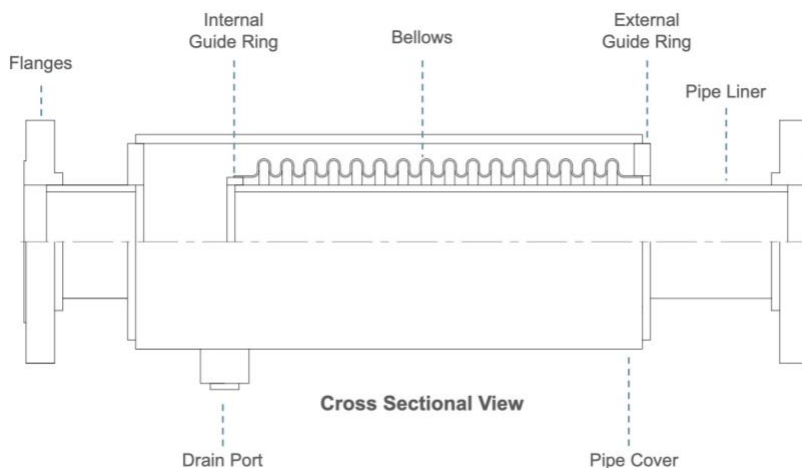


PENFLEX

EXTERNALLY PRESSURIZED EXPANSION JOINTS

The unique design of externally pressurized expansion joints allows for large axial movements which may be desired when space limitations are a concern.

As media flows through the expansion joint, it comes into contact with the outside, rather than the inside, of the bellows. This external pressurization removes pressure instability as a design limitation, allowing for a longer construction and bigger stroke.



In a more traditional design, increasing the number of corrugations would be the only way to achieve this same outcome, though this would also increase the possibility of in-plane or column squirm.

At a glance

Sizes range from 2-1/2" to 120" ID using single, two-ply or multi-ply construction.

Materials of construction include 300 Series Stainless Steels, Inconel® 600, 625 and 718, Monel® 400, Hastelloy® C22, C276 and X, Duplex 2205. Others available upon request.

The full complement of end fittings and accessories is available.

On-call engineering support for bellows and expansion joint products.

Designed to meet various codes, including B31.3, B31.1 and EJMA.

ASME Sec. IX certified welders and on-site Certified Welding Instructor and NDE ensures highest quality fabrication.

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COMMON APPLICATIONS

Externally pressurized expansion joints are often used in lieu of multiple expansion joints or a pipe loop to accommodate thermal movements. Heating and cooling systems as well as applications involving water, steam, and steam condensate commonly call for these kinds of components.

Due to the encasing of the bellows within a rigid pipe, externally pressurized expansion joints can be buried under ground making them the ideal solution in certain scenarios.

DESIGN NOTES

In applications where corrosion is a concern, wetted plies may be a consideration to manage costs. A drain in the shell is a common request, and anchors are another accessory we can incorporate.

As the bellows floats at one end, externally pressurized expansion joints are used in California to meet certain seismic requirements.

These components can be installed vertically or horizontally, though there is a preferred direction corresponding to media flow. In addition to engineering and design support, Penflex offers customers resources to support proper installation for longer life in service.