

# Bourdon Tube Pressure Gauges

## Solid-Front Process Gauge - SS Wetted Parts

### Type 232.34 - Dry Case

### Type 233.34 - Liquid-filled Case

WIKA Datasheet 23X.34

#### 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
- Solid front thermoplastic case
- Positive pressure ranges to 30,000 psi

#### Standard Features

##### Design

ASME B40.100

##### Sizes

4½" & 6" (115 & 147 mm) dial size

##### Accuracy class

± 0.5% of span (ASME B40.100 Grade 2A)  
± 1.0% of span (ASME B40.100 Grade 1A) [for 20,000 psi range]

##### Ranges

Vacuum / Compound to 200 psi  
Pressure from 15 psi to 30,000 psi  
or other equivalent units of pressure or vacuum

##### Working pressure

Steady: full scale value  
Fluctuating: 0.9 x full scale value  
Short time: 1.5 x full scale value

##### Operating temperature

Ambient: -40°F to +150°F (-40°C to +66°C) - dry  
-4°F to +150°F (-20°C to +66°C) - glycerine filled  
-40°F to +150°F (-40°C to +66°C) - silicone filled  
Medium: max. +212°F (+100°C) (See Note 1 on reverse)

##### 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.



Bourdon Tube Pressure Gauge Model 232.34

##### Weather protection

Weather resistant (NEMA 3 / IP54) - dry case  
Weather tight (NEMA 4X / IP65) - liquid-filled case

##### Pressure connection

Material: 316L stainless steel  
Lower mount (LM) or lower back mount (LBM)  
1/4" or 1/2" NPT with M4 internal tap

##### Bourdon tube

Material: 316L stainless steel  
≤ 1,000 PSI: C-type  
≥ 1,500 PSI: helical type

##### Movement

Stainless steel. Internal stop pin at 1.3 x full scale  
Overload and underload stops - standard  
Dampened movement - optional

##### Dial

White aluminum with black lettering, stop pin at 6 o'clock

##### Pointer

Black aluminum, adjustable

##### Case

Black glass-reinforced thermoplastic (PBTP)  
Solid front, blowout back  
Turret-style case with built in rear flange lugs

## Window

Clear acrylic with Buna-N gasket

## Case filling

Glycerine 99.7% - Type 233.34

## Shock & vibration

Shock resistant up to 100g force (up to 400g optional)

Vibration resistance up to 10g optional

## Cycle testing

400,000 - 2,000,000\* cycles, depending upon pressure range

\* Liquid filled

**Note 1:** Maximum continuous media temperature of 212°F is recommended. However, higher temperatures can be maintained safely for short term exposure per table to the right. The user should consider temperature error and gauge component degradation when exposing gauge to any media or ambient temperature above 212°F. For continuous use in either ambient or media temperatures above 212°F, a diaphragm seal or other heat dissipating means is recommended. Consult factory for technical inquiries and application assistance.

## Optional extras

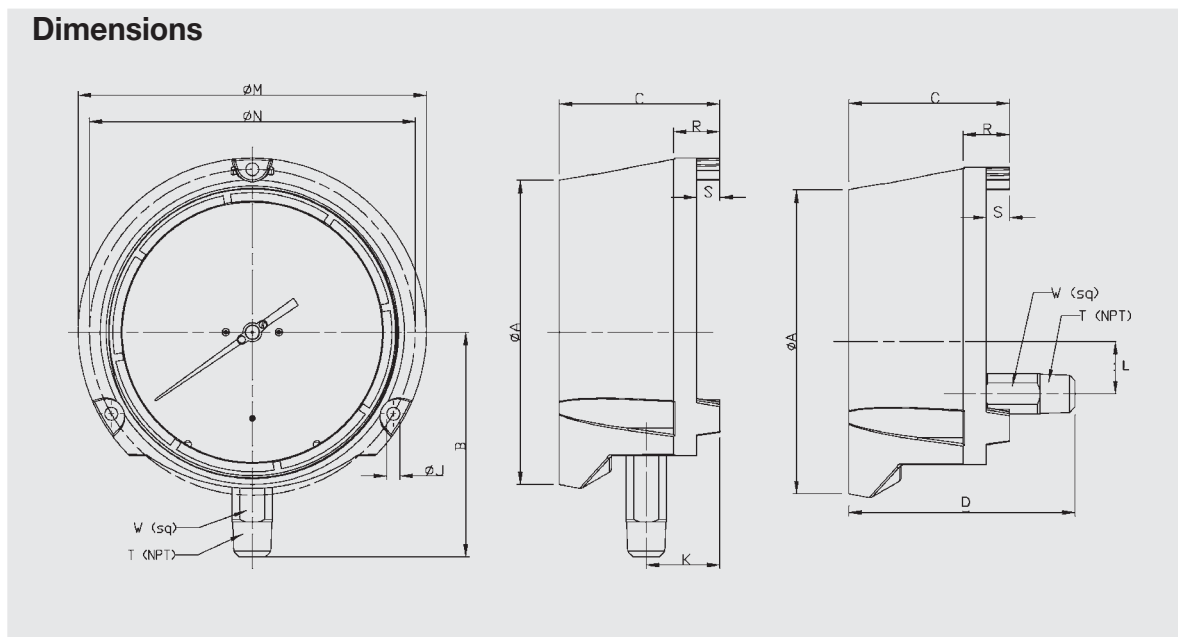
- Threaded restrictor
- Silicone dampened movement
- Panel mounting adaptor kit (field assembled)
- Silicone for fluorolube case filling
- Cleaned for oxygen service
- Instrument glass or safety glass window
- Alarm contacts switches (magnetic or inductive)
- Special process connections
- Custom dial layout

## Short term, intermittent maximum media temperature limits

(Optional glass window required for all these temperatures)

- 500°F (260 °C) - Dry Gauge
- 250°F (130°C) - Liquid filled gauge
- 300°F (150°C) - Dampened movement gauge

## Dimensions



### Size

		A	B	C	D	J	K	L	M	N	R	S	T	W	Weight <sup>1</sup>
4.5"	mm	128	103	84	120.3	6.3	40	28.5	148	136.5	25	12.5		22	2 lb. dry
	in	5	4.06	3.31	4.74	0.248	1.57	1.12	5.83	53.7	0.99	0.49	1/2"	0.87	3 lb. filled
6"	mm	164	122.5	88	123.4	7.1	40.2	28.5	190	177.8	25.4	12.7		22	3 lb. dry
	in	6.46	4.82	3.46	4.86	0.28	1.58	1.12	7.5	7	1	0.5	1/2"	0.87	4 lb. filled

<sup>1</sup> Weight without optional accessories

### 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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