

NPC FlexRib[®] Frame-Chimney Seal

Recommended Installation Procedure

Preparing the Manhole Prior to Installation:

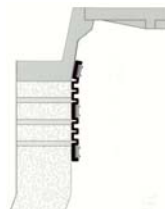
1. Inspect the area to be sealed for dirt, debris, and surface defects.
2. Remove rust, dirt and debris from the inside of the frame casting and manhole cone where the seal will be installed.
3. Repair any defects in the cone wall where the seal will be installed with a non-shrink repair mortar. It is important that the surface under the expansion bands be reasonably smooth, circular and free of defects that would prevent the rubber sleeve from achieving a watertight seal.

FlexRib Seal Installation:

1. Place the rubber seal in the manhole following these steps:
 - Pinch seal together
 - Place seal in manhole frame
 - Push out sides of seal



2. Position the rubber seal in the frame so that the top expansion band track is located completely inside the manhole frame as shown at right.



3. Install the top expansion band by collapsing it into itself and position it in the expansion band track of the rubber seal as shown at right.



4. Place the installation tool into the expansion band with the tips of the tool between the end of the slotted portion of the band and engaged in one of five jack tip receivers.



Hold the installation tool firmly in place and expand the band until the recommended value listed below has been reached.

Manual Installation Tool - 28 foot pounds

Hydraulic Installation Tool - 5,000 psi (max.)

Note: Index installation tool as needed to next tip receiver to cover full range of travel of band. For final tightening, place tool in closest tip receiver for best performance.

5. Loosen the installation tool and remove it from the expansion band.
6. Make sure the bottom expansion band track of the rubber seal is completely inside the manhole cone and repeat steps 3 and 4 for the bottom expansion band.
7. An optional expansion band can be installed in the center of the rubber seal to prevent the seal from ballooning inward due to external ground water pressure. The center band typically is not required.

See reverse side for instructions on installing multiple FlexRib Seals.

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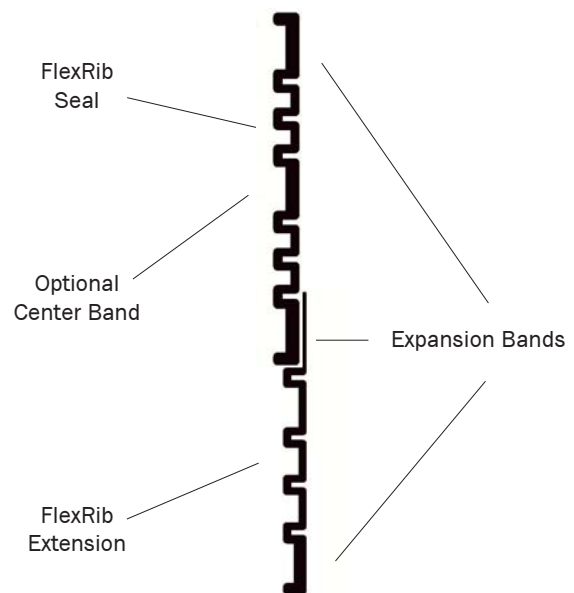
Recommended Installation Procedure

Installing Multiple FlexRib Seals

If one FlexRib Seal is not sufficient to cover the area between the manhole frame and the manhole cone, a FlexRib Extension can be added as shown.

Depending on the manhole configuration, the FlexRib extension can be used at the top or bottom of the sealing area. However, the FlexRib Seal should be used when there is a diameter change from frame to grade adjustment area.

1. Install the FlexRib Extension by following steps 1 through 5.
2. Position the bottom of this seal so that it is over a reasonably flush, smooth surface.
3. Place the FlexRib Seal over the bottom flap of the FlexRib Extension as shown at right. Install the expansion band as instructed in step 4.
4. Complete installation by following step 6.



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