



APPLIANCE

FREUDENBERG-NOK
SEALING TECHNOLOGIES

FREUDENBERG-NOK
INNOVATING TOGETHER



ENHANCING QUALITY OF LIFE

Appliances offer a range of features that only multiple machines could deliver in the past. The global demands of these appliances are always the same: efficiency and reduced water consumption, durability, safety and reduction in noise and vibration. Now there is a new mega trend that has hit the market: smart appliances. The smart appliance demand is projected to grow tremendously over the next ten years.

To cut costs and help the environment, consumers are looking for the best energy-efficient appliance models. The energy standards and smart appliances' advanced features impact energy consumption, which in turn affects consumers. Therefore, companies are under pressure to be the first with a better, faster, and more energy-efficient product. This global impact on manufacturers is pushing them to use the most innovative products and solutions in their design.

Other concerns manufacturers are faced with are durability and safety. In order to be compliant with stringent safety and performance certifications, ultimate sealing solutions need to be integrated as part of the design and manufacturing lifecycle.

LEADING INNOVATIONS

As the leading specialist in sealing applications and their market, Freudenberg–NOK Sealing Technologies is a supplier as well as a development and service partner serving customers in a wide variety of industries. At Freudenberg, we

And it is no surprise that building appliances with durable components ensures a longer life, which in turn pleases consumers and companies that want to reduce warranty issues.

Consumers should be willing to pay a premium if it will reduce noise and vibration in their appliances. Most traditional sound-reduction systems have limitations. Manufacturers who choose suppliers whose products contain state-of-the-art designs achieve the ultimate in noise reduction and less vibration. If the right design is used, you can accomplish both with one product.

It is more important than ever that your product delivers what you promise and exceeds customer expectations. And with the increase of smart appliances, failure is not an option. Seals are fundamentally important to the proper functioning of appliances. If properly designed, they can become a foundation for your innovations by improving water and energy efficiency, consumer safety, and device durability while reducing space requirements, friction, weight, and force levels. Look to Freudenberg–NOK Sealing Technologies for your next appliance application.

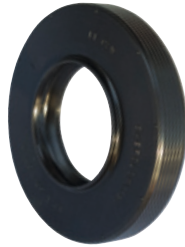
drive innovation with research, development, testing, and production teams integrated across our global operations to meet the demands of worldwide and local markets.

EFFICIENCY AND DURABILITY

Building on our unparalleled material expertise, we are the industry's partner of choice whenever there is a need for efficiency and durability.

SIMMERRING SHAFT SEALS

The special design of the Simmerring shaft seal delivers sophisticated technology providing cost-effective sealing solutions for your application. These seals assist with high functional reliability and extended operating life. They are resistant to wear (70 NBR 260866) and harsh chemical environments like detergent and ozone (75 FKM 143898).



COMBI SEALS

Combi seals consist of an oil seal with an optimized wear sleeve which enhances the longevity of the toughest applications. This seal assists in keeping lubrication at optimum levels while keeping contaminants out.



LUBE & SEAL

The customer benefits all around when the seal and the lubricant work in perfect harmony. Freudenberg–NOK Sealing Technologies and Kluber Lubrication have bundled their groundbreaking knowhow to create Lube & Seal, an innovative and cost-effective sealing system from a single source.



POLYURETHANE SEALS

Resistant to wear and abrasion, these seals last longer than the average seal. High tear resistance increases operating life. Compatibility with wide temperature ranges and excellent chemical compatibility make them the ultimate in sealing.

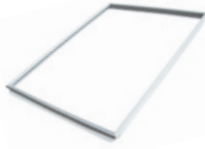


EXTREME TEMPERATURES

Freudenberg–NOK improves thermal efficiency with low closure force and thermal barriers that are aesthetically pleasing to customers. We are able to assist you with ultimate temperature sealing from extreme low (–120 °F) to high (1000 °F) temperatures. These materials are also fire-resistant and have conductivity, magnetization and antimicrobial options.

REFRIGERATION GASKETS

The combination of design and material expertise helps our customers achieve their goal of improved overall efficiency and consumer satisfaction for the life of the product. Our materials deliver superior sealing and closure performance at low temperatures and provide an excellent thermal barrier which improves efficiency and reduces consumer concerns such as condensation build-up.



OVEN GASKETS

Our low load deflection designs paired with our unique materials can provide solutions where others cannot. Whether continuous use at temperatures exceeding 450 °F and high steam environments for commercial type applications, to resisting harsh chemicals or caustic animal fat renderings, our sealing solutions provide durable energy savings to ensure customer satisfaction.



DRYER GASKETS

Equipped with the latest innovative materials and technology, Freudenberg–NOK has proven fire-resistant elastomers. These materials are durable, and withstand continued use at high temperatures and daily operation of the door. Our unique fire-resistant material contributes to fire containment as specified by the UL and also minimizes the need for additional components and cost required to protect the door opening.





PRECISION, COST, AND MAINTENANCE

Precision components that reduce cost and maintenance are key to innovative appliances. Using advanced materials allows us to extend the life of your products and to meet the demands of your customers.

DIAPHRAGMS

Our custom-tailored diaphragms are key for precise flow and control of media. We deliver pure elastomer, fabric-reinforced, or diaphragm designs with metal/plastic insert that maintain their function and provide superior life service. With our great variety of rubber materials we always find the appropriate one for your special requirement.



MULTI-COMPONENT PRODUCTS (2K)

Our multi-component parts are designed with two materials to provide maximum flexibility. Freudenberg-NOK's automated molding process controls quality and functional characteristics, therefore reducing risks during assembly and requiring less maintenance.



SOLENOID PLUNGERS

With sealing and damping functions combined in one component, our custom solenoid plungers allow for high pressure and narrow tolerances. Bonding solution of elastomer and carrier material offers precise sealing and extreme reliability, thus reducing maintenance. Ask us about our RFN (reduced friction by nanotechnology) process to extend long-term service life.



ENCODERS

Together with an appropriate sensor, our encoders provide precise measurement of speed and rotation angle for several applications. Whether you need specific pole pair configuration or a maintaining signal quality at all speeds, with our encoders have the solution for you.



PORTFOLIO

Seal Type	Refrigeration	Laundry	Dishwashing	Cooking	Homecare	Personal Care
Combi Seals		+				
Diaphragms		+		+	+	
Encoders		+	+	+	+	
Gasket Profiles	+	+	+	+		
Integrated Molded Components				+		+
Liquid Silicone Custom-Molded Products	+	+	+	+		
Multi-Component (2K) Products		+	+	+	+	+
O-Rings		+	+	+	+	+
Polyurethane Seals		+				
Simmerring Shaft Seals		+	+	+		

Freudenberg–NOK Sealing Technologies

Marketing Communications
47690 East Anchor Court
Plymouth, MI 48170
USA

Service Contact:

Phone: +1 734 451 0020

email: appliance@fnst.com

www.fnst.com