Bourdon Tube Pressure Gauge
Stainless Steel Construction
Model 21X.53

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

Special Features

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

Standard Features

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
Pressure from 15 psi to 15,000 psi
Pressure from 15 psi to 10,000 psi - 2" size
or other equivalent units of pressure or vacuum

Working pressure
2 & 2½":
  - Steady: ¾ full-scale value
  - Fluctuating: ½ 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:
  - -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:
  - +140°F (+60°C) maximum

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 / IP 65)

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 area
ABS (2" & 2½") and white aluminum (4")
Bourdon tube

- **2½" Size:** Material: Copper alloy
- **30" Hg (VAC) to 800 psi - C-type (soldered)**
- **1000 psi to 15,000 psi - helical type (soldered)**
- Changes to stainless steel at 7,500 psi brazed
- **4" Size:** Material: Copper alloy ≤ 1,000 psi
- **316 stainless steel ≥ 1,500 psi**
- **30" Hg (Vac) to 1,000 psi- C-type (soldered)**
- **1,500 psi to 15,000 psi- helical type (brazed)**
- Changes to stainless steel at 1,500 psi

**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 Fluorolube case filling
- Special connections limited to wrench flat area
- Custom dial layout
- Other pressure scales available
  - bar, kPa, MPa, kg/cm² and dual scales
### Dimensions

<table>
<thead>
<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>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>
<th>W (mm)</th>
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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
- 4½"- panel mount adapter 104mm minimum (not shown)