

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

Special features

- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- Positive pressure ranges to 15,000 psi

Standard Features

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
Pressure from 15 psi to 15,000 psi
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



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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
Weather tight (NEMA 4X / IP65) - liquid filled

Pressure connection

Material: 316L 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: 316L stainless steel
2" & 2½": ≤ 1,000 PSI: C-type,
≥ 1,500 PSI: helical type
4": ≤ 1,500 PSI: C-type,
≥ 2,000 PSI: helical type

Movement

Stainless steel

Dial

White aluminum with black lettering, 2½" with stop pin

Pointer

Black aluminum

Case

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

Window

Polycarbonate

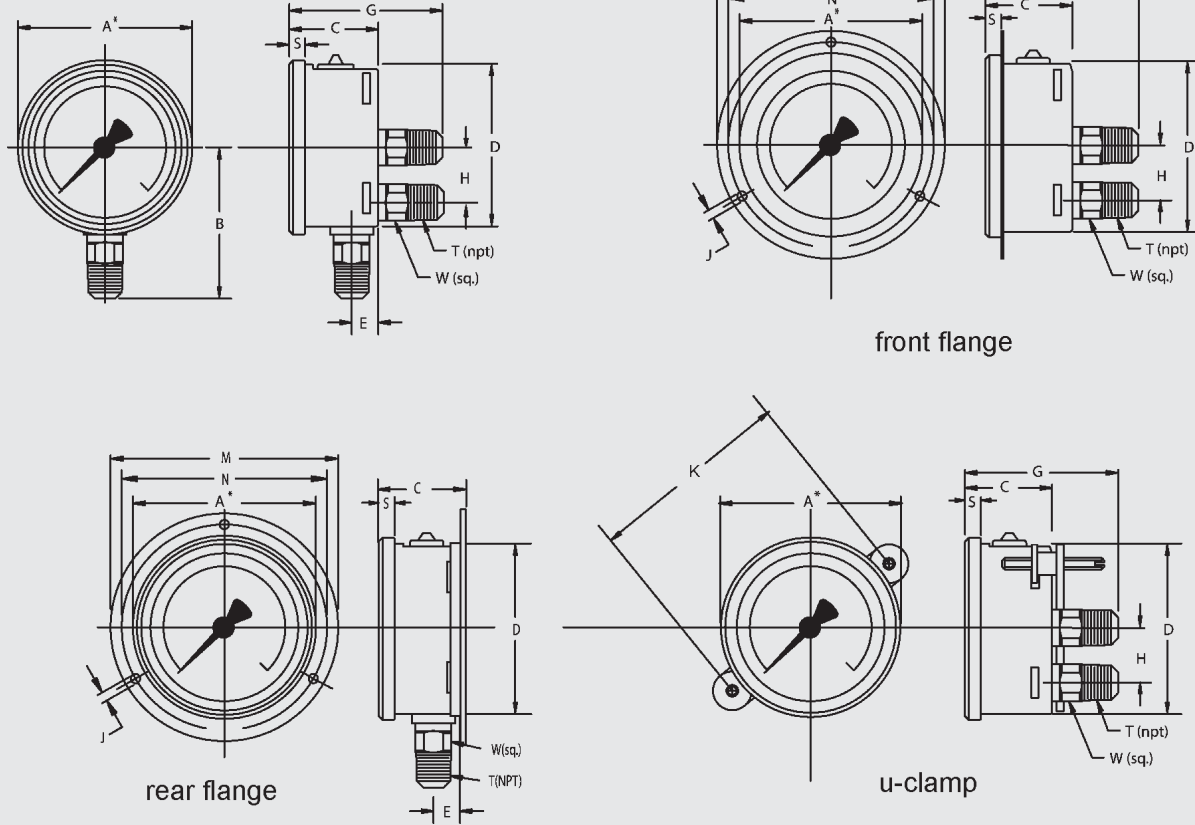
Liquid filling

Glycerine 99.7% - Type 233.53

Optional extras

- SS restrictor
- SS front or rear flanges
- Zinc-plated steel or SS u-clamp bracket (field installable)
- Cleaned for oxygen service
- Red drag pointer for mark pointer
- Other pressure connections
- Silicone or Fluorolube case filling
- Other pressure scales available:
bar, kPa, MPa, kg/cm² and dual scales

Dimensions



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

Recommended panel cutout is dimension D + 1 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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