

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

WIKA Datasheet 23X.53

## 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



Bourdon Tube Pressure Gauge Model 232.53 - 2½"

### 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

**Pointer**

Black aluminum

**Case**

304 stainless steel with vent plug and SS crimp ring  
Welded case / socket connection

**Window**

Polycarbonate

**Liquid filling**

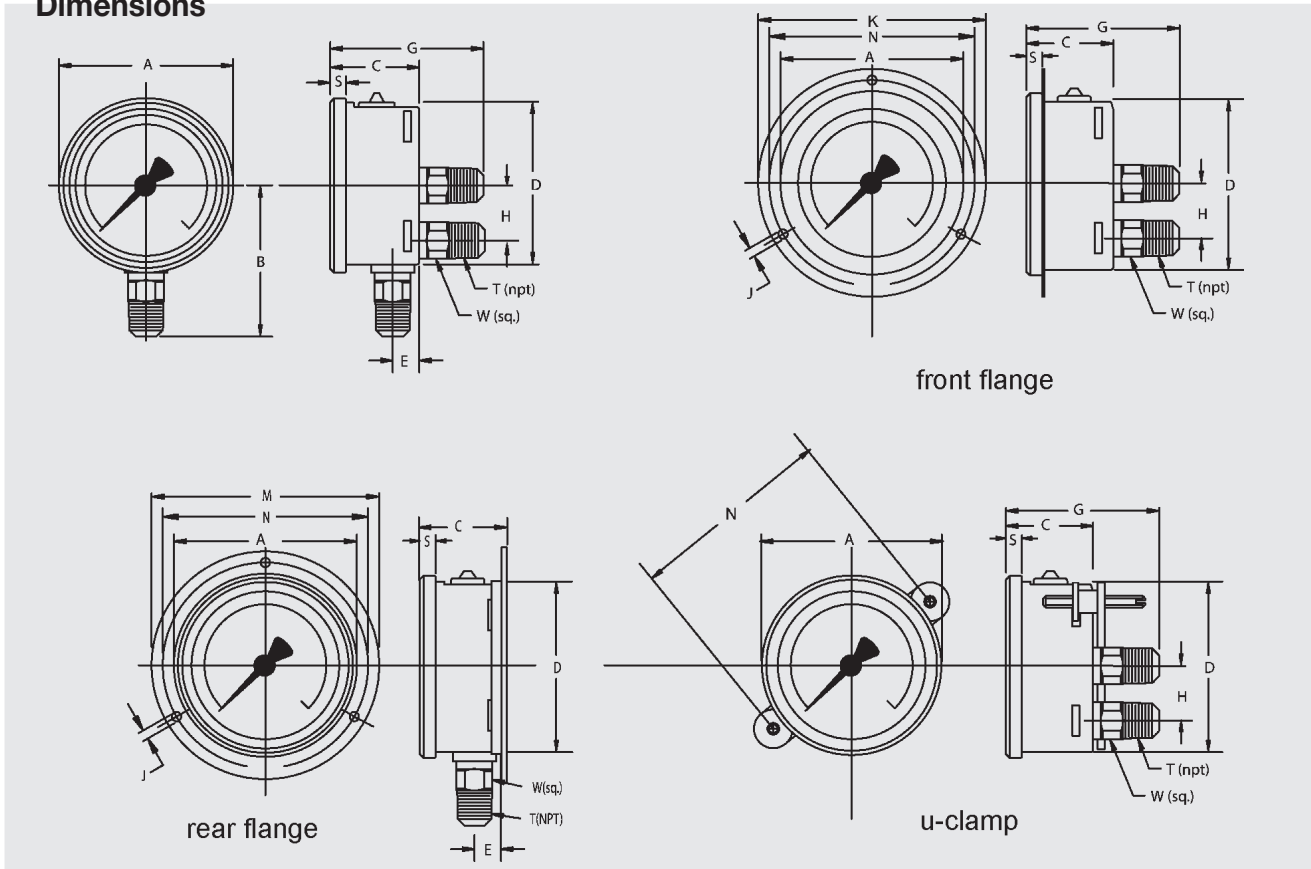
Glycerine 99.7% - Type 233.53

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

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

**Dimensions**



Size		A	B	C	D	E	G	H	J	K	M	N	S	T	W	Weight
2"	mm	55	48	30	50	12	53	-	3.6	71	71	60	5.5		14	0.27 lb. dry
	in	2.17	1.89	1.18	1.97	0.47	2.09	-	0.14	2.80	2.80	2.36	0.22	1/4"	0.55	0.33 lb. filled
2.5"	mm	69	54	32	62	13	54	-	3.6	85	88.1	75	6.5		14	0.36 lb. dry
	in	2.69	2.13	1.26	2.45	0.51	2.13	-	0.14	3.35	3.47	2.95	0.26	1/4"	0.55	0.44 lb. filled
4"	mm	107	87	48	100	15.5	79.5	30	4.8	132	132	116	8		22	1.10 lb. dry
	in	4.21	3.43	1.89	3.91	0.61	3.13	1.18	0.19	5.20	5.20	4.57	0.31	1/2"	0.87	1.76 lb. filled

Recommended panel cutout is dimension D + 3 mm

**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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