

# Bourdon Tube Pressure Gauges

## Stainless Steel Case with Liquid Filling • Model 213.53

### Pressure Gauges

Approval German Lloyd



#### Service intended

Robust pressure gauge with stainless steel case and liquid filling. Intended for adverse service conditions where pulsation or vibration exists. Suitable for gaseous or liquid media that will not obstruct the pressure system or attack copper alloy parts.

#### Design

EN 837-1

#### Nominal size

50, 63, 80 and 100 mm

#### Accuracy class per EN 837-1 /6

50 and 63 mm: 1.6

80 and 100 mm: 1.0

#### Scale ranges per EN 837-1 /5

50 mm: 0 ... 1 to 0 ... 400 bar

63, 80 and 100 mm: 0 ... 0.6 to 0 ... 1000 bar

or other equivalent units of pressure or vacuum.

#### Working pressure

50 and 63 mm: Steady:  $\frac{3}{4}$  of full scale value

Fluctuating:  $\frac{2}{3}$  of full scale value

Short time: full scale value

80 and 100 mm: Steady: full scale value

Fluctuating: 0.9 x full scale value

Short time: 1.3 x full scale value

#### Operating temperature

Ambient: -20 ... +60 °C

Medium: +60 °C maximum

#### Temperature error

Additional error when temperature of the pressure element deviates from +20 °C

Rising temperature: +0.3%/10 K of true scale value

Falling temperature: -0.3%/10 K of true scale value

#### Degree of protection

IP 65 per EN 60 529 / IEC 529

#### Standard features

##### Pressure connection

Material: Copper alloy

Threaded entry (radial or back) per EN 837-1 /7.3

50 and 63 mm: G  $\frac{1}{4}$  B 14, mm flats

80 and 100 mm: G  $\frac{1}{2}$  B 22, mm flats

##### Pressure element

50, 63 and 80 mm:

&lt; 60 bar: Cu-alloy, C-type, soft soldered

<sup>3</sup> 60 bar: Cu-alloy, helical type, soft soldered

100 mm:

&lt; 100 bar: Cu-alloy, C-type, soft soldered

<sup>3</sup> 100 bar: stainless steel 1.4571, helical type, brazed


#### Movement

Cu-alloy

80 mm: Cu-alloy, wear parts argantan

#### Dial

50 and 63 mm: white plastic, with pointer stop pin

80 and 100 mm: white aluminium

With black lettering

#### Pointer

50 and 63 mm: black plastic

80 and 100 mm: black aluminium

#### Case

Natural finish stainless steel

O-ring seal between case and entry stem

Pressure relief in case top

Ranges  $\geq$  6 bar with case venting provision

#### Window

Non-splintering clear acrylic glass

#### Bezel ring

Triangular bezel, roll formed, glossy finish stainless steel

#### Liquid filling

Glycerine 99.7 %

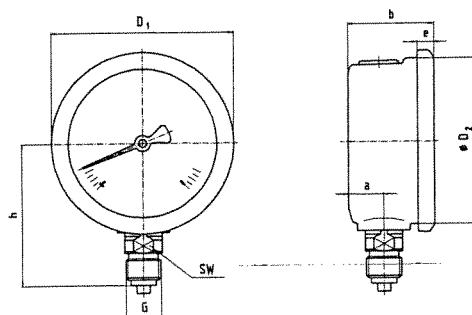
#### Optional extras

- Other pressure connections
- 50 and 63 mm: stainless steel pressure system (model 233.53)
- 63 and 100 mm: internal pressure compensation
- 100 mm: zero point adjustable in front
- Medium temperature to 100 °C with special soft solder
- 3-hole panel mounting flange, stainless steel (back entry only)
- 3-hole surface mounting flange, stainless steel
- With clamp (back entry only)

## Dimensions

### Standard version

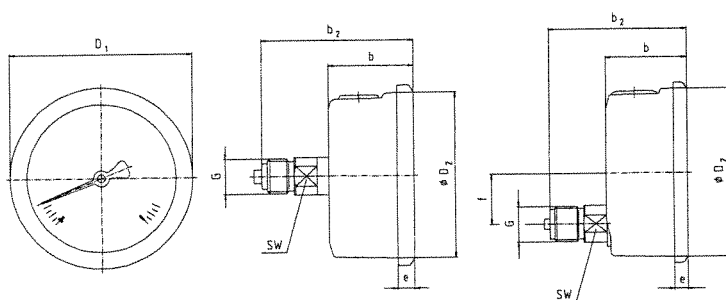
#### Radial bottom pressure connection



1224 557

#### 50, 63 and 80 mm, centre back pressure connection

#### 100 mm, lower back pressure connection



1224 549

Nominal size	Dimensions [mm]										Weight [kg]
	a	b ± 0,5	b <sub>2</sub> ± 1	D <sub>1</sub>	D <sub>2</sub>	e	f	G	h ± 1	SW	
50	12	30	55	55	50	5.5	-	G ¼ B	48	14	0.15
63	13	32	56	68	62	6.5	-	G ¼ B	54	14	0.21
80	15.8	43.5	78	83.6	80	5	-	G ½ B	76	22	0.39
100	15.5	48	81.5	107	100	8	30	G ½ B	87	22	0.80

Standard pressure connection with parallel thread and seating to EN 837-1 / 7.3

### Ordering information

State:

Pressure gauge model / Nominal size / Scale range / Size and location 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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