

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

WIKA Datasheet 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: ⅔ 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



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### 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**

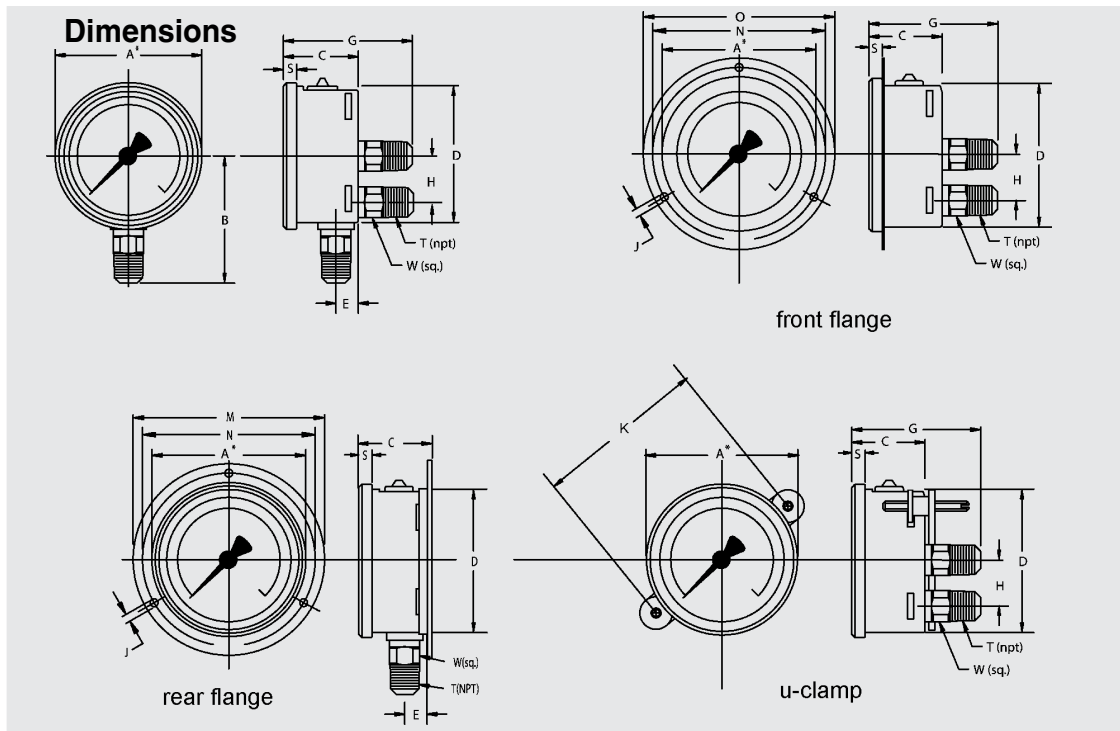
**Polycarbonate with Buna-N gasket**

**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/cm<sup>2</sup> and dual scales



Size		A	B	C	D	E	G	H	J	K	M	N	O	S	T	W	Weight	
2"	mm	55	48	30	50	12	53	-	3.6	72	71	60	17	5.5	14	0.27 lb.	dry	
	in	2.17	1.89	1.18	1.97	0.47	2.09	-	0.14	2.83	2.80	2.36	2.80	0.22	¼"	0.55	0.33 lb.	filled
2½"	mm	69	54	32	62	13	54	-	3.6	72	88.1	75	85	6.5	14	0.36 lb.	dry	
	in	2.69	2.13	1.26	2.45	0.51	2.13	-	0.14	2.83	3.47	2.95	3.35	0.26	¼"	0.55	0.44 lb.	filled
4"	mm	107	87	48	100	15.5	79.5	30	4.8	109	132	116	132	8	22	1.10 lb.	dry	
	in	4.21	3.43	1.89	3.91	0.61	3.13	1.18	0.19	4.29	5.20	4.57	5.20	0.31	½"	0.87	1.76 lb.	filled

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)



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