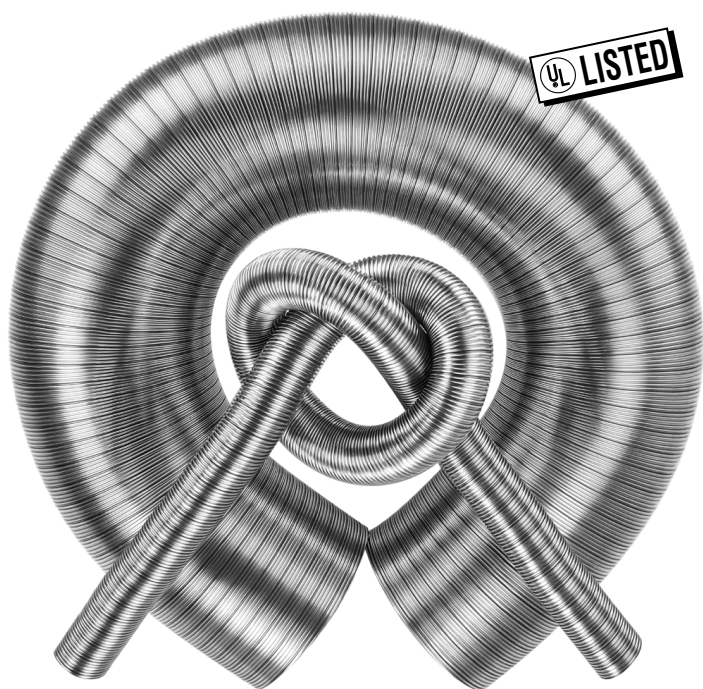


INSTALLATION AND
MAINTENANCE INSTRUCTIONS
FOR



FLEXIBLE STAINLESS STEEL RELINING PIPE



UL Listed Sizes: 3" – 12" diameters

Manufactured Exclusively for: Copperfield Chimney Supply, Inc.,
304 South 20th Street, Fairfield, IA 52556

INTRODUCTION

HomeSaver Pro flexible stainless steel relining pipe is intended for use in conjunction with residential heating appliances which burn wood, wood pellets, coal, or oil, any Category I LP or natural gas appliances, and gas logs installed in a fireplace. HomeSaver Pro shall be installed in masonry chimneys and may be installed in certain factory-built chimney applications.

HomeSaver Pro relining pipe is a high-quality, patented, flexible, stainless steel lining system. It has been tested and listed by Underwriters Laboratories, file #MH13768. HomeSaver Pro is made of high-quality, 316 Ti-alloy stainless steel. This maintains the corrosion resistance while also giving the benefits of high heat resistance.

HomeSaver Pro is a corrugated liner with a unique mechanical, roll-lock seam. These seams are gas tight and hold tight no matter how much you bend or shape them (Figure 1).

HomeSaver requires that an experienced professional who works with chimneys on a regular basis perform the installation of HomeSaver Pro relining pipe.

HomeSaver Pro is tested and listed to the UL 1777 Standard which requires insulation for wood and coal applications, explained later on. Acceptance of the lining system is void if these installation instructions are not followed.

HomeSaver's commitment to providing a product of superior quality is reflected in its obtaining the UL Listing. The testing is very stringent, and UL ensures consistency of the product by regularly inspecting the manufacturing facility and materials. This commitment is also reflected in HomeSaver's excellent warranty.

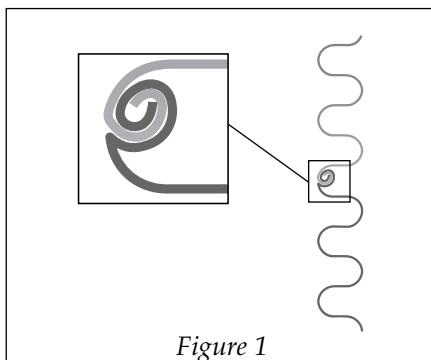


Figure 1

SECTION 1

How To Determine If A Reline Is Needed

A reline is advisable when:

- The chimney has missing or damaged flue tiles, or mortar is missing between flue tiles.
- The cross-sectional area of the flue of a chimney with no walls exposed to the outside below the roofline is more than three times the cross-sectional area of the appliance flue collar.

The cross-sectional area of the flue of a chimney with one or more walls exposed to the outside below the roofline is more than two times the cross-sectional area of the appliance flue collar.

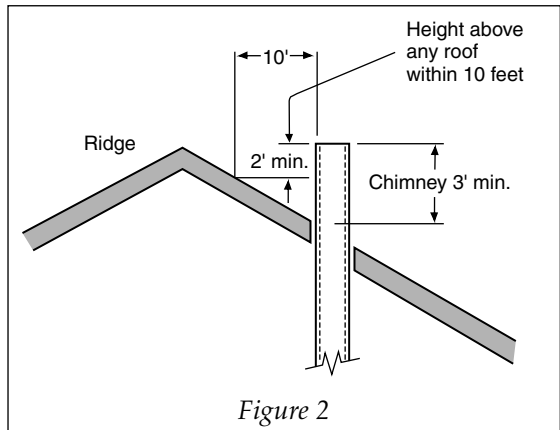
- Deemed necessary by the appliance manufacturer.
- Deemed necessary according to the NFPA 211, NFPA 31 Oil Standard, or the NFPA 54 Fuel Gas Code Book.
- The system has a history of repeated excessive creosote and/or moisture buildup.

SECTION 2

Important Code And Safety Considerations

CHIMNEY HEIGHT

The National Fire Protection Association Standard 211 requires that the chimney extend at least 3' above the highest point where it passes through the roof and at least 2' higher than any structure within 10' (Figure 2).



CLEARANCES

Masonry Chimneys

Airspace clearances between the masonry chimney exterior and combustible materials should be checked to verify whether the chimney is in accordance with the clearance specifications contained in:

1. NFPA 211
2. Other recognized major building codes
3. These instructions

NFPA 211 states that the minimum airspace clearance between exterior masonry chimneys (which have the chimney completely outside the exterior wall of the building, excluding the soffit or cornice area) and combustible material shall be at least 1".

NFPA 211 states that the minimum airspace clearance between interior masonry chimneys (which have any portion of the chimney located within the exterior wall of the building) and combustible materials shall be at least 2". The airspace shall not be filled.

Factory-built Chimneys

Before beginning the installation, determine if the existing factory-built fireplace and chimney system has been installed correctly and required clearances have been maintained. Be sure the factory-built chimney and components are not warped, rusted, or damaged in any way. The system must be structurally sound. If there is damage to the system, insufficient clearances, or rusting of components, these parts must be replaced! Do not install a liner if the above requirements cannot be met!

Make sure you are connecting to an appliance that has been listed for installation in a zero clearance fireplace and that all clearances and requirements set forth by the listed insert manufacturer have been met. Also make sure the fireplace manufacturer has approved this type of installation. *This installation is approved for these types of appliances with a 6" collar only. Only a 6" HomeSaver Pro, HomeSaver UltraPro or HomeSaver RoundFlex liner may be used.*

CONNECTING OTHER APPLIANCES

Use of this liner is approved for wood, wood pellets, coal, or oil, any Category I LP or natural gas appliances, and gas logs installed in a fireplace. However, it is important to remember:

You cannot connect gas or oil appliances to a liner serving solid fuel-burning appliances. You cannot connect more than one, solid fuel-burning appliance to a single HomeSaver Pro liner. Be sure to consult the authority having jurisdiction for any special code and permit requirements.

SECTION 3

Determining The Materials You Need

1. WHAT SIZE OF HOMESAVER PRO LINER TO USE

When relining to a solid fuel appliance, HomeSaver Pro must be properly sized to that appliance as specified in the appliance manufacturer's instructions. For solid fuels, the cross-sectional area shall not be less than the area of the appliance flue collar. Only a 6" HomeSaver Pro, UltraPro, or RoundFlex liner may be used to line a factory-built chimney when being connected to a listed solid fuel-burning insert or hearth stove. The minimum inside diameter of the factory built pipe must be 8". Please refer to the chart in Figure 3, which gives the cross-sectional areas for 3" – 12" HomeSaver Pro. When using HomeSaver Pro to vent a fireplace (Figure 4), if the chimney is straight and at least 8' tall and you are using a round pipe, the cross-sectional opening of the flue liner (Area A) should usually be no less than $\frac{1}{12}$ of the face opening of the fireplace chamber (Area B) to ensure proper draft. If the chimney is offset, or if the liner is square, oval or rectangular, the flue liner shall not be less than $\frac{1}{10}$ of the fireplace

CROSS-SECTIONAL AREA FOR EACH SIZE OF PIPE:

3" Round	7.1 sq. in.
4" Round	12.6 sq. in.
5" Round	19.6 sq. in.
5.5" Round	23.8 sq. in.
6" Round	28.3 sq. in.
7" Round	38.5 sq. in.
8" Round	50.3 sq. in.
9" Round	63.6 sq. in.
10" Round	78.5 sq. in.
11" Round	95 sq. in.
12" Round	113.1 sq. in.

Figure 3

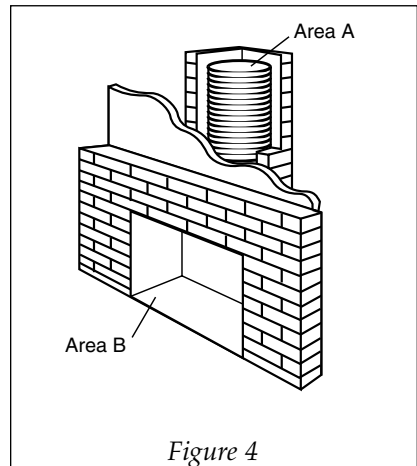


Figure 4

opening. You should refer to NFPA 211 for additional sizing specifications. For oil-burning appliances, the flue shall be sized according to the appliance manufacturer or the NFPA 31 Oil Standard. For LP or natural gas appliances, the flue shall be sized according to the appliance manufacturer or the NFPA 54 Fuel Gas Code Book. In all cases, the authority having jurisdiction can mandate sizing.

2. DETERMINING WHAT LENGTH OF HOMESAVER PRO LINER IS NEEDED

Determine the length of liner needed by lowering a weighted rope down the chimney to where your relining pipe terminates. Add another 3" for the installation of the top clamp, storm collar, and Guardian™ Cap or the rain cap with band connection and the CollarPlate.

If needed, HomeSaver Pro may be cut with an angle grinder or circular saw with a metal-cutting blade.

The maximum recommended height for HomeSaver Pro is 65'. Minimum height is 10'.

3. INSULATING THE LINER

Insulation is required when venting solid fuel appliances but is optional for wood pellet appliances, oil appliances, and Category I LP or natural gas-burning appliances.

Wood And Coal Applications

First, determine if the chimney you are relining has at least 1" of clearance between its exterior masonry surfaces and combustibles. If it does, you may insulate with one wrap of ¼" Foil-Face FlexWrap or a minimum of 1" of TherMix Insulation (see point 10, page 17). The ¼" Foil-Face FlexWrap adds 1" to the outside dimensions of your liner (it lofts to ½").

Remember, the outside dimension for HomeSaver Pro is ⅜" larger than the inside diameter.

If less than 1" of clearance exists between the exterior masonry surface and combustibles, you must insulate with two wraps of ¼" Foil-Face FlexWrap, one wrap of ½" Foil-Face FlexWrap, or 1" of TherMix Insulation.

When relining a factory-built chimney, one wrap of ½" Foil-Face FlexWrap is required.

Two wraps of the ¼" Foil-Face FlexWrap adds 2" to the outside dimensions of your liner. The ½" FlexWrap adds 1½" to the outside dimensions of your liner (it lofts to ¾"). TherMix insulation (page 14), adds 2" to the outside dimensions of your liner (1" of TherMix is required to surround the pipe on all sides).

As an alternative, HomeSaver offers a ½" Foil-Face Insulation Kit in 25' lengths for 5", 5.5", 6", 7", and 8" diameters. HomeSaver also offers insulation kits for 6" diameter in 30' and 35' lengths. These kits also include a can of 3-M Spray Adhesive, an appropriately sized roll of the ArmorMesh Insulation Cover, a Mini Make-A-Clamp Kit, and a roll of Aluminum Foil Tape.

Note: When using FlexWrap for insulation, there is no airspace required between insulation and the inside of the masonry chimney (or flue tile liner).

Wood Pellet, Oil, And LP Or Natural Gas-Burning Appliances

Since the use of insulation around HomeSaver Pro keeps the liner warmer, one wrap of ¼" Foil-Face FlexWrap will help reduce condensation, as well as reducing cold spots which affect chimney performance. This is especially prone to happen when the flue gas temperature is below 280°F at the thimble, when large portions of the chimney are located on the exterior of the house, when HomeSaver Pro is venting a fan-assisted Category I gas appliance, or when the flue cavity is much larger than the liner.

In addition, insulating helps to reduce soot deposits found in oil flues.

Using HomeSaver Foil-Face FlexWrap

HomeSaver Foil-Face FlexWrap is an insulating blanket of special ceramic fibers mated to a heavy reflective foil. The use of FlexWrap around HomeSaver Pro relining pipe will help center the liner in the chimney, in addition to the general benefits mentioned above.

Remember, you have a choice when using HomeSaver Foil-Face FlexWrap that is dictated by the airspace clearances to combustibles in the chimney system being relined.

To determine the width of FlexWrap needed, see Trim Chart, (Figure 5, next page).

Adhesive and foil tape will also be needed to adhere the FlexWrap to the liner. FlexWrap must be covered with ArmorMesh to protect the FlexWrap from tearing during installation — see the chart, (Figure 6, next page), to

TRIM CHART — HOMESAVER® PRO™ AND FLEXWRAP™ INSULATION			
HomeSaver® Pro™ size to be used	Cut this width for first ¼" wrap	Cut this width for second (outer) ¼" wrap	Cut this width for ½" wrap
3" dia.	12¾"	14"	13½"
4" dia.	16"	17½"	17"
5" dia.	19½"	21"	19½"
5.5" dia.	21½"	23½"	21½"
6" dia.	23"	25"	22½"
7" dia.	27½"	29½"	26¼"
8" dia.	30"	32"	29¼"
9" dia.	32½"	34½"	32½"
10" dia.	35½"	37¾"	35¾"
11" dia.	39"	41¼"	38¾"
12" dia.	42½"	45¼"	41½"

Figure 5

determine what size is needed. Clamps for fastening the ArmorMesh at the top and bottom will also be needed and can be created from a Make-A-Clamp brand clamping kit, or large radiator-type clamps which can be purchased at automotive supply stores.

WHICH SIZE ARMORMESH™ TO USE WITH DIFFERENT SIZES OF HOMESAVER® PRO™	
HomeSaver® Pro size to be used	Use this size ArmorMesh™ with all insulation combinations
3" – 6" dia.	Small
7" – 9" dia.	Large
10" – 12" dia.	Extra-Large

Figure 6

4. COMPONENTS

Flex installations should be finished at the top with a top plate, top clamp (or support brackets), storm collar, and a 316-alloy stainless steel Guardian Cap or an inverted cone cap. As an alternative, a CollarPlate and CollarPlate Rain Cap may be used. A Gelco Knock-Down Top or Chimney Protector may be used as an alternative to terminate a HomeSaver relining installation, see page 18 for specific sizes. If wood is being burned, a 304-alloy stainless steel Guardian Cap may be used.

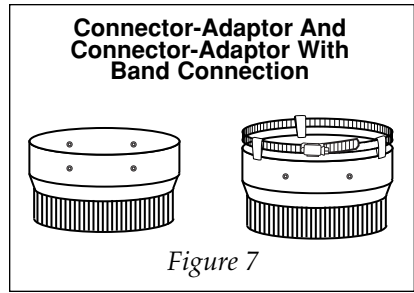
If relining a factory-built chimney, a Factory-Built Liner Adaptor will be needed as part of the top termination. It's important that these installation instructions are followed to ensure the prevention of moisture is prevented from entering the liner, the space between the liner and factory-built

chimney and the chimney insulation.

A 316-alloy stainless flex connector-adaptor (Figure 7), is needed when connecting two pieces of HomeSaver Pro relining pipe.

This adaptor allows a drip-free connection. The adaptor on the left in Figure 7 requires that four, 316-alloy

stainless pop rivets be used at every connection. The adaptor on the right in Figure 7 requires the band to be tightened to the liner and pop rivets, although not required, may also be used.



HomeSaver Pro installations connecting to an appliance should be finished at the bottom with a tee. If connecting to a woodstove insert, the connection may be made with a connector/adaptor or a HomeSaver Pro insert boot adaptor and a RoundFlex cast-iron insert boot. In fireplace installations, either a plate, and support rods or a bottom plate leg support system or an insulation plug at the top of the smoke chamber (Figure 11, page 14) must be used. See installation procedures for details (see point 7, page 13).

Important Note: Do not use any liner parts other than those specified in these installation and maintenance instructions.

SECTION 4

Before You Begin

The following tools and supplies are basic ones needed for your HomeSaver Pro installation:

Trowel	Mortar	Mortar pan
Steel snips	Silicone sealant	File
Ladder	Pop rivet gun	Utility knife
Electric drill	316-alloy S.S. pop rivets	Measuring tape
$\frac{3}{16}$ " high-speed drill bit	Hammer	Screwdriver
Cold chisel	Gloves	Pliers
Eye protection	Rope	Caulking gun
$\frac{3}{16}$ " masonry drill bit		
Respirator (MSA Comfo Classic or equivalent)		
Circular saw with metal-cutting blade (or similar tool)		

Wear eye protection, gloves, and respirator whenever you're in contact with creosote, soot, mortar, or insulation. Use caution when working on a roof. Proper and safe scaffolding should be used for a safe installation. All ladders should be secured to the building. Be sure to check overhead for antennas, power lines, or other obstacles before erecting the ladder and installing the liner.

INSPECT THE CHIMNEY

Inspect the chimney for structural integrity before it is lined. HomeSaver Pro relining pipe shall be installed in a chimney with a minimum 4" of solid brick as specified in NFPA 211. Look for loose or eroded mortar, cracks in the masonry, missing bricks, internal obstructions, abandoned flue holes, and excessive creosote accumulation. Make necessary masonry repairs prior to relining the chimney.

CLEAN THE CHIMNEY

Clean and remove all tar-glazed creosote and soot found on internal chimney walls and the fireplace smoke chamber before relining the chimney. If not removed, creosote is a fire hazard. It can also cause an unpleasant odor.

TEST TO MAKE SURE THE LINER FITS

On any installation where minimum or near minimum inside chimney dimensions are present, always test your fit before proceeding. Chimneys are irregular and hard to "sight" accurately. Take a small scrap section of liner, about 2' in length, then wrap it with the required thickness of FlexWrap (if this is your insulation choice). Be sure this "test section" can be lowered easily, without binding, through the entire length of chimney.

SECTION 5

Doing The Installation

The following instructions are intended as a guide to assist a qualified professional installer. Check your local building codes and contact local building or fire officials to obtain any required permits.

1. Inspect the masonry chimney for structural integrity before it is lined. HomeSaver liner shall be installed in a chimney with a minimum 4" of

solid brick as specified in NFPA 211. Inspect the chimney for loose or eroded mortar, cracks in the masonry, missing bricks, internal obstructions, abandoned flue holes, and excessive creosote accumulation. Make necessary masonry repairs prior to relining the chimney.

Before relining a factory-built chimney, determine if the existing factory-built fireplace and chimney system have been installed correctly and required clearances have been maintained. Be sure the factory-built chimney and components are not warped, rusted, or damaged in any way. The system must be structurally sound. If there is damage to the system, insufficient clearances, or rusting of components, these parts must be replaced! Do not install a liner if the above requirements cannot be met!

2. If you are relining a fireplace, go to point 7, page 13.

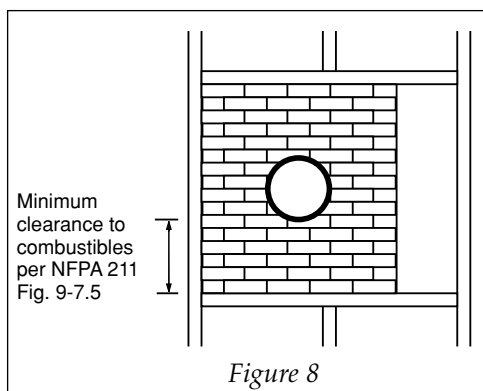
If the liner is to be connected to an insert, determine if the liner will line up exactly with the flue collar on the insert top. If it does, and the collar is round, use a HomeSaver connector/adaptor to make the connection. The connector/adaptor should be securely attached to the liner. The male end of the adaptor should then fit into the insert flue collar and stainless screws may be used to attach it to the collar.

If the liner angles towards the insert collar, or has an oval or rectangular opening, a HomeSaver RoundFlex cast-iron insert boot and insert boot adaptor must be used to connect the Pro liner to the insert boot.

If you are relining to a hearth stove, the liner will terminate into a tee, which should be located in the fireplace firebox. See point 4, next page for information on connecting the tee.

3. If you are relining a flue venting a woodstove and there is no existing opening for stovepipe, you now need to make one. If there is an opening, it may need to be expanded in order to assemble the take-off to the flex tee.

For solid fuel appliances the NFPA "minimum clearance to combustibles" is 18" for single-wall connectors. Figure 8, shows a



typical framing, which would have to be constructed in a combustible wall next to the chimney. This framing requires a minimum of 12" of brick masonry surrounding the thimble on all sides, see NFPA 211 for more details. It must not be located directly behind the appliance, but above it.

If a UL Listed wall penetration assembly is used (as an alternative to Figure 8, previous page), it must be located above the heating appliance and may not be located directly behind the heating appliance.

Clearances from solid fuel-burning appliances to combustible materials must be strictly adhered to. Follow all local codes and manufacturer's instructions.

4. To install the tee, first place the tee cover over the outside of the bot-

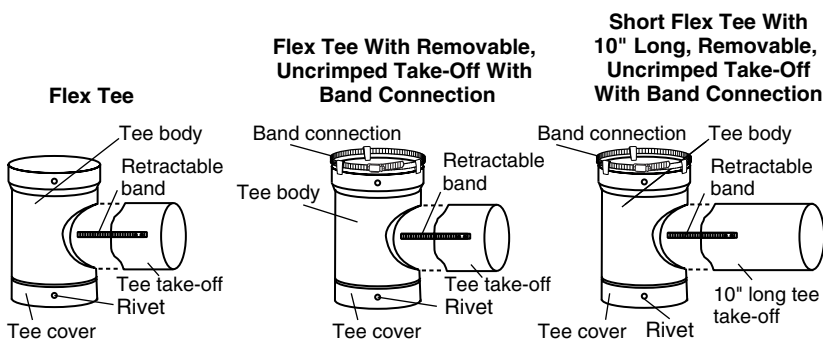


Figure 9

tom end using four, 1/2" 316-alloy stainless pop rivets to secure (Figure 9). The first tee, which is the Flex Tee, attaches to the pipe with four 1/2" 316-alloy pop rivets.

The take-off attaches to the tee body with a retractable band connection.

The second tee, above, is called the Flex Tee With Removable, Uncrimped Take-Off With Band Connection. The Pro slides into the top of the tee and is secured by tightening the retractable band connection. There are also four pilot holes where 1/2" 316-alloy pop rivets may also be used if desired. The take-off attaches to the tee body with a retractable band connection.

The third tee, above, is called the Short Flex Tee With 10" Long, Removable, Uncrimped Take-Off With Band Connection. The Pro slides into the top of the tee and is secured by tightening the

retractable band connection. There are also four pilot holes where $\frac{1}{2}$ " 316-alloy pop rivets may also be used if desired.

This tee has a retractable band that secures the take-off to the tee body. The band should be opened so that when the HomeSaver Flex and tee are lowered down the chimney, the tee can pass through the band.

As an alternative, a Pro connector-adaptor may be used to join the liner to a Heat-Fab rigid tee.

5. Install support rods and bottom plate as shown (Figure 10) so the take-off will line up with the thimble hole. The tee sits on the plate which supports the weight of the liner.

6. When using HomeSaver Pro relining pipe to reline a fireplace flue, terminate the liner at the bottom of the chimney flue just above the smoke chamber. Termination is illustrated on the next page, Figure 11. As an alternative method of support, a HomeSaver Bottom Plate Leg Support System can be used instead of support rods (see Figure 11, next page, alternative "A") Install the four support brackets by bolting to the liner in a position that allows them to rest on the bottom plate, and so no more than 2" of liner is below the plate. Or, a bottom plate with 2" collar may be used. A connector-adaptor will be needed to join the liner to the collar.

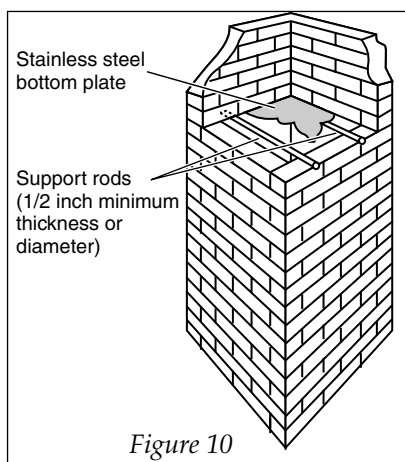
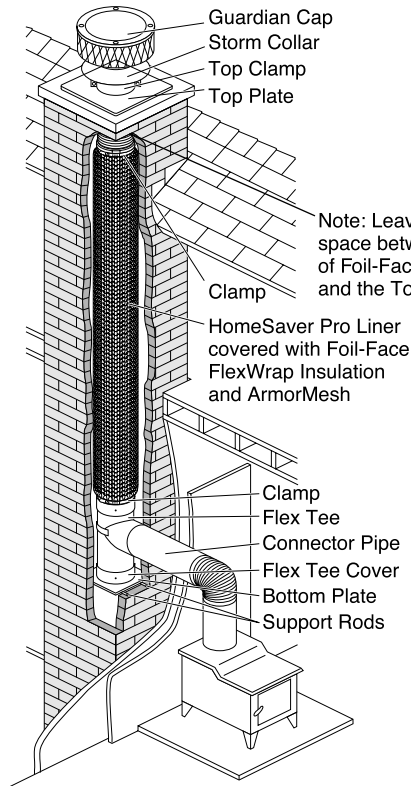


Figure 10

Another choice is the HomeSaver Insulation Plug (see Figure 11, next page, alternative "B.") HomeSaver Foil-Face FlexWrap must be layered with refractory cement and tightly packed at the base of the liner to a depth of 6" to form a seal. Make sure there is adequate support at the top of the chimney. If the liner, including insulation, weighs more than 150 pounds, double up on the top plates and top/bottom support brackets.

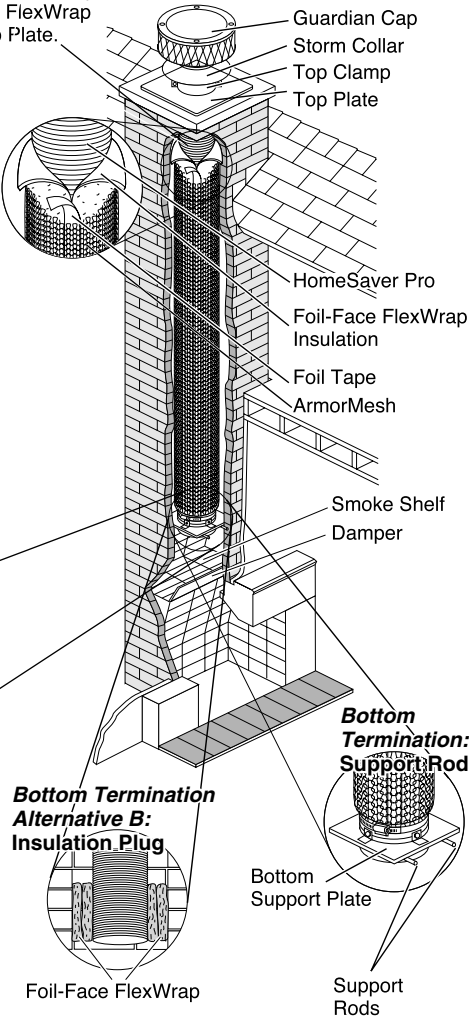
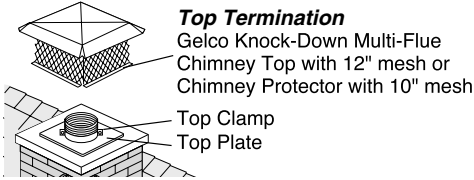
7. Each liner component (tee, tee cover, and connector-adaptor) comes equipped with four pilot holes. To fasten, simply install the component on the liner, drill, (using the pilot holes) with a $\frac{3}{64}$ " drill, insert $\frac{1}{2}$ "

**HomeSaver® Pro™
with Foil-Face FlexWrap™
and ArmorMesh™**

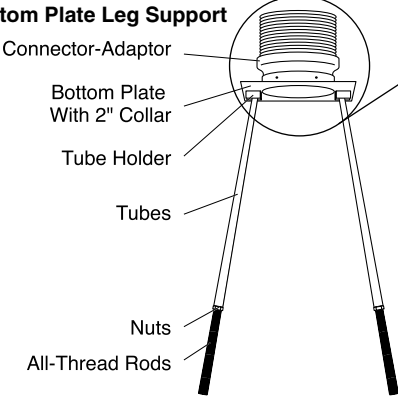


**HomeSaver® Pro™
with Foil-Face FlexWrap™
and ArmorMesh™**

**Alternative UL Listed
Top Termination**



**Bottom Termination
Alternative A:
Bottom Plate Leg Support**



**Bottom Termination
Alternative B:
Insulation Plug**

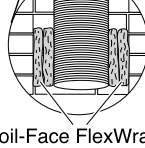


Figure 11

316-alloy pop rivets, and fasten.

Note: If you are using a connector/adaptor with band connection or a tee with band connection, pop rivets are optional.

8. Insulating the liner with HomeSaver Foil-Face FlexWrap:
 - A. Wrap lengthwise, creating one long vertical seam down the length of the liner. The foil side should face away from the pipe.
 - B. Begin by rolling out a length of FlexWrap equal to 9" less than the length of the liner to be used.
 - C. Trim the FlexWrap lengthwise with a sharp utility knife so that when wrapped around the liner, a tight joint, the length of the liner, is achieved. Accuracy in cutting is important.
 - D. Apply 3M Spray Adhesive or Rutland Water Glass to the liner. Then carefully wrap the FlexWrap around the liner.
 - E. Thoroughly tape the insulation seam and the ends with foil tape.
 - F. If two wraps of the ¼" Foil-Face FlexWrap insulation is required, repeat the steps above for the second wrap.
 - G. Measure, cut, and install a length of HomeSaver ArmorMesh Insulation Cover over your FlexWrap insulation. This can be accomplished by rolling the mesh like a stocking, then unrolling over the insulated pipe. Clamp the bottom end of the ArmorMesh, just before it enters the tee.
 - H. Grasp the unclamped end of the ArmorMesh and pull, working it tight from one end to the other. This will draw the ArmorMesh snug around the FlexWrap.
 - I. Trim any excess FlexWrap and ArmorMesh from the top of your installation back to within 6" of where the liner will stick through the top plate or factory-built liner adaptor, then clamp it in place. Leave no more than 3" of liner protruding above the flex top plate.

Explanation: Due to normal thermal expansion, HomeSaver Pro may "grow" lengthwise in the chimney during use. Leaving 6" of uninsulated liner just below the top plate termination will allow this expansion to take place without interference from the insulation.

9. Insulating HomeSaver Pro with TherMix Insulation:

TherMix may only be used when relining a masonry chimney and is a

specially formulated, dirt-like consistency chimney fill insulation. Since 1" of TherMix needs to surround the liner on all sides, the inside flue dimension needs to be a minimum of 2" larger than the outer diameter of the liner (which is $\frac{3}{8}$ " larger than I.D.). This means a 6" diameter liner would require a flue opening of $8\frac{3}{8}" \times 8\frac{3}{8}"$.

The formula for determining the volume of insulation in cubic feet for HomeSaver Pro is:

$$\frac{(W'' \times D'' \times H'') - (\pi \times R^2 \times H'')}{1728}$$

W = width of flue in inches

D = depth of flue in inches

H = height of flue in inches (multiply feet \times 12 to convert to inches)

$\pi = 3.1416$

R^2 = radius of pipe multiplied by radius of pipe (remember, radius is $\frac{1}{2}$ the diameter)

Dividing by 1728 converts the answer (in inches) to the number of cubic feet of space you need to fill with TherMix. Each bag of TherMix holds three and a quarter cubic feet, so divide the final figure by 3.25 to determine the number of bags of TherMix you need.

The following are typical examples:

A. 6" = diameter of HomeSaver Pro relining pipe

8 $\frac{1}{2}$ " = width of flue

8 $\frac{1}{2}$ " = depth of flue

(16 ft.) 192" = height of flue

$$\frac{(8.5 \times 8.5 \times 192) - (3.1416 \times 9 \times 192)}{1728} = \frac{8443.32}{1728} = 4.89 \text{ cu. ft.}$$

4.89 cubic feet \div 3.25 cubic feet/bag = 1.5 bags

B. 8" = diameter of HomeSaver Pro relining pipe

10 $\frac{1}{2}$ " = width of flue

12" = depth of flue

(35 ft.) 420" = height of flue

$$\frac{(10.5 \times 12 \times 420) - (3.1416 \times 16 \times 420)}{1728} = \frac{31,808.45}{1728} = 18.41 \text{ cu. ft.}$$

18.41 cubic feet \div 3.25 cubic feet/bag = 5.66 bags

10. In installations using a tee, position the tee take-off with retractable band into the chimney opening. The retractable band should be fully opened so the body of the HomeSaver tee may be lowered through the band. Then the band must be secured to the tee body by tightening the retractable band.

Fill mortar in tightly around the take-off to the tee. Make sure the connector pipe will connect easily to the take-off before the mortar cures. Single-wall metal connectors must maintain a minimum of 18" clearance to combustibles and a rise of at least $\frac{1}{4}$ " per foot. Connectors shall be securely supported and fastened with sheet metal screws or stovepipe screws. The connector shall be readily accessible for inspection, cleaning, and replacement.

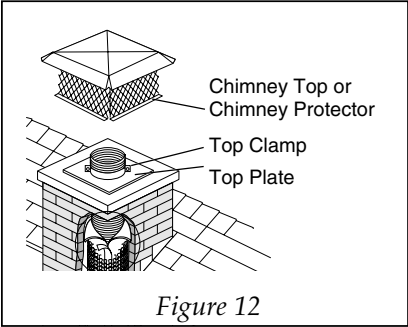
The initial pipe connection will either be a direct connection to the take-off of the flex tee in a HomeSaver Pro installation, or a connector through a UL Listed wall penetration assembly. Any pipe connector used, which is not in plain view from the room, must be made of stainless steel or equivalent materials.

In fireplace installations, lower the liner directly down the chimney until the top/bottom support brackets rest on the stainless bottom plate.

11. Apply an exterior-rated silicone sealant to the perimeter of the top plate. Slide the top plate over the liner until it rests squarely on the chimney top. Next, slide the top clamp over the liner so it rests on the top plate, then secure the top clamp to the liner. The top clamp will ride up and down with the liner during thermal expansion. Alternatively, a set of support brackets may be bolted to the liner and used instead of a top clamp.
12. For masonry chimneys, please see the following. For factory-built chimneys please see point 13, page 19.

Do not allow the top clamp or support brackets to be the installation's sole means of support. *Always* support your installation solidly at the bottom. Position the storm collar so it is above the top clamp and tighten the storm collar. A bead of silicone sealant between the collar and the pipe will prevent water from entering the chimney through this joint. Insert the friction fit 316-alloy Guardian Cap into the liner or use an Inverted Cone Cap which fits into the liner and includes a clamp to hold it in place. A Gelco Knock-Down Top or Chimney Protector Cap may be used as an alternative to terminate a HomeSaver Relining

Installation, Figure 12. A storm collar is not required but may be used. Allow a maximum of 3" of HomeSaver Liner to extend past the top plate. Make sure the combined height of liner and tile extend into the cap no more than 4" for the Chimney Protector and no more than 6" for the Knock-Down Tops and Chimney Protector models 13231 and 13248 which include 12" high mesh. This ensures adequate clearance for the liner.



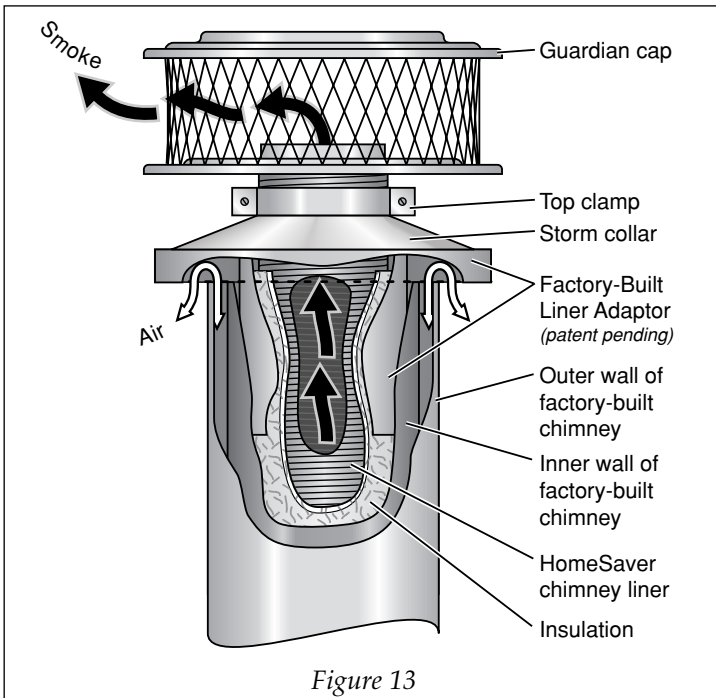
To install the cap you will need a caulking gun, drill, and a 3/16" masonry drill bit. Set the cap on the crown of the chimney, marking with a pencil where the base will sit. Apply chimney top adhesive within the penciled lines. Be sure to leave spaces where the holes for the masonry screws will be drilled. Firmly press the cap base into the adhesive. Drill into the crown using the 3/16" drill bit

Maximum Liner Size Per Cap				
Screen Size	Model Number	Description	With Storm Collar	Without Storm Collar
9"×13"	11705	Chimney Protector with 10" mesh	4"	8"
13"×20"	11710	Chimney Protector with 10" mesh	6"	12"
13"×24"	11714	Chimney Protector with 10" mesh	6"	12"
13"×26"	11716	Chimney Protector with 10" mesh	6"	12"
13"×28"	11718	Chimney Protector with 10" mesh	6"	12"
13"×36"	11726	Chimney Protector with 10" mesh	6"	12"
14"×14"	11730	Chimney Protector with 10" mesh	9"	12"
14"×14"	13212	Knock-Down Model A Cap with 12" mesh	9"	12"
17"×17"	11740	Chimney Protector with 10" mesh	10"	12"
17"×17"	13222	Knock-Down Model B Cap with 12" mesh	10"	12"
17"×22"	11742	Chimney Protector with 10" mesh	10"	12"
17"×29"	11746	Chimney Protector with 10" mesh	10"	12"
17"×29"	11746	Chimney Protector with 10" mesh	10"	12"
17"×29"	13231	Chimney Protector with 12" mesh	10"	12"
17"×29"	13234	Knock-Down Model C Cap with 12" mesh	10"	12"
17"×35"	11750	Chimney Protector with 10" mesh	10"	12"
17"×41"	11754	Chimney Protector with 10" mesh	10"	12"
17"×41"	13248	Chimney Protector with 12" mesh	10"	12"
17"×41"	13244	Knock-Down Model D Cap with 12" mesh	10"	12"
17"×58"	11758	Chimney Protector with 10" mesh	10"	12"
17"×58"	13254	Knock-Down Model E Cap with 12" mesh	10"	12"

and anchor the cap with masonry screws.

As an alternative, you may also use a CollarPlate Rain Cap and CollarPlate, using high-temperature silicone sealant to adhere the CollarPlate to the flue.

13. When terminating at the top of a factory-built chimney, make sure the liner passes through the HomeSaver Factory-Built Liner Adaptor and extends 3" above it. Then install the storm collar over the liner making sure the bottom of the storm collar sits flush on the liner adaptor. Seal with high-temperature silicone sealant. Install the top clamp above the storm collar. Squeeze the base of the HomeSaver Pro Guardian Cap and slide it down into the liner. See illustration in figures 13 and 14, pages 19 and 20.



14. After completing the installation of a new appliance, the initial firing precautions of the appliance manufacturer's instructions must be strictly followed.



Figure 14

SECTION 6 – PLEASE READ AND SAVE Maintenance Instructions For Installer And Homeowner

HomeSaver's commitment to providing a product of superior quality is reflected in its excellent warranty and UL Listing. HomeSaver Pro relining pipe must be installed and used correctly in order to have the safest, most efficient, long-lasting system. For this reason, the following maintenance and usage instructions must be followed. Parts or materials used other than those specified in our installation instructions will void any UL listings and homeowner's warranty.

MAINTENANCE

1. The chimney connector pipe and HomeSaver Pro system must be cleaned and the entire installation inspected annually by a professional chimney sweep. During the heating season, the chimney liner system should be inspected at least once every two months to determine if creosote or soot buildup has occurred. If buildup has occurred, it should be removed to reduce the risk of a chimney fire.
2. A round wire steel chimney cleaning brush is recommended to clean HomeSaver Pro liner. Some chemical chimney cleaners may be harmful to HomeSaver Pro, so use only brands approved by HomeSaver.

The chimney may be accessed for cleaning through the top by removing the rain cap. If inaccessible from the top, the cleaning may be done through the appliance tee, clean-out opening, or through the damper (for a fireplace). Debris should then be removed from below.

USAGE

When wood is burned slowly, it produces tar and other organic vapors which combine with expelled moisture to form creosote. These vapors condense in the relatively cool flue during slow-burning periods. This results in creosote accumulation on the chimney liner, which is dangerous. If this creosote should ignite, it makes an extremely hot chimney fire.

Therefore, we advise homeowners to prevent creosote buildup with safe burning procedures — burn fires hot, not smoldering with a lot of smoke. And keep the fire small — in a fireplace, keep the top of the flames visible below the fireplace opening; in a woodstove, keep the flames confined to

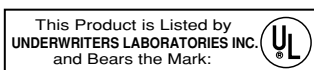
the woodstove itself. Never burn trash, papers, garbage, etc. in a fireplace or woodstove. This could cause a fire hazard and damage the liner.

When used for venting solid fuel appliances, this liner must not be smaller than the appliance flue collar, unless approved by the appliance manufacturer.

Be sure to check the rain cap for icing during low ambient temperatures.

WARRANTY CHART*		
APPLICATION	WARRANTY	INSULATION REQUIREMENTS
Wood, Coal	Lifetime warranty	Insulation required. See point 3, pages 6 – 8.
Oil, Wood Pellet, Category I Gas	Lifetime warranty (Gas is non-condensing appliances only)	Insulation recommended but not required. See point 3, pages 6 – 8.
*This chart is intended as a quick reference on the warranties — please read the actual written warranty cards for specific details.		

Figure 15



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304 South 20th Street, Fairfield, IA 52556