

Durable
JOINING SOLUTIONS
for RIGID
APPLICATIONS



R E L I A B I L I T Y | D U R A B I L I T Y | F L E X I B I L I T Y



FLEXIBEL

www.flexibellows.com

Industries Served

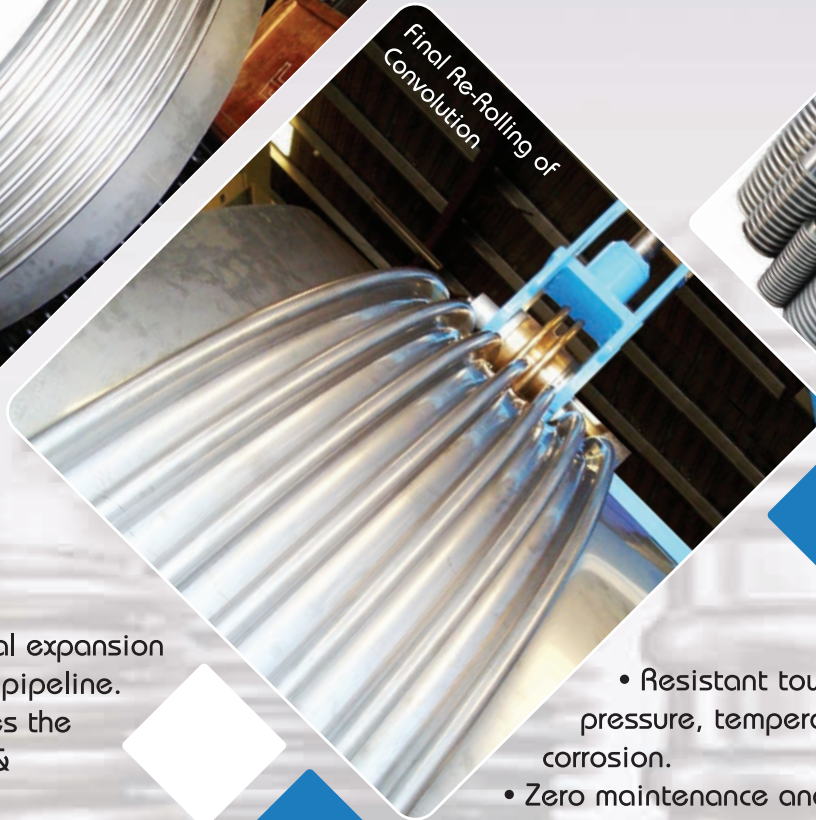
Marine
Oil & Gas Platforms
Power Plants
Steel Plants
Nuclear Plants
Cement Plants
Construction
Mining

Applications

Marine Diesel Engines
Boilers & Incinerators
Gas & Exhaust Systems
Generator Sets
Marine Propulsion
Auxiliary Piping Systems

Basic types of Expansion Joints (Bellows)

Single Bellows
Universal Expansion Joints
Tied Single Bellows
Tied Universal Expansion Joints
Square Bellows
Rectangular Bellows



Salient Features

- Absorbs thermal expansion & vibrations in the pipeline.
- Significantly improves the service life of pipelines & connected equipments.
- Best solution where flexible components for the pipeline is required, as it allows movements and prevent damages in the pipelines.
- Economically advantageous as components absorb several levels of movements than their substitutes.

- Resistant towards pressure, temperature & corrosion.
- Zero maintenance and heat & friction losses.
- Perfect balance of strength & flexibility.
- High motion capabilities for offset, misalignment & vibratory conditions.



Flexibel Bellows are manufactured in accordance with set standards and undergo rigid process to ensure its sustainability. They are produced from a multi-wall laminated tube consisting of many plies of thin gauge stainless steel. Convolutions are then formed on this multi-wall tube by means of exerting internal pressure.

Flexibel Bellows are produced tough to withstand very high pressures. This is achieved by the combined strength of the multiple plies (layers) and at the same time retaining the flexibility and movement capacity of each individual ply.

Bellows Movements and Spring Rates

There are four basic movements that can be applied to a bellow. These are Axial, Lateral, Angular and Torsional.

Bellows behave like springs in a piping system. When they are compressed, the bellows resist the movement in the same manner as a spring would.

The spring rate of a bellow is entirely dependant on bellows geometry and material properties. AMG-Flexibel is able to vary bellows geometry such as convolution height, pitch, thickness and number of plies to provide a bellow to satisfy any customer's needs.

Technical Aspects

- Available in all different types of stainless Steel Grades
- Sizes ranging from DN 100 to DN 3000
- Tough to withstand temperature range from -165 deg C to 680 deg C
- Can be designed to withstand pressure upto 40 bar.
- Products are inspected and evaluated extensively through each stage of production, thereby ensuring quality products and solutions with a complete guarantee
- Type approval from Bureau Veritas



Automatic Longitudinal
Seam Welding



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