

# Bourdon Tube Pressure Gauges

## Industrial Stainless Steel Gauge

### Type 232.54 - Dry Case

### Type 233.54 - Liquid-filled Case

#### Applications

- Intended for adverse service conditions where pulsating or vibration exists
- Process industry: chemical/petrochemical, power stations, mining, on and offshore, environmental technology, mechanical engineering and plant construction
- Suitable for gaseous or liquid media that will not obstruct the pressure system

#### Product features

- Vibration and shock resistant (with liquid filling)
- All stainless steel construction
- Pressure ranges up to 15,000 psi

#### Specifications

##### Design

ASME B40.100 & EN 837-1

##### Sizes

2½" & 4" (63 & 100 mm)

##### Accuracy class

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)

or other equivalent units of pressure or vacuum

##### Working pressure

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% of span for every 18°F (10°K) rising or falling.

##### Weather protection

Weather tight (NEMA 4X / IP 65)

##### Pressure connection

Material: 316L stainless steel

Lower mount (LM) or center back mount (CBM) - 2½"

Lower mount (LM) or lower back mount (LBM) - 4"

1/4" NPT or 1/2" NPT limited to wrench flat area

##### Bourdon tube

Material: 316 stainless steel

< 1,500 psi (100 bar): C-shape,

≥ 1,500 psi (100 bar): Helical type

##### Movement

300-series stainless steel

##### Dial

White aluminum with black lettering; 2½" size with stop pin

**Pointer**

Black aluminum, friction adjustable

**Case**

304 stainless steel with vent plug and polished stainless steel bayonet ring. Suitable for liquid filling. Welded case/socket connection

**Window**

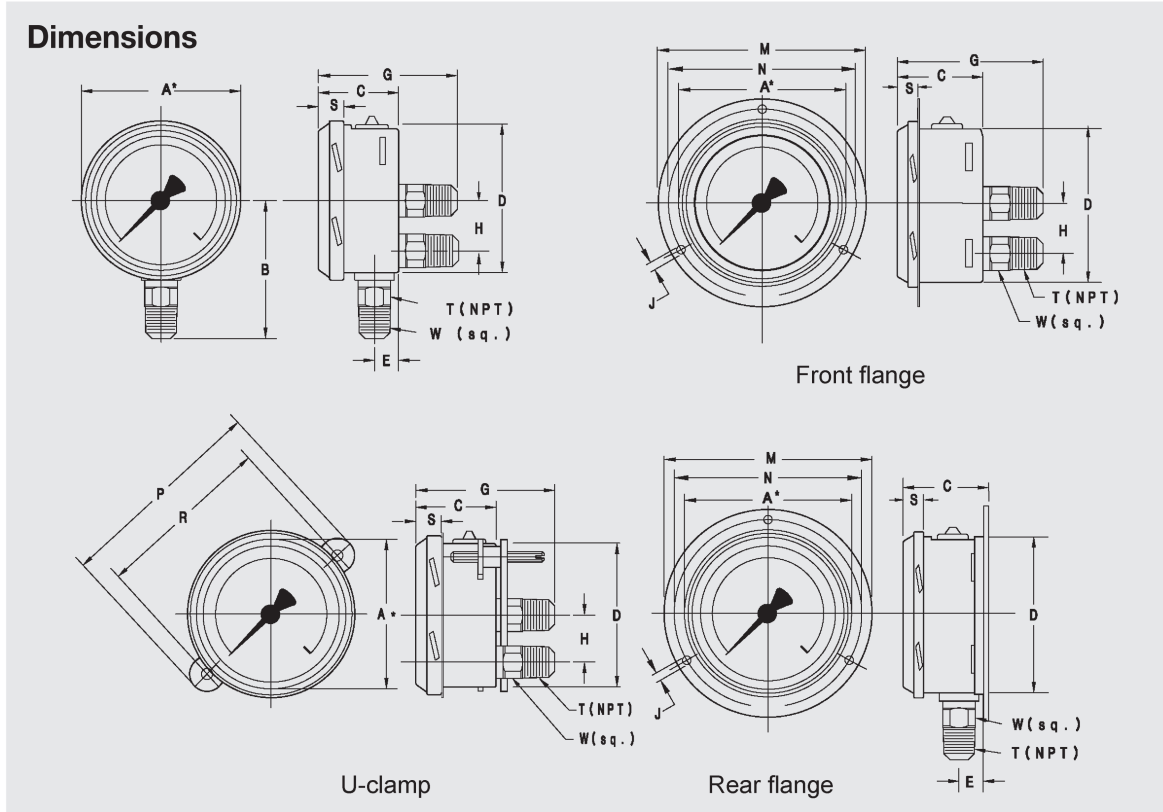
Laminated safety glass with Buna-N gasket

**Case fill**

Glycerine 99.7% - Type 233.54

**Optional extras**

- 316SS restrictor
- Accuracy  $\pm 1.0\%$  of full scale (2 1/2" size)
- Stainless steel front or rear flange
- Zinc-plated steel or SS u-clamp bracket (field installable)
- 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/cm<sup>2</sup> and dual scales



Size		A	B	C	D	E	G	H	J	M	N	P	R	S	T	W	Weight
2.5"	mm	70	54	33.5	62	13	55.5	-	3.6	85	75	87	72	12		14	0.36 lb. dry
	in	2.75	2.13	1.32	2.44	0.51	2.19	-	0.14	3.35	2.95	3.43	2.83	0.47	1/4"	0.55	0.44 lb. filled
4"	mm	110	87	49.5	100	15.5	81	30	4.8	132	116	125	110	15		22	1.10 lb. dry
	in	4.30	3.43	1.95	3.94	0.61	3.19	1.18	0.19	5.20	4.57	4.92	4.33	0.59	1/2"	0.87	1.76 lb. filled

Recommended panel cutout is dimension D + 3 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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