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 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”,  4½” & 6” (63, 100, 115 and 160 mm)

Accuracy class
2½”: ± 2/1/2% of span (ASME B40.100 Grade A)
4”, 4½” & 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”, 4½”
- Pressure from 0/10 to 0/20,000 psi - 6”
- or other equivalent units of pressure or vacuum

Working pressure
2½”: Steady: 3/4 full scale
     Fluctuating: 2/3 full scale
     Short time: full scale value
4”, 4½” & 6”: 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: +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” size 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 with solid baffle wall and blowout back (safety case)

Window
Polycarbonate (2½") and Safety Glass (4", 4½" & 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*
- 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

### LM/LBM

<table>
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<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>E</th>
<th>G</th>
<th>H</th>
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<th>S</th>
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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