Bourdon Tube Pressure Gauges
Stainless Steel Series, 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 (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

Product Features

- Solid-front stainless steel case
- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- Positive pressure ranges to 20,000 psi (1600 bar)

Specifications

Design
ASME B40.100 & EN 837-1

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

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

Ranges
Vacuum / Compound to 200 psi (16 bar)
Pressure from 0/15 (1 bar) to 0/15,000 psi (1000 bar)
- 2½”, 4”
Pressure from 0/10 (0.6 bar) to 0/20,000 psi (1600 bar) - 6”
or other equivalent units of pressure or vacuum

Working pressure
2½”:
- Steady: ¾ full-scale value
- Fluctuating: ½ full-scale value
- Short time: full-scale value

4” & 6”:
- Steady: full-scale value
- Fluctuating: 0.9x full-scale value
- Short time: 1.3x 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% 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)
Lower back mount (LBM) - for 2½” & 4” size only
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; 2½” with stop pin

Pointer
Black aluminum, adjustable
**Case**
304 stainless steel 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

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**Optional extras**

- Other pressure connections
- Restrictors for applications with high dynamic pressure pulsations
- Monel® wetted parts (Type 26X.30)
- Front flange, SS (LBM only)
- Mounting lugs for wall mounting*
- 316SS case material
- Silicone or Halocarbon oil case filling
- 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

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**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>
<th>L</th>
<th>M</th>
<th>N</th>
<th>S</th>
<th>T</th>
<th>W</th>
<th>Weight</th>
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<tbody>
<tr>
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<td>mm</td>
<td>63</td>
<td>48</td>
<td>42</td>
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<td>1/2&quot;</td>
<td>0.87 lb. filled</td>
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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.

* Note: When mounting rear lugs, leave 15 mm between the back of the gauge and the mounting surface.

**Recommended panel cutout is dimension D + 1 mm**