TD46A
INSTALLATION & OPERATING INSTRUCTIONS
FOR RESIDENTIAL USE

I. LISTINGS AND CODE APPROVALS

The TD46A fireplace system has been tested in accordance with Underwriters Laboratories Inc. Standards, and has been LISTED by them for installation and operation as described in these Instructions and in the Operating Instructions accompanying each fireplace.

Fireplace Catalog Number TD46A has been tested and LISTED for use with the Optional Components described in Section II of these Instructions. These Optional Components may be purchased separately and installed at a later date. However, installation of the Outside Air Kit will require significant reconstruction, and should be installed at the time of initial installation.

Check with your local building code agency before you begin installation to ensure compliance with local codes, including the need for "permits" and follow-up inspections. If any problems are encountered regarding code approvals, or if you wish clarification of any of the instructions contained here, contact: Technical Services, Heatilator Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641. HEATILATOR® is a registered trademark of Heatilator Inc., Division, HON INDUSTRIES.

WARNING

THIS HEATILATOR 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 PRIOR TO STARTING YOUR INSTALLATION AND FOLLOW THEM CAREFULLY THROUGHOUT YOUR PROJECT.
II. DESCRIPTION OF THE FIREPLACE SYSTEM

The HEATILATOR® fireplace system consists of the following:

1. Fireplace
2. Hearth Extension
3. Chimney System
4. Roof Termination
5. Integral Grate

Optional components include:

1. Glass Doors
2. Outside Combustion Air System

THE FIREPLACE SYSTEM COMPONENTS

The table below, together with the following pictures, show only those components which may be safely used with this fireplace.

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>TD46A</td>
<td>Fireplace</td>
</tr>
<tr>
<td>GD46A</td>
<td>Glass Doors - Clear-View, Antique Solid Brass</td>
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<tr>
<td>GD46B</td>
<td>Glass Doors - Clear-View, Bright Solid Brass</td>
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<td>GD46TD</td>
<td>Glass Doors - Bifold, Antique Solid Brass</td>
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<tr>
<td>GR20</td>
<td>Integral Grate (included with Fireplace)</td>
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<tr>
<td>SS14</td>
<td>Standoff Skirt Kit</td>
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<tr>
<td>AK13</td>
<td>Air Kit - Outside Air</td>
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<tr>
<td>ID4</td>
<td>Insulated Duct/Outside Air</td>
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<tr>
<td>UD4</td>
<td>Uninsulated Duct/Outside Air</td>
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<tr>
<td>SL406</td>
<td>Chimney Section - 6 inch long</td>
</tr>
<tr>
<td>SL412</td>
<td>Chimney Section - 12 inch long</td>
</tr>
<tr>
<td>SL418</td>
<td>Chimney Section - 18 inch long</td>
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<tr>
<td>SL436</td>
<td>Chimney Section - 36 inch long</td>
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<tr>
<td>SL448</td>
<td>Chimney Section - 48 inch long</td>
</tr>
<tr>
<td>SL4</td>
<td>Chimney Stabilizer</td>
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<tr>
<td>SL430</td>
<td>Chimney Offset/Return - 30° (See NOTE)</td>
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<tr>
<td>FS544</td>
<td>Firestop - Straight</td>
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<tr>
<td>FS546</td>
<td>Firestop - 30°</td>
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<tr>
<td>FS548</td>
<td>Attic Firestop</td>
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<tr>
<td>JB577</td>
<td>Chimney Joint Band</td>
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<td>CB576</td>
<td>Chimney Bracket</td>
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<td>RT492</td>
<td>Telescoping Chimney Terminal Cap - Round</td>
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<tr>
<td>RT494</td>
<td>Chimney Terminal Cap - Round</td>
</tr>
<tr>
<td>ST475</td>
<td>Chimney Terminal Cap - Square</td>
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<tr>
<td>CT56</td>
<td>Chase Top</td>
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NOTE: When offsetting, the first Chimney Section above the firebox must be an SL412, or a Chimney Section of greater length. The Offset/Return cannot be placed directly on top of the TD46A Fireplace.
CHIMNEY SECTIONS

<table>
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<tr>
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<td>SL436</td>
<td>36”</td>
</tr>
<tr>
<td>SL448</td>
<td>48”</td>
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</table>

CHIMNEY STABILIZER

| 10” |

OFFSET/RETURN

| 30° |

| 21” |

| 13” |

| 10” |

SL4

SL430

FIRESTOP SPACERS

<table>
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<tr>
<th>STRAIGHT &amp; 30° FIRESTOPS</th>
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<tbody>
<tr>
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<tr>
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FS548
ATTIC FIRESTOP
CHIMNEY TERMINAL CAPS & TERMINATIONS

RT492
ROUND TERMINAL CAP

RT494
ROUND TERMINAL CAP

ST475
SQUARE TERMINAL CAP

CHASE TOP

CT56
III. FIREPLACE LOCATIONS, SPACE AND CONSTRUCTION REQUIREMENTS

The fireplace may be located as shown in Figure 1.

![Diagram of fireplace locations]

Figure 1
Fireplace Locations

Figures 2 and 3 show installations assuming outside air ducts with allowance for making 90° bends. Less space is required when ducting goes directly outside without forming elbows.

![Diagram of installation along a wall or an exterior chase]

Figure 2
Installation along a wall or an exterior chase.

![Diagram of corner installation]

Figure 3
Corner Installation

<table>
<thead>
<tr>
<th>WITHOUT OUTSIDE AIR</th>
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<table>
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<td>CAT. NO.</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>TD46A</td>
</tr>
</tbody>
</table>

ALL DIMENSIONS IN INCHES

**WARNING**

WHEN LOCATING THE FIREPLACE IN A SPACE PROJECTING INTO A GARAGE, THE OUTSIDE AIR MUST NOT BE TAKEN FROM THE GARAGE SPACE. 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 FOR SMOKING OR FLOW REVERSAL.
Figure 4 shows the framing of the TD48A, assuming combustible materials are used. The vertical framing must extend from floor to ceiling, with no horizontal members projecting from front to back above the fireplace, except at the ceiling level. Chimney sections at any level require a minimum air space of two inches to the enclosure, including any framing, for the total chimney height.

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.

NON-COMBUSTIBLE MATERIAL MUST BE USED FROM THE TOP OF THE FIREPLACE TO THE HEADER USE THE FRONT UPPER BOARD (NON-COMBUSTIBLE MATERIAL) SUPPLIED WITH THE FIREPLACE

2" MINIMUM AIR SPACE CLEARANCE TO ENCLOSURE

1" x 4" HEADER

8 FT.

HEADER HEIGHT
49 5/8"

FLOOR LEVEL

METAL STRIP TWO INCHES UNDER EDGE OF FIREPLACE AND HEARTH EXTENSION

2 FT. MIN. TO COMBUSTIBLE WALL PERPENDICULAR TO FIREPLACE OPENING

HEARTH EXTENSION

Install the front upper board (non-combustible material) between the top of the fireplace and the header. After completing the framing and before applying the facing material over the framing, a non-combustible sealant, one-half inch wide maximum, must be used to close off any gaps at the top and sides between the fireplace and facing, to prevent cold air leaks. A mantel of combustible material may be installed no less than 56 1/2 inches above the platform or floor upon which the fireplace is located. The mantel may extend no more than 10 inches from the wall.

Combustible materials cannot be used to cover the black fireplace front or the non-combustible front upper board. Non-combustible materials may be used to cover these areas, but must not restrict the airflow to or from the front of the unit in any manner. The following is a description of materials specified in these instructions:
Combustible Material. Material made of or surfaced with wood, compressed paper, plant fibers, plastics, or other material that will ignite and burn, whether flameproofed or not, or whether plastered or unplastered.

Non-combustible Material. Material which will not ignite and burn, such materials consisting entirely of steel, iron, brick, tile, concrete, slate, asbestos, glass or plasters, or combination thereof.

Non-combustible Sealant Material. General Electric RTV103 (Black), or equivalent. Rutland, Inc. Fireplace Mortar #63, or equivalent.

WARNING

DO NOT APPLY FINISH MATERIALS OVER THE TOP AND BOTTOM AIR INLET SLOTS NEAR THE GLASS DOOR OPENING ON THE FACE OF THESE FIREPLACES. THIS WILL BLOCK THE FLOW OF COOLING AIR AND MAY CAUSE DANGEROUSLY HIGH TEMPERATURES ON THE FIREPLACE AND COMBUSTIBLE SURFACES, AND MAY RESULT IN A STRUCTURE FIRE.

Figure 5
Minimum Dimensions - Field Constructed Hearth Extension

Field constructed hearth extensions must be constructed in accordance with the following instructions. A typical construction is shown in Figure 5. In all cases of field construction, a minimum dimension of 20" to the front and extending 12" on either side of the fireplace opening must be used, and gaps must be sealed with non-combustible (sand-cement) grout.

Figure 6
Field Constructed Hearth Extension
NOTE: MICORE CV230 is manufactured by U.S. Gypsum Corporation. Conwed Spec 300 is manufactured by Conwed Corporation. Hearth extensions may be fabricated using any non-combustible insulating material at least 1¼” thick with a K value (thermal conductivity) of .48 or lower. Field constructed hearth extensions must also meet requirements specified above and in Figure 5.

A second alternative to the cement block construction shown in Figure 6A is as follows:

1. Three 1/2” layers of non-combustible, inorganic material equivalent to millboard having a thermal conductivity of \( K = 0.68 \text{ BTU-IN.} / \text{SQ.FT.-HR.-°F.} \).
2. Apply one course common brick on edge over the material described in STEP 1.
3. A minimum dimension of 20” to the front, and extending 12” on either side of the fireplace opening must be maintained.
4. The platform shown in Figure 6 is not required for this construction.

The constructions illustrated in Figures 6A and 6B may require that the fireplace or hearth extension be raised on a platform. A protector strip (metal) must be used between the fireplace and the field constructed hearth extension. Depending on the construction, a special shape may be needed. Each horizontal leg must be 2” wide and the length must be at least equal to the length of the protector strip (metal) provided with each fireplace. The fireplace must rest on a continuous, level surface.

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**WARNING**

HEARTH EXTENSIONS ARE TO BE INSTALLED ONLY AS ILLUSTRATED TO PREVENT HIGH TEMPERATURES FROM OCCURRING ON CONCEALED COMBUSTIBLE MATERIALS. METAL 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.

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When planning your fireplace location, the chimney construction and necessary clearance must be considered. Figure 7 illustrates a typical one floor with attic space installation in which joists and rafters may require modification. The fireplace system and chimney components have been tested to provide the following flexibility in construction.

- Minimum straight height: 15 ft.
- Minimum height with Offset/Returns: 18 ft.
- Maximum height: 90 ft.
- Maximum chimney length between an Offset/Return: 8 ft.
- Maximum distance between Chimney Stabilizers: 35 ft.
- Double Offset/Return minimum height: 24 ft.
- Maximum unsupported chimney length between Offset/Return: 6 ft.
- Maximum straight unsupported chimney height above firebox: 25 ft.
Joint Bands must be used at every joint between an Offset and Return.

If Outside Combustion Air is used, Figure 8 illustrates only two of many possible locations - a basement fireplace with a maximum vertical height, and a direct exit from the fireplace side.

**Figure 7**

Ceiling and Attic Construction

**Figure 8**

Outside Air Locations

NOTE: A 6' minimum height in a straight chimney installation (and 10' in an Elbow installation) must be maintained from the top of the uppermost Chimney Section to the Outside Combustion Air inlet.

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:

1. If the horizontal distance from the side of the chimney to the peak of the roof is 10 feet or less, the top of the chimney must be at least 2 feet above the peak of the roof, but never less than 3 feet in height above the highest point where it passes through the roof. See Figure 9.
2. If the horizontal distance from the side of the chimney to the peak of the roof is more than 10 feet, a chimney height reference point is established on the surface of the roof a distance of 10 feet from the side of the chimney in a horizontal plane. The top of the chimney must be at least 2 feet above this reference point, but never less than 3 feet in height above the highest point where it passes through the roof. See Figure 10.

These chimney heights are necessary in the interest of safety and do not assure smoke-free operation. Trees, buildings, adjoining roof lines, adverse wind conditions, etc., may require a taller chimney should smoking occur.

SELECTING THE CHIMNEY COMPONENTS

Figure 11A illustrates the height from the bottom of the fireplace to the top of the chimney adapter. Proper assembly of Air Cooled Chimney Sections results in an overlap at chimney joints of 1/4”.

For Offset/Return installations, Figure 11B illustrates the minimum height from the bottom of the fireplace to the top of the first Chimney Section, SL412. An arrangement, using either an SL412, SL418, SL436 or SL448 as the first Chimney Section, is required when Offsets/Returns are used anyplace in the system.

Figure 12 and Table 1 enable selection of the appropriate chimney components when using Offsets and Returns.

1. Determine amount of offset required to extend the chimney through a wall or around an obstacle. See Figure 12, dimension “A”.

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**Figure 9**
Chimney Height

**Figure 10**
Chimney Height

**Figure 11**
Fireplace (Side View)

**Figure 12**
Chimney Offset/Return
2. Refer to the following 30° offset chart and find the "A" dimension closest to but not less than the amount of offset required in your installation.

![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.**

3. Find the "B" dimension on the chart and determine if it is compatible with your installation.

4. Read across the chart and find the Catalog Number and number of Chimney Sections required.

5. Refer to the Step-By-Step Installation Instructions following the chart.

6. All joist areas must be Firestopped.

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**TABLE 1**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>SL406</th>
<th>SL412</th>
<th>SL418</th>
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4-28-86 A  12.  11117
IV. STEP-BY-STEP INSTALLATION OF THE FIREPLACE SYSTEM

**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.

☐ **STEP 1**

Position the fireplace and nail wood blocks along the sides to prevent the fireplace from shifting (blocks must be removed later).

☐ **STEP 2**

Slide the metal strip two inches under the front edge of the fireplace. See Figure 4. When the metal strip is not provided as a single piece, then the individual pieces must overlap each other approximately one inch.

☐ **STEP 3**

Level the fireplace side-to-side and front-to-back. Shim with non-combustible material as necessary. Secure the fireplace by utilizing the nailing flanges located on either side of the fireplace.

☐ **STEP 4**

Assemble either a straight Pipe Section or an Offset to the fireplace. Always secure all Offsets with the screws provided.

**WARNING**

FOLLOW THE INSTRUCTIONS FOR ASSEMBLY OF THE PIPE AND OTHER PARTS, WHICH ARE PACKED WITH EVERY PIPE SECTION AND ALL OTHER COMPONENTS 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.

☐ **STEP 5**

Mark and cut out an opening in the ceiling for the particular Firestop Spacer being utilized. Frame the opening with the same size lumber used in the ceiling joists. See Chapter 25 of the Uniform Building Code for general construction requirements when "Framing Around Openings".

☐ **STEP 6**

Install the Firestop Spacer FS544 (Straight), or FS546 (30° Offset, if Offset is located in the ceiling joist area). These Firestop Spacers are designed to provide the minimum two inch air space around the chimney. In all situations, the Firestops are to be nailed to the ceiling joists from the bottom or fireplace side, EXCEPT, when the space above the ceiling is an attic space. In this situation, an FS548 Attic Firestop must be nailed from the attic side to ensure against loose or later blow-in type insulation from falling into the required two inch air space around the chimney. Refer to the respective Firestop Spacer Installation Instructions. Firestop Spacers must be used at all ceiling levels where the chimney penetrates a living space.
STEP 7
Continue assembling Chimney Sections up through the Firestop Spacers as needed. Check height and unsupported chimney length limitations described earlier.

STEP 8
When Offsets/Returns are joined to straight Pipe Sections, they must be locked in position with the size 10 sheet metal screws provided, using the predrilled holes. Offsets/Returns and Chimney Stabilizers have straps for securing these parts to joists or rafters. Plumbers tape may be purchased locally and used in conjunction with Joint Bands to secure the chimney as an alternate method. Chimney Brackets may be used to stabilize the chimney. See Figures 13 and 14.

![Figure 13](image1)
Chimney with Stabilizer

![Figure 14](image2)
Offset/Return Installation

**WARNING**
WHEN CHIMNEY SECTIONS EXCEEDING 6 FEET IN LENGTH ARE INSTALLED BETWEEN AN OFFSET/RETURN, STRUCTURAL SUPPORT MUST BE PROVIDED TO REDUCE OFF-CENTER LOADING AND PREVENT CHIMNEY SECTIONS FROM SEPARATING AT THE CHIMNEY JOINTS.

STEP 9
Locate the point where the chimney will exit the roof by plumbing down to the center of the chimney. Drive a nail through the roof to mark the center.

STEP 10
Measure to either side of the nail and mark the 17" x 17" opening required. This 17" x 17" 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.
STEP 11
Continue to add Chimney Sections through the roof opening, maintaining at least a 2" air space.

STEP 12
Construct a chase for the fireplace and chimney or for the chimney only. A chase is an enclosure around the system which is most commonly constructed on an outside wall as shown below.

Figure 15
Chase Constructions

A variety of materials may be used to construct the chase including brick, stone, or any standard siding material. The following are important considerations when constructing a chase enclosure:

1. The enclosed area under the Chase Top must be ventilated to remove excess heat build-up.
2. Maintain a 2" air space around the Chimney Sections.
3. The Chase Top must be constructed from non-combustible materials.
4. The walls of the chase enclosure must be insulated to prevent excessive heat loss through the fireplace.

The Chase Top should be constructed in the following manner:

(a) The minimum Chase Top dimension shown in Figure 16 must be maintained when forming a 2" flange.

NOTE: A 28" x 28" minimum Chase Top dimension assumes a chase exterior dimension of 25" x 25" minimum. Therefore, a 3" minimum larger Chase Top must be formed for any chase exterior dimension. See Figure 18 for additional detail.

(b) Attach the Chase Top spacers as shown in Figure 17. These spacers may be cut from any 1½" thick material such as 2x4 framing lumber.

Figure 16
Chase Top
(c) Attach either a wire mesh or an expanded metal screen of 1/2" x 1/2" or less opening size and total opening not less than 74%, to the inside edges of the chase to a height equal to the Chase Top spacer height (1 1/2"), to cover the entire opening that will be created by this spacer.

(d) Install Chimney Sections to a minimum of 4" above the Chase Top collar.

(e) Insert the Chase Top over the Chimney Section and nail it in place. See Figures 17 and 18. The Chase Top collar must be centered with the chimney center before you secure the Chase Top to these spacers.

(f) Install the Storm Collar over the top Chimney Section to prevent water leakage, tighten the Storm Collar and caulk all seams.

(g) Attach an RT494 Round Terminal Cap to the top Chimney Section and secure it, or slip the Telescoping Round Terminal Cap RT492 over the top Chimney Section and secure it to the Chase Top (use of an RT492 requires the top Chimney Section to be terminated in a range of 15" under the Chase Top to 3" above the Chase Top). If an ST475 Square Terminal Cap is to be installed, install the Chase Top as described above, however, the top Chimney Section must be terminated in a range of 4 1/2" under the Chase Top to 1 1/2" above the Chase Top. Follow the Installation Instructions packaged with the Square Terminal Cap.
WARNING
CHASE CONSTRUCTIONS AND CHIMNEY TERMINATIONS SHOWN IN FIGURE 15, AND THE METHODS DESCRIBED ABOVE, ARE THE ONLY SAFE METHODS FOR INSTALLATION OF THIS FIREPLACE SYSTEM. DETAILED INSTRUCTIONS FOR INSTALLATION OF THE CHASE TOP, STORM COLLAR AND TERMINAL CAP ARE FOUND 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 COMBUSTIBLE ENCLOSURE AND BETWEEN CHASE AND CHASE TOP. TO PROTECT AGAINST EFFECTS OF METAL CORROSION OF PARTS SUCH AS CHASE TOP AND THOSE ABOVE CHASE TOP, FIRST WASH THEM WITH A SOLVENT OR VINEGAR, RINSE WITH WATER, AND THEN PAINT WITH A RUST RESISTANT PAINT.

☐ STEP 13
Frame the fireplace enclosure, allowing space for outside air ducts and gas piping if desired. Install the front upper board (non-combustible material supplied with the fireplace) on the top of the fireplace, placing the bottom edge into the channel. The edges of the front upper board should extend approximately 3/4” beyond each side of the fireplace and approximately 3/4” onto the header. Nail the front upper board into position. NOTE: The header height must be maintained at 49 3/8” from the bottom of the unit and should rest on the standoffs on the top of the unit. Care must be taken with any electrical wiring to avoid exposure to high temperatures or mechanical damage to wire insulation. A minimum clearance of 1 1/2” must be maintained between the fireplace sides and back and the combustible enclosure. Check to make sure blocks from STEP 1 have been removed.

☐ STEP 14
Knockouts are provided on the left hand side refractory to allow for connection of a decorative gas appliance, in accordance with the National Fuel Code, ANSI Z223.1-1980. This side refractory is designed to allow 1/2” iron pipe to pass through. Use a non-combustible 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.

CAUTION
1. WHEN USING THE DECORATIVE APPLIANCE, THE FIREPLACE DAMPER MUST BE SET IN THE FULLY OPEN POSITION.
2. A FULLY OPEN DAMPER ENSURES PROPER VENTING OF COMBUSTION PRODUCTS.

☐ STEP 15
Install Outside Air if desired or required by local code, using the Instructions supplied with the AK13 Air Kit.

NOTE: If Insulated Duct for Outside Air, Catalog Number ID4, is used, the studs will compress the side of the Insulated Duct about 3/4 inch. Insulated or Uninsulated Duct, UD4, must be ordered separately. In some installations, more than one piece of the duct material may be required. Duct sections should be joined securely.
CAUTION
SIGNIFICANT COLD AIR MAY INFILTRATE THROUGH THE DUCT OR OTHER PARTS OF THIS SYSTEM. TO GUARD AGAINST THIS, CHECK FOR LIGHT LEAKS WITH A FLASHLIGHT AND SEAL THESE WITH DUCT TAPE AND/OR INSULATION.

☐ STEP 16
Install Glass Doors if desired, using the instructions supplied with these optional accessories. Protect Glass Doors from breakage by temporarily removing them until all construction is complete.

☐ STEP 17
Position the Hearth Extension over the metal protective strip which should project two inches in front of the fireplace bottom front. See Figure 4. Seal the crack between the Hearth Extension and fireplace with a non-combustible (sand-cement) grout.

☐ STEP 18
Apply the finish materials of your choice. Do not install combustible materials over the black face of the fireplace or over the cooling air inlet slots in the firebox opening. You may use non-combustible material over the black vertical face of the fireplace.

☐ STEP 19
This fireplace is equipped with a factory installed Integral Grate. In the event it becomes necessary to replace it, remove the pins from both ends of the back horizontal bar, using a vise grip to pull them free. Slide the Grate to one side so the opposite end clears the hub. Your new Grate will be supplied with new pins. Remove these pins and slide the Grate into the hubs located in each side refractory (one side at a time), and replace the pins on both ends of the Grate bar. Use only Catalog Number GR20 Integral Grate for replacement.

☐ STEP 20
Prior to building your first fire in your fireplace, please read the "Operating Instructions" section that follows.

WARNING
DO NOT PACK REQUIRED AIR SPACES WITH INSULATION OR OTHER MATERIALS. THIS PREVENTS THE NATURAL CONVECTION COOLING WHICH MUST TAKE PLACE. THE REQUIRED CLEARANCES ARE TO THE ENCLOSURE AND SHOULD NOT BE REDUCED BY THE ADDITION OF OTHER MATERIALS WHETHER OF NON-COMBUSTIBLE OR COMBUSTIBLE MATERIAL. COMBUSTIBLE MATERIALS AS WELL AS THE NON-COMBUSTIBLE MATERIALS USED IN THE FIREPLACE MAY HAVE THEIR USEFUL LIFE REDUCED.
OPERATING INSTRUCTIONS

NOTICE
SAVE AND PASS THESE OPERATING INSTRUCTIONS AND THE INSTALLATION INSTRUCTIONS TO SUBSEQUENT 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.

CAUTION
EDGES ARE SHARP. HAND PROTECTION IS RECOMMENDED.

Before starting a fire in your new or existing fireplace, use the following check list:

A. FLUE DAMPER. When the damper handle is raised out of the closed position, the handle should move toward the full open position. Verify by looking up from the inside of the firebox. Always operate this fireplace with the damper fully open. Please note, downdrafts, obstructions, damage or poor (wet) fuels can cause smoke spillage.

WARNING
DO NOT MODIFY THE DAMPER CONTROL BY PROVIDING INTERMEDIATE NOTCHES NOT SUPPLIED BY THE FACTORY. THIS CAN RESULT IN SEVERE OVERTEMPERATURES AND POSSIBLE FIRE. THE FIREPLACE MUST BE OPERATED WITH THE DAMPER IN THE FULL OPEN POSITION.

B. CHIMNEY INSPECTION. Visually inspect the chimney internally for obstructions and construction damage. Flue pipe joints and seams must be continuous and mechanically tight. In a used chimney, additional inspection is needed for the following:

"Creosote - Formation and Need for Removal.

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 monthly during the heating season to determine if creosote build-up has occurred.

If creosote has accumulated, it should be removed to reduce the risk of a chimney fire."
C. CHIMNEY CLEANING. If you do detect a build-up of creosote, contact a qualified chimney sweep or clean it yourself.

1. Open the damper.
2. Hang a damp sheet across the fireplace opening to stop dirt and soot from entering the room.
3. Remove the Terminal Cap. See Figure 1.
4. Clean with a stiff bristled brush attached to a pole.

OR

4A. Tie a rope to a burlap bag filled with straw and several stones. Work up and down the flue until clean.
5. Replace the Terminal Cap.

![Figure 1](image)

**Figure 1**
Terminal Caps

D. CLEAR SPACE NEAR FIREPLACE. The Hearth Extension must extend at least 20 inches to the front and 12 inches on either side of the firebox opening. Combustible materials must not be stored in this area. Combustible walls perpendicular to the front of the fireplace must be at least 2 feet from the fireplace opening. Room furnishings such as drapes, curtains, chairs, or other combustibles must be at least 4 feet from the open front of the fireplace.

E. 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. See Figure 2. Use only Catalog Number GR20 Integral Grate for replacement.

![Figure 2](image)

**Figure 2**
Section Through Fireplace
F. INLET AIR OPENING. Slots are provided near the Glass Door opening on the upper and lower face of this fireplace, which serve as cooling air inlets.

**CAUTION**

DO NOT APPLY FINISH MATERIALS OVER THE TOP AND BOTTOM AIR INLET SLOTS NEAR THE GLASS DOOR OPENING ON THE FACE OF THESE FIREPLACES. THIS WILL BLOCK THE FLOW OF COOLING AIR AND MAY CAUSE DANGEROUSLY HIGH TEMPERATURES ON THE FIREPLACE AND COMBUSTIBLE SURFACES, AND MAY RESULT IN A STRUCTURE FIRE.

G. 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 as might occur when overfilling the fireplace with empty boxes or branches. Only those Glass Door units specifically tested and listed for use with the specific fireplace model should be used. Screens should be closed when the Glass Doors are closed.

H. OUTSIDE AIR. A damper allows individual control of the Outside Air inlets if your fireplace is equipped with this option. In a tightly sealed or well insulated home, replacement of combustion air is necessary to keep harmful gases from entering living spaces.

**CAUTION**

FIREPLACE OPERATION DOES REQUIRE AIR. DO NOT TAKE AIR FROM OTHER FUEL BURNING APPLIANCES WHICH CAN RESULT IN IMPROPER VENTING (SMOKING) OR AIR DILUTION. ALWAYS PROVIDE ADEQUATE MAKE-UP AIR.

I. SETTING THE FIRE. Check the flue damper to be sure it is fully open. Place crumbled or twisted paper under the Grate. Loosely arrange kindling or small pieces of wood to form a layer above the paper. Place three logs in a rough pyramid as shown in Figure 2, being sure to allow free air space between the logs. Small sticks of wood may be used to separate the logs. NOTE: When heated the first time, the temperature of the fireplace must be raised gradually, to prevent moisture within the refractory from causing cracks, and to allow the binders in the insulation to dissipate.

**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 WHILE IT IS IN USE TO AVOID THE RISK OF FIRE.
J. 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 non-combustible 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 cinders have thoroughly cooled.

K. GLASS DOORS. Most efficient fireplace operation using Glass Doors is with the Doors open, as can be felt when standing in front of the fireplace. When not burning the fireplace, Glass Doors will prevent loss of room heat through the chimney. Only HEATILATOR® Glass Doors, Catalog Numbers GD46A, GD46B or GD46TD may be used.

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<tr>
<td>FIREPLACES EQUIPPED WITH DOORS SHOULD BE OPERATED ONLY WITH DOORS FULLY OPEN OR DOORS FULLY CLOSED. IF DOORS ARE LEFT PARTLY OPEN, GAS AND FLAME MAY BE DRAWN OUT OF THE FIREPLACE OPENING, CREATING RISKS OF BOTH FIRE AND SMOKE.</td>
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L. OPERATING YOUR FIREPLACE.

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<td>CONTINUED OVERFIRING CAN PERMANENTLY DAMAGE YOUR FIREPLACE SYSTEM. EXAMPLES OF OVERFIRING ARE:</td>
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1. QUANTITIES OF SCRAP LUMBER, PINE BRANCHES OR CARDBOARD BOXES WHICH EXCEED THE VOLUME OF THE "NORMAL LOG FIRE". THESE MATERIALS PRODUCE MANY SPARKS AND MUST NOT BE USED.

2. THE "NORMAL LOG FIRE" IS THREE LOGS, EACH FOUR INCHES IN DIAMETER, WITH THE LENGTH NO GREATER THAN THE BACK WALL OF THE FIREPLACE. THE RATE OF FIRING MUST NOT EXCEED THESE THREE LOGS PER HOUR.

M. SAFETY - A FINAL WORD. Fireplaces as well as other woodburning appliances have been used safely for many years. Our own experience is that most problems are caused by improper installation, fueling, and operating. All dimensions specified are minimum and increasing distances to combustibles decreases risk. Such common practice as surrounding the fireplace with loose fill insulation, and especially leaving the fire unattended, will increase the risk of fire.
Attention
Fireplace Installer:

Please return operating and installation instructions to the firebox for consumer use.

heatilator
THE WOODBURNING SPECIALISTS