

PRODUCT OVERVIEW FOR HYDROGEN APPLICATIONS



Expansion joints

Expansion joints are used for compensating thermal expansion and misalignments as well as for the absorption of pipe movements and thus protect the piping network against damage. This is of particular significance for hydrogen applications. One differentiates between axial and lateral expansion joints depending on the application and requirements.

- Standard dimensions from DN 15 to DN 3000
- Large number of versions for optimally-fitting solutions
- Pressure and low temperature applications



Corrugated bellows

Corrugated bellows combine high pressure resistance at low adjusting forces and optimised expansion absorption on all sides. The main fields of application are along the entire hydrogen chain from production to distribution and utilization. They are available in single and composite wall versions in a wide range of dimensions for pressures up to 500 bar.

- Media, corrosion and temperature resistance
- Pressure-tight with high flexibility
- Long service life



Fittings and valve bellows

Fittings and valve bellows fulfil the strictest requirements concerning pressure resistance, tightness, and axial absorption of movements. The metal bellows are used as moving gaskets subject to pressure and compensate relative movements. With the right materials, they can withstand temperatures from -270 °C to 550 °C and are therefore used in applications with liquid as well as gaseous hydrogen.

- Generally as multi-ply design
- Absolute (leak) tightness, high pressure and temperature resistance
- Pressure resistance up to 600 bar



Corrugated hoses

Corrugated hoses for hydrogen applications are available for diameters ranging from DN 6 to DN 300, up to PN 250 (depending on nominal diameter) and for temperatures ranging from -270 °C up to max. 600 °C. They are used for the demand of hydrogen under pressure (CGH2) or low temperatures in the cryogenic range (LH2).

- Fluid lines for pressure and vacuum applications
- The highest demands on (leak) tightness
- Available with various connection fittings



High-pressure hoses (for technical gases)

The high pressure hoses are used to route gaseous hydrogen, for example for filling in industrial filling stations. They are designed for high pressures, additional movements and pressure cycles.

- Robust design
- Suitable for operating pressures of up to 400 bar.
Burst pressures of up to 1,300 bar are attained.
- High degree of flexibility simplifies the installation



Automotive parts for hydrogen applications

In mobility of the future, hydrogen will play an important role in particular where long ranges and high loads are required. In electric cars, HGVs, trains and aeroplanes, our thin-walled flexible and rigid pipelines are used wherever hydrogen needs to be transported safely from A to B.