Diaphragm Pressure Gauges
Process Industry Series Sealgaug®
Type 452.50 - Dry Case / Type 453.50 - Liquid-filled Case

Applications
- With liquid filled case optional for applications with high dynamic pressure pulsations or vibration
- Suitable in corrosive environments for gaseous, liquid or highly viscous media.
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction
- Ideally for applications in the water/wastewater industry

Product features
- PTFE wetted parts
- All stainless steel construction
- High overpressure safety
- Ideal for crystallizing media

Specifications

<table>
<thead>
<tr>
<th>Design</th>
<th>EN 837-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sizes</td>
<td>4&quot; &amp; 6&quot; (100 &amp; 160 mm)</td>
</tr>
<tr>
<td>Accuracy class</td>
<td>± 2.5% of span</td>
</tr>
</tbody>
</table>

Ranges
Vacuum / Compound to 300 psi (20bar)
Pressure from 6" H₂O (16 mbar) to 100" H₂O (250 mbar) -
(6"/160 mm flange diameter)
Pressure from 6 psi (400 mbar) to 360 psi (25 bar) -
(4"/100 mm flange diameter)
or other equivalent units of pressure or vacuum

Working pressure
Steady:  full scale value
Fluctuating:  0.9 x full scale value

Overpressure safety
5 x full scale value, max. 600 psi (40 bar)

Operating temperature
Ambient:  -4°F to +140°F (-20°C to +60°C)
Medium:  +212°F maximum (+100°C)
Storage:  -4°F...+158°F (-20°C to +70°C)
          for ranges > 25" WC (80 mbar)
          -4°F...+158°F (-20°C to +70°C)
          for ranges ≤ 25" WC (60 mbar)

Temperature error
Additional error when temperature changes from reference temperature of 68°F (20°C) ±0.8% of span for every 18°F (10°K) rising or falling.

Weather protection
Weather resistant (NEMA 3 / IP54) - dry case
Weather tight (NEMA 4X / IP66) - liquid-filled case

Case and upper diaphragm housing
Material: stainless steel
Case with pressure relief disc and stainless steel bayonet ring

Pressure connection and lower diaphragm housing
316L stainless steel with PTFE lining
1" 150# RF flange
2" 150# RF flange

Diaphragm element
≤ 100" H₂O (250 mbar): 316 stainless steel with PTFE lining
> 100" H₂O (250 mbar): Inconel® (NiCr-alloy) with PTFE lining
### Optional extras

- 10X overpressure safety, max. 600 psi (40 bar)
- Silicone or fluorolube case filling
- Open flange connections (300# ASME maximum)
- Instrument glass or acrylic window
- Cleaned for oxygen service
- Extended media temperature to +392°F (+200°C)
- Alarm contacts switches (magnetic or inductive)
- Custom dial layout
- Special wetted materials

### Movement

Material: stainless steel

### Dial

White aluminum with black lettering

### Pointer

Black aluminum, adjustable - Type 452.50
Black aluminum, non-adjustable - Type 453.50

### Window

Laminated safety glass with Buna-N gasket

### Case fill

Standard dry

Glycerine 86.5% - Type 453.50

### Gauge Dimensions

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>4&quot;</td>
<td>mm</td>
<td>100</td>
<td>49.5</td>
<td>99</td>
<td>15.5</td>
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<tr>
<td></td>
<td>in</td>
<td>4</td>
<td>1.95</td>
<td>3.9</td>
<td>0.61</td>
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<tr>
<td>6&quot;</td>
<td>mm</td>
<td>160</td>
<td>49.5</td>
<td>159</td>
<td>15.5</td>
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<td></td>
<td>in</td>
<td>6</td>
<td>1.95</td>
<td>6.26</td>
<td>0.61</td>
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</table>

NOTE: For "B", see "Connecting Flange" dimensions on sheet 3 of 3.
### Connecting Flange Dimensions ASME B 16.5, Size 1”, Class 150

<table>
<thead>
<tr>
<th>Connecting Flange Pressure Gauge</th>
<th>Pressure Ranges</th>
<th>( d_4 )</th>
<th>( k )</th>
<th>( b_1 )</th>
<th>( f )</th>
<th>( G_1 )</th>
<th>( B )</th>
<th>Total Weight</th>
</tr>
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<tbody>
<tr>
<td><strong>ASME Size 1” Class 150</strong></td>
<td>4&quot; ≤ 0.25 bar mm</td>
<td>160</td>
<td>79.5</td>
<td>51</td>
<td>36</td>
<td>2</td>
<td>4 x 1/2-13 UNC</td>
<td>114</td>
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<tr>
<td></td>
<td>≤ 3.63 psi in</td>
<td>6.30</td>
<td>3.13</td>
<td>2.01</td>
<td>1.42</td>
<td>0.08</td>
<td>4 x 1/2-13 UNC</td>
<td>4.49</td>
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<tr>
<td></td>
<td>&gt; 0.25 bar mm</td>
<td>160</td>
<td>79.5</td>
<td>51</td>
<td>36</td>
<td>2</td>
<td>4 x 1/2-13 UNC</td>
<td>144</td>
</tr>
<tr>
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<td>&gt; 3.63 psi in</td>
<td>6.30</td>
<td>3.13</td>
<td>2.01</td>
<td>1.42</td>
<td>0.08</td>
<td>4 x 1/2-13 UNC</td>
<td>5.67</td>
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<tr>
<td><strong>6” ≤ 0.25 bar mm</strong></td>
<td>115</td>
<td>79.5</td>
<td>51</td>
<td>27</td>
<td>2</td>
<td>4 x 1/2-13 UNC</td>
<td>103</td>
<td>2.2 kg</td>
</tr>
<tr>
<td></td>
<td>≤ 3.63 psi in</td>
<td>4.53</td>
<td>3.13</td>
<td>2.01</td>
<td>1.06</td>
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<td>4 x 1/2-13 UNC</td>
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<td>79.5</td>
<td>51</td>
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<td>2</td>
<td>4 x 1/2-13 UNC</td>
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<td>&gt; 3.63 psi in</td>
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<td>2.01</td>
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<td>4 x 1/2-13 UNC</td>
<td>5.24</td>
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### Connecting Flange Dimensions ASME B 16.5, Size 2”, Class 150

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<tr>
<th>Connecting Flange Pressure Gauge</th>
<th>Pressure Ranges</th>
<th>( d_4 )</th>
<th>( k )</th>
<th>( b_1 )</th>
<th>( f )</th>
<th>( G_1 )</th>
<th>( B )</th>
<th>Total Weight</th>
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</thead>
<tbody>
<tr>
<td><strong>ASME Size 2” Class 150</strong></td>
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<td>150</td>
<td>120.5</td>
<td>92</td>
<td>54</td>
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<td>4 x O20</td>
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<td>≤ 3.63 psi in</td>
<td>5.91</td>
<td>4.74</td>
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<td>4 x O20</td>
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<tr>
<td></td>
<td>&gt; 0.25 bar mm</td>
<td>150</td>
<td>120.5</td>
<td>92</td>
<td>54</td>
<td>2</td>
<td>4 x O20</td>
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<tr>
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<td>&gt; 3.63 psi in</td>
<td>5.91</td>
<td>4.74</td>
<td>3.62</td>
<td>2.13</td>
<td>0.08</td>
<td>4 x O20</td>
<td>5.67</td>
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<tr>
<td><strong>6” ≤ 0.25 bar mm</strong></td>
<td>150</td>
<td>120.5</td>
<td>92</td>
<td>26.5</td>
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<td>4 x O17</td>
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<td>120.5</td>
<td>92</td>
<td>26.5</td>
<td>2</td>
<td>4 x O17</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>&gt; 3.63 psi in</td>
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<td>4.74</td>
<td>3.62</td>
<td>1.04</td>
<td>0.08</td>
<td>4 x O17</td>
<td>5.16</td>
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Ordering information
Pressure gauge model / Nominal size / Scale range / Size of connection / Optional extras required.
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.