

Precision in motion

Dover Precision Components drives innovation through advanced technology and diverse R&D

With strategically located facilities around the globe, Dover Precision Components delivers performance-critical solutions for rotating and reciprocating machinery across the oil and gas, power generation, marine, industrial, chemical, and general processing markets. The company's brands are equipped with decades of experience and expertise, developing solutions that ensure optimum efficiency, reliability, and productivity in even the most challenging operating environments.

Its portfolio of custom-engineered products spans fluid film bearings, active magnetic bearings, system and bearing protection, and reciprocating compressor components. Supported by extensive R&D capabilities, Dover Precision Components also offers comprehensive aftermarket services to ensure customers' equipment is running as effectively as possible.

"As part of Dover Corporation, Dover Precision Components is a global manufacturer of innovative, performance-critical equipment components for a wide range of industries and customers," opens Bimal Venkatesh, Vice President of Innovation, IT, and Marketing Strategy. "The three core brands within our division are Cook Compression, Inpro/Seal, and

Waukesha Bearings, which were brought together by Dover in 2017 to form the business as it is today. In 2023, we acquired FW Murphy Production Controls, and we now also operate Waukesha Magnetic Bearings and BPI Bearings Plus.

“Each of the brands in our portfolio has deep roots and expertise in its respective markets. Waukesha Bearings specializes in custom-engineered fluid film bearings based on magnetic levitation technologies, for example, whereas Inpro/Seal provides permanent bearing protection and sealing products like isolators, shaft seals, and grounding systems used in rotating equipment. As a leading resource for engineered compressor solutions from valves and sealing technologies to pistons, rods, repairs, and project services, Cook Compression delivers proven reciprocating compressor performance. Across these

brands, our precision-manufactured products are backed by robust R&D and comprehensive aftermarket services, which see us supply replacement products and repairs for our customers.

“By manufacturing components for turbo machinery and other industry equipment central to our customers’ operations, we help them achieve business objectives like improved efficiency and productivity, enhanced machine reliability, and reduced emissions and maintenance costs,” Bimal adds. “Our most recent acquisition, FW Murphy, provides monitoring equipment and control systems for gas engines and reciprocating compressors, helping customers to identify and troubleshoot problems early to avoid unnecessary downtime. Using IoT-based technology, FW Murphy devices provide end users with full visibility over performance characteristics and can notify



Enabling Access to Global High-Performance Polymers



BARplast LLC, Houston, serves as a gateway to advanced Polymer materials for demanding applications across North America. With expertise in virgin PEEK (VESTAKEEP®), recycled PEEK (DEXNYL® R-PEEK), thermoset Polyimides (UIP®) and thermoplastic Polyimides (AURUM®), PAI (TI-5000®), and PEI (GIMIDE™), the company combines in-depth technical know-how with responsive customer support.

As part of the BIEGLO Group, BARplast benefits from a globally managed network of qualified material suppliers.



Mitsui Chemicals

Thermoplastic Polyimide



Thermoset Polyimide



PEI Polyetherimide



PAI Polyamideimide



PEEK Polyetheretherketone



and compliance testing. We can also develop custom tests for more sophisticated, state-of-the-art developments, enabling fast product validation and market launches for our customers and OEMs.

“Strong partnerships also fuel innovation,” he adds. “We have a great relationship with BARplast, for example, a distributor of high-end products like PEEK and POLYIMIDES. This has strengthened our access to a list of advanced high-temperature polymers, which is a crucial capability required for us to develop products and technologies to be used in emerging technologies like hydrogen.”

Such partnerships, along with Dover’s Innovation Labs, are driving the company’s expansion into clean energy markets. “The energy transition is reshaping customer demand across our core markets, and its success relies on the development and qualification of highly innovative new products and technologies,” Bimal states. “These emerging technologies must focus

on customer needs to ensure they address challenges facing our customer base.

“Over the last few years, we’ve supported several initiatives in the energy transition sector, focusing on areas where we can apply our core strengths in precision components and advanced materials, such as hydrogen, wind, and emissions reduction technologies like carbon capture. We’re a true partner to our customers, with our expert engineers and scientists helping to find innovative solutions to complex technical challenges through comparisons, test conditions, and performance validation in our labs. In doing so, we can provide customers with a success probability, generating large quantities of real-world data to reassure them.

“In some cases, we can apply existing technology to new applications,” Bimal highlights. “For example, our highly engineered fluid film bearing solutions have served the high-speed rotating equipment market for more than half a century, but

customers of possible issues or alerts before a shutdown occurs.”

As an industry leader, R&D is critical to its continued success, and the Dover Precision Components Innovation Labs are central to ensuring the business remains at the forefront. “One of our main labs is here in Houston, Texas, where we provide world-class testing capabilities to validate various products, materials, and processes under near-real-world operating conditions,” Bimal says. “With highly qualified engineers and scientists with decades of expertise, testing products in our labs gives us a competitive advantage in allowing us to reassure customers of performance characteristics.

“Our labs play a key role in developing new products to meet evolving industry demands, with capabilities including prototype validation, failure analysis, accelerated lifecycle testing, and regulatory



we're now leveraging that success in new application spaces, most notably wind energy. Based on this technology, Waukesha Bearings has developed a specialized bearing, NordAlign, specifically designed for wind turbine main shafts. Wind turbine shafts typically operate in extreme conditions, pushing the main shaft bearing systems to operating limits, which often necessitates the use of expensive, specialized vessels. NordAlign, however, can withstand the harsh operating environments, optimizing performance by enhancing turbine reliability, streamlining installation, and reducing total cost of ownership, especially in terms of maintenance costs. The product is currently in testing, and has the potential to disrupt the wind sector, allowing operators to remain competitive in an ever-evolving market."

With highly experienced people, diverse R&D capabilities, and an ability to scale manufacturing, Dover Precision Components will continue to grow and maintain its



industry-leading reputation. "Our focus is currently on the lab and innovation areas of the business, and we're launching a program later this year to make our lab services more accessible to our customers," Bimal reveals. "Working closely with them, our R&D teams will validate components, optimize designs, and help customers accelerate market acceptance and product launches. As a component manufacturer, we're in a strong position to understand the complexities and nuances of designing new industrial equipment, and our network of facilities can support every stage of our customers' product development cycle.

"We'll also continue to extend our lab capabilities, and we're in the process of commissioning a new, one-of-a-kind, custom test rig. This will utilize the core products across the business, leveraging expertise from Cook Compression, Inpro/

Seal, and FW Murphy. We're using magnetic bearings, for instance, with precise control of magnetic forces to generate dynamic load schemes on the shaft, which will enable us to simulate and test products in near-real-world operating conditions rather than a static lab environment."

As the energy sector evolves, Dover Precision Components is in a unique position to support its customers in developing custom solutions, leveraging its decades of expertise to strengthen both existing and emerging applications. Bimal concludes: "I have no doubt that Dover Precision Components will continue to grow at a healthy rate, focusing on continuous improvement and innovative technologies that help customers overcome business challenges." ■

www.doverprecision.com