**Freudenberg Helps Manufacturers Optimizing Hydraulic Cylinder Sealing Systems**

**Plymouth, Mich. (USA), March 5, 2019. With the goal of helping customers reduce the manufactured cost of hydraulic cylinders while optimizing performance and lifespan of their production equipment, Freudenberg-NOK Sealing Technologies has announced its new Freudenberg Perfect Cylinder program, a collaborative engineering and design approach with customers. Freudenberg-NOK runs the business operations for Freudenberg Sealing Technologies in the Americas.**

Large-scale manufacturers, such as those found in the agriculture and construction industries, often find themselves faced with the daunting task of upgrading entire pieces of expensive equipment to keep production running smoothly. With the Freudenberg Perfect Cylinder program, the experts at Freudenberg-NOK work with cylinder distributors to reengineer cylinder components for hydraulic systems and pair them with the appropriate sealing solutions to maximize system efficiency on existing machines while eliminating the need for costly equipment replacement.

“We’re known for our sealing products but our expertise can reach beyond that to assist our customers in new ways,” said John Plut, Director, Fluid Power Partners, North America, Freudenberg-NOK. “With the Freudenberg Perfect Cylinder program, we can substantially reduce cylinder costs by collaborating at the engineering level to help create an enhanced system of cylinders and seals.”

Once cylinders are re-engineered, they are be paired with sealing products from Freudenberg’s vast catalog of industry leading solutions, resulting in an optimized sealing solution that uses premium, high performance seals while still saving customers as much as 40 percent on total material and production expenditures, Plut explained. In addition, Freudenberg’s portfolio of sealing options continues to grow.

One of the company’s latest sealing innovations in this area, for example, is the newly launched imperial-sized Guivex® series guide bands, which are profiled piston and rod guide bands made with a new carbon-fiber filled polyamide material. The Guivex bands can be used in Perfect Cylinder-optimized sealing systems and in long-stroke cylinder, short stroke, short guiding distance, and high-side-load applications.

The size of the Guivex bands allows manufacturers to use them in radial load capacities that are 40 percent higher than standard guide bands, and they can be utilized in all fluids normally found in hydraulic systems, replacing standard 1/8” cross section piston guide bands in current housings.

“The new Guivex bands can enable the reduction of cylinder gland widths and lengths, reducing costs and increasing design flexibility,” said Jay White, Product Marketing Manager, Fluid Power, Freudenberg-NOK. “They are less abrasive to sliding surfaces as well, resulting in no jamming and quieter operation.”

Other sealing technologies that can used in the Perfect Cylinder program include the HDP 330 high-pressure piston seal, plus seals made from the new 94 AU 30000 polyurethane material.

The HDP 330 is a special polyamide seal that can withstand extreme pressure (up to 800 bar) and allows for use of rougher cylinder liner surfaces, which can also cut cylinder production costs

Seals made from the 94 AU 30000 material last longer than current, standard seal solutions and have high resistance to hydrolysis, even in temperatures ranging from -35°C to 120°C and can remain stable in operating pressures up to 50 MPa / 7250 psi.

More information is available at <https://www.fst.com/products/dynamic-seals/guide-rings>

*image: FST\_img\_GuivexPerfectCylinder.jpg*

*Caption: The Freudenberg Perfect Cylinder Program consists of a piston sealing system (Guivex Piston Guide Band and HDP 330 Piston Seal) and a rod sealing system (Guivex Rod guide band, 94 AU 30000 U-cup rod seal und 94 AU 30000 rod wiper), f.l.t.r.*

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**About Freudenberg Sealing Technologies**

Freudenberg Sealing Technologies is a longstanding technology expert and market leader in sealing technology and electric mobility solutions worldwide. With its unique materials and technology expertise, the company is a proven supplier for demanding products and applications, as well as a development and service partner to customers in the automotive industries and in general industries. In 2017, Freudenberg Sealing Technologies generated sales of about €2.3 billion and employed approximately 15,000 people. More information at [www.fst.com](http://www.fst.com).

In the Americas, Freudenberg-NOK Sealing Technologies runs the business operations of Freudenberg Sealing Technologies. The company is a joint venture between Freudenberg and NOK Corp. in Japan and headquartered in Plymouth, Mich. and operates more than 20 facilities across the Americas.

The company is part to the global Freudenberg Group which, with its Business Areas Seals and Vibration Control Technology, Nonwovens and Filtration, Household Products as well as Specialties and Others. In 2017, the Group generated sales of approximately €9.3 billion and employed more than 48,000 associates in around 60 countries. More information is available at [www.freudenberg.com](http://www.freudenberg.com).

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