



metal bellows sitcoflex

metal expansion joints

description

A sheet of metal rolled into a cylinder and seam welded using the GTAW (TIG) welding process. convolutions (corrugations) are formed into the wall of the element. The element may be single ply or multi-ply (i.e. with two or more cylinders inside each more).

applications

The element absorbs axial (longitudinal) and lateral (offset) movements through the change in shape of the convolutions as the element moves. Generally used in industrial and exhaust piping Installations to absorb pipe movements and vibrations.

materials of construction

The selection of the material is generally dependent upon the temperature and corrosion resistance requirements of the application. Typical materials include:

- Stainless steel grades 304, 316, 321
- High Nickel Alloys eg. Incoloy, Inconel, Monel 253MA, Hastelloy C (registered trade names), nickel, carbon steel

methods of forming convolutions

- Mechanical - pneumatically applied internal forming tools
- Rolling - repeated rolling of cylinder over forming wheels
- Hydraulic - controlled internal water Pressure

Sitcoflex can form bellows elements by all three Methods.

bore size range

25 – 3800mm

The bore of the standard element is sized to slip over the outside of matching standard pipework to enhance flow characteristics.



pressure capability

The pressure capability of the element is Determined by the thickness of the material and the controls on its movement.

Movement capability

The amount of movement the element is capable of is dependent upon the number, height, shape and pitch of the convolutions in the element.

The type of movement is determined by the control hardware attached to the element and surrounding pipework eg. flanges, tie rods, hinge plates, anchors, etc.