



Rexnord Aerospace Seal Applications

Since 1946, Rexnord Aerospace has been designing high-quality seals for many different aerospace and industrial applications. Rexnord Seals are designed to provide optimum leak protection in many different operating environments and are found in:

- Gas turbine engines
- Auxiliary power units
- Gearboxes and accessories
- Hydraulic power systems
- Environmental control systems
- Rockets and weapon systems
- Pumps and compressors
- Industrial turbines
- Many other rotating components

Rexnord engineers design optimum solutions for some of the most complex operating parameters. Our designs are intended to bring significant customer value, long life and product life services.

Rexnord Shallow Hydropad Seals

Our shallow hydropad seals live up to your demands.

Rexnord® Shallow Hydropad Seals offer a single-seal solution for applications with high-surface speed and low-pressure differential requirements. Our designs can be customized to meet the most demanding surface speed applications while offering outstanding performance, long life and extraordinary value.

Theory of operation

Rexnord Shallow Hydropad Seals are designed for non-contacting use in a variety of fluid environments. They feature a lubricating gas film between the seal nose face and the mating ring to reduce wear and mechanical and thermal damage, while increasing the reliability of the seal. The film is formed as the shaft rotates and gas is forced into the converging gaps between the shallow hydropad seals on the mating ring and the seal nose. The end result is increased pressure at the seal interface that develops hydrodynamic lift which helps to create and maintain the lubricating film, and acts as a high-pressure barrier of air to reduce leakage across the seal interface to virtually zero.

Our team of engineers and experts take into consideration that different conditions present different problems; the flexibility of our designs enables us to resolve these challenges with modification of the basic design and careful selection of material grades. With precision analysis, we optimize various forces to achieve the desired balance between low leakage and long life for each application. Our seals can also be designed to be tamper resistant or repairable.

The operational details of the Rexnord Shallow Hydropad Seal is fully described in Rexnord U.S. Patents 5,941,532 and 6,257,589.

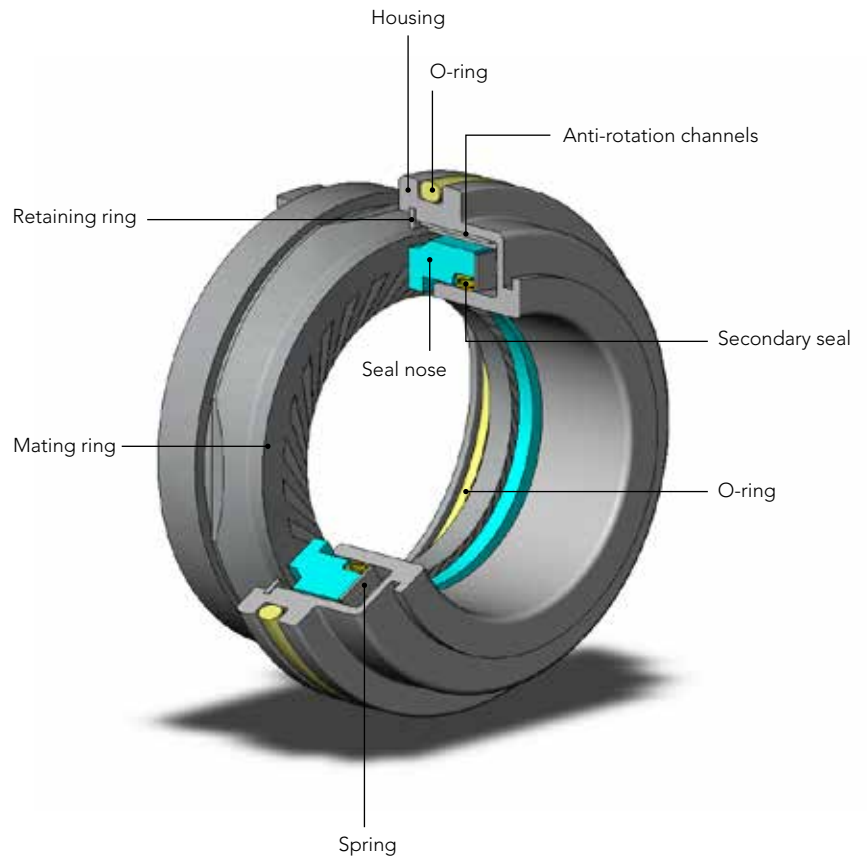
Mating rings

Proper mating ring materials and mounting are crucial to the optimum performance of the completed seal assembly. A complete list of options and additional services is available upon request.





Materials of construction



Features and benefits

- High-pressure air barrier at the seal face to reduce leakage and cool interface temperature
- Significantly reduces seal wear to dramatically extend seal life in hot environments
- Positive sealing barrier to prevent leakage during static conditions
- Versatile design to allow for custom modifications and upgrades
- Compact design to minimize weight and space requirement
- Wide variety of material options to meet the demands of specialized operating conditions
- More than 60 years of proven design application experience to provide you and your customers with a high level of confidence

Since 1946, Rexnord Aerospace has satisfied the needs and critical demands of the aerospace industry with exceptional, high-quality products and innovative engineering. Choose Rexnord Aerospace products and solutions for your designs. Speak with our engineering sales staff to address your questions and design inquiries.