Bourdon Tube Pressure Gauge
Stainless Steel Case
Type 212.53 - Dry Case
Type 213.53 - Liquid-filled Case

Applications
- Intended for adverse service conditions where pulsating or vibration exists (with liquid filling)
- Hydraulics & compressors
- Suitable for gaseous or liquid media that will not obstruct the pressure system

Product Features
- Vibration and shock resistant (with liquid filling)
- Stainless steel case
- Pressure ranges up to 15,000 psi (1000 bar)

Specifications
Design
ASME B40.100 & EN 837-1

Sizes
2", 2½" & 4" (50, 63 & 100 mm)

Accuracy class
2" & 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 (16 bar)
Pressure from 15 psi (1 bar) to 15,000 psi (1000 bar)
Pressure from 15 psi (1 bar) to 10,000 psi (690 bar) - 2" size or other equivalent units of pressure or vacuum

Working pressure
2 & 2½“:
- Steady: ¾ full-scale value
- Fluctuating: ⅔ 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:
- -4°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: +140°F (+60°C) maximum

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 / IP 66)

Pressure connection
Material: copper alloy
Lower mount (LM) or center back mount (CBM) - 2" & 2½"
Lower mount (LM) or lower back mount (LBM) - 4"
⅛” NPT, ¼” NPT or ½” NPT limited to wrench flat areaABS (2" & 2½") and white aluminum (4")
**Bourdon tube**

- 2" (50 mm) ≤ 870 psi (60 bar): C-shape copper alloy
- 2" (50 mm) > 870 psi (60 bar): Helical copper alloy
- 2½" (63 mm) ≤ 870 psi (60 bar): C-shape copper alloy
- 2½" (63 mm) > 870 psi (60 bar): Helical copper alloy
- 2½" (63 mm) > 6000 psi (400 bar): Helical stainless steel
- 4" (100 mm) ≤ 1000 psi (70 bar): C-shape copper alloy
- 4" (100 mm) > 1000 psi (70 bar): Helical stainless steel

**Movement**

Copper alloy

**Dial**

White ABS (2" & 2½") and white aluminum (4")

**Pointer**

Black aluminum

**Case**

- 304 stainless steel with vent plug and stainless steel crimp ring. Suitable for liquid filling.
- Case connection sealed with O-ring, (O-ring material dependent on the case fill):
  - 2½": EPDM O-ring for Glycerine case fill; Viton O-ring for Silicone fill
  - 4": EPDM O-ring for Glycerine or Silicone case fill; Viton O-ring for Halocarbon or Fluorolube fill

**Window**

Polycarbonate with Buna-N gasket

**Case fill**

Glycerine 99.7% - Type 213.53

**Optional extras**

- Brass restrictor
- Stainless steel front or rear flange - 2½" & 4"
- Zinc-plated steel or SS U-clamp bracket (field installable)
- External zero adjustment (2½" only)
- Red drag pointer or mark pointer
- Silicone or Halocarbon oil case filling
- Special connections limited to wrench flat area
- Custom dial layout
- Other pressure scales available
  - bar, kPa, MPa, kg/cm² and dual scales
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<tr>
<th>Size</th>
<th>A (mm)</th>
<th>B (mm)</th>
<th>C (mm)</th>
<th>D (mm)</th>
<th>E (mm)</th>
<th>F (mm)</th>
<th>G (mm)</th>
<th>H (mm)</th>
<th>J (mm)</th>
<th>K (mm)</th>
<th>M (mm)</th>
<th>N (mm)</th>
<th>O (mm)</th>
<th>S (mm)</th>
<th>T (mm)</th>
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<td>30</td>
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<td>2.83</td>
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Note: For ¼” NPT connections on 4” gauges, reduce B dimension by 5mm/0.2”.

Recommended panel cut-out:
2”- U-clamp: 51mm
front flange: n/a

2½”- U-clamp: 63mm
front flange: 65mm

4”- U-clamp: 101mm
front flange: 104mm
panel mount adapter 104mm minimum (not shown)