond the fireplace. See Figure 16.

WARNING!

This fireplace was not tested by the fireplace manufacturer for use with an unvented gas log heater. To reduce risk of injury, do not install an unvented gas log heater in this fireplace unless it has been specifically tested and listed by Underwriter's Laboratories Inc. for use in this specific model fireplace. Unless the unvented gas log heater is tested and listed for use in this factory-built fireplace, a fire hazard may be created that can result in a structure fire.

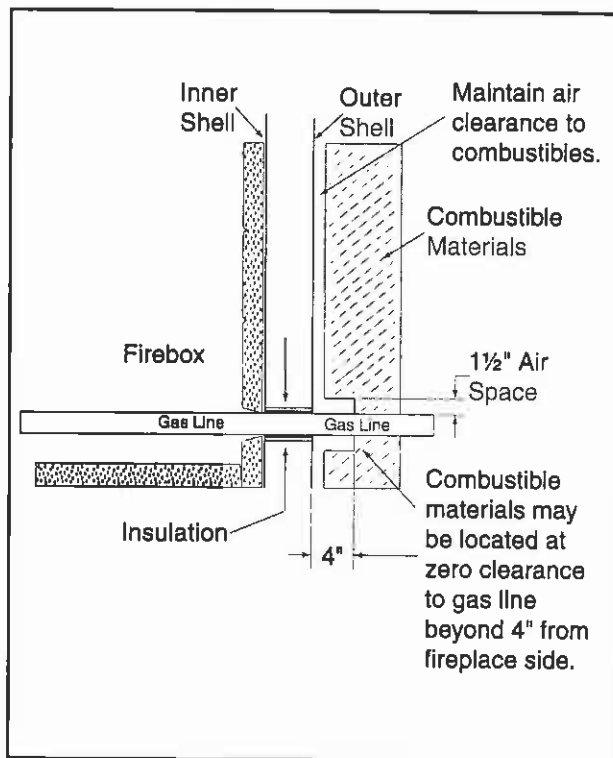


Figure 16 - Air Clearance Around Gas Line

CLEARANCES!

A minimum 1½" air clearance must be maintained at the back and sides of the fireplace assembly except at the nailing flange where the clearance is ½".

Chimney sections at any level require a 2" minimum air space clearance between the framing and chimney section.

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17. Hearth Extension

A hearth extension must be installed with all fireplaces to protect the combustible floor in front of the fireplace from both radiant heat and sparks.

The construction of, and materials used for a hearth extension are shown in Figures 17-19. A hearth extension of this construction may be covered with any noncombustible decorative material and may have a maximum thickness as per the illustration. Seal gaps between the hearth extension and the front of the fireplace with a bead of noncombustible sealant.

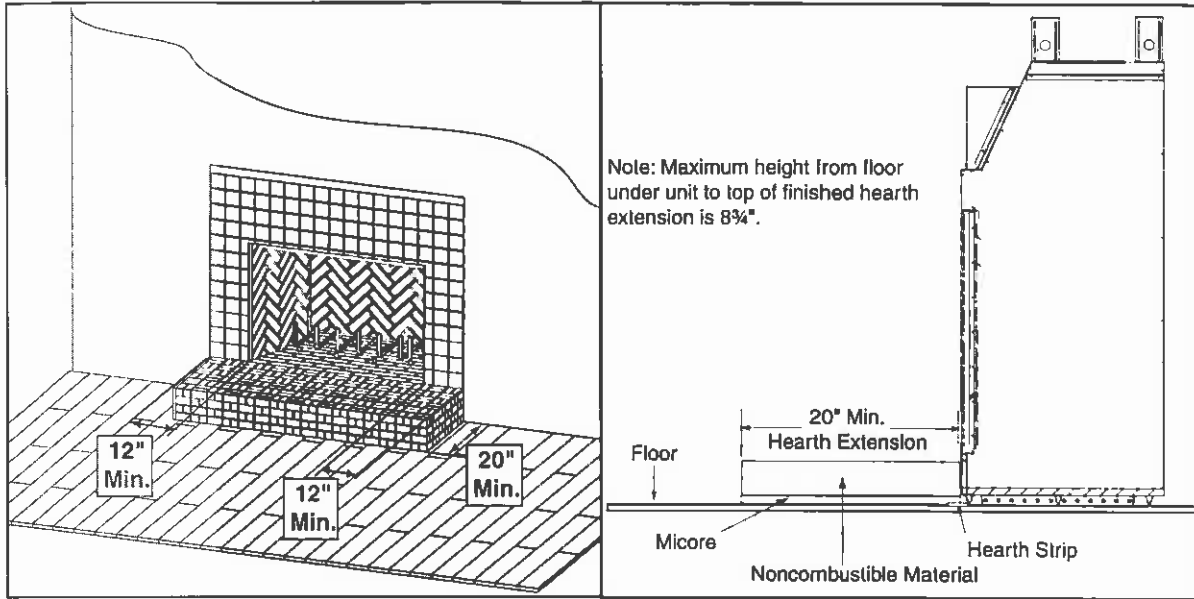


Figure 17 - Raised Hearth Extension

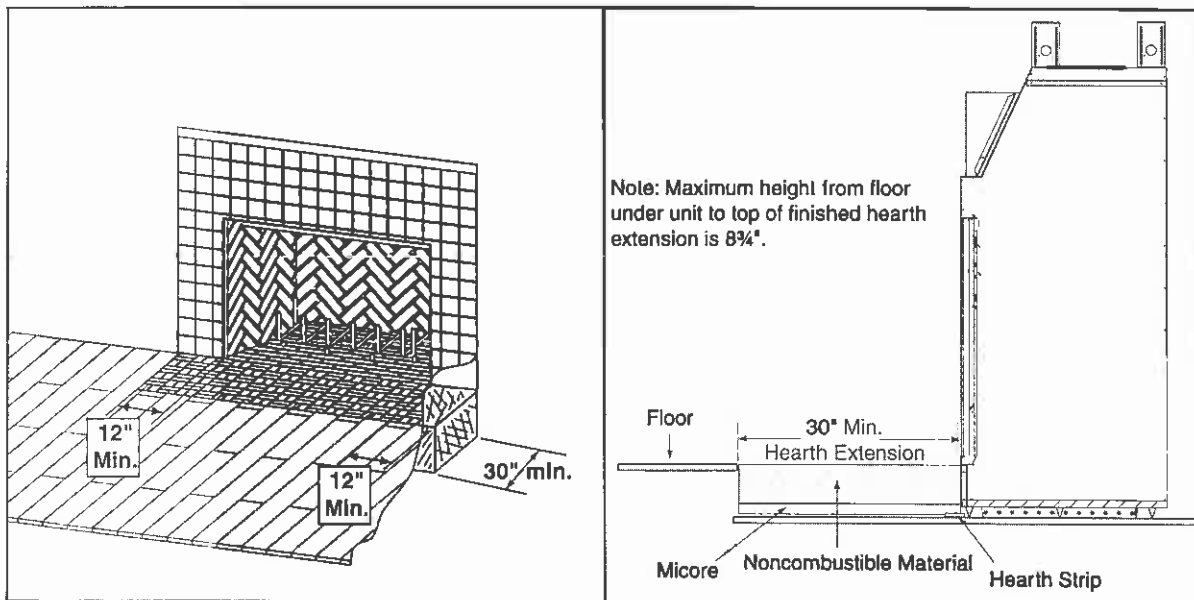


Figure 18 - Flush Hearth Extension

WARNING!

Hearth extensions are to be installed only as illustrated to prevent high temperatures from occurring on concealed combustible materials. Hearth sealing strips prevent burning or hot particles from inadvertently falling directly on combustible surfaces in the event the building should settle and disturb the original construction.