Expansion Joints

Series EP Externally Pressurized Expansion Joints – 150# & 300# Styles

Series EP Externally Pressurized Expansion Joints are used in straight runs of pipe to accommodate large amounts of thermal expansion. Typical applications would include steam systems, where extreme temperature differentials would cause thermal growth of the piping system. Series EP expansion joints are a packless, maintenance-free joint that incorporates an all stainless steel flexible bellows, a steel enclosure, with external and internal guide ring/sleeve to maintain alignment of the inner pipe. The sleeve isolates the bellows from media, eliminating flow turbulence. External pressure is applied to the bellows via a gap between the internal flange and housing. Movement limitation is accomplished by means of an internal flange, and also guides the bellows along the longitudinal centerline. The external pressure keeps the bellows stable.

Externally pressurized expansion joints have significant advantages over pipe loops because they are able to absorb very large axial movements and take up far less space than pipe loops. Typically these applications are indoors, in utility tunnels, or buried where extra space is not available. Series EP joints also are frequently specified instead of slip joints that are also engineered for large movements because of several factors. Slip joints are a packed product that required periodic inspection and maintenance. Access vaults are always required for packed joints. Series EP externally pressurized joints are of a packless, all-welded construction that does not require inspection and can be installed in remote locations or even directly buried. Unisource Series EP externally pressurized expansion joints are a long-life quality piping product.

Select either 150 PSIG or 300 PSIG bellows construction. Single bellows styles are available for 4” or 8” of axial travel. Dual styles can accommodate either 8” or 16” of travel. Flanges or weld end are additional options. Meets MIL-E-17813F Type II Class 4. Standard bellows are constructed of single ply or multi-ply Type 304 stainless steel and are suitable for most chloride free applications such as steam, condensate, oil, and chilled water. Where chlorides may be present, Inconel 600 bellows should be specified. Special bellows material would include 316SS, 321SS, Inc 600, and Inc 625. Other bellows alloys are available upon request. Pipe and end connections are plain steel.

Series EP Externally Pressurized Expansion Joint - Construction

Available Styles and Options:
- Single or dual bellows
- 150# or 300# pressure ratings (with appropriate Class 150 or 300 drilled flanges)
- Standard T-304 SS bellows or specify 316SS, 321SS, Inc 600, or Inc 625.
- Anchor base is standard on dual units and optional on single units.
- Ends can be flange x flange, weld x weld, or flange x weld.