

The purpose of a steel internal expanding band is to prevent backfill soil from coming through an existing drainage pipe joint. The internal band fills any gap that may be in the joint. Internal steel bands have been used on reinforced concrete pipes, corrugated metal pipes, and thermoplastic pipes.

There are two types of internal expanding bands. One type uses a corrugated band with internal angles; the second type uses flat band sheets that are attached to the inside of the pipe with self-tapping screws. Internal flat gaskets are optional with both types of internal expanding bands. If there is heavy debris anticipated in the culvert, flat sheets connected with self-tapping screws may be the preferred method for corrugated metal pipe.

The installation of the internal band with flat sheets should be relatively easy. Typically, 12" wide or 24" wide (nominal) flat steel sheets are used for the band. The band sheet material can be made from aluminized steel or galvanized steel sheets.

The band sheets are attached from the inside of the pipe. The sheet lengths should overlap at least one inch circumferentially. The sheets are attached to the pipe wall with $\frac{1}{4}$ " or $\frac{3}{8}$ " self-tapping screws, made from galvanized or stainless steel. The screws need to be long enough to penetrate the pipe wall. Screw lengths of 1.5", 1.75", or 2" are acceptable if there is a solid connection of the steel band to the pipe. The self-tapping screws should be installed eight inches on center on both sides of the flat band.



Above: Flat steel band with self-tapping screws



Above: Corrugated Steel Internal Band with Angles

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