FEATURES
- Compact design allows seals to fit in confined areas
- Sufficient displacement to drive a wide variety of instrumentation
- Minimal fill volume
- All stainless steel construction; other materials available
- Lightweight design

TYPICAL USES
- Oil and gas
- Refineries (Hydrofluoric / Sulfuric Alkylation)
- Chemical and petrochemical
- Water and wastewater
- Oil and gas fracking
- NACE Compliant processes (sour gas separation)
- Biogas and biodiesel
- Corrosive processes

SPECIFICATIONS
- Connection Style:
  - 510: Threaded
  - 511: Threaded with Flushed Connection
- Process Connection Size: ½ NPT Male
- Instrument Connection Size: ½ NPT Female
- Pressure Rating (MAWP):
  - Vac. to 1,500 psi at 100 °F (high pressure option available)
- Added Tolerance: ±0.5% typical
- Fill Fluid: Glycerin, Silicone, Halocarbon®, Syltherm®
- Approvals: CRN, NACE

WETTED COMPONENTS
- Diaphragm
  - 316L SS
  - Hastelloy® C-276
  - Monel® 400
  - Duplex 2205
- Lower Housing
  - 316L Stainless steel
  - Hastelloy® C-276
  - Monel® 400
  - Duplex 2205
  - Hastelloy® B

NON-WETTED COMPONENTS
- Top Housing
  - 316 SS, Hastelloy® C-276 (XHB), Monel® 400, Duplex 2205

KEY BENEFITS
- Continuous duty design
- All-welded construction prevents inadvertent disassembly
- Ensures process compatibility
- Male connections eliminate adapters/fittings

All specifications are subject to change without notice. All sales subject to standard terms and conditions. Ashcroft® and Trust the Shield® are trademarks of Ashcroft Inc. The following non-Ashcroft trademarks are the property of their respective owners: Halocarbon®, Hastelloy®, Monel®, Syltherm®, Tantalum®. For more information, see Ashcroft Brands & Trademarks.
# 510/511 All Welded Diaphragm Seal

## ORDERING CODE

<table>
<thead>
<tr>
<th>Process Connection Size</th>
<th>Example:</th>
</tr>
</thead>
<tbody>
<tr>
<td>04 - ½ NPT Male</td>
<td>04</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seal Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>510 - All-welded threaded compact seal, with no flushing port</td>
</tr>
<tr>
<td>511 - All-welded threaded compact seal, with flushing port</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Diaphragm Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>S - 316L Stainless Steel</td>
</tr>
<tr>
<td>H - Hastelloy® C-276</td>
</tr>
<tr>
<td>P - Monel® 400</td>
</tr>
<tr>
<td>W - 316L Stainless Diaphragm, gold plated on non-process (fill) side</td>
</tr>
<tr>
<td>B - Monel Diaphragm, gold plated on non-process (fill) side</td>
</tr>
<tr>
<td>Z - Duplex 2205</td>
</tr>
<tr>
<td>U - Tantalum®</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bottom Housing Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>S - 316L Stainless Steel</td>
</tr>
<tr>
<td>H - Hastelloy® C-276</td>
</tr>
<tr>
<td>M - Monel® 400</td>
</tr>
<tr>
<td>Z - Duplex 2205</td>
</tr>
<tr>
<td>B - Hastelloy® B (510 only)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Instrument Connection Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>04T - ½ NPT Female</td>
</tr>
</tbody>
</table>

### Options (if choosing option(s) must include an “X”)

- **Fill Fluid**
  - CF - Halocarbon®
  - CC - Syltherm® XLT (for low-temperature applications)
  - CG - Glycerin (direct-mount only)
  - CK - 50 cSt Silicone
  - DJ - 10 cSt Silicone
  - HA - Syltherm® 800 (for high-temperature applications)

- **Optional Features**
  - DU - Instrument welded to seal
  - PU - Pipe plug for flushing connection (511 only)
  - NH - Stainless steel tag wired to product
  - HY - Hydrostatic testing
  - 6B - Cleaning for oxidizing agents
  - HP - High pressure design (510: 10,000 psi MAWP, 511: 5000 MAWP)
  - HB - Hastelloy® C-276 top housing

When selecting an instrument, refer to the [MinMax Guide](#) for compatibility with this diaphragm seal or scan the QR code to the right.
**DIMENSIONS**

For reference only, consult Ashcroft for specific dimensional drawings

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**510 Diaphragm Seal**

- ½ NPT Instrument Connection
- Upper Housing
- Lower Housing
- ½ NPT Process Connection

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**510 High Pressure Diaphragm Seal**

- ½ NPT Instrument Connection
- Across Flats SW [27] / 1.06”
- Across Flats SW [28.6] / 1.13”
- [Ø 37.5] 1.48”

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**511 Diaphragm Seal with Flushing Connection**

- [Ø 57.5] 2.26”
- [Ø 31 mm] 1.22”
- Across Flats SW [27] / 1.06”

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**511 High Pressure Diaphragm Seal with Flushing Connection**

- [Ø 31] 1.22”
- Across Flats SW [27] / 1.06”
- Across Flats SW [28.6] / 1.13”
- [Ø 37.5] 1.48”

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