Bourdon Tube Pressure Gauges
Industrial Stainless Steel Gauge
Type 232.54 - Dry Case
Type 233.54 - Liquid-filled Case

Applications
- Intended for adverse service conditions where pulsating or vibration exists
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction
- Suitable for gaseous or liquid media that will not obstruct the pressure system

Special features
- Vibration and shock resistant (with liquid filling)
- All stainless steel construction
- Pressure ranges up to 15,000 psi

Standard Features

Design
ASME B40.100 & EN 837-1

Sizes
2½" & 4" (63 & 100 mm)

Accuracy class
2½": ± 2/1/2% of span (ASME B40.100 Grade A)
4": ± 1% of span (ASME B40.100 Grade 1A)

Ranges
Vacuum / Compound to 200 psi
Pressure from 15 psi to 15,000 psi
or other equivalent units of pressure or vacuum

Working pressure
2½":
- Steady: 3/4 scale value
- Fluctuating: 2/3 full scale value
- Short time: full scale value
4":
- Steady: full scale value
- Fluctuating: 0.9 x full scale value
- Short time: 1.3 x full scale value

Operating temperature
Ambient: -40°F to +140°F (-40°C to +60°C) - dry
-4°F to +140°F (-20°C to +60°C) - glycerine filled
-40°F to +140°F (-40°C to +60°C) - silicone filled
Medium: +212°F (+100°C) maximum

Temperature error
Additional error when temperature changes from reference temperature of 68°F (20°C) ±0.4% for every 18°F (10°C) rising or falling. Percentage of span.

Weather protection
Weather tight (NEMA 4X / IP 65)

Pressure connection
Material: 316L stainless steel
Lower mount (LM) or center back mount (CBM) - 2½"
Lower mount (LM) or lower back mount (LBM) - 4"
1/4" NPT or 1/2" NPT limited to wrench flat area

Bourdon tube
Material: 316L stainless steel
2" & 2½": ≤ 1,000 PSI: C-type,
≥ 1,500 PSI: helical type
4": ≤ 1,500 PSI: C-type,
≥ 2,000 PSI: helical type

Movement
300-series stainless steel

Dial
White aluminum with black lettering; 2½" size with stop pin
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.

| Pointer | Black aluminum, friction adjustable |
| Case | 304 stainless steel with vent plug and polished stainless steel bayonet ring. Suitable for liquid filling. Welded case/socket connection |
| Window | Laminated safety glass with Buna-N gasket |
| Case fill | Glycerine 99.7% - Type 233.54 |

### Optional extras
- 316SS restrictor
- Accuracy ±1.0% of full scale (2½” size)
- Stainless steel front or rear flange
- Zinc-plated steel or SS u-clamp bracket (field installable)
- Red drag pointer or mark pointer
- Silicone or fluorolube case filling
- Special connections limited to wrench flat area
- Custom dial layout
- Other pressure scales available bar, kPa, MPa, kg/cm² and dual scales

#### Dimensions

- **Dimensions**
  - **Pointer**
    - Black aluminum, friction adjustable
  - **Case**
    - 304 stainless steel with vent plug and polished stainless steel bayonet ring. Suitable for liquid filling. Welded case/socket connection
  - **Window**
    - Laminated safety glass with Buna-N gasket
  - **Case fill**
    - Glycerine 99.7% - Type 233.54

#### Size

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>R</th>
<th>S</th>
<th>T</th>
<th>W</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5” mm</td>
<td>70</td>
<td>54</td>
<td>33.5</td>
<td>62</td>
<td>13</td>
<td>55.5</td>
<td>-</td>
<td>3.6</td>
<td>85</td>
<td>75</td>
<td>87</td>
<td>72</td>
<td>12</td>
<td>14</td>
<td>0.36 lb. dry</td>
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<tr>
<td>in</td>
<td>2.75</td>
<td>2.13</td>
<td>1.32</td>
<td>2.44</td>
<td>0.51</td>
<td>2.19</td>
<td>-</td>
<td>0.14</td>
<td>3.35</td>
<td>2.95</td>
<td>3.43</td>
<td>2.83</td>
<td>0.47</td>
<td>1/4”</td>
<td>0.55</td>
<td>0.44 lb. filled</td>
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<tr>
<td>4” mm</td>
<td>110</td>
<td>87</td>
<td>49.5</td>
<td>100</td>
<td>15.5</td>
<td>81</td>
<td>30</td>
<td>4.8</td>
<td>132</td>
<td>116</td>
<td>125</td>
<td>110</td>
<td>15</td>
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<td>1.10 lb. dry</td>
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<tr>
<td>in</td>
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<td>3.43</td>
<td>1.95</td>
<td>3.94</td>
<td>0.61</td>
<td>3.19</td>
<td>1.18</td>
<td>0.19</td>
<td>5.20</td>
<td>4.57</td>
<td>4.92</td>
<td>4.33</td>
<td>0.59</td>
<td>1/2”</td>
<td>0.87</td>
<td>1.76 lb. filled</td>
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**Recommended panel cutout is dimension D + 1 mm**