



Corrugated bellows

Corrugated bellows combine high pressure resistance with low displacement force and optimized all-round expansion capacity. The main areas of application are construction of fittings, measurement and control engineering, aviation and space engineering as well as machine and system construction.

Corrugated bellows are available as one-wall or multiple-wall designs, and in different sizes and materials. They are available with nominal widths from DN 3 and for nominal pressures up to 500 bar. Depending on their use, the bellows are also welded together with customer-specific connecting pieces.



Membrane bellows

Corrugated membrane bellows provide a very high degree of elasticity, low spring rates, low hysteresis and high bend fatigue strength or service life. They are especially suitable for components under low pressure or a vacuum. The expansion capacity of up to 80% of its construction length ensures maximum movement capacity.

Areas of application: machine construction, vacuum technology, aviation and space engineering, medical technology, construction of special fittings, sealing element construction, as floating ring seals in pumps and compressors and as volume compensation bodies in oil-cooled high voltage insulators.



Application in the construction of fittings

Here one finds the highest demands for pressure stability, impermeability and axial movement absorption under high load tolerances. Optimised valve construction series with low construction heights are available in 1.4541, 1.4571, 1.4404 and 1.4306 stainless steel. And special materials such as hastelloy, inconel or incoloy are available at the warehouse.

TÜV certified welders and welding procedures (laser, plasma, TIG), individual qualifications in high security engineering and worldwide approval by the most important independent test institutes ensure that even the most strict acceptance conditions can be fulfilled.





Applications for bellow couplers

Metal bellows can be used as permanent flexible coupling elements for applications in machine tool manufacture and high-precision engineering. They enable backlash-free, direct force transmission of the motor starting torque and operating torque or compensate axial, lateral and angular displacement between axles and connecting shafts.



Innovative applications

In the new Piezo injection technology, a multi-layered miniature bellow which has an internal diameter of just 3 mm serves as an extremely precise sealing element. This delicate component part is flexible enough to facilitate the extremely small, fast movements of the Piezo element and simultaneously ensure that the element remains absolutely dry, even at pressures of over 200 bar and for the entire life of the vehicle.

Gas-tight metal bellows that function as pressure tanks in hybrid powered vehicles provide highly reliable breaking performance even when the combustion engine has been turned off. Membrane bellows in implants, are used in modern medical technology to provide the accurate dosage of medicines.



Witzenmann GmbH

Östliche Karl-Friedrich-Str. 134
75175 Pforzheim
Phone: +49 - (0)7231 581 - 0
Fax: +49 - (0)7231 581 - 8 20
wi@witzenmann.com
www.witzenmann.com