Bourdon Tube Pressure Gauges
Stainless Steel Series
Type 232.53 - Dry Case
Type 233.53 - 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

Product features

- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- Positive pressure ranges to 15,000 psi (1,000 bar)

Specifications

Design
ASME B40.100 & EN 837-1

Sizes
2", 2½" & 4" (50, 63 and 100 mm)

Accuracy class
2" & 2½": ± 2/1/2% of span (ASME B40.100 Grade A)
4": ± 1.0% 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 (1,000 bar)
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: +212°F (+100°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 / IP65)

Pressure connection
Material: 316 stainless steel
Lower mount (LM) or center back mount (CBM)
Lower back mount (LBM) for 4" size
1/8” NPT, 1/4” NPT or 1/2” NPT limited to wrench flat area

Bourdon tube
Material: 316 stainless steel
> 1,500 psi (100 bar): C-shape,
≤ 1,500 psi (100 bar): Helical type

Movement
Stainless steel

Dial
White aluminum with black lettering, 2" and 2½” with stop pin
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.

WIKA Instrument Corporation
1000 Wiegand Boulevard
Lawrenceville, GA 30043
Tel (770) 513-8200 Toll-free 1-888-WIKA-USA
Fax (770) 338-5118
E-Mail info@wika.com
www.wika.com

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### Optional extras

- SS restrictor
- SS front flange
- SS rear flange (2½" and 4" only)
- Zinc-plated steel or SS u-clamp bracket (field installable - see note)
- Cleaned for oxygen service
- Red drag pointer or mark pointer (2½" and 4" only)
- External zero adjustment (4" size only)
- Other pressure connections
- Silicone or Halocarbon Oil case filling
- Other pressure scales available: bar, kPa, MPa, kg/cm² and dual scales

Note: U-clamp bracket for 2" must be ordered with gauge

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### Dimensions

#### Front flange

![Front Flange Diagram]

#### Rear Flange

![Rear Flange Diagram]

#### U-Clamp

![U-Clamp Diagram]

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### Size

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<th>Size</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
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<th>H</th>
<th>J</th>
<th>K</th>
<th>M</th>
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<th>S</th>
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Recommended panel cutout is dimension D + 3 mm