



# sitcoflex

## metal expansion joints

### construction

A metal bellows expansion joint is a fabricated item to be fitted into a pipeline to absorb movements in and forces exerted on the pipeline. The joint consists of a metal bellows element with flanges or pipe weld ends fitted to facilitate the bolting or welding of the joint into a pipeline. Control devices, commonly called hardware in the industry, can be attached to control the direction and amounts of movement that the expansion joint achieves.

### how a joint works

The bellows element is a metal cylinder into which circumferential convolutions (corrugations) are formed to create a flexible seal. These convolutions flex when the joint is subjected to forces within the piping system, generally thermal. The number of convolutions in the bellows depends upon the amount of movement the bellows must accommodate or the force that must be used to accomplish this deflection. Pressure thrust forces are required to be absorbed by other device attached to the bellows or adjoining pipework including anchors, hinges, gimbals rings, or tie rods.

### pipework system design

sitcoflex strongly recommends that you seek the advice of a qualified pipework engineer on your pipework system and expansion joint selection.

### types of movement

A metal bellows expansion joint can be fabricated to accommodate axial, lateral or angular movements. Angular movement is the least severe on the bellows element of the three lateral the most severe.

Control devices would generally be required to be fitted to the joint where these movements occur concurrently

For further details contact SITCOFLEX.

