



Hydrogen Capabilities

YOUR PARTNER FOR THE HYDROGEN TRANSITION

Hydrogen plays a critical role in transforming the world's energy infrastructure, and compression is key in enabling this transition. Cook Compression is investing in the engineering, innovation and materials development capabilities needed to support energy companies as they navigate their pathway to a carbon-neutral world. Our experience, coupled with state-of-the-art research facilities and a deep range of products and engineered polymers, enables us to quickly develop and test new technologies for the next generation of hydrogen applications.

EXPERIENCE

For over 133 years, Cook Compression has developed components critical to the performance and reliability of reciprocating compressors. These products are backed by Cook Compression's engineering expertise and include innovative designs that have a proven track record of success in hydrogen applications.

Current product offerings include:

ROD AND CYLINDER RINGS

A combined-ring approach breaks down pressure loads and eliminates leak paths using a minimal number of rings to deliver a highly efficient seal in light gas applications. Cook Compression rings are made with materials formulated for the high pressures, speeds, and temperatures of hydrogen compression. *Applied in lubricated environments with discharge pressures up to 910 bar and non-lubricated environments with discharge pressures up to 500 bar.*

VALVES

Utilizing hydrogen-resistant materials, superior sealing elements and robust designs, new Cook Compression valve technology provides optimum performance and reliability in demanding high-pressure hydrogen environments. *Designed for discharge pressures up to 1000 bar in low and high speed applications.*

PACKING CASES

COOK CLEAN™ sealing system utilizes multiple components within the packing case to reduce leakage to near-zero levels. The system components can be applied equally to hydrogen gas applications to reduce leakage and increase compressor efficiency. *Designed for low emission requirements.*

OIL WIPERS

Side-loaded nonmetallic oil wiper with integrated gas seal features knife-edge geometry that virtually eliminates oil migration to the seals. Provides a clean, oil-free environment that results in extended run times. *Designed for non-lubrication environments.*



Rod Rings



Lentus™ Valves



Packing Case and Rings



Oil Wiper

MATERIALS DEVELOPMENT

Advanced materials technology is the key to developing hydrogen-specific products, and our approach combines in-house capabilities with external partnerships to accelerate product development. TruTech® engineered materials incorporate the latest advances in polymer science to provide superior durability and optimum performance characteristics. Specialty formulations are available for high-performance sealing and lasting reliability in lubricated, non-lubricated, dry-gas and higher pressure and temperature environments. We continuously develop new formulations as hydrogen applications evolve.



RESEARCH AND TESTING

We have pledged a continual investment in the capabilities needed to quickly develop, test and deliver new innovations for the evolving hydrogen market. Our US-based testing resources include the Materials Lab, staffed by PhD-level polymer scientists and featuring state-of-the-art equipment and modeling capabilities; the Innovation lab that allows us to prove out high-speed hydrogen solutions under real machine conditions; and an in-house hydrogen testing facility. As part of Dover Corporation, we have access to the Dover India Innovation Centre (IIC) for additional sophisticated testing and validation capacity, including in-house high-pressure hydrogen material testing.



Hydrogen H₂

H₂ HYDROGEN POWER
CLEAN ENERGY OF THE FUTURE

WHO WE ARE

Cook Compression is part of Dover Precision Components, an integrated provider of performance-critical solutions for rotating and reciprocating machinery across the oil & gas, power generation, marine, industrial, chemical and general processing markets.

Comprising the Waukesha Bearings®, Bearings Plus®, Inpro/Seal® and Cook Compression® brands, the Dover Precision Components portfolio includes hydrodynamic bearings, active magnetic bearings, system and bearing protection, and reciprocating compressor components. Each solution is custom-engineered to provide optimum efficiency, reliability and productivity, and backed by comprehensive aftermarket services.

Dover Precision Components serves its global customer base through facilities in North America, Europe, Asia and the Middle East, as well as technical sales representatives around the world.



READY TO GET STARTED?

Visit www.cookcompression.com to find your local Cook Compression representative or submit an inquiry.



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