Fisher Stoves®

GOLDILOCKS™ MODEL

RADIANT HEATER/FIREPLACE STOVE

OWNER'S MANUAL

UL This symbol on the nameplate means the product is Listed by Underwriters Laboratories, Inc. File No. MH11256

Conforms to all Department of Housing and Urban Development (HUD) rules and regulations plus Underwriters Laboratories (UL) requirements for safety and construction standards for installation in mobile homes. Has passed Underwriters Laboratories Standard for Fireplace Stoves, UL 737, third edition, and the mobile home installation requirements of proposed standard for Solid Fuel Type Room Heater, UL 1482. The Goldilocks Model can be installed in both mobile homes and conventional homes.

ASSEMBLY / INSTALLATION / OPERATION MAINTENANCE PROCEDURES

THANK YOU...

. . .for purchasing a FISHER STOVE and welcome to the growing family of woodburning stove owners. Considering the cost of oil, gas and electric heat, it's easy to see why hundreds of thousands of homeowners across North America have recently installed a wood stove.

The FISHER STOVE is not an ordinary wood stove. It has incorporated into its design a unique two-step combustion chamber which re-circulates wood gases back into the flames for almost total combustion. The result is more heat and fewer ashes.

Other outstanding features include a triple-sealed door which helps keep air out — smoke in; firebrick lining to eliminate burn-outs; two cooking surfaces with two temperatures; unique air regulator; and virtually airtight construction to control the amount of air actually reaching the fire. Its carefully welded mild steel plate construction will allow every FISHER STOVE to deliver years of remarkable heating efficiency.

Besides saving you money on your heating bill, the FISHER STOVE will allow many to rediscover the joys of wood stove cooking.

This OWNER'S MANUAL has been carefully written. The Table of Contents sets out, item by item, General Information, Installations Instructions, and Operating and Maintenance Instructions. We urge you to read it carefully before initiating actual installation work.

We wish you many happy years of heating with your new FISHER STOVE.

FISHER STOVES. AN IDEA AMERICA IS WARMING UP TO.

GOLDILOCKS™ OWNER'S MANUAL

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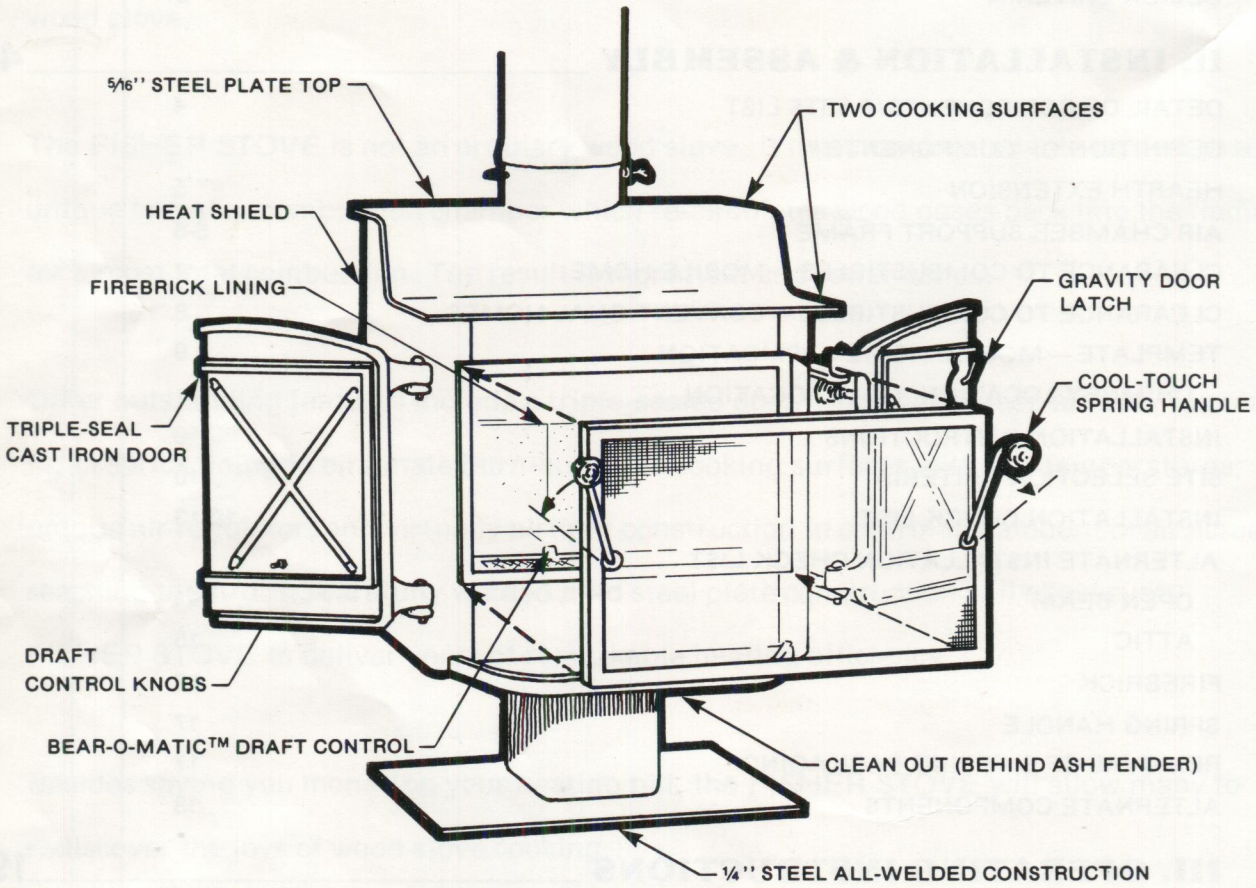
GOLDILOCKS™ MODEL



GOLDILOCKS™ MODEL SPECIFICATIONS

HEIGHT — 36''
WIDTH — 24''
DEPTH — 26''
TAKES 16'' WOOD
WEIGHS 420 LBS.
FLUE SIZE — 6''
HEATS APPROX. 1,250 SQ. FT.

GOLDILOCKS™ OWNER'S MANUAL

I. GENERAL INFORMATION

Congratulations! You have made a wise decision. The Fisher Stove is one of the most efficient, versatile and highest quality radiant heaters available. We're confident your Fisher Stove will provide you years of warm comfort and safe heat when installed according to these instructions. There are a few basic DO'S and DON'TS when installing and using wood burning stoves. Please read and follow these basic rules.

This manual is written to cover installation for both mobile home Department of Housing and Urban Development (HUD) requirements and conventional home use. Differences will be noted where applicable.

DO'S

1. Do comply with federal, state, and local codes.
2. Do contact your state or local building official for installation approval. A permit may be required when installing your Fisher Stove.
3. Do check with a reputable chimney contractor when having your chimney installed.
4. Do locate your Fisher Stove as close as possible to the center of the area that you intend to heat. The efficiency and radiant heat from the heavy steel surfaces and cast iron door will generally heat adjacent rooms adequately. (Refer to "Fisher Facts" on this page for futher explanation.)
5. THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL, AND CEILING/ROOF MUST BE MAINTAINED.
6. When installing a new chimney or outside air inlet in conventional homes (not mobile homes), cut as few structural members as necessary and avoid disturbing wiring, plumbing pipes or duct work.
7. Do read and follow these instructions completely before installing your stove.

DON'TS

1. Do not install your stove without first checking with state/local building officials to determine if a permit is required.
2. Do not locate your stove closer to **any** combustible materials than shown in the diagram for installation.
3. Do not locate the stove in a bedroom or sleeping area without providing an outside air source equivalent to the combustion air requirement. HUD specifically prohibits the installation of a fireplace stove in a sleeping area of a mobile home.

FISHER FACTS:

1. The Goldilocks Model is an extremely efficient radiant heater. The actual physical size of the stove in relation to the area it will heat might appear deceiving.
2. The Goldilocks Model is structurally constructed of ¼" steel with a 5/16" plate top. The stove is lined with ASTM C-27 or C-64 firebrick. The doors are made of heavy duty cast iron.
3. Because of the heavy duty, all welded and virtually air tight construction, the Goldilocks Model generates a long even flow of radiant heat.
4. The Goldilocks Model will heat approximately 1250 square feet (10,000 cubic feet) of floor space. Variables may include the following: degree day climate, home insulation, solar orientation, ceiling height, window glazing and infiltration rates of doors, windows and walls.
5. The Goldilocks Model uses a 6" diameter chimney system.

NOTE: The Goldilocks Model meets all HUD requirements for installation in mobile homes when installed in compliance with the mobile home requirements in this manual.

DESIGN CRITERIA:

MOBILE HOME OR CONVENTIONAL HOUSING USE

The Goldilocks Model is a double door radiant heater/fireplace stove designed to heat approximately 1250 square feet (10,000 cubic feet) and is intended for mobile home or conventional housing installation.

To be listed for mobile home installation, the Goldilocks Model was designed to meet Department of Housing and Urban Development (HUD) requirements which are as follows:

1. Provide a source of outside combustion air that is fed directly into the fire chamber.
2. The stove shall be equipped with the means to be securely attached to the mobile home structure.
3. The weight of the stove, hearth extension, chimney connector and chimney must be spread over an area not to exceed 40 pounds per square foot.
4. A UL-listed chimney, residential type and building heating appliance, must attach directly to the radiant heater system.
5. A spark arrestor must be used in the chimney system.
6. The stove shall not be installed in a sleeping room in a mobile home.
7. Fuel or products of combustion must be prevented from dropping onto the area beneath the mobile home.
8. A rodent guard must be provided.

The Goldilocks Model meets all of these requirements when installed according to these instructions.

OUTSIDE AIR REQUIREMENTS

Many new methods of construction are virtually airtight such as mobile homes and energy conserving homes. Construction of this type may require access to combustion air from sources other than what's available in the home.

The Goldilocks Model radiant heater/fireplace was designed to use outside air for combustion through its unique Bear-O-Matic™ Draft Control system which accomplishes the following:

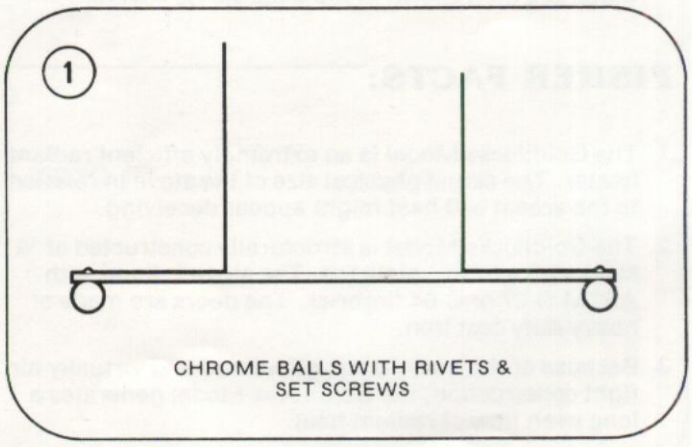
1. The outside air inlet must have the same cross sectional area as the flue collar.
2. The outside air comes up through the pedestal and travels along the chamber below the fire bed. This path allows for the outside air to be preheated before it enters the fire chamber.
3. The air regulator provides for very precise temperature control by utilizing a vernier (calibrated) control mechanism.
4. When the doors are opened, the air control mechanism automatically returns to the full open position.
5. When the doors are reclosed, the air control "memory" returns the stove to the previous setting.

NO OUTSIDE AIR REQUIREMENTS

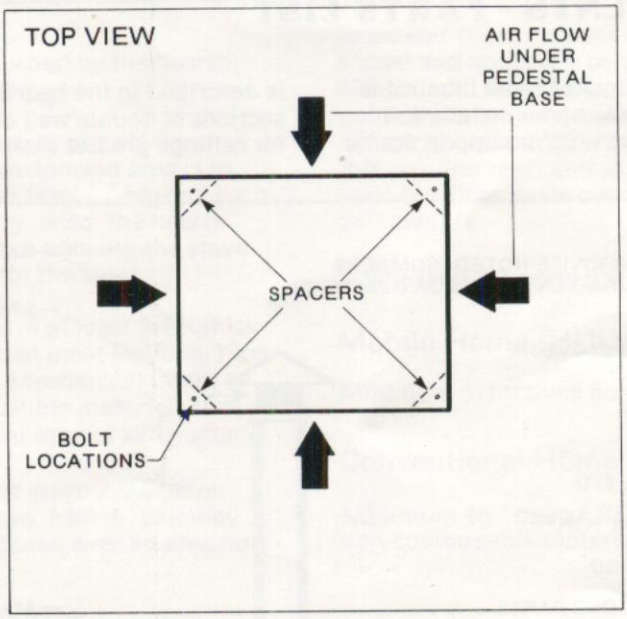
CONVENTIONAL HOUSING

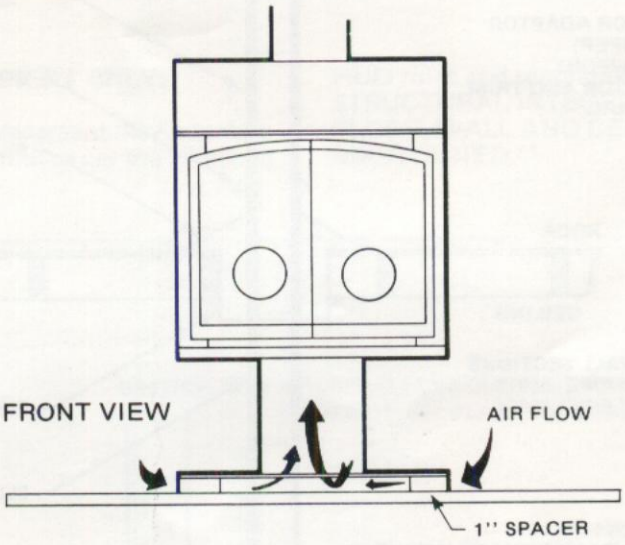
The Goldilocks Model radiant heater/fireplace is also adaptable for use in homes where the combustion air comes from inside the area to be heated. The inside air is supplied by providing an air path to reach the pedestal. This can be achieved by raising the stove at least one inch off the hearth which provides 30 square inches of opening to the air inlet under the stove pedestal base. Refer to the following diagram for further explanation:

OPTIONS:
1. CHROME BALLS
2. AIR FRAME
3. SPACERS



CHROME BALLS WITH RIVETS & SET SCREWS





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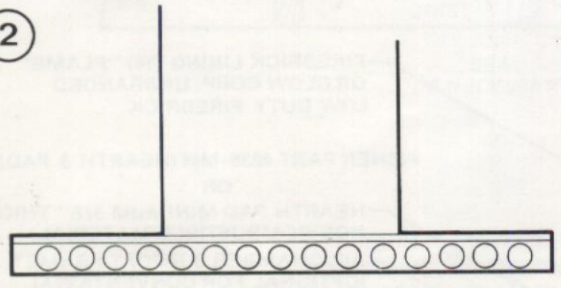
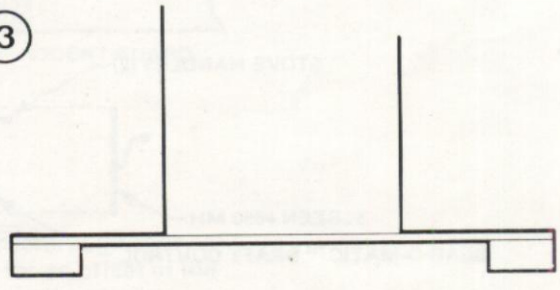


FRAME WITH AIR PASSAGES

3

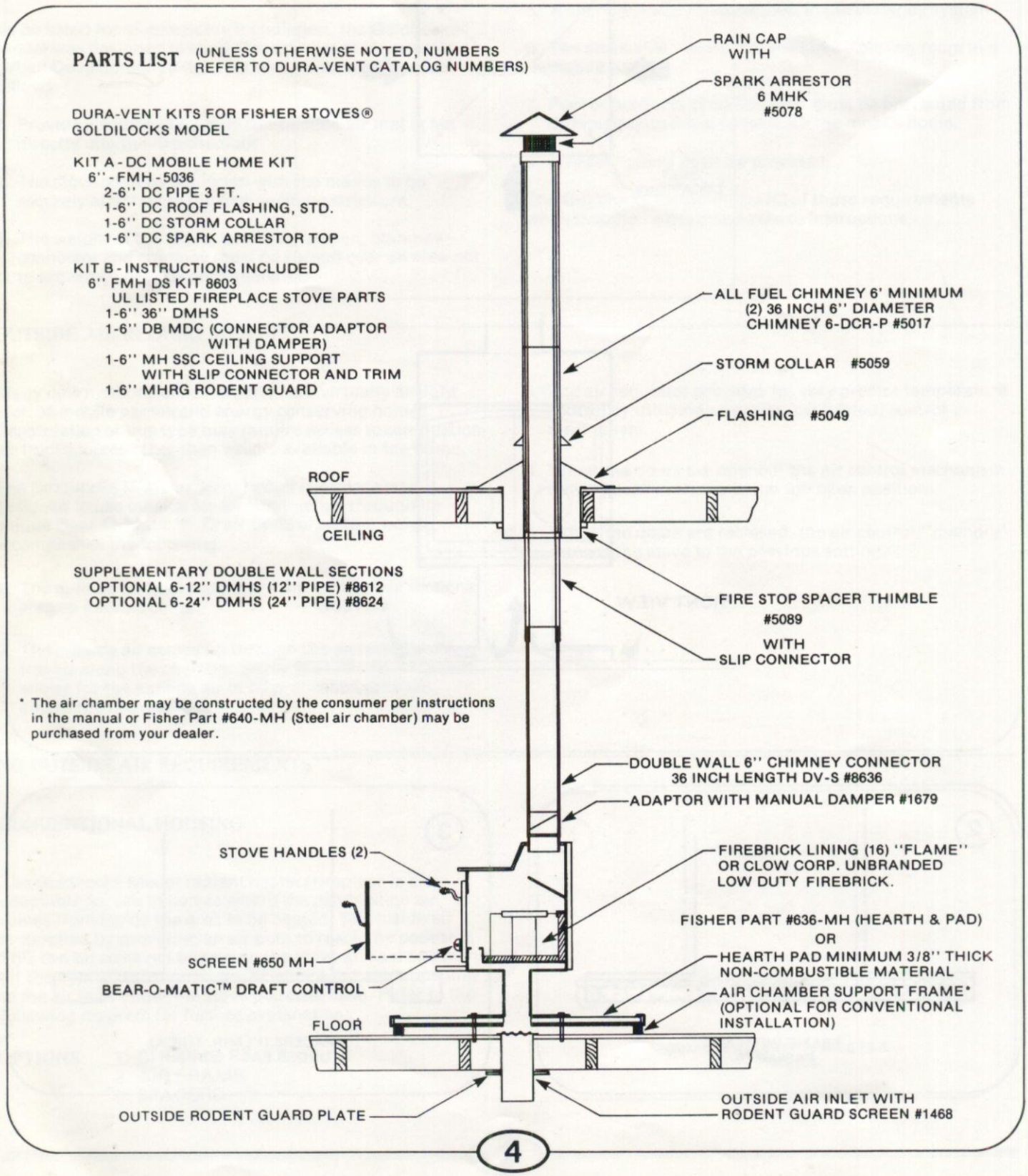


SPACERS (1'' MIN. THICK) UNDER EACH CORNER

II. INSTALLATION & ASSEMBLY

DETAIL OF COMPONENTS - PARTS LIST

The following diagram of the Goldilocks Model illustrates the required components for a mobile home installation. The requirements for the hearth pad and/or support frame is described in the hearth extension section. Additional sections of double wall chimney connector may be required for ceilings greater than 7 feet 6 inches.



DEFINITION OF COMPONENTS

HEARTH EXTENSION OR FLOOR PROTECTOR

The three major objectives accomplished by the hearth extension (floor protector) are as follows:

1. Provide a non-combustible surface to protect floor coverings. The minimum hearth extension area is to extend at least 16'' in front and at least 8'' beyond each side of the fireplace stove opening. Also, the hearth shall extend over the entire surface beneath the stove and at least 10'' beyond the rear of the stove.

2. The floor protector shall be made of at least 3/8'' thick non-combustible material and must meet National Fire Protection Association, Uniform Mechanical Code, or local code specifications. Combustible materials that are saturated with flame retardant are not satisfactory.

3. HUD regulations for mobile home stove installation require that the weight of the stove, hearth, chimney connector and chimney be distributed over an area not to exceed 40 pounds per square foot. The Goldilocks Model and accessory components weigh approximately 620 pounds. Therefore, 16 square feet are required (640 pounds availability) to distribute the weight. The 48'' x 48'' air chamber recommended in this manual meets this requirement, and assures the spanning over at least two floor joists even when the joists are located on 24'' centers.

MINIMUM REQUIREMENT SUMMARY

Mobile Home (HUD):

Minimum 3/8'' thick non-combustible material, 48''x 48''

Conventional Home Installation:

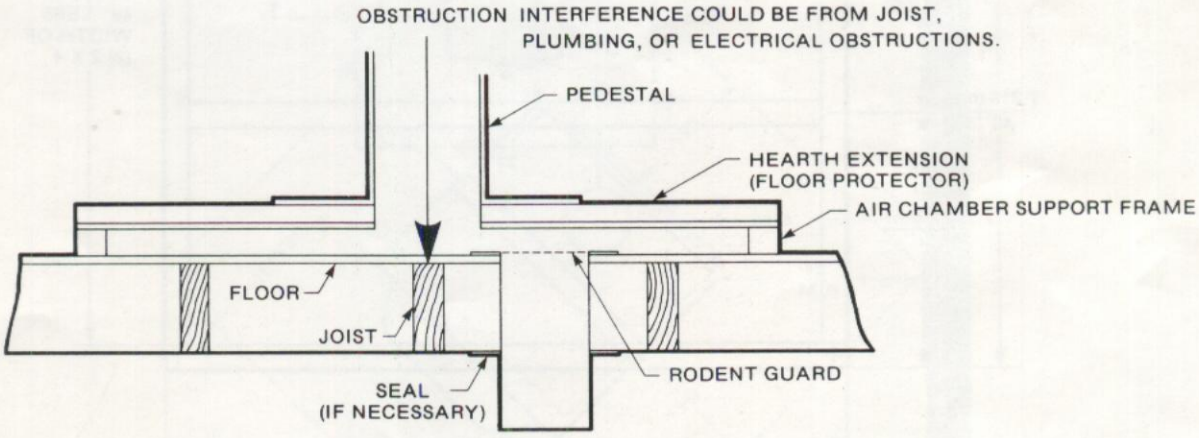
Minimum 45'' deep x 37'' wide x 3/8'' thick non-combustible material.

AIR CHAMBER SUPPORT FRAME

MOBILE HOME [HUD] REQUIREMENT ONLY:

Very often the chimney and stove placement may interfere with the location of the outside air inlet as per the following diagram:

HUD rules and regulations state the following: ''THE STRUCTURAL INTEGRITY OF THE MOBILE HOME FLOOR, WALL AND CEILING/ROOF MUST BE MAINTAINED.''



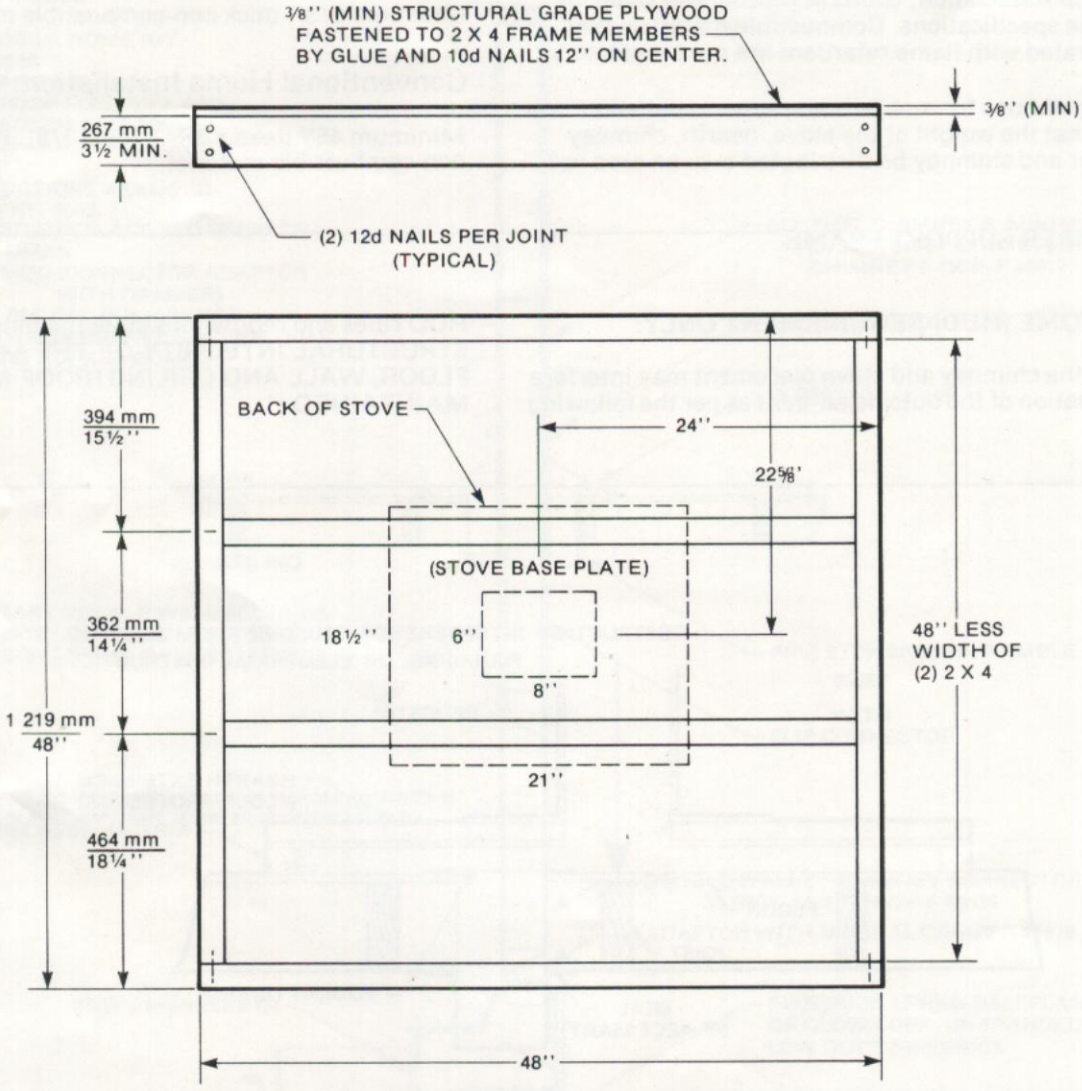
To eliminate the need to reduce the structural integrity of the flooring, an air chamber will allow for an offset of the air inlet to avoid obstructions as shown in the above drawing.

AIR CHAMBER SUPPORT FRAME CRITERIA

1. Provide at least 1'' of air space to allow enough outside air to enter the stove up through the pedestal.
2. Must be strong enough to support the stove and components and distribute 620 pounds over at least 16 square feet.
3. Must be placed on a solid smooth surface to eliminate interference of the air flow.
4. Caution should be observed in the placement of the air chamber so that registers (forced air heating systems, etc.) will not be blocked.

The following drawing illustrates how the air chamber can be made to meet these requirements.

Plan for Wood Air Chamber That Meets HUD Requirements



Material: PLYWOOD, 3/8'' MIN., STRUCTURAL GRADE, 48'' X 48''
WOOD 2 X 4. SOME SUITABLE MATERIALS ARE:
SELECT STRUCTURAL #2: DOUGLAS-FIR, LARCH, EASTERN HEMLOCK, TAMARACK, NORTHERN PINE

OPTIONS:

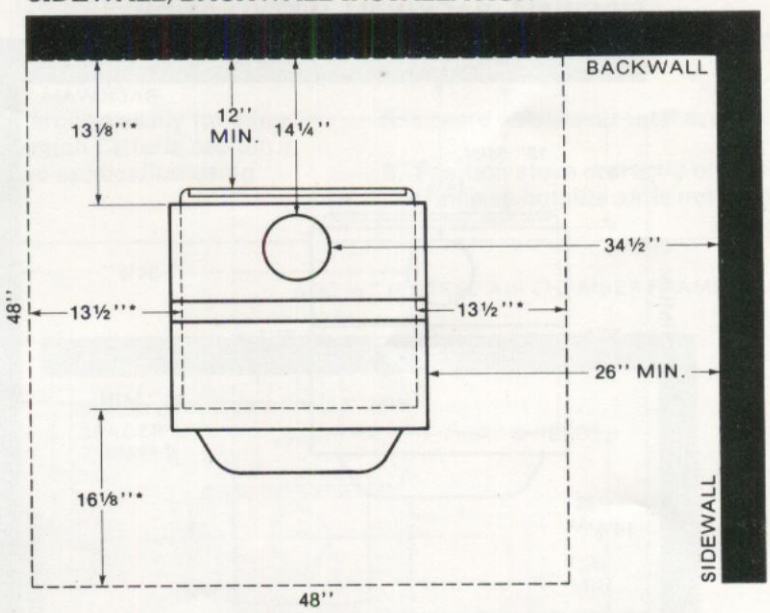
1. Carpets, tile, and mastics must be removed so the air chamber will sit on the mobile home floor structure.

OR

2. Place a hard surface material such as plywood or sheetmetal over the carpet to eliminate any obstruction to the air flow.

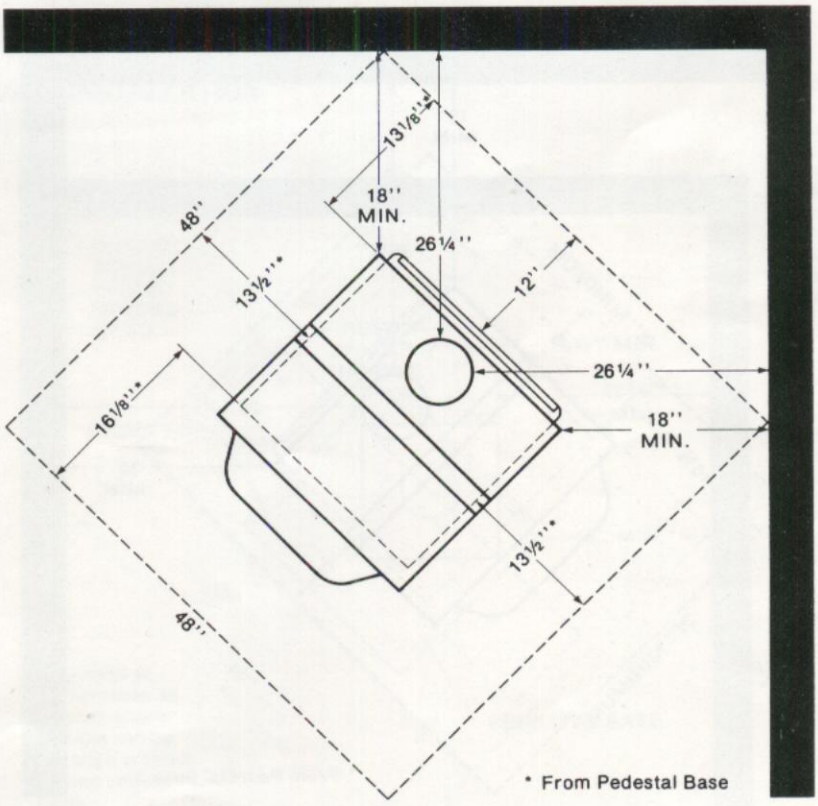
CLEARANCE TO COMBUSTIBLES/MOBILE HOME INSTALLATIONS

SIDEWALL/BACKWALL INSTALLATION



* From Pedestal Base

CORNER INSTALLATION

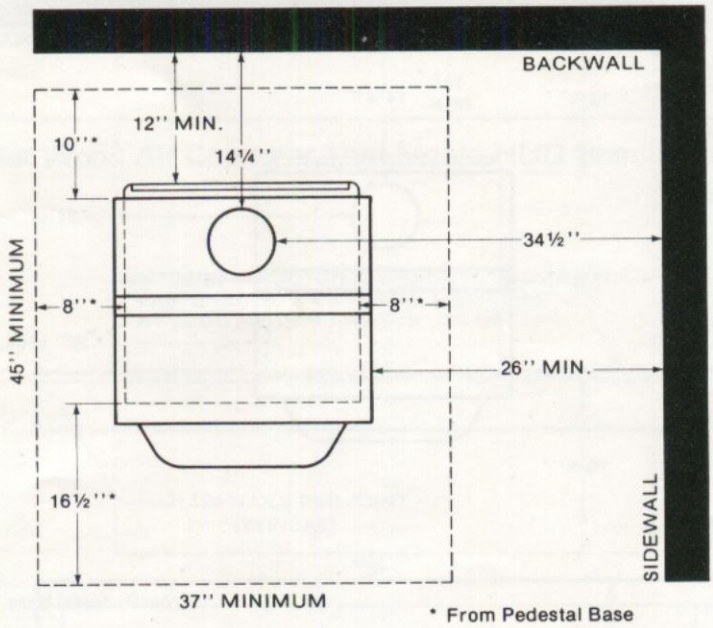


* From Pedestal Base

CLEARANCE TO COMBUSTIBLES/RESIDENTIAL-CONVENTIONAL

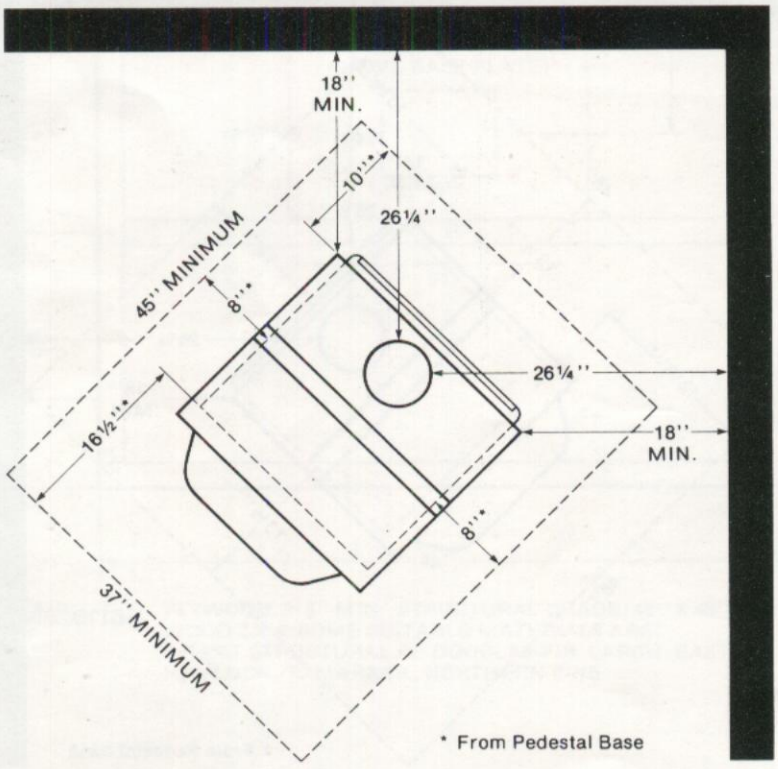
REDUCED CLEARANCES ARE SUBJECT TO APPROVAL OF LOCAL BUILDING OFFICIALS.

SIDEWALL/BACKWALL INSTALLATION



* From Pedestal Base

CORNER INSTALLATION

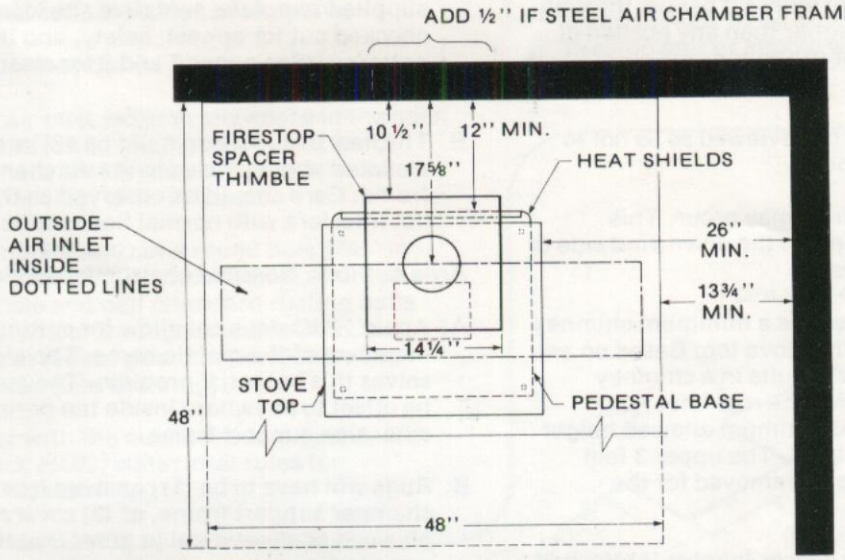


* From Pedestal Base

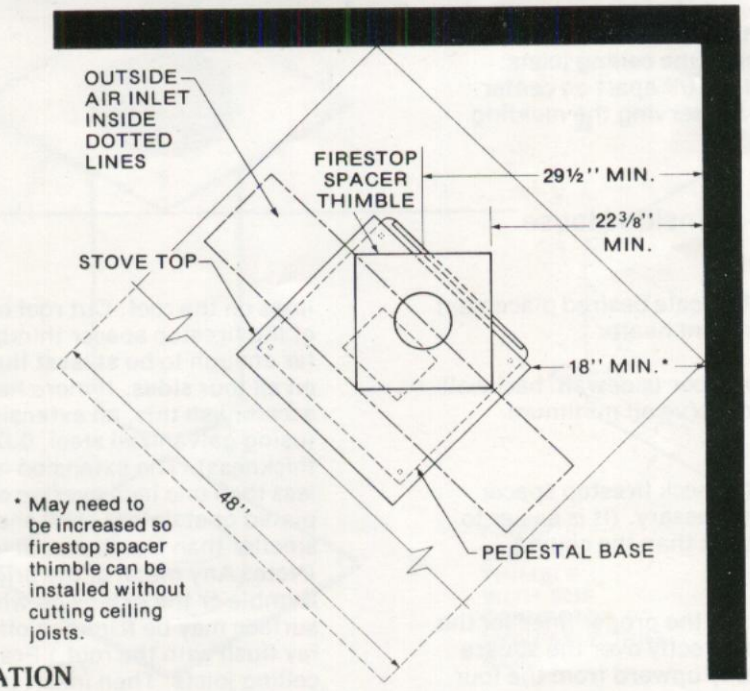
TEMPLATE-MOBILE HOME APPLICATION

A template is provided to make the installation easier and will be utilized in the Instruction Check List. The sidewall/backwall installation is on one side and the corner installation is on the other side. The purpose is as follows:

1. Help select the stove, chimney, hearth, and outside air location.
   a. The template can be moved around easily for site selection. (Refer to Site Selection Criteria section.)
   b. 48'' x 48'' is for Mobile Home application using outside air.
2. Establish clearance to combustibles requirements.
3. Locate hearth extension (floor protector) corners. (This determines area where carpet may need to be removed.)
4. Locate chimney firestop spacer thimble location in ceiling/roof.
5. Locate outside air inlet area in floor.
6. Position stove correctly on hearth extension and air frame so outside air is not restricted.



SIDEWALL/BACKWALL INSTALLATION



* May need to be increased so firestop spacer thimble can be installed without cutting ceiling joists.

CORNER INSTALLATION

A great deal of careful planning has gone into preparing the template for assisting in the installation of the Goldilocks™ Mobile Home Stove. The template is designed to apply to most mobile home installations. Should variances occur... stop...and consult a licensed or professional installer.

INSTALLATION INSTRUCTIONS

SITE SELECTION CRITERIA

In accordance with HUD rules and regulations for mobile home installation the structural members of the ceiling and floor cannot be weakened. Careful consideration of the stove placement must be made prior to the start of installation. The four major areas to consider are as follows:

Area 1. Outside (above roof) where chimney is placed.

A. Building codes require that the chimney extend at least 3 feet above the highest point where it passes through the roof and at least 2 feet higher than any portion of the building within 10 feet of the chimney. See drawing on page 14.

B. The power pole inlet should be reviewed so as not to conflict with chimney location.

C. Avoid areas where a down draft may occur. This situation is sometimes created on the downwind side of trees and adjoining obstacles.

Note: The Goldilocks Model requires a minimum chimney height of 10 feet 6 inches from the stove top. Based on an average 7 foot 6 inch ceiling this results in a chimney height approximately 5 feet above the roof line. For transporting a mobile home the maximum allowed height is 13½ feet from above ground level. The upper 3 foot section and rain cap will need to be removed for the transporting process.

Area 2. Ceiling: Where firestop spacer thimble is attached.

Note: For other than standard installations see instruction for open beam or attic installations.

A. The firestop spacer thimble is 14¼'' x 14¼'' square which is designed to fit between the ceiling joists. These joists are usually located 16'' apart on center. They can usually be found by observing the molding strips on the ceiling.

B. For corner oriented installations the locations of the firestop spacer thimble may dictate the distance to the end wall which may be more than the minimum clearance.

Area 3. Inside: Minimum clearance to combustibles.

A. These clearances are minimum distances to any combustible material such as walls, curtains, chairs, kindling, papers, etc. Therefore with use of the supplied template, tentative site locations can be checked out for appeal, safety, and floor traffic patterns. (See pages 7 and 8 for clearance to combustible charts.)

B. The hearth extension must be 48'' x 48'' and will be elevated about 2'' due to the air chamber support frame. Care should be observed so that the hearth does not interfere with normal floor traffic patterns.

Area 4. Floor: Possible obstruction to air flow inlet.

A. Again HUD does not allow for cutting of structural members of the mobile home. The air chamber easily solves this potential problem. The outside air inlet can be offset to anywhere inside the perimeter of the hearth extension support frame.

B. Rugs will have to be (1) removed from under the air chamber support frame, or (2) covered with hard plywood or sheetmetal in order that the air flow not be impeded.

C. Check to be sure that inlet ducts of forced air heating systems (if appropriate) are not blocked.

INSTALLATION CHECK LIST ~ Inside House

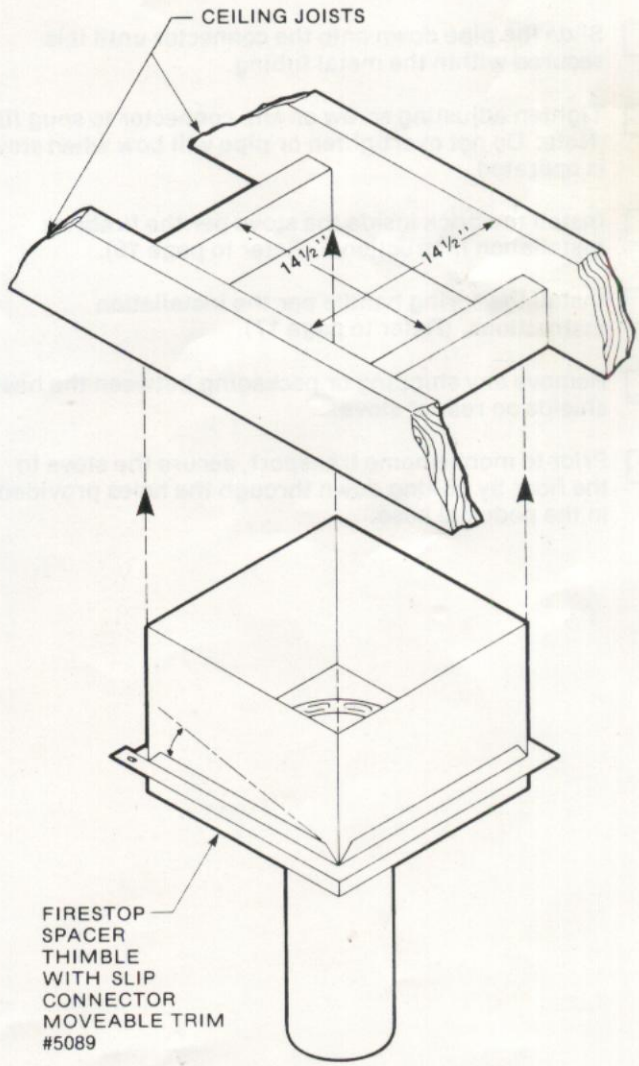
☐ Use Site Selection Criteria to locate desired placement of your Goldilocks Model radiant heater.

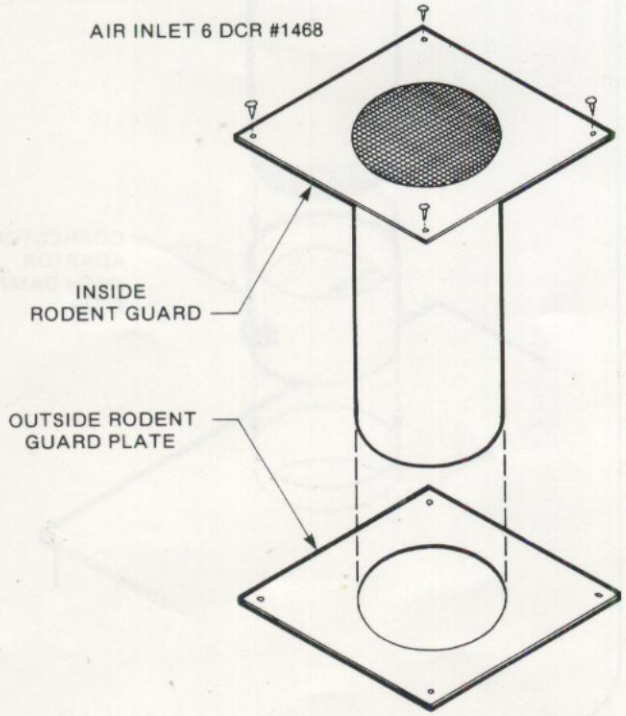
☐ Lay appropriate template on floor (sidewall/backwall or corner installation) and observe all minimum clearances.

☐ Use string and plumb bob to check firestop spacer thimble location. Adjust if necessary. (It is easier to move the floor air inlet location than the ceiling outlet.)

☐ Special Instructions: To locate the proper lines for the roof cut-out (which must be directly over the square ceiling cut-out), drill vertically upward from the four corners of the ceiling opening, then use holes to mark lines on the roof. Cut roof opening. The square body of the firestop spacer thimble must extend upward far enough to be **at least flush with the roof surface on all four sides.** If more height is needed to accomplish this, an extension may be made locally (using galvanized steel, 0.018 inch minimum thickness). The extension is to be fastened with not less than one inch overlap of the thimble metal, using plated or stainless steel sheet metal screws (not smaller than No. 8 size, at least two screws per side). (Note: Any metal of the original firestop spacer thimble or the extension which is above the roof surface may be trimmed off to allow the flashing to lay flush with the roof.) Frame the opening to the ceiling joists. Then insert the support box from the bottom of the frame opening. (See Drawing).

- ☐ Lay template out on floor and use string and plumb bob to match up ceiling hole location with the corresponding marking on the template.
- ☐ Mark the corner locations where the hearth extension is to be installed.
- ☐ (1) Remove any carpet, tile, or mastic between the corners or (2) place a hard surface material such as plywood or sheet metal over the carpet to eliminate any obstruction to the air flow.
- ☐ Locate the area on the template the outside air inlet can be placed and cut out section of template.
- ☐ Mark the area on the floor.
- ☐ Select the floor air inlet location anywhere in the open area where (1) the full 6'' diameter air inlet is not restricted, (2) there are no obstructions such as floor joists, electrical wiring, plumbing, etc.
- ☐ Remove the template and cut a round hole 6¼'' in diameter in the floor. Slip tube section of air inlet down through hole and nail (standard roofing nails recommended) to floor through four pre-punched holes. **Always put rodent guard in position before securing fireplace**. (See Drawing).
- ☐ Seal the air inlet with the outside rodent guard, if necessary. Check HUD/state/local rules for requirements. (See Drawing).
- ☐ Place the hearth pad and air chamber support frame on the cleared area.
- ☐ Cut the template on the lines marked ''pedestal base''.
- ☐ Place the template on the hearth extension and mark the corner locations of the stove pedestal base.
- ☐ Orient the firestop spacer thimble (#5089) so that the tightening bolt on the back of the slip connector is positioned to the back wall.
- ☐ Nail the thimble (#5089) to the sides of the joists using at least three 8-penny nails per side. The firestop spacer should be flush with the ceiling. (See Drawing).

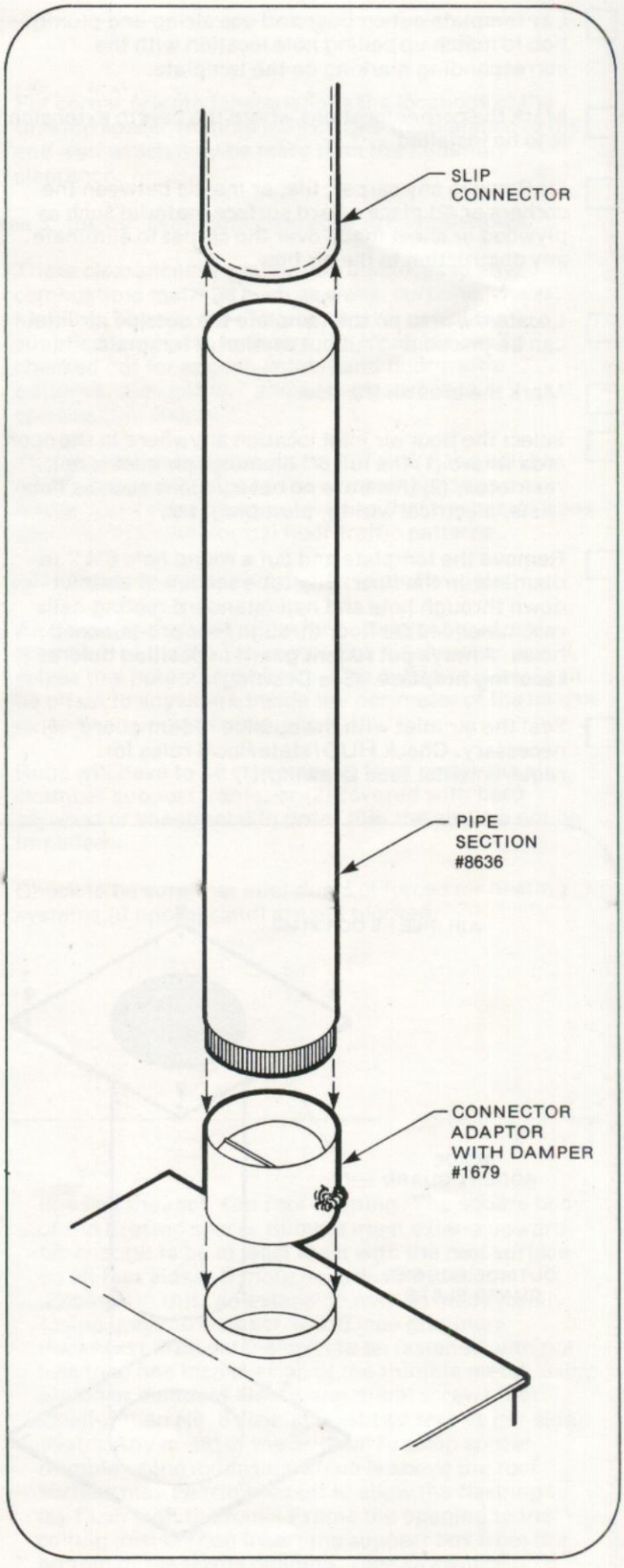




Inside House [continued]

- ☐ Orient the connector pipe section (36''), (#8636) so that the open liner end (crimped) is pointed downward. This insures the drip-free integrity. (See Drawing).
- ☐ Insert the double walled chimney connector pipe (#8636) up into the slip connector (#5089). The inside lines of the slip connector will slide into the chimney connector. The seams should be facing the wall so the smooth side of the pipe faces the room. Push the pipe up into the slip connector approximately six inches.

  Note: Additional lengths of pipe may be required for ceilings greater than 7 foot 6 inches.
- ☐ Raise the chimney connector section up into the slip connector so that the adapter can now be installed.
- ☐ Place the adapter on the stove and rotate until the manual damper handle is in your preferred positioning. (See Drawing).
- ☐ Slide the pipe down onto the connector until it is secured within the metal tubing.
- ☐ Tighten adjusting screw on slip connector to snug fit. Note: Do not overtighten or pipe will bow when stove is operated.
- ☐ Install the brick inside the stove per the firebrick installation instructions. (Refer to page 16).
- ☐ Install the spring handle per the installation instructions. (Refer to page 17).
- ☐ Remove any shipping or packaging between the heat shields on rear of stove.
- ☐ Prior to mobile home transport, secure the stove to the floor by bolting down through the holes provided in the pedestal base.



Outside House:

- ☐ Install 3' triple walled chimney sections (#5017) into firestop spacer thimble. Chimney sections twist together to lock into position.
- ☐ Install flashing (#5049) down over chimney section. Keep pipe in vertical position. Secure flashing to roof by nailing the upper edge and sides with 1'' roofing nails.
- ☐ DO NOT nail the lower edge of the flashing. Care should be taken to put upper edge and sides of flashing under roofing shingles to prevent leakage.
- ☐ DO NOT seal where the chimney and flashing contact. It will break loose due to expansion and contraction.
- ☐ Place the storm collar (#5059) from ¼ to ½ inches above the flashing and seal from the bottom side.
- ☐ Example: after chimney is installed, place a heavy bead of sealant around chimney approximately ¾ inch above top of flashing. Place storm collar around chimney and slightly above sealant. Tighten storm collar fairly snug then slide downward until it contacts sealant. Continue to slide downward until storm collar is ½ inch above flashing but not closer than ¼ inch. Finish tightening storm collar.
- ☐ Install additional 3' section of chimney (#5017) if necessary to assure 10 feet 6 inches of height from the stove top. Twist chimney sections together and lock into position.
- ☐ Snap rain cap and spark arrester (#5078) into the top of chimney.

INSTALLATION NOTES:

ALTERNATE INSTALLATIONS

INSTRUCTIONS FOR OPEN BEAM INSTALLATION

NOTE: For very steep pitched roofs, a longer support box may be required.

1. Cut hole 14½-inch square in roof to fit Support Box.

2. Cut 2 sides of Support Box to match the pitch of the roof. Allow sufficient depth so Support Box can extend 2 inches below inside of roof. Bend over the 2 sides of Support Box to right angles. Bend third side (lower side) to match pitch of the roof.

3. Set Support Box into the hole in roof. Nail down folded over parts of Support Box to the roof using 1-inch roofing nails. Keep Support Box level. Install trim, fastening to ceiling around the Support Box with screws.

4. Install triple walled Chimney Section into Support Box. Keep arrows on pipe pointing up. Chimney sections twist together to lock into position.

5. Install Flashing down over Chimney Section. Keep pipe in vertical position. Secure Flashing to roof by nailing the upper edge and sides with 1-inch roofing nails. Do not nail the lower edge of the Flashing.

6. Do not seal where the chimney and flashing contact. It will break loose due to expansion and contraction.

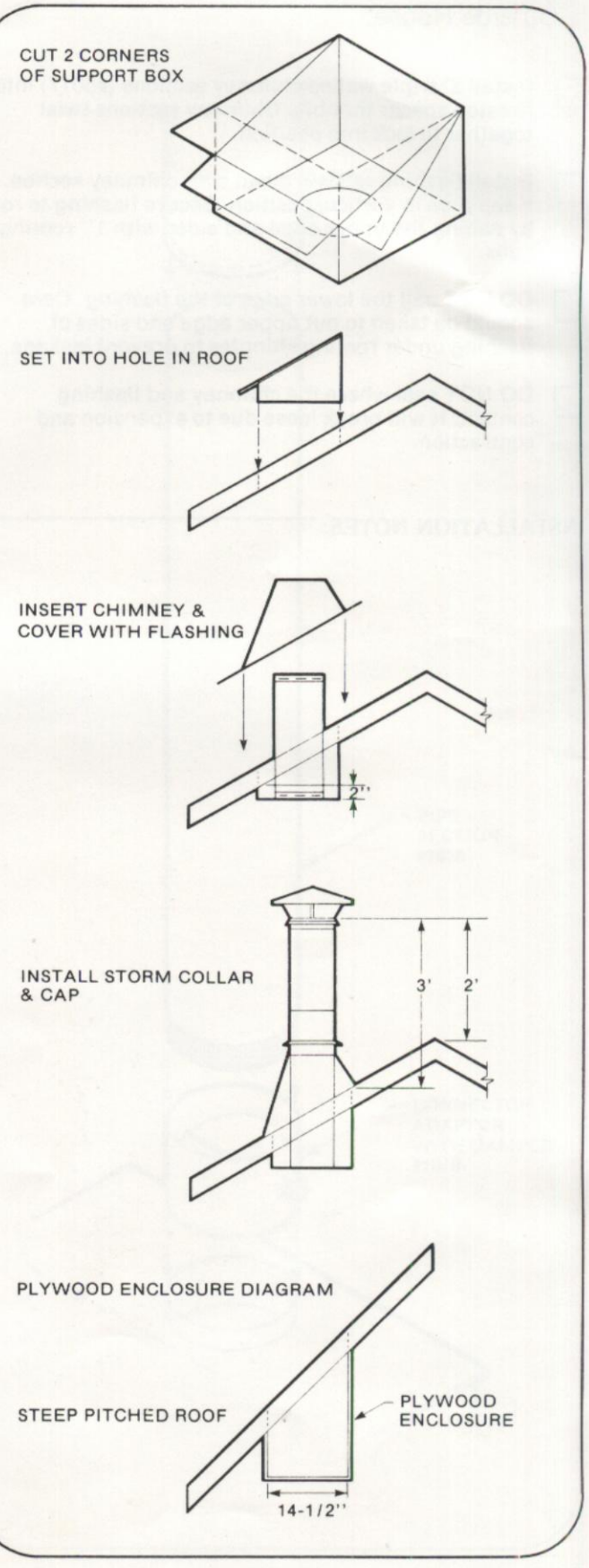
Place the storm collar (#5059) from ¼ to ½ inches above the flashing and seal from the bottom side.

Example, after chimney is installed, place a heavy bead of sealant around chimney approximately ¾-inch above top of flashing. Place storm collar around chimney and slightly above sealant. Tighten storm collar fairly snug then slide downward until it contacts sealant. Continue to slide downward until storm collar is ½ inch above flashing but not closer than ¼ inch. Finish tightening storm collar.

7. Round Top snaps into top of chimney.

CAUTION: Building codes require that chimney extend at least 3 feet above the highest point where it passes through the roof and at least 2 feet higher than any portion of the building within 10 feet of the chimney.

For very steep pitched roofs, a plywood enclosure (14½'' x 14½'' inside dimension) could be constructed so that the existing (Kit B) firestop spacer thimble could be used. For mobile home installation the thimble must be continuous through the enclosure.



ALTERNATE INSTALLATIONS

INSTRUCTIONS FOR ATTIC INSTALLATION FOR CONVENTIONAL HOUSING

The Goldilocks Model requires a minimum chimney height of 13'-4'' from the floor to the top of the chimney.

1. Cut a 14½'' square opening in the ceiling to fit the Support Box (firestop spacer thimble). Frame the opening to the ceiling joists, then insert the Support Box from the bottom of the framed opening.

2. Nail the Support Box to sides of joists using at least three 8-penny nails per side. Allow Support Box to extend 2 inches below finished ceiling. Install trim, fastening to ceiling around the Support Box with screws.

3. Place section of triple walled Chimney Pipe into Support Box, assemble chimney by placing sections together and twisting to lock.

4. If chimney passes through multiple levels of ceiling and floors, a Firestop Spacer, UL listed chimney Part 6-DCR-FS #5061 from Dura-Vent Corp. must be used at each level.

A. Frame a 14½-inch square opening in the ceiling.

B. Where the chimney passes through a ceiling and into an attic the Firestop Spacer should be nailed to the TOP of the framed opening.

C. Where the chimney passes through the floor from a lower level the Firestop Spacer should be nailed to the BOTTOM of the framed opening.

Continue to assemble chimney sections up through the opening in the Firestop Spacer.

5. Cut and frame a square opening in the roof, maintaining the required 2-inch clearance to combustibles between the chimney and the framed opening and roof materials.

NOTE: It is recommended that where the chimney passes through the attic space that it be enclosed within a wooden or metal enclosure. A minimum clearance of 2 inches must be maintained between the chimney and nearest combustible. The enclosure will prevent objects from being pushed up against the chimney.

6. Place the Roof Flashing over the chimney section and secure to roof by nailing the upper edge and sides of the flashing base to roof with 1-inch roofing nails. Do not nail the lower edge of the flashing.

7. Apply mastic to the nailheads and cover the upper portion of the flashing base with roofing material, creating a natural shingling effect.

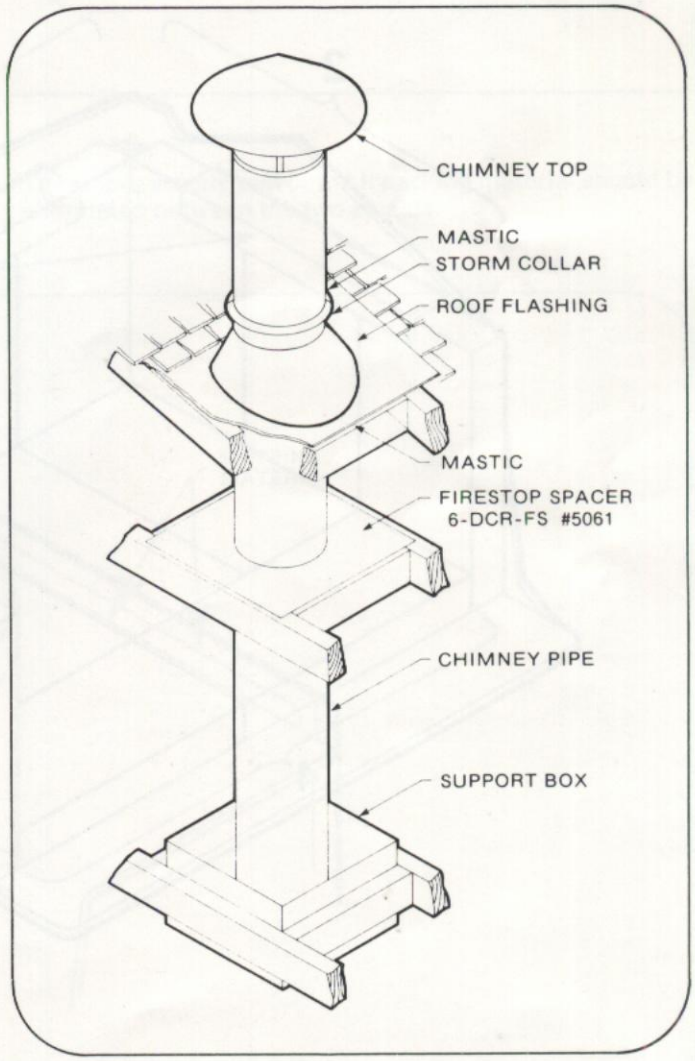
8. Do not seal where the chimney and flashing contact. It will break loose due to expansion and contraction.

Place the storm collar (#5059) from ¼ to ½ inches above the flashing and seal from the bottom side.

Example, after chimney is installed, place a heavy bead of sealant around chimney approximately ¾ inch above top of flashing. Place storm collar around chimney and slightly above sealant. Tighten storm collar fairly snug then slide downward until it contacts sealant. Continue to slide downward until storm collar is ½ inch above flashing but not closer than ¼ inch. Finish tightening storm collar.

9. Round Top snaps into top of chimney.

CAUTION: Building codes require that chimney extend at least 3 feet above the highest point where it passes through the roof and at least 2 feet higher than any portion of the building within 10 feet of the chimney.

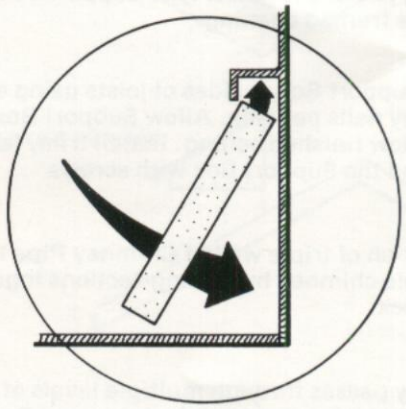


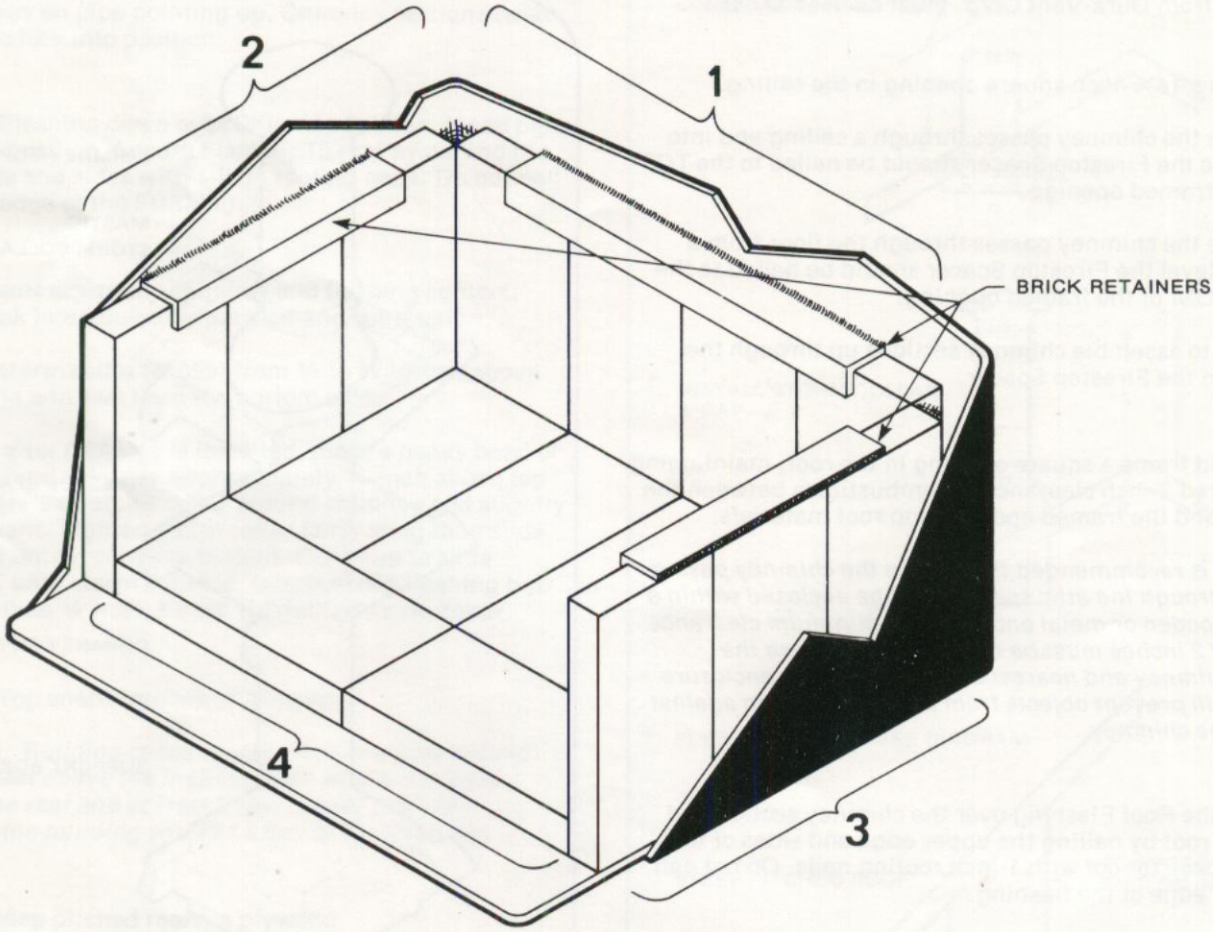
FIREBRICK INSTALLATION

There are 16 ASTM C-27 or C-64 firebricks (4½'' x 9'' x 1¼'') included with the stoves. Bricks are identified with the word FLAME imprinted on each brick, or the marking ''Clow Corp. Dover, Ohio Unbranded Low Duty Firebrick'' marked on each package of brick.

The bricks are to be installed as follows:

1. Back — 4 vertically placed, centrally located.
2. Left — 3 vertically located to meet rear bricks.
3. Right — 3 same as left.
4. Bottom — 6 horizontally placed as shown in diagram.





SPRING HANDLE

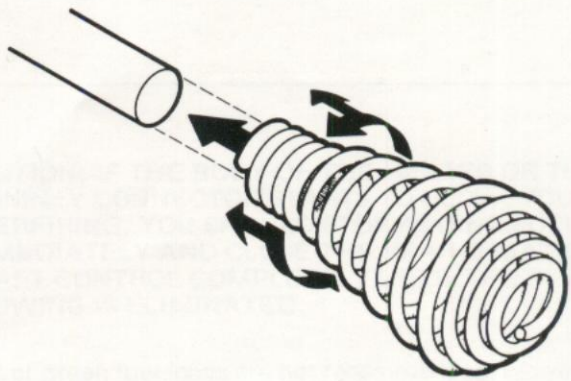
The Fisher Stoves exclusive spring handle has been designed to provide a ''cool'' feel to the touch. This is accomplished by the following techniques:

1. A special non-conducting material is used to coat the handle. This minimizes conduction of heat from the stove into the spring handle and ultimately to the skin contact.
2. The ''open coil'' design provides a dissipation of convection heat and the shape is comfortable to hold with the hand.
3. The highly reflective finish reflects radiant heat from the stove and consequently does not absorb the heat.

TO INSTALL THE SPRING HANDLE

The small end of the handle is designed to act like a spring-loaded corkscrew. Note that the inside diameter of the spring handle is slightly smaller than the handle rod.

To install the spring handle onto the rod, rotate the handle in a counter-clockwise direction until the spring opens up, then push onto the handle rod. It will remain tightly affixed when installed in this manner.

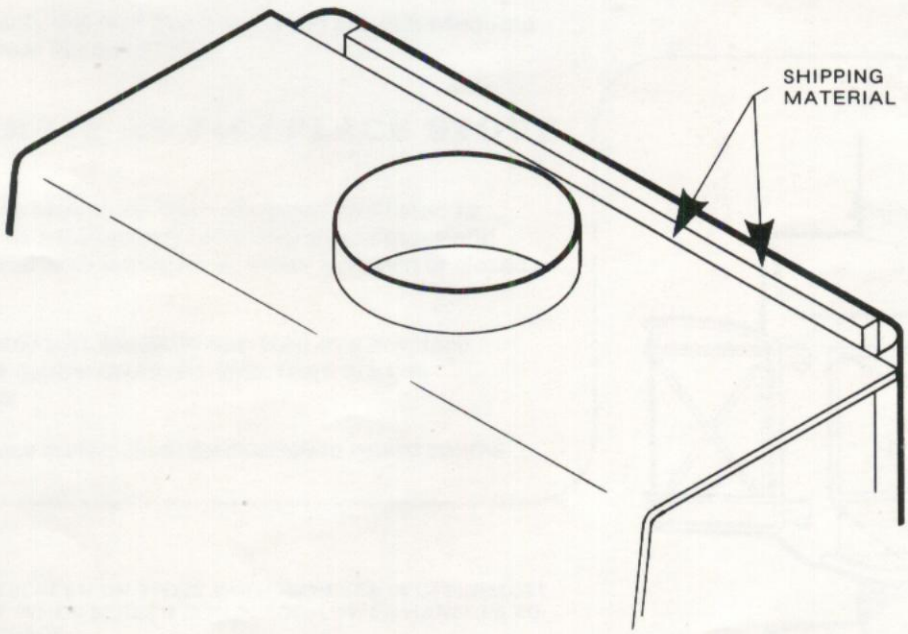


TO INSTALL: ROTATE COUNTER CLOCKWISE AND PUSH.

REMOVAL OF SHIPPING PACKAGING

There may be spacers inserted between the heat shield and the rear of the stove to protect the stove and shield during shipment.

To remove simply pull out. All packing material should be eliminated between the two shields.



III. OPERATING INSTRUCTIONS

PAINT ODOR DURING START-UP

When first using your Fisher Goldilocks Model, the high temperature paint that is used will smoke and give off a temporary odor for several hours. Although this is a temporary condition, windows and/or doors should be open enough to give adequate ventilation.

TO OPERATE AS RADIANT HEATER

TO LIGHT A FIRE

When first lighting a fire, roll a newspaper or other paper and hold the lighted end up in the upper chamber first before lighting the kindling. This starts the "draw" or draft up into the chimney and minimizes any smoke entering the room.

1. Turn manual damper handle to vertical position.
2. Using paper and small pieces of dry wood, start the fire on the bottom of the firebox. The fire should be started near the front of the firebox.

   Note: Under no circumstances should kerosene, gasoline, or similar products be used for starting fires.
3. Once the fire has started, slowly add larger pieces of wood until a bed of coals has been established. Some smoking may occur just after the fire is ignited but this will stop once the chimney has warmed.
4. Once the fire is well established, the burning may be controlled by adjusting the Bear-O-Matic™ Draft Control (left draft cap). Opening the draft cap several turns will cause the fire to burn more intensely and consume more fuel. Closing the draft cap will cause the fire to burn more slowly and consume less fuel. (Refer to section on Creosote for extended burning at low settings.)

   Normally only the first 2 or 3 turns will provide adequate air for normal temperatures.

CAUTION: IF THE BODY OF THE HEATER OR THE CHIMNEY CONNECTOR STARTS TO GLOW, YOU ARE OVERFIRING. YOU SHOULD STOP ADDING FUEL IMMEDIATELY AND CLOSE THE BEAR-O-MATIC™ DRAFT CONTROL COMPLETELY UNTIL THE GLOWING IS ELIMINATED.

Wet or green fuel loads are not recommended. However, if adding fuel which is wet or green, the Bear-O-Matic™ Draft Control should be opened several turns (3 or 4). This will intensify the fire and drive the moisture up the flue. Once the fire is well underway and the moisture driven off, the draft control may be readjusted to maintain the fire as desired.

For long duration fires, large diameter seasoned hardwood is the recommended fuel. Fill stove to its maximum capacity.

For additional information on wood and wood types see section on "Wood."

TO CHECK EXISTING FIRE

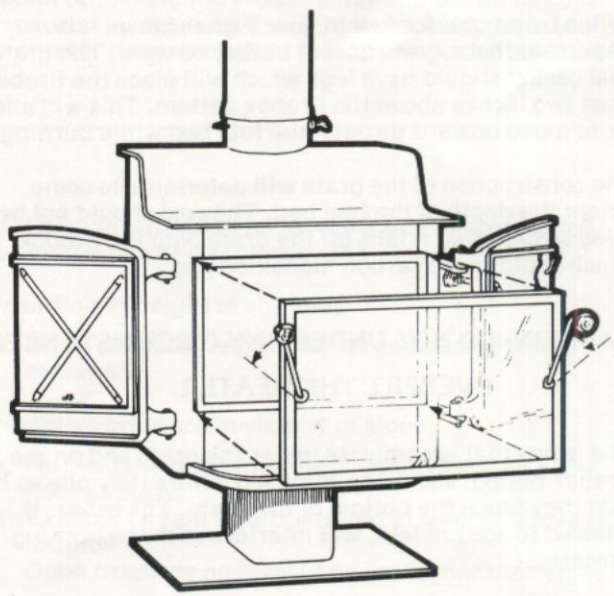
If you have been burning your stove with the draft closed and you need to check the fire, first open the door a crack, hesitate, then open the rest of the way. This keeps the open door from overpowering the chimney draw.

TO OPERATE AS FIREPLACE STOVE

The Goldilocks Model has been designed and listed to operate both as a radiant heater and fireplace stove and can be operated with the doors in either the open or closed position.

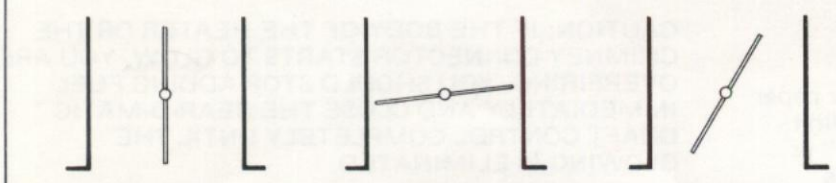
When the Goldilocks Model is operated as a fireplace stove and the double doors are open there are two requirements:

1. The fireplace screen must be in place to retard sparks.



POSITION SCREEN ON STOVE WITH HANDLES IN UPPERMOST POSITION. WHEN SCREEN IS IN PLACE, LOWER HANDLES TO LOCK IN PLACE.

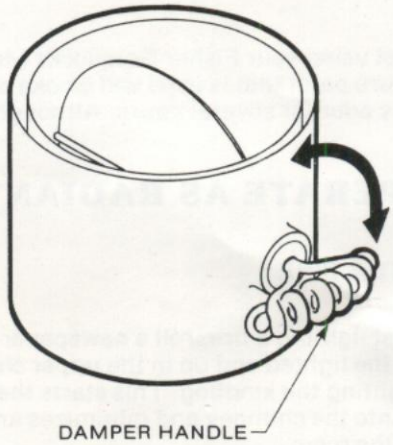
2. The manual damper in the flue adapter is used to control the stove temperature when the doors are open. To set the damper, rotate the damper handle slowly until smoke starts to come out of the opening. Reverse the rotations until the smoke stops. Adjust for your preferred temperature.



MAXIMUM OPEN POSITION FOR DOORS CLOSED OPERATION

MAXIMUM CLOSED POSTION (SMOKE STARTS TO EXIT OPENING)

ADJUSTMENT FOR DESIRED TEMPERATURE SETTING



ASHES - U.L. DISPOSAL REQUIREMENT

All Fisher Stove models give best performance when you consistently maintain a good bed of coals. When you clean out the ashes remember a wood fire burns better with approximately one inch 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.

COAL

It is recommended that hard coals such as anthracite be burned instead of soft coals.

It is very important that coal fires be started by using paper and kindling.

When using coal for fuel in your Fisher Stove, it is important that a grate or coal basket be used. The grate or coal basket should have legs which will place the firebed at least two inches above the firebox bottom. This will allow air to move upward through the fuel bed while burning.

The construction of the grate will determine to some extent the depth of the fuel bed. The coal should not be piled so high that it falls off the grate onto the firebox which could cause carbon monoxide gas.

CAUTION: DO NOT UNDER ANY CIRCUMSTANCES OVERFILL THE HEATER

The ashes that accumulate under the grate and on the firebox bottom should be removed before they pile so high that they touch the bottom of the grate. The ashes, if allowed to accumulate, will interfere with the burning process.

Large quantities of carbon monoxide may be formed, but will vent out of the chimney with proper maintenance and clean out of ashes. If it is suspected that carbon monoxide is entering the area around the heater you should follow these steps:

1. Immediately open the doors and windows of your home.
2. Shut down the heater (tighten the draft control).
3. Investigate further to determine if the heater or the chimney connector is leaking combustion products.
4. Check the chimney thoroughly as it may have become partially blocked.
5. If the source of the problem cannot be determined, call in a reputable installer or qualified person.
6. Correct before again burning.

CARBON MONOXIDE: This is a colorless, odorless gas which is very deadly. While carbon monoxide cannot be smelled, there are other gases also being produced, known as aldehydes. These have a distinctive odor described as "sour". Thus, a sour odor indicates that carbon monoxide is being produced and is somehow entering the space around the heater. The first physical symptoms of carbon monoxide poisoning will be a severe headache, dizziness, and possibly an upset stomach. Remember, if sour odors are noticed, take immediate action by following the above recommended procedure.

TROUBLE SHOOTING

CREOSOTE

Creosote is an undesirable result of every wood burning appliance. It can cause chimney fires if allowed to build up excessively. While we can't cure the creosote problem, there are things we can do to minimize the build up.

Let's look at the causes and solutions. Creosote is basically the residue of wood smoke and moisture when it is condensed. Therefore, we will consider the following factors: (1) smoke density; (2) moisture; (3) temperature of surface (chimney) where it can condense; (4) spark arrestors; and (5) chimney fires.

1. SMOKE DENSITY — HEAT CONTROL

Problem 1. Highest smoke densities occur during low smoldering burns, particularly when small pieces of wood are added to a hot bed of coals while the draft control is closed too tightly.

Solution 1a. After fuel is added, let the fire start burning good before closing down the draft control.

Solution 1b. After an overnight burn, open the draft control and let the fire burn pretty hot for 5-10 minutes with dry kindling. The desired hot temperature would be either when the upper level surface reaches 400-450° F. or a large pan of water comes to a rapid boil.

Solution 1c. At least weekly, open the draft control three to four turns and let the fire burn hot for approximately one-half hour.

1a. SMOKE DENSITY — WOOD

Problem 2. Some types of wood have more pitch in them than others and cause creosote.

Solution 2. Avoid or minimize the use of this type of wood. Hardwoods have the least amount of creosote causing materials.

2. MOISTURE

Problem 3. Water vapor in smoke condenses on cooler surfaces.

Solution 3a. Minimize the water vapor by using dry, seasoned wood.

Solution 3b. Avoid green wood during periods of slow burning conditions.

3. TEMPERATURE OF CHIMNEY

Problem 4. Creosote will condense on a cool surface.

Solution 4a. We do not recommend using thermal-siphon type chimneys as they operate in a very cool mode and may cause creosote to condense.

Solution 4b. Chimneys which rise in the house's interior will not cool as rapidly as chimneys installed on the outside of the house.

4. SPARK ARRESTORS

Problem 5. Spark arrestors in the chimney cap may get clogged with creosote.

Solution 5. Check chimney cap and clean if necessary.

5. CHIMNEY FIRES

Problem 6. Excessive buildup of creosote may ignite during a very hot fire and cause a chimney fire.

Solution 6a. Close the draft control immediately, and if necessary throw one or two cups of water into the stove and close the door. Stand far enough back to not get scalded when throwing water into the stove. The resulting steam should limit the intensity of the flue fire. Call the Fire Department. Clean the chimney before further operation.

Solution 6b. Avoid the creosote buildup before a fire is caused by cleaning the chimney at least periodically or after no greater than two cords of wood are burned.

SMOKING

The Fisher Stoves are designed and tested not to smoke with a normal chimney installation. If the stove smokes after the chimney is warm, it is due to insufficient draft of the chimney system and should be checked for the following:

1. Obstructions or restrictions in the system, such as
   a. Birds' nests, etc.
   b. Clogged spark arrestor
2. Reduction in effective size of system
   a. Excessive creosote buildup
3. Down drafts or abnormal winds
   a. Chimney installed on leeward side of obstruction
   b. Ineffective or no chimney cap
4. Insufficient height of chimney
   a. More chimney height may be necessary for high elevations
5. Negative pressure in vicinity of stove
   a. No partially open window or combustion air same floor as stove
   b. Exhaust or vent fans operating at level or above stove location
   c. Open fireplace on level of house higher than stove.

IV. MAINTENANCE CHECKLIST

☐ THE CHIMNEY AND CHIMNEY CONNECTOR MUST BE CLEANED PERIODICALLY DEPENDING UPON THE SOOT OR CREOSOTE BUILDUP. THE FREQUENCY OF CLEANING WILL DEPEND UPON A NUMBER OF FACTORS, BUT MAINLY UPON THE TYPE OF FUEL BEING BURNED.

IF THE CHIMNEY CAP IS EASILY ACCESSIBLE, CHECKING MAY BE DONE BY REMOVING THE COVER AND MESH AND LOOKING DOWN FROM THE TOP USING A BRIGHT FLASHLIGHT. IF THE CHIMNEY CAP IS NOT EASILY ACCESSIBLE, THEN THE CHIMNEY CONNECTOR MUST BE REMOVED SO THAT INTERIOR SURFACES MAY BE EXAMINED.

IMPORTANT: If it is necessary to remove the chimney connector or any portion, first protect all carpeting, furniture, etc. in the vicinity. Some soot and dirt will be knocked loose when the chimney connector sections are broken loose. If the chimney is tall, a length of large chain 2-3 feet long or a set of tire chains tied to a rope may be moved up and down within the chimney. In both of these instances, the soot and dirt will fall downward towards the heater and will have to be cleaned out through the door opening. Be sure both stove doors and the draft control are closed during this cleaning operation.

IF THE CHIMNEY CAP IS INACCESSIBLE, THEN THE CHIMNEY CONNECTOR WILL HAVE TO BE REMOVED AND THE CLEANING DONE FROM THE BOTTOM BY USING A LONG STICK WITH RAGS ATTACHED TO ONE END. AGAIN BE SURE CARPETING, FURNITURE, ETC. ARE PROTECTED. CLOSE STOVE DOOR AND DRAFT CONTROL OF HEATER WHILE CLEANING.

☐ WHEN CLEANING FROM BOTTOM, BE SURE TO PROTECT YOUR FACE WITH A SHIELD OR BY WEARING GOGGLES.

☐ THE DOORS ARE NICKEL PLATED CAST IRON. PERIODIC CONVENTIONAL TECHNIQUES TO CLEAN NICKEL COULD BE USED TO MAINTAIN THEIR BRILLIANCE.

☐ THE BEAR-O-MATIC™ CONTROL BOLT (INSIDE THE STOVE DOOR) AND HINGES SHOULD BE CLEANED WITH A WIRE BRUSH AT LEAST MONTHLY.

☐ THE FISHER GOLDILOCKS MODEL HAS A SMOKE-SHELF BAFFLE. PERIODICALLY (ONLY AFTER THE STOVE AND ASHES ARE COOL), THE CHIMNEY CONNECTOR SHOULD BE LIFTED FROM THE STOVE AND THE AREA BETWEEN THE TOP OF THE BAFFLE AND BACK SHOULD BE CLEANED. USE A VACUUM CLEANER TO REMOVE ANY ACCUMULATION OF FINE ASH.

☐ THE GOLDILOCKS MODEL HAS A CLEANOUT BELOW THE ASH FENDER TO REMOVE ANY PARTICLES THAT MAY HAVE FALLEN DOWN IN THE AIR CONTROL SYSTEM. THIS SHOULD BE CLEANED AT LEAST ONCE A MONTH. PLACE A LARGE BREAD PAN (OR OTHER METAL CONTAINER) BENEATH OPENING TO CATCH ANY FIRE RESIDUE.

V. SAFETY GUIDELINES / WARNINGS, U.L. STATEMENTS

- ☐ DO NOT BURN LARGE QUANTITIES OF LOOSE PAPER IN THE HEATER AS THE BURNT PAPER REMAINS MAY BLOCK THE SPARK ARRESTOR.

- ☐ NEVER USE KEROSENE, GASOLINE, OR SIMILAR PRODUCTS FOR STARTING THE FIRE.

- ☐ DO NOT OVERFIRE THE HEATER. IF THE HEATER OR CHIMNEY CONNECTOR START TO GLOW, IT IS BEING OVERFIRED.

- ☐ DO NOT TOUCH HEATER DURING FIRING—SERIOUS BURNS MAY RESULT. THIS IS A HEAT PRODUCING APPLIANCE. WARN CHILDREN OF POSSIBILITIES OF BEING BURNED IF THEY TOUCH THE HEATER.

- ☐ COMBUSTION AIR REQUIREMENT: CONVENTIONAL HOUSING STOVE INSTALLATIONS.
  All fuel burning appliances require air for combustion. Therefore, it is important that some fresh air be supplied to the space where the heater is located. This may be done by opening a window slightly. If a fireplace is also in your house and is operating, make sure a downdraft is not being created in your Fisher Stove.

- ☐ DO NOT STORE ANY FLAMMABLE LIQUIDS, ESPECIALLY GASOLINE, IN THE VICINITY OF THE ROOM HEATER.

- ☐ ALL FURNITURE, KINDLING, NEWSPAPERS, OR ANY OTHER COMBUSTIBLE SHOULD FOLLOW THE SAME CLEARANCE TO COMBUSTIBLE GUIDELINES AS SHOWN FOR THE WALL PROTECTION ON THE SIDEWALL/BACKWALL OR CORNER INSTALLATION DIAGRAMS.

VI. WOOD

Wood is America's renewable resource. Thank you for selecting this form of energy. Let's look at a few facts that may help in your choice.

The Fisher Stove's very high efficiency is based on an air starvation, secondary combustion system which results in very little ash and generates long, consistent heat.

However, with any virtually air tight system which has a smoldering type fire there can be a buildup of creosote in the chimney system. The type and moisture content of wood plays a major part in creosote formation. Our objective in this discussion will be to suggest facts that will reduce creosote and increase the efficiency and comfort of your system.

MOISTURE CONTENT FACTS:

1. When wood is dry, all woods, regardless of kind, have approximately the same energy content: 8600 BTU/lb. This is to say that one pound of dry oak has the same energy as one pound of pine. Oak and pine have different densities (lbs. per cubic foot) which we will discuss later.
2. Wet wood, whether seasoned or green, has less heat value because energy is wasted in drying the wet wood in order for it to burn.
3. Wet wood will cause more creosote because creosote is formed by the water vapor in the smoke which condenses in the chimney.
4. Wet wood is difficult to ignite and to keep burning.
5. Green wood generally has a high moisture content.

SUMMARY:

Wet or green wood should be avoided to minimize the formation of creosote as well as being less efficient. (8600 BTU/lb. for dry wood; 6000 BTU/lb. for wet wood.)

GREEN WOOD FACTS

1. Because green wood has a high moisture content, it is usually heavier, more troublesome to ignite and contains less energy.
2. The heartwood of trees is generally drier than the sapwood. Thus, if green wood must be burned, select the heartwood.
3. Green wood does burn more slowly because of the moisture content and causes the fire to last long. However, dry dense woods also burn longer and cause less creosote. We would recommend using dry, dense seasoned woods rather than green wood.

SEASONED WOOD FACTS:

Green wood can be seasoned or dried adequately within six months to two years if the proper techniques are used.

Techniques and facts:

1. Keep the woodpile at least one foot off the ground.
2. Place the wood so that air can circulate freely throughout the woodpile. This can be achieved by crisscrossing the stacking of the wood.
3. Direct exposure to sunlight will speed the drying process.
4. The smaller the pieces, the faster the drying process. Therefore split the logs into the smallest size preferred.
5. Cover the top part of the pile with plastic, but avoid completely covering to the ground. Otherwise, air circulation is impeded and ground moisture will become "trapped".
6. Store wood in a heated space such as a garage or basement if available and convenient.

SUMMARY:

Dry seasoned wood is preferable for good efficiency and easy burning. Green wood purchased in the "off season" (six months before heating season) may also be less expensive.

DENSITY:

Density is defined as weight per volume or, for example, pounds per cubic foot. All dry wood has the same BTU's per pound (8600); therefore, one pound of oak has the same energy potential as one pound of pine. However, since oak is a denser wood, it takes less space or volume than pine. Wood is usually sold by the cord (4' x 4' x 8' equals 128 cubic feet) which is a fixed volume. One cord of oak (dense wood) has more potential energy value than one cord of pine. Dense wood usually burns longer and creates less creosote. A cord of a denser wood may be a better bargain in the final analysis.

	RELATIVE DENSITY
SPRUCE	.4
REDWOOD	.4
CEDAR	.4
PINE	.5
WALNUT	.55
MAPLE	.55
ASH	.58
BIRCH	.62
OAK	.65
HICKORY	.7

HARDWOOD VS. SOFT WOOD:

When we think of hardwood, we usually think of dense heavy wood. This is generally but not always true. However, let's review and compare the characteristics, qualities, and difference in the two types.

SUMMARY:

Softwood is generally low in energy content but may be good for kindling and quick heat.

Softwood with high resin and pitch content should be avoided to minimize creosote.

Hardwoods generally have higher energy content and less creosote buildup and should be used for long, sustained heating.

Please review the next chart for specific comparisons.

	SOFTWOOD	HARDWOOD
DENSITY: (ENERGY CONTENT)	LOW	HIGH
LEAVES:	NEEDLES EVERGREEN (Except Tamarack, Larch and Cypress)	BROAD LEAF DECIDUOUS
PITCH OR RESIN CONTENT:	MAY BE HIGH AND CAUSE CREOSOTE	LOW
BURNING QUALITIES:	FAST AND HOT GOOD FOR KINDLING	LONGER LASTING GOOD COALS
IGNITION:	QUICK	SLOW

CONCLUSION:

Kindling: Use dry softwood split in small pieces.

Fuel: Use best dense wood available that is dry and seasoned.

Avoid green wood and wet wood for long, sustained periods.

RELATIVE CHARACTERISTICS OF COMMON FIREWOODS

TYPE	APPROXIMATE DENSITY	ENERGY COMPARISON WT/CUBIC FT	BTU'S (MIL) PER CORD AVE. ASSUME ACTUAL 80 CUBIC FT/CORD	MOISTURE CONTENT	SMOKE CONTENT	SPLITS	USE	COMMENTS
HARDWOODS:								
HICKORY	.7	43.6	30.0	MEDIUM	LITTLE	VERY WELL	FUEL	BEST FUEL
OAK	.65	40.5	27.9	WET	LITTLE	FAIR	FUEL	
BIRCH	.62	38.6	26.5	MEDIUM	SOME	HARD		AROMATIC
ASH	.58	36.0	24.8	DRY	LITTLE	WELL		GOOD FUEL
MAPLE	.55	34.3	23.6	MEDIUM	SOME	FAIR	FUEL	
WALNUT	.55	34.3	23.6	WET	LITTLE	FAIR		
CHERRY	.5	31.2	21.5	DRY	LITTLE	FAIR		
ELM	.5	31.2	21.5	WET	LOTS	DOESN'T		POOR FUEL
ALDER	.41	25.5	17.5	WET	LOTS	FAIR		POOR ENERGY CONTENT
SOFTWOODS:								
PINE	.5	31.2	21.5	DRY	LOTS	VERY WELL	KINDLING	PITCHY WOOD CREOSOTE
FIR	.5	31.2	21.5	DRY	SOME	EASY	KINDLING	
CEDAR	.4	24.9	17.1	DRY	SOME	VERY WELL		NOISE & SPARKS
REDWOOD	.4	24.9	17.1	DRY	MEDIUM	FAIR		

These Figures are approximate and will vary somewhat for different species.

THANK YOU. . .

. . .for reading this OWNER'S MANUAL. It has been written in such a way as to be easy to read and understand. It was our desire to provide as much data as needed to allow you to install and operate your FISHER STOVE GOLDILOCKS™ MODEL in the safest manner possible.

There are a number of excellent resources of wood heating which you might like to purchase for your home library. These include "The Woodburning Encyclopedia" by Jay W. Shelton.

For further information on using your heater safely, obtain a copy of the National Fire Protection Association publication "Using Coal and Wood Stoves Safely" NFPA No. HS-10-1978. The address of the NFPA is 470 Atlantic Avenue, Boston, Massachusetts 02210.

If you have any questions regarding your GOLDILOCKS™ MODEL which were not covered in this Manual, please feel free to contact your dealer. We welcome your comments and invite you to share with us any unusual applications of your stove and/or pictures showing your actual installation.

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