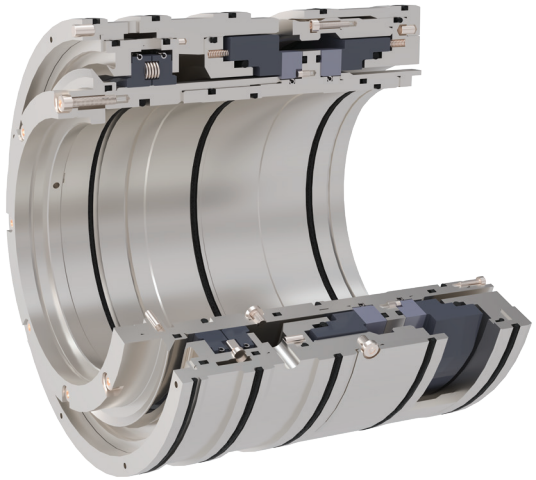
Aquapac
Water-lubricated Compressor Seal

Zero-contamination sealing for hydrogen-driven compression systems

Aquapac is a water-lubricated mechanical seal engineered for compressors that use hydrogen as the process medium. By using ultra-pure water as the sealing fluid, Aquapac eliminates oil and inert-gas barrier systems and prevents process contamination. The seal provides minimal dynamic leakage and back-pressure tightness under static conditions, ensuring hydrogen retention even during fluctuations in sealing-water pressure.

Proven through rigorous performance and durability testing, Aquapac supports safe, efficient operation across hydrogen-medium applications, from green hydrogen production to numerous processes where water is the preferred sealing fluid and minimal leakage is key.



Features and Benefits

What sets Aquapac apart:

- **Zero-Contamination Operation**
  Water-based barrier medium eliminates oil or inert-gas contact with the hydrogen stream.
- **High-Speed Capability**
  Designed for peripheral speeds above 100 m/s in demanding screw-compressor environments.
- **Optimized Thermal Behavior**
  Internal geometry supports effective heat management without complex thermal control mechanisms.
- **Hydrogen-Tight Performance**
  - Running conditions: Minimal dynamic leakage
  - Static conditions: Back-pressure tightness for hydrogen retention
- **Water Efficiency & Recovery**
  Atmospheric-side leakage can be collected and returned to circulation; double configuration reduces or eliminates product loss to the primary vent.
- **Versatile Hydrogen-Medium Applicability**
  Applicable across a wide range of hydrogen-medium processes, with particular benefit in systems that rely on water as the sealing fluid and demand minimal leakage and clean, emission-free operation.

Engineered for Hydrogen-Medium Compression

With its water-lubricated design, hydrogen-tight performance, and efficient leakage-management capabilities, Aquapac delivers the reliability, cleanliness, and sealing integrity demanded in demanding hydrogen-based applications.

Ideal for:

Hydrogen production and compression
Electrolyzers, buffer compressors, storage compressors, and booster stages.

Hydrogen-carrier and synthetic-fuel processes
Including ammonia, methanol, and other power-to-X pathways where hydrogen is present as part of the process stream.

Processes where water is the preferred sealing fluid
Applications that benefit from contamination-free, emission-free sealing.

General industrial applications using hydrogen as a medium
Any system requiring contamination-free, emission-free sealing for hydrogen service.

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