

Bourdon Tube Pressure Gauge Stainless Steel Case Type 212.53 - Dry Case Type 213.53 - Liquid-filled Case

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

Product Features

- Vibration and shock resistant (with liquid filling)
- Stainless steel case
- Pressure ranges up to 15,000 psi (1000 bar)



Bourdon Tube Pressure Gauge Model 21X.53

Specifications

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 (16 bar)

Pressure from 15 psi (1 bar) to 15,000 psi (1000 bar)

Pressure from 15 psi (1 bar) to 10,000 psi (690 bar) - 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

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% 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) - 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

2" (50 mm) ≤ 870 psi (60 bar): C-shape copper alloy
2" (50 mm) > 870 psi (60 bar): Helical copper alloy
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) ≤ 1000 psi (70 bar): C-shape copper alloy
4" (100 mm) > 1000 psi (70 bar): Helical stainless steel

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

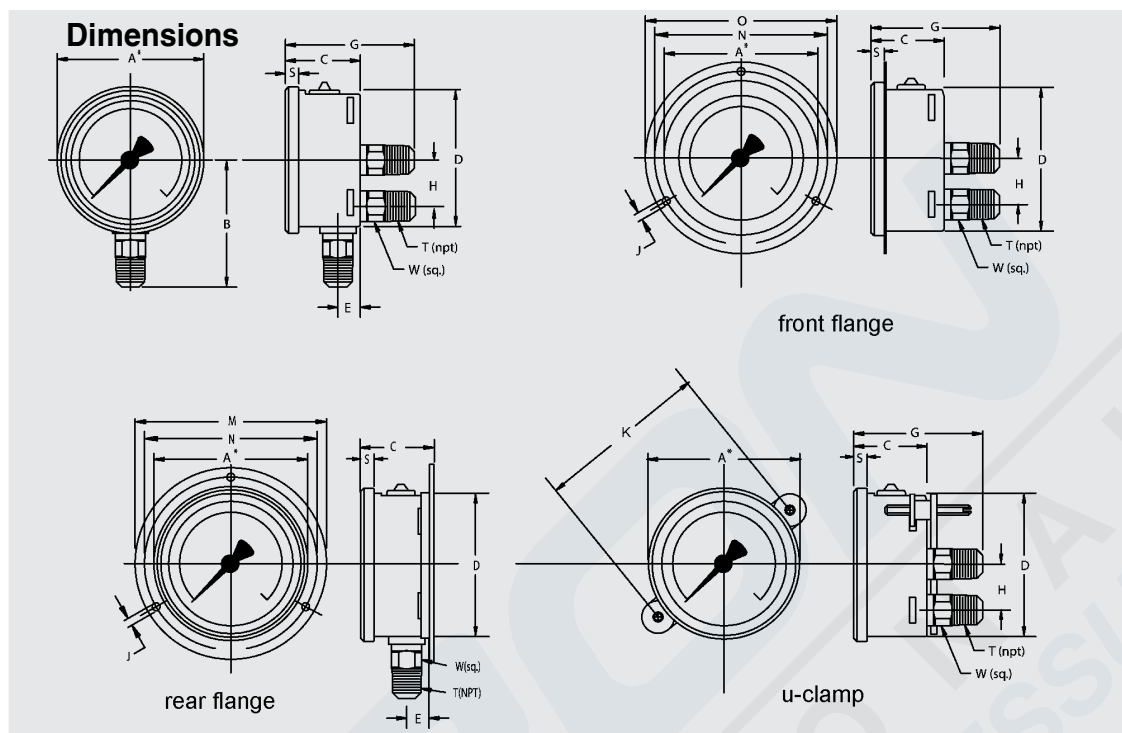
Polycarbonate with Buna-N gasket

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 Halocarbon oil case filling
- Special connections limited to wrench flat area
- Custom dial layout
- Other pressure scales available
bar, kPa, MPa, kg/cm² 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	1/4"	0.55	0.33 lb.	filled
2 1/2"	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	1/4"	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	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: 51mm
front flange: n/a

2 1/2"- U-clamp: 63mm
front flange: 65mm

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

4 1/2"- panel mount adapter 104mm minimum
(not shown)



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