Bourdon Tube Pressure Gauges
Stainless Steel, Solid Front Case
Type 232.30 - Dry Case
Type 233.30 - Liquid-filled Case

Applications
- With liquid filled case for applications with high dynamic pressure pulsations or vibration
- Suitable for corrosive environments and gaseous or liquid media that will not obstruct the pressure system
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction

Special features
- Solid-front stainless steel case
- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- Positive pressure ranges to 20,000 PSI

Standard Features

Design
ASME B40.100 & EN 837-1

Sizes
2½", 4" & 6" (63, 100 and 160 mm)

Accuracy class
2½": ± 2/1/2% of span (ASME B40.100 Grade A)
4" & 6": ± 1.0% of span (ASME B40.100 Grade 1A)

Ranges
Vacuum / Compound to 200 psi
Pressure from 0/15 to 0/15,000 psi - 2½" & 4"
Pressure from 0/10 to 0/20,000 psi - 6"
or other equivalent units of pressure or vacuum

Working pressure
2½":
- Steady: full scale value
- Fluctuating: 0.9 x full scale value
- Short time: 1.1 x full scale value

4 & 6":
- Steady: full scale value
- Fluctuating: 1.1 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: +392°F (+200°C) maximum - dry
+212°F (+100°C) maximum - liquid filled

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 / IP65)

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

Bourdon tube
Material: 316L stainless steel
< 1,000 PSI: C-type
≥ 1,500 PSI: helical type

Movement
Stainless steel

Dial
White aluminum with black lettering, 2½" with stop pin

Pointer
Black aluminum, adjustable
Case
304 stainless steel, case with solid baffle wall and blowout back (safety case)

Window
Polycarbonate (2½") and Safety Glass (4" & 6")
with Buna-N gasket

Bezel ring
Stainless steel, bayonet-type

Case fill:
Glycerine 99.7% - Type 233.30 (LM only)

Optional extras
- Other pressure connections
- Monel wetted parts (Type 26X.30)
- Front flange, SS (LBM only)
- Mounting lugs for wall mounting (4" size only)
- Silicone or Halocarbon case filling (LM only)
- Red drag pointer or mark pointer
- Non-adjustable pointer
- Safety glass window
- Custom dial layout
- Integral alarm contacts or transmitters
- Other pressure scales available
  bar, kPa, MPa, kg/cm² and dual scales

Dimensions

<table>
<thead>
<tr>
<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>G</th>
<th>H</th>
<th>J</th>
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<th>M</th>
<th>N</th>
<th>S</th>
<th>T</th>
<th>W</th>
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<tr>
<td>2½&quot;</td>
<td>63</td>
<td>48</td>
<td>42</td>
<td>17.5</td>
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<td>2.95</td>
<td>0.08</td>
<td>1/4&quot;</td>
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<td>2.26</td>
<td>0.94</td>
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<td>0.19</td>
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<td>5.20</td>
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<td>1/2&quot;</td>
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<td>116</td>
<td>58</td>
<td>24</td>
<td>-</td>
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<td>1/2&quot;</td>
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</table>

¹ For 6" LM range 20,000 psi, C dimension changes to 75.5 mm / 2.97 in.
² Weight without optional accessories

Note: For 2½" size, front flange is a 2-piece design. Hole panel cutout dimension for this option is 66.5 mm