

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

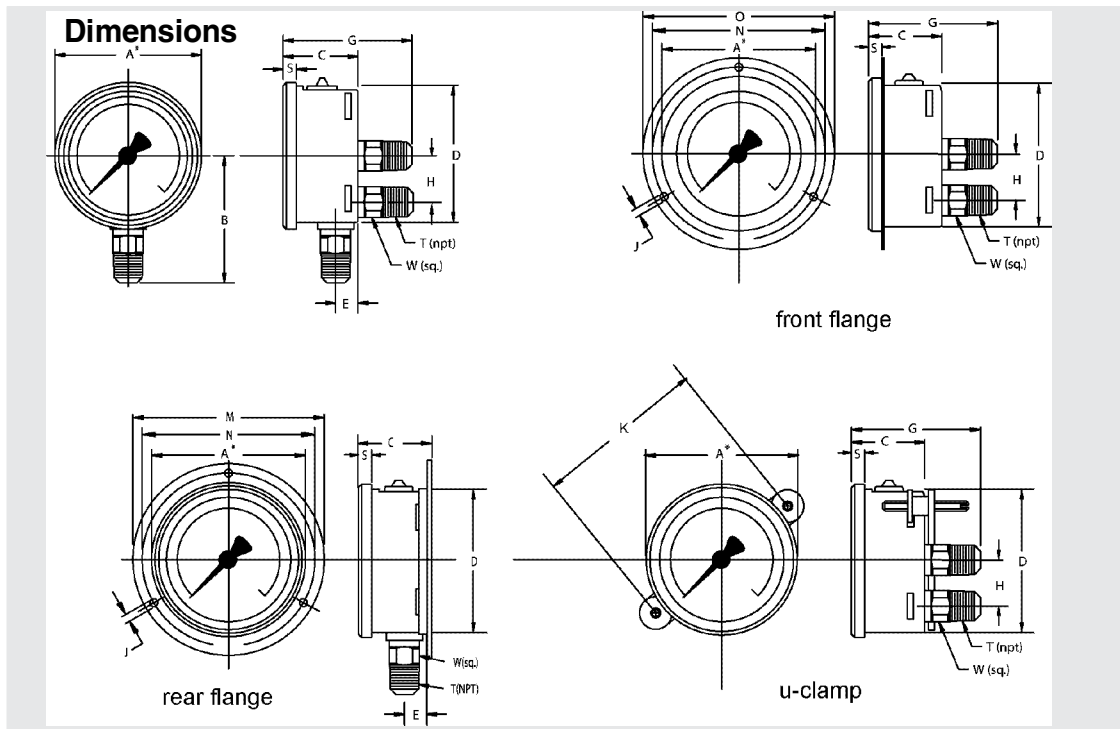
Polycarbonate with Buna-N gasket

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 | 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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