Bourdon Tube Pressure Gauges
Stainless Steel Case Process Gauge, Solid Front Design
Type 232.30 - Dry Case 4½"
Type 233.30 - Liquid-filled Case 4½"

Applications
- With liquid-filled case for applications with high dynamic pressure pulsations (add restrictor) 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
- Meets API RP 551 requirements for pressure measurement

Product Features
- Solid-front stainless steel case
- Excellent load-cycle stability and shock resistance
- All 316L stainless steel construction

Specifications

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

Weather protection
Weather tight (NEMA 4X / IP65)

Pressure connection
Material: 316L stainless steel
Lower mount (LM)
¼" NPT or ½" NPT limited to wrench flat area

Bourdon tube
Material: 316L stainless steel
< 1,500 psi (100 bar): C-shape
≥ 1,500 psi (100 bar): Helical

Movement
Stainless steel

Dial
White aluminum with black lettering and stop pin at 6 o'clock

Pointer
Black aluminum, adjustable
Case
- 316L stainless steel with solid baffle wall and blowout back (safety case)
- For pressure ranges ≤ 300 psi, case has a compensating valve/fill plug to vent case pressure

Window
Safety Glass with Buna-N gasket

Bezel ring
316L stainless steel, bayonet-type

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

Optional extras
- Other pressure connections
- Restrictor for high dynamic pressure pulsations
- Mounting lugs for wall mounting*
- Silicone or Halocarbon oil case filling (LM only)
- Red drag pointer or mark pointer
- Acrylic (PMMA) window
- Custom dial layout
- InSight™ reflective dial options available with white, fluorescent yellow, fluorescent orange or glow-in-the-dark dial backgrounds
- 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>T</th>
<th>W</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.5&quot;</td>
<td>mm</td>
<td></td>
<td></td>
<td>mm</td>
<td></td>
<td></td>
<td>1.43 lb. dry</td>
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<tr>
<td></td>
<td>in</td>
<td>4.76</td>
<td>3.82</td>
<td>2.34</td>
<td>0.99</td>
<td>0.87</td>
<td>2.38 lb. filled</td>
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</tbody>
</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: When mounting rear lugs, leave 15 mm between the back of the gauge and the mounting surface.