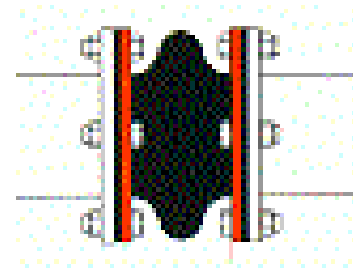


Flexible Gasket or Expansion Joint?

By Nikki White, UIP International, Inc.

Rubber expansion joints are intricately designed flexible connectors that can be considered flexible gaskets. They are best used in problematic piping systems where gaskets are being continuously crushed, due to stress build up caused by excessive pipe movement. Typically, rubber expansion joints are used to absorb vibration, noise, shock, and axial/lateral movement within a piping system. They are made of vulcanized rubber, integrated with fabric reinforcement and either floating or duck and rubber flanges. The reinforcement's purpose is to strengthen the bellows and allow increased pressures, often including an impregnated metal ring or wire to allow for full vacuum services. The use of control rods limits axial extension and are designed to absorb thrust forces. The various designs allow for connections to almost any type of flanges including flat faced, raised face and, in some cases, lap joint stub ends and butterfly valves.



Precision molded spherical expansion joints minimize water hammer or hydraulic shock in any system. The streamlined, flowing arch reduces turbulence and allows for a smooth, quiet flow. The floating flange allows for misalignment in the system and the beaded end, once compressed, serves as the sealing gasket in-between both flanges.



Wide arch designed expansion joints provide double arch movements utilizing a single low-profile design. Manufactured utilizing tire industry technology, this style has been designed to provide greater strength and pressure capabilities. The construction combines woven fabrics and reinforced wire to create a product with superior performance characteristics. Hand-wrapped expansion joints allow for design variations including offsets, non-standard face-to-face dimensions, multi-arch configurations and special flanges or drill patterns. The duck and rubber flanges are sandwiched between support rings (retaining rings) and the mating flange (typically a flat faced flange), acting as the rubber gasket to ensure a gas and fluid-tight seal.



With the combined benefits of shock absorbency, movement control and gasket sealing capabilities, rubber expansion joints can be an all-in-one solution for your system needs. Stress reducing, vibration isolation and misalignment compensation characteristics, in addition to gasket sealing capabilities, make these products an excellent solution to all system applications including chillers, cooling towers, compressors, blowers, fans and more.

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