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

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: 3/4 scale value
- Fluctuating: 2/3 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 resistant (NEMA 3 / IP 54) - dry case
Weather tight (NEMA 4X / IP 65) - liquid-filled case

Pressure connection
Material: copper alloy
Lower mount (LM) or center back mount (CBM) - 2" & 2½"
Lower mount (LM) or lower back mount (LBM) - 4"
1/8" NPT, 1/4" NPT or 1/2" NPT limited to wrench flat area

Bourdon tube
2½" Size - Material: Copper alloy
30” Hg (VAC) to 800 PSI- C-type (soldered)
1000PSI to 15,000PSI- 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 with stop pin and with black lettering

Pointer
Black aluminum
Case
304 stainless steel with vent plug and stainless steel crimp ring. Suitable for liquid filling. Case connection sealed with EPDM o-ring (glycerine filled) or Viton o-ring (dry or silicone filled).

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</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>S</th>
<th>T</th>
<th>W</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>2&quot; in</td>
<td>2.17</td>
<td>1.89</td>
<td>1.18</td>
<td>1.97</td>
<td>0.47</td>
<td>2.09</td>
<td>-</td>
<td>0.14</td>
<td>n/a</td>
<td>0.26</td>
<td>2.80</td>
<td>2.36</td>
<td>0.22</td>
<td>1/4&quot;</td>
<td>0.55</td>
<td>0.33 lb. filled</td>
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<tr>
<td>2.5&quot; in</td>
<td>2.69</td>
<td>2.13</td>
<td>1.26</td>
<td>2.45</td>
<td>0.51</td>
<td>2.13</td>
<td>-</td>
<td>0.14</td>
<td>2.83</td>
<td>0.30</td>
<td>3.35</td>
<td>2.95</td>
<td>0.26</td>
<td>1/4&quot;</td>
<td>0.55</td>
<td>0.44 lb. filled</td>
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<tr>
<td>4&quot; in</td>
<td>4.21</td>
<td>3.43</td>
<td>1.89</td>
<td>3.91</td>
<td>0.61</td>
<td>3.13</td>
<td>1.18</td>
<td>0.19</td>
<td>4.29</td>
<td>0.35</td>
<td>5.20</td>
<td>4.57</td>
<td>0.31</td>
<td>1/2&quot;</td>
<td>0.87</td>
<td>1.76 lb. filled</td>
</tr>
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</table>

Note: For 1/4" NPT connections on 4" gauges, reduce B dimension by 5mm/0.2".

Recommended panel cut-out:
2" U-clamp: 51mm
2½" U-clamp: 63mm
4" U-clamp: 101mm
4½" panel mount adapter 104mm minimum (not shown)

Ordering information
Pressure gauge model / Nominal size / Scale range / Size of connection / Optional extras required
Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.