

## Garlock Expansion Joint Control Unit

Control units are recommended on most applications to prevent damage due to excessive pipe movements. They are NOT designed to replace pipeline anchoring. Control units consists of two or more tie rods connected between pipe flanges.

### DESIGN

- » Triangular end plates (gussets) have two holes for bolting securely to flange and one hole to accommodate the connecting tie rod. Gusset plates are cut from ASTM A36 Carbon Steel plate.
- » Tie rods are cut from ASTM A193 Grade B7 threaded rod. Each rod incorporates double nuts on each end to keep the expansion joint from over-elongating due to pressure thrust forces.
- » Nuts are ASTM A194 Grade 2H heavy hex nuts.
- » Spherical washers are incorporated to accommodate moderate piping alignments but also assists with angular, torsional and lateral movements.

### ADDITIONAL OPTIONS

- » When excessive axial compression is a concern, compression nuts can be incorporated to restrict movements as needed and to protect the expansion joint from damage.
- » Gusset plates can be supplied galvanized according to ASTM A123.
- » Control units can be fabricated from 304 or 316 Stainless Steel.
- » Control units can be supplied with uncoated steel on request. (previous standard design)

### NEW FEATURES

- » Gusset plates will now be coated black with a corrosion resistant paint. This is the same coating that is applied to Garlock retaining rings.
- » Tie rods and nuts will be clear zinc plated according to ASTM F1941/F1941M, "Standard Specification for Electrodeposited Coatings on Mechanical Fasteners, Inch and Metric".
- » Zinc plating offers improved corrosion resistance resulting in easier adjustments of the control units over time.



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