



# INSTALLATION INSTRUCTIONS

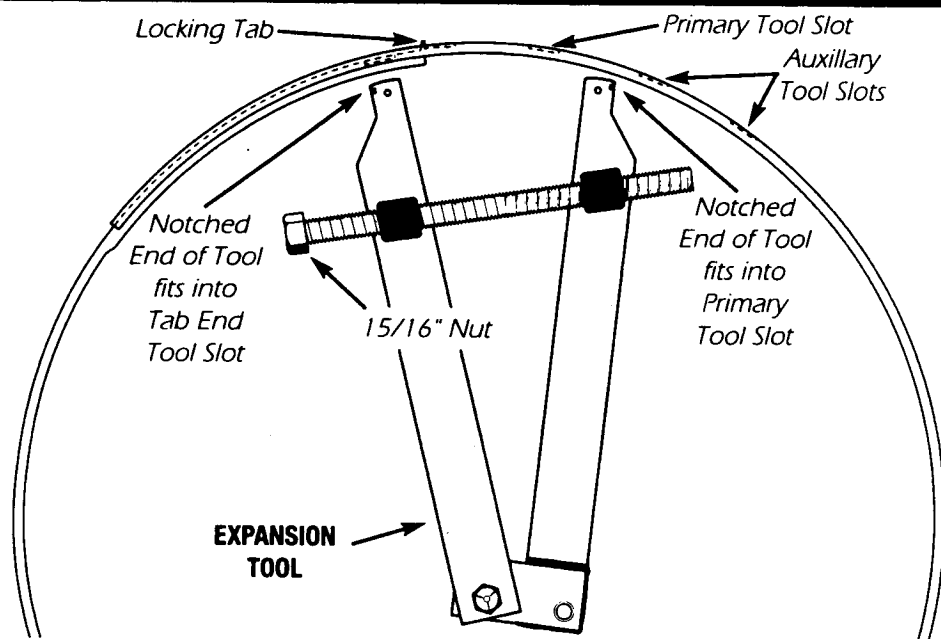
## INTERNAL MANHOLE CHIMNEY SEAL

**SURFACE PREPARATION** – All loose and protruding mortar and brick that would interfere with the seal's performance shall be removed and the appropriate surfaces of the frame, chimney and/or cone/corbel prepared in accordance with the manufacturer's instructions. **(SEE REVERSE SIDE)**

**INSTALLATION** – See the "Installation Variations" and "Cross Section and Usage" sheets for various installation options. Read complete instructions before starting installation.

1. Install the rubber sleeve with the printing at the top and the top edge lined up with the previously applied alignment marks.
2. Wipe off the outside of one stainless steel band and apply a moderate coating of band lubricant to the slot area and a light to moderate coating to the remainder of the band's outside surface. Either the top band or the smaller band, if two different sized bands are being used, is to be installed first.
3. Install the band in the appropriate band recess with the slotted end against the rubber surface. Position the expansion tool as shown below and expand the band until the locking tab pops into the tightest slot possible. Loosen the tool slowly until the tab is fully engaged in the slot, then continue to loosen and remove the tool. When installing a larger diameter band, use one of the auxiliary tool slots to start the expansion process. Move one leg of the tool to the primary tool slot if necessary to complete expansion.
4. Lubricate the second band and install it in the other band recess, attach the tool and expand as before, keeping the bands parallel. The bands can be put closer together if only a limited height is available or if excessive sleeve expansion is desired.
5. If an extension is being used, position it such that the top portion of the extension fits snugly into the lower band recess of the chimney seal sleeve, prior to installing the band. Lubricate and install the band inside the recess formed by the top portion of the extension and expand as before, thereby compressing both the extension and the sleeve against the manhole surface.
6. If multiple extensions are required, repeat step 5.
7. Position the extension's bottom sealing surface on the vertical surface of the cone. Lubricate and install the third band in the lower band recess of the extension and expand as before.
8. Check the top and bottom edges of the installed sleeve to insure that they have been properly compressed against the surfaces.

**NOTE: ALWAYS WEAR GLOVES WHEN HANDLING BANDS**



**CRETEX SPECIALTY PRODUCTS**

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## **SURFACE PREPARATION INSTRUCTIONS**

1. Remove manhole cover and allow any accumulated fumes to dissipate, use blower to ventilate.
2. Wire brush the lower 3" of the manhole frame to remove any loose rust or scale and repair any imperfections by either grinding smooth or filling with mortar. A reasonably smooth, clean surface is required.
3. Realignment of the casting is necessary if it is offset more than approximately 3" from the chimney.
4. As a guide for proper seal alignment, make a visible line or series of alignment marks around the frame 2-3/4" up from the bottom edge of the frame for normal positioning. The sleeve can be installed higher in the frame if necessary, in which case the marks should be raised accordingly.
5. Determine what sleeve width is going to be used and, if extensions are required, their size and quantity. Remove all loose and protruding mortar and brick that would interfere with the seals performance and clean the appropriate areas of the manhole frame, chimney and/or cone/corbel by wire brushing.
6. All sealing surfaces must be reasonably smooth and circular, clean and free of any loose material or excessive voids. If such a surface does not exist for the bottom of the sleeve and extension to seal against, one must be prepared. Repair mortar, described below, must be used to prepare this 3"-4" wide, uniformly vertical sealing surface.
7. If the bottom of the sleeve or extension is to seal against the top of an eccentric (straight side) cone and an adequately high vertical surface does not exist, contact your local Cretex representative. He will provide you with detailed information on the building of a form and instructions on how it is used to build a vertical surface on a sloping cone.
8. If any caulk is used to fill irregularities in the bottom sealing surface, it must be a butyl rubber caulk conforming to AASHTO M-198, Type B. When used, a single bead of the material is applied to the center portion of the lower sealing area of either the sleeve or extension. No other type of caulking material is to be used.

REPAIR MORTAR-Repair mortar shall be a one-component, 10-15 minute set, high strength, non-shrink, polymer modified patching mortar, which has been formulated for vertical or overhead use.

**(SEE REVERSE SIDE FOR INSTALLATION INSTRUCTIONS)**