



PTFE Bellows



PTFE bellows are used as balancing elements between engineering parts. They are machined parts. Due to the different geometries of the folds highly flexible or pressure-resistant versions can be designed and manufactured.

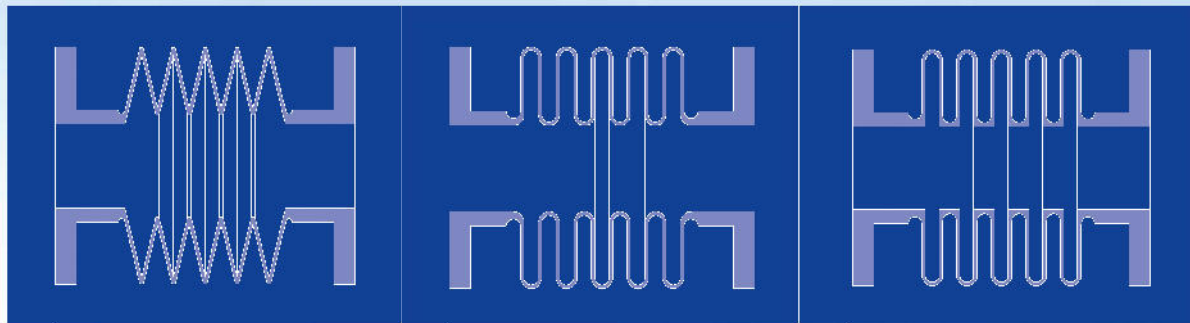
PTFE's outstanding material properties allow bellows to be used increasingly in medical, food and general industrial applications.

Benefits

- Nearly universal chemical resistance
- FDA-conformable materials for food and pharmaceutical products
- Very good suitability for sterilization
- Anti-adhesive
- Wide temperature range from -60°C to $+200^{\circ}\text{C}$
- Cost effective series production from in-house production of semi-finished goods to the final product
- High reverse bending strength
- Good dimensional stability
- Low tooling costs
- Freedom of design

Applications

Versions



Pointed, Non-cut Folds
for maximum expansion and
low pressures up to 3 bar.

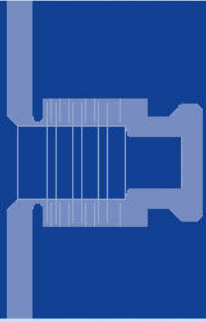
Round, Machined Folds
for improved cleaning and
maximum reverse bending
strength. Low to medium
pressures up to 6 bar.

Solid, Machined Folds
for high pressures above
6 bar. Optimal with
rectangular support on the
rod or in the cylinder.

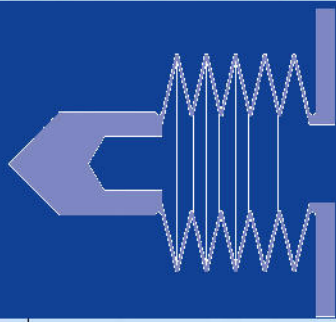
Fields of Application

- As compensation for expansion in pipe systems
- For shielding sterile areas
- For filling systems
- With aseptic valves
- With solenoid valves
- With metering devices
- With pumps and valves

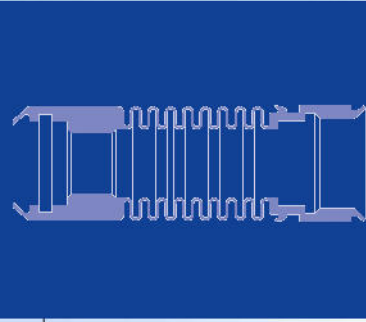
Application Examples



Bellows for a solenoid valve in medical technology.
High flexibility and frequency.
Physiologically harmless.
Resistant to aggressive cleaning agents.

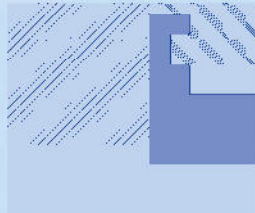


Bellows for filling valves
Hermetical separation of the medium from the actuation mechanism. The tip is the sealing cone of the valve.

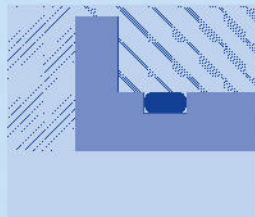


Multi-functional bellows
Separation of two areas with moving parts. Integration of sealing and guiding elements. Connections can be performed according to customer specifications.

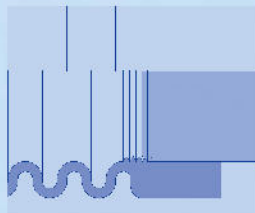
Various Connecting Configurations



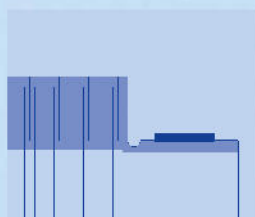
Positive flange compression fit.



Clamping flange with additional O-ring seal.



Locating connection with thread.



Clamping by means of a sleeve.

Materials

- Typically, unfilled PTFE with FDA-conformance
- Modified PTFE with higher reverse bending strength
- Special versions with electrical conductivity
- With applications as metering, shut-off and sealing element the clamping flange, the sealing cone or the slide ring may be manufactured from a PTFE compound (e.g. glass fibers or ceramics)
- For information on materials with good reverse bending strength and low permeation, please see pages 26 – 27
- For your inquiry, please complete the technical questionnaire at the end of the catalog