

# Bourdon Tube Pressure Gauge Stainless Steel Case Type 212.54 - Dry Case Type 213.54 - Liquid-filled Case

WIKA Datasheet 21X.54

## Applications

- Intended for adverse service conditions where pulsating or vibration exists
- Process industry
- 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 with removable bayonet ring
- Pressure ranges up to 15,000 psi (1000 bar)

## Specifications

### Design

ASME B40.100 & EN 837-1

### Sizes

2½" & 4" (63 & 100 mm)

### Accuracy class

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)

or other equivalent units of pressure or vacuum

### Working pressure

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



Bourdon Tube Pressure Gauge Model 212.54, 4"

### 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) - 2½"

Lower mount (LM) or lower back mount (LBM) - 4"

1/4" NPT or 1/2" NPT limited to wrench flat area

### Bourdon tube

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) < 1500 psi (100 bar): C-shape copper alloy

4" (100 mm) ≥ 1500 psi (100 bar): Helical stainless steel

### Movement

Copper alloy

### Dial

White aluminum with black lettering; 2½" size with stop pin

**Pointer**

Black aluminum, adjustable

**Case**

304 stainless steel with vent plug and stainless steel bayonet ring. Suitable for liquid filling. Case connection sealed with EPDM o-ring (glycerine) or Viton o-ring (dry, silicone).

**Window**

Laminated safety glass with Buna-N gasket

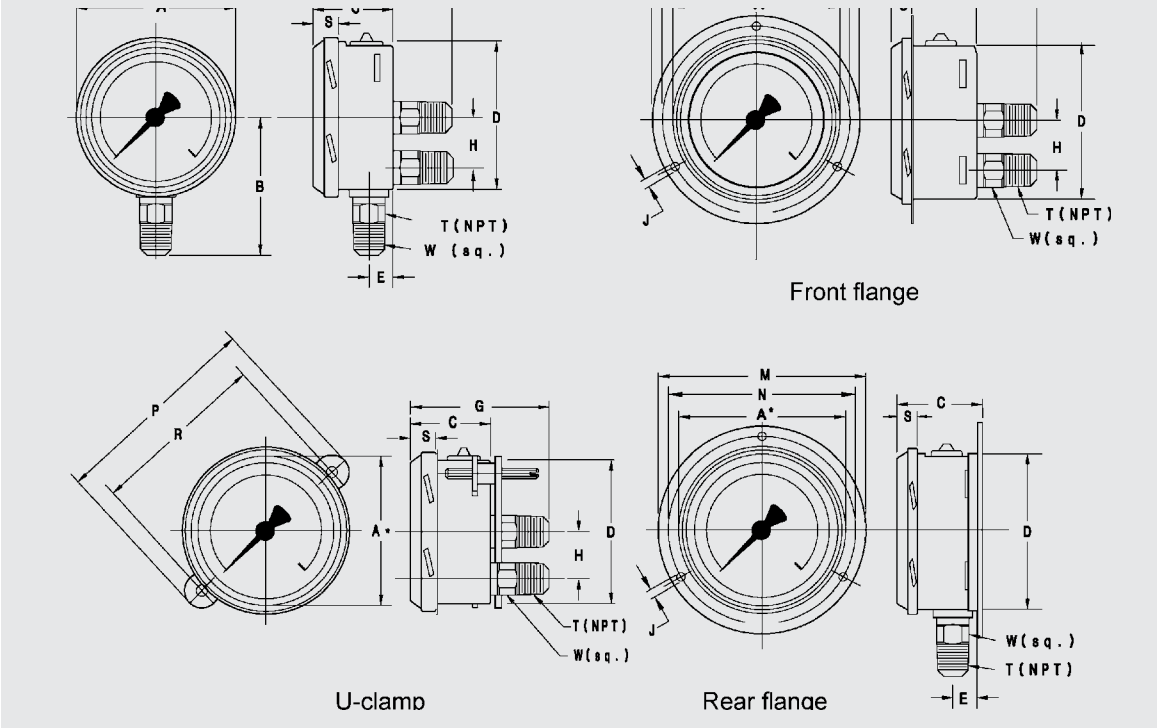
**Case fill**

Glycerine 99.7% - Type 213.54

**Optional extras**

- Brass restrictor
- Stainless steel front or rear flange
- Zinc-plated steel or SS u-clamp bracket (field installable)
- 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/cm<sup>2</sup> and dual scales

**Dimensions**



| Size |    | A    | B    | C    | D    | E    | G    | H    | J    | M    | N    | P    | R    | S    | T    | W    | Weight          |
|------|----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| 2.5" | mm | 70   | 54   | 33.5 | 62   | 13   | 55.5 | -    | 3.6  | 85   | 75   | 87   | 72   | 12   |      | 14   | 0.36 lb. dry    |
|      | in | 2.75 | 2.13 | 1.32 | 2.44 | 0.51 | 2.19 | -    | 0.14 | 3.35 | 2.95 | 3.43 | 2.83 | 0.47 | 1/4" | 0.55 | 0.44 lb. filled |
| 4"   | mm | 110  | 87   | 49.5 | 100  | 15.5 | 81   | 30   | 4.8  | 132  | 116  | 125  | 110  | 15   |      | 22   | 1.10 lb. dry    |
|      | in | 4.30 | 3.43 | 1.95 | 3.94 | 0.61 | 3.19 | 1.18 | 0.19 | 5.20 | 4.57 | 4.92 | 4.33 | 0.59 | 1/2" | 0.87 | 1.76 lb. filled |

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

Recommended panel cut-out:

2"- U-clamp: 63mm  
front flange: 65mm

4"- U-clamp: 101mm  
front flange: 104mm

4 1/2"- 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.



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