

Expansion Joint Accessories

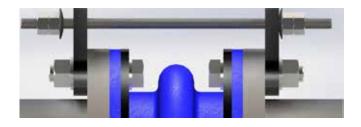
METAL RETAINING RINGS

- » Retaining rings are required for all expansion joint installations. The metal surface of the ring equally distributes the bolting pressure, preventing flange damage during bolt tightening.
- » Rings should be installed against the expansion joint's external
- » Standard material of construction is mild steel with a corrosionresistance coating; galvanized and stainless steel options available upon request.

CONTROL UNITS

- » Control units are recommended for most applications to prevent damage to the expansion joint from excessive pipe movement.
- » A control unit assembly consists of two or more tie rods connected between pipe flanges.
- Triangular end plates (gussets) come complete with two holes for secure bolting to the flange and one hole to accommodate the connecting tie rod.
- » Spherical washers are incorporated to accommodate moderate piping misalignment and to assist with angular, torsional, and
- » Each rod incorporates double nuts on each end to prevent overelongation of the expansion joint.
- When excessive axial compression is a concern, compression nuts can be incorporated to prevent damage as a result of over-compression.
- » Please note, control units are NOT intended as a replacement for adequate pipeline anchoring.

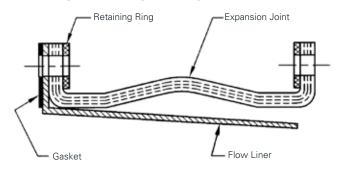
TYPICAL CONTROL UNIT FOR RUBBER **EXPANSION JOINT**



METAL FLOW LINERS

- » A metallic flow liner can extend service life by protecting the expansion joint from abrasive materials or solids, particularly in high-velocity applications.
- » Flanged at one end, flow liners are installed with the flange at the head of the media flow. They are designed with a 5 degree taper to allow for lateral movement.
- » Liner flange thickness:10 gauge Liner body thickness: 12 gauge
- Recommended for Flow Rates: 8 fps
- » Available in 304/316 stainless steel; also, titanium, Hastelloy C, and other materials upon request
- » Special configurations available for reducing and multi-arch designs. Please contact Garlock for additional information.

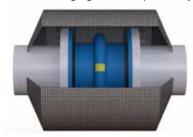
METAL FLOW LINER INSTALLATION



FIRE RESISTANT COVERS

Recommended on applications where flammable liquids are being used or in fire water systems.

- » Constructed from several layers of fiberglass fabric with a surface layer of silver-covered, high-temperature resistant silicone aluminum-glass fabric.
- Tested to ISO 15540 at 1472°F (800°C) for 30 minutes for fire resistance
- Provided as a split design to allow for easy installation and inspection.
- The cover is oil-resistant, providing added protection against weather and aging of the expansion joint.



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