

**2. Chase Top**

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

**3. Termination Cap**

- a. Install the chimney sections up through the chase enclosure. When using a TR344 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 20.
- b. For installations utilizing a TR342 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 21.

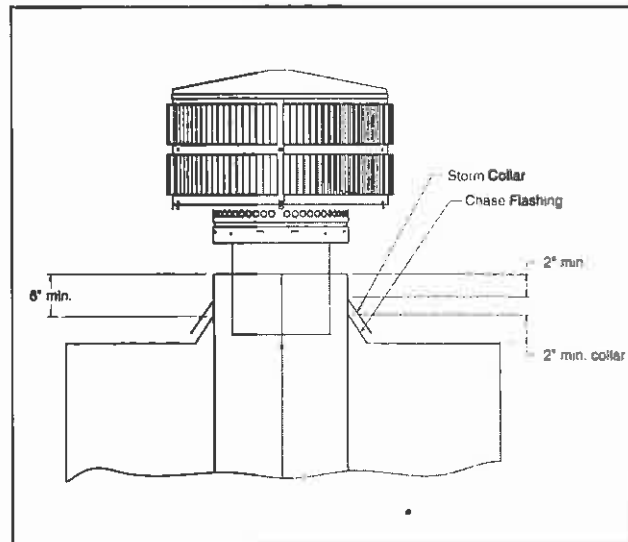


Figure 20 - Installing a TR344 Round Termination Cap

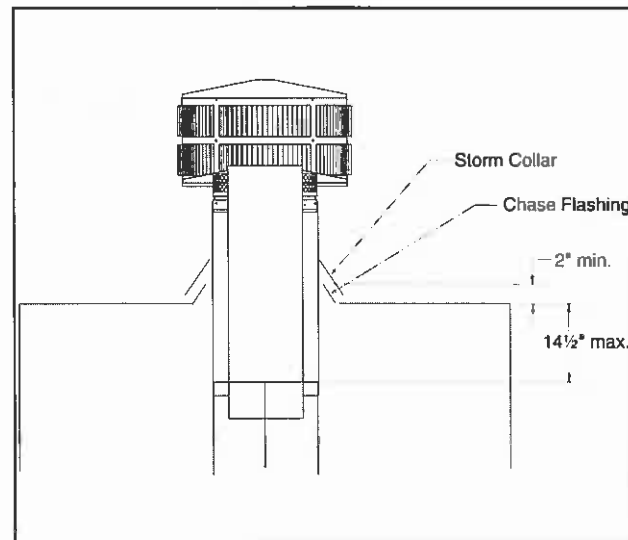
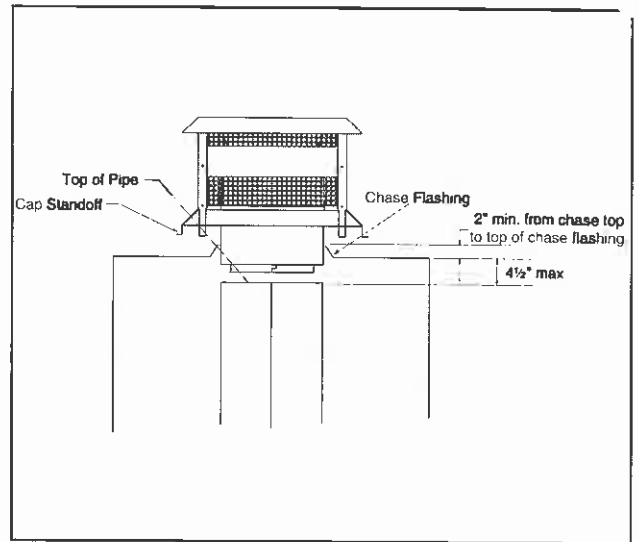


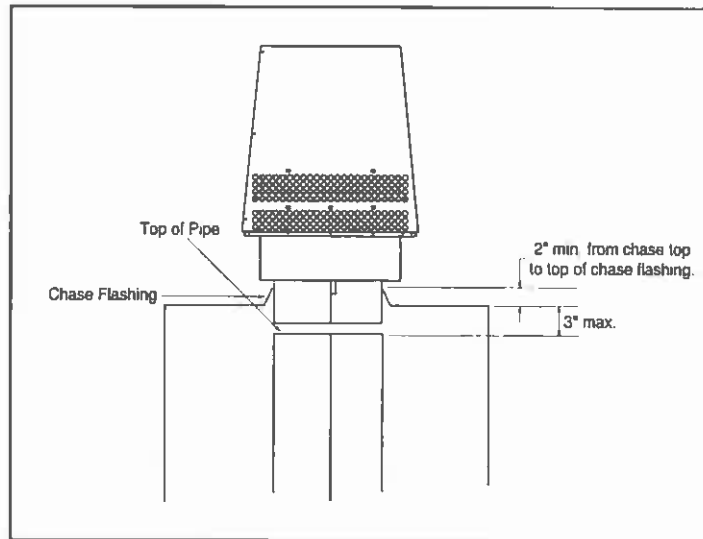
Figure 21 - Installing a TR342 Round Telescoping Termination Cap

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- c. For installations utilizing an ST375 square termination cap the last chimney section must not be more than 4½" below the chase top. See Figure 22.
- d. For installation utilizing a TS345/TS345P Square Termination Cap, the uppermost chimney section must not be more than 3" below the chase top. See Figure 23.
- e. Attach the chase top (CT35) to the top of the chase.
- f. Attach the chase top to the top of the chase.
- g. Install the termination cap following the instructions provided with it.



**Figure 22 - Installing an ST375 Square Termination Cap**



**Figure 23 - Installing a TS345/TS345P Square Termination Cap**

**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.

## H. 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.

### 1. General Information

This fireplace is intended to operate as a supplemental heat source. It is not designed to function as a primary heat source for a structure.

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.

#### WARNING!

**DO NOT** operate this fireplace with the flue damper in the closed position. Combustion products must vent up the chimney system to prevent carbon monoxide poisoning, and to prevent hot combustion gases from contacting and overheating combustible surfaces. Failure to operate this fireplace with the damper in the open position may result in asphyxiation or a structure fire.

### 2. Outside Air

A source of air (oxygen) is required in order for combustion to take place. Whatever air is consumed by the fire must be replaced through cracks around windows, under doors, etc. Most newly constructed houses or existing homes fitted with tightly sealed doors and windows are relatively air tight. In this case, an outside air source must be made available to feed combustion air from outside the home.

A damper control handle allows the individual control of the outside air inlet if your fireplace is equipped with this option. Use of outside air for combustion is highly recommended to conserve heated air within the structure and to provide make up air to keep the fireplace venting properly.

This fireplace will operate correctly only if adequate ventilation is provided to allow proper draft to the fireplace system. Hearth & Home Technologies assumes no responsibility for the improper performance of the fireplace system caused by inadequate draft due to environmental conditions, down drafts, tight sealing construction of the structure, or mechanical exhausting devices which create a negative air pressure within the structure where the fireplace is located.

#### 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 makeup air.**

### 3. 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.

#### 4. 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.

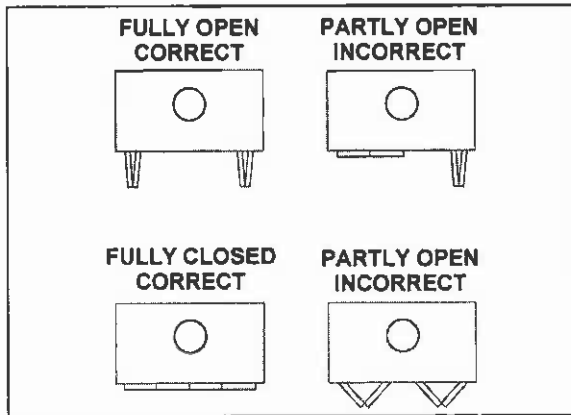


Figure 24  
Proper Operating Positions of Bi-Fold Doors

#### 5. 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.

#### 6. 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".

#### 7. 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. Hardwood can then 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.

**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.

**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.

## 8. 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.**

## 9. Draft Problems

**Note:** When first lighting your fireplace, it may be necessary to pre-warm the flue to establish a draft. This is done by holding a rolled up piece of burning newspaper under the flue damper for a few moments. This will help reduce smoke spillage during start-up.

This fireplace will operate correctly only if adequate ventilation is provided to allow proper draft to the fireplace system. Hearth & Home Technologies assumes no responsibility for the improper performance of the fireplace system caused by inadequate draft due to environmental conditions, down drafts, tight sealing construction of the structure or mechanical exhausting devices which will create a negative air pressure within the structure where the fireplace is located.

Flue draft is measured as negative pressure in the chimney. The amount of negative pressure determines how strong the draft is. The draft is important because it draws the combustion air into the fireplace and pulls the smoke out of the chimney.

There are three basic criteria essential in establishing and maintaining flue draft:

- Availability of combustion air.
- Heat generated from the fire.
- Diameter and height of the flue system.

These three factors work together as a system to create the flue draft. Increasing or decreasing any one of them will affect the other two and thus change the amount of draft in the entire system. See Figure 25.

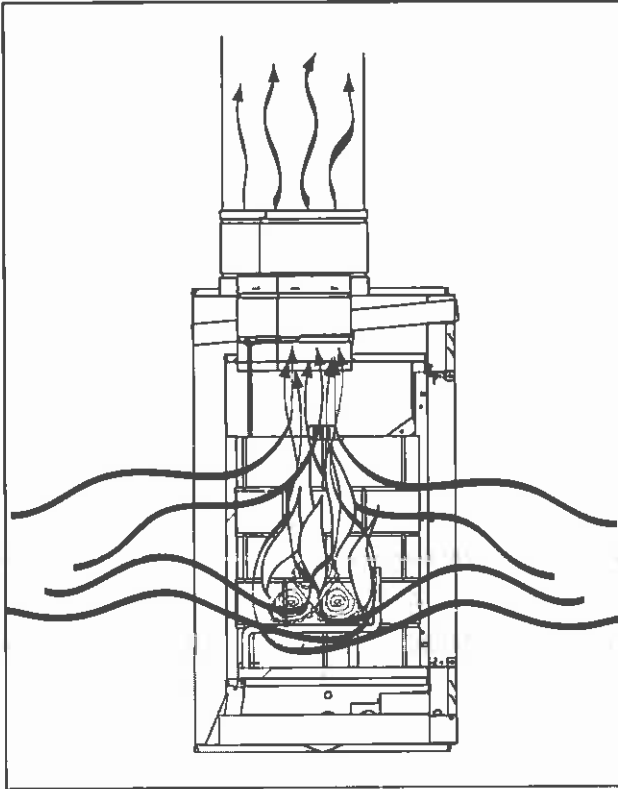


Figure 25 - Flue Draft

If the fire is hard to start and smoke spills out of the fireplace, or you find it difficult to establish and maintain a moderately high burn rate, then the flue draft is too low and corrective measures must be taken.

Be sure you have air available for combustion and that your firewood is dry and well seasoned. Build your fires properly and according to the instructions given in operating instructions, "Starting a Fire". Be sure your flue system is installed correctly and that it is the proper diameter and height. Check for the following:

- All chimney sections are properly installed and the joints are tightly sealed.
- The chimney is clean and free of creosote buildup.
- Make sure overhanging trees and branches are cut back within ten feet of the top of the chimney.
- Ensure the chimney cap is clean and free of any buildup of soot or creosote.

If you still suspect you have a low draft problem it may be necessary to increase the volume of air in your flue system. Since the diameter of your flue system is matched with the size of the flue collar and should not be changed, then the height of the system must be increased. Add chimney sections a little at a time until the draft improves.

In some cases, regardless of what you do, it can still be difficult to establish the proper flue draft. This is especially evident when using an exterior factory built chimney or exterior masonry chimney. Try placing several sheets of crumpled paper on top of your kindling as close to the flue outlet of the fireplace as possible. Light this paper first then the paper under the kindling. The heat generated from the rapidly burning paper on top of the kindling should help get the draft established.

Still other factors can affect how well your flue system performs. Neighboring structures, high winds, tall trees, even hillsides can affect air currents around the chimney. Well designed chimney caps are available that can help. Your fireplace dealer is the local expert in your area. He can usually make suggestions or discover problems that can be easily corrected allowing your fireplace to operate correctly as it has been designed, providing safe and economical heat for your home.

## I. 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 mechanically 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:

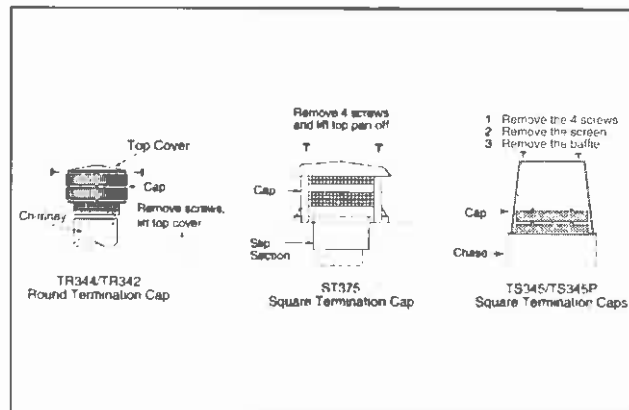
- Open the damper.
- Hang a damp sheet across the fireplace openings to stop dirt and soot from entering the room.
- Remove the termination cap or housing top. See Figure 26.
- Clean with a stiff nylon brush attached to a pole OR tie a small burlap bag filled with straw and several small stones or sand. Work up and down the flue until the flue is clean.
- Replace the termination cap or housing top.

#### 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.

### 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.



**Figure 26**  
Chimney and Termination Cap Cleaning

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## HOMEOWNER'S NOTES

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## Index

### A

Air Clearance 17, 19  
 Air Kit Handle Location 18  
 Ashes, Disposal of 29  
 Attic Insulation Shield 17

### B

Building Codes 4, 18, 21

### C

Chase 22  
 Chase Top 23  
 Chimney  
   Assembling Sections Through the Roof 18  
   Checking the Assembly 17  
   Cleaning 29  
   Creosote 29  
   Exit Point Through the Roof 18  
   Height Requirements 14  
   Requirements 12  
   Securing the System 17  
 Chimney Air Kit 9, 18  
 Chimney Bracket 8  
 Chimney Requirements 12  
 Chimney Sections  
   Assembling 16  
   Number Required 14  
 Chimney Stabilizer 8  
 Cleaning  
   Disposal of Ashes 29  
 Clearances 11, 19  
 Codes  
   Building 4, 14, 18, 21  
   Gas 19, 25  
 Combustible  
   Material 20  
 Combustible Material 21  
 Components 5  
 Construction 20, 23  
 Creosote 29

### D

Damper 25  
 Description of the Fireplace System 4  
 Dimensions 6  
 Draft 27

### E

Exhaust Products 10

### F

Finishing Material 21  
 Fireplace  
   Enclosure 19  
   Locations 10  
 Firescreen 26  
 Firestop Spacer 8  
   Installation 16  
 Firewood 26  
 Flue 25  
 Framing 11  
 Fuel 26

### G

Gas Codes 19, 25  
 General Information 25  
 Glass Doors 5, 21, 26  
 Grate 26

### H

Hearth Extension 20  
   Positioning 21  
 Hearth Strips 15

### I

Installation  
   Fireplace 15  
 Insulation Shield 8, 17

### J

Joint Band 8

### L

Leveling the Fireplace 15  
 Locations 10

### M

Maintenance 29  
 Mantel 11, 12, 21  
 Material, Sealant 21  
 Metal Hearth Strips 15  
 Moisture Content of Wood 26

### N

Negative Air Pressure 27  
 Noncombustible Material 21  
 Noncombustible Sealant Material 21

### O

Offsets>Returns 13  
 Outside Air 25  
 Outside Air Kit 6, 18  
 Overhead Obstructions 13

### P

Positioning 15  
 Pre-Installation Preparation 10

### R

Roof Flashing 8, 18

### S

Safety 15  
 Sealant Material 21  
 Shroud 9  
 Sidewalls/Surrounds 12  
 Smoke 10  
 Smoke Spillage 25  
 Soot 29  
 Space Requirements 10  
 Standard for Decorative Gas Appliances 19, 25  
 Starting a Fire 27

### T

Ten Foot Rule 14  
 Termination Cap 9, 23  
 Trim Kit 5  
 Typical Fireplace System 4

### U

UL 127 Standards 4  
 Uniform Building Code for Roof Framing  
   Details 18  
 Unvented Gas Log Heater 19, 25

### V

Ventilation 27

### W

Wet Insulation 2  
 Wood  
   Moisture of 26  
 Wood Fuel 26

# heatilator®

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**HEATILATOR WOODBURNING FIREPLACE  
Limited Warranty  
As part of its  
20-YEAR BUYER PROTECTION PROGRAM**

**AS PART OF ITS 20 YEAR BUYER PROTECTION PROGRAM ("PROGRAM"), HEARTH & HOME TECHNOLOGIES INC. ("HHT")** is pleased to offer a Limited Warranty and a Replacement Parts Advantage covering specific components of your Heatilator woodburning fireplace system (the "Fireplace"), installed in the United States of America or Canada. Dealers and employees of HHT have no authority to make any warranty or authorize any remedies in addition to or inconsistent with the terms of this Program.

### **Limited Warranty**

HHT warrants the following components of your Heatilator woodburning fireplace to be free from original defects in material and workmanship during the applicable periods described: five years for the firebox assembly, chimney system and roof termination; two years for refractory firebox liners; and one year for the grate, wire mesh screens, fan system, outside air system, and glass doors. All limited warranty periods run from the date of initial installation of your Fireplace (the "Installation Date"). The Limited Warranty is subject to the conditions, exclusions and limitations of liability listed below.

### **Replacement Parts Advantage**

Under HHT's Replacement Parts Advantage, for a period of twenty years from your Installation Date of your Fireplace, if available, HHT will provide you with repair or replacement parts for defective components which are no longer under their applicable Limited Warranty, at 50% of the then current retail list price for such components. HHT shall have no responsibility for freight and labor charges related to such parts.

### **Conditions, Exclusions, & Limitations of Liability**

- A.** Both the Limited Warranty and Replacement Parts Advantage supplied by HHT apply only while the Fireplace is in its location of original installation. HHT's obligation under this warranty does not extend to damages resulting from (1) installation, operation or maintenance of the Fireplace not in accordance with the Installation Instructions, Operating Instructions, and the Listing Agent Identification Label furnished with the Appliance; (2) installation which does not comply with local building codes; (3) shipping, improper handling, improper operation, abuse, misuse, accident or unworkmanlike repairs; (4) environmental conditions, inadequate ventilation or drafting caused by tight sealing construction of the structure, air handling devices such as exhaust fans or forced air furnaces, or other causes; (5) use of fuels other than those specified in the Operating Instructions; (6) installation or use of components not supplied with the Fireplace or any other components not expressly authorized and approved by HHT; and/or (7) modification of the Fireplace not expressly authorized and approved by HHT in writing. This warranty is limited to only the component parts manufactured or supplied by HHT.
- B.** During the first year of the Limited Warranty, HHT will, at its sole option, repair or replace any covered defective component and will provide replacement parts at no charge. And will pay reasonable labor and freight costs. During the second through the fifth years of the Limited Warranty (if applicable), HHT will provide replacement parts free of charge for any covered defective component, but will not pay for freight or labor costs related to the shipment of the parts or the actual repair or replacement. After the fifth anniversary of the Installation date, HHT's sole obligation and your exclusive remedy is set forth in HHT's Replacement Parts Advantage described above. **In no event shall HHT be liable for any incidental or consequential damages caused by defects in your Fireplace.**
- C. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE WARRANTY SPECIFIED ABOVE.**
- D.** Some states do not allow exclusions or limitations of incidental or consequential damages, so those limitations may not apply to you. This warranty gives you specific rights; you may also have other rights which vary from state to state.

### **How to Obtain Service**

To obtain service under this warranty you must:

1. Send written notice of the claimed condition to Heatilator Technical Service Department, Hearth & Home Technologies, 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641-1563. You may also register your claim online at [www.heatilator.com/contact.asp](http://www.heatilator.com/contact.asp).
2. Provide proof of purchase, model number, serial number, and manufacturing date code to HHT.
3. Provide HHT reasonable opportunity to investigate the claim, including reasonable opportunity to inspect the Appliance prior to any repair or replacement work and before the Appliance or any component of the Appliance has been removed from the place of original installation.
4. Obtain HHT's consent to any warranty work before the work is done.

**ADDITIONAL INFORMATION:** if you would like information on current HEATILATOR products or want to locate a dealer in your area, call 1-800-843-2848.

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