Applications

• CVD/PVD Rotation
• Wafer Handling
• Web Coating
• Thin film deposition and etching processes

Features

• Ferro-magnetic fluid acts as an o-ring seal around dynamic parts
• Fluid hermetically seals the shaft, making a liquid o-ring while a permanent magnet keeps the fluid in place. Ferrofluid is magnetically held in stages formed by grooves machined into either the shaft or pole pieces
• Unlike dynamic o-ring seals, the ferro-magnetic fluid o-rings remain intact for years of operation despite the shaft's motion

Options

• Standard and custom designs with solid or hollow shafts
• Baseplate, CF flanged, thread mount, o-ring flanged, and cartridge mounts
• Customized multi-axial applications
• Water-cooling

www.lesker.com
Drives consist of a non-magnetic housing, bearings, two pole pieces, a permanent magnet, a magnetic shaft and ferro-magnetic fluid. Within symmetrical magnetic fields, the ferro-magnetic fluid fills the radial rings to form multiple liquid “o-rings”. Each ring can sustain a pressure differential of ~0.15 - 0.2 atm. The pressure capacity of the entire feedthrough is approximately equal to the sum of the individual stages, usually designed for 2.5 atm differential pressure.

**Common Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard operating temperature</td>
<td>0°C to 80°C *</td>
</tr>
<tr>
<td>Operating pressure [Pa]</td>
<td>Atm to 10^-6</td>
</tr>
<tr>
<td>Leak rate (He)[Pa*m³/sec]</td>
<td>&lt;10^-12</td>
</tr>
<tr>
<td>Gas compatibility</td>
<td>Inert gas</td>
</tr>
</tbody>
</table>

*Water-cooling available on most configurations*