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"SINCE 1980"

CDA: 6385 Kennedy Rd • Mississauga • ON • L5T 2W4 USA: POB 29140 • Columbus • OH • 43229-0140

## INSTALLATION AND MAINTENANCE INSTRUCTIONS

### PRODUCT:

FLEXI-LINER  
Flexible Aluminum Chimney Lining/Resizing System

### MANUFACTURER:

FLEX-L INTERNATIONAL INC.  
CDA: 6385 Kennedy Rd • Mississauga • ON • L5T 2W4  
USA: POB 29140 • Columbus • OH • 43229-0140

### FLEXI-LINER KIT CONTENTS:

	Part No.
"A" Series Kit	
Components:	
Flexi-Liner Tube	AFL-(dia.)
Rain Cap	LCC-
Top Adapter	LCT-
Top Flashing (3"-8" kits only)	LCF-
2 Angle Supports (3"-8" kits only)	LCA-
Bottom Mortar Sleeve	LCS-
Bottom Flue Adapter 5.5 (5.5" kit only)	LCB-
Package of Fasteners	
Installation & Maintenance Instructions	
Warranty Sheet	
"B" Series: Fireplace Kit	
Components:	
Flexi-Liner Tube	AFL-(dia.)
Rain Cap	LCC-
Top Adapter	LCT-
Top Flashing	LCF-
2 Angle Supports	LCA-
Package of Fasteners	
Installation & Maintenance Instructions	
Warranty Sheet	

NOTE: THE "A" SERIES KIT CONTAINS THE COMPONENTS NOTED ABOVE FOR INSTALLATION AND VENTING OF MOST GAS APPLIANCES (FURNACES, BOILERS, WATER HEATERS). THE "B" SERIES KIT IS DESIGNED ONLY FOR USE WITH GAS FIREPLACE INSERTS AND DOES NOT CONTAIN THE "BOTTOM" FITTINGS.

### OPTIONAL INSTALLATION ACCESSORIES:

Liner Prover Cone (includes 2-40' ropes)	LPC-05
Liner Leader Cone	LLC-(dia.)
Liner Stretching Handles	LSH-SET
Puller Rope (40')	LRP-40

NOTE: THESE ACCESSORIES CAN AID IN THE INSTALLATION OF THE LINER SYSTEM. HOWEVER, THEY ARE OPTIONAL AND THEREFORE AVAILABLE SEPARATELY FROM FLEX-L DISTRIBUTORS.

### OPTIONAL ACCESSORY COMPONENTS:

Flexi-Extension	E10-(dia.)
Flexi-Sleeve (insulation)	N10-(dia.)
Flexi-B Vent Adapter (3"-7" only)	LBF-(dia.) Fitting to adapt Flexi-Liner to type B-Vent connectors
Flexi-BA Adapter Kit	LBA-(dia.) Fittings (where required) to install Flexi-Liner into factory built chimneys and vents.

NOTE: THESE ACCESSORY COMPONENTS ARE AVAILABLE SEPARATELY. CONTACT A FLEX-L DISTRIBUTOR OR FLEX-L INTERNATIONAL FOR APPLICATION AND AVAILABILITY.

### APPLICATION:

Flexi-Liner is UL/cUL Listed as a liner for existing masonry or Listed factory built chimneys and vents serving gas fired appliances equipped with draft hoods and appliances intended for use with Type B gas vents. This chimney lining system is not recommended for venting appliances rated higher than 83% AFUE.

### LINER MATERIAL USE:

The Listing for this product is void if components used are other than those supplied as Listed components by this manufacturer. All warranties, stated or implied, are void if this product and the appliance(s) to which it is connected are not installed in accordance with their respective instructions and local code requirements. If unusual conditions exist, the installer MUST obtain "Local Authorization" prior to installation of this product.

UNDER NO CIRCUMSTANCES SHOULD THE AIR SPACE AROUND AN INSTALLED FLEXI-LINER SYSTEM BE USED TO VENT OTHER APPLIANCES.

### CLEARANCES:

This liner system may be installed in masonry or factory built chimneys and vents where there is 0" clearance between the liner and chimney interior and 0" clearance between combustible materials and the chimney exterior.

LOCAL APPROVAL:

CONTACT LOCAL GAS UTILITY, BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

FLEXI-LINER SIZING:

The appliance manufacturers' specified vent sizing instructions must be observed.

The correct Flexi-Liner diameter can be established by using a Flexi-Liner sizing chart or other approved methods such as the NFPA-54 in the USA or by the CAN/CGA-B149.1 in Canada.

The following information will be required: a) total BTU inputs of the appliance(s); b) vertical height from the appliance(s) flue outlet to the top of the existing chimney; c) the length of the lateral run from the appliance(s) to the base of the chimney; d) the flue size of each appliance; e) the smallest inside dimension of the existing chimney; f) number of 90° turns; g) is there a vent manifold.

CHIMNEY CONNECTORS:

Chimney connectors shall be installed as required by regional codes. ANSI/NFPA-211 in the USA or CAN/CSA A405 in Canada are generally preferred standards for guidelines.

WALL PENETRATIONS:

Wall penetration assemblies shall not be located directly behind a heating appliance.

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## INSTALLATION PROCEDURE

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PRIOR TO INSTALLATION OF THIS LINING SYSTEM THE FOLLOWING STEPS MUST BE COMPLETED.

EXISTING CHIMNEY STATUS:

The existing masonry chimney must adhere to the American National Standard NFPA-211 in the USA or to CAN/CSA A405 in Canada.

The chimney must be checked for cracked, loose, or missing bricks and mortar and repaired to provide a safe internal and external condition if necessary.

The existing chimney's inside dimension should be such that it can provide at least a 1/2" space between the liner and the inner masonry wall for ease of installation.

PROVE PASSAGEWAY:

The existing chimney passageway must be cleared of any obstructions that would prevent the liner installation. This can be accomplished by running a FACTORY AVAILABLE prover cone up and down the chimney or utilizing other tools often used by chimney sweeps to clear chimneys. These will break off any mortar projections, prove the liner will fit down the chimney and help to establish the exact length of liner required.

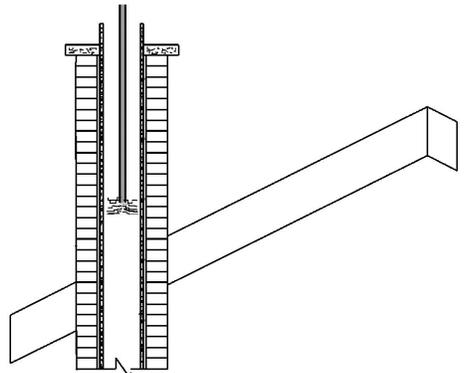
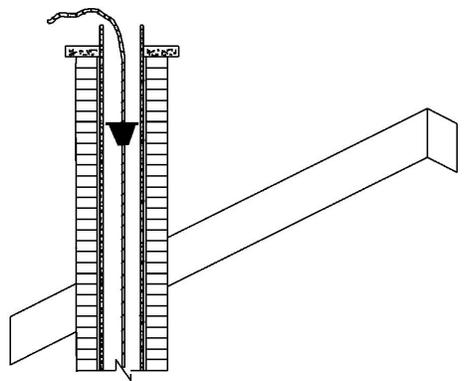
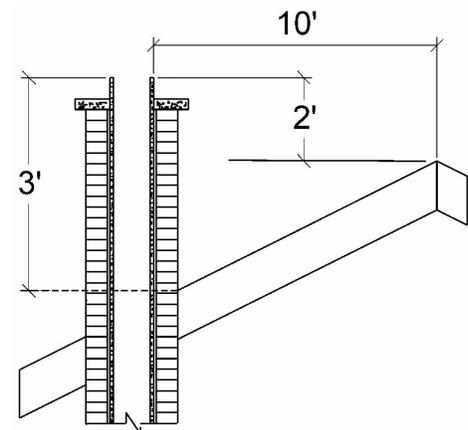
If there is any doubt about the size of the chimney opening after proving, it is recommended that a 5'-6' length of scrap liner tube of the diameter required be attached to a FACTORY AVAILABLE leader cone and pulled down the chimney.

If either the prover cone or the leader cone, with the short length of liner tube attached, do not pass through the chimney, it is not suitable for relining. The chimney may be taken apart at the area of the blockage and rebuilt to allow the installation of the liner, or an alternate method of venting the appliance must be considered.

SWEEP CHIMNEY:

Once the chimney passageway has been "proven", the chimney shall be swept to remove particles and contaminants with particular attention paid to the removal of tar glazed creosote.

If there is any doubt about the cleanliness of the chimney after sweeping, "Flexi-Sleeve" insulation with protection sleeve should be used to help protect the liner from contamination. (See Flexi-Sleeve installation instructions packaged with sleeves)



## TOP COMPONENT ATTACHMENT AND TUBE STRETCHING:

For use with gas fireplace inserts, see gas fireplace insert installation on the last page.

### STEP #1

- A) Insert one end of a desired length of rope through the small hole of the **FACTORY AVAILABLE** leader cone and tie into a knot inside the cone. Place the leader cone over the end of the unstretched liner tube and push on as far as possible. Fasten the leader cone to the unstretched liner tube using four (4) evenly spaced screws. The screws should be located approximately one inch (1") from the end of the leader cone. This will allow the screws to get a good hold of the unstretched liner and will minimize the possibility of the liner tearing.
- B) Insert the end of the top adapter without the holes through the hole in the flashing plate and into the end of the unstretched liner tube. Fasten the top adapter to the unstretched liner tube using four (4) evenly spaced rivets located approximately 1 inch (1") from the end of the liner tube.

### STEP #2

- A) Tie a knot into the rope near the leader cone and insert the hook of the **FACTORY AVAILABLE** stretching handle.
- B) Insert the **FACTORY AVAILABLE** stretching handles into the holes of the top adapter.
- C) One installer grasps one handle (A) and the other installer grasps two handles (B) and together they slowly walk away from each other, stretching the liner tube to the desired length or maximum length indicated on the carton. When stretching the liner tube, allow the tube to untwist as it will want to do naturally.

## ADDING EXTENSION:

If an extension is not being added to the liner tube from the base kit, continue with **STEP #4**.

### STEP #3

- A) If an extension is required, insert the connector fitting of the extension piece into the liner tube from the base kit. Fasten together using four (4) evenly spaced rivets provided with the extension. The rivets should be located approximately one inch (1") from the end of the liner tube.
- B) Add the components and stretch the liner as per **STEPS #1** and **#2**.

### STEP #4

- A) Remove the stretching handle from the rope and take out the knot.
- B) Remove the stretching handles from the top adapter. Attach the rain cap to the top adapter using four (4) evenly spaced screws provided.

## INSTALLING THE LINER:

### STEP #5

- A) At the base of the chimney where the appliance vent connector will attach to the lining system, break out sufficient brick and mortar to allow for the liner tube to exit the chimney.
- B) Drop the rope from the leader cone down the chimney and use it to gently guide the liner down the chimney avoiding sharp bends that would crimp and restrict the cross-section of the liner.

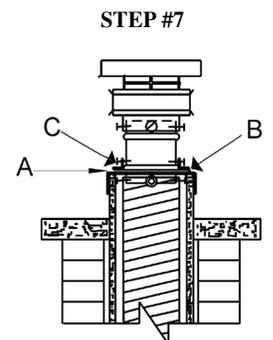
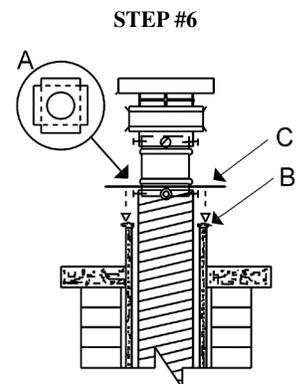
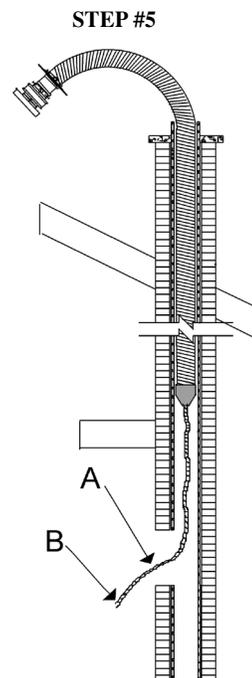
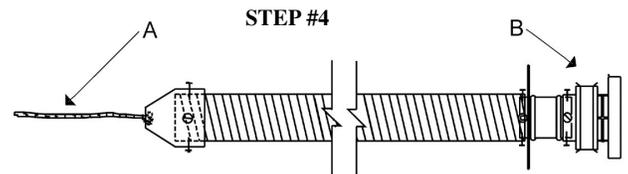
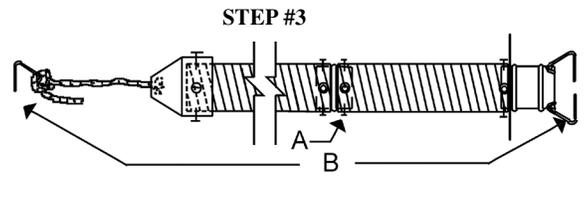
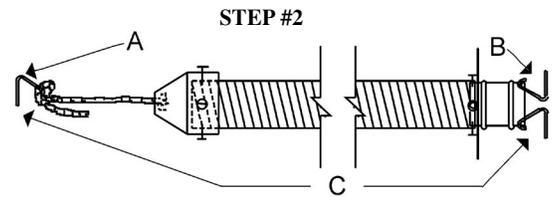
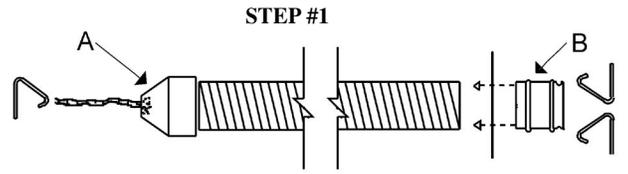
## TOP TERMINATION:

### STEP #6

- A) Center the flashing plate on the clay tile. Mark the outline of the clay tile on the underside of the flashing plate. Lift the top assembly to notch the corners of the flashing plate and bend over the excess at the marked line using a pair of hand folders.
- B) Place a wide bead of high temperature silicone along the entire top surface of the clay tile.
- C) Lower the top termination assembly so that the flashing plate comes to rest on the clay tile. Press the flashing plate firmly into the silicone to create a good seal.

### STEP #7

- A) Silicone the gap between the top adapter and the flashing plate with high temperature silicone.
- B) Place two beads of high temperature silicone across the flashing plate on opposite sides of the top adapter. Cut the angle supports to the length of the flashing plate. Press one side of the angle support into the bead of silicone.
- C) Rivet the other side of the angle support to the top adapter.



## BOTTOM TERMINATION:

### STEP #8

- A) Remove the leader cone from the end of the liner tube.
- B) Slide the bottom mortar sleeve over the liner tube and insert into the chimney opening. The end of the bottom mortar sleeve without the UL Listing label should slide over the liner tube first. The UL Listing label needs to be visible when the installation is complete.

### STEP #9

- A) Seal the bottom mortar sleeve into place using an appropriate sealing compound (ie. mortar, silicone). Make sure the end with the UL Listing label attached extends into the living area approximately two inches (2") so the UL Listing label is visible for inspection.
- B) Trim the liner tube to the edge of the bottom mortar sleeve. **AT NO TIME SHALL THE LINER TUBE EXTEND TO THE APPLIANCE(S).**
- C) Insert the end of the single wall vent connector into the liner tube. If Type B-Vent is used as a vent connector, an **OPTIONAL Flexi-B Vent Adapter** will be necessary to connect the B-Vent to the liner.
- D) Insert four (4) evenly spaced screws through the bottom mortar sleeve and into the liner tube and vent connector.

**NOTE:** The 5.5" diameter kits include a flue adapter fitting to adapt the 5.5" kit to 6" single wall vent connector. Insert the small end into the liner tube and connect as per step #9D. The large end fits over the 6" diameter vent connector and is fastened with four (4) evenly spaced screws.

## GAS FIREPLACE INSERT INSTALLATION:

Connect the rope, leader cone and liner tube as per **STEPS #1** and **#2**. **DO NOT** fasten the other components at this time.

Using the leader cone, rope and the handle on one end and grasping the opposite end of the tube in your hands, stretch the liner tube to length, (see **STEP #2C**).

Install the liner tube into the chimney as per **STEP #5** and exit through the masonry fireplace opening.

### STEP #10

- A) Remove the leader cone from the liner tube. Slide the liner tube over the collar of the gas fireplace insert and attach using four (4) evenly spaced screws.
- B) Do not allow the liner tube to drop below the top of the clay tile.

### STEP #11

- A) Slide the gas fireplace insert into the masonry fireplace opening. At the same time, pull the excess liner tube from the top of the chimney.
- B) Silicone the top of the clay tile as per **STEP #6B**. Trim the liner tube so that 2"-3" of tube is exposed above the clay tile. Attach the top components as per **STEP #1B** and rain cap as per **STEP #4B**. Finish the top termination as per **STEPS #6** and **#7**.

## MAINTENANCE INSTRUCTIONS:

- A) This assembly should be inspected by a qualified heating or chimney technician before each heating season to ensure it is free of debris and condensation and that all components are in good condition. This can be accomplished by removing the vent connector and looking into the liner at it's base.
- B) Periodically check for condensation at the bottom fittings or down drafting at the appliance. If either condition is evident, have a qualified heating technician check the entire heating system from the appliance(s), throughout the venting assembly and up to the top terminal (rain cap).
- C) The rain cap can be removed for inspection purposes by removing the fastening screws. As gas is a clean burning fuel and the rain cap minimizes debris from entering the system, cleaning is usually not necessary. If for some reason cleaning is deemed to be required, contact the manufacturer before attempting to clean. **DO NOT USE ABRASIVE BRUSHES.**
- D) Installer should remind homeowners to check the rain cap for icing during conditions of low ambient temperatures.
- E) Consult authority having jurisdiction if a rain cap is being considered in areas of low ambient temperature due to possibility of blockage through freezing moisture.

