



## 1.0 PRODUCT INFORMATION

CHIM-A-LATOR<sup>®</sup> stainless steel liner systems are available in 5" to 12" round diameters. The liner is type 304 or type 316 stainless steel.

The liner system is for use in a masonry chimney servicing residential wood burning, oil, or low efficiency gas appliances. The liner system covered by this listing is not intended for use with Category 11, 111 or IV gas burning appliances as defined by the National Fuel Gas Code, NFPA 54, or other appliances that cause condensation of corrosive acids on the liner of the chimney, or that create positive pressures in the chimney system. Coal burning appliances must be connected only with type 316 connectors and liners.

The CHIM-A-LATOR<sup>®</sup> liner system is intended for use in an unlined chimney with at least 4" of masonry all around. It may also be used in a properly built masonry chimney with cracked clay tile liners. Another use for the CHIM-A-LATOR<sup>®</sup> liner is to provide a properly-sized flue for a wood burning appliance installed into a masonry chimney which otherwise meets existing codes.

Use of any parts or materials not specified in this manual may not provide a listed system.

## 2.0 GENERAL INFORMATION

An experienced professional chimney service company should install this product.

### APPROVED TYPES OF CONNECTIONS:

CHIM-A-LATOR<sup>®</sup> stainless steel liner may be used for the following types of installations:

1. With a tee section which is connected to a single appliance. (Pg.6)
2. With a U.L. listed direct connect system. (Pg.7)
3. To a connector directly attached to the appliance. (Pg.7)
4. As a masonry fireplace flue. (Pg. 11)

The correct installation procedure for each of these connections is detailed in this manual on the pages indicated.

### CHOOSING THE CORRECT TYPE OF STAINLESS:

Type 304 (or 304L) stainless can be used for wood, oil and low efficiency gas appliances. Type 304 can also be used as a fireplace liner. The high efficiency gas furnaces require another type of venting system. Refer to the manufacturer's installation instructions before connecting a liner to a gas appliance.

Type 316 (or 316L) stainless should be used for a coal-burning appliance. Type 316 may also be used in any instance noted above where type 304 is specified.



### **SIZING THE LINER:**

All liners are to be sized in accordance with the actual size (square inches of the cross-sectional area) of the exhaust opening of the appliance. This is specified in the 1992 edition of NFPA 211, Section 8-5.4. If the liner is for a fireplace chimney, the cross-sectional area of the liner is to be minimum of 10% of the area of the face opening of the fireplace. The overall length of the liner system will be determined from the components required, the height of the masonry chimney and the top termination. The system should be a minimum of 8 feet in height but not greater than 75 feet.

### **REQUIREMENT FOR INSULATION:**

Ceramic blanket insulation (ordered in addition to the liner assembly) which is a minimum of 1/2" thick and 89 density must be wrapped around the entire length of the liner system in an unlined masonry chimney. If the chimney is lined and meets existing codes no insulation is necessary. The same procedure is to be used for U.L. listed appliances that have been approved for installation into a listed "Zero Clearance" fireplace. Specific instructions for the proper application of the insulation are included in the following installation instructions.

### **3.0 INSPECTION OF THE CHIMNEY:**

The chimney must be thoroughly cleaned. All creosote (including glazed creosote), soot, dirt and debris must be removed.

The criteria for the inspection must be in conformance with local or state building codes, whichever has jurisdiction. Consult the local building or fire officials about restrictions and installation inspection requirements. Additional consideration may be give to the following:

1. NFPA 211- Chimneys, fireplaces, vents and solid fuel burning appliances. 1992.
2. NFPA 54: National Flue Gas Code.
3. NFPA 31: Installation of oil burning equipment.

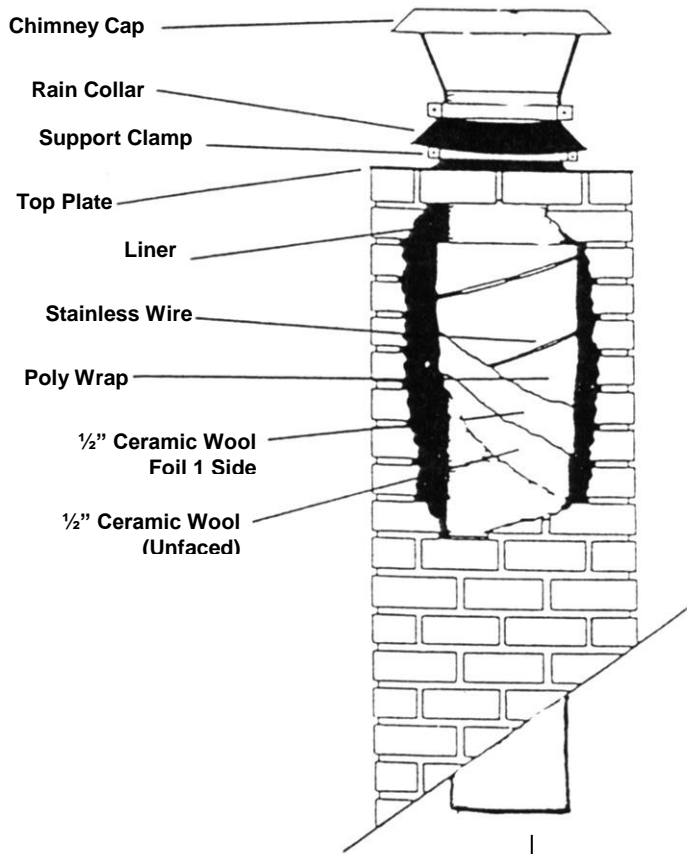
Inspect the chimney for cracked, loose, or missing bricks or stones. Check for missing mortar joints. The chimney must be a minimum of 4" thick throughout. No chimney should be relined that is not structurally sound. Also, inspect the air space clearances between the exterior of the masonry chimney and any combustibles. These clearances must be in accordance with current NFPA 211 standards or the local building codes. Check the height of the chimney to be certain it conforms to the recognized regulations. The inside dimensions of the chimney must be a minimum of 1 1/8" larger than the diameter of the liner required.

It is recommended you use an inspection form and make notes that you can review with the homeowner, local building official or insurance adjuster.

**NOTE: IT MAY BE NECESSARY TO OBTAIN A PERMIT BEFORE INSTALLING THE CHIMNEY LINER. PLEASE CHECK WITH THE LOCAL BUILDING AUTHORITY.**

### **4.0 PREPARING THE CHIMNEY:**

The chimney, smoke dome and fireplace cavity must be free of creosote, soot or any other combustible materials. A careful check must be made to be certain you can get a properly sized, insulated liner in the chimney. Any obstructions that would possibly restrict the installation of the liner must be removed - provided it does not affect the structural soundness of the chimney.



**TYPICAL INSTALLATION**  
**(1" Clearance to inside of 4"**  
**(Min.) Nominal Masonry)**

**NOTE: Insulation Continues to termination of liner system and connector assembly (if applicable) as per manufacturer's instructions**

**CONNECTED TO:**

**HEATING APPLIANCE**

**UL LISTED DIRECT  
CONNECT SYSTEM**

**TEE**

**FIREPLACE  
SMOKE DOME**

## CHIMNEY HEIGHT REQUIREMENT AS PER NFPA 211, 1992 EDITION

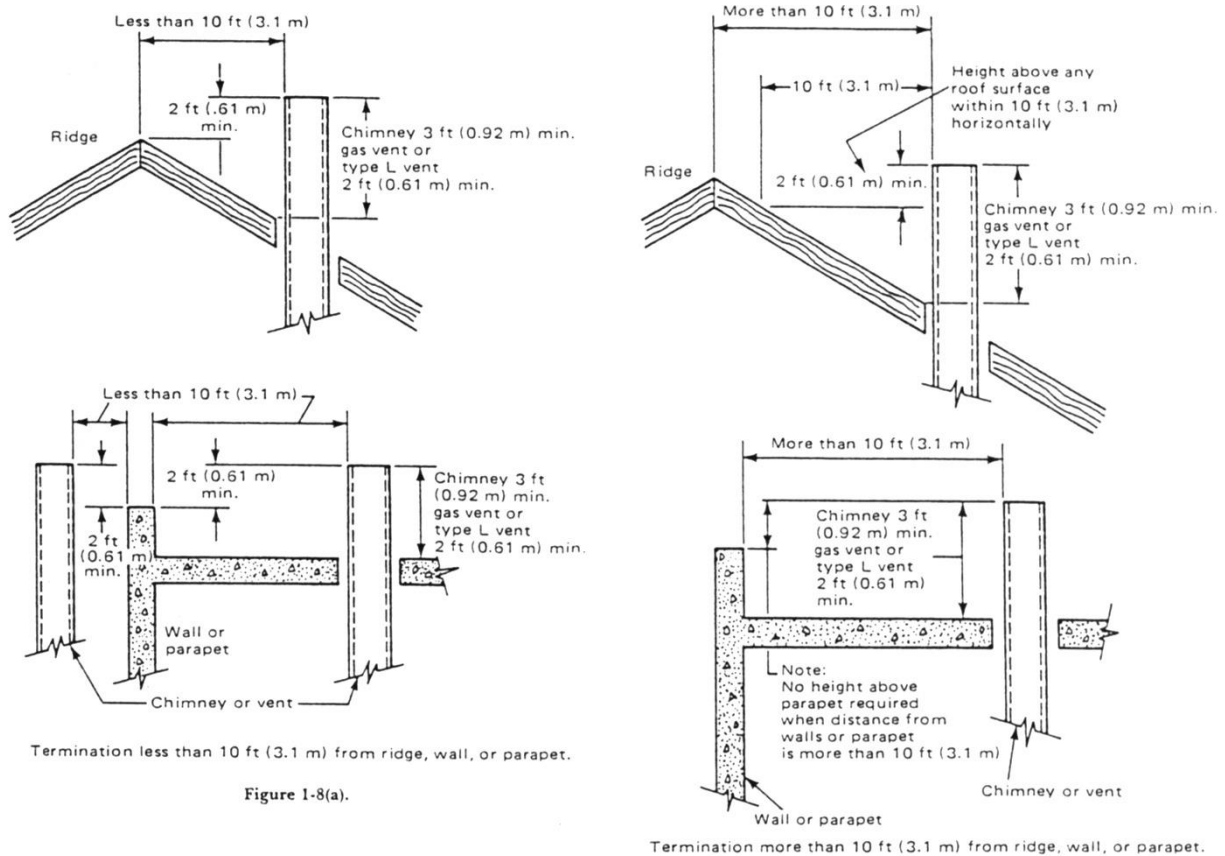


Figure 1-8(a).

Figure 1-8(b).

## 5.0 TOOLS AND EQUIPMENT

It is recommended to have the following items available. Each job may not require all the equipment listed.

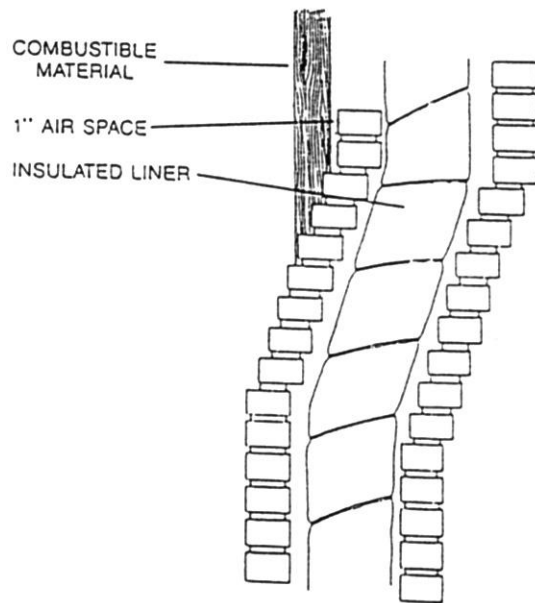
Gloves	Power Drill
Mask/Respirator	1/8" and 9/64" HSS Drill Bits
Safety Goggles	1/4" and 3/8" Masonry Bits
Whisk Broom	Felt Tipped Markers
Shop Vacuum	Chalk
Drop Cloths	Coarse, 3/4 file
Ladders	Chalk box
Scaffolding	Pop rivet gun
Ropes	Hammer
Chimney Brushes/Rods	Tin Snips/Side Cutter/Shears
Tape Measure	Caulking Gun
Drop Lights	Screwdrivers
Extension Cords	Ratchet Set/Nut Drivers
Reciprocating Saw & Blades	Utility Knife
Angle Grinder & Blades	Awl
Metal Punch	Trowel

Cold Chisels	Mortar Bag
Jig Saw & Metal Cutting Blades	5/8" Rebar (Various Lengths)

**CLEARANCE REQUIREMENTS:**

The CHIM-A-LATOR® liner system has been approved with 1" air space required between the insulated liner and at least 4" of nominal (thick) masonry. It should be noted that NFPA standards require a 1" air space between the exterior of an outside chimney and combustibles. It is further stated that a 2" air space is required for an interior chimney. Local building codes may differ with NFPA standards. Always stay within the guidelines of local codes. **See Illustration A.**

**ILLUSTRATION A**



**APPROVED COMPONENTS:**

Only components listed on the approved "Products/Components" listing may be used. The use of other components, or custom-made parts, may affect the warranty an UL listing of system.

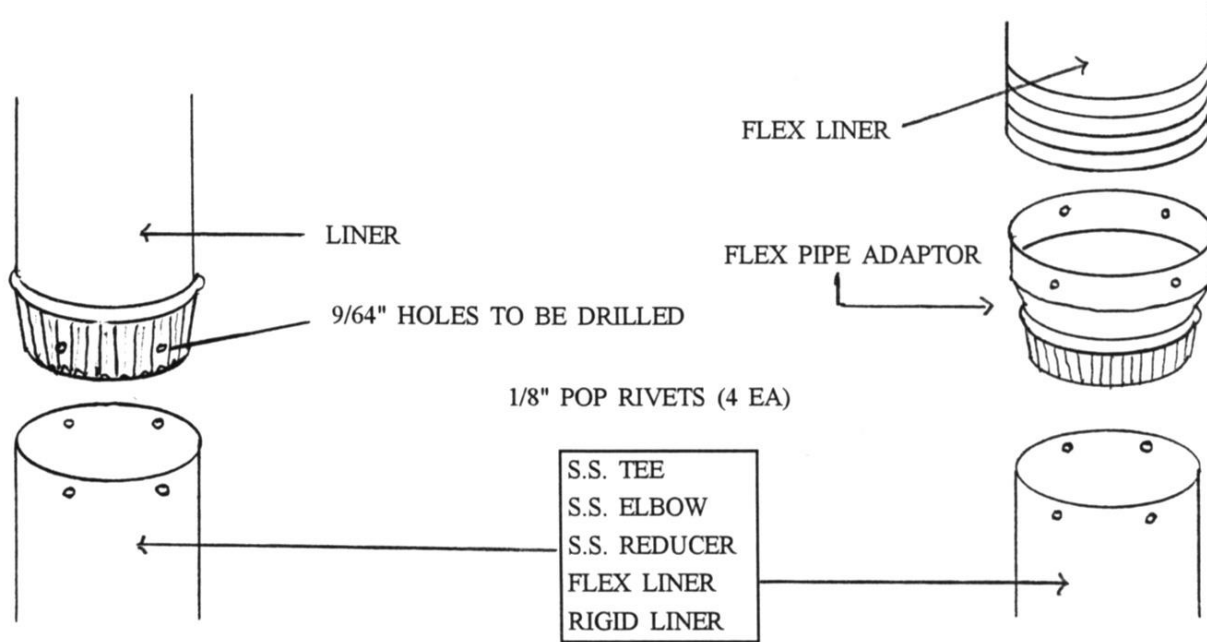
**PRODUCTS / COMIPONENTS**

Manufacturer	Description	Part Number	Sizes	Material
Bernard Dalsin	Rigid Liner	60xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Flex Liner, Hvy Strip Wound	50xxxx	3" - 8"	26 ga type 304/316
Bernard Dalsin	Flex Liner, Light	9801xxxx	3" - 8"	.007 ga type 304/316
Bernard Dalsin	2 pc Tee	6301xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Fixed Tee	6400xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	30 Deg Angle	6130xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	45 Deg Angle	6145xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	90 Deg Elbow	6190xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Rain Cap	6200xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Storm Collar	6600xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Support Clamp	6700xxxx	3" - 8"	18 ga type 304/316

Bernard Dalsin	Support Plate	6800xxxx	3" - 8"	18 ga type 304/316
Bernard Dalsin	Tee Cap	6302xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Reducer	65xxxx	3" - 8"	24 ga type 304/316
Bernard Dalsin	Flex Adapter	53xxxx	3" - 8"	24 ga type 304/316

**METHOD OF CONNECTING COMPONENTS:**

**ILLUSTRATION B**



Every connection must be made in a "drip-free" method. This is to keep all condensation inside the liner system. The rigid & flex liner may be jointed to other components as follows:

1. Rigid to inside of tee, elbow or reducer. Crimped end down.
2. Rigid to inside of flex section. Crimped end down.
3. Flex to flex, rigid liner, tee, elbow or reducer using adaptor. Crimped end down.

To fasten the liner inside any of the above-mentioned components use only 1/8" diameter with 3/8 grip range stainless steel pop rivets. The rigid components all have pre-punched holes in the collar that the liner fits into. Place the end of the liner into the top of the component and drill through each of the holes and through the liner with a 9/64ths drill bit. Fasten the products together with 4 stainless steel rivets. See **Illustration B**.

**INSTALLATION PROCEDURES**

**INSTALLING CHIMNEY PASS-THROUGH TO LINER**

**A. Masonry Structure - No Combustibles**

Locate the point at which the connector pipe will pass through the masonry chimney to be connected to the tee on the liner system. There must be an opening in the chimney that is large enough to allow the diameter of the connector plus at least 1 1/2" all around to mortar the connector in place after it is positioned properly onto the tee. If you need to open a hole in the chimney, the easiest way is to remove whole sections of brick. Use your electric drill and a long masonry bit with a slightly smaller diameter

than the width of the mortar joints. Drill several holes through the mortar joints around one of the bricks. Knock out the rest of the mortar around the brick with a cold chisel and remove the brick. Remove the rest of the brick necessary using the same procedure.

You can use a single wall, 24-gauge min., stainless steel connector pipe through the chimney to the tee on the liner. Always assemble the tee sections and the connector pipe before beginning the installation to be certain of proper fit and method of assembly. The removable snout on the round tee section is designed for the male end of the pipe connector to fit inside. It is pre-punched (4 holes) and the connector is to be drilled and attached with stainless steel rivets when installed.

For purposes of maintaining a drip free connection of the connector to the stovepipe, the connector passing through the chimney should have a male fitting at both ends. Insert the connector pipe into the snout. Using the holes in the snout as a guide, drill four 9/64ths holes through the pipe. Remove the connector pipe from the snout and the snout from the body of the tee. The tee body will be attached to the liner, insulated and placed inside the chimney. When the tee is in position at the opening in the chimney, reach through the chimney and cut the insulation away from the area where the snout is to be affected. Place the snout in position on the tee and secure it by tightening the hose clamp. Wrap the pipe connector with insulation and secure the insulation with stainless steel wire. Place the end of the connector inside the snout and line up the holes. Fasten the two sections together with 1/8" stainless steel rivets. The connector needs to be long enough to stick out past the chimney far enough to allow the stovepipe to be connected securely around the outside of the connector. It is recommended there be at least 1 1/2" of the connector available for this connection. When the connector is in the desired position, fill in the hole of the chimney around the connector with brick and mortar. After the mortar has dried, you may wish to remove the insulation from the exposed end of the connector. The stovepipe can be secured to the outside of the connector to complete the installation.

The collar (snout) on the oval tees is sized to fit inside the pipe connector. Place the female end of the connector over the outside of the snout and drill 4 equally spaced 1/8" diameter holes through the connector and the collar. Remove the connector from the body of the tee. The installation of the tee section with the liner will be the same as with a round tee. The only exception to the complete installation procedure for the pipe connector is to secure the connector to the outside of the collar on the tee with 4 #8 stainless steel TEK screws. This can be done by lining up the holes in the connector and snout and then securing the TEK screws from the inside of the collar (reaching through the connector) or from the outside of the connector. TEK screws are used to allow removal of the connector pipe for inspection or cleaning. Seal the opening in the wall as previously described.

Refer to the latest edition of NFPA 211 to be sure of conforming to required clearances to any combustibles.

## **B. Through Framed Wall of Face of Chimney**

When the connector must pass through a framed-wall structure to reach the chimney, you must use a U.L. listed wall pass-through system (Insul-Flue®) installed in accordance with the manufacturer's instructions or protect all framing structure as specified by NFPA 211, Section 5-7. The procedure for going through the masonry wall of the chimney will be the same as detailed on page 9 & 10.

### **C. Opening Hole in Flue Tile**

If there is a clay tile liner in the chimney you may need to make an opening through the tile. Draw a circle on the tile at least 2 1/2" larger than the diameter of the connector that will attach to the body of the tee. Using a carbide-tipped masonry bit connector (1/4" - 3/8") in your electric drill, drill a series of holes very closely together around the circle you drew on the tile. Carefully knock out the center with your hammer. Secure the insulated connector to the tee, Seal the gap in the tile around the connector with refractory cement.

**NOTE: WALL PENETRATION ASSEMBLIES MAY NOT BE LOCATED DIRECTLY BEHIND THE HEATING APPLIANCE. SEE REFERENCE DIAGRAMS.**

### **CONNECTION TO UL LISTED DIRECT CONNECT SYSTEM**

The liner system may be connected with a U.L. Listed direct connect system which is installed in accordance with the manufacturer's instructions. You must use a stainless steel pipe connector or stainless steel transition or slip connector to make the connection. The liner must also be sized (cross-sectional area) the same as the direct connect system.

### **CONNECTION DIRECTLY TO THE APPLIANCE**

The liner may be connected to the exhaust collar of an appliance by using a pipe connector, or a transition on the end of the liner. The pipe connector, or transition must be mechanically fastened to the inside of the exhaust collar.

The liner may be connected by the same means to a properly sized length of straight pipe, or an elbow, attached to the collar of an appliance. If you are using a flex pipe connector on the end of the liner, the pipe connector must be secured to the inside of the connector on the stove.

If you use a transition on the end of the liner into a connector from the appliance, you may install it as a slip connector and it does not need to be permanently fastened. The entire length of the slip section must go into the connector to avoid any possibility of separation due to expansion and contraction. This type of connection is only allowed when the assembled components will be in a vertical or diagonal position. It is not permitted to alter the circumference (shape) of the liner. This could result in a loss of square inches of the cross-sectional area. In most cases, for an installation through the smoke dome of a fireplace, it will be necessary to remove a portion of the damper frame and part of the smoke shelf.

## **REFERENCE DIAGRAMS: CHIMNEY CONNECTORS AND VENT CONNECTORS**

Table 5-7:  
Chimney Connector Systems and Clearances from Combustible Walls for Residential Heating Appliances

<b>System</b>	<b>Clearance (in/mm)</b>
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12/305

A. Minimum 3.5 in. (90-mm) thick brick masonry wall framed into combustible wall with a minimum of 12 in. (305 mm) brick separation from clay liner to combustibles. Fire clay liner (ASTM C315 or equivalent). Minimum 5/8-in (16nun) wall thickness, shall run from outer surface of brick wall to, but no beyond, the inner surface of chimney Rue liner and shall be firmly cemented in place.



9/229

B. Solid insulated listed factory-built chimney length of the same inside diameter as the chimney connector and having 1 in. (25 mm) or more of insulation with a minimum 9-in. (229-mm) air space between the outer wall of the chimney length and combustibles.

The inner end of the chimney length shall be flush with the inside of the masonry chimney flue and shall be sealed to the flue and to the brick masonry penetration with non-water - soluble refractory cement. Supports shall be securely fastened to wall surfaces on all sides. Fasteners between supports and the chimney length shall not penetrate the chimney liner.

6/152

C. Sheet steel chimney connector, minimum 24 gauge (0.024 in. - 0.61 nun) in thickness, with a ventilated thimble, minimum 24 gauge (.0.024 in. - 0.61 nun) in thickness, having two 1-in (25-mm.) air channels, separated from combustibles by a minimum of 6 in. (152 nun) glass fiber insulation. Opening shall be covered and thimble supported with a sheet steel support minimum 24 gauge (0.024 mm - 0.61 mm) in thickness.

Supports shall be securely fastened to wall surfaces on all sides and shall be sized to fit and hold chimney section. Fasteners used to secure chimney sections shall not penetrate chimney flue liner.

2/51

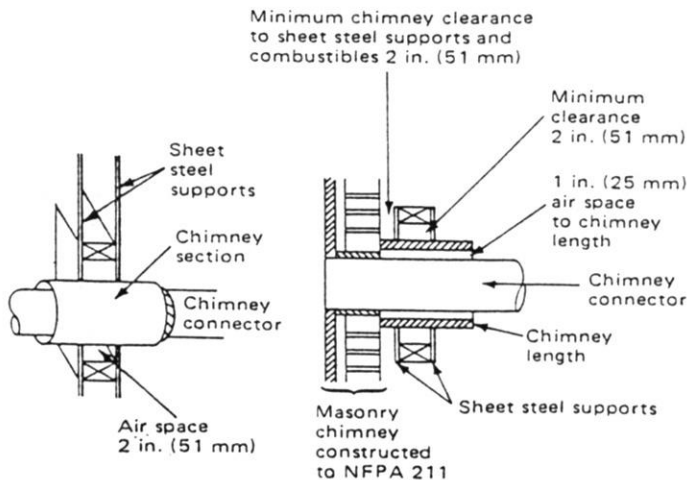
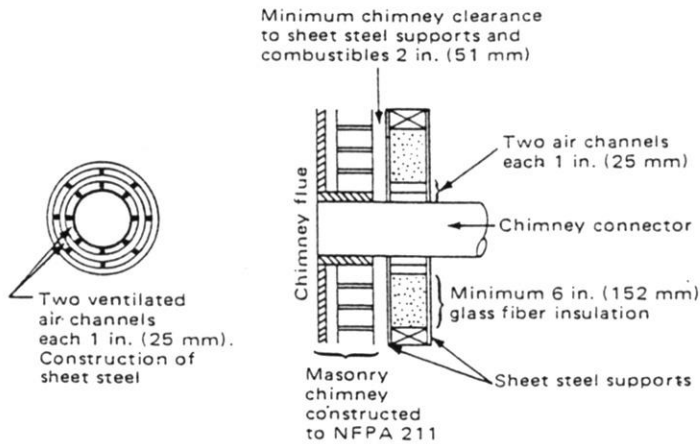
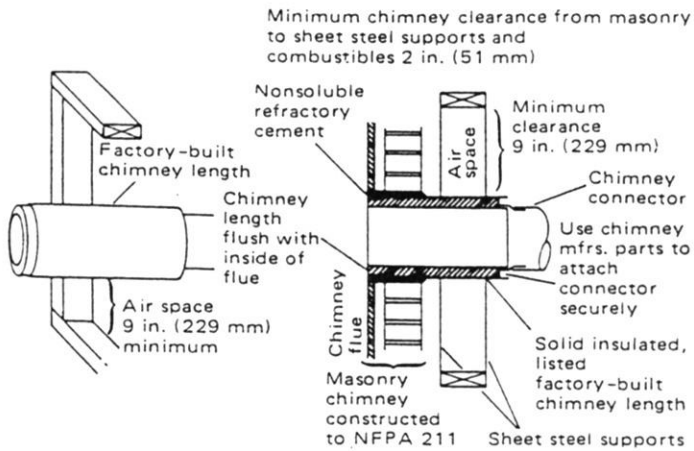
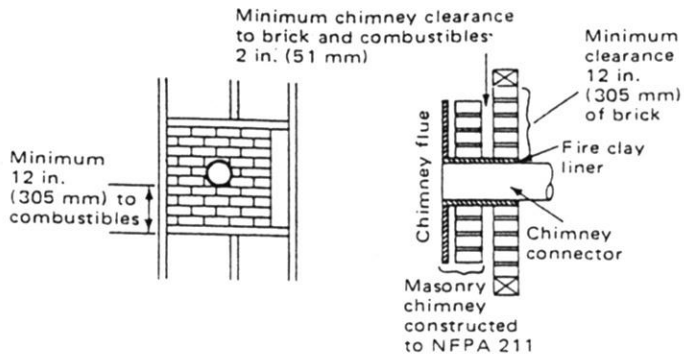
D. Solid insulated listed factory-built chimney length with an inside diameter 2 in. (51 mm) larger than the chimney connector and having 1 in. (25 mm) or more of insulation, serving as a pass-through for a single wall sheet steel chimney connector of minimum 24 gauge (0.024 in. 0.61 mm) thickness, with a minimum 2-in. (51 nun) air space between the outer wall of chimney section and combustibles.

Minimum length of chimney section shall be 12 in. (305 nun). Chimney section concentric with and spaced 1 in. (25 mm) away from connector by means of sheet steel support plates on both ends of chimney section. Opening shall be covered and chimney section supported on both sides with sheet steel supports of minimum of 24 gauges (0.024. in (0.61 mm) thickness.

Supports shall be securely fastened to wall surfaces on all sides and shall be sized to fit and hold chimney section. Fasteners used to secure chimney sections shall not penetrate chimney flue liner.

**Additional Requirements:**

1. Insulation material used as part of wall pass-through system shall be non-combustible material and shall have a thermal conductivity of 1.0 Bru-in/ft.F (4.88kg-cal/hr-m C) or less.
2. All clearances and thicknesses are minimums; larger clearances and thicknesses are acceptable.
3. Any material used to close up an opening for the connector shall be of non-combustible material.
4. A connector to a masonry chimney, except for System B, shall extend through the wall pass-through system and the chimney wall to the inner face of the flue liner, but not beyond.



## **USE AS A FIREPLACE FLUE**

The Chim-A-Lator® liner may be used as a flue for a fireplace. The liner must provide a cross-sectional area of no less than 10% of the area of the face opening of the fireplace. The liner should be connected to the top of the smoke dome by means of a bottom plate which provides an air-tight and drip-free connection. If opening is too big, reduce by use of a closure hood or brick.

## **CLEAN OUT DOOR**

It is recommended to install a clean out door with every installation. The door should be positioned to allow access to the lowest point in the chimney/fireplace chamber where components can be disassembled for purposes of inspection and/or cleaning. If a tee section is used in the installation, the clean out door should allow access to remove the tee cap when necessary.

## **PREPARING THE LINER**

To determine the length of the liner required, measure from the point at which the liner will begin in the chimney (or smoke chamber) to the top of the chimney and add approximately 12". This is the total length of liner needed. Lay the liner out straight on the ground.

Now you are ready to insulate the liner. If you are using a tee section, attach the tee cap to the bottom of the tee with a minimum of a 2 TEK screws on opposite sides through the pre-punched holes in the cap. Secure the tee to the bottom of the liner. The tee is to be insulated with the liner. If you are connecting to a Listed connector assembly, or direct connect system, consult that manufacturer's instructions to satisfy the requirements for the insulation. All connections must be made in a drip-free manner. No alteration of the end of the liner is permitted and the connection must be made with adapters/connectors specified in the "Products" listing. Roll the 1/2" ceramic insulation with the foil facing out on the ground. Place the liner system on the center of the blanket with the bottom end of the liner system flush with one end of the insulation. Cut the insulation 18" short of the end of the liner at the other end. Wrap the ceramic blanket around the liner system. **DO NOT STRETCH THE BLANKET, AS THIS WOULD LESSEN THE THICKNESS AND DENSITY.**

The edges of the ceramic should butt together with no gaps. If the blanket is wider than necessary to just fit over the circumference of the pipe without overlapping, trim the excess away. **DO NOT OVERLAP THE BLANKET.** When you have the correct width of blanket to butt together properly, spray adhesive on the entire length of each edge and ends of the blanket - as well as several spots on the rest of the blanket - and wrap the blanket around the liner system. The adhesive will hold the blanket in place.

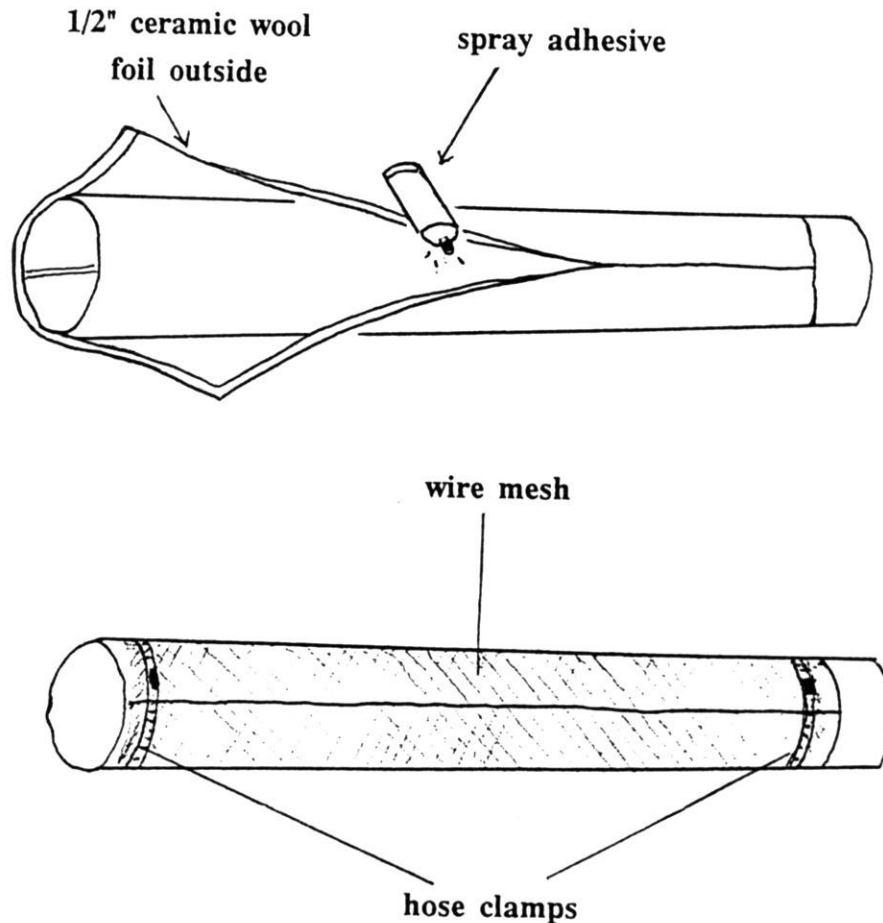
To permanently secure the blanket to the liner, wrap stainless steel wire spirally around the system. Wrap the wire firmly around the liner at 12" to 16" intervals to the top of the blanket.

It is imperative to maintain the integrity of the insulation while the liner is being placed onto position in the chimney. The preferred way is to use an expandable stainless steel wire mesh held in place with stainless steel hose clamps.

Starting at the bottom end of the wrapped liner/liner assembly, slip the mesh around the outside of the blanket and pull it up the liner to the top end of the blanket. Securely fasten a stainless steel hose clamp around that end of the mesh. Go to the bottom end of the liner and pull the mesh until it is tight against the blanket. Secure a stainless steel hose clamp around the mesh at the bottom of the ceramic blanket. Leave a couple inches of mesh below the clamp and cut off the excess.

NOTE: If you are using a tee with removable cap, do not run the ceramic blanket or mesh past a point that would prevent the cap from being removed for cleaning and inspection purposes. Do not cut the mesh away from the take-off hole on the tee before the liner is in position in the chimney.

### ILLUSTRATION C



### PLACING THE LINER IN THE CHIMNEY

The height and location of the chimney, as well as the type of shingles and the pitch of the roof, will determine how you must set up to lower the liner, do not attempt to install a longer length of liner than the available manpower can handle safely. It may be necessary to install the liner in more than one section to insure the safety of the workers.

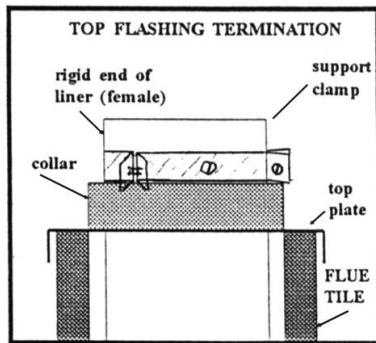
As you lower the liner into the chimney, keep it centered in the top of the flue opening and away from the edges. This will help insure the integrity of the protective wrap around the ceramic insulation. If you are installing the liner in sections, you can support the top end of the section of liner in the chimney with a support clamp and two pieces of rebar across the top of the chimney while you attach the next section. The area where the two sections are joined must be insulated and protected in the same fashion as the rest of the liner.

When the bottom end of the liner is at the desired position in the chimney, or smoke chamber, you are ready to install the chimney top kit.

## INSTALLING THE CHIMNEY TOP KIT

While the liner is held in position with the support clamps resting on the rebar, put a heavy bead of high temperature silicone caulk around the liner (you may trim or fold the edges of the top plate to the dimensions of the chimney) and let it rest on top of the support clamp. Have your helper get a very firm hold at the very top of the liner (vise grips are recommended) and keep the liner in position while you slide the top plate back up the liner far enough to allow the removal of the support clamp and rebar from underneath the plate. Wipe part of the silicone bead across the spots where the rebar was resting. Push the top plate firmly down onto the top of the chimney. Put the support clamp back around the liner so it is resting on the collar of the top plate. Secure the support clamp to the liner with 1/8" stainless steel pop rivet through the center hole on each side of the support clamp.

Install the storm collar. When the storm collar is as far down on the liner as it can go (it will stop when it hits the tabs on the support clamp), tighten the bolt until the top of the storm collar is compressed tightly against the entire circumference of the liner and then bend it back to hold the storm collar in position. Seal all around the top of the storm collar with a bead of high temperature silicone caulk. Position the collar of the rain cap at the top of the liner and secure in the same manner as the support clamp. Your installation at the top of the chimney is complete.



### COMPLETE THE INSTALLATION:

You can now complete the installation from the liner to the appliance. Refer to the approved methods of connection.

When the installation is complete, advise the homeowner as to the proper burning, inspection and maintenance techniques. These procedures are carefully detailed in the following section.

### PROPER BURNING PROCEDURES

It is recommended that you bum your appliance at a high temperature range for at least 45 minutes every day you use the appliance. This will allow any accumulation of creosote as the result of a low bum to be dried and burned off, preventing a dangerous accumulation which could result in a serious flue fire. You may wish to use a temperature-monitoring device on the liner/connector to be certain you are reaching adequate temperatures to remove any accumulation of creosote in the system.

**ALWAYS CONSULT THE MANUFACTURER'S RECOMMENDED PROCEDURE ON HOW TO PROPERLY OPERATE THE APPLIANCE.**

## **PROPER INSPECTION AND MAINTENANCE PROCEDURES**

CREOSOTE AND SOOT - FORMATION AND NEED FOR REMOVAL; WHEN WOOD IS BURNED SLOWLY, IT PRODUCES TAR AND OTHER ORGANIC VAPORS, WHICH COMBINE WITH EXPELLED MOISTURE TO FORM CREOSOTE. THE CREOSOTE VAPORS MAY CONDENSE ON THE INSIDE OF THE CHIMNEY LINER DURING SLOW-BURNING FIRING PERIODS. AS A RESULT, CREOSOTE RESIDUE ACCUMULATES ON THE CHIMNEY LINER. WHEN IGNITED, THIS CREOSOTE MAKES AN EXTREMELY HOT FIRE.

The chimney liner system should be inspected at least once every two months during the heating season to determine if a creosote or soot built-up has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of a chimney fire. The entire system, from the connection at the appliance to the top of the liner, must be completely inspected and cleaned. If required, clean at least annually by a qualified professional. Remove the chimney cap at the top of the liner. A properly sized wire, or poly brush can be used to clean the liner. In some instances, proper cleaning will require removing the appliance and disassembling the connector assembly to thoroughly inspect parts that cannot be reached otherwise. If you have a U1 Listed direct connect system with your liner system, refer to the installation and maintenance manual for the direct connect system and follow the instructions for removal and maintenance. Re-install the chimney cap when the job is completed.

## **ADDITIONAL INFORMATION**

Your liner system provides several benefits. The first, and certainly most important is additional safety for your home and family. The exhaust from your appliance is wholly contained in a drip free, properly-sized insulated liner that prevents sufficient kindling temperatures from reaching wood framing members around the fireplace or chimney. The next benefit is realized by the improved operating efficiency of your wood-burning appliance. Having properly sized liner meets the draft requirement determined necessary by the manufacturer of the appliance. This also provides another benefit - the greater savings of firewood realized when you don't have to heat an entire fireplace chamber and oversized flue to attain adequate draft.

Use only seasoned, dry firewood. Properly seasoned wood (split and dried for at least one year) will be gray and split on the ends. If you store your wood outside, it is best to have a cover over the top of the wood but to allow air to circulate through the stack. Always keep a two or three day supply of firewood inside so it will be free of moisture. The liner system you have does not guarantee the elimination of creosote. Only correct burning techniques, periodic inspections and preventive maintenance will eliminate the fire hazards created by creosote.

## **REMOVAL AND RESTORATION**

In the event you would ever decide to restore your chimney or fireplace to its original condition, the liner system can be removed. After the liner has been removed, the chimney/fireplace will have to be restored in a condition that will meet existing codes for your locality. Consult you local building or code-make authority before proceeding.