

# Bourdon Tube Pressure Gauge Model 21X.54 Stainless Steel Construction

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

## Special features

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

## Standard Features

### 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

Pressure from 15 psi to 15,000 psi

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



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### 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) - 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" 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 aluminum with black lettering; 2½" size with stop pin

**Pointer**

Black aluminum, adjustable

**Case**

304 stainless steel with vent plug and stainless steel crimp 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

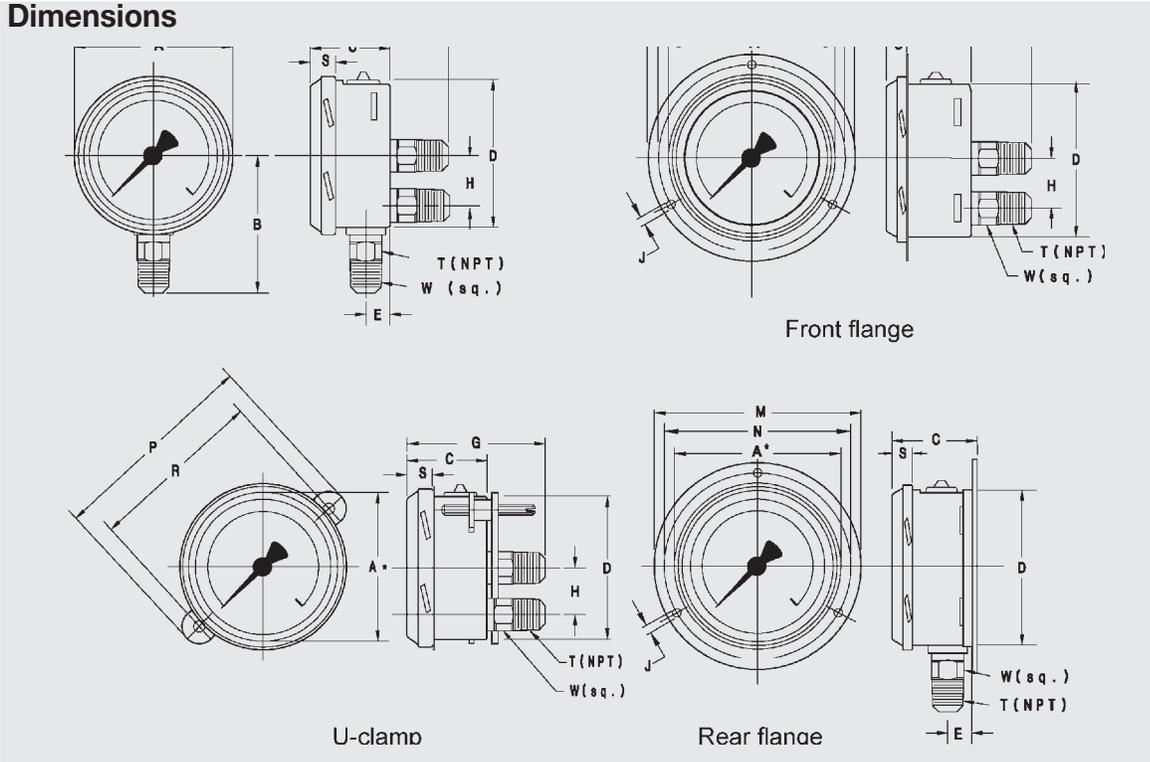
**Case fill**

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
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

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: 63mm      4"- U-clamp: 101mm front flange: 101mm      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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