

# HYDROGEN SAFETY

*Pressure relief and explosion protection for equipment used in hydrogen production, storage and transportation*

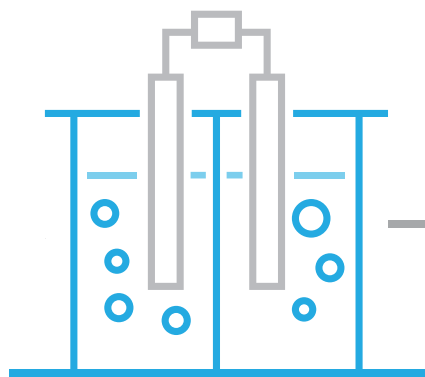




# Hydrogen Applications

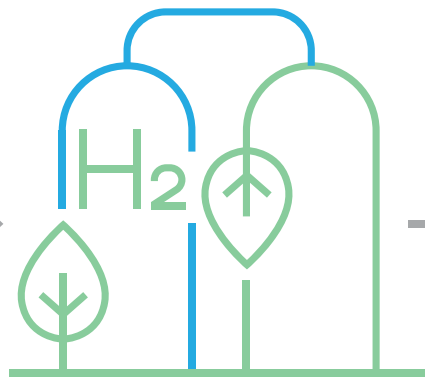
Customized design and engineering support to ensure you have the right pressure relief device for your hydrogen plant, equipment and vehicles

## Production and Processing



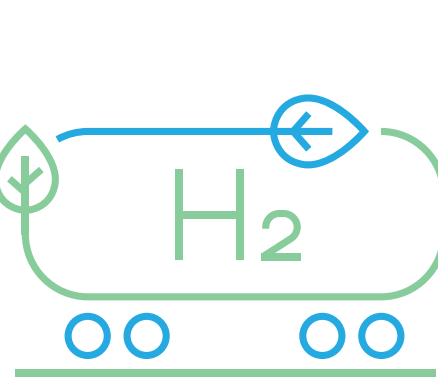
Electrolyzers  
Fermenters  
Reactors  
Boilers  
Pressure Swing  
Adsorption plants  
Liquefaction plant

## Storage



Adsorption-based storage  
Tanks  
Vessels  
Bottle systems  
Cylinders

## Transportation



Cryogenic cylinders  
Liquid tankers  
Tube trailers  
Sea tankers  
Rail containers

Hydrogen is one of the most volatile chemical elements in existence. Production, processing, storage and transportation of hydrogen is closely regulated. Standards governing hydrogen safety include NFPA, OSHA, NREL, ISO, COMAH, PER, DSEAR and ATEX (including IECEX and UKEX).

Fittings such as vents, valves and rupture discs must conform to these standards. They must also withstand the specific conditions found in hydrogen applications: they must work at very low temperatures and in vacuum, they need to be resistant to embrittlement, prevent boil-off and be leak-tight (non-permeable). OsecoElfab's rupture discs and explosion vents meet the required standards for hydrogen safety, and offer exceptional leak-tightness, with reliability and accuracy for peace of mind across your hydrogen equipment.

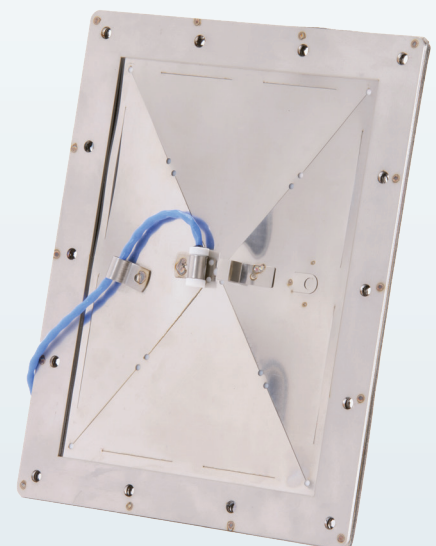
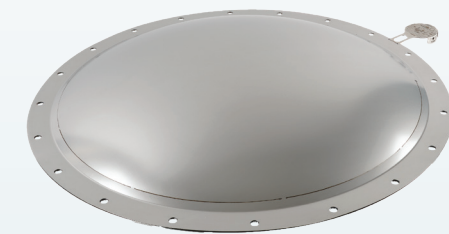
## Rupture discs



- ¼" to 30" (7.5mm to 750mm)
- 0.07 psig–5,000 psig (5mbarg–344.7 barg)
- Suitable for gas and liquid systems
- Suitable for cryogenic conditions
- Austenitic and 316 Stainless Steel
- Exceptional leak tightness
- Withstand embrittlement
- Withstand vacuum
- Prevent boil-off
- High speed activation
- Safe and simple installation
- Designed to ISO and ASME standards
- ATEX-approved burst detection available

## Explosion vents

- Circular, rectangular, trapezoid and irregular shapes
- Standard and custom sizes
- Domed or flat
- Single-skinned or multi-layered
- Frames, gaskets and insulating linings available
- For venting to atmosphere or into ducting
- Industry-leading performance tolerance of + / - 0.25 psig.
- Stocking program available for rapid delivery (USA only)
- Meets ISO, OHSA and NFPA requirements
- ATEX-approved burst detection available







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