

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

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:	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) - 2" & 2½"
Lower mount (LM) or lower back mount (LBM) - 4"
1/8" NPT, 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 ABS with stop pin and with black lettering

Pointer

Black aluminum

Case

304 stainless steel with vent plug and stainless steel crimp ring. Suitable for liquid filling. Case connection sealed with EPDM o-ring (glycerine filled) or Viton o-ring (dry or silicone filled).

Window

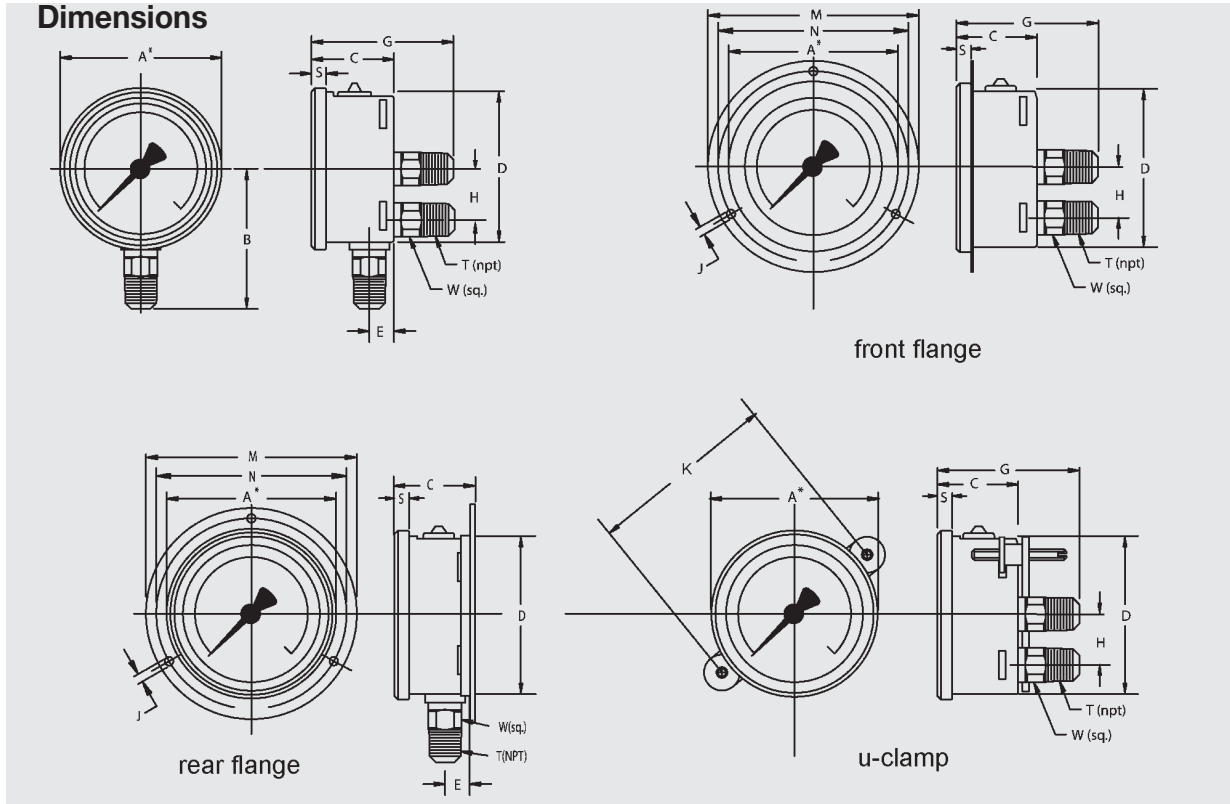
Polycarbonate with Buna-N gasket

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/cm² and dual scales



Size		A	B	C	D	E	G	H	J	K	L	M	N	S	T	W	Weight
2"	mm	55	48	30	50	12	53	-	3.6	n/a	6.5	71	60	5.5		14	0.27 lb. dry
	in	2.17	1.89	1.18	1.97	0.47	2.09	-	0.14	n/a	0.26	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	72	7.5	85	75	6.5		14	0.36 lb. dry
	in	2.69	2.13	1.26	2.45	0.51	2.13	-	0.14	2.83	0.30	3.35	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	109	9	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	4.29	0.35	5.20	4.57	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

2½" U-clamp: 63mm
front flange: 65mm

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

4½" 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.



WIKA Instrument Corporation