

HOSE MASTER

Boiler Penetration Seals

Controlling Pressure Vessel Stress

Few pieces of equipment are as widespread in industry as pressure vessels. Especially prevalent are those seen in power generation: steam boilers, HRSGs, condensers, heat exchangers, water pre-heaters, etc. All of these pressure vessel units play an integral part across many industries, and all are subject to the stresses from shrinking and expanding due to thermal cycling. Between startup, shutdown and temperature fluctuation during regular use, these large units change in size and impart huge thermal stresses on the surrounding piping system as a result. The best way to accommodate these stresses and maximize the life of the unit and the piping is to utilize expansion joints in the form of penetration seals.

Metal bellows penetration seals offer long term reliability and flexibility in the most demanding of applications. Effective at even the highest temperatures, metal bellows have a small footprint and can operate in tight spaces without impacting surrounding equipment or sacrificing their mobility performance axially, laterally, or angularly. Today, armed with ASME VIII, Hose Master has both the means and knowhow to provide air-tight solutions for the toughest boiler penetration seal applications in the industry.

FEATURES:

- Complete bellows size range from 2” to 120” inner diameter
- Both single ply and multiple ply designs available
- Many grades of stainless steel including 316 to choose from, as well as exotic alloys such as Hastelloy, C276, Inconel 600, & 625 and more
- Expansion joint designs available in accordance with EJMA 10 & ASME VIII
- Every expansion joint design quoted by Hose Master comes with a custom-engineered design pack that details product dimensions to ensure proper application

BENEFITS:

- **Leakproof Seal.** Provides an airtight seal from piping to pressure vessel that accommodates movement
- **Multi-Directional Protection.** Penetration seals provide relief for lateral, axial and angular movements from thermal expansion
- **Long Service Life.** Increases service life of pressure vessel and surrounding piping by controlling stresses
- **Safety.** All metal construction prevents catastrophic failure (pinhole leak vs bursting)

Hose Master is a Service and Engineering Company

As the leading North American manufacturer of metal hose and expansion joints, Hose Master has grown through product innovation to define the industry standard. We do this by designing and building our own equipment to meet the most stringent requirements in an ever more demanding marketplace.

Our engineering expertise stems from a combination of long-standing industry field experience and 10% of our total workforce being devoted to research and development. But our primary driver to change and improve our organization has always been service to our customers.

By expanding our national presence to include three additional manufacturing satellites to support our extensive outside sales force, and increasing our fabricating footprint by employing and training our 100+ ASME IX welders, we are able to provide premium fabricating and sales service across the country.

Selecting the proper hose and assembly components is crucial. You must ensure each assembly is designed specifically for your intended purpose and operating conditions. Please consult our website or Inside Sales for assistance.