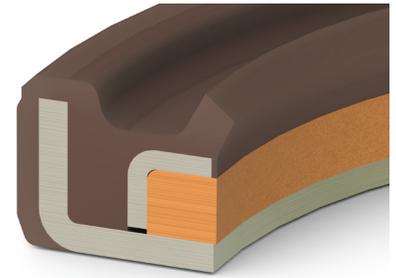


HIGH/LOW PRESSURE SEAL (HLPS)

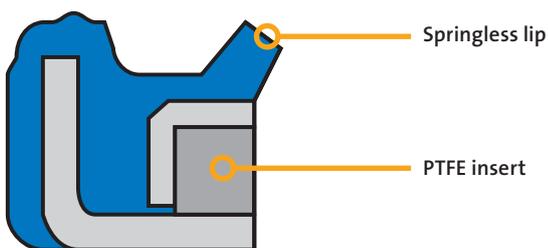


The High/Low Pressure Seal (HLPS) from Freudenberg Sealing Technologies is a field-proven, specialty-designed, high-pressure Simmerring® shaft seal. The HLPS is a severe duty pressure seal and has a unique design with several features that greatly improve its overall performance.

This seal is ideal for hydrostatic drives subject to very high stress. Unlike most high pressure seals, the HLPS uses a proprietary spring-less lip to perform the sealing function, which allows it to withstand pressure up to 200 bar. The PTFE insert makes the seal very resistant to frictional wear. The inner metal case molded into the seal supports the main lip while the heavy duty outer case maintains the overall correct geometry even under high pressure spikes.

General Features of the HLPS

- Typical compounds are HNBR with PTFE back-up ring
- Temperature range is -40°C to $+120^{\circ}\text{C}$
- Pressure range—maximum 200 bar
- Surface speed—1.5 m/s



VALUES FOR THE CUSTOMER

- **Unique Design**—The unique design of the HLPS with PTFE insert and back-up ring makes it reliable under the most extreme pressure and gives it a longer service life
- **Improved Pressure Capability**—Typical use in hydrostatic drives subject to very high stress
 - Pressure average of 150 bar
 - Pressure maximum of 200 bar
 - Velocity maximum of 1.5 m/s
- **Compound Variety**—The HLPS seal can be produced in a variety of materials (HNBR, FKM) to accommodate application requirements
- **Better resistance in a variety of oils**
- **Increased temperature ratings**

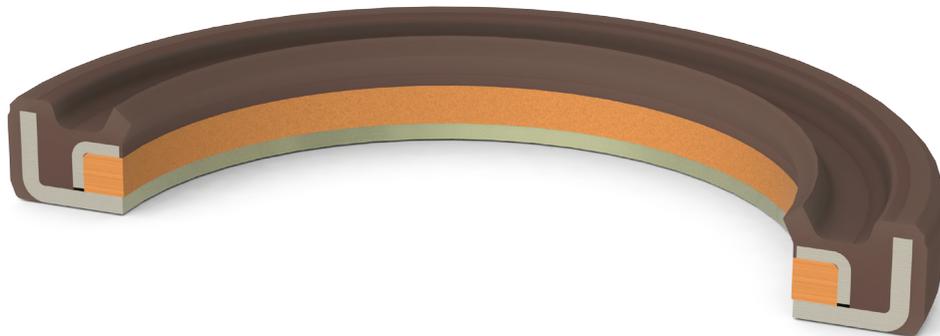


FEATURES AND BENEFITS

The HLPS offers a number of design features that make this seal appropriate for high stress applications:

- Features the latest “zero leak” design and is the only high pressure seal made by Freudenberg Sealing Technologies without a controlled leak
- Can be produced in a variety of materials (HNBR, FKM) that are specially formulated for decreased wear and deformation resistance
- Overall design is very resistant to extrusion and pressure rupture

Seal Type	Pressure ave. bar	Pressure max. bar	Velocity max. m/s	PV, max. m*bar/s	Preferred material	Advantages
BAHD	100	150	1.5	45	HNBR	Significantly increases pressure capability limited follow ability
HPS	100	175	1.5	60	HNBR	Improved shaft follow-ability and PV rating
HLPS	150	200	1.5	60	HNBR	Latest “zero leak” design with high pressure/low speed capability



The information contained herein is believed to be reliable, but no representation, guarantees or warranties of any kind are made to its accuracy or suitability for any purpose. The information presented herein is based on laboratory testing and does not necessarily indicate end product performance. Full scale testing and end product performance are the responsibility of the user.

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