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

Applications
- With liquid filled case 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

Special features
- Wide selection of special materials
- All stainless steel construction
- High overpressure safety
- Raised face flange
- Ideal for crystallizing media

Standard Features

Design
EN 837-3

Sizes
4” & 6” (100 & 160 mm)

Accuracy class
± 2.5% of span

Ranges
Vacuum / Compound to 300 psi
Pressure from 10” H₂O to 250” H₂O (6” flange diameter)
Pressure from 10 psi to 600 psi (4” 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

Operating temperature
Ambient: -4°F to +140°F (-20°C to +60°C)
Medium: +212°F (+100°C) maximum

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

Weather protection
Weather resistant (NEMA 3 / IP54) - dry case
Weather tight (NEMA 4X / IP65) - liquid-filled case

Pressure connection and lower diaphragm housing
1” 150# RF flange or
2” 150# RF flange

Case and upper diaphragm housing
Material: stainless steel
Case with blowout disk and stainless steel bayonet ring

Diaphragm element
< 100” H₂O: 316 stainless steel with PTFE lining
> 100” H₂O: Duratherm (NiCrCo-alloy) with PTFE lining
All ranges with FPM (Viton) sealing gasket

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**
Glycerine 86.5% - Type 453.50

**Optional extras**
- 10X overpressure safety, max. 600 psi
- Underpressure safe to -30"Hg
- 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
- Alarm contacts switches (magnetic or inductive)
- Custom dial layout
- Special wetted materials

**Gauge Dimensions**

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>S</th>
</tr>
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<tbody>
<tr>
<td>4&quot;</td>
<td>mm</td>
<td>100</td>
<td>49.5</td>
<td>99</td>
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<tr>
<td></td>
<td>in</td>
<td>4</td>
<td>1.95</td>
<td>3.9</td>
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<td>6&quot;</td>
<td>mm</td>
<td>160</td>
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<td>in</td>
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<td>1.95</td>
<td>6.26</td>
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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</th>
<th>Pressure Gauge</th>
<th>Pressure Ranges</th>
<th>d₅</th>
<th>k</th>
<th>d₄</th>
<th>b₁</th>
<th>f</th>
<th>G₁</th>
<th>B</th>
<th>Total Weight</th>
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</thead>
<tbody>
<tr>
<td>ASME Size 1” Class 150</td>
<td>≤ 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>
<td>5.6 kg</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>
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<td></td>
<td>4.49</td>
<td>12.32 lbs</td>
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<tr>
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<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>
<td>6 kg</td>
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</tr>
<tr>
<td></td>
<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>
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<td></td>
<td>5.67</td>
<td>13.2 lbs</td>
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<tr>
<td>6”</td>
<td>≤ 0.25 bar mm</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>
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<td>≤ 3.63 psi in</td>
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<td>4 x 1/2-13 UNC</td>
<td>133</td>
<td>2.6 kg</td>
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<tr>
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<td>&gt; 3.63 psi in</td>
<td>4.53</td>
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<td>2.01</td>
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<td>5.24</td>
<td>5.72 lbs</td>
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### Connecting Flange Dimensions ASME B 16.5, Size 2”, Class 150

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<th>Connecting Flange</th>
<th>Pressure Gauge</th>
<th>Pressure Ranges</th>
<th>d₅</th>
<th>k</th>
<th>d₄</th>
<th>b₁</th>
<th>f</th>
<th>G₁</th>
<th>B</th>
<th>Total Weight</th>
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</thead>
<tbody>
<tr>
<td>ASME Size 2” Class 150</td>
<td>≤ 0.25 bar mm</td>
<td>150</td>
<td>120.5</td>
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<td>92</td>
<td>54</td>
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<td>4 x Ø20</td>
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<td>5.3 kg</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>
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<td>5.67</td>
<td>11.66 lbs</td>
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<tr>
<td>6”</td>
<td>≤ 0.25 bar mm</td>
<td>150</td>
<td>120.5</td>
<td>92</td>
<td>26.5</td>
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<td>4 x Ø17</td>
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<td>4 x Ø17</td>
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<td>3.6 kg</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>
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<td>5.16</td>
<td>7.92 lbs</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.

WIKA Instrument Corporation
1000 Wiegand Boulevard
Lawrenceville, GA 30043
Tel (770) 513-8200 Toll-free 1-888-WIKA-USA
Fax (770) 338-5118
E-Mail info@wika.com
www.wika.com