

INSTALLATION INSTRUCTIONS



CHAMBER-TECH 2000™ SMOKE CHAMBER

Many masonry fireplaces are in need of help. Time, heat, moisture and acid attack have taken their toll on the complete system, not to mention poor design during construction. Chimneys can be relined and fireboxes can easily be repaired, but until the development of **Chamber-Tech 2000** the smoke chamber between the firebox and chimney has often been neglected.

Chamber-Tech 2000 is a lightweight insulating mortar designed to insulate, strengthen and streamline fireplace smoke chambers by reshaping. CHAMBER-TECH 2000 must be installed at a minimum of

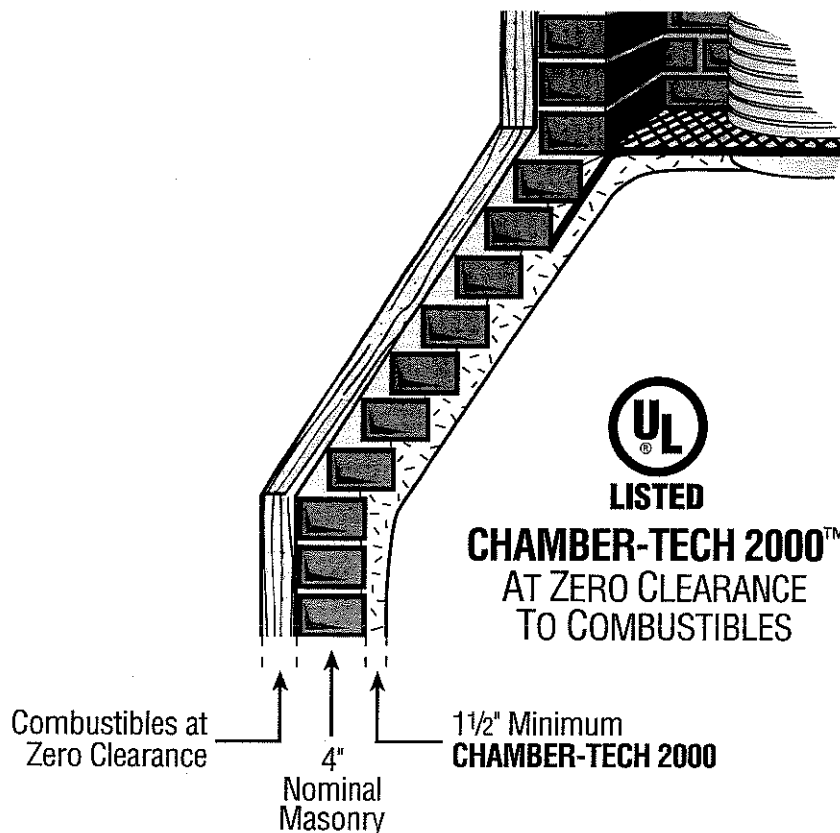
1½" thickness onto 4" nominal thickness solid masonry units as defined in NFPA 211.

NFPA 211, 3.3.78 Solid Masonry Unit

A masonry unit whose net cross-sectional area in every plane parallel to the bearing surface is 75 percent or more of its gross cross-sectional area measured in the same plane.

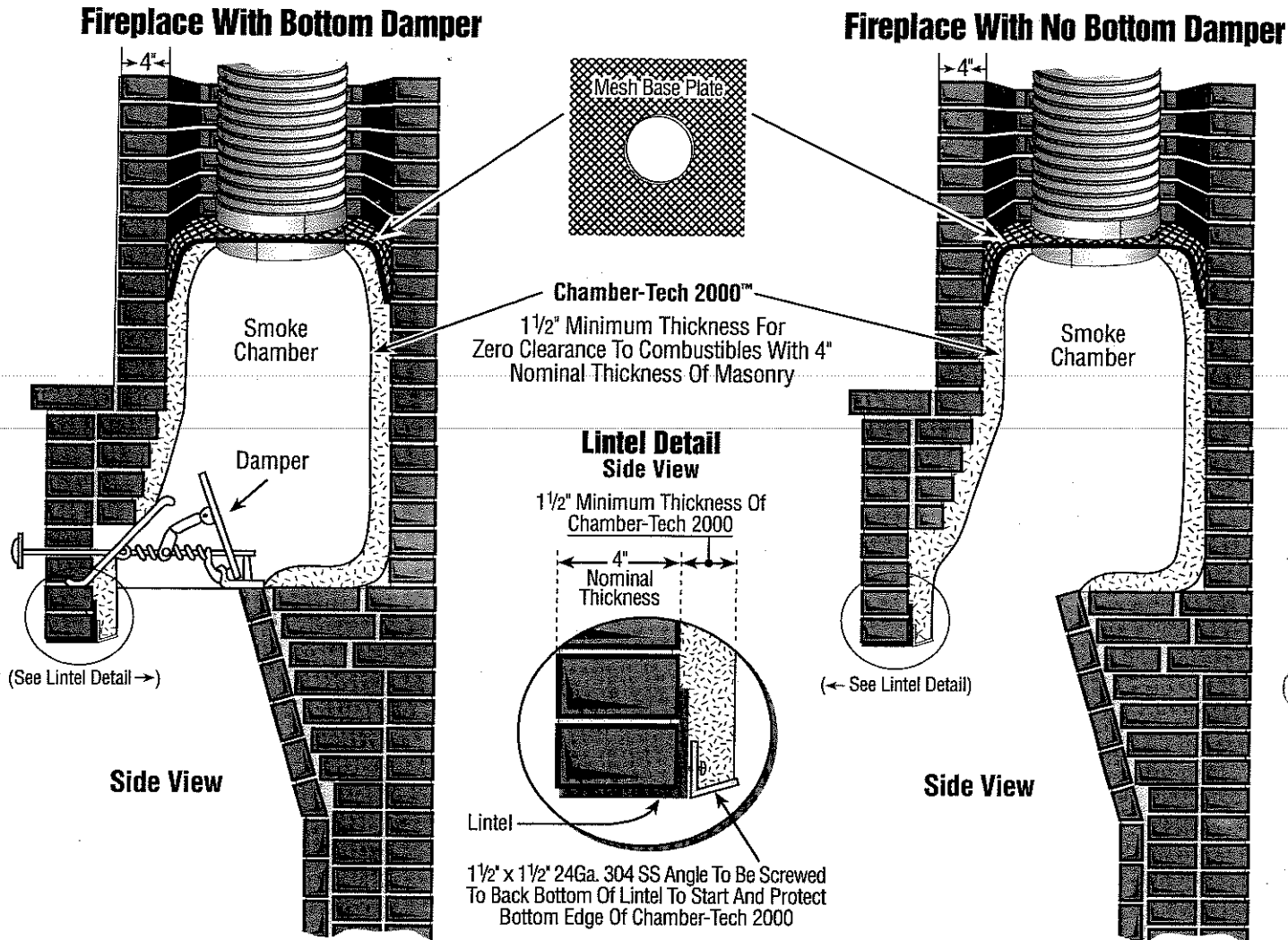
When installed in accordance with these instructions, CHAMBER-TECH 2000 addresses building codes by offering the necessary protection to combustibles having a minimum of zero clearance to the masonry.

CHAMBER-TECH 2000™ UL LISTED AT ZERO CLEARANCE TO COMBUSTIBLES



For **Chamber-Tech 2000** to be a UL Listed product at zero clearance to combustibles, it must be installed on all (4) four walls of the smoke chamber from its lowest points and the bottom edge of the lintel up to the

bottom edge of the chimney liner. (See drawings) A very fluent, stream-line shape can easily be achieved.



Points of particular importance are as follows:

STORAGE

Keep Chamber-Tech 2000 raw material dry, store at room temperature before using.

SAFETY

Use protective gloves, proper eye protection and respiratory protection. (See **MSDS Section VIII** for more information)

Please read the following step by step instructions carefully and thoroughly prior to installation.

THE CHAMBER-TECH 2000 SMOKE CHAMBER INSTALLATION

Step 1

Mixer and tools must be clean.

Step 2

For best results premix entire contents of pail before adding clean water. If portions of a pail are to be mixed, first dry mix entire pail to blend any segregated ingredients.

Step 3

Chamber-Tech 2000 will set slightly faster than regular mortar. To assure enough working time adjust water and refractory temperature so that final wet mix temperature is 50-70°F (10-21°C). Keep mixed material shaded.

Step 4

Do not mix more material than what can be placed within 30 minutes.

Step 5

Add dry Chamber-Tech 2000 material to water while mixing to obtain a slightly drier than mortar-like consistency. Approximately 6.5 quarts water/5 gallon mix. Too much mixing water will create excessive shrinkage cracking. Some cracking is typical and acceptable with this material.

Step 6

If a handful of material tossed one foot in the air and caught breaks up, the material is too dry. If the material sags through the fingers when caught, it is too wet.

Step 7

Install material immediately after mixing with water.

Step 8

Area to be parged should be cleaned thoroughly. All loose and glazed creosote should be removed prior to material applications.

Step 9

Dampen surface prior to application to prevent rapid water absorption. No standing water should be present.

Step 10

Apply in 3/4" to 1 1/2" layers. Start at the top of the smoke chamber and work down. (See "Expansion Tape" section on the back of this pamphlet)

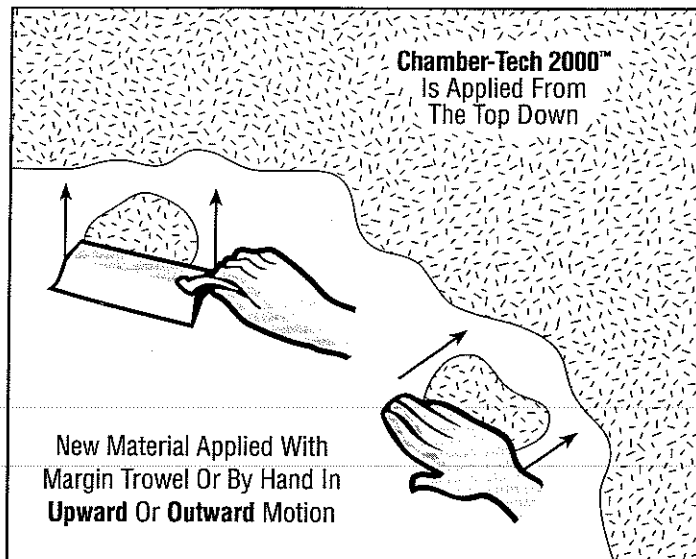
Step 11

The minimum final thickness must be 1 1/2". This thickness offers the proper insulation to protect zero-clearance to combustible constructions and creates a self supporting dome that is no longer dependent on physical bond.

Step 12

For best adhesion, use your hand or margin trowel to slap the material into place. This creates a suction bond. Taper or feather the bottom edge

with a margin trowel from the desired thickness to zero so you will always be overlapping the material. Always blend new material into the existing material in an upward motion.



Step 13

Once material has been applied, a jar or bottle can be used to radius the corners.

The margin trowel can be used to smooth out the flat surfaces. Do not overwork the material or the suction bond can be broken. Repeat Step 10 if more thickness is desired.

Step 14

Once Chamber-Tech 2000 is installed, block off the fireplace opening to eliminate any air flow. This will prevent rapid drying so the product can reach its designed strength. For best results, keep material moist for at least 24 hours during curing.

Step 15

Keep from freezing during 24 hour cure time.

Step 16

Winter Installation: Plug the chimney above the smoke chamber (foam rubber works well). Let room air 60-70°F enter the smoke chamber to keep material from freezing.

Step 17

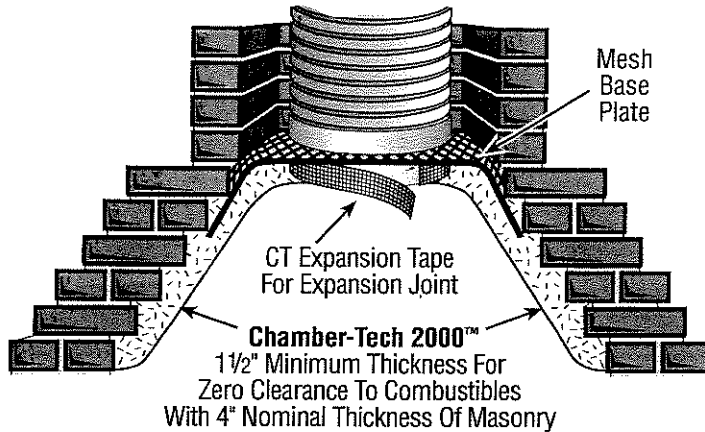
If homeowner has a top sealing damper, the above procedure is not needed. Just keep the top sealing damper closed.

Step 18

Your customer may build a fire following a 24-hour cure time. Advise homeowner to keep fires small for an additional five days. Too high of a temperature can create steam within the material.

CT EXPANSION TAPE

High heat in the smoke chamber and chimney area can cause expansion



of the stainless steel liner or base plate collar. To prevent this expansion pressure from being a concern to the Chamber-Tech 2000, an expansion joint should be applied between the two materials.

Adhere the pressure sensitive adhesive expansion strip (1/8" x 1 1/2" x Length) to the bottom of the liner or base plate collar. Use the following chart to determine proper length.

Liner Diameter	Liner Circumference
8"	25"
9"	29"
10"	32"
11"	35"
12"	38"
13"	41"

HOMEOWNER USE & MAINTENANCE INSTRUCTIONS FOR THE CHAMBER-TECH 2000 SYSTEM

1. PRODUCT APPLICATION:

The Chamber-Tech 2000 System is a professionally installed system designed to repair or restore existing masonry fireplace smoke chambers and can also be installed for new construction. For this product to be a UL Listed product at zero clearance to combustibles, the existing smoke chamber walls must be a minimum of 4" nominal thickness solid masonry units as described in NFPA 211, 3.3.78.

2. INITIAL FIRING OF THE FIREPLACE:

The Chamber-Tech 2000 System can be used 24 hours after installation is complete. Burn small fires for the first week to cure the mortar used and dry off any surface moisture.

3. CREOSOTE, 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 smoke chamber and chimney liner during slow-burn firing periods. As a result, creosote

residue accumulates on these interior surfaces. When ignited, this creosote makes an extremely hot fire.

The smoke chamber and chimney should be inspected at least once every two months during the heating season to determine if a creosote or soot buildup has occurred. If creosote or soot has accumulated, it should be removed to reduce the risk of a chimney fire.

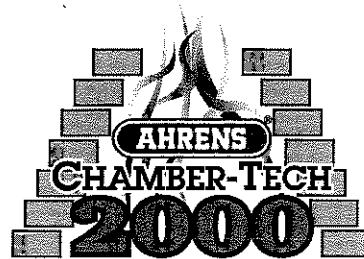
4. RECOMMENDED CLEANING:

Access to the smoke chamber for proper cleaning can be gained through the fireplace opening.

The Chamber-Tech 2000 smoke chamber SHOULD BE cleaned with plastic brushes. It is important that the fireplace system be inspected on a regular basis (every two months is recommended if your fuel is wood). For proper cleaning and inspection, we recommend the services of a professional chimney sweep.

5. LOCAL CODES:

Contact Local Building or Fire Officials about restrictions and installation inspections in your area.



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