

## Bourdon Tube Pressure Gauges Stainless Steel Series Model MBS, without/with Liquid Filling



### Applications

- With liquid-filled case for applications with high dynamic pressure pulsations or vibrations
- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive ambience
- Process industries: chemical/petro-chemical, power stations, mining, on and offshore, environmental technology, machine building and plant construction

### Special Features

- Excellent load-cycle stability and shock resistance
- All stainless steel construction
- German Lloyd, Gosstandart and DVGW approval
- Scale ranges up to 0 ... 1600 bar



**Bourdon Tube Pressure Gauge Model MBS**

### Description

#### Design

EN 837-1

#### Nominal size in mm

63, 100, 160

#### Accuracy class

NG 63: 1.6

NG 100, 160: 1.0

#### Scale ranges

NS 63: 0 ... 1 to 0 ... 1000 bar

NS 100: 0 ... 0.6 to 0 ... 1000 bar

NS 160: 0 ... 0.6 to 0 ... 1600 bar

or all other equivalent vacuum or combined pressure and vacuum ranges

#### Pressure limitation

NS 63: Steady: 3/4 x full scale value

Fluctuating: 2/3 x full scale value

Short time: full scale value

NS 100, 160: Steady: full scale value

Fluctuating: 0.9 x full scale value

Short time: 1.3 x full scale value

#### Operating temperature

Ambient: -40 ... +60 °C without liquid filling

-20 ... +60 °C gauges with glycerine filling

Medium: +200 °C maximum without liquid filling

+100 °C maximum with liquid filling

#### Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C):

max. ±0.4 %/10 K of full scale value

#### Ingress protection

IP 65 per EN 60 529 / IEC 529

## Standard version

### Process connection

Stainless steel 316L (NS 63: 1.4571),  
lower mount (LM) or lower back mount (LBM)  
NS 63: G ¼ B (male), 14 mm flats  
NS 100, 160: G ½ B (male), 22 mm flats

### Pressure element

Stainless steel 316L,  
< 100 bar: C-type  
≥ 100 bar: helical type

### Movement

Stainless steel

### Dial

Aluminium, white, black lettering,  
NS 63 with pointer stop pin

### Pointer

Aluminium, black

### Case

Stainless steel, with pressure relief in case top (NS 63) or in  
case back (NS 100 and 160),  
ranges ≤ 0 ... 16 bar with compensating valve to vent case

**Window:** Laminated safety glass (NS 63: Polycarbonate)

**Bezel ring:** Cam ring (bayonet type), stainless steel

**Liquid filling :** Glycerine 99.7 %

## Special versions

**Gauges for ammonia plants** (NS 100 and 160)  
With temperature scale for refrigerant R 717 (NH<sub>3</sub>) in °C,  
scale ranges: -1 ... 0 ... 15 bar or -1 ... 0 ... 26 bar

## Dimensions in mm

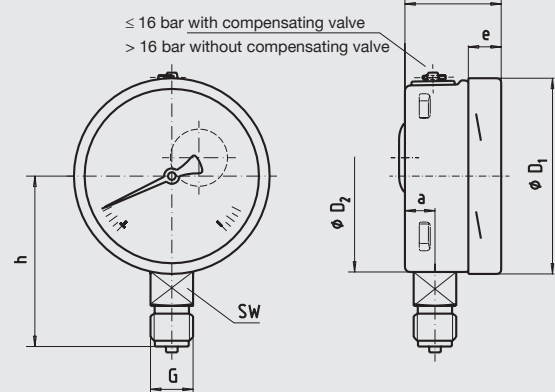
| NS  | Dimensions in mm |      |                |                |                |                |      |    |       |       | Weight in kg |           |
|-----|------------------|------|----------------|----------------|----------------|----------------|------|----|-------|-------|--------------|-----------|
|     | a                | b    | b <sub>1</sub> | b <sub>2</sub> | D <sub>1</sub> | D <sub>2</sub> | e    | f  | G     | h ± 1 | SW           | Model MBS |
| 63  | 9.5              | 33   | 33             | 57             | 63             | 62             | 11.5 | -  | G ¼ B | 54    | 14           | 0.20      |
| 100 | 15.5             | 49.5 | 49.5           | 83             | 101            | 99             | 17.5 | 30 | G ½ B | 87    | 22           | 0.90      |
| 160 | 15.5             | 49.5 | 49.5           | 83             | 161            | 159            | 17.5 | 50 | G ½ B | 118   | 22           | 2.00      |

## Options

- Other process connection
- Assembly on diaphragm seals
- Monel pressure system
- Pressure system stainless steel 1.4571
- Surface or panel mounting flange, stainless steel
- Panel mounting flange, stainless steel, polished
- Triangular bezel, stainless steel, polished, with clamp
- Ambient temperature -40 °C: silicon oil filling
- Switch contacts (see data sheet EP310)
- Version per ATEX Ex II 2 GD c

## Standard version

### Lower mount (LM)



### Lower back mount (LBM)

