

Model "SF" Liner Installation Guide



FOR SAFETY'S SAKE

Chimney relining and chimney repairs must be done with the utmost of care. Please ensure before starting that the safety aspect of the installation has been looked after. Secure your ladders and scaffolding, wear protective gear and the appropriate footwear and gloves before starting. Avoid problems through proper safety measures ensuring every installation is an accident free installation.

Z-FLEX "SF" CHIMNEY LINING SYSTEM

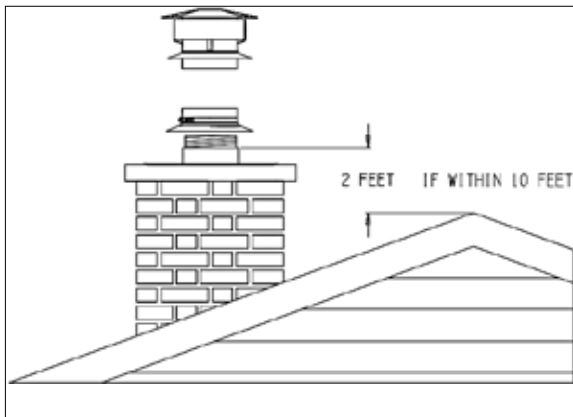
The Z-Flex Flexible Liner is intended for use as a chimney liner in masonry chimneys for oil, gas or wood fired residential heating appliances with maximum running temperature of 1000°F (538°C) and occasional 1400° F (760° C) temperatures.

- Z-Flex Flexible Liner
- Rain Cap/Mushroom Cap/Aerocowl
- Chimney Flashing
- Base Tee, 'A' Connector
- Fiberfrax Insulation & Fiberglass High Temperature Blanket
- Spacers, Aligners
- Nose Cone
- Screws, Rivets
- Liner Support

GENERAL INSTRUCTIONS

Warning: Do not use any materials other than those specified in this instruction.

1. Read the installation instructions carefully prior to installing the chimney liner. If doubts exist, contact your local distributor or Z-Flex at 1-800-654-5600 (in NH 603-669-5136).
2. Clean and repair chimney as required. **NOTE:** Removal of all tar glazed creosote is a must prior to installation of chimney liner. Also, cracked, loose or missing bricks, mortar or other materials that could inhibit correct installation of the chimney lining system, should be removed/repared.
3. Contact your local building or fire officials about any restrictions and inspections required.
4. The wall penetration assemblies must not be located directly behind a heating appliance.
5. The chimney liner **must not** be sized less than that specified in the appliance manufacturer's instructions.
6. The liner may be purchased in various lengths to suit chimney height. If it is necessary a single joint can be allowed to join two liners.
7. Nose cone is a catalogue item and is sold by Z-Flex.
8. Be sure to extend the chimney liner to conform to applicable building codes (local & national). That is, chimneys are required to extend at least **three (3) feet above the highest point where they pass through the roof of a building, and at least two (2) feet higher than any portion of the building within 10 feet** (see illustration).



The air space clearance between the masonry chimney exterior and combustible materials should be checked to verify that the chimney is in accordance with the clearance specifications contained in the NFPA 211 Standard or other recognized major building codes, i.e., on an exterior chimney, clearance is 1" while on an interior chimney, clearance is 2".

10. The "SF" Liner is intended for installation into masonry chimneys that are used for the natural draft venting of gas- liquid-, and solid-fuel-fired residential-type appliances in which the maximum continuous flue-gas outlet temperatures do not exceed 1000° F (538° C). The following list details only some intended uses of "SF" chimney liner. If your appliance is not on this list and you are not sure if it is appropriate to use with "SF" liner, contact the appliance manufacturer prior to installation.

- Furnace
- Water Heater
- Fireplaces
- Wood Stove
- Clothes Dryer
- Boiler
- Burner
- Ranges
- Pellet Stoves

11. The recommended minimum air space clearance between the 'SF' Liner and the chimney wall is 1" (in accordance with major recognized standards). Joining of two parts such as two liners should be done using a 'A' Connect.

12. Minimum and Maximum Clearances Liner

Diameter	Minimum Chimney Dimensions
3"	6" x 6"
4"	7" x 7"
5"	8" x 8"
6"	9" x 9"
7"	10" x 10"
8"	11" x 11"
9"	12" x 12"

Maximum Chimney Height = 65 Feet High
Minimum Chimney Height = 10 Feet High
Minimum Brick Thickness = 3 1/2 Inches Thick.

13. Clearance from connectors to unprotected combustible material shall be in

Description of Appliance	Minimum Clearance inch (mm).
Gas appliances without draft hoods	18 (457).
Oil and solid-fuel appliances	18 (457)
Unlisted gas appliances with draft hoods	9 (229)
Boilers and furnaces equipped with listed gas burners and with draft hoods	9 (229).
Listed gas appliances with draft hoods	6 (152)

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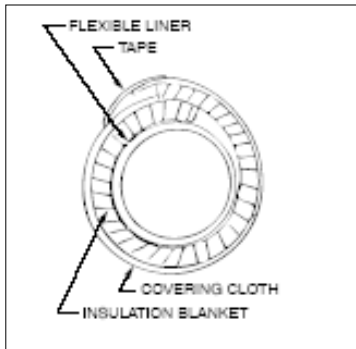
accordance with the table below (ref. NFPA 211).

- NOTE 1:** These clearances apply except if the listing of an appliance specifies different clearance, in which case the listed clearance takes precedence.
- NOTE 2:** These clearances apply except if a listed wall penetration assembly is used.

- Ensure access to clean out Tee are in accordance with the enforcing authorities and clearances are maintained to your local building codes.

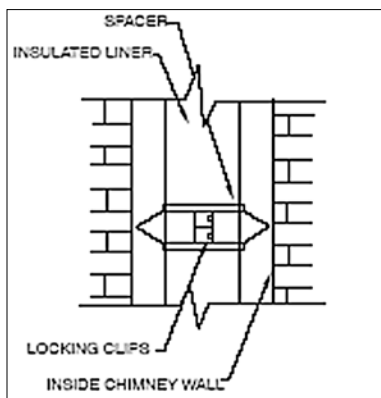
INSTALLATION PROCEDURE

- Unroll the Flexible Liner to the maximum allowable length.
- Now get ready to insulate the liner with the Z-Flex Insulation Blanket. This blanket consists of two components: a 1/4" thick insulation blanket and a covering cloth. First wrap the liner with 1/4" thick Insulation Blanket, allow 2" overlap. Use duct tape to hold the insulation. Then wrap the liner with the covering cloth and tape it down. This outer wrap is a woven fiberglass cloth and

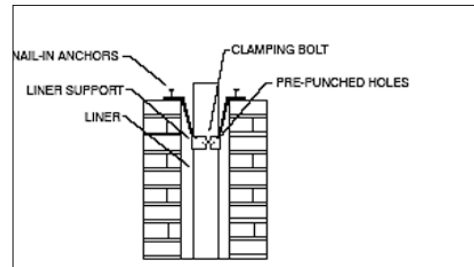


has a recommended limit to continuous use 538° C (1000° F).

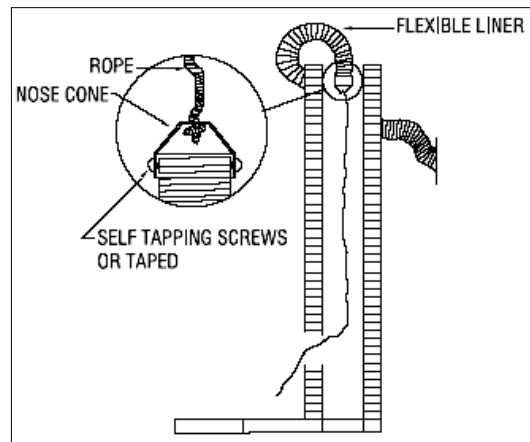
- Install the spacers on liner at every 4-5 feet and secure them by locking clips or bolts. These spacers are provided to ensure the required clearance between the inside chimney wall and the liner.



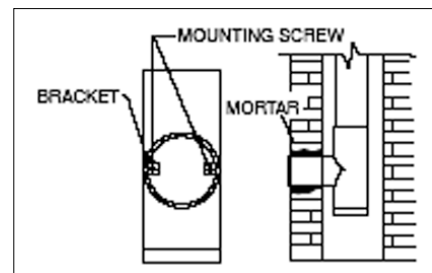
- Next, install the Liner Support on the liner. Predetermine the desired height for the Liner Support. Using the pre-punched holes as a guide, drill through the liner using a #30 drill bit, and secure with 3 rivets.



- Now the Flexible Liner is ready to be installed in the chimney. Take a rope slightly longer than the liner and make a knot at one end of the rope and place other end through the backside of the Nose Cone and pull the rope until the knot is completely in the Nose Cone. Place the Nose Cone at the end of liner. To secure, use duct tape or other fastener.
- Guide the liner down the chimney (Nose Cone first) using the attached rope, to the inlet opening. After the required length of the liner (just enough to fasten the liner to the Base Tee through the "A" Connector) is gone down the chimney, secure the anchor supports of the Liner Support to the top of the chimney using nail-in anchors.

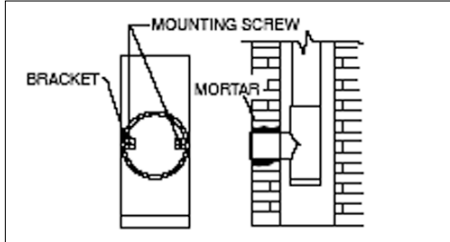


- Insert the vertical portion of the Base Tee into the inlet opening with the capped end pointing down. Remove the Nose Cone from the flex liner and fasten liner to an "A" Connector using large head stainless steel-pop rivets (1/8" size) (use 3 rivets). Fasten the "A" Connector to the top inlet of the Base Tee using large head stainless steel rivets (use 3 rivets). To join two parts by rivet, drill 3 holes, (9/64") through the two parts. Then fasten the rivet by using either hydraulic (mechanical) or pneumatic riveter. Use three (3) rivets.



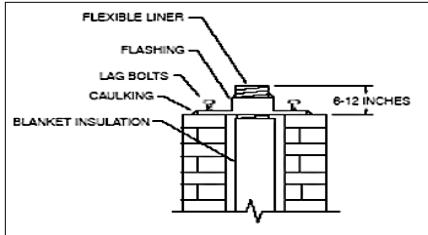
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8. Install the horizontal portion of the Base Tee and secure it with 2 screws



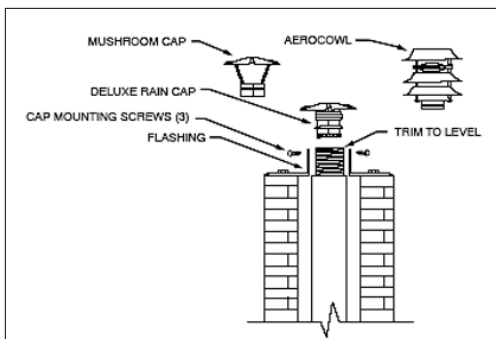
through the attached brackets. Using a standard mortar mix, cement around the horizontal portion of the Base Tee at the inlet opening.

9. Allow at least 6" - 12" of liner to extend above the top of the chimney, for attaching the Rain Cap or Mushroom Cap or an Aerocowl. Next, place the

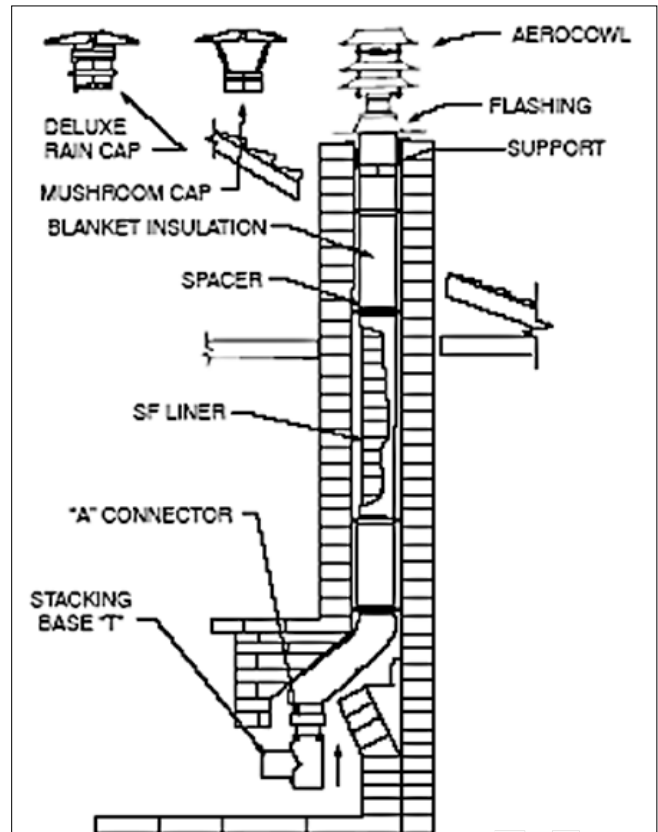


Chimney Flashing over the liner and secure it to chimney top using suitable anchors. Using a quality high temperature sealant, caulk all joints and paint if necessary.

10. Trim the liner to level using a knife or hacksaw. Next, install Rain Cap

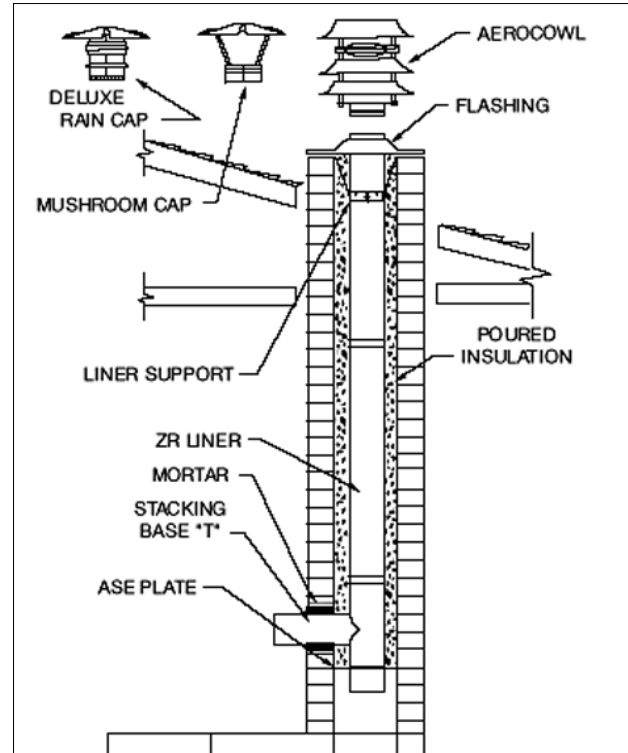
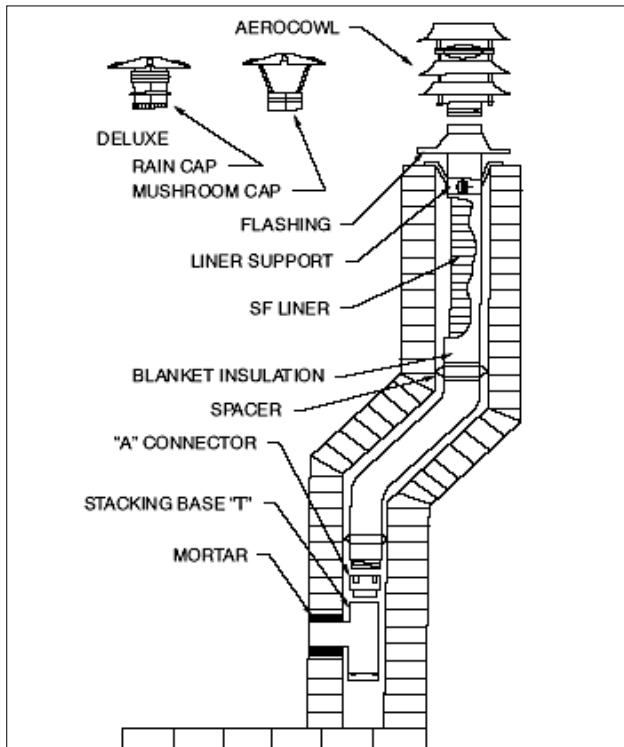


or Mushroom Cap or Aerocowl, and secure it with three (3) screws to the Flashing.



11. See illustrations for typical installations.

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MAINTENANCE INSTRUCTION

Manufacturer's address:
Z-Flex, Inc.
20 Commerce Park North
Bedford, NH 03110-6911
Tel: 1-800-654-5600 in NH 603-669-5136

The replacement parts/components for the "SF" chimney liner system are available from Z-Flex, Inc.

B. WARNING: DO NOT USE ANY MATERIAL/PARTS OTHER THAN THOSE SPECIFIED IN THE INSTALLATION INSTRUCTIONS.

C. "Creosote and Soot Formation and Need for Removal". When wood is burned slowly, it produces tar and other organic vapors, which combined with expelled moisture, forms creosote. The creosote vapor condense, in the relatively cool chimney flue of a slow-burning fire. As a result, creosote residue accumulates on the flue lining. When ignited this makes an extremely hot fire. The chimney should be inspected every two (2) months during the heating season to determine if a creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of chimney fire.

D. The recommended method of cleaning your Z-Flex Liner is with a poly or wire chimney brush approximately 1/8" larger than the diameter of your liner. The liner should be brushed until all creosote and soot have been removed.

E. It is recommended to have the chimney lining system checked by a qualified chimney inspector, such as a certified chimney sweep, at least once annually following initial installation of the lining system.

F. Any heating appliance connected to the chimney liner must not have a flue outlet size larger than the chimney liner area at its smallest point.

PARTS COMMON TO "ZR" AND "SF" LINER SYSTEMS

Base Tee	Chimney Flashing
Rain Cap/Deluxe	Rain Cap
Mushroom Cap	Aerocowl
Liner Support	

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Z-FLEX® Lifetime Liner Warranty

Z-Flex, Inc. warrants its stainless steel chimney liners to the original purchaser or if purchased by a contractor, to the end user. The warranty is valid for as long as the original purchaser owns the property in which the liner is installed, provided it is installed according to U.L. installation instructions. Deviating from the installation and use instructions included with the liner will void the warranty. Z-Flex warrants that at the time of shipping the stainless steel chimney liner will be free of manufacturer's defects in material and/or workmanship. Liability under the warranty shall be limited to the replacement of the liner and accessories found to be defective according to the terms of the warranty, and shall not include replacement installation or other costs.

IMPORTANT: Z-Flex Chimney Liners are designed to be used with these fuels only: natural gas, propane gas, oil, and seasoned hardwood. The following fuels are not recommended for use in Z-Flex chimney liners: coal, ocean driftwood or garbage. Excessive condensation with high chlorine content will corrode some stainless steel. Where these conditions prevail, we recommend AL29-4C™ Stainless Steel Liners. Refer to equipment manufacturer's installation instructions for proper liner material for appliances which produce condensation.

Excessive creosote accumulation, sulphur residue from burning coal or the use of unapproved chemical cleaners may cause chimney fires that could warp the liner or may corrode the liner. Such misuse will void the warranty.

To activate the warranty, the purchaser or end user must complete and return the Z-Flex warranty registration card within ninety (90) days of installation. Upon receipt of written notice of any defect, Z-Flex reserves the right to examine or engage others to examine the liner. Such examination must establish reasonable proof of defective material or workmanship justifying replacement.

The sole remedy for breach of any and all warranties and the sole remedies for Z-Flex's liability of any kind shall be limited to the remedies provided herein. Z-Flex shall not be liable for any special, incidental, indirect or consequential damages, or for any claim against the purchaser or end user by any other party. EXCEPT AS SPECIFICALLY PROVIDED HEREIN, Z-FLEX DOES NOT MAKE ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. Some states do not allow the exclusion of implied warranties or the limitation or exclusion of liability for incidental or consequential damages, so the above limitations may not apply to you. You may also have other rights which vary from state to state.

For further information, call or write to:

U.S.A.
20 Commerce Park North
Bedford, NH 03110-6911
Tel: (603) 669-5136
Toll Free: 1-800-654-5600

Canada
20 East Pearce Street
Richmond Hill, Ontario
L4B 1B7
Tel: (416) 731-9411

Z-FLEX® Warranty Registration Card

For this warranty to be effective this card must be completed upon purchase of the covered liner and returned to Z-FLEX, Inc.

NAME: _____

ADDRESS: _____

LINER PURCHASED FROM: _____

DATE OF INSTALLATION: _____

FIREPLACE, STOVE OR FURNACE MODEL: _____

I understand and agree
to the warranty as stated: _____
(signature)