



LISTED

HEAT-N-GLO

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Hearth & Home Technologies Inc.

800 W. Jefferson

Lake City, MN 55041

INSTALLATION & OPERATING INSTRUCTIONS

STS-42

OUTDOOR WOODBURNING FIREPLACE



This fireplace must be installed outside. Significant cold air infiltration will result if it is installed inside a structure.

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.

TABLE OF CONTENTS

A. Listings and Code Approvals	3
B. Description of the Fireplace System	3
C. Fireplace System Components	4
D. Pre-Installation Preparation	8
E. Chimney Requirements	10
F. Installation of Fireplace	12
G. Operating Instructions	21
H. Maintenance Instructions	25
Index	27
Warranty	28

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.

WARNING!

This appliance is tested and listed for use only with the optional accessories listed in these instructions. Use of optional accessories not specifically tested for this appliance could void the warranty and/or result in a safety hazard.

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 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 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. The fireplace must be installed with the Hearth & Home Technologies 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 fireplace is built for solid fuel only. **NEVER** use gasoline, gasoline type lantern fuel, kerosene, charcoal light 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 "Maintenance Instructions" in this manual for cleaning instructions.

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 4. 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 Heat-N-Glo Technical Services Department, Hearth & Home Technologies Inc., 800 W. Jefferson, Lake City, MN 55041.

Heat-N-Glo® is a registered trademark of Hearth & Home Technologies Inc., a Division of HON Industries.

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 Heat-N-Glo fireplace system consists of the following:

- a. Fireplace/Integral Grate/Cooling Air System
- b. Refractory
- c. Chimney Termination Cap
- d. Chimney System
- e. Hearth Extension

2. Optional Components Include:

- a. Glass Doors
- b. Weather Cover

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.

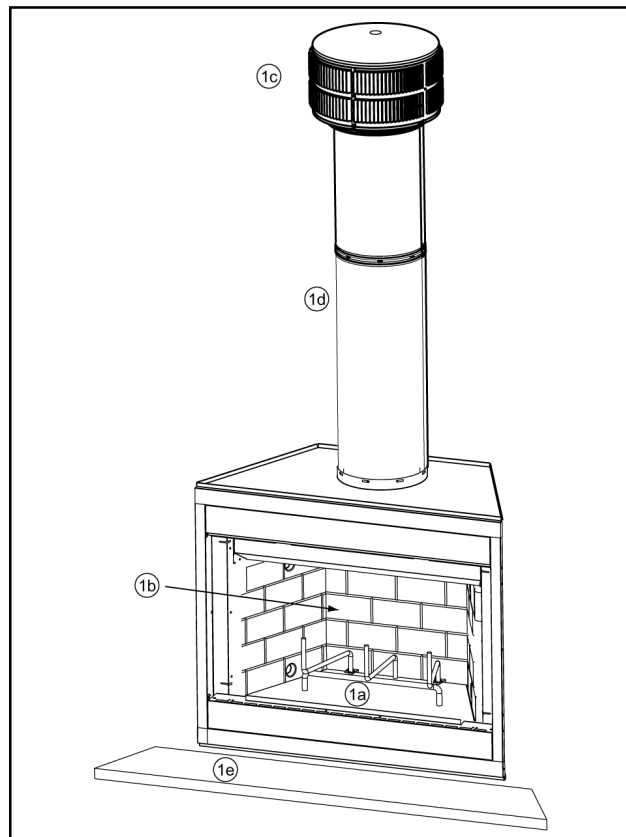


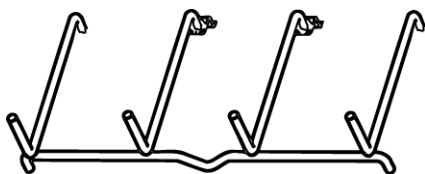
Figure 1 - Typical Fireplace System

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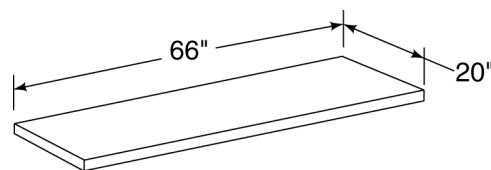
C. FIREPLACE SYSTEM COMPONENTS

1. Fireplace Components

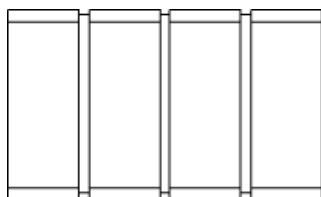
Catalog #	Description:
STS-42	Fireplace, with Integral Grate, Cooling Air Kit and Hearth Protection Strips
DM1842	Bi-fold Glass Doors, Clear-View - Black
DM1842B	Bi-fold Glass Doors, Clear-View - Polished Brass
DM1842S	Bi-fold Glass Doors, Clear-View - Stainless Steel
HX4	Hearth Extension
WC42S	Weather Cover - Stainless Steel
GR21	Integral Grate (included with Fireplace)



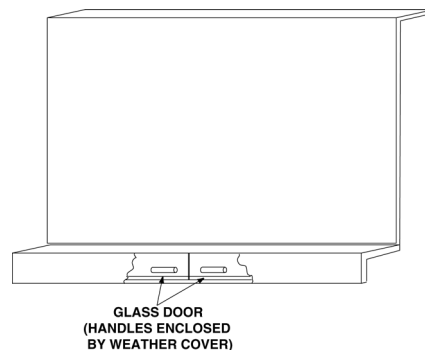
GR21 Integral Grate



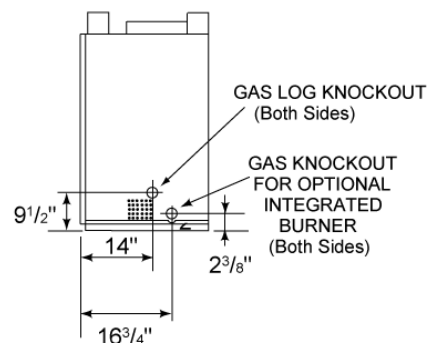
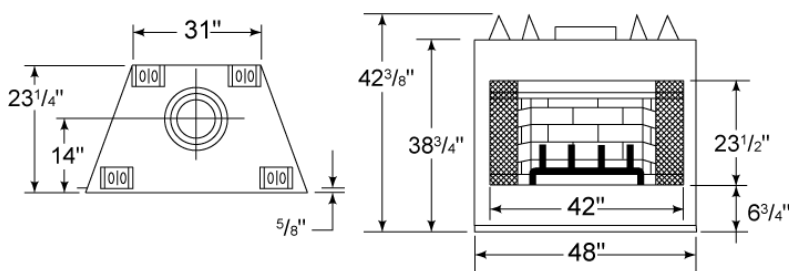
HX4 - Hearth Extension



Bi-Fold Glass Doors
DM1842
DM1842B
DM1842S



WC42S - Weather Cover



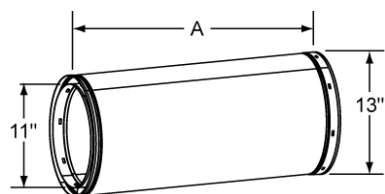
Fireplace Dimensions

2. Chimney Components

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

Catalog #	Description:
CAK5A	Chimney Air Kit
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'

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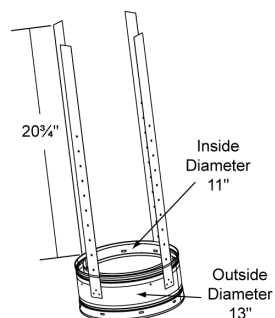


Chimney Sections

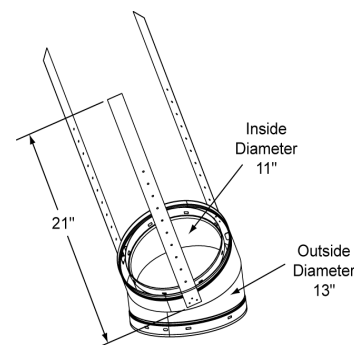
Catalog #	A	B
SL1106	6"	4 $\frac{3}{4}$ "
SL1112	12"	10 $\frac{3}{4}$ "
SL1118	18"	16 $\frac{3}{4}$ "
SL1136	36"	34 $\frac{3}{4}$ "
SL1148	48"	46 $\frac{3}{4}$ "

A = Actual length

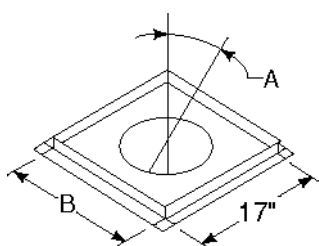
B = Effective length (length of chimney part after it has been snapped to another)



SL11 - Chimney Stabilizer

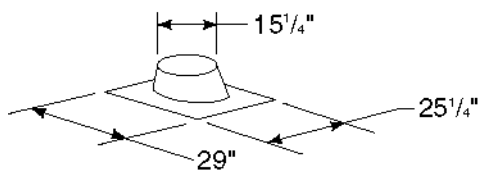


SL1130 - Offset/Return

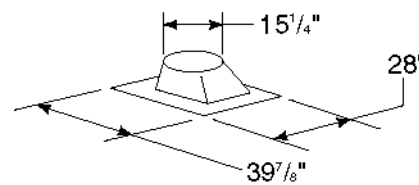


Firestop Spacer

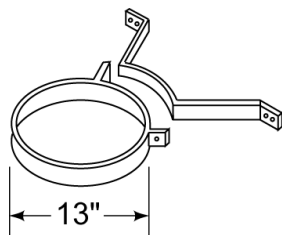
Catalog #	A	B
FS538	0°	17"
FS540	30°	26"



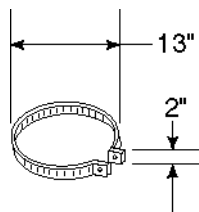
**RF570 - Roof Flashing
Flat to 6/12 Pitch**



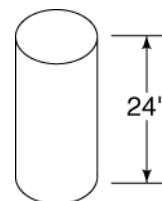
**RF571 - Roof Flashing
6/12 to 12/12 Pitch**



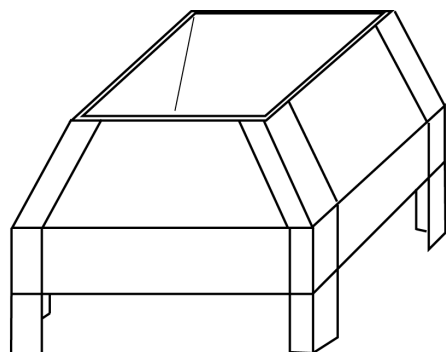
**CB576
Chimney Bracket**



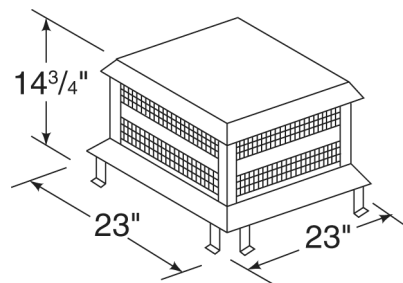
**JB577
Joint Band**



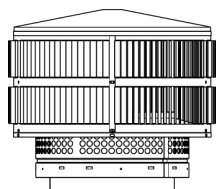
**AS10
Straight Attic
Insulation Shield**



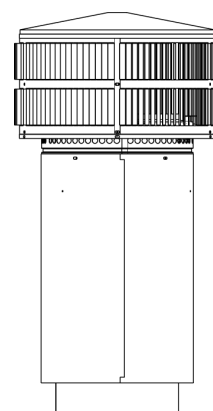
LDS33 (3' x 3')
LDS46 (4' x 6')
Decorative Shroud



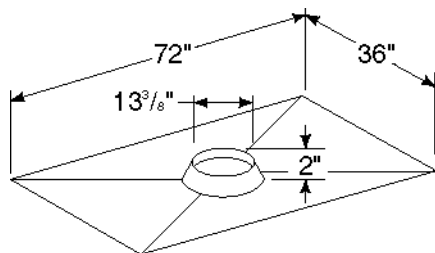
ST1175
Square
Termination Cap



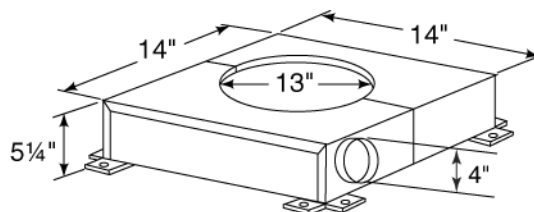
TR11
Round
Termination Cap



TR11T
Round Telescoping
Termination Cap



CT56
Chase Top



CAK5A
Chimney Air Kit

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D. PRE-INSTALLATION PREPARATION

1. Fireplace Locations and Space Requirements

This fireplace is intended for installation on an outdoor patio or in your yard. It must never be installed inside of the warm air envelope of your structure. Significant cold air infiltration will result if it is installed inside of the structure. Figure 2 shows two typical installations.

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.

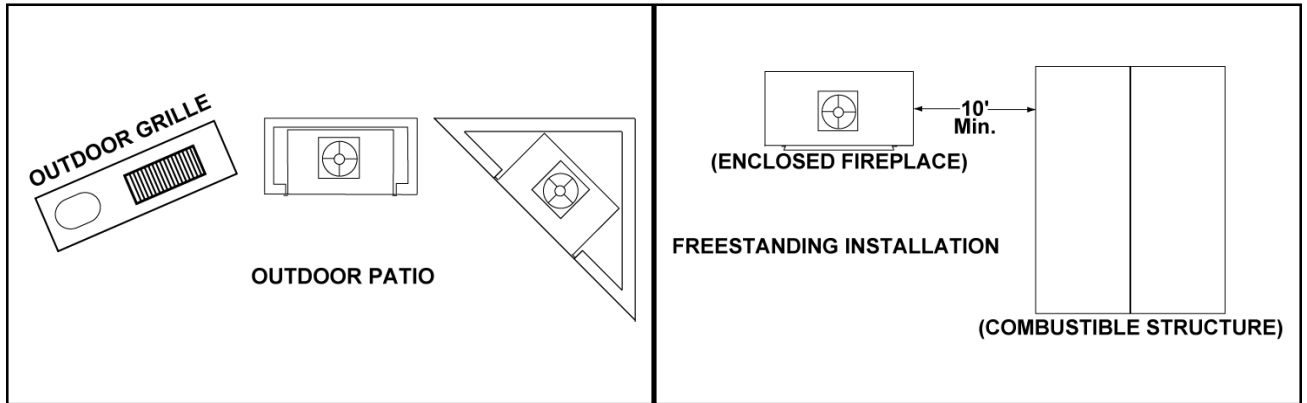


Figure 2 - Fireplace Locations

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.

Note: If the fireplace is a freestanding fireplace, it must be located a minimum of 10' from a combustible structure.

A minimum height of 6' 4" measured from the base of the fireplace to the bottom of the termination cap is permitted in this installation.

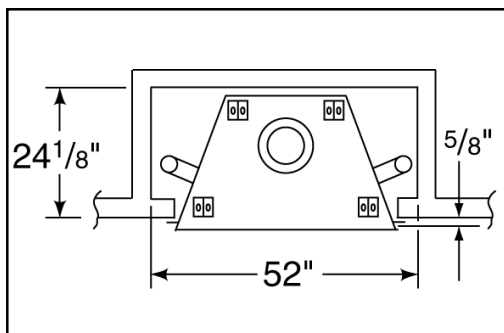


Figure 3 - Installation Along a Wall or an Exterior Chase

These are rough framing dimensions only.

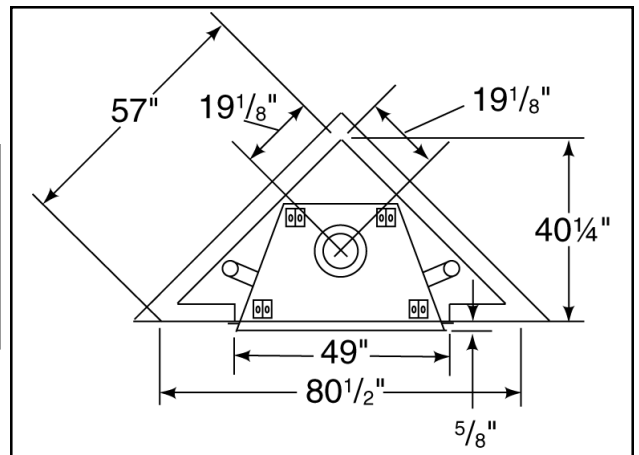


Figure 4 - Corner Installation

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. Constructing an Outdoor Enclosure

This fireplace is intended to be installed outside the house. It may be installed against the outside wall of the house or as a freestanding fireplace on your porch, patio, or in your yard.

When installing the outdoor fireplace against an outside wall, it must be enclosed to prevent impact damage to the outside of the fireplace. Build the outside enclosure out of standing building materials, being careful to maintain the minimum air clearances specified in these installation instructions.

When installing this fireplace as a freestanding fireplace on your porch, patio or in your yard, it must be enclosed to prevent impact damage to the fireplace. However, the enclosure must not be finished on all four sides. The exterior of the enclosure may be finished in a textured plywood, a wood clapboard siding, brick or a cultured stone. Vinyl siding is not recommended for use on the front of the fireplace due to the heat the fireplace produces. This can cause the vinyl siding to deteriorate.

3. Framing the Fireplace

The STS-42 fireplace will fit a framed opening of 49" wide x 42³/₈" tall. The finished cavity depth must be no less than 24¹/₈".

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 level of the top standoffs.

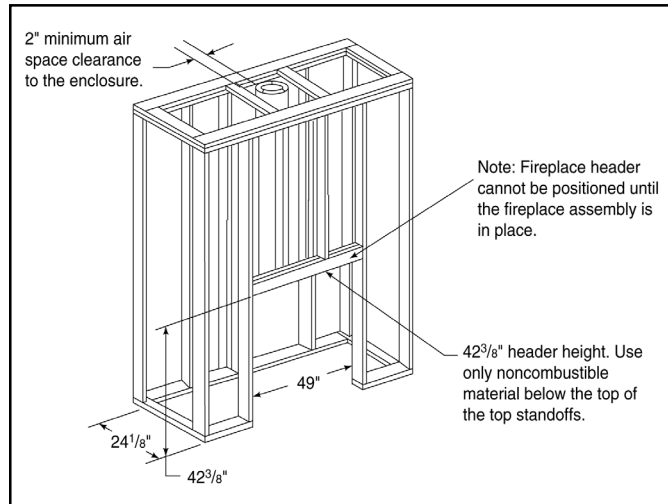


Figure 5 - Framing the Fireplace

CLEARANCES!

A minimum 1¹/₂" 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!

Do not apply combustible finishing materials over any part of the stainless face of this fireplace or a structure fire may result. The 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.

4. Sidewalls/Surrounds

Adjacent combustible side walls must be located a minimum of 12" 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.

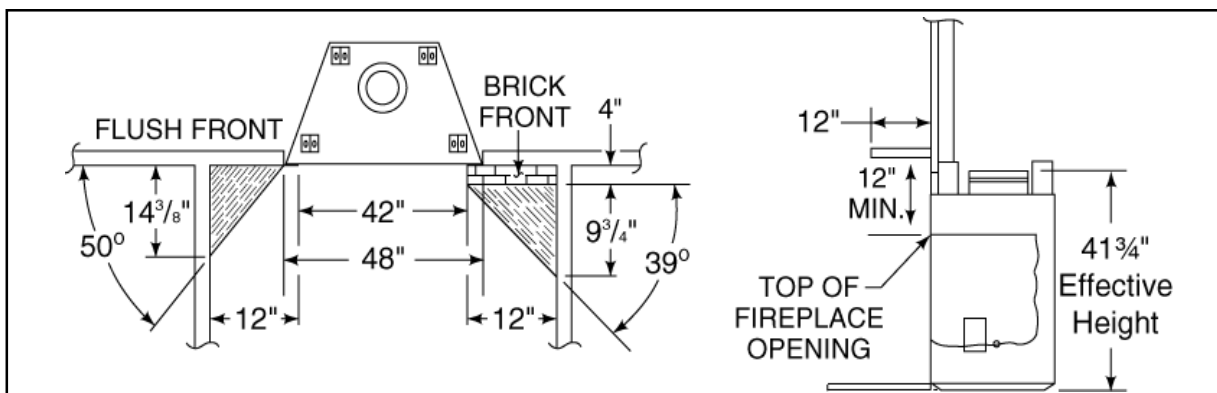


Figure 6 - Sidewalls and Surrounds

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. **Minimum overall straight height is 6' 4" if the fireplace is freestanding a minimum of 10' from a combustible structure. See Figure 2, page 8.**

1. Minimum overall straight height	14 ft.
2. Minimum height with offset/return	16 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

- 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.
- An offset and return may be attached together or a chimney section(s) may be used between an offset and return.
 - 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.
 - 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.
 - The "B" dimension that coincides with the "A" dimension represents the required vertical clearance that is needed to complete the offset and return.
 - Read across the chart and find the number of chimney sections required and the model number of those particular chimney parts.
 - Whenever the chimney penetrates a floor/ceiling, a firestop spacer must be installed.
 - 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 / ₄ "	-	1	1	-	-
21 ¹ / ₄ "	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 / 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

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

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.

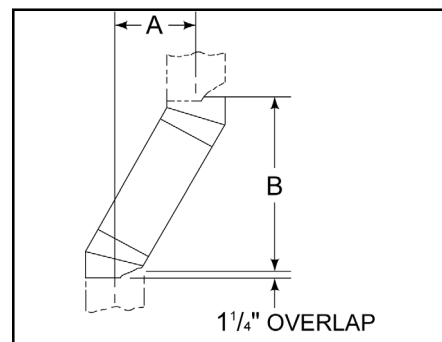


Figure 7 - Chimney Offset/Return

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.

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.

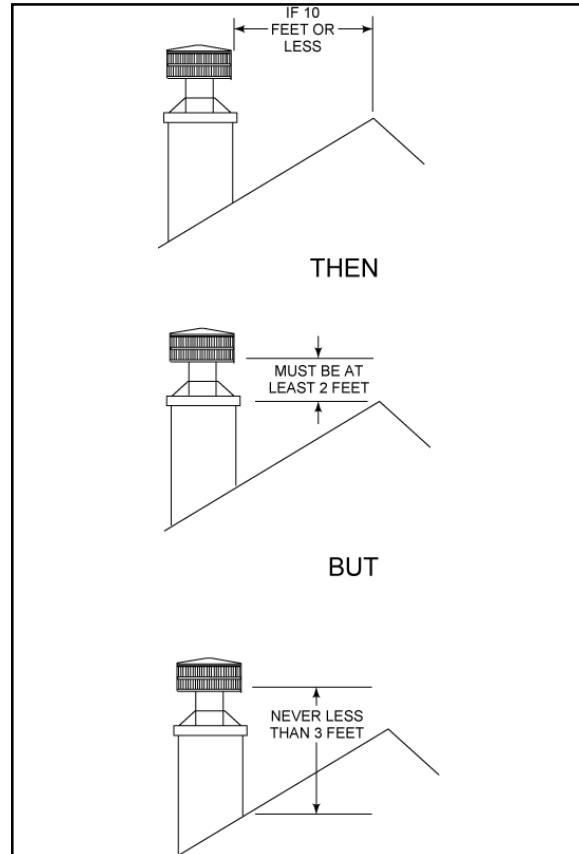


Figure 8 - Chimney Height

3. Number of Sections Required

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

- 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.
- 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).
- Refer to Table 2 to determine what components must be selected to complete the fireplace installation.
- 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.

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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 8 and 9. 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".

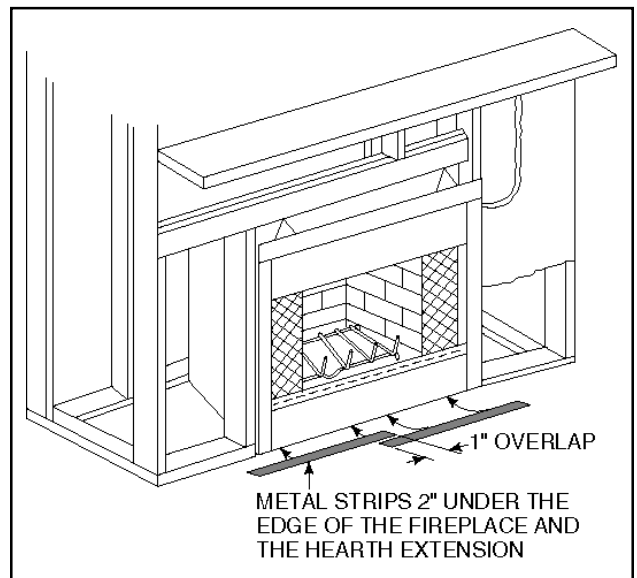


Figure 9 - Positioning the Metal Strips

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.

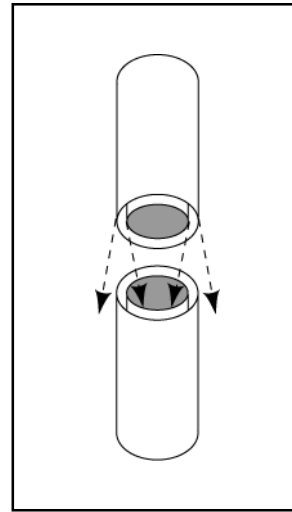


Figure 10
Assembling Chimney
Sections

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.

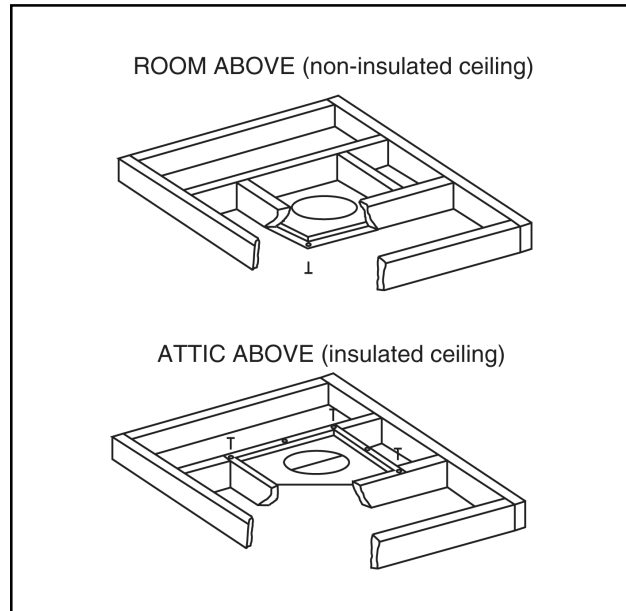


Figure 11
Installing the Firestop Spacer

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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.

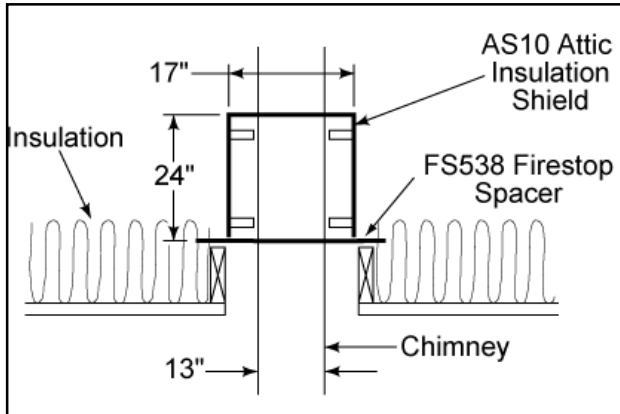


Figure 12 - Installing an Insulation Shield

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 10 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.

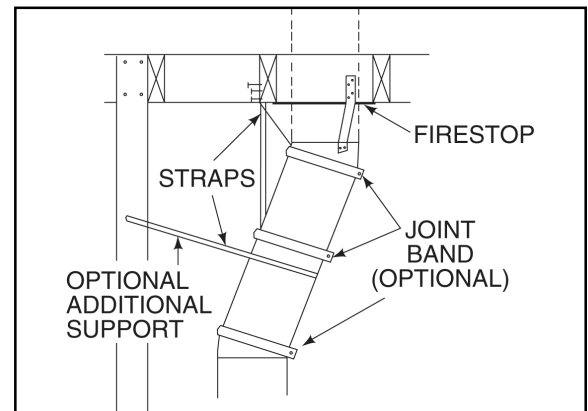


Figure 13 - Offset/Return with Stabilizer

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.

9. Installing the Termination Cap

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 Heat-N-Glo distributor.

- a. Install the chimney sections up through the chase enclosure. When using a TR11 round termination cap, the uppermost top section of pipe must extend 6" above the top of the chase collar to allow installation of the storm collar and termination cap. See Figure 14.

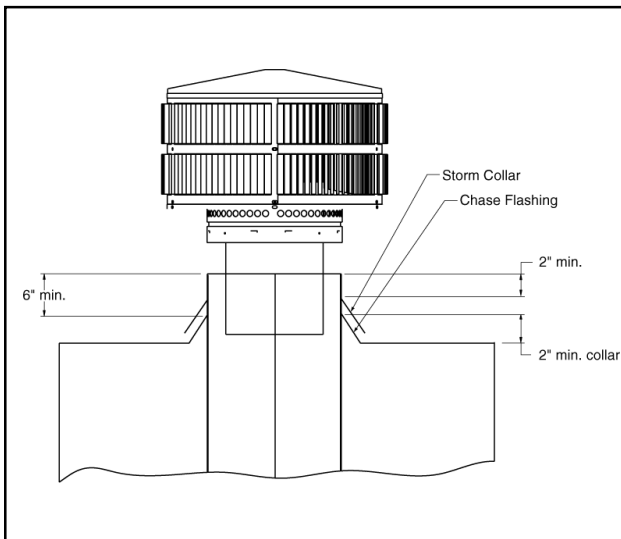


Figure 14 - Installing a TR11 Round Termination Cap

- b. For installations utilizing a TR11T telescoping round termination cap, the uppermost chimney section must be below the top of the chase top, but not more than 14½" below the top of the chase top flashing collar. See Figure 15.

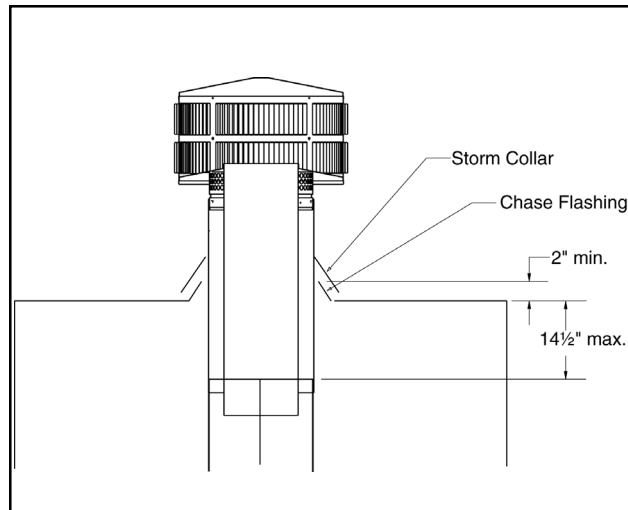
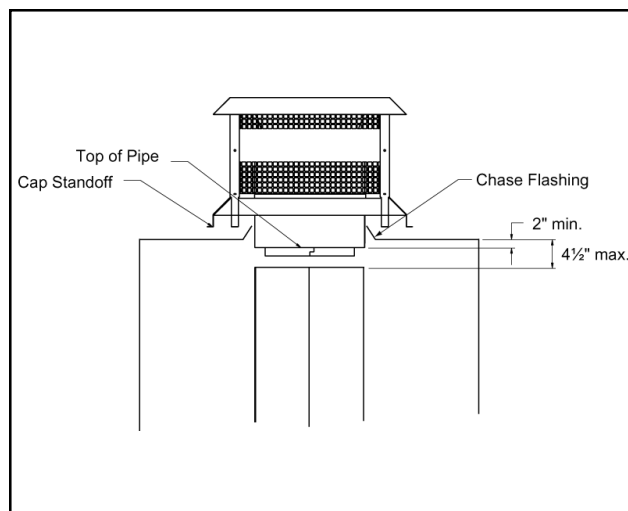


Figure 15 - Installing a TR11T Round Telescoping Termination Cap

- c. For installations utilizing an ST1175 square termination cap the last chimney section must not be more than 4½" below the chase top. See Figure 16.



**Figure 16
Installing an ST1175 Square Termination Cap**

- d. Attach the chase top to the top of the chase.
- e. Install the termination cap, following the instructions provided with it.

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10. Installing the Required Cooling Air Kit (furnished)

The cooling air kit is supplied as a standard feature with this fireplace and is **required** for safe operation. Installation must be done at the time of initial construction. The cooling air inlet tubes must be a minimum of 72" above the base of the fireplace. This is to prevent potential blockage by snow or yard debris. See Figure 17.

Note: The cooling air kit must terminate at least six feet above ground level.

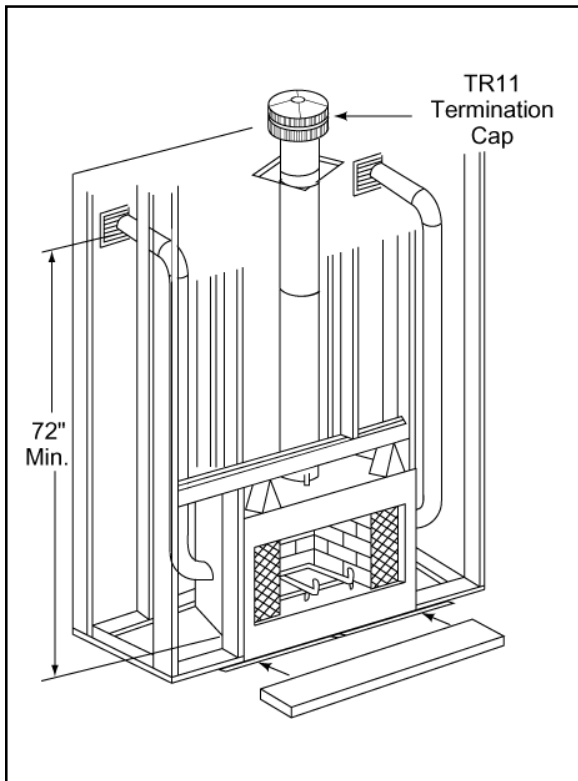


Figure 17 - Cooling Air Location

To install the air kit collar, slide one of the tabs of the collar down into the seam. See Figure 18.

Secure the collar tabs to the fireplace by placing the screws into the holes provided. See Figure 19.

Repeat for the other side.



Figure 18 - Insert the Tabs



Figure 19 - Securing the Tabs

11. Installing the Chimney Air Kit

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

12. 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 8 and 9 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.

13. 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 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 20.

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.

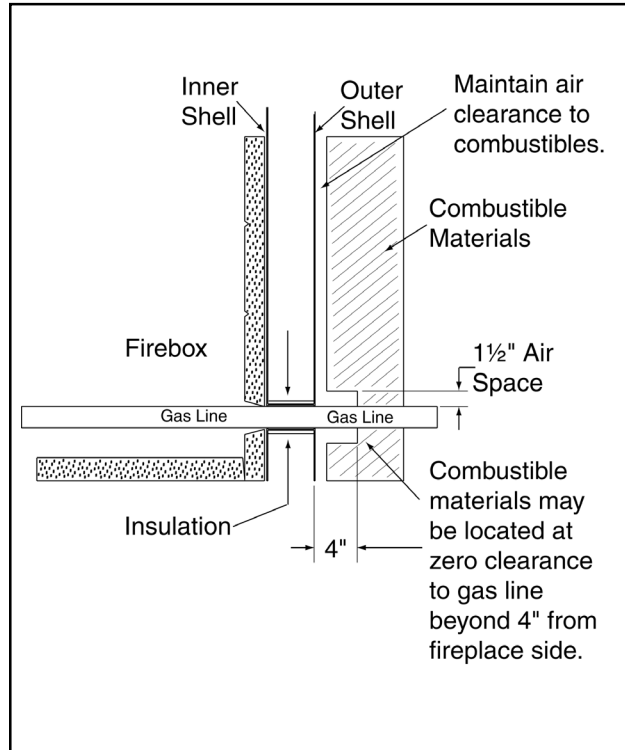


Figure 20 - Air Clearance Around Gas Line

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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14. 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 21 and 22. 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.

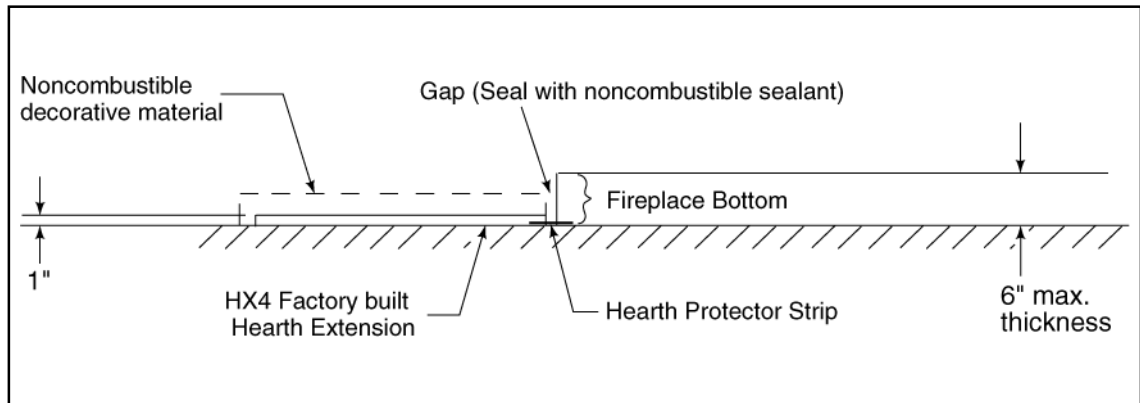


Figure 21 - Factory Built Hearth Extension

Field constructed hearth extensions should be constructed in accordance with the instructions in Figure 22. The field constructed hearth extension must be constructed from ½" MICORE CV230, or a material with an equivalent insulation value.

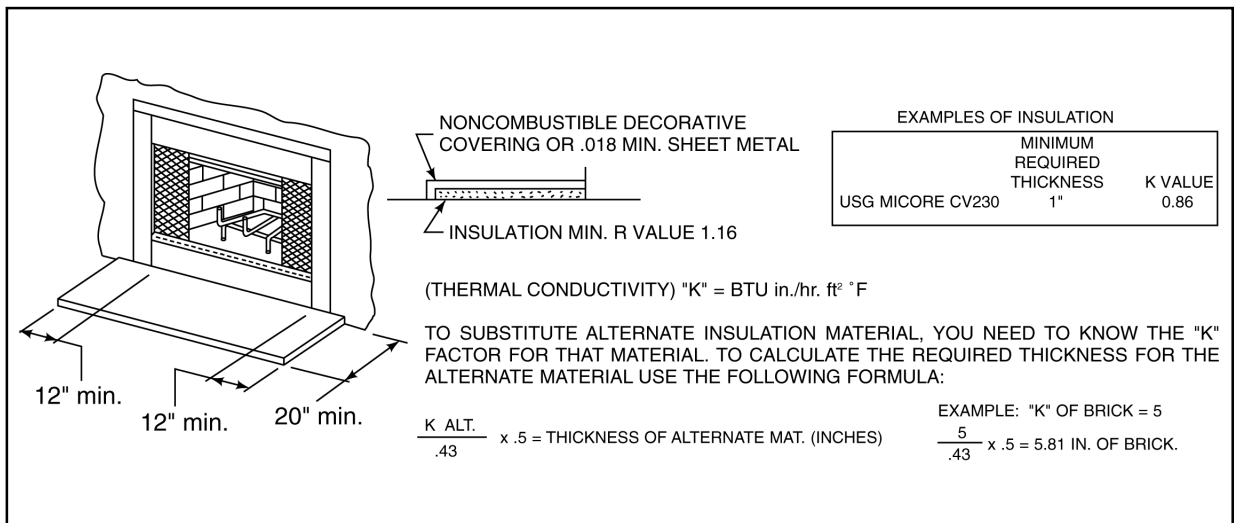


Figure 22 - Field Constructed Hearth Extension

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.

15. 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 23. Apply a noncombustible finishing material of your choice to the hearth extension.

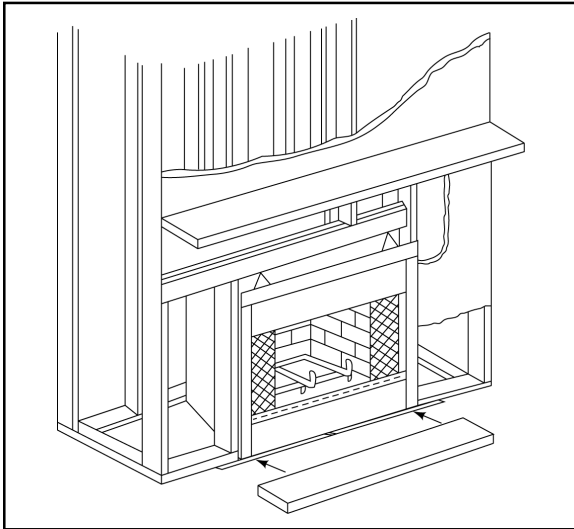


Figure 23 - Position the Hearth Extension

16. Finishing Material

Do not install combustible materials over the face of the fireplace! This poses a safety hazard and may start a fire. You may only use noncombustible material over the 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 ½" 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 metal fireplace front.

17. Mantel

A combustible mantel may be positioned no lower than 12" above the top of the fireplace opening. See Figure 6, page 9. The combustible mantel may have a maximum depth of 12". Combustible trim pieces that project no more than 1½" 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 metal surfaces of the fireplace. This mantel clearance is in accordance with **Section 7-3.3.3 of ANSI/NFPA211.**

18. Glass Doors

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

19. Chase Top

Construct a chase of desired materials maintaining a minimum 2" air space around the chimney.

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WARNING!

Never install a single wall slip section or smoke-pipe in a chase structure. The higher temperature of this single wall pipe may radiate sufficient heat to combustible chase materials to cause a fire.

WARNING!

Detailed instructions for installation of the chase top, storm collar and termination cap are packaged with these parts. To avoid danger of fire, all instructions must be strictly followed, including the provision of air space clearance between chimney system and enclosure. To protect against the effects of corrosion on those parts exposed to the weather, we recommend that the chase top and termination cap be painted with a rust-resistant paint.

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G. OPERATING INSTRUCTIONS

Note: Save and pass this instruction manual to subsequent home owners. The information provided is intended to notify and warn them about making unsafe future modifications such as the addition of shelves or the use of unauthorized parts and repairs.

Note: Some discoloration may appear over time.

WARNING!

Care must be taken when burning this fireplace. Wind and wind gusts can cause sparks to be blown out of the hearth area of the fireplace and pose a fire hazard to any combustible material they come in contact with. Do not operate this fireplace when it is windy. If the wind becomes a problem when the fireplace is in use, close the glass doors and allow the fireplace to go out. Be certain to check that no sparks or embers have escaped from the fireplace hearth area.

1. General Information

Fireplaces, as well as other woodburning appliances, have been used safely for many years. It has been our experience that most problems are caused by improper installation and operation of the fireplace. Make certain that installation and operation of the fireplace system is in accordance with these instructions.

It is extremely important that the fire be supervised whenever the fireplace is in use. It is also recommended that an annual inspection be performed on the fireplace system to determine if the flue system needs to be cleaned, or as in the case of any appliance, if minor repairs are required to maintain the system in top operating condition.

This factory built fireplace is intended for use with either solid fuel (firewood) or a decorative gas appliance that has been tested and listed to the **Standard for Decorative Gas Appliances for Installation in Vented Fireplaces, ANSI Z21.60**. When operating your fireplace, the flue damper must be in the open position.

This fireplace was not tested and listed for use with an unvented gas log heater. Do not install an unvented gas log heater in this fireplace and operate it with the flue damper in the closed position unless the unvented gas log heater has been specifically tested and listed for use in this fireplace by Underwriters Laboratories Inc.

Use of an unvented gas log heater in this factory built fireplace may create a fire hazard that can result in a structure fire.

2. Flue Damper

The flue damper must be in a full open position, and is operated by moving the handle up toward the top of the fireplace. Before lighting the fire, verify this by looking up from the inside of the fireplace. Always operate this fireplace with the damper fully open. Please note: down drafts, obstructions, damaged or poor (wet) fuels can cause smoke spillage.

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3. Glass Doors

Most efficient fireplace operation using glass doors is with the doors open. When the doors are open, the screen must be closed. Only Hearth & Home Technologies glass doors may be used. See Figure 24 for proper glass door operation.

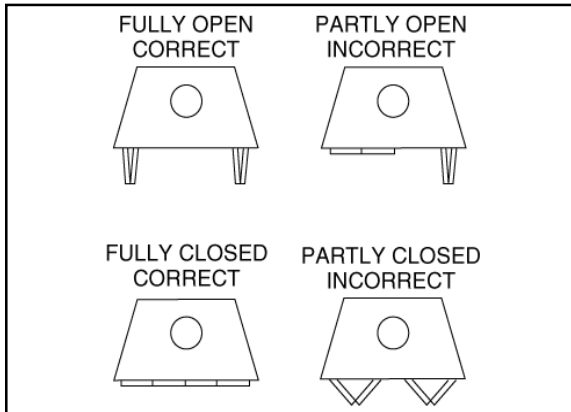


Figure 24
Proper Operating Positions of Bi-Fold Doors

4. Grate

The factory installed integral grate must be used to hold the logs from falling out of an open fireplace and to allow air to pass between the burning logs. It is important to keep the fire off the hearth and to allow the ashes to collect beneath the fire, thereby forming a layer of additional heat protection.

5. Firescreen

A firescreen is always provided to control sparks. It must be closed whenever the fireplace is in use. Glass doors or firescreens must not be used to hold burning material inside the fireplace. Only those glass doors specifically tested and listed for use with the specific fireplace model should be used. Screens should be closed when the glass doors are closed.

CAUTION:

When left closed while burning your fireplace, firescreens and glass doors will be HOT. Handle with care!

WARNING!

Do not store fuel within the clearances to combustibles, or in the space required for refueling and ash removal. See maintenance instructions, "Clear Space Near the Fireplace".

6. Wood Fuel

FIREWOOD: Your fireplace performance depends on the quality of the firewood you use. All seasoned wood, regardless of species, contains about 8,000 BTU's per pound, and hardwoods have a greater density than soft woods. A piece of hardwood will contain about 60% more BTU's than an equal size piece of soft wood. Firewood is commonly sold by the cord (128 cu. ft.). A cord of seasoned oak (hardwood) would contain about 60% more potential energy than a cord of seasoned pine (soft wood).

Soft woods are generally considered coniferous. These are trees with needle-like leaves that stay green all year and carry their seeds exposed in a cone. Examples of soft wood trees are Douglas fir, pine, spruce, and cedar. Soft woods require less time to dry, burn faster and are easier to ignite than hardwoods.

Hardwoods are generally considered deciduous. Deciduous trees are broadleaf trees that lose their leaves in the fall. Their seeds are usually found within a protective pod or enclosure. Some examples are oak, maple, apple, and birch. It should be noted that there are some deciduous trees that are not considered hardwoods, such as poplar, aspen, and alder. Hardwoods require more time to season, burn slower and are usually harder to ignite than soft woods.

The best wood fuel is a combination of soft wood and hardwood. Start the fire with soft wood; the fire will give off quick heat to bring the appliance up to operating temperature, and then the hardwood can be added for slow, even heat and longer burn time.

MOISTURE: Regardless of which species of wood you burn, the single most important factor that effects the way your fireplace operates is the amount of moisture in the wood. The majority of the problems fireplace owners experience are caused by trying to burn wet, unseasoned wood.

Freshly cut wood can be as much water as it is wood, having a moisture content of around 50%. Imagine a wooden bucket that weighs about eight pounds. Fill it with a gallon of water, put it in the fireplace and try to burn it. This sounds ridiculous but that is exactly what you are doing if you burn unseasoned wood.

SEASONING: Seasoned firewood is nothing more than wood that is cut to size, split and air dried to a moisture content of around 20%. The time it takes to season wood varies from around nine months for soft woods to as long as eighteen months for hardwoods. The key to seasoning wood is to be sure it has been split, exposing the wet interior and increasing the surface area of each piece. A tree that was cut down a year ago and not split is likely to have almost as high a moisture content now as it did when it was cut.

The following guideline will ensure properly seasoned wood:

- Stack the wood to allow air to circulate freely around and through the woodpile.
- Elevate the woodpile off the ground to allow air circulation underneath.
- The smaller the pieces, the faster the drying process. Any piece over six inches in diameter should be split.
- Cover the top of the woodpile for protection from rain and snow. Avoid covering the sides and ends completely. Doing so may trap moisture from the ground and impede air circulation.

The problems with burning wet, unseasoned wood are twofold: First, you will receive less heat output from wet wood because it requires energy in the form of heat to evaporate the water trapped inside. This is wasted energy that should be used for heating your home. Secondly, this moisture evaporates in the form of steam which has a cooling effect in your fireplace and chimney system. When combined with tar and other organic vapors from burning wood it will form creosote which condenses in the relatively cool fireplace and chimney.

WARNING!

Burning wet, unseasoned wood can cause excessive creosote accumulation. When ignited it can cause a chimney fire that may result in a serious house fire.

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7. Starting a Fire

Check the flue damper to be certain it is in the full open position. Place crumpled or twisted paper under the fireplace grate. Loosely arrange kindling or small pieces of wood to form a layer above the paper.

The fires must be built on the fireplace grate, without danger of the burning fuel falling out of the fireplace opening.

Light the paper and add small pieces of wood until a hot bed of embers has been established.

After establishing the fire bed, and the small firewood is burning briskly, add a minimum of three average sized pieces of split firewood, place the wood in such a manner to allow combustion air and flames between them.

Note: The first three or four fires should be of moderate size to allow the oils and binders to be burned from the fireplace and the refractory and paint to cure. You may notice an industrial odor the first few fires. This is considered normal.

As you use the fireplace, expansion and contraction will cause minor cracking of the refractory. This is normal, unavoidable, and will not affect the performance of the fireplace. If the cracks become large enough that the metal behind the refractory is exposed or large pieces fall out, the panels should be replaced.

CAUTION:

Never use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or "freshen up" a fire in this fireplace. Keep all such liquids well away from the fireplace.

WARNING!

Fireplaces equipped with doors should be operated only with the doors fully open or fully closed. If doors are left partially open, gas and flame may be drawn out of the fireplace opening, creating the risk of both fire and smoke.

H. MAINTENANCE INSTRUCTIONS

1. Disposal of Ashes

Ashes should be placed in a metal container with a tight-fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, well away from all combustible materials, 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 embers have thoroughly cooled.

2. Creosote and Soot

Inspect the chimney internally for obstructions and construction damage. Flue pipe joints and seams must be continuous and mechanical tight. In a used chimney, additional inspection is needed for creosote buildup, which is the formation of a flammable sediment.

When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

The chimney should be inspected at least twice a year during the heating season to determine if creosote buildup has occurred.

If creosote has accumulated, it should be removed to reduce the risk of a chimney fire.

3. Chimney Cleaning

If you do detect a buildup of creosote, contact a qualified chimney sweep or clean it yourself. To do this, perform the following steps:

- Open the damper.
- Hang a damp sheet across the fireplace opening to stop dirt and soot from entering the room.
- Remove the termination cap or housing top. See Figure 25.
- Clean with a stiff nylon brush attached to a pole OR tie a small burlap bag filled with straw and several small stones or sand. Work up and down the flue until the flue is clean.
- Replace the termination cap or housing top.

4. Clear Space Near the Fireplace

Combustible materials must not be stored on the hearth extension. Room furnishings such as drapes, curtains, chairs, or other combustibles must be at least four feet from the open front of the fireplace.

WARNING!

A chimney fire can permanently damage your chimney system. This damage can only be repaired by replacing the damaged component parts. Chimney fires are not covered by the Limited Warranty and Buyer Protection Plan.

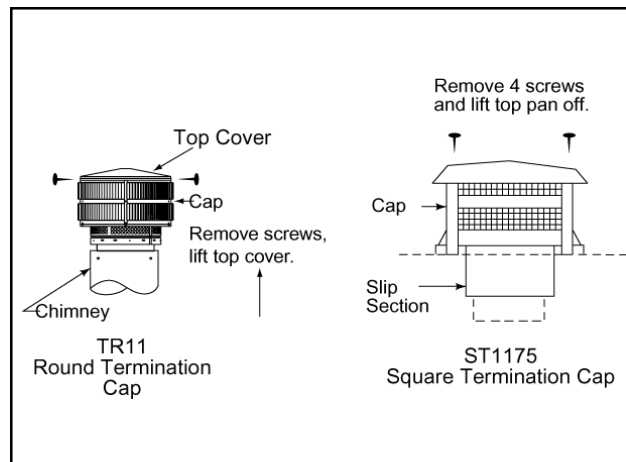


Figure 25
Chimney & Termination Cap Cleaning

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Homeowner's Notes

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INDEX

A

Air Clearance 14, 17
Air Kit 16
Ashes, Disposal of 25
Attic Insulation Shield 14

B

Building Codes 3, 19

C

Chase Installation 8
Chase Top 7, 19
Chimney
 Checking the Assembly 14
 Cleaning 25
 Creosote 25
 Height Requirements 11
 Requirements 10
 Securing the System 14
Chimney Air Kit 7, 16
Chimney Bracket 6
Chimney Requirements 10
Chimney Sections
 Assembling 13
 Number Required 11
Chimney Stabilizer 6
Codes
 Building 3, 19
 Gas 17, 21
Combustible
 Material 18
Combustible Material 19
Components 4
Construction 18, 19
Cooling Air 16
Corner Installation 8
Creosote 25

D

Damper 21
Description of the Fireplace System 3
Dimensions 4

F

Fireplace
 Enclosure 17
 Locations 8
Firescreen 22
Firestop Spacer 6
 Installation 13
Firewood 23
Flue 21
Framing 9
Freestanding Installation 8
Fuel 23

G

Gas Codes 17, 21
Gas Log/Lighter Provisions 17
General Information 21
Glass Doors 19
Grate 22

H

Hearth Extension 18
 Positioning 19

I

Installation
 Fireplace 12
 In a Corner 8
 In a Wall 8
Installation, Freestanding 8
Installation in a Chase 8
Insulation Shield 6, 14

J

Joint Band 6

L

Leveling the Fireplace 12
Locations 8

M

Mantel 9, 19
Material, Sealant 19
Metal Hearth Strips 12
Moisture Content of Wood 23

N

Noncombustible Material 19
Noncombustible Sealant Material 19

O

Offsets/Returns 6, 10
Overhead Obstructions 10

P

Positioning 12

R

Roof Flashing 6, 15

S

Safety 12
Seasoning the Wood 23
Shroud 7
Sidewalls/Surrounds 9
Soot 25
Space Requirements 8
Standard for Decorative Gas Appliances 17, 21
Starting a Fire 24

T

Ten Foot Rule 11
Termination Cap 7
Typical Fireplace System 3

U

UL 127 Standards 3
Unvented Gas Log Heater 17, 21

W

Wall Installation 8
Wet Insulation 2
Wood
 Moisture of 23
 Seasoning of 23
Wood Fuel 23

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Hearth & Home Technologies Inc.
800 W. Jefferson
Lake City, MN 55041

WARRANTY FOR HEAT-N-GLO FIREPLACES

The limited warranty will not become effective until you have mailed the completed warranty card to:

Hearth & Home Technologies Inc., A DIVISION OF HON Industries
20802 Kensington Blvd., Lakeville, MN 55044.

This card must be mailed within 60 days of the fireplace installation.

Subject to the conditions set forth herein, HEARTH & HOME TECHNOLOGIES INC. (HHT) extends the following limited warranty with respect to your Heat-N-Glo fireplace, excluding accessories, chimney components and glass doors.

If HHT is satisfied that any part or portion of the fireplace covered by this warranty is defective in material or workmanship under normal use and service as described in the operating instructions, HHT will take the following actions:

1. Within the first five (5) years from the date of installation, HHT shall, at its option, replace or repair any such defect in material or workmanship, at HHT's expense. HHT SHALL NOT BE RESPONSIBLE FOR ANY OTHER LABOR COSTS, OR EXPENSES, INCLUDING INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.
2. During the sixth (6th) through the (10th) years after the date of installation, HHT shall supply replacement parts or parts at no charge, but SHALL NOT BE RESPONSIBLE FOR ANY LABOR, TRANSPORTATION, OR OTHER INDIRECT DAMAGES.
3. During the eleventh (11th) through the fifteenth (15th) years after date of installation, HHT will send to you, FOB its factory, replacement parts (if available) at the current minimum wholesale price, but HHT SHALL NOT BE RESPONSIBLE FOR ANY LABOR, TRANSPORTATION OR OTHER INDIRECT DAMAGES.
4. During the first six (6) months after installation, HHT shall, at its option, replace or repair the glass doors and any electrical components, if operation is faulty. (This does not include glass panels broken during shipment, misuse or careless handling.) After the first six (6) months, HHT will sell to you, FOB its factory, replacement parts at the current list price, but HHT SHALL NOT BE RESPONSIBLE FOR ANY LABOR, TRANSPORTATION OR OTHER INDIRECT DAMAGES. IF GLASS DOORS OTHER THAN FACTORY DOORS ARE USED ALL WARRANTY AND LIABILITY ON THE FIREPLACE IS VOIDED.

HHT may discharge its entire warranty liability by refunding the price of the product.

Products made by other manufacturers, sold with the fireplace or thereafter are not covered by this limited warranty.

This limited warranty will be void if the fireplace is not installed according to the installation instructions. The limited warranty also is void if the fireplace is not operated, at all times, according to the operating instructions furnished. The limited warranty will also be void if the fireplace is removed from the place originally installed.

EXCEPT TO THE EXTENT PROVIDED BY LAW, NO IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND NO IMPLIED WARRANTIES SHALL APPLY TO THE FIREPLACE AFTER THE ABOVE LIMITED WARRANTY HAS EXPIRED.

In states that do not allow limitations on how long implied warranty lasts, or do not allow exclusion of indirect damages, those limitations or exclusions may not apply to you. You may also have additional rights not covered in this limited warranty.

HHT reserves the right to make changes at anytime, without notice, in design, material, specifications and prices and the right to discontinue styles and products.

• UNDERWRITERS LABORATORIES FILE NO. MH5850