

heatilator®

The first name in fireplaces



LISTED

Hearth & Home Technologies-Mt. Pleasant
1915 W. Saunders Street
Mt. Pleasant, Iowa 52641
Division, HON INDUSTRIES
www.heatilator.com

INSTALLATION & OPERATING INSTRUCTIONS

ICON

I60

WOODBURNING FIREPLACE



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.

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CAUTION:

Do not expose the fireplace to the elements (i.e. rain, etc.) and keep the fireplace dry at all times. Wet insulation will produce an odor when the fireplace is used.

Safety Precautions

1. Please read these installation instructions completely before beginning installation procedures. Failure to follow them could cause a fireplace malfunction resulting in serious injury and/or property damage.
2. Always check your local building codes prior to installation. The fireplace installation must comply with all local, regional, state and national codes and regulations.
3. An adequate supply of replacement combustion air from outside the house must be available to the fire for the fireplace to operate properly. To achieve this, the use of the optional outside air kit is highly recommended.
In the event the home is unusually tightly sealed, the optional combustion air kit may not provide all the air required to support combustion. Hearth & Home Technologies Inc. is not responsible for any smoking or related problems that may result from the lack of adequate combustion air. It is the responsibility of the builder/contractor to ensure that adequate combustion air has been provided for the fireplace.
4. This fireplace must be installed with the Hearth & Home Technologies Inc. (HHT) SL Series Chimney System.
The chimney system must always terminate outside the building. Be sure to follow all chimney specifications given in these installation instructions.
5. **NEVER** leave children unattended when there is a fire burning in the fireplace.
6. This woodburning fireplace is built for solid fuel only. **NEVER** use gasoline, gasoline type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids in this fireplace. Keep any flammable liquids a safe distance from the fireplace.
7. **DO NOT** use chimney cleaners or flame colorants in your fireplace.
8. The flue damper must be open at all times when the fireplace is in use.
9. While servicing this fireplace, always shut off any electricity or gas to the fireplace. This will prevent possible electric shock or burns. Also, make sure the fireplace is completely cooled before servicing.
10. To ensure a safe fireplace system and to prevent the build up of soot and creosote, inspect and clean the fireplace and chimney prior to use and periodically during the burning season. See page 26 for cleaning instructions.

DESIGN AND INSTALLATION CONSIDERATIONS

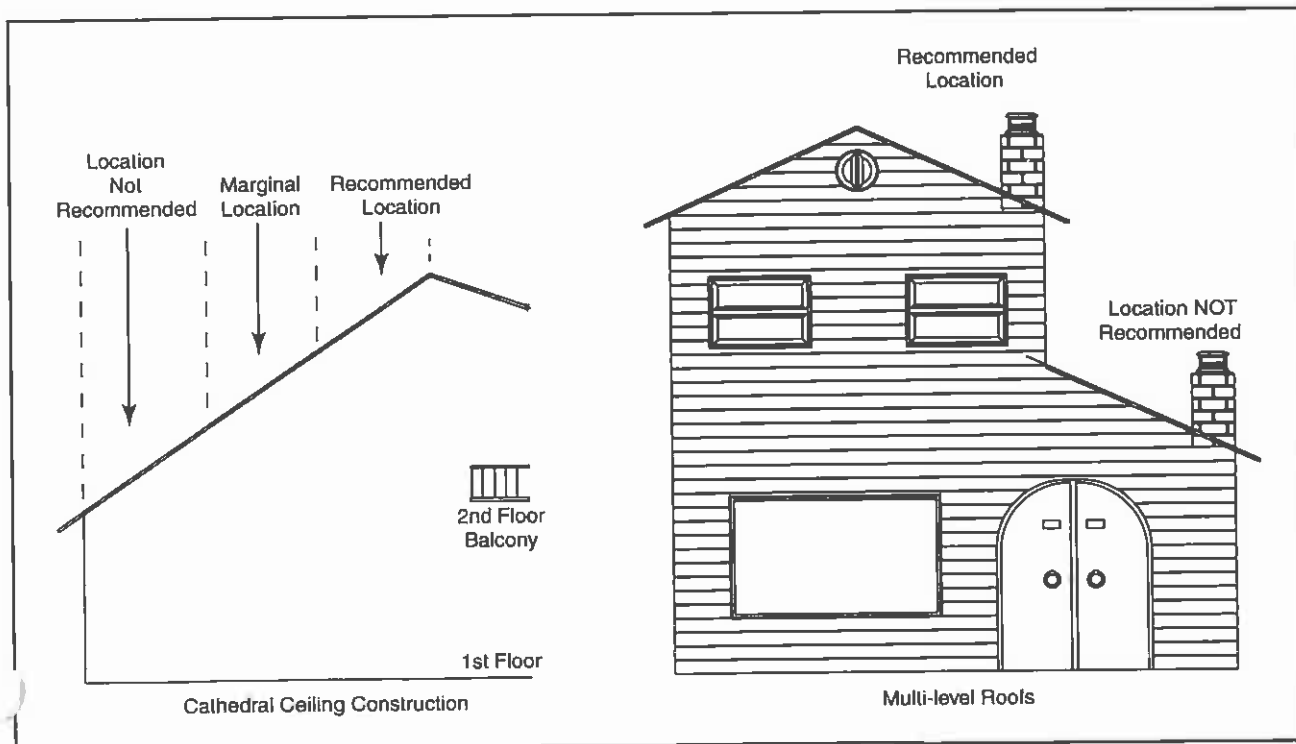
When selecting a location for your woodburning fireplace, it is important to evaluate a number of considerations. Modern construction techniques can create conditions that may not allow your chimney to draft properly. This may result in smoke spillage from your fireplace, as well as cause other combustion appliances to operate incorrectly.

Tightly sealed construction is important for energy efficiency. Unfortunately, a great deal of effort has been directed to tightening up sidewall construction, while considerably less attention has been paid to tightening upper portions of the warm air envelope (insulated ceilings). This has increased the "Stack Effect", a condition that increases the negative pressure generated by the structure. This negative pressure will directly affect the drafting performance of a fireplace chimney. To minimize the negative pressure generated by stack effect, make certain that all ductwork installed in the attic spaces is sealed airtight. Minimize the number of recessed light fixtures installed in the insulated ceiling, and use sealed recessed light fixtures. Finally, make certain the whole house fans and attic access panels are tightly sealed. These are important design considerations that must be observed during the design and construction stage of the home.

If you desire to put a fireplace in your basement, we recommend that you consider a direct vent gas fireplace. Basements always have a significant negative air pressure that causes the fireplace system to be more susceptible to smoke spillage and cold flue back drafting. Since direct vent gas fireplaces are sealed, they are not affected by the negative pressure that exists in basements.

Finally, woodburning fireplaces perform best when their chimney (roof termination) is located on the upper half of the roof, especially when cathedral ceilings are present. Chimneys that are located on the lower half of the roof realize what is known as "lazy flue" and will not draft as well as a chimney that is located in the upper portion of the roof. The reason for this is that the stack effect generated by the overall height of the living spaces inside the house will exceed the draft generated by the chimney system. If you desire to place a woodburning fireplace in a location where the termination cap would be located on the lower half of a roof, such as on an outside wall at the base of a cathedral ceiling, we recommend that you consider using a direct vent gas fireplace. This will assure the homeowner a fireplace that operates correctly.

These properties do not affect just your woodburning factory built fireplace. They can cause any woodburning fireplace as well as any conventionally vented (B-vent) gas appliance to operate improperly. Careful planning at this stage of your project will ensure satisfaction with the operation of your fireplace once it is completed.



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A. LISTINGS AND CODE APPROVALS

This fireplace system has been tested and listed in accordance with UL 127 standards, and has been listed by Underwriters Laboratories Inc. for installation and operation in the United States as described in this manual.

This fireplace has been tested and listed for use with the optional components listed on page 5. These optional components may be purchased separately and installed at a later date. However, installation of an outside air kit will require significant reconstruction, and should be installed at the time of the initial fireplace installation.

Check with your local building code agency prior to installing this fireplace to ensure compliance with local codes, including the need for permits and follow-up inspections. If you need assistance during installation, please contact your local dealer or the Heatilator Technical Services Department, Hearth & Home Technologies Inc., 1915 W. Saunders St., Mt. Pleasant, Iowa 52641 (1-800-843-2848).

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WARNING!

This fireplace and its components are designed to be installed and operated as a system. Any alteration to or substitution for items in this system, unless allowed by these installation instructions, will void the Underwriters Laboratories listing and may void the product warranty. It may also create a hazardous installation. Read through these instructions thoroughly before starting your installation and follow them carefully throughout your project.

B. DESCRIPTION OF THE FIREPLACE SYSTEM

1. The Heatilator fireplace system consists of the following:
 - a. Fireplace/Integral Grate/Outside Combustion Air System
 - b. Refractory
 - c. Chimney Termination Cap
 - d. Chimney System
 - e. Hearth Extension
2. Optional Components Include:
 - a. Glass Doors
 - b. Chimney Air Kit

Note: Illustrations used throughout these instructions reflect "typical installations" and are for design purposes only. Actual installation may vary slightly due to individual design preferences. However, minimum and maximum clearances must be maintained at all times.

The illustrations and diagrams used throughout these installations instructions are not drawn to scale.

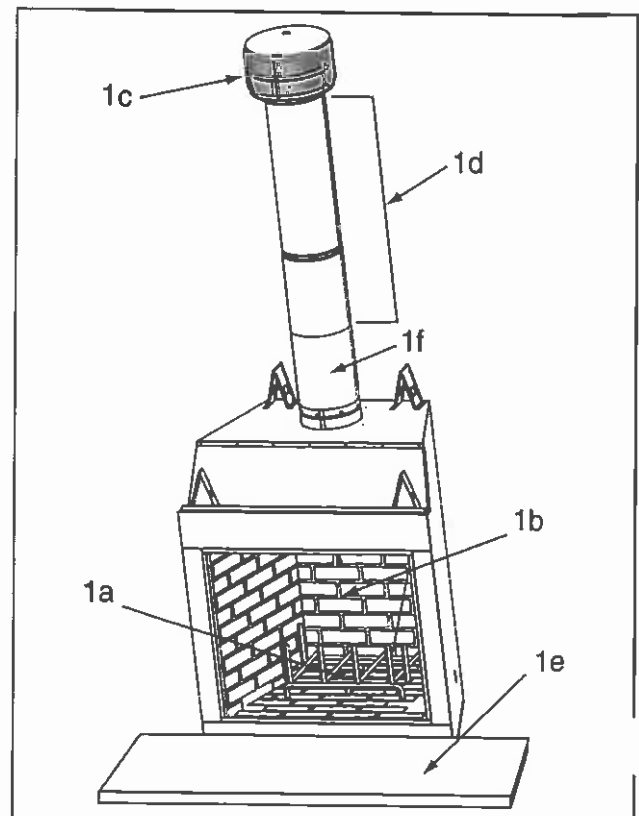
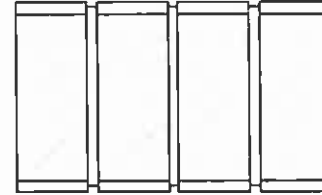


Figure 1 - Typical Fireplace System

C. SYSTEM COMPONENTS

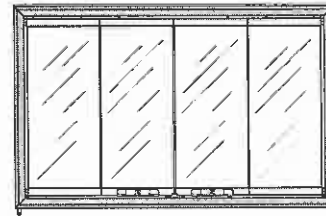
1. Fireplace Components

Catalog #	Description:
I60T	Fireplace with Integral Grate, Outside Air Kit, Hearth Protection Strips and Traditional Brick pattern Refractory
I60H	Fireplace with Integral Grate, Outside Air Kit, Hearth Protection Strips and Herringbone pattern Refractory
AED60	Glass Doors - 75th Anniversary Edition Bi-fold Doors
DM6036	Glass Doors - Bi-fold, Clear-View - Black
DM6036B	Glass Doors - Bi-fold, Clear-View - Polished Brass
DM6036S	Glass Doors - Bi-fold, Clear-View - Stainless Steel
DP6036	Glass Doors - Tinted - Black
DP6036B	Glass Doors - Tinted - Polished Brass
DP6036S	Glass Doors - Tinted - Stainless Steel
AES60	Surround, Red Oak, Mission-Style
HX4	Hearth Extension
GR30	Integral Grate (included with Fireplace)



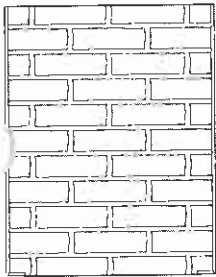
Bi-Fold Glass Doors

DM6036
DM6036B
DM6036S



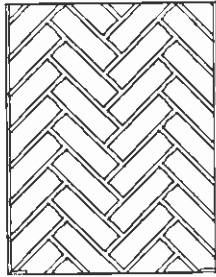
Perception Glass Doors

DP6036
DP6036B
DP6036S



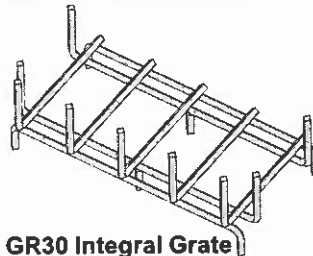
TB

Refractory
Traditional Brick
Pattern

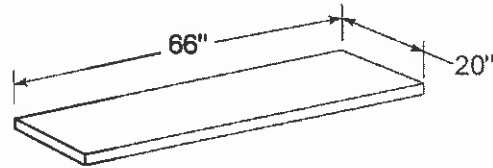


HB

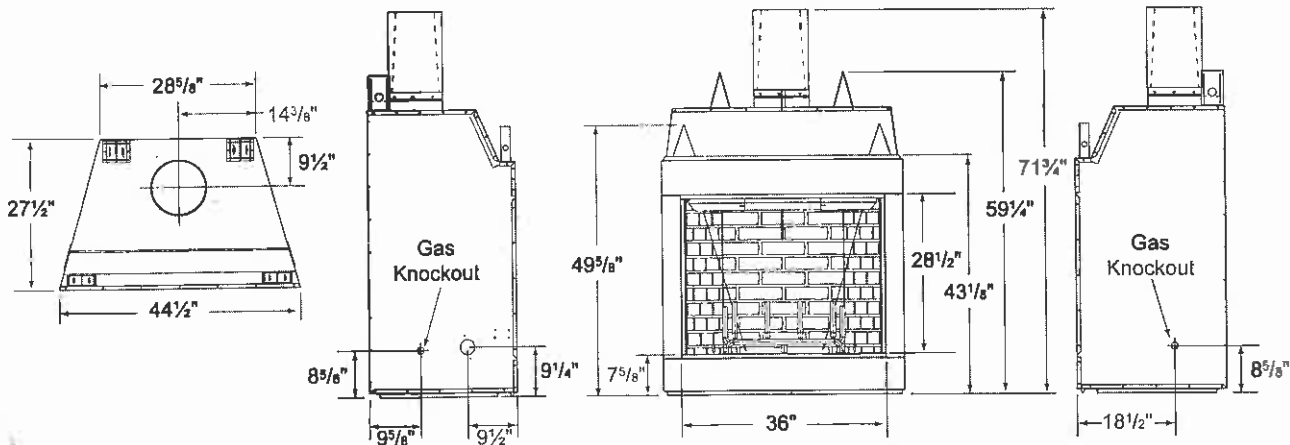
Refractory
Herringbone Pattern



GR30 Integral Grate



HX4 - Hearth Extension

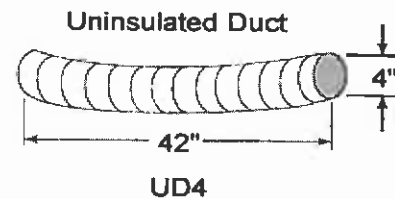
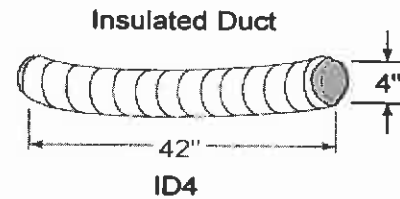


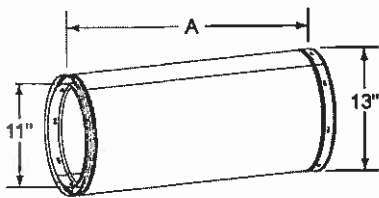
Fireplace Dimensions

2. Chimney Components

The following pictures show only those chimney components which may be safely used with this fireplace.

Catalog #	Description:
AK22	Outside Air Kit (Included with Fireplace)
CAK5A	Chimney Air Kit
ID4	Insulated Duct/Outside Air
UD4	Uninsulated Duct/Outside Air
SL1106	Chimney Section - 6" long
SL1112	Chimney Section - 12" long
SL1118	Chimney Section - 18" long
SL1136	Chimney Section - 36" long
SL1148	Chimney Section - 48" long
SL11	Chimney Stabilizer
SL1130	Chimney Offset/Return - 30°
FS538	Firestop - Straight
FS540	Firestop - 30°
AS10	Straight Attic Insulation Shield, 24"
JB577	Chimney Joint Band
CB576	Chimney Bracket
RF570	Roof Flashing - Flat to 6/12 Pitch
RF571	Roof Flashing - 6/12 to 12/12 Pitch
TR11	Round Termination Cap
TR11T	Round Telescoping Termination Cap
ST1175	Square Termination Cap
CT56	Chase Top
LDS33	Decorative Shroud - 3' x 3'
LDS46	Decorative Shroud - 4' x 6'

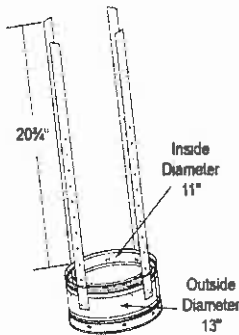




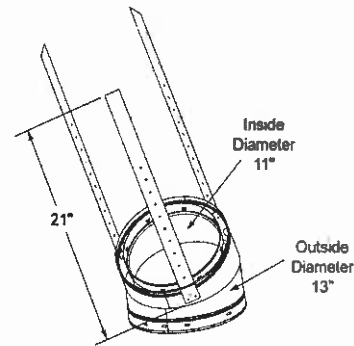
Chimney Sections

Catalog #	A	B
SL1106	6"	4 $\frac{3}{4}$ "
SL1112	12"	10 $\frac{3}{4}$ "
SL1118	18"	16 $\frac{3}{4}$ "
SL1136	36"	34 $\frac{3}{4}$ "
SL1148	48"	46 $\frac{3}{4}$ "

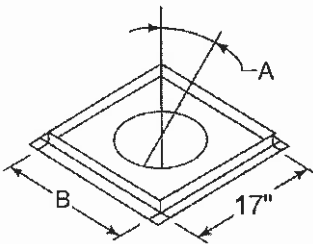
A = Actual length
B = Effective length (length of chimney part after it has been snapped to another)



SL11 - Chimney Stabilizer

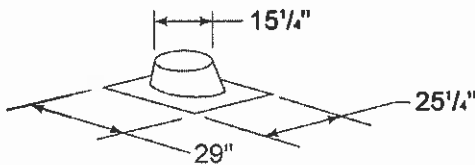


SL1130 - Offset/Return

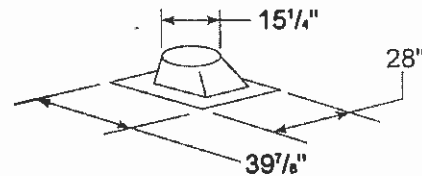


Firestop Spacer

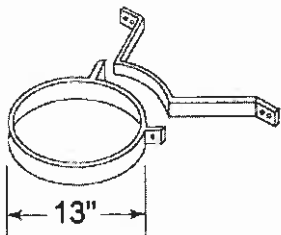
Catalog #	A	B
FS538	0°	17"
FS540	30°	26"



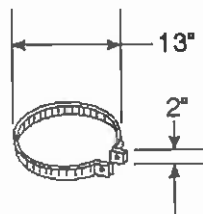
**RF570 - Roof Flashing
Flat to 6/12 Pitch**



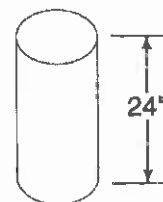
**RF571 - Roof Flashing
6/12 to 12/12 Pitch**



**CB576
Chimney Bracket**



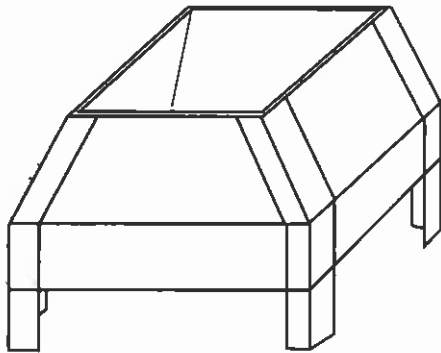
**JB577
Joint Band**



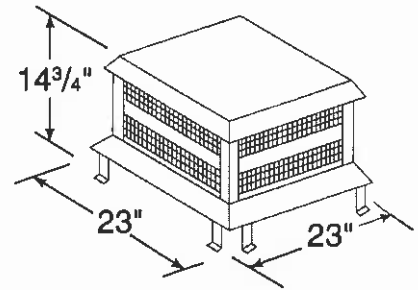
**AS10
Straight Attic
Insulation Shield**

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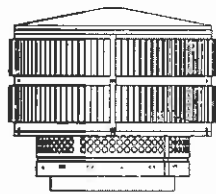
The first name in fireplaces



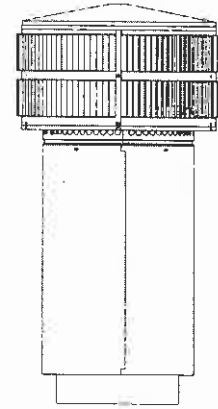
**LDS33 (3' x 3')
LDS46 (4' x 6')
Decorative Shroud**



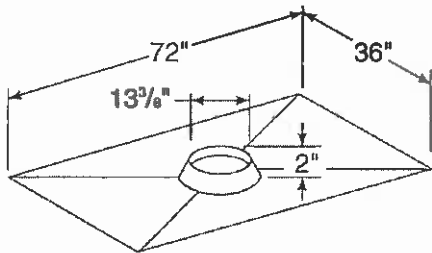
**ST1175
Square
Termination Cap**



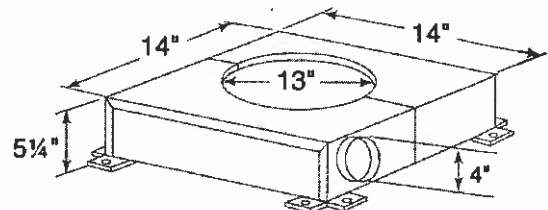
**TR11
Round
Termination Cap**



**TR11T
Round Telescoping
Termination Cap**



**CT56
Chase Top**



**CAK5A
Chimney Air Kit**

D. PRE-INSTALLATION PREPARATION

1. Fireplace Locations and Space Requirements

Several options are available to you when choosing a location for your fireplace. This fireplace may be used as a room divider, installed along a wall, across a corner or used in an exterior chase. See Figure 2.

Locating the fireplace in a basement, near frequently opened doors, central heat outlets or returns, or other locations of considerable air movement can affect the performance and cause intermittent smoke spillage from the front of the fireplace. Consideration should be given to these factors before deciding on a location.

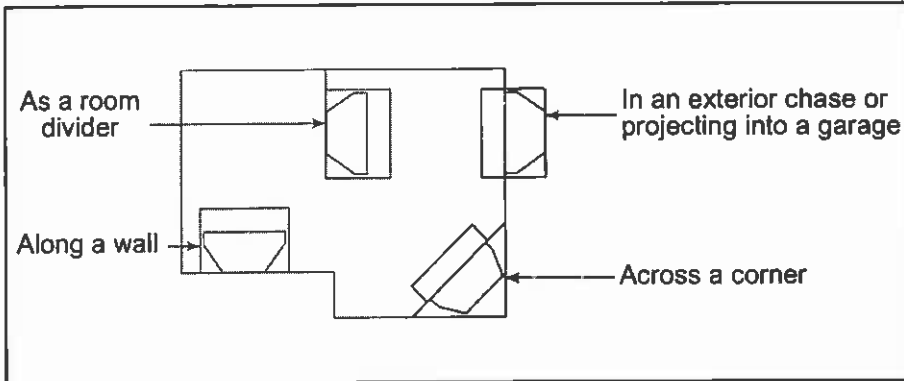


Figure 2 - Fireplace Locations

CLEARANCES!

A minimum 1" 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.

Figures 3 and 4 show two typical installations assuming an outside air kit is being used. Therefore, an allowance must be made for 90° bends. Less space is required when ducting goes directly outside without forming elbows.

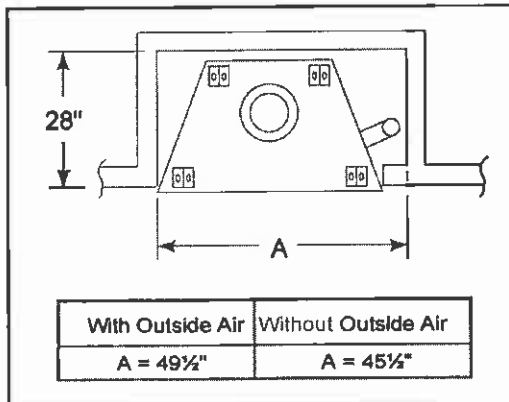


Figure 3
Installation Along a Wall or an Exterior Chase

These are rough framing dimensions only.

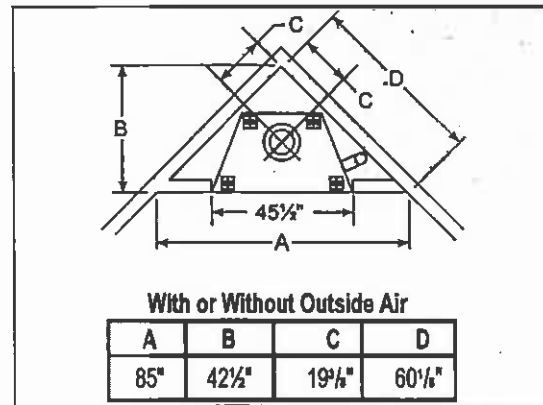


Figure 4
Corner Installation

WARNING!

Do not draw outside air from garage spaces. Exhaust products of gasoline engines are hazardous. Do not install outside air ducts such that the air may be drawn from attic spaces, basements or above the roofing where other heating appliances or fans and chimneys exhaust or utilize air. These precautions will reduce the possibility of fireplace smoking or air flow reversal.

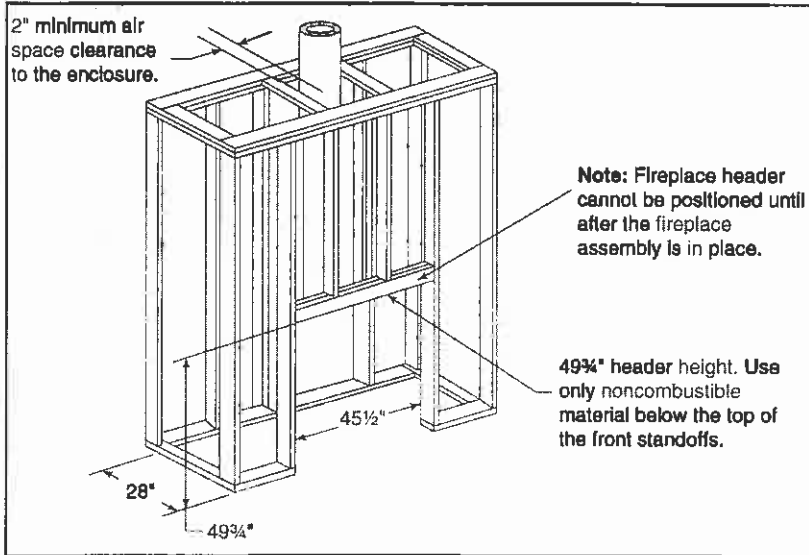
WARNING!

To prevent contact with sagging or loose insulation, the fireplace must not be installed against vapor barriers or exposed insulation. Localized overheating could occur and a fire could result.

2. Framing the Fireplace

The I60 fireplace will fit a framed opening of 45½" wide x 49¾" tall. The finished cavity depth must be no less than 28".

Figure 5 shows a typical framing (using 2 x 4 lumber) of the fireplace, assuming combustible materials are used. All required clearances to combustibles around the fireplace must be adhered to. Any framing across the top of the fireplace must be above the top of the standoffs. Chimney sections at any level require a 2" minimum air space clearance between the framing and chimney section.



CLEARANCES!
A minimum 1" 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.

Figure 5 - Framing the Fireplace

WARNING!
Do not apply combustible finishing materials over any part of the black face of this fireplace or a structure fire may result. The black metal fireplace front may only be covered with noncombustible materials such as ceramic tile, brick or stone. Do not cover or block any cooling air slots. Do not cover any portion of the opening to the fireplace that would prevent the installation of an authorized glass door.

Note: The frame of the AED door overlaps the front of the fireplace beyond the opening by ¾" on each side and 1½" above the top. This should be allowed for when applying facing to the front of the fireplace.

3. Sidewalls/Surrounds

Adjacent combustible side walls must be located a minimum of 24" from the fireplace opening. See Figure 6. If you are using a decorative surround constructed of combustible material, it must be located within the shaded area defined in Figure 6. Short stub walls are also acceptable if they are contained within the shaded area.

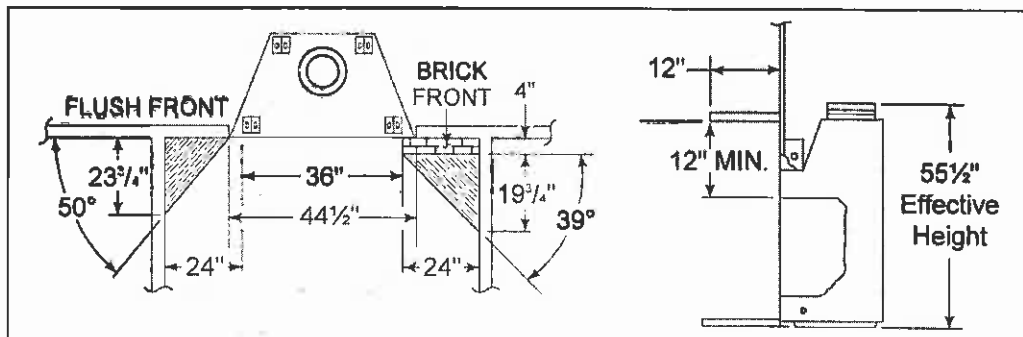


Figure 6 - Sidewalls and Surrounds

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 / ₂ "	44 ⁵ / ₈ "	-	-	-	1	-
23 ⁵ / ₈ "	48 ³ / ₄ "	1	-	-	1	-
27 ¹ / ₄ "	55 ³ / ₄ "	-	-	-	-	1
29 ⁵ / ₈ "	59"	1	-	-	-	1
32 ⁵ / ₈ "	64 ¹ / ₂ "	-	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.

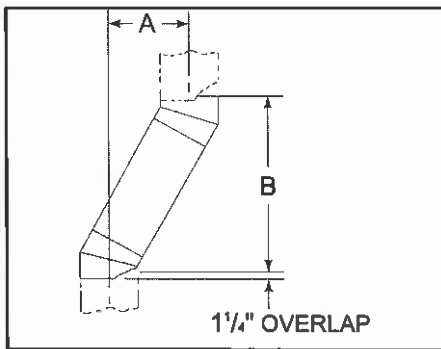


Figure 7 - Chimney Offset/Return

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 1/4". Effective length is built into this table.

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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.

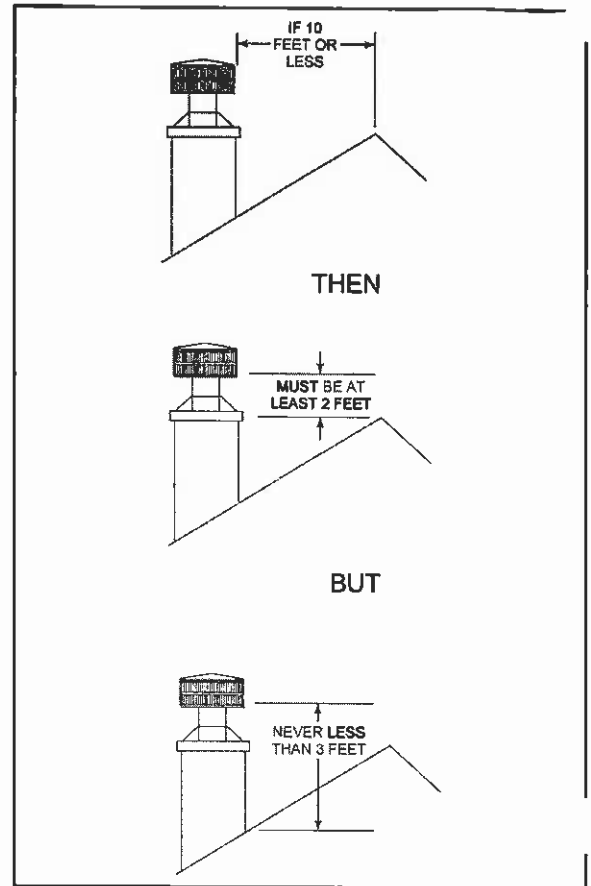


Figure 8 - Chimney Height

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".

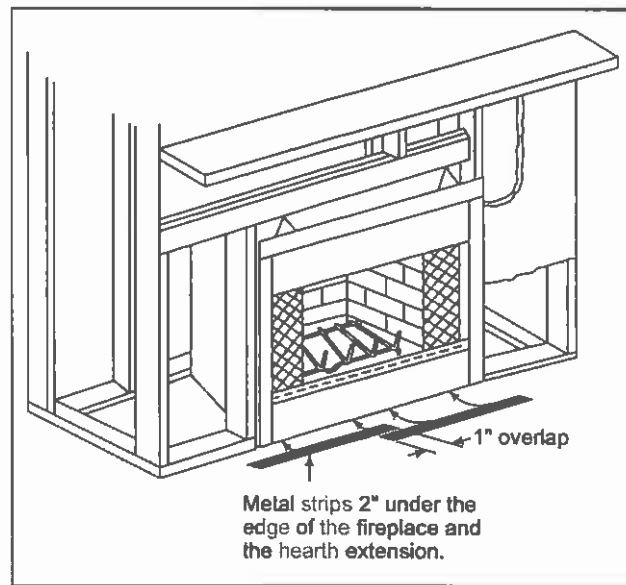


Figure 9 - Positioning the Metal Strips

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.

The first name in fireplaces

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.

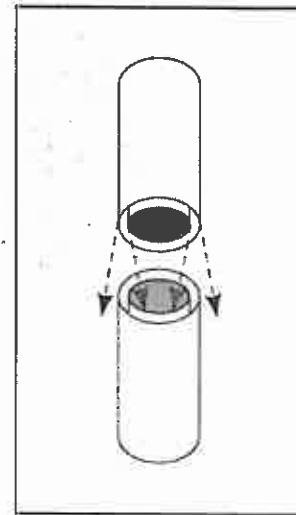


Figure 10
Assembling Chimney Sections

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.

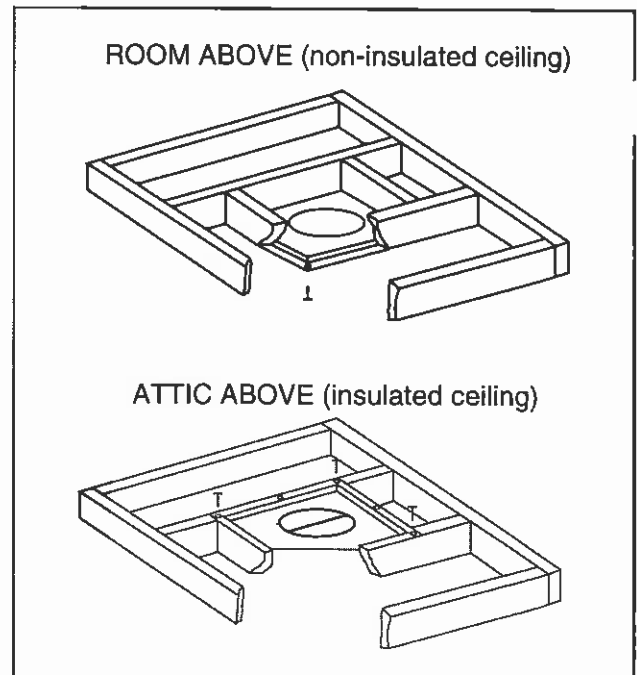


Figure 11
Installing the Firestop Spacer

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.

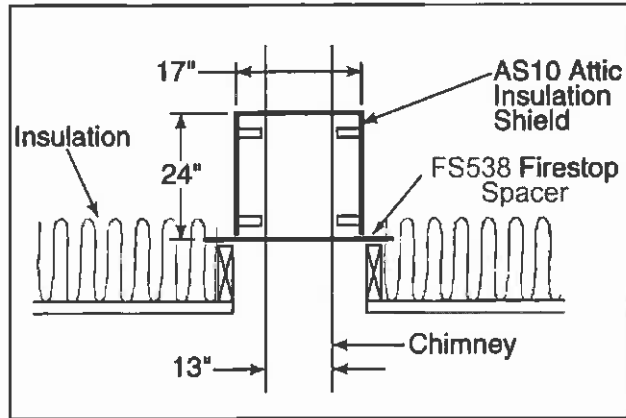


Figure 12 - Installing an Insulation Shield

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.

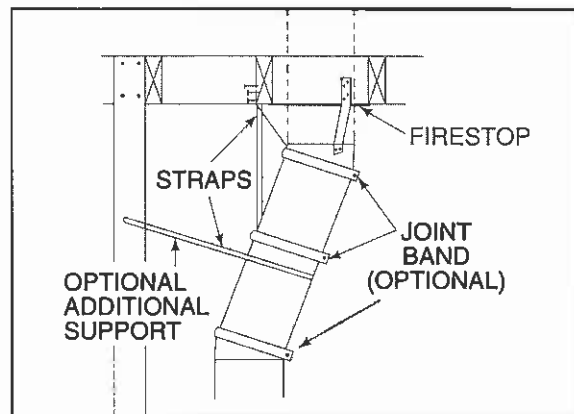


Figure 13 - Offset/Return with Stabilizer

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.

The first name in fireplaces

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.

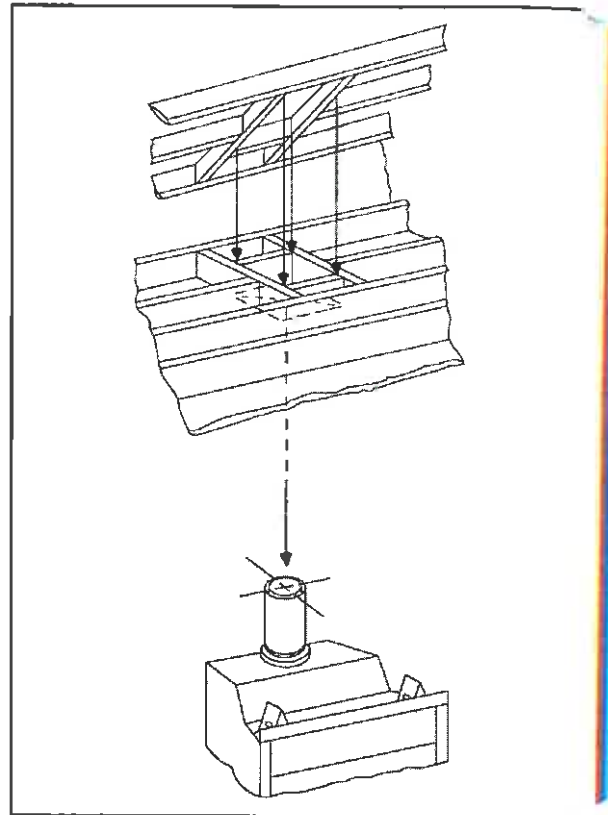


Figure 14 - Ceiling/Attic Construction

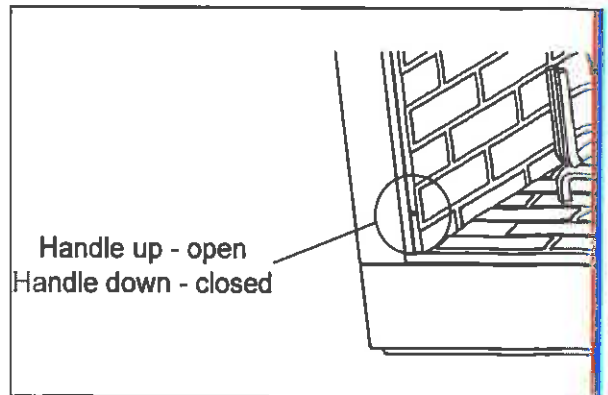


Figure 15 - Air Kit Handle Location

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".

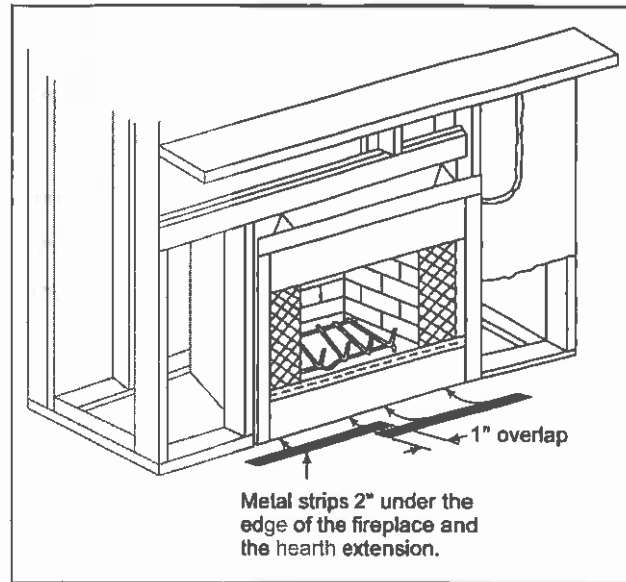


Figure 9 - Positioning the Metal Strips

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.

The first name in fireplaces

4. Assembling Chimney Sections

Attach either a straight chimney section or an offset to the top of the fire place (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.

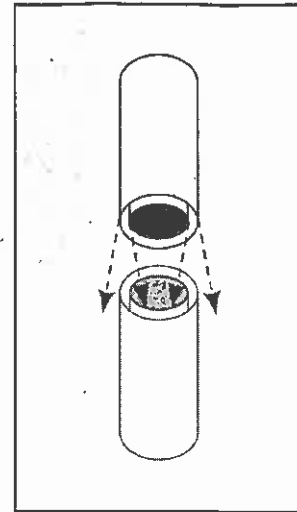


Figure 10
Assembling Chimney Sections

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.

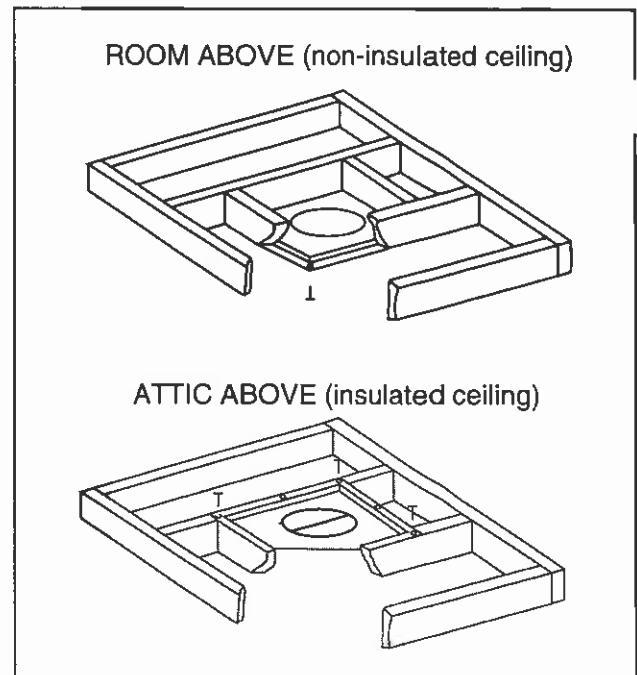


Figure 11
Installing the Firestop Spacer

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.

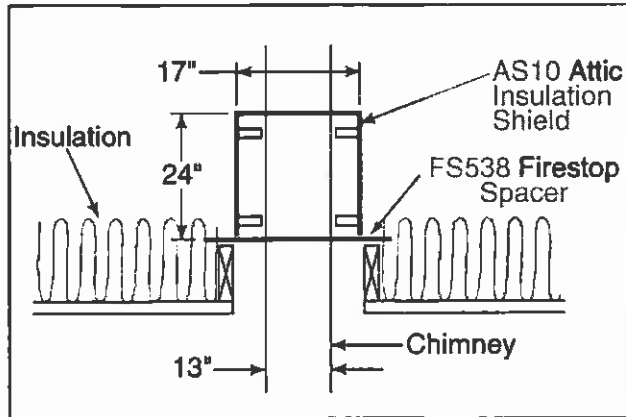


Figure 12 - Installing an Insulation Shield

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.

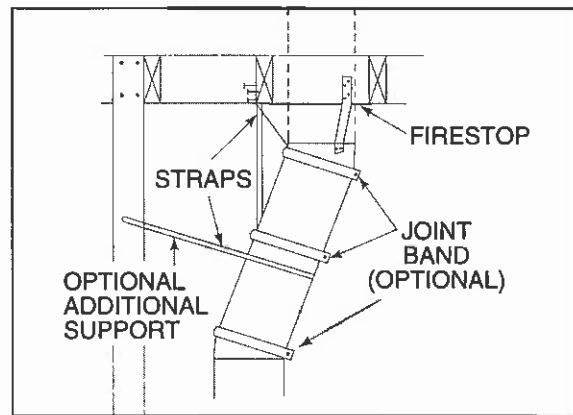


Figure 13 - Offset/Return with Stabilizer

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.

The first name in fireplaces

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.

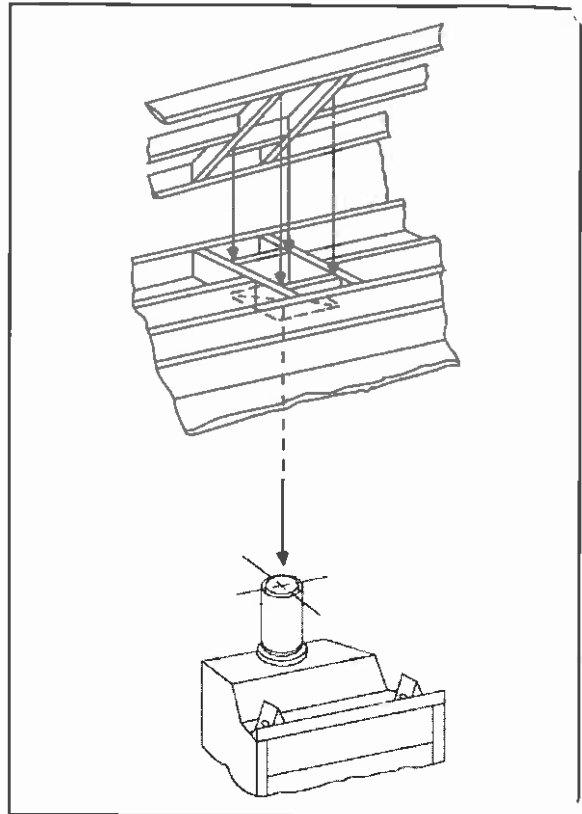


Figure 14 - Ceiling/Attic Construction

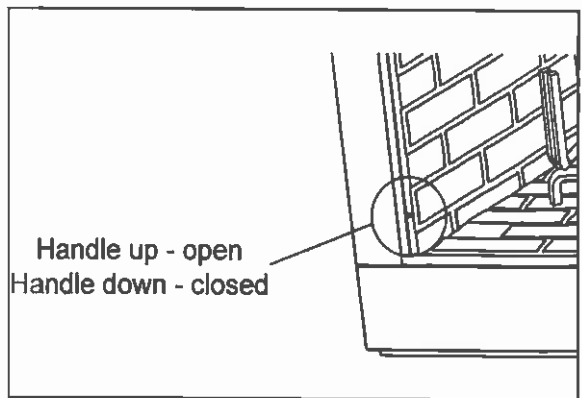


Figure 15 - Air Kit Handle Location

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 1" 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.

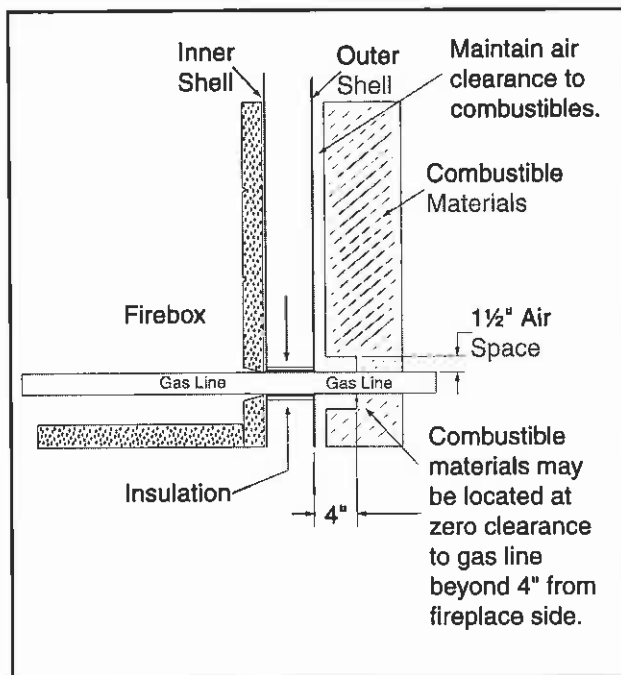


Figure 16 - Air Clearance Around Gas Line

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 shutoff 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 1/2" 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 1 1/2" air clearance must be provided around the 1/2" iron pipe for a minimum of 4 inches beyond the fireplace. See Figure 16.

CLEARANCES!

A minimum 1" air clearance must be maintained at the back and sides of the fireplace assembly except at the nailing flange where the clearance is 1/2".
Chimney sections at any level require a 2" minimum air space clearance between the framing and chimney section.

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.

The first name in fireplaces

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.

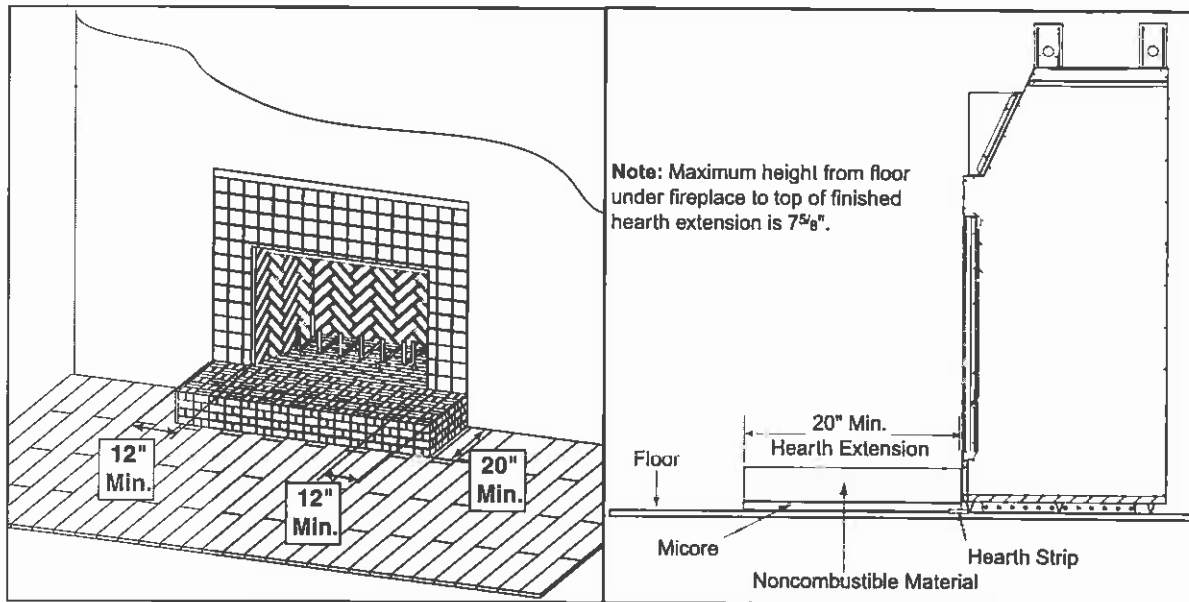


Figure 17 - Raised Hearth Extension

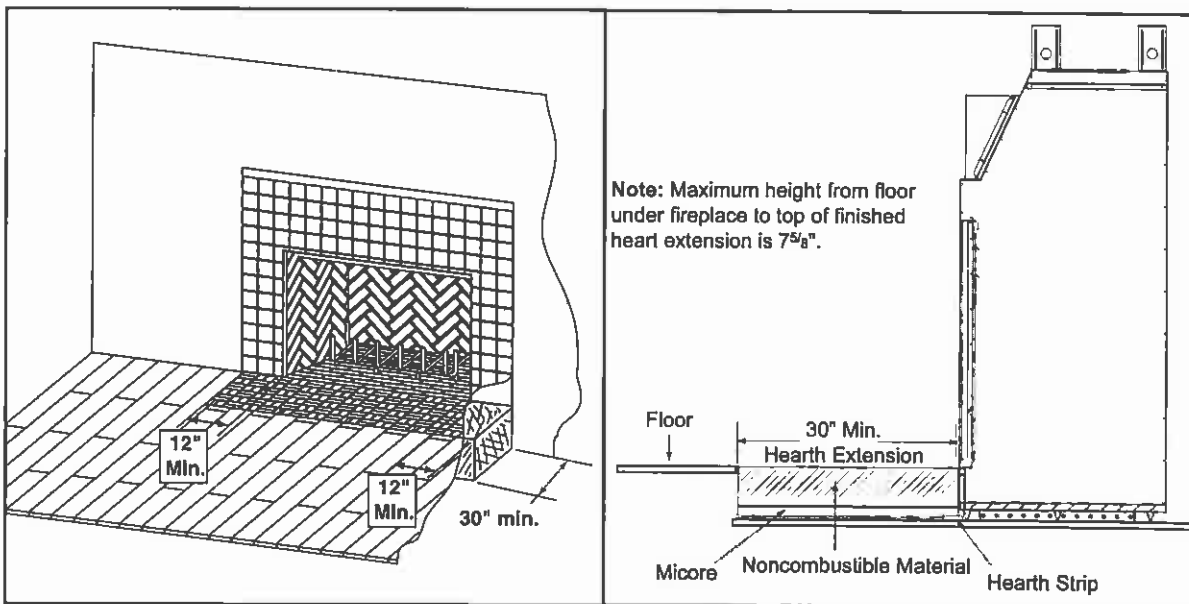


Figure 18 - Flush Hearth Extension

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.

The first name in fireplaces

Field constructed hearth extensions should be constructed in accordance with the instructions in Figure 19. The field constructed hearth extension must be constructed from 1/2" MICORE CV230, or a material with an equivalent insulation value.

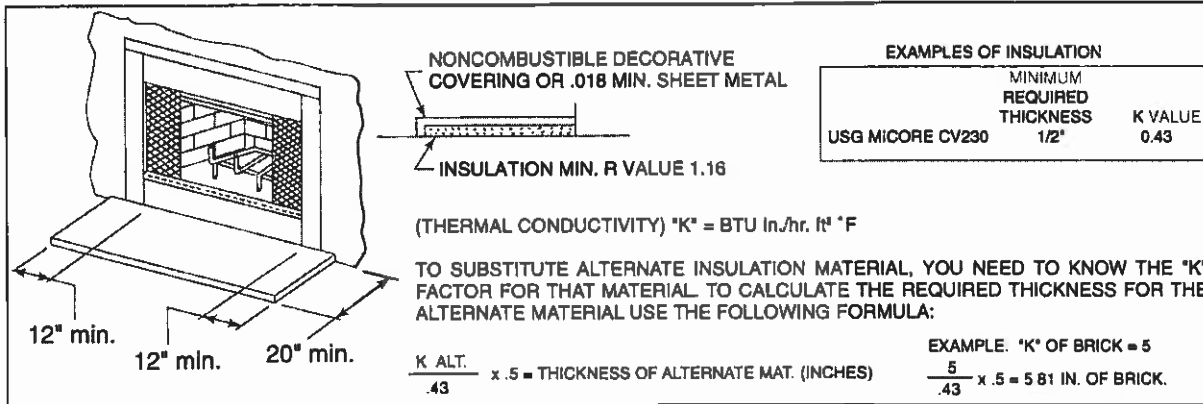


Figure 19 - Field Constructed Hearth Extension

18. Position the Hearth Extension

Position and secure the hearth extension over the protective metal strips that have been placed partially under the fireplace front. These strips should be protruding approximately 2" from under the fireplace front and 2" on both sides of the fireplace opening. Seal the crack between the hearth extension and fireplace with a bead of noncombustible sealant. See Figure 20. Apply a noncombustible finishing material of your choice to the hearth extension.

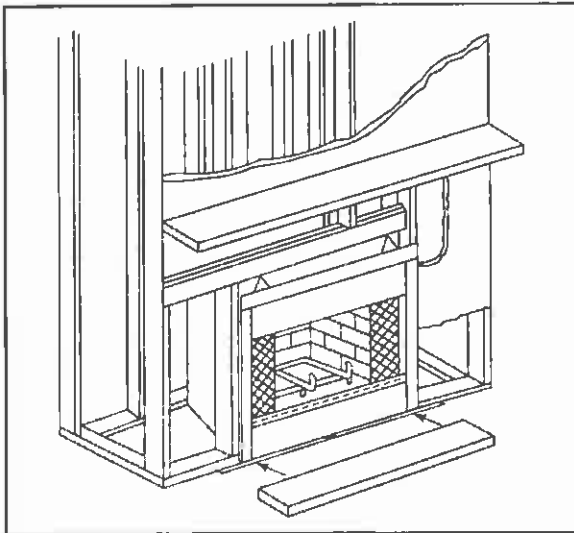


Figure 20 - Position the Hearth Extension

19. Finishing Material

Do not install combustible materials over the black face of the fireplace! This poses a safety hazard and may start a fire. You may only use noncombustible material over the black face of the fireplace.

a. Combustible Material

Material which is made of or surfaced with wood, compressed paper, plant fibers, plastics, or any material capable of igniting and burning, whether flame proofed or not, plastered or unplastered.

b. Noncombustible Material

Material which will not ignite and burn. Such materials are those consisting entirely of steel, iron, brick, tile, concrete, slate, glass or plasters, or any combination thereof.

c. Noncombustible Sealant Material

Sealants which will not ignite and burn; General Electric RTV103 Black (or equivalent), Rutland, Inc. Fireplace Mortar #63 (or equivalent).

After completing the framing and applying the facing material (dry wall) over the framing, a 1/2" wide (maximum) bead of noncombustible sealant must be used to close off any gaps at the top and sides between the fireplace and facing to prevent cold air leaks.

Only noncombustible materials may be used to cover the black metal fireplace front.

20. Mantel

A combustible mantel may be positioned no lower than 12" above the top of the fireplace opening. The combustible mantel may have a maximum depth of 12". Combustible trim pieces that project no more than 1 1/2" from the face of the fireplace can be placed no closer than 6" from the top of the fireplace opening. Combustible trim must not cover the black metal surfaces of the fireplace. This mantel clearance is in accordance with Section 7-3.3.3 of ANSI/NFPA211.

21. Glass Doors

This fireplace has been tested and listed for use with doors as specified in Section C, "System Components". Please refer to the manual packed with each set of doors for installation instructions.

The first name in fireplaces

G. CONSTRUCTING A CHASE

A chase is a vertical boxlike enclosure built around the chimney and fireplace. A chase may be constructed for the fireplace and chimney or for the chimney only. It is most commonly constructed on an outside wall.

In cold climates, it is recommended that the chase floor be insulated using batt type insulation between the floor joists.

Three examples of chase applications are shown in Figure 21.

1. Fireplace and chimney enclosed in an exterior chase.
2. Chimney offset through exterior wall and enclosed in chase.
3. Chase constructed on roof.

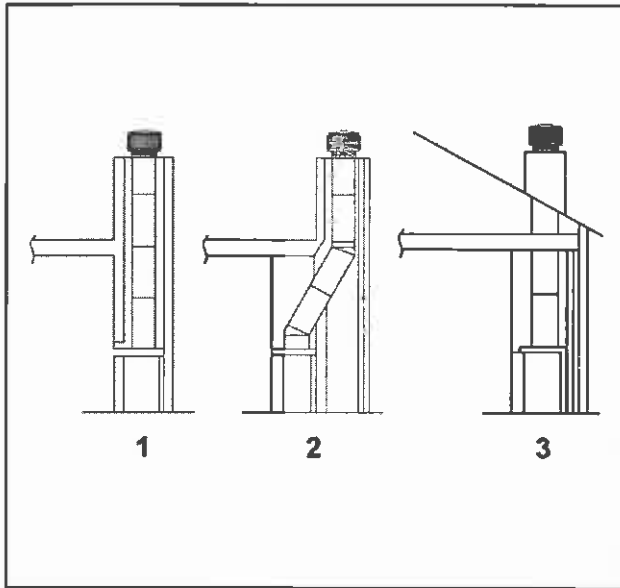


Figure 21 - Chase Constructions

1. Materials

- a. The chase is constructed using framing materials much the same as the walls in your home. A variety of materials may be used including brick, stone, veneer brick, or standard siding materials.
- b. In constructing the chase, several factors must be considered:
 - 1) Maintain a 2" air space around the chimney.
 - 2) The chase top must be constructed of noncombustible material.
 - 3) In cold climates, a firestop spacer should be installed in an insulated false ceiling at the 8' level above the fireplace assembly. This reduces heat loss through the chase.
 - 4) In cold climates, the walls of the chase should be insulated to the level of the false ceiling as shown in Figure 22. This will help reduce heat loss from the home around the fireplace.

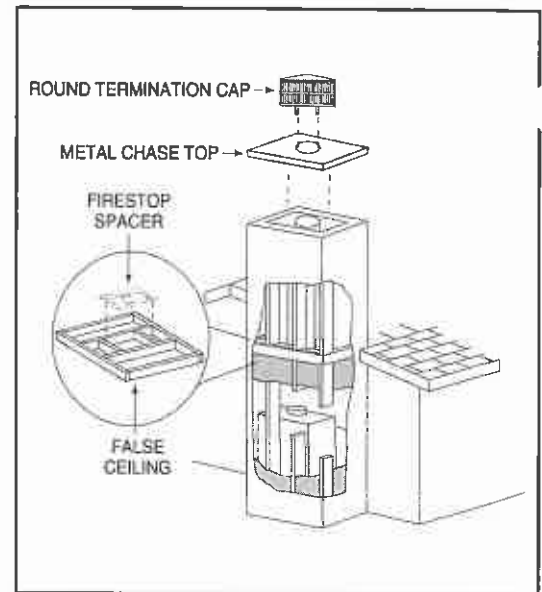


Figure 22 - Chase Assembly