Underwriters Laboratories Inc.®

333 Pfingsten Road
Northbrook, IL 60062-2096 USA
www.ul.com
tel: 1 847 272 8800
fax: 1 847 272 8129
Customer service: 1 877 854 3577

VP Engineering
REGIONAL CHIMNEY SUPPLY L L C
8045 SNOUFFER'S SCHOOL RD
GAITHERSBURG MD 20879

Date:	2007/04/03
Subscriber:	100100588
PartySite:	946785
File No:	MH45528
Project No:	06CA39996
PD No:	07M19831
Type:	R
PO Number:	Dale Howard

Subject: **Initial Production Inspection**

PLEASE NOTE: YOU ARE NOT AUTHORIZED TO SHIP ANY PRODUCTS BEARING ANY UL MARKS UNTIL THE INITIAL PRODUCTION INSPECTION HAS BEEN SUCCESSFULLY CONDUCTED BY THE UL FIELD REPRESENTATIVE.

An Initial Production Inspection (IPI) is an inspection that must be conducted prior to the first shipment of products bearing the UL Mark. This is to ensure that products being manufactured are in accordance with UL's requirements including the Follow-Up Service Procedure. After the UL Representative has verified compliance of your product(s), authorization will be granted for shipment of product(s) bearing the appropriate UL Marks as denoted in the Procedure.

Please file revised pages and illustrations in place of material of like identity. New material should be filed in its proper numerical order.

NOTE: Follow-Up Service Procedure revisions DO NOT include Cover Pages, Test Records and Conclusion Pages. Report revisions DO NOT include Authorization Pages, Indices, Section General Pages and Appendixes.

Please review this material and report any inaccuracies to our Customer Service Professional, PHONE: 1-877-ULHELPS (1-877-854-3577), FAX: 1-847-407-1395, E-MAIL: customerservice.nbk@us.ul.com, referring to the above Project and/or PD Numbers.

This material is provided on behalf of Underwriters Laboratories Inc.(UL) or any authorized licensee of UL.

NBK File

UL INSPECTION CENTER 347

Production Date:	04/16/2007
Contact:	Dale Howard
Phone:	301-740-3488
EMail:	dhhoward@usa.net

ADDENDUM TO TRANSMITTAL LETTER

VP Engineering
REGIONAL CHIMNEY SUPPLY L L C
8045 SNOUFFER'S SCHOOL RD
GAITHERSBURG MD 20879

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The following material resulting from the investigation under the above numbers is enclosed.

Issue Date	Vol	Sec	Pages	Revised Date
2006/09/22	1	1	Add New Volume	

Follow-Up Service Procedure

DO NOT DISCARD THIS PAGE

It is important to keep Procedures and Test Reports up-to-date as new or revised pages are received.
Correct maintenance will decrease the amount of time the UL Representative spends when visiting your facility.
Refer to the **HOW TO UPDATE** column below for instructions.

PAGE	FUNCTION	HOW TO UPDATE
Authorization Page	Authorizes the appropriate type of Follow-Up Service (L or R). Contains the names and addresses of the Applicant, Listee (Recognized or Classified Company) and Manufacturer and the corporate Identifier number assigned by UL to each entity, as well as the name of the UL product category title.	Replace present page by matching the UL File Number, Volume Number and most current "Issued" or "Revised" date.
Addendum to Authorization Page*	Lists the names, addresses and UL identifier numbers of all manufacturing locations when multiple locations exist	Replace, add or delete page by matching the UL File Number, Volume Number and most current "Issued" or "Revised" date.
Listing Mark Data (LMD) Page, Classification Mark Data (CMD) Page or Recognized Component Marking Data (RCMD) Page*	Used only for products covered under Type R service as shown on the Authorization Page. Use to determine the correct Listing/Classification/Recognized Component Mark(ing). For Listed and Classified categories the assigned control number is included, which is part of the required marking. Also includes additional information regarding minimum size, application, procurement, and any other optional markings, as well as the appropriate UL Mark.	Replace present page with most current "Issued" or "Revised" date.
Multiple Listing (ML) Correlation Sheet*	Correlates product model numbers between those products made by a Manufacturer for the Basic Applicant and those supplied to another company, the Multiple Listee.	Replace, add or delete page(s) with most current "Issued" or "Revised" date.
Index*	Catalogs the contents of the Procedure by some logical means, i.e. Section Number or Issue Date.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Appendices* (App.)	Contains instructions for the Manufacturer and UL Representative concerning specific responsibilities and required periodic tests. May also outline tests to be conducted on samples to be forwarded to UL's facilities.	Replace present page by matching the UL File Number, Volume Number, Appendix letter (eg. App.A), Page Number and most current "Revised" date.
	Standardized Appendix Pages are the same for all manufacturers within a particular product category.	Replace present page by matching the Appendix letter (eg. App.A), Page Number and most current "Revised" date.
Follow-Up Inspection Instructions (FUII) Pages*	Contains information similar to that in the Appendices. FUII Pages are issued as part of the Procedure when a UL Standard is used in conjunction with the Procedure, and are the same for all manufacturers within a particular category.	Replace present pages by matching the Page Number and most current "Issued" or "Revised" date.
Section General* (Sec. Gen.)	Contains description, requirements, identifications and/or specifications that are common to all products covered by the entire volume and supplements the information provided in the Description Section.	Replace present page by matching the UL File Number, Volume Number, Page Number and most current "Revised" date.
Description Section* (Sec.)	Contains the specific description of one or more products or systems. This includes written text supplemented by photographs, drawings, etc., as necessary, to define features that affect compliance with the applicable requirements.	Replace present page by matching the UL File Number, Volume Number, Section Number, Page Number and most current "Issued" date.

*The above page(s) may not appear in all UL Follow-Up Service Procedures. Their inclusion is determined by UL's Conformity Assessment Services staff.

PLEASE NOTIFY YOUR LOCAL UL OFFICE OF ANY CHANGES IN CONTACT NAME, COMPANY NAME OR ADDRESS SO THAT MATERIAL AND IMPORTANT INFORMATION CONTINUES WITHOUT INTERRUPTION TO YOUR FACILITY.

File MH45528 Vol 1 Issued: 2007-04-03
Revised:

FOLLOW-UP SERVICE PROCEDURE
(TYPE R)

LINERS
(DDZR)

Manufacturer: (100100-588) REGIONAL CHIMNEY SUPPLY L L C
8045 SNOUFFER'S SCHOOL RD
GAITHERSBURG MD 20879

Applicant: (100100-588) SAME AS MANUFACTURER

Listee: (100100-588) SAME AS MANUFACTURER

This Procedure authorizes the above manufacturer to use the marking specified by Underwriters Laboratories Inc.(UL), or any authorized licensee of UL, only on products covered by this Procedure, in accordance with the applicable UL Services Agreement.

The prescribed Mark or Marking shall be used only at the above manufacturing location on such products which comply with this Procedure and any other applicable requirements.

The Procedure contains information for the use of the above named Manufacturer and representatives of Underwriters Laboratories Inc. and is not to be used for any other purpose. It is lent to the Manufacturer with the understanding that it is not to be copied, either wholly or in part, and that it will be returned to Underwriters Laboratories Inc. (UL) or any authorized licensee of UL, upon request.

This PROCEDURE, and any subsequent revision, is the property of Underwriters Laboratories Inc.(UL) and the authorized licensee of UL and is not transferable.

Underwriters Laboratories Inc.

Stephen Hewson
Senior Vice President
Global Follow-Up Service Operations

William R. Carney
Director
North American Certification Program

Listing Mark Data Page (LMDP)

(FILE IMMEDIATELY AFTER AUTHORIZATION PAGE)

LISTING MARK

The Listing Mark consists of four elements placed in close proximity and shall appear on Listed products only. Minimum size is not specified, as long as the Listing Mark is legible. The following is suggested.

9XXXX = The control number assigned by UL, 3KUC.

The minimum height of the registered trademark symbol ® shall be 3/64 of an inch. When the overall diameter of the UL Mark is less than 3/8 of an inch, the trademark symbol may be omitted if it is not legible to the naked eye.

The product identity is: "CHIMNEY LINER", "CHIMNEY LINER PART INTENDED FOR USE WITH (COMPANY NAME) LISTED CHIMNEY LINER PARTS", "CHIMNEY LINER MATERIAL INTENDED FOR USE WITH (COMPANY NAME) LISTED CHIMNEY LINER PARTS", or "CHIMNEY LINER PART".

The product may be omitted if the Mark is directly and permanently applied to the product by stamping, molding, ink-stamping, silk screening or similar process. The product identity may appear elsewhere on the product if the other three elements are part of the nameplate which includes the rating or the catalog or model designation.

Separable Listing Mark (not part of a nameplate and in the form of decals, stickers or labels) will always include the four elements.

The manufacturer may reproduce the Mark or obtain it from a UL authorized supplier.

THIS PAGE IS TO BE REVISED BY FUS DEPARTMENT ONLY

DESCRIPTION:

PRODUCT COVERED:

USL - Model, PRO*TECT stainless steel chimney liner system.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USL - Denotes conformance to the US Standard For Chimney Liners, UL 1777, Third Edition.

GENERAL:

The flexible, metallic chimney liner systems are intended to be installed in new or existing masonry chimneys used to vent wood, wood pellets, non-condensing gas and oil fired heaters. The liners are manufactured in 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in. diameters. The chimney liners are intended for installation in masonry chimneys having a minimum height of 10 ft. and a maximum height of 100 ft.

The factory built chimney liner systems consist of a 316Ti stainless steel flue. When used for venting wood-fired heaters or fireplaces, it is required that the liners are installed with Thermix™ or two layers of 1/4" "Pro-Foil" ceramic blanket as described in the instructions provided with each chimney liner.
In oil and gas-fired applications it is not required that the liners are insulated.

The chimney liner system are similar in overall design with differences in construction.

When using the Thermix™ insulation, the voids between the chimney liner and the interior of the masonry walls are to be completely filled with a minimum 1 in. thick Thermix™ insulation mixture with a minimum clearance of 0 in. from the exterior of the masonry chimney to combustible construction.

The flexible chimney liner systems require the use of a base tee section, top plate, support clamp, storm collar and rain cap assembly.

INSTALLATION INSTRUCTIONS:

A copy of the installation instructions shown as ILL. 1 shall be packaged with each chimney liner section.

MARKING:

All markings shall be permanent when affixed to an exposed part of the assembly and identifiable after installation is completed. Markings need not be permanent when affixed to an unexposed part of the assembly.

Each chimney liner part such as a base tee, connector, support plate, collar and rain cap shall bear the following:

1. The manufacturer's part name or number.

2. The Listee's name and address.

3. The statement: "Install And Use In Accordance With Regional Chimney Supply Manufacturing Installation and Maintenance Instructions"

Each liner section shall bear the following information to be repeated at 5 foot intervals on liner sections longer than 5 feet:

1. The manufacturer's part name or number.

2. The Listee's name and address.

3. The information specified on the Listing Mark Data Page for this volume.

4. The statement: "Install And Use In Accordance With American Chimney Supplies Installation and Maintenance Instructions"

5. The statement: "This Liner Is To Be Installed In A Masonry Chimney Where There Is A Minimum Clearance Of 0 Inch Air Space Between Combustible Materials And The Chimney Exterior."

6. The exterior surface of each part of a chimney liner intended for connection to a Category I gas-fired appliance shall be permanently marked with the following, "For Use Only With Category I Appliances Which Burn Natural Gas or Propane". The exterior surface of each part of a chimney liner intended for connection to a oil-fired appliance shall be permanently marked with the following, "For Use Only With Appliances Which Burn Oil Fuel". The exterior surface of each part of a chimney liner intended for connection to a solid-fuel-fired appliance shall be permanently marked with the following, "For Use Only With Appliances Which Burn Solid Fuel". When a chimney liner is intended for connection to more than one type of appliance, the above markings are to be combined.

MARKING MATERIAL:

All permanent markings affixed to an exposed part of the assembly and identifiable after installation are to be provided on pressure sensitive labels - R/C (PGDQ2), (PGGU2) or (PGJI2). When a R/C (PGGU2) label is applied, a R/C (PGGU2) overlaminate must also be provided. All labels must be suitable for the surface to which they are applied. All labels along with printer/ink combinations must have a minimum temperature rating of 302°F (150°C).

CONSTRUCTION DETAILS:

Flexible Chimney Liner – (Model PRO*TECT) The flexible chimney liners are manufactured in a corrugated spirally wound method. The chimney liner seam is formed mechanically by folding a two-ply seam that is pressure gnarled on order to close the seal. The flexible liners are available in a Type 316Ti steel. The liner material will be a minimum thickness of 0.006 in. and manufactured in 4 through 12 in. diameters.

With the exception of the Liner, the other chinney liner components that make-up the liner system such as the Base Tee, End Cap, Support Clamp, Storm Collar and Rain Cap are manufacturerd by RLH Industries, Inc.

INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

INSTALLATION INSTRUCTIONS FOR PRO•TECT™ CHIMNEY LINERS

PRO•TECT™ Chimney Liners are manufactured by Regional Chimney Supply, LLC. and are intended to service residential heating appliances burning wood, wood pellets, natural gas, propane gas (LP) or oil fuel, including naturally drafted appliances with draft hoods, fan assisted naturally drafted appliances and other appliances listed for use with Type B gas vents. **PRO•TECT™** liners should not be used to vent unlisted gas or oil appliances, unlisted wood or coal burning appliances, Category II, III and IV Gas appliances or gas appliances listed for use only with Type BW vent.

PRO•TECT™ liners must be installed by an experienced professional, familiar with the operation and maintenance of heating appliances and chimneys.

Regional Chimney Supply, LLC manufactures **PRO•TECT™ Chimney Liner**, which is listed for venting wood, wood pellets, non-condensing gas and oil fired heaters.

Every venting system must be properly planned and installed for optimum performance and safety. Refer to the appliance manufacturer's instructions to determine venting requirements and limitations with respect to installation and use of the appliance.

It is the responsibility of the installer to contact local building and fire officials concerning any installation restrictions and/or inspection requirements that may apply.

Permits may be required before commencement of the installation. This product must be installed in accordance with local building code requirements.

PRO•TECT™ liners are made from 316Ti stainless steel. This type of stainless steel has proven to be resistant to corrosion. It is common, however, for indoor air to contain chlorides given off from carpeting, paints, paint thinners and laundry detergents. When combustion air for the gas appliance is drawn directly from the house, these contaminants can combine with flue gas condensates to form aggressive chemicals, such as hydrochloric acid that can attack and degrade connector pipes and chimney liners.

Since it is difficult to determine if contaminants are present, the venting system should be designed to minimize the potential for condensation (i.e. insulate the liner and use B vent type double wall connectors) and to supply outside combustion air directly to the appliance. Refer to the appliance manufactures instructions and local codes for methods of providing outside air.

REGIONAL CHIMNEY SUPPLY LLC.

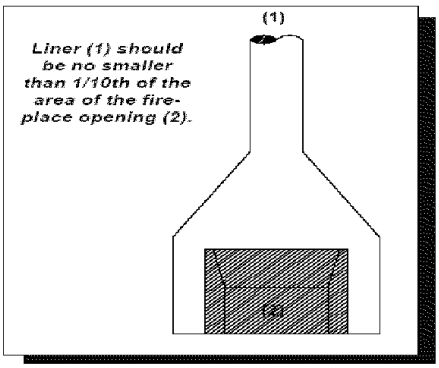
Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

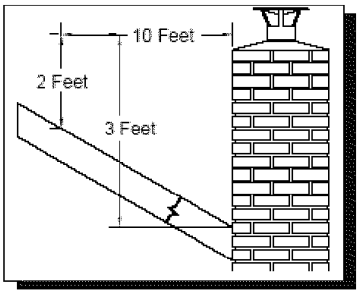
INSPECTING AND PREPARING THE CHIMNEY

Inspect the masonry chimney for proper construction and compliance with applicable building codes. The chimney must meet the following minimum requirements before lining or relining it with **PRO•TECT™ Chimney Liners**:

- The masonry chimney must have a wall thickness of at least 3.5 inches (4 in. nominal), a minimum height of 10 feet and maximum height of 100 feet.
- In wood burning applications the chimney must extend at least 3 feet above the highest point where it passes through the roof and at least 2 feet higher than any portion of the building within 10 feet.
- Only one solid fuel heater may be connected into a flue and may not be combined to vent gas or oil burning appliances
- If the flue's capacity is sufficient multiple gas and/or oil burning appliances may be vented into one flue.
- Gas appliances must connect into the flue ABOVE any oil fired heater.
- Oil fired appliances require a base Tee.
- Connector pipes between a heater and chimney must be installed with proper clearance to combustibles as specified by the appliance manufacturer and by any applicable building codes and standards. In the US, refer to the National Fire Protection Association's NFPA 211. In Canada, refer to CSA B365M91 Installation Code for Solid Fuel Burning Appliances and Equipment.

The chimney must be thoroughly cleaned before a liner is installed. Examine the chimney for obstructions, soot or tar, glazed creosote, cracked, loose or missing bricks and eroded mortar joints. Any defects or potential safety problems must be repaired prior to relining the chimney or must be rectified by the installation of a **PRO•TECT™** system.





The chimney must adhere to the
" 2' - 3' - 10' Rule "

At least two feet above any point within 10 feet of the chimney, and at least three feet above the roofline on the high side of the chimney.

REGIONAL CHIMNEY SUPPLY LLC.

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INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

DETERMINING THE REQUIRED LINER SIZE

To determine the correct diameter of a liner, refer to the appliance manufacturer's installation instructions, or to local building codes: model code NFPA 211(wood), model code NFPA 54(gas), model code NFPA 31(oil), the GAMA Venting Tables For Category I Central Furnaces (gas) or in Canada, the Installation Code for Natural Gas and Propane Burning Appliances and Equipment, CAN1-B149.1 and .2 and Installation Code for Oil burning equipment, CSA B139.

It is very important that high efficiency appliances with low flue gas temperatures have correctly sized flue liners.

Condensation within the flue system and improper venting/appliance performance can result, if flue liners are sized incorrectly.

Important: Never install a liner of a size less than specified by the appliance manufacturer.

No Downsizing: The chimney liner at no point shall be smaller than the flue outlet of the heating appliance.

FITTING PRO•TECT™ INTO A MASONRY CHIMNEY

PRO•TECT™ liners are listed as alternative lining materials to standard clay tiles. **PRO•TECT™** can be installed into existing clay tiles, or clay tiles may be removed and replaced with **PRO•TECT™** liners.

PRO•TECT™ liners venting gas or oil appliances do not require a minimum clearance or insulation between the outside of the liner and inside of the masonry shell*. Leave enough clearance for the liner to slide into place without difficulty.

REGIONAL CHIMNEY SUPPLY LLC.

INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

TOOLS AND SUPPLIES

The following tools and supplies may be required when installing **PRO•TECT™** Chimney Liners:

- Hammer
- Hexhead driver
- Cold Chisel
- Tin Snips
- Trowel
- Measuring Tape
- Eye Protection
- Dust Respirator
- Masonry Drill Bit(s)
- Key Hole Saw(s)
- Reversible Drill
- Mortar Mixing Trough
- Silicone Caulk
- Refractory Mortar
- Ladder
- Pliers
- Rope
- Hack Saw
- Dust Control Vac
- Work Gloves

PRO•TECT™ Liners are available in 4, 5, 5.5, 6, 7, 8, 9, 10, 11, and 12 inch diameters.

PRO•TECT™ Components are made from 316Ti stainless steel. **PRO•TECT™** Components are fastened to **PRO•TECT™** liners by tightening the built-in draw band. Pre-drilling liners or the use of pop rivets is not necessary.

- Tee
- Tee Cap
- All Purpose Adapter
- Universal Take-off
- Rain Cap
- Top Plate
- Base Plate
- Elbows, 45° or 90°
- Coupler

Liner and component arrangements depend on the size and configuration of the chimney structure and the type, number and location of the appliances that are to be vented into the chimney. For assistance, review the manufacturer's instructions for appropriate codes and standards, or contact Regional Chimney Supply LLC.

NOTE: The safe operation of a venting system depends on the proper installation and use of materials & parts supplied by the manufacturer and proper use and operation of the connected heating equipment.

Warning: Installers shall not substitute other materials or components with **PRO•TECT™** Chimney Liners. To do so violates the terms of the Underwriter Laboratories listing and may present hazards to the structure of inhabitants of the home.

IN ORDER TO MEET THE TERMS OF THE LISTING REGIONAL CHIMNEY SUPPLY'S WARRANTY REQUIRMENTS, THESE INSTALLATION INSTRUCTIONS MUST BE FOLLOWED.

PREPARING THE THIMBLE AREA

A **PRO•TECT™** Tee with Tee Cap is the most common way to terminate a lining system at the bottom. Elbows or Universal Take-offs may be used as well. If necessary, enlarge the thimble area(s) to accommodate the fittings. Make sure that proper clearances between connector pipes, heating appliances and combustibles are maintained after the liner and heating appliances are installed. If penetrating a combustible wall, be sure to install an **approved wall penetration device.**

REGIONAL CHIMNEY SUPPLY LLC.

INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

DETERMINING THE REQUIRED LINER LENGTH

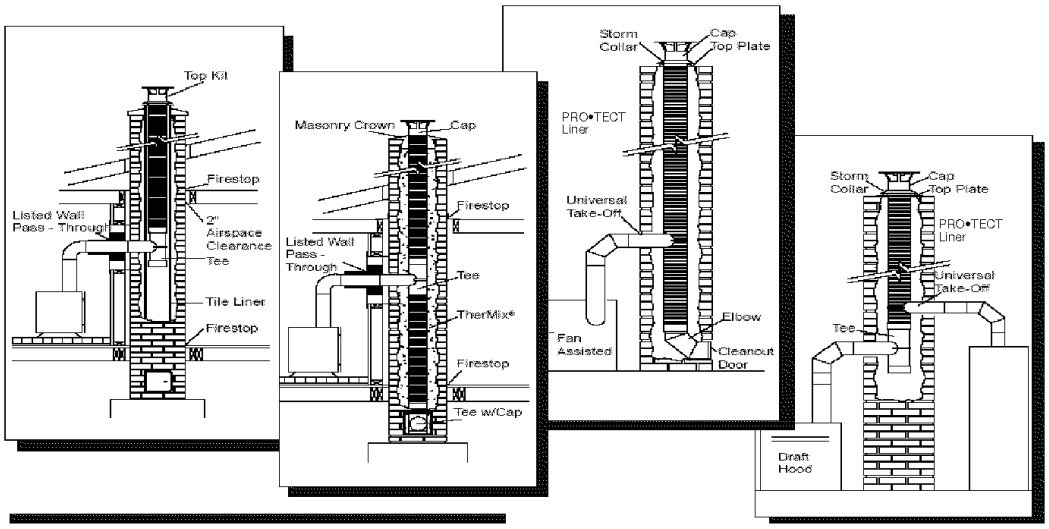
Measure the distance from the thimble to the top of the chimney. Add 6 inches to allow for the installation of the chimney crown and Rain Cap. Subtract the length of the bottom Tee and any other system components. In a chimney with offsets, add a foot for each offset. Mark the liner, then cut with a hacksaw or reciprocating saw with a metal cutting blade. **EDGES OF THE LINERS ARE SHARP! WEAR GLOVES AND USE EYE PROTECTION**

PRO•TECT™ WITH A TEE AT THE THIMBLE

Prepare the liner assembly. Slide the expanded end of the Tee body onto the liner and tighten the draw band. Attach the Tee Cap to the Tee Body in the same fashion. Do not attach the Tee Snout at this time. Lower the liner into the chimney from the top until the Tee reaches the thimble area. With the draw band of the Tee Snout fully extended, push the Snout through the thimble into the chimney. Lower the liner and feed it through the draw band of the Snout. Rotate the liner until the Snout and Tee are aligned and tighten the draw band securely. In tight chimneys or chimneys with offsets, it may be difficult to insert the liner with the Tee attached. In such cases, open the wall to be sure the tee is attached securely and oriented correctly.

Important: A heating appliance should never be placed directly in front of the wall penetration assembly.

Typical systems layout for chimneys serving one or more heating appliances:



REGIONAL CHIMNEY SUPPLY LLC.

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INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

PRO•TECT™ UNIVERSAL TAKEOFF INSTALLATION

Use Universal Takeoff when additional gas or oil appliances need to be vented into the **PRO•TECT™** liner (common vent). When a Takeoff is installed into a round **PRO•TECT™** liner, the liner must be at least one inch larger in diameter than the diameter of the Takeoff.

Cut an access hole into the masonry chimney at the point where the Takeoff is to be joined into the liner. Use an appropriate diameter hole saw (with pilot drill bit) and a reversible drill, to make a pilot hole through the liner. Before the main hole is cut, switch the drill into reverse and press lightly but firmly against the liner to cut the main hole. Remove the cutout portion of the liner.

Feed the Takeoff's draw band around the liner and into the turnbuckle. Tighten the draw band. Apply a bead of High Temp RTV Silicone between the Takeoff and liner.

CLOSING UP THE THIMBLE AREA

Use the Tee Snout or Takeoff to center the liner within the chimney. Fill the space between the Tee Snout or Takeoff and the chimney structure with masonry and mortar to form an airtight seal. Silicone caulking may also be used for this purpose.

INSTALLING PRO•TECT™ IN FIREPLACE APPLICATIONS

Anchor the **PRO•TECT™** Base Plate at the base of the line (top of the smoke chamber). Seal the gap between the liner and masonry with 3000 furnace cement. The Base Plate can be supported by wedging it into mortar joints or by supporting it with steel rods.

When trimming a Base Plate, make sure that the hole in the plate is centered in the flue. Attach the Base Plate to the **PRO•TECT™** liner, and then lower it until the male end of the VSL is seated in the Base Plate.

When venting a stove or insert through a fireplace and into a chimney, **PRO•TECT™ Chimney Liner** can provide a continuous flue from the heater to the top:

Ideally, remove a large enough portion of the back of the fireplace damper to allow the liner to pass through and install a sealing plug at the damper level or at the top of the smoke chamber.

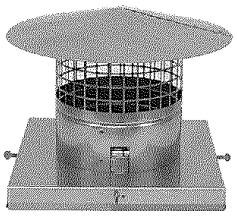
REGIONAL CHIMNEY SUPPLY LLC.

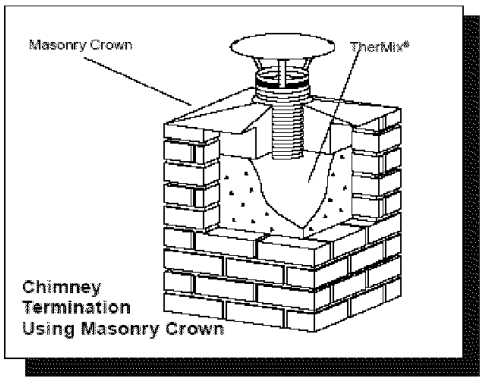
Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

FINISHING THE TOP OF A PRO•TECT™ LINED CHIMNEY

Important: Every chimney liner must be finished at the top with the PRO•TECT™ Chimney Cover. It is important to keep rain from entering the chimney, causing possible damage to the appliance below. It is also important to keep birds, squirrels, etc. from making a nest in the chimney. Chimney blockages often cause flue gasses to spill into the living space, creating serious health hazards.

1) PRO•TECT™ Top Components include a Top Plate with Collar and Rain Cap and provide one method for terminating **PRO•TECT™** liner at the top. When using a **PRO•TECT™** Top Plate and Rain Cap, slip the Top Plate over the liner and secure the clamps tightly. Position it on the chimney with the liner centered. Trim as necessary or fold edges over the outside of the chimney. Apply a generous bead of High Temp RTV Silicone under the Top Plate and press it into position. Slip the Rain Cap over the collar and tighten the band securely.

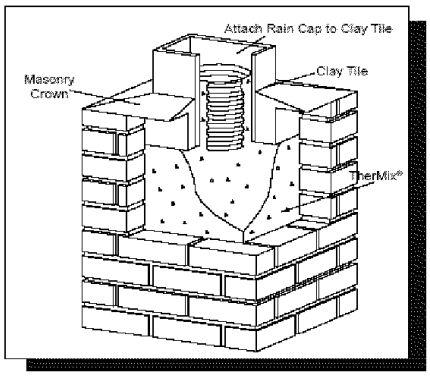




2) Masonry crowns with a PRO•TECT™ Rain Cap (VRC) are commonly used to finish TherMix insulated **PRO•TECT™** liners. Fill TherMix to within four inches from the chimney top. Fill the remaining four inches with mortar or crown mix and form a slope from the liner to the outside of the top course of bricks. Attach a **PRO•TECT™** Rain Cap to the liner.

3) Masonry crowns with a clay tile and any UL listed rain cap

Fill TherMix® to within four inches from the chimney top. Slip a full or partial length of any standard clay tile over the **PRO•TECT™** liner. Fill the gap between the outside of the tile with mortar or crown mix and form a slope to the outside of the top course of bricks. Fill the gap between **PRO•TECT™** and the tile with TherMix® and seal the last inch with mortar or crown mix. **PRO•TECT™** may be terminated anywhere within the tile, as long as it protrudes at least four inches into the tile. Attach a UL Listed rain cap to the clay tile.



REGIONAL CHIMNEY SUPPLY LLC.

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Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

INSULATING PRO•TECT™ LINERS

Please note: While insulation is not required for every installation (refer to UL1777 or appropriate listings or standards), the performance of the entire heating system is greatly enhanced when installing insulating materials. The venting system acts and reacts in step with the heating unit's operation. Insulation helps improve draft, minimize condensation and flue surfaces warm up quickly to achieve a heater's rated efficiency. Insulation is particularly important for exterior chimneys. Read the sections outlining insulating procedures before beginning the installation.

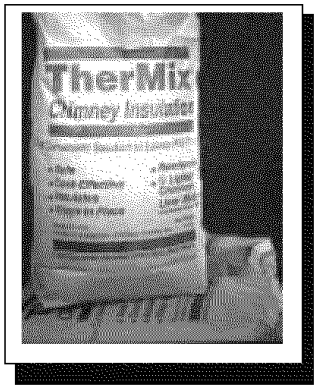
PRO•TECT™ liners venting solid fuel heaters must be installed with a minimum of one inch of TherMix® or with two layers of ProFoil ceramic insulating blanket between the outside of the liner and the inside of the masonry shell to meet the requirements of UL1777 at zero-clearance to combustibles.

General Guidelines:

PRO•TECT™ Chimney Liner is listed by Underwriters Laboratories, Inc (UL) to the UL 1777 standard at zero-clearance to combustibles and for use with all fuels. When venting wood-fired heaters or fireplaces, a minimum of one inch TherMix® or two layers of ProFoil ceramic blankets are needed to conform to the UL1777, zero-clearance listing.

PRO•TECT™ Chimney Liner is listed by UL to UL 1777 at zero-clearance to combustibles for use with gas and oil heaters. No insulation is needed to conform to the UL1777, zero-clearance listing. Here, flue gas temperatures are too low to cause dangerous temperature rises on the outside of a chimney. However, insulating liners is highly recommended for performance reasons (see above). All heaters or fireplaces can be fired up right after the installation is complete. Keep flue gas temperatures below 700 degrees F for three weeks. This allows for TherMix® to dry gradually. The operator is responsible for making sure that the heater is not over fired during this initial period.

All temperature data was obtained from tests performed on chimneys featuring a 4" nominal masonry shell and liner with or without the specified insulation between the liner and interior of the chimney (no clay tiles). The outside of the chimney was surrounded with a wood enclosure at zero-clearance as specified by the standard.



Method #1: Insulating with TherMix®

TherMix® is poured into the chimney AFTER the liner is installed. TherMix® is a pre-mixed insulation material and only requires the addition of water at the job site. Review TherMix® literature to determine the volume of TherMix® needed to fill a specific chimney.

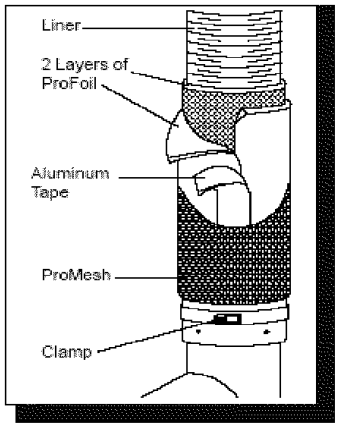
Empty a TherMix® bag into a mortar trough or wheelbarrow. Add 7 to 9 gallons of water and mix with a hoe. Proper consistency is achieved when the material feels damp but is still granular. Little or no water should appear between fingers when a handful of TherMix® is squeezed. Correctly prepared TherMix® pours like "loose fill" into the void between the liner and the chimney. **Complete instructions are on each TherMix® bag.**

During the pouring process, distribute the insulation evenly into the available space. Spacers may be used every 5 ft. to center the liner. Vibrate the liner by firmly tapping it. Continue to pour TherMix® until the chimney is filled to the top and finish as described previously. Inspect the liner at this time to ensure that no TherMix® has fallen inside the venting system.

REGIONAL CHIMNEY SUPPLY LLC.

Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

Method #2: Insulating with ProFoil ceramic blankets.



ProFoil blankets are attached to **PRO•TECT™ Chimney Liner** BEFORE the liner is installed into the chimney. Blankets are ¼ in. thick, 8 pounds density, and faced with a 2 mil. Aluminum foil. Aluminum tape, wire mesh and clamps are needed for proper installation.

Attaching the ProFoil ceramic blankets to PRO•TECT™ Chimney Liner

Roll out the ProFoil insulation blanket on a clean surface, foil face down. Lay the liner on top and trim the blanket so that it is about one foot shorter than the liner.

Wrap the insulation around the liner lengthwise and trim it so that a butt joint is formed. Seal the joint with aluminum foil tape. Spray adhesive may be used to hold the blanket in place until it can be secured with the foil tape. If a double layer of blanket is needed, install it with the butt joint on the opposite side.

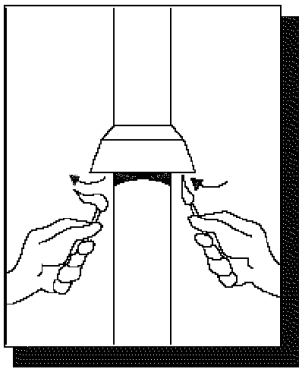
Install ProMesh protective wire mesh over the blanket(s). Slip the ProMesh over the insulated liner and secure one end with a stainless steel band clamp. Pull the ProMesh towards the other end of the liner so that it tightens snugly around the insulation, and then trim off the excess. Secure this end with a stainless steel band clamp.

CONNECTING THE APPLIANCE AND CHECKING DRAFT

When installing gas or oil appliances, use connector pipes specifically designed for connecting such appliances. Attach the connector pipe directly and securely to the **PRO•TECT™** Tee Snout or to a listed wall penetration assembly. Secure all sections of the connector pipe with at least three screws or rivets.

Record the date of installation (on the label provided with the liner) and attach it to the **PRO•TECT™** Tee Snout or wall penetration assembly. The label provides the **PRO•TECT™** brand name, liner manufacturer, the date of installation and states the intended use of the **PRO•TECT™** liner.

When a liner is for use with gas or oil only, the installer should post a notice near the point where the connection is made to the gas vent or roof jack concerning limitation to use with either gas or oil appliances only.



After the installation is complete, make sure the appliances are venting properly. With a gas-burning appliance equipped with a draft hood, turn on the unit, let it warm up, and then hold a match under the draft hood. If the flame is blown outward or extinguished, the appliance is not drafting properly. Fan assisted appliances (without draft hoods) have built-in pressure sensing switches. If chimney draft is not adequate, the appliance shuts off. With oil burning appliances, barometric draft dampers should be installed in the connector pipe. Hold a match in front of the partially opened barometric damper to check draft.

If more than one appliance is connected to a common vent, test each appliance with and without the other in operation. **If draft problems exist, corrections must be made before the appliance is used.**

REGIONAL CHIMNEY SUPPLY LLC.

Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

INSPECTION AND MAINTENANCE

Creosote formation and the need for removal

When wood is burned slowly it produces tar and other organic vapors which combine with expelled moisture to form creosote that accumulates inside a chimney flue. When ignited, creosote produces extremely hot fires. Should a fire occur within a **PRO•TECT™** liner, notify the fire department immediately. Fires are catastrophic events for any chimney. Before using the chimney after a fire, it must be inspected by a qualified person and cleaned or repaired as necessary.

Soot build-up and blockages can occur in all venting systems. Therefore, PRO•TECT™ Lining Systems must be inspected by a Certified Chimney Sweep or qualified professional at least once per year.

The inspection is required to comply with the terms of the warranty. If creosote or debris has accumulated, it must be removed to eliminate the risk of a chimney fire or the formation of carbon monoxide. Excessive condensation and chimney fires can be prevented through proper appliance use and maintenance.

To properly inspect the liner, gain access either from the top or bottom of the chimney.

When examining from the bottom, remove the connector from the thimble or if access is available, inspect through the clean-out cap of the Tee. Use a mirror and flashlight or chimney inspection camera to examine the inside of the liner. When examining from the top, remove the Rain Cap, examine the inside as above and determine if cleaning is necessary.

CLEANING PROCEDURE

Remove the Rain Cap, or if working from the bottom, remove the appliance connector or clean-out cap. Select appropriately sized polypropylene chimney brushes and flexible fiberglass extension rods. Run the brush up and down inside the liner until deposits or debris are removed. Reinstall the Rain Cap, connector pipe or Tee Cap.

A qualified, experienced chimney professional is recommended. Hiring a CSIA or NFI certified professional may provide the highest level of safety.

LEAVE A COPY OF THESE INSTRUCTIONS AND THE PRO•TECT™ WARRANTY CARD WITH THE HOMEOWNER

Regional Chimney Supply LLC.
8045 Snouffer School Road
Gaithersburg MD 20879
301-740-3488 * Fax 301-740-3489

REGIONAL CHIMNEY SUPPLY LLC.

C070510786

File MH45528
Project 06NB27622

September 22, 2006

REPORT

on

CHIMNEYS, LINERS

Regional Chimney Supply L L C
Gaithersburg, MD

DESCRIPTION:

PRODUCT COVERED:

USL - Model, PRO*TECT stainless steel chimney liner system.

ENGINEERING CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

USL - Denotes conformance to the US Standard For Chimney Liners, UL 1777, Third Edition.

GENERAL:

The flexible, metallic chimney liner systems are intended to be installed in new or existing masonry chimneys used to vent wood, wood pellets, non-condensing gas and oil fired heaters. The liners are manufactured in 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in. diameters. The chimney liners are intended for installation in masonry chimneys having a minimum height of 10 ft. and a maximum height of 100 ft.

The factory built chimney liner systems consist of a 316Ti stainless steel flue. When used for venting wood-fired heaters or fireplaces, it is required that the liners are installed with Thermix™ or two layers of 1/4" "Pro-Foil" ceramic blanket as described in the instructions provided with each chimney liner.
In oil and gas-fired applications it is not required that the liners are insulated.

The chimney liner system are similar in overall design with differences in construction.

When using the Thermix™ insulation, the voids between the chimney liner and the interior of the masonry walls are to be completely filled with a minimum 1 in. thick Thermix™ insulation mixture with a minimum clearance of 0 in. from the exterior of the masonry chimney to combustible construction.

The flexible chimney liner systems require the use of a base tee section, top plate, support clamp, storm collar and rain cap assembly.

INSTALLATION INSTRUCTIONS:

A copy of the installation instructions shown as ILL. 1 shall be packaged with each chimney liner section.

MARKING:

All markings shall be permanent when affixed to an exposed part of the assembly and identifiable after installation is completed. Markings need not be permanent when affixed to an unexposed part of the assembly.

Each chimney liner part such as a base tee, connector, support plate, collar and rain cap shall bear the following:

1. The manufacturer's part name or number.

2. The Listee's name and address.

3. The statement: "Install And Use In Accordance With Regional Chimney Supply Manufacturing Installation and Maintenance Instructions"

Each liner section shall bear the following information to be repeated at 5 foot intervals on liner sections longer than 5 feet:

1. The manufacturer's part name or number.

2. The Listee's name and address.

3. The information specified on the Listing Mark Data Page for this volume.

4. The statement: "Install And Use In Accordance With American Chimney Supplies Installation and Maintenance Instructions"

5. The statement: "This Liner Is To Be Installed In A Masonry Chimney Where There Is A Minimum Clearance Of 0 Inch Air Space Between Combustible Materials And The Chimney Exterior."

6. The exterior surface of each part of a chimney liner intended for connection to a Category I gas-fired appliance shall be permanently marked with the following, "For Use Only With Category I Appliances Which Burn Natural Gas or Propane". The exterior surface of each part of a chimney liner intended for connection to a oil-fired appliance shall be permanently marked with the following, "For Use Only With Appliances Which Burn Oil Fuel". The exterior surface of each part of a chimney liner intended for connection to a solid-fuel-fired appliance shall be permanently marked with the following, "For Use Only With Appliances Which Burn Solid Fuel". When a chimney liner is intended for connection to more than one type of appliance, the above markings are to be combined.

MARKING MATERIAL:

All permanent markings affixed to an exposed part of the assembly and identifiable after installation are to be provided on pressure sensitive labels - R/C (PGDQ2), (PGGU2) or (PGJI2). When a R/C (PGGU2) label is applied, a R/C (PGGU2) overlaminate must also be provided. All labels must be suitable for the surface to which they are applied. All labels along with printer/ink combinations must have a minimum temperature rating of 302°F (150°C).

CONSTRUCTION DETAILS:

Flexible Chimney Liner – (Model PRO*TECT) The flexible chimney liners are manufactured in a corrugated spirally wound method. The chimney liner seam is formed mechanically by folding a two-ply seam that is pressure gnarled on order to close the seal. The flexible liners are available in a Type 316Ti steel. The liner material will be a minimum thickness of 0.006 in. and manufactured in 4 through 12 in. diameters.

With the exception of the Liner, the other chinney liner components that make-up the liner system such as the Base Tee, End Cap, Support Clamp, Storm Collar and Rain Cap are manufacturerd by RLH Industries, Inc.

INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

INSTALLATION INSTRUCTIONS FOR PRO•TECT™ CHIMNEY LINERS

PRO•TECT™ Chimney Liners are manufactured by Regional Chimney Supply, LLC. and are intended to service residential heating appliances burning wood, wood pellets, natural gas, propane gas (LP) or oil fuel, including naturally drafted appliances with draft hoods, fan assisted naturally drafted appliances and other appliances listed for use with Type B gas vents. **PRO•TECT™** liners should not be used to vent unlisted gas or oil appliances, unlisted wood or coal burning appliances, Category II, III and IV Gas appliances or gas appliances listed for use only with Type BW vent.

PRO•TECT™ liners must be installed by an experienced professional, familiar with the operation and maintenance of heating appliances and chimneys.

Regional Chimney Supply, LLC manufactures **PRO•TECT™ Chimney Liner**, which is listed for venting wood, wood pellets, non-condensing gas and oil fired heaters.

Every venting system must be properly planned and installed for optimum performance and safety. Refer to the appliance manufacturer's instructions to determine venting requirements and limitations with respect to installation and use of the appliance.

It is the responsibility of the installer to contact local building and fire officials concerning any installation restrictions and/or inspection requirements that may apply.

Permits may be required before commencement of the installation. This product must be installed in accordance with local building code requirements.

PRO•TECT™ liners are made from 316Ti stainless steel. This type of stainless steel has proven to be resistant to corrosion. It is common, however, for indoor air to contain chlorides given off from carpeting, paints, paint thinners and laundry detergents. When combustion air for the gas appliance is drawn directly from the house, these contaminants can combine with flue gas condensates to form aggressive chemicals, such as hydrochloric acid that can attack and degrade connector pipes and chimney liners.

Since it is difficult to determine if contaminants are present, the venting system should be designed to minimize the potential for condensation (i.e. insulate the liner and use B vent type double wall connectors) and to supply outside combustion air directly to the appliance. Refer to the appliance manufactures instructions and local codes for methods of providing outside air.

REGIONAL CHIMNEY SUPPLY LLC.

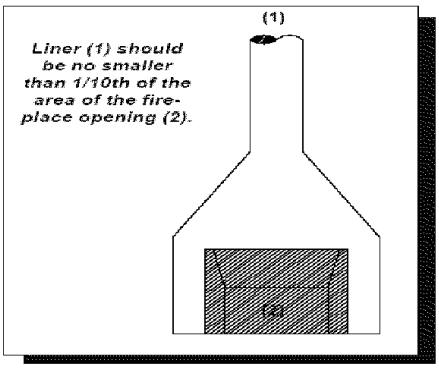
Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

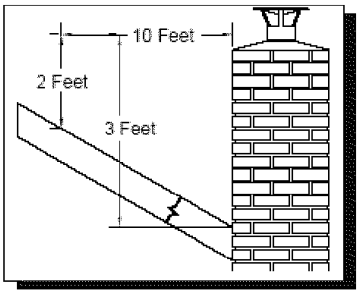
INSPECTING AND PREPARING THE CHIMNEY

Inspect the masonry chimney for proper construction and compliance with applicable building codes. The chimney must meet the following minimum requirements before lining or relining it with **PRO•TECT™ Chimney Liners**:

- The masonry chimney must have a wall thickness of at least 3.5 inches (4 in. nominal), a minimum height of 10 feet and maximum height of 100 feet.
- In wood burning applications the chimney must extend at least 3 feet above the highest point where it passes through the roof and at least 2 feet higher than any portion of the building within 10 feet.
- Only one solid fuel heater may be connected into a flue and may not be combined to vent gas or oil burning appliances
- If the flue's capacity is sufficient multiple gas and/or oil burning appliances may be vented into one flue.
- Gas appliances must connect into the flue ABOVE any oil fired heater.
- Oil fired appliances require a base Tee.
- Connector pipes between a heater and chimney must be installed with proper clearance to combustibles as specified by the appliance manufacturer and by any applicable building codes and standards. In the US, refer to the National Fire Protection Association's NFPA 211. In Canada, refer to CSA B365M91 Installation Code for Solid Fuel Burning Appliances and Equipment.

The chimney must be thoroughly cleaned before a liner is installed. Examine the chimney for obstructions, soot or tar, glazed creosote, cracked, loose or missing bricks and eroded mortar joints. Any defects or potential safety problems must be repaired prior to relining the chimney or must be rectified by the installation of a **PRO•TECT™** system.





The chimney must adhere to the
" 2' - 3' - 10' Rule "

At least two feet above any point within 10 feet of the chimney, and at least three feet above the roofline on the high side of the chimney.

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INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

DETERMINING THE REQUIRED LINER SIZE

To determine the correct diameter of a liner, refer to the appliance manufacturer's installation instructions, or to local building codes: model code NFPA 211(wood), model code NFPA 54(gas), model code NFPA 31(oil), the GAMA Venting Tables For Category I Central Furnaces (gas) or in Canada, the Installation Code for Natural Gas and Propane Burning Appliances and Equipment, CAN1-B149.1 and .2 and Installation Code for Oil burning equipment, CSA B139.

It is very important that high efficiency appliances with low flue gas temperatures have correctly sized flue liners.

Condensation within the flue system and improper venting/appliance performance can result, if flue liners are sized incorrectly.

Important: Never install a liner of a size less than specified by the appliance manufacturer.

No Downsizing: The chimney liner at no point shall be smaller than the flue outlet of the heating appliance.

FITTING PRO•TECT™ INTO A MASONRY CHIMNEY

PRO•TECT™ liners are listed as alternative lining materials to standard clay tiles. **PRO•TECT™** can be installed into existing clay tiles, or clay tiles may be removed and replaced with **PRO•TECT™** liners.

PRO•TECT™ liners venting gas or oil appliances do not require a minimum clearance or insulation between the outside of the liner and inside of the masonry shell*. Leave enough clearance for the liner to slide into place without difficulty.

REGIONAL CHIMNEY SUPPLY LLC.

INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

TOOLS AND SUPPLIES

The following tools and supplies may be required when installing **PRO•TECT™** Chimney Liners:

- Hammer
- Hexhead driver
- Cold Chisel
- Tin Snips
- Trowel
- Measuring Tape
- Eye Protection
- Dust Respirator
- Masonry Drill Bit(s)
- Key Hole Saw(s)
- Reversible Drill
- Mortar Mixing Trough
- Silicone Caulk
- Refractory Mortar
- Ladder
- Pliers
- Rope
- Hack Saw
- Dust Control Vac
- Work Gloves

PRO•TECT™ Liners are available in 4, 5, 5.5, 6, 7, 8, 9, 10, 11, and 12 inch diameters.

PRO•TECT™ Components are made from 316Ti stainless steel. **PRO•TECT™** Components are fastened to **PRO•TECT™** liners by tightening the built-in draw band. Pre-drilling liners or the use of pop rivets is not necessary.

- Tee
- Tee Cap
- All Purpose Adapter
- Universal Take-off
- Rain Cap
- Top Plate
- Base Plate
- Elbows, 45° or 90°
- Coupler

Liner and component arrangements depend on the size and configuration of the chimney structure and the type, number and location of the appliances that are to be vented into the chimney. For assistance, review the manufacturer's instructions for appropriate codes and standards, or contact Regional Chimney Supply LLC.

NOTE: The safe operation of a venting system depends on the proper installation and use of materials & parts supplied by the manufacturer and proper use and operation of the connected heating equipment.

Warning: Installers shall not substitute other materials or components with **PRO•TECT™** Chimney Liners. To do so violates the terms of the Underwriter Laboratories listing and may present hazards to the structure of inhabitants of the home.

IN ORDER TO MEET THE TERMS OF THE LISTING REGIONAL CHIMNEY SUPPLY'S WARRANTY REQUIRMENTS, THESE INSTALLATION INSTRUCTIONS MUST BE FOLLOWED.

PREPARING THE THIMBLE AREA

A **PRO•TECT™** Tee with Tee Cap is the most common way to terminate a lining system at the bottom. Elbows or Universal Take-offs may be used as well. If necessary, enlarge the thimble area(s) to accommodate the fittings. Make sure that proper clearances between connector pipes, heating appliances and combustibles are maintained after the liner and heating appliances are installed. If penetrating a combustible wall, be sure to install an **approved wall penetration device.**

REGIONAL CHIMNEY SUPPLY LLC.

INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

DETERMINING THE REQUIRED LINER LENGTH

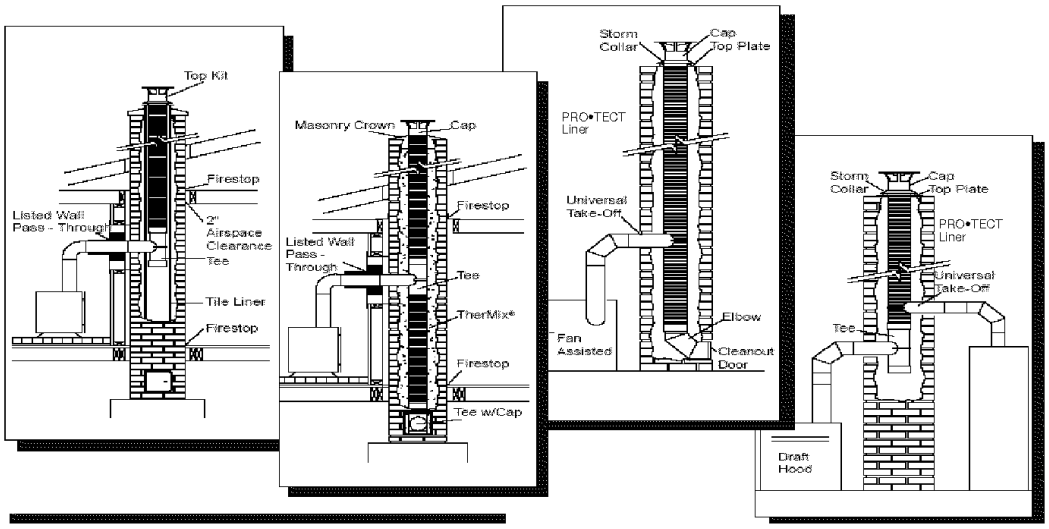
Measure the distance from the thimble to the top of the chimney. Add 6 inches to allow for the installation of the chimney crown and Rain Cap. Subtract the length of the bottom Tee and any other system components. In a chimney with offsets, add a foot for each offset. Mark the liner, then cut with a hacksaw or reciprocating saw with a metal cutting blade. **EDGES OF THE LINERS ARE SHARP! WEAR GLOVES AND USE EYE PROTECTION**

PRO•TECT™ WITH A TEE AT THE THIMBLE

Prepare the liner assembly. Slide the expanded end of the Tee body onto the liner and tighten the draw band. Attach the Tee Cap to the Tee Body in the same fashion. Do not attach the Tee Snout at this time. Lower the liner into the chimney from the top until the Tee reaches the thimble area. With the draw band of the Tee Snout fully extended, push the Snout through the thimble into the chimney. Lower the liner and feed it through the draw band of the Snout. Rotate the liner until the Snout and Tee are aligned and tighten the draw band securely. In tight chimneys or chimneys with offsets, it may be difficult to insert the liner with the Tee attached. In such cases, open the wall to be sure the tee is attached securely and oriented correctly.

Important: A heating appliance should never be placed directly in front of the wall penetration assembly.

Typical systems layout for chimneys serving one or more heating appliances:



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INSTALLATION INSTRUCTIONS FOR PRO*TECT™ CHIMNEY LINERS BY REGIONAL CHIMNEY SUPPLY, LLC.

PRO•TECT™ UNIVERSAL TAKEOFF INSTALLATION

Use Universal Takeoff when additional gas or oil appliances need to be vented into the **PRO•TECT™** liner (common vent). When a Takeoff is installed into a round **PRO•TECT™** liner, the liner must be at least one inch larger in diameter than the diameter of the Takeoff.

Cut an access hole into the masonry chimney at the point where the Takeoff is to be joined into the liner. Use an appropriate diameter hole saw (with pilot drill bit) and a reversible drill, to make a pilot hole through the liner. Before the main hole is cut, switch the drill into reverse and press lightly but firmly against the liner to cut the main hole. Remove the cutout portion of the liner.

Feed the Takeoff's draw band around the liner and into the turnbuckle. Tighten the draw band. Apply a bead of High Temp RTV Silicone between the Takeoff and liner.

CLOSING UP THE THIMBLE AREA

Use the Tee Snout or Takeoff to center the liner within the chimney. Fill the space between the Tee Snout or Takeoff and the chimney structure with masonry and mortar to form an airtight seal. Silicone caulking may also be used for this purpose.

INSTALLING PRO•TECT™ IN FIREPLACE APPLICATIONS

Anchor the **PRO•TECT™** Base Plate at the base of the line (top of the smoke chamber). Seal the gap between the liner and masonry with 3000 furnace cement. The Base Plate can be supported by wedging it into mortar joints or by supporting it with steel rods.

When trimming a Base Plate, make sure that the hole in the plate is centered in the flue. Attach the Base Plate to the **PRO•TECT™** liner, and then lower it until the male end of the VSL is seated in the Base Plate.

When venting a stove or insert through a fireplace and into a chimney, **PRO•TECT™ Chimney Liner** can provide a continuous flue from the heater to the top:

Ideally, remove a large enough portion of the back of the fireplace damper to allow the liner to pass through and install a sealing plug at the damper level or at the top of the smoke chamber.

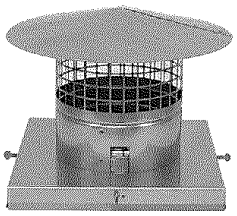
REGIONAL CHIMNEY SUPPLY LLC.

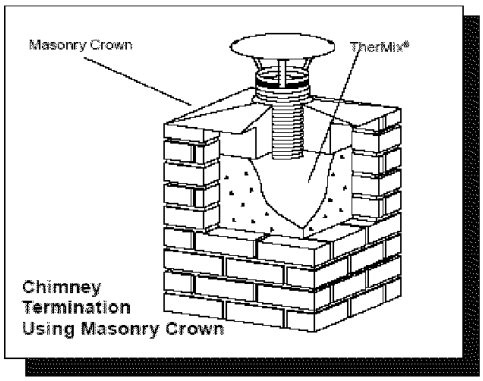
Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

FINISHING THE TOP OF A PRO•TECT™ LINED CHIMNEY

Important: Every chimney liner must be finished at the top with the PRO•TECT™ Chimney Cover. It is important to keep rain from entering the chimney, causing possible damage to the appliance below. It is also important to keep birds, squirrels, etc. from making a nest in the chimney. Chimney blockages often cause flue gasses to spill into the living space, creating serious health hazards.

1) PRO•TECT™ Top Components include a Top Plate with Collar and Rain Cap and provide one method for terminating **PRO•TECT™** liner at the top. When using a **PRO•TECT™** Top Plate and Rain Cap, slip the Top Plate over the liner and secure the clamps tightly. Position it on the chimney with the liner centered. Trim as necessary or fold edges over the outside of the chimney. Apply a generous bead of High Temp RTV Silicone under the Top Plate and press it into position. Slip the Rain Cap over the collar and tighten the band securely.

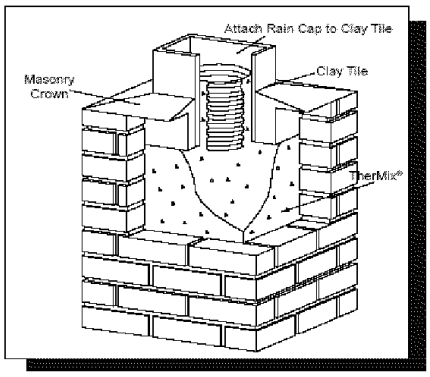




2) Masonry crowns with a PRO•TECT™ Rain Cap (VRC) are commonly used to finish TherMix insulated **PRO•TECT™** liners. Fill TherMix to within four inches from the chimney top. Fill the remaining four inches with mortar or crown mix and form a slope from the liner to the outside of the top course of bricks. Attach a **PRO•TECT™** Rain Cap to the liner.

3) Masonry crowns with a clay tile and any UL listed rain cap

Fill TherMix® to within four inches from the chimney top. Slip a full or partial length of any standard clay tile over the **PRO•TECT™** liner. Fill the gap between the outside of the tile with mortar or crown mix and form a slope to the outside of the top course of bricks. Fill the gap between **PRO•TECT™** and the tile with TherMix® and seal the last inch with mortar or crown mix. **PRO•TECT™** may be terminated anywhere within the tile, as long as it protrudes at least four inches into the tile. Attach a UL Listed rain cap to the clay tile.



REGIONAL CHIMNEY SUPPLY LLC.

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Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

INSULATING PRO•TECT™ LINERS

Please note: While insulation is not required for every installation (refer to UL1777 or appropriate listings or standards), the performance of the entire heating system is greatly enhanced when installing insulating materials. The venting system acts and reacts in step with the heating unit's operation. Insulation helps improve draft, minimize condensation and flue surfaces warm up quickly to achieve a heater's rated efficiency. Insulation is particularly important for exterior chimneys. Read the sections outlining insulating procedures before beginning the installation.

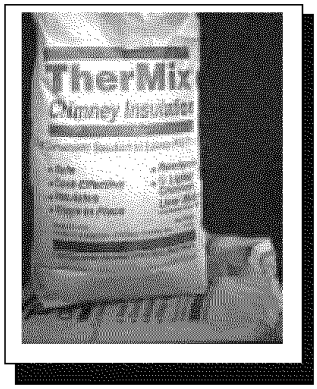
PRO•TECT™ liners venting solid fuel heaters must be installed with a minimum of one inch of TherMix® or with two layers of ProFoil ceramic insulating blanket between the outside of the liner and the inside of the masonry shell to meet the requirements of UL1777 at zero-clearance to combustibles.

General Guidelines:

PRO•TECT™ Chimney Liner is listed by Underwriters Laboratories, Inc (UL) to the UL 1777 standard at zero-clearance to combustibles and for use with all fuels. When venting wood-fired heaters or fireplaces, a minimum of one inch TherMix® or two layers of ProFoil ceramic blankets are needed to conform to the UL1777, zero-clearance listing.

PRO•TECT™ Chimney Liner is listed by UL to UL 1777 at zero-clearance to combustibles for use with gas and oil heaters. No insulation is needed to conform to the UL1777, zero-clearance listing. Here, flue gas temperatures are too low to cause dangerous temperature rises on the outside of a chimney. However, insulating liners is highly recommended for performance reasons (see above). All heaters or fireplaces can be fired up right after the installation is complete. Keep flue gas temperatures below 700 degrees F for three weeks. This allows for TherMix® to dry gradually. The operator is responsible for making sure that the heater is not over fired during this initial period.

All temperature data was obtained from tests performed on chimneys featuring a 4" nominal masonry shell and liner with or without the specified insulation between the liner and interior of the chimney (no clay tiles). The outside of the chimney was surrounded with a wood enclosure at zero-clearance as specified by the standard.



Method #1: Insulating with TherMix®

TherMix® is poured into the chimney AFTER the liner is installed. TherMix® is a pre-mixed insulation material and only requires the addition of water at the job site. Review TherMix® literature to determine the volume of TherMix® needed to fill a specific chimney.

Empty a TherMix® bag into a mortar trough or wheelbarrow. Add 7 to 9 gallons of water and mix with a hoe. Proper consistency is achieved when the material feels damp but is still granular. Little or no water should appear between fingers when a handful of TherMix® is squeezed. Correctly prepared TherMix® pours like "loose fill" into the void between the liner and the chimney. **Complete instructions are on each TherMix® bag.**

During the pouring process, distribute the insulation evenly into the available space. Spacers may be used every 5 ft. to center the liner. Vibrate the liner by firmly tapping it. Continue to pour TherMix® until the chimney is filled to the top and finish as described previously. Inspect the liner at this time to ensure that no TherMix® has fallen inside the venting system.

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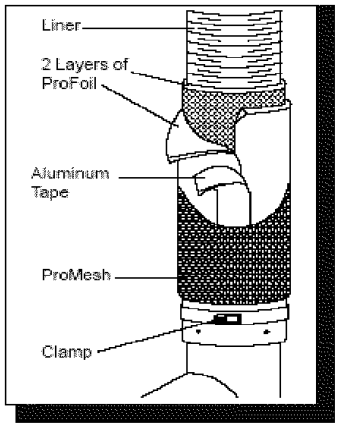
Method #2: Insulating with ProFoil ceramic blankets.



ProFoil blankets are attached to **PRO•TECT™ Chimney Liner** BEFORE the liner is installed into the chimney. Blankets are ¼ in. thick, 8 pounds density, and faced with a 2 mil. Aluminum foil. Aluminum tape, wire mesh and clamps are needed for proper installation.

Attaching the ProFoil ceramic blankets to PRO•TECT™ Chimney Liner

Roll out the ProFoil insulation blanket on a clean surface, foil face down. Lay the liner on top and trim the blanket so that it is about one foot shorter than the liner.

Wrap the insulation around the liner lengthwise and trim it so that a butt joint is formed. Seal the joint with aluminum foil tape. Spray adhesive may be used to hold the blanket in place until it can be secured with the foil tape. If a double layer of blanket is needed, install it with the butt joint on the opposite side.

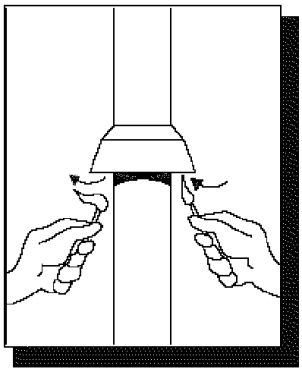
Install ProMesh protective wire mesh over the blanket(s). Slip the ProMesh over the insulated liner and secure one end with a stainless steel band clamp. Pull the ProMesh towards the other end of the liner so that it tightens snugly around the insulation, and then trim off the excess. Secure this end with a stainless steel band clamp.

CONNECTING THE APPLIANCE AND CHECKING DRAFT

When installing gas or oil appliances, use connector pipes specifically designed for connecting such appliances. Attach the connector pipe directly and securely to the **PRO•TECT™** Tee Snout or to a listed wall penetration assembly. Secure all sections of the connector pipe with at least three screws or rivets.

Record the date of installation (on the label provided with the liner) and attach it to the **PRO•TECT™** Tee Snout or wall penetration assembly. The label provides the **PRO•TECT™** brand name, liner manufacturer, the date of installation and states the intended use of the **PRO•TECT™** liner.

When a liner is for use with gas or oil only, the installer should post a notice near the point where the connection is made to the gas vent or roof jack concerning limitation to use with either gas or oil appliances only.



After the installation is complete, make sure the appliances are venting properly. With a gas-burning appliance equipped with a draft hood, turn on the unit, let it warm up, and then hold a match under the draft hood. If the flame is blown outward or extinguished, the appliance is not drafting properly. Fan assisted appliances (without draft hoods) have built-in pressure sensing switches. If chimney draft is not adequate, the appliance shuts off. With oil burning appliances, barometric draft dampers should be installed in the connector pipe. Hold a match in front of the partially opened barometric damper to check draft.

If more than one appliance is connected to a common vent, test each appliance with and without the other in operation. **If draft problems exist, corrections must be made before the appliance is used.**

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Installation Instructions for Pro*Tect™ Chimney Liners By Regional Chimney Supply, LLC.

INSPECTION AND MAINTENANCE

Creosote formation and the need for removal

When wood is burned slowly it produces tar and other organic vapors which combine with expelled moisture to form creosote that accumulates inside a chimney flue. When ignited, creosote produces extremely hot fires. Should a fire occur within a **PRO•TECT™** liner, notify the fire department immediately. Fires are catastrophic events for any chimney. Before using the chimney after a fire, it must be inspected by a qualified person and cleaned or repaired as necessary.

Soot build-up and blockages can occur in all venting systems. Therefore, PRO•TECT™ Lining Systems must be inspected by a Certified Chimney Sweep or qualified professional at least once per year.

The inspection is required to comply with the terms of the warranty. If creosote or debris has accumulated, it must be removed to eliminate the risk of a chimney fire or the formation of carbon monoxide. Excessive condensation and chimney fires can be prevented through proper appliance use and maintenance.

To properly inspect the liner, gain access either from the top or bottom of the chimney.

When examining from the bottom, remove the connector from the thimble or if access is available, inspect through the clean-out cap of the Tee. Use a mirror and flashlight or chimney inspection camera to examine the inside of the liner. When examining from the top, remove the Rain Cap, examine the inside as above and determine if cleaning is necessary.

CLEANING PROCEDURE

Remove the Rain Cap, or if working from the bottom, remove the appliance connector or clean-out cap. Select appropriately sized polypropylene chimney brushes and flexible fiberglass extension rods. Run the brush up and down inside the liner until deposits or debris are removed. Reinstall the Rain Cap, connector pipe or Tee Cap.

A qualified, experienced chimney professional is recommended. Hiring a CSIA or NFI certified professional may provide the highest level of safety.

LEAVE A COPY OF THESE INSTRUCTIONS AND THE PRO•TECT™ WARRANTY CARD WITH THE HOMEOWNER

Regional Chimney Supply LLC.
8045 Snouffer School Road
Gaithersburg MD 20879
301-740-3488 * Fax 301-740-3489

REGIONAL CHIMNEY SUPPLY LLC.

C070510786

T E S T R E C O R D N O. 1

SAMPLES:
Representative samples of the PRO*TECT chimney liner which are to be used to vent wood, wood pellets, non-condensing gas and oil fired heaters were submitted by the manufacturer.

The 12″ diameter liner was used for investigation purposes and was considered representative of 3, 4, 5, 6, 7, 8, 9, 10, 11 and 12 in. diameter liners.

GENERAL:

Test results relate only to the items tested.

Refer to the original data in 1-datasheet-1.

Due to similarity of these devices to previously Listed devices for this manufacturer, only the following tests were considered necessary.

Test Title	Section
Flexibility Test For Flexible Metal Liners	Sec. 29, Ul 1777
Torsion Test	Sec. 30, Ul 1777
Strength Test For Metallic Chimney Liners	Sec. 25, Ul 1777

The test methods and results of the above tests have been reviewed and found to be in accordance with the requirements of the standards indicted in the summary, and are included in the Test Reference section of this Report.

TEST RECORD NO. 1 SUMMARY:

The results of this investigation, including construction review and testing, indicate that the products evaluated comply with the applicable requirements in:

UL1777, Standard For Safety For Chimney Liners, Third edition, revision February 27, 2004.

Therefore, the products are judged eligible to bear UL's Mark as described on the Conclusion Page of this Report.

Responsible Engineer:	Reviewed by:
Alex O. Mishinger	Robert Zimmerman
Project Engineer	Associate Staff Engineer

CONCLUSION

A sample of the product covered by this Report has been found to comply with the requirements covering the category and the product is judged to be eligible for Listing and Follow-Up Service. The manufacturer is authorized to use the UL Mark on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear the UL Mark are considered as Listed by Underwriters Laboratories Inc.

Responsible Engineer:

Alex O. Mishinger

Project Engineer

Reviewed by:

Robert Zimmerman

Associate Staff Engineer