

Heatilator Inc. 1915 W. Saunders Street Mt. Pleasant, IA 52641 a HON INDUSTRIES company

MODEL NX INSTALLATION & OPERATING INSTRUCTIONS FOR RESIDENTIAL USE

I. LISTINGS AND CODE APPROVALS

The NX fireplace system has been tested in accordance with Underwriters Laboratories Inc. Standards, UL127 (6th edition) and Warnock Hersey in accordance with ULC S610, and has been LISTED by them for installation and operation as described in these Installation & Operating Instructions.

Fireplace Catalog Number NX 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, Junction Box Kit and Fan 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 your local distributor/dealer, or Customer Relations Department, Heatilator Inc., 1915 W. Saunders Street, Mt. Pleasant, Iowa 52641. HEATILATOR® is a registered trademark of Heatilator Inc., a HON INDUSTRIES company.

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 BEFORE 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
- Integral Grate

Optional components include:

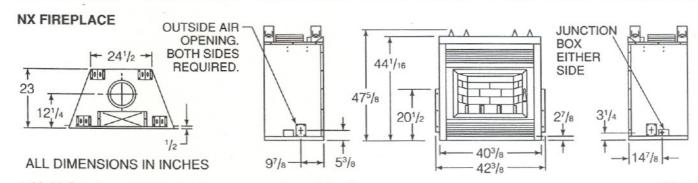
- 1. Outside Combustion Air System
- 2. Heat Circulating Fan
- 3. Cast Iron Door (Black)

- 4. Cast Iron Door (Gold)
- 5. Gold Louver Kit

THE FIREPLACE SYSTEM COMPONENTS

The table below, together with the following pictures, show only those components which may be safely used with this fireplace. Two chimney designs are designated, with the appropriate components for each design. Components may not be interchanged between chimney designs. Select SL or IC Series and follow down the column for the correct components.

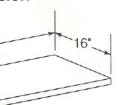
Catalog Number Description	
NX	Fireplace Hearth Extension Integral Grate (included with Fireplace) Cast Iron Door (Black) Cast Iron Door (Gold Plated) Gold Louver Kit Fan Kit Motor Speed Control Kit Air Kit - Outside Air Insulated Duct/Outside Air Uninsulated Duct/Outside Air Uninsulated Duct/Outside Air Chimney Section - 6 inch long Chimney Section - 18 inch long Chimney Section - 18 inch long Chimney Section - 8 inch long Chimney Section - 8 inch long Chimney Section - 48 inch long Chimney Section - 36 inch long Chimney Offset/Return - 15° Chimney Offset/Return - 30° Firestop - 5traight Firestop - 15° Firestop - 5traight Firestop - 15° Firestop - 30° Roof Flashing - Flat to 6/12 Pitch Roof Flashing - 6/12 to 12/12 Pitch Chimney Terminal Cap - Round - for use with DT3030 Decorative Shroud Telescoping Chimney Terminal Cap - Round Chimney Terminal Cap - Square Telescoping Chimney Terminal Cap - Square Housing Top Chimney Terminal Cap 4' Simulated Red Brick Chimney Panels 6' Simulated Red Brick Chimney Panels 6' Simulated Tan Brick Chimney Panels 6' Simulated Tan Brick Chimney Panels 6' Simulated Tan Brick Chimney Panels Chimney Bracket Chimney Joint Band Chase Top Insulated Chimney Adapter converts fireplace for IC use.



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AIR KIT

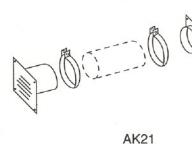
НХ3

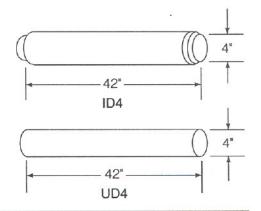
INTEGRAL GRATE

1113/16 20 GR7



MOTOR SPEED CONTROL KIT

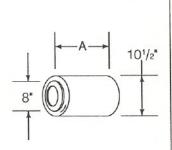




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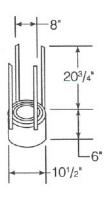
BC10

CHIMNEY SECTIONS



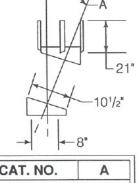
CAT. NO.	Α
SL306 IC806	6"
SL312 IC812	12"
SL318	18"
SL324 IC824	24"
SL336 IC836	36"
SL348	48"

CHIMNEY STABILIZERS



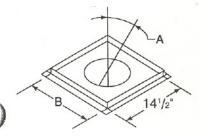


OFFSETS/RETURNS

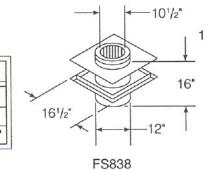


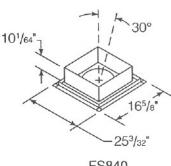
CAT. NO.	Α		
SL315 OR815	0°		
SL330 OR830	30°		

FIRESTOP SPACERS

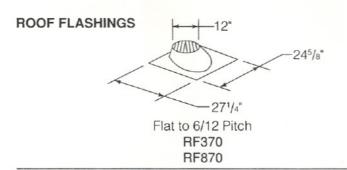


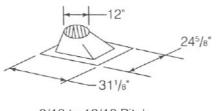
CAT. NO.	Α	В	
FS338	0°	141/2"	
FS339	15°	18 ³ / ₈ "	
FS340	30°	2215/16"	





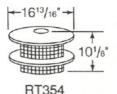
38 FS840



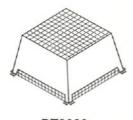


6/12 to 12/12 Pitch RF371 **RF871S**

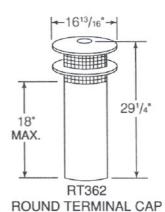
CHIMNEY TERMINAL CAPS & TERMINATIONS



ROUND TERMINAL CAP FOR USE WITH **DECORATIVE SHROUD**



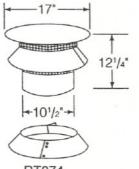
DT3030 **DECORATIVE SHROUD**



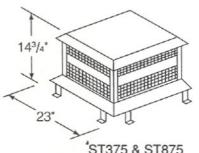
RT364 ROUND TERMINAL CAP

10¹/8"

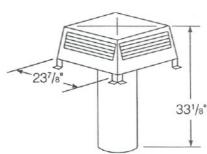
-16¹³/₁₆" ->



RT874 ROUND TERMINAL CAP

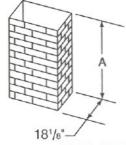


ST375 & ST875 SQUARE TERMINAL CAPS



ST376 SQUARE TERMINAL CAP



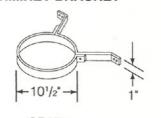


CAT. NO.	Α
RB4	453/4"
TB4	453/4"
RB6	693/4"
TB6	693/4"

SIMULATED BRICK TERMINATIONS

CHASE TOP

CHIMNEY BRACKET



CB876

JOINT BANDS



JB877

36 107/8"

4.

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CT35

III. FIREPLACE LOCATIONS, SPACE AND CONSTRUCTION REQUIREMENTS

The fireplace may be located as shown in Figure 1.

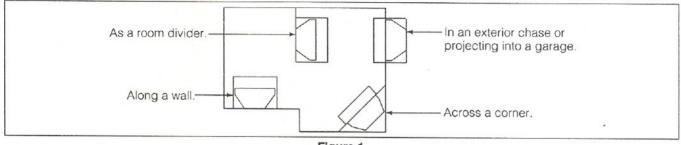
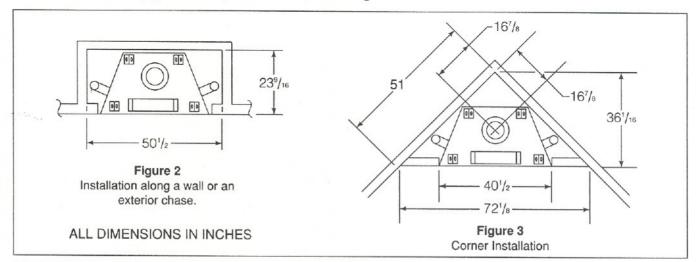


Figure 1
Fireplace Locations

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.



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 a typical framing of the fireplace, assuming combustible materials are used. All required clearances to combustibles around the fireplace must be adhered to. Any enclosure on top of the fireplace must be above the top standoffs. 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.

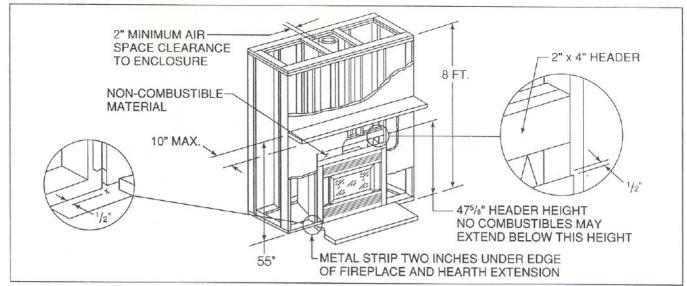


Figure 4
Framing the Fireplace

After completing the framing and after 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.

WARNING

DO NOT APPLY FINISH MATERIALS OVER THE LOUVERED FACE OF THIS FIREPLACE. THIS WILL BLOCK THE FLOW OF COOLING AIR AND MAY CAUSE DANGEROUSLY HIGH TEMPERATURES ON COMBUSTIBLE SURFACES OR ON THE FIREPLACE ITSELF.

Non-combustible materials may be used to cover the black non-louvered fireplace front, but must not restrict the air flow 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.

HEARTH EXTENSIONS

The use of factory-built Hearth Extensions is shown in Figure 5. These may be covered with a non-combustible decorative material. Seal gaps with non-combustible sealant.

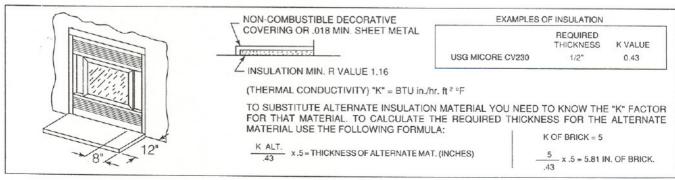


Figure 5
Factory-Built Hearth Extension

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.

SIDEWALLS

Adjacent combustible side walls must be located a minimum of 18" from the fireplace opening. See Figure 6.

MANTEL

A mantel of combustible material may be installed no less than 55" above the platform or floor upon which the fireplace is located. The mantel may extend no more than 10" from the wall.

- 18"

Figure 6

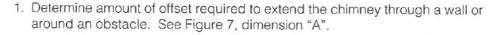
IV. CHIMNEY REQUIREMENTS

When planning your fireplace location, the chimney construction and necessary clearance must be considered. 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/Return	15 ft.
Maximum height	60 ft.
Maximum chimney length between an Offset/Return	8 ft.
Maximum distance between Chimney Stabilizers	25 ft.
Double Offset/Return minimum height	20 ft.
Maximum unsupported chimney length between Offset/Return	6 ft.
Maximum straight unsupported chimney height above firebox	12 ft.

OFFSET INSTALLATIONS

To clear any overhead obstructions, the chimney may be offset using a 15° or 30° Offset/Return, Catalog Number SL315, SL330, OR815 or OR830. Figure 7 and Tables 1 or 2 (page 8) enable selection of the appropriate chimney components when using Offsets and Returns.



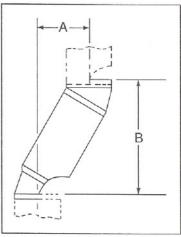


Figure 7
Chimney Offset/Return

- 2. Refer to Table 1 or 2 and find the "A" dimension closest to but not less than the amount of offset required in your installation.
- 3. Find the "B" dimension in Tables 1 or 2 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 Section V, Step-By-Step Installation of the Fireplace System.
- All joist areas must be Firestopped.

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.

		Dimensions in inc					in inches			
	15	;o	3	0°						
А		В	Α	В	SL306	SL312	SL318	SL324	SL336	SL348
15/	8	133/8	3 7/8	147/16	_	_	_	_	_	_
27	/8	17 ³ / ₄	6 1/4	18 ⁹ / ₁₆	1	_	-		_	_
-	- 1	-	8 ⁵ / ₈	22 11/16	2	_	_	_	_	_
47,	16	23 9/16	9 1/4	23 3/4	_	1	_	_	_	_
-	-	-	115/8	27 7/8	1	1	_	_	_	
6		29 ³ / ₈	12 1/4	28 15/16	_	_	1	****		_
73,	/16	34	145/8	33 1/16	_	2	-	_	_	
_		-	15 1/4	34 1/8	_	-	-	1	No.	_
_		-	17 ⁵ / ₈	38 1/4	1	_	_	1	_	_
-		-	20 ⁵ / ₈	43 7/16	_	_	2	_	_	_
105	/8	46 ³ / ₄	21 1/4	44 9/16	_	_	-	_	1	
117,	/8	51 ³ / ₈	23 5/8	48 11/16	1	_	_	_	1	NAME .
_		-	26 ⁵ / ₈	53 13/16	_	_	_	2	_	_
133	/4	58³/ ₈	27 1/4	55 ³ / ₄	_	-	-	1922	_	1
15		62 15/16	29 5/8	59 1/16	1	_	-	_	_	1
161	12	68 ³ / ₄	32 5/8	64 1/4	non.	1	-	_		1
181	16	74 9/16	35 ⁵ / ₈	69 7/16	_	_	1	_	_	1
_		-	38 5/8	74 ⁵ / ₈	_	_	-	1	_	1
_		-	41	783/4	1	_	-	1	_	1
223	14	91 7/8	44 5/8	85 1/16	-	_	_	_	1	1
24		96 ¹ / ₂	47	89 ¹ / ₈	1	_	_	_	1	1
257	/ ₈	103 1/2	50 ⁵ / ₈	95 7/16		_	_	_	_	2

TABLE 2

15° & 30° Offset Chart

(Dimensions in Inches)

INDLL L		15 & 30 Offset Chart (Dimensions in Incl					s in inches	
1	15°	3	0°					
Α	В	Α	В	IC806	IC812	IC824	IC836	JB877
23/8	117/8	5 1/4	13 ⁵ / ₈	1	_	_	-	2
4	173/4	8 1/4	183/4	_	1	_		2
51/2	231/2	11 1/4	24	1	1	_	_	3
7 1/8	29 1/4	14 1/4	29 1/8	_	_	1	-	2
85/8	35¹/ ₈	17 1/4	343/8	1	_	1	_	3
101/4	40 ⁷ / ₈	20 1/4	39 1/2	_	_	_	1	2
113/4	463/4	23 1/4	443/4	1	_	_	1	3
131/4	521/2	26 1/4	50	_	_	2	_	3
147/8	581/4	29 1/4	55 1/8	1	_	2	1-1	4
16 ³ / ₈	641/8	32 1/4	603/8	_	_	1	1	3
18	69 7/8	35 1/4	65 ¹ / ₂	1	_	1	1	4
19 1/2	75 ⁵ / ₈	38 1/4	703/4	_	_		2	3
21	811/2	41 1/4	75 ⁷ /8	1	_	_	2	4
225/8	87 1/4	44 1/4	81 1/8	_	_	2	1	4
241/8	93	47 1/4	86 3/8	1	_	2	1	5
25 3/4	98 ⁷ / ₈	50 1/4	91 1/2	_	_	1	2	4
		1		The second secon	1	1	1	1

Figure 8 illustrates the height from the bottom of the fireplace to the top of the chimney starter.

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

 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.

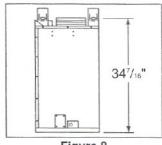


Figure 8
Fireplace (Side View)

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.

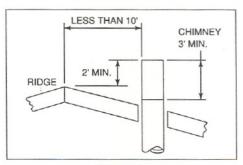


Figure 9 Chimney Height

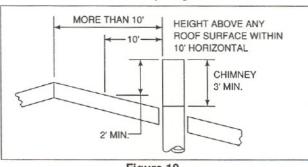


Figure 10 Chimney Height

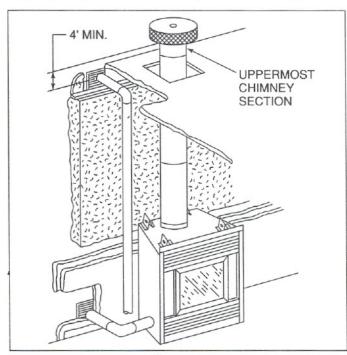


Figure 11
Outside Air Locations (Must come from both sides of unit)

If Outside Combustion Air is used, Figure 11 illustrates only two of many possible locations - a basement fireplace with a vertical outside air arrangement; and a horizontal, direct exit from the fireplace sides. Outside air is required on both sides of the unit.

NOTE: A 4' minimum height difference must be maintained from the top of the uppermost Chimney Section to the Outside Combustion Air inlet.

V. 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.
- ALWAYS MAINTAIN THE MINIMUM AIR SPACE REQUIRED TO THE ENCLOSURE TO PREVENT FIRE.

☐ STEP 1
Position the fireplace in the desired location and frame.
☐ 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 by one inch.
☐ STEP 3
Level the fireplace side-to-side and front-to-back. Shim with non-combustible materials as necessary. Secure the fireplace by utilizing the nailing flanges located on either side of the fireplace.

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.

STEP 4

Assemble the first section to the top of the fireplace. It may be either a straight Pipe Section or an Offset. If an Offset is used, it must be turned to its final position and locked in place with size 10 sheet metal screws provided with the Offset. Drill three 1/8" holes in the fireplace collar using the predrilled Offset holes as a template. See Figure 12.

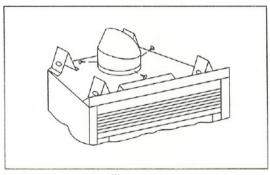


Figure 12
Offset Secured to Fireplace

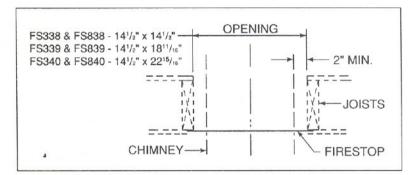


Figure 13
Straight Firestop with Top Pan

STEP 5

Mark and cut out an opening in the ceiling for the particular Firestop Spacer being utilized (14 1/2" x 14 1/2" for an FS338 or FS838; 14 1/4" x 18 11/16" for an FS339 or FS839; 14 1/2" x 22 15/16" for an FS340 or FS840). 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 FS338 or FS838 (Straight), or FS339, FS340, FS839 or FS840 (15° or 30° Offset, if Offset is located in the ceiling joist area). Nail the four sides of the Firestop to the joists using a minimum of (3) nails per side. 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. When the space above the ceiling is an attic space, then the top pan that comes with the Firestop must also be used. Nail the top pan 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. See Figure 13. 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 limitations described earlier.

The maximum straight unsupported height is 12 feet above the firebox and 25 feet between Chimney Stabilizers (SL3 or SZ8).

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. Chimney Brackets may be used to stabilize the chimney. See Figures 14 and 15.

NOTE: Nails must always be driven so the nail head is in shear (shank is perpendicular to the chimney load). This will prevent the nail from pulling loose.

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

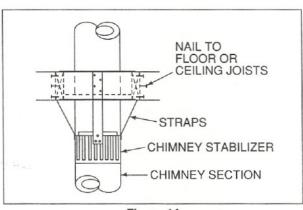


Figure 14 Chimney with Stabilizer

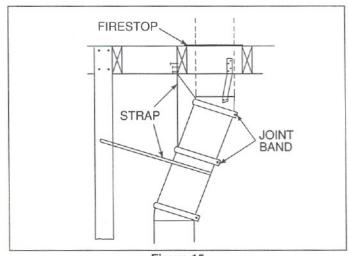


Figure 15
Offset/Return Installation

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. See Figure 16.

STEP 10

Measure to either side of the nail and mark the 14 1/2" x 14 1/2" opening required. This 14 1/2" x 14 1/2" 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.

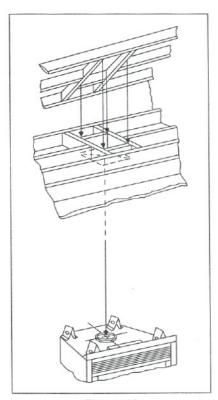


Figure 16
Ceiling and Attic Construction

STEP 12

Install the Roof Flashing appropriate to the roof pitch and install one of these Terminal Caps: RT362 (Telescoping-Round), or RT354 with DT3030 Decorative Shroud, RT364 or RT874 (Round) following the instructions shipped with these accessories. The Terminal Cap may also be a ST8 (Housing Top and Flashing) utilizing RB4, TB4, RB6 or TB6 (Simulated Brick Panels) and installed in accordance with the Instructions shipped with these accessories. For flat roof pitch installations, Terminal Caps ST375 or ST875 (Square), or ST376 (Telescoping-Square) may be installed utilizing a Chase Top.

WARNING

DETAIL INSTRUCTIONS FOR INSTALLATION OF THE ROOF FLASHING, 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. TO PROTECT AGAINST EFFECTS OF METAL CORROSION OF THE ABOVE PARTS, FIRST WASH THEM WITH A SOLVENT OR VINEGAR, RINSE WITH WATER, AND THEN PAINT WITH A RUST RESISTANT PAINT.

STEP 13

Complete the fireplace enclosure, allowing space for outside air ducts. Care must be taken with any electrical wiring to avoid exposure to high temperatures or mechanical damage to wire insulation. A minimum clearance of 1/2" must be maintained between the fireplace sides and the combustible enclosure.

STEP 14

Install Outside Air if desired or required by local code, using these Instructions as well as those supplied with the AK21 Air Kit. The use of Outside Air is strongly recommended. See Figure 17.

- 1. Remove the cover plate from both sides of the fireplace.
- 2. Using a sharp knife, cut the insulation from inside the opening.
- Remove the lower louver from the fireplace by holding at the ends and twisting upward.
- 4. Caulk all the joints inside of the air housings.
- 5. Position the cover plates on the front of the air howsings.
- 6. Replace the louver.
- 7. Fasten the tube assemblies to the sides of the fireplace.
- 8. Mark and cut a 4" diameter hole in the building side for air entry for each side of the unit. This hole should allow some framing (2 sides) so the 4" inlet assembly can be nailed in position flush with the building outside.

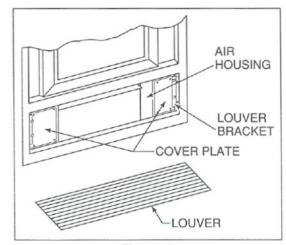


Figure 17

9. Assemble the flexible duct between the tube assembly and the inlet assembly. Secure it in position with the clamp bands using the fasteners provided.

STEP 15

If a Fan Kit is desired, the power supply wires must first be brought to the junction box. The junction box is factory installed on the right side of the unit, however, it may be moved to the left side to accommodate alternate installations. Use the following instructions for proper installation of the Fan Kit:

- Attach the conduit with conduit connector to the junction box with the conduit connector lock nut.
- Bring the supply wires to the inside of the junction box. Firmly attach the ground connector to the green headed screw and connect the supply wires to the lead wires (see Figure 18) using the wire nuts provided in the fastener pack.
- Proceed with the installation of the FK17 Fan Kit. Follow the instructions supplied with the Fan Kit for proper installation.

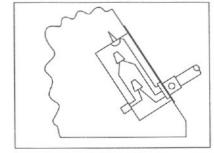


Figure 18

It is recommended that the junction box wiring be done during initial construction even if a Fan Kit is not initially desired. This allows for adding a Fan Kit at a later date.

WARNING

DISCONNECT POWER BEFORE STRIPPING OR JOINING ANY SUPPLY WIRES. ONLY PERSONS QUALIFIED FOR MAKING ELECTRICAL INSTALLATIONS (ELECTRICIANS) AS RECOGNIZED BY LOCAL OR NATIONAL GOVERNMENTAL BODIES SHOULD ATTEMPT TO MAKE THE INCOMING SUPPLY WIRE CONNECTIONS.

EDGES ARE SHARP. HAND PROTECTION IS RECOMMENDED. RECHECK ALL FASTENERS BEFORE LEAVING JOB.

NOTE: A Motor Speed Control Kit, Catalog Number BC10, is available for use with this Fan Kit. Refer to the Instructions packed with it for proper installation. If a speed control option is desired, it is recommended to use the BC10 Kit to insure proper function.

STEP 16

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 sealant.

STEP 17

Apply the finish materials of your choice. Do not install combustible materials over the black face of the fireplace or louvered openings. You may use non-combustible material over the black - non-louvered - face of the fireplace.

STEP 18

This fireplace is equipped with a factory installed Integral Grate. In the event it becomes necessary to replace it, raise the back refractory and pull the Grate forward, removing the retaining brackets as well. Your new Grate will be supplied with new retaining brackets already attached. Raise the back refractory and slide the brackets under it, aligning them with the recessed areas at the bottom of the back refractory. Use only Catalog Number GR7 Integral Grate for replacement.

STEP 19

To mount the Door on the unit, carefully rest the Door hinge blocks on top of the hinges. Push a hinge pin down through the top hinge and top hinge block on the Door. Next push the other hinge pin down through the bottom hinge block and lower hinge. Close the Door carefully, making sure that it does not hit the Door latch, and closes fully. If the Door does not hang perfectly straight, it will need to be adjusted. This can be done by loosening the machine screws on the top hinge and sliding it either right or left as needed. After adjusting, tighten the screws, close the Door and recheck alignment. See Figure 19.

STEP 20

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

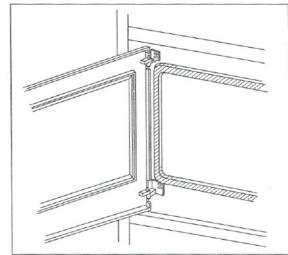


Figure 19

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.

VI. CONSTRUCTING A CHASE

The chase may be constructed for the fireplace and chimney or for the chimney only. A chase is an enclosure built around the system. It is most commonly constructed on an outside wall as shown below.

Three examples of chase applications are shown in Figure 20.

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

MATERIALS FOR CHASE

The chase is constructed much the same as the walls in your home. A variety of materials may be used including brick, stone, veneer brick, or standard siding materials.

In constructing the chase, several factors must be considered.

- 1. Maintain a 1/2" minimum air space around the firebox.
- 2. Maintain a 2" air space around the chimney.
- 3. The Chase Top must be constructed of a non-combustible material.
- 4. The walls of the chase should be insulated to prevent heat loss from the home around and through the fireplace.
- 5. A Firestop Spacer should be installed in an insulated false ceiling at the 8' level above the firebox assembly. This prevents heat loss through the fireplace.

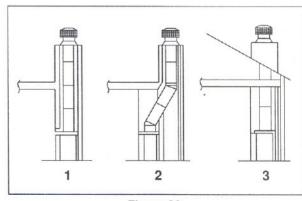


Figure 20 Chase Constructions

TO INSTALL TERMINAL CAP ON CHASE - ENCLOSED CHIMNEY

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

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 CONSTRUCTION MATERIALS TO CAUSE A FIRE.

2. Install the Chimney Sections up through the chase. When using a Round Terminal Cap (RT354, RT364 or RT874), the last section of Pipe must extend above the Chase Top to allow installation of the Storm Collar and Terminal Cap. For installations utilizing a Telescoping Round Terminal Cap (RT362) or Telescoping Square Terminal Cap (ST376), the last Chimney Section must be below the top of the Chase Top, but not more than 18" below the Chase Top. For installations utilizing an ST375 Square Terminal Cap, the top Chimney Section must be no more than 43/4" below the base of the Chase Top. For installations utilizing an ST875 Square Terminal Cap, the top Chimney Section must be no lower than the top of the Chase Top flashing cone, or 1 1/2" taller than the top of the Chase Top flashing cone. It may be necessary to adjust the height of the chase to match these installation requirements.

WARNING

DETAIL 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.

- 3. Attach the Chase Top (CT35) to the top of the chase.
- 4. If a Round Terminal Cap (RT354, RT364 or RT874) is to be utilized, loosen the bolt on the Storm Collar and slide it down over the Pipe to the Chase Top. Tighten the bolt and seal around the Collar.
- 5. Attach and secure either a Round or Square Terminal Cap.

OPERATING INSTRUCTIONS

WARNING

DO NOT ATTEMPT TO OPERATE THIS FIREPLACE WITHOUT READING AND UNDERSTANDING THESE OPERATING INSTRUCTIONS THOROUGHLY. FAILURE TO OPERATE THIS APPLIANCE PROPERLY MAY CAUSE A SERIOUS HOUSE FIRE.

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.

The HEATILATOR® Model NX Fireplace is an efficient woodburning appliance designed to burn natural, seasoned wood. Do not burn artificial logs or driftwood.

WOOD FUEL

Hardwood vs. Softwood

Your fireplace performance depends a great deal on the quality of the firewood you use. Contrary to popular belief, one species of wood varies very little to the other in terms of energy content. All seasoned wood, regardless of species, contains about 8,000 BTU's per pound. The important factor is that hardwoods have a greater density than softwoods. Therefore, a piece of hardwood will contain about 60% more BTU's than an equal size piece of softwood. Since firewood is commonly sold by the cord (128 cu. ft.), a volume measurement, a cord of seasoned oak (hardwood) would contain about 60% more potential energy than a cord of seasoned pine (softwood).

There are many definitions of hardwood and softwood. Although not true in every case, one of the most reliable is to classify them as coniferous or deciduous.

Softwoods are considered coniferous. These are trees with needle-like leaves that stay green all year and carry their seeds exposed in a cone. Examples of softwood trees are Douglas fir, pine, spruce and cedar.

Softwoods, being more porous, require less time to dry, burn faster and are easier to ignite than hardwoods.

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

Obviously, you will use the type of wood that is most readily available in your area. However, if at all possible the best arrangement is to have a mix of softwood and hardwood. This way you can use the softwood for starting the fire giving off quick heat to bring the appliance up to operating temperature. Then add the hardwood for slow, even heat and longer burn time.

MOISTURE CONTENT

Regardless of which species of wood you burn, the single most important factor that effects the way your stove operates is the amount of moisture in the wood. The majority of the problems fireplace and fireplace insert 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 8 pounds. Fill it with a gallon of water, put it in the firebox 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 is takes to season wood varies from around nine months for softwoods 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:

- 1. Stack the wood to allow air to circulate freely around and through the woodpile.
- 2. Elevate the woodpile off the ground to allow air circulation underneath.
- 3. The smaller the pieces, the faster the drying process. Any piece over six inches in diameter should be split.
- 4. 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 firebox and chimney system. When combined with tar and other organic vapors from burning wood it will form creosote which condenses in the relatively cool firebox and chimney. See page 18 of this manual for more information regarding creosote formation and need for removal.

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.

FLUE DRAFT

Like all modern woodburning fireplaces, the NX requires the proper amount of flue draft to assure safe and efficient operation. 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 firebox and pulls the smoke out of the chimney.

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

- 1. Availability of combustion air.
- 2. Heat generated from the fire.
- 3. 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 effect the other two and thus change the amount of draft in the entire system. See Figure 21.

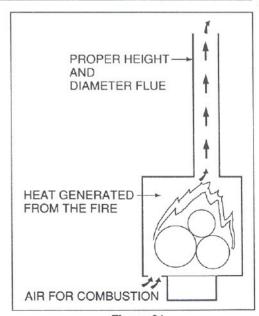


Figure 21

- 1. Availability of combustion air. A source of air (oxygen) is required in order for combustion to take place. The air enters the firebox through an opening in the fireplace body. The important thing is to realize that whatever air is consumed by the fire must be replaced. If you are using room air, the air is replaced through cracks around windows, under doors, etc. However, 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 into the fireplace.
- 2. Heat generated from the fire. Most of the heat produced from the fire is transferred into the heat exchanger of the fireplace, then into the room. However, part of this heat escapes up the chimney taking smoke and other combustion gases with it. Most modern woodburning fireplaces, including the NX, extract heat so efficiently that the amount that goes up the flue can be minimal. This is one reason why it is important to burn well seasoned wood. The heat generated from the fire should be warming your home and establishing the flue draft. It should not be wasted by evaporating moisture out of wet, unseasoned wood.
- 3. Diameter and height of flue system. The chimney height requirements are listed on page 7 and should be installed in accordance with the installation instructions on page 10. A specific volume of air, determined by the diameter and height of the chimney connector and chimney, is contained within the flue system. As heat from the fire enters the flue, it warms this air causing it to rise. The air moving up the flue draws smoke and more heated air from the fire with it, thus establishing draft. The amount of draft depends on the temperature of the heated air and the volume of air that is contained in the flue system.

BREAK-IN PERIOD. Build your first few fires small to allow the high temperature paint on your fireplace to cure. During this period excessive temperatures may damage the paint. Allow adequate ventilation to dissipate smoke and odor that may come from the paint during curing.

STARTING THE FIRE. NOTE: Build the fire directly on the Integral Grate.

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.

- 1. Place several crumpled newspaper pages (at least 6) on the firebox floor.
- Cover the paper with several pieces of kindling. The kindling should be less than 1" in diameter, well seasoned, dry split firewood.
- 3. Light the newspaper in several places, starting at the back of the firebox and working towards the front.
- 4. Close the door to prevent smoke spillage BUT DO NOT LATCH. This allows extra air into the firebox for start-up while pre-heating the glass to help keep it cleaner.
- Maintain the fire by adding kindling periodically until a uniform fire bed has been established (approximately 5-10 minutes.)
- 6. After establishing a fire bed, add a few small pieces of firewood, two to three inches in diameter, to the fire. Place the wood in such a manner to allow combustion air and flames between them.

NOTE: If the chimney flue is cold due to low outside temperatures, several pieces of crumpled paper on TOP of the fuel can help to establish a draft in the flue. Light this paper when lighting the kindling in step 5.

WARNING

DO NOT LEAVE FIRE UNATTENDED WHEN THE DOOR IS UNLATCHED. CARELESSLY PLACED FIREWOOD COULD FALL OUT OF THE FIREBOX CREATING A FIRE HAZARD.

When the kindling is consumed and the firewood is burning briskly (about 5 to 10 minutes) add a minimum of three
average sized pieces of split firewood. Close the door and latch it securely.

CAUTION: Do not slam fireplace door or otherwise impact the glass. When closing door, make sure that logs or other objects do not protrude to impact against the glass.

8. After about 45 minutes to 1 hour, the fireplace will have reached operating temperature. If equipped with the optional blower, turn it on and adjust the speed as desired.

WARNING

ALWAYS OPERATE THIS APPLIANCE WITH THE DOOR CLOSED AND LATCHED EXCEPT DURING START-UP AND RE-FUELING.

RE-FUELING. When adding fresh wood to an existing fire:

1. Unlatch the door, wait a few seconds, then open the door slowly.

CAUTION: Always open the door slowly while the fire is burning to avoid smoke and flame spillage. It is best to unlatch the door, wait a few seconds, then open the door slowly.

If the fire has been allowed to die down between re-fueling it may be necessary to use smaller pieces of wood to rekindle it.

WARNING

CONTINUED OVERFIRING CAN PERMANENTLY DAMAGE YOUR FIREPLACE SYSTEM. AN EXAMPLE OF OVERFIRING IS:

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.

ASH DISPOSAL. 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. The ashes should be retained in the closed container until all cinders have thoroughly cooled.

WARNING

ASHES SHOULD NEVER BE PLACED IN WOODEN OR PLASTIC CONTAINERS, OR IN PAPER OR PLASTIC BAGS, REGARDLESS OF HOW LONG THE FIRE HAS BEEN OUT. COALS HAVE BEEN FOUND TO STAY HOT FOR SEVERAL DAYS WHEN EMBEDDED IN ASHES.

CREOSOTE & SOOT - 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 newly started fire or from a slowly burning fire. As a result, creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire which may damage the chimney or even destroy the house.

The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if creosote or soot build-up has occurred. If so, it should be removed to reduce the risk of a chimney fire.

To help prevent creosote build-up, always burn dry, well seasoned firewood. When refueling after an extended low burn rate, allow the appliance to burn with the combustion air intake fully open (temperature setting on HI) for 10 to 20 minutes to burn off creosote deposits that accumulate during the low burn.

The creosote and soot should be removed with a brush specifically designed for the type of chimney in use. A chimney sweep can perform this service. It is also recommended that before each heating season the entire system be professionally inspected, and cleaned and repaired if necessary.

WARNING

FAILURE TO INSPECT AND CLEAN YOUR CHIMNEY SYSTEM REGULARLY CAN RESULT IN A SERIOUS FIRE WHICH MAY DAMAGE THE CHIMNEY OR CAUSE A HOUSE FIRE.

DOOR GASKET. Check the door gasket periodically for proper seal. Wear or damage to the gasket material can cause air leakage into the firebox resulting in overfiring and loss of efficiency.

LATCH ADJUSTMENT. The fuel loading door has been factory adjusted for proper fit. However, if the door seems loose, open the door and rotate the handle one complete turn counter-clockwise. This will adjust the door handle approximately 1/16". If necessary, repeat the adjustment one complete turn at a time, until the handle locks securely into the safety latch and the door fits tightly.

Replace the gasket, when necessary, with 5/8" diameter woodstove gasket material available from your local HEATILATOR® dealer.

WARNING

DO NOT OPERATE THIS FIREPLACE IF THE DOOR GASKET IS MISSING OR DAMAGED. DANGEROUS OVERFIRING CAN OCCUR WHICH CAN DAMAGE THE APPLIANCE OR IGNITE CREOSOTE IN THE CHIMNEY, POSSIBLY CAUSING A HOUSE FIRE.

DOOR GLASS. Inspect the glass regularly for cracks or breaks. If you detect a crack or break, extinguish the fire immediately and contact your HEATILATOR® dealer for replacement. Replacement glass must be ceramic.

WARNING

DO NOT OPERATE THE FIREPLACE IF THE DOOR GLASS IS BROKEN OR MISSING. DANGEROUS OVERFIRING CAN OCCUR WHICH CAN DAMAGE THE APPLIANCE OR IGNITE CREOSOTE IN THE CHIMNEY, POSSIBLY CAUSING A HOUSE FIRE.

A portion of the combustion air entering the firebox is deflected down over the inside of the door glass. This air flow - "washes" the glass helping to keep smoke from adhering to its surface.

When operated at a low burn rate less air will be flowing over the glass and the smoky, relatively cool condition of a low fire will cause the glass to become coated. If the deposits on the glass are not very heavy, normal glass cleaners work well. Heavier deposits may be removed by using a damp cloth dipped in wood ashes or by using a commercially available oven cleaner. After using an oven cleaner, it is advisable to remove any residue with a glass cleaner or soap and water. Oven cleaner left on during the next firing can permanently stain the glass and damage the finish on plated metal surfaces.

CAUTION: Take care when using oven cleaners as they may be caustic. Always follow label instructions and warnings.

Do not clean the glass with materials that may scratch or otherwise damage the glass. Scratches on the glass can develop into cracks or breaks. Never attempt to clean the glass while a fire is in the unit.

The best way to keep the glass clean is to operate the fireplace efficiently by using dry, well seasoned wood and burning moderate to hot fires.

GOLD PLATED DOOR. To keep the finish looking its best, gently wipe with a soft cloth. If desired, use a non-abrasive cleaner such as soap and water, window cleaner or vinegar and water. Never use any solvent, thinner or abrasive cleaners since these will damage the finish.

OUTSIDE AIR. In a tightly sealed or well insulated home, replacement of combustion air is necessary to keep harmful gases from entering living spaces. The optional AK21 Air Kit supplies outside air directly to the firebox.

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. Use only Catalog Number GR7 Integral Grate for replacement.

FAN KIT. HEATILATOR® FK17 Heat Circulating Fan may be used with this fireplace. An external ON/OFF switch must be provided, or a Motor Speed Control BC10, may be used. Using this fan will increase efficiency and heat output.

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 practices as surrounding the fireplace with loose fill insulation, and especially leaving the fire unattended, will increase the risk of fire. Additionally, an annual inspection of all fireplace systems should be performed as, like any appliance, minor repairs may be required to maintain the system in top operating condition.

Attention

FIREPLACE INSTALLER

Please return these
Operating & Installation
Instructions to the
Firebox
for Consumer Use



Heatilator Inc. 1915 W. Saunders Street Mt. Pleasant, IA 52641 a HON INDUSTRIES company 319/385-9211 FAX 319/385-9225

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