Medium pressure seals, such as the BABSL, can be used in many applications including pumps and motors in hydro-units, mechanical power transmission gearboxes, and 2-stroke engines. However in conventional seal designs, as pressure increases the seal life dramatically decreases due to atypical seal wear that is caused by pressure distortion of the seal lip geometry and increased friction at the contact point. The BABSL minimizes those problems over a wide range of operating conditions.

The standard line of BABSL Simmerring shaft seals from Freudenberg Sealing Technologies has a proven record of durability and longevity in a variety of medium pressure applications. The BABSL seal has been the industry standard in medium pressure Simmerring shaft seals for decades and Freudenberg Sealing Technologies’ advanced designs ensure a sealing lip that functions correctly as pressure increases in the application. The BABSL seal is a great option for an affordable price, without compromising reliability.

Method of operation

The BABSL seal utilizes a spring-loaded sealing lip that applies an optimum radial load on the shaft to perform the sealing function. The spring maintains this consistent radial load over the entire life of the seal. The design features a shorter flex section and a reinforced metal case to prevent pressure deformation. This helps prevent hollow wear of the elastomer and protects the seal for a longer working life span.

VALUES FOR THE CUSTOMER

- **Reliable Sealing**—The rubber outer diameter and robust design of the BABSL is an advantage when sealing low viscosity or gaseous media
- **Application Versatility**—Due to its proven design and lip geometry, the BABSL delivers consistent sealing ability over a wide range of operating conditions. This performance is maintained as temperature and pressure fluctuate
- **Compound Variety**—The BABSL seal can be produced in a variety of materials (NBR, HNBR, FKM) to accommodate application requirements for better resistance in a variety of oils and increased temperature ratings
- **Mature Process**—The BABSL medium pressure Simmerring shaft seal has proven to be a reliable design and has been the industry standard for decades
FEATURES AND BENEFITS

General product information

- Primary shaft range 8 mm to 340 mm for NBR and 8 mm to 170 mm for FKM
- The BABSL can be produced in a variety of materials—NBR, HNBR, FKM—that are specially formulated for decreased wear and deformation resistance
- When the FKM compound is used thermal stability and chemical resistance are both increased
- More than 200 items available in the standard catalog program

<table>
<thead>
<tr>
<th>Seal type</th>
<th>Pressure avg. bar</th>
<th>Pulse Pressure max. bar</th>
<th>Velocity max. m/s</th>
<th>PV max. m²/bar/s</th>
<th>Material for rating</th>
<th>Progression</th>
</tr>
</thead>
<tbody>
<tr>
<td>BABSL</td>
<td>3.5</td>
<td>7</td>
<td>9</td>
<td>10</td>
<td>FKM</td>
<td>Industry standard for decades</td>
</tr>
<tr>
<td>PPS</td>
<td>5</td>
<td>25</td>
<td>15</td>
<td>40</td>
<td>FKM</td>
<td>Improved pressure rating, one piece seal, and lower friction</td>
</tr>
<tr>
<td>BAHD</td>
<td>120</td>
<td>170</td>
<td>2</td>
<td>40-60</td>
<td>NBR</td>
<td>High pressure seal with extremely stable sealing lip and low wear</td>
</tr>
<tr>
<td>HLPS</td>
<td>150</td>
<td>200</td>
<td>1.5</td>
<td>60</td>
<td>HNBR</td>
<td>Latest “zero leak” design with high pressure/low speed capability</td>
</tr>
</tbody>
</table>

BABSL PV curves*

*Data for reference use only. Actual values will vary depending upon conditions.

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