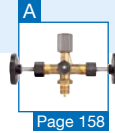


# Bourdon tube pressure gauges for industrial applications

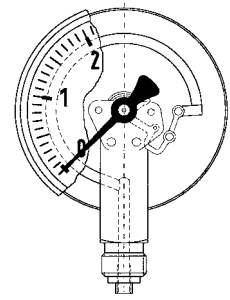
EN 837-1



- For machine and plant engineering
- Robust, stainless steel housing with bayonet bezel
- Optionally available up to nominal size 250 mm
- Can be equipped with electrical contact
- DNV type approval GOSSTANDART-certified



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1

**Application** For gaseous and liquid media which are not highly viscous, do not crystallise and do not attack copper alloys. For high accuracy and rough application conditions.  
! For measuring gas or vapour, these gauges must be used in accordance with the table "Selection Criteria as per EN 837-2" (see appendix)!

## Technical specifications

**Type**  
D 4

**Nominal size**  
100 – 160

**Accuracy class (EN 837-1/6)**  
1.0

**Ranges (EN 837-1/5)**  
-1/0 to -1/+15 bar  
0/0.6 to 0/1000 bar

**Application area**  
Static load:  
≤ 600 bar = full scale value  
> 600 bar = ¾ x full scale value  
Dynamic load:  
≤ 600 bar = 0.9 x full scale value  
> 600 bar = ⅔ x full scale value

Short-term:  
≤ 600 bar = 1.3 x full scale value  
> 600 bar = full scale value

**Operating temperature range**  
Medium:  $T_{max} = +60\text{ °C}$   
Ambient:  $T_{min} = -20\text{ °C}$   
 $T_{max} = +60\text{ °C}$

**Temperature performance**  
Indication error when the temperature of the measuring system deviates from the normal temperature of 20 °C:  
rising temperature approx. ±0.4 %/10 K  
falling temperature approx. ±0.4 %/10 K  
of full scale value

**Degree of protection**  
IP 54 (EN 60529)

## Standard version

**Connection**  
Brass, bottom or bottom back  
G½B – spanner size SW 22 (EN 837-1/7.3)

**Measuring element**  
Bourdon tube, ≤ 60 bar "C" type tube, copper alloy  
> 60 bar helical tube, stainless steel 316 Ti/316 L

**Movement**  
Brass

**Dial**  
Aluminium, white; dial marking black

**Pointer**  
Aluminium, black

**Housing**  
Stainless steel 304  
with blow-out

**Bayonet type bezel**  
Stainless steel 304

**Window**  
Instrument glass

- Options**
- Nominal size 250 (bottom connection)
  - Back flange
  - Panel mounting bezel
  - 3-hole fixing, panel mounting bezel
  - Laminated safety glass window

- Damping screw
- Reference pointer
- Electrical contacts
- Special scales
- Other process connections

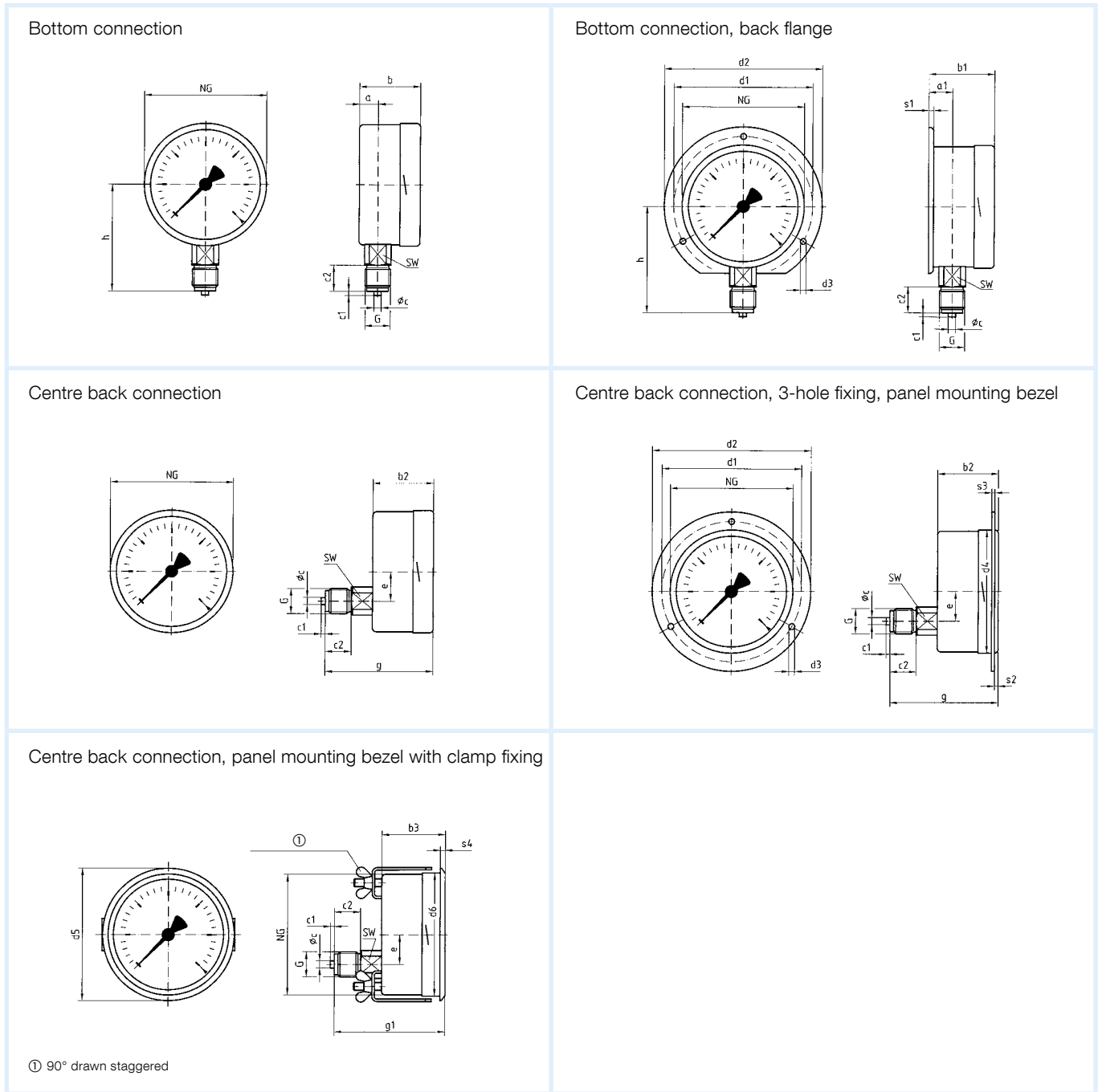


See page 37 for prices.

# Bourdon tube pressure gauges for industrial applications

Type D 4 – NG 100/160

## 1 Housing types and dimensions



### Dimensions (mm)

| Nominal size (NG) | a    | a1   | b   | b1   | b2 | b3 | $\phi_c$ | c1 | c2 | d1* | d2  | d3* | d4  | d5  | d6  | e    | G                 | g  | g1 | h   | s1  |
|-------------------|------|------|-----|------|----|----|----------|----|----|-----|-----|-----|-----|-----|-----|------|-------------------|----|----|-----|-----|
| 100               | 15.6 | 19.1 | 49  | 52.5 | 49 | 49 | 6        | 3  | 20 | 116 | 132 | 4.8 | 104 | 107 | 101 | 26.5 | G $\frac{1}{2}$ B | 81 | 81 | 86  | 5.5 |
| 160               | 17.5 | 20.5 | 50  | 53   | 50 | 52 | 6        | 3  | 20 | 178 | 196 | 5.8 | 164 | 167 | 161 | 26.5 | G $\frac{1}{2}$ B | 82 | 84 | 116 | 6   |
| 250               | 16   | -    | 57  | 59   | -  | -  | 6        | 3  | 20 | 270 | 285 | 5.8 | -   | -   | -   | -    | G $\frac{1}{2}$ B | -  | -  | 165 | 2   |
| Nominal size (NG) | s2   | s3   | s4  | SW   |    |    |          |    |    |     |     |     |     |     |     |      |                   |    |    |     |     |
| 100               | 4    | 2    | 4   | 22   |    |    |          |    |    |     |     |     |     |     |     |      |                   |    |    |     |     |
| 160               | 4    | 2    | 4.5 | 22   |    |    |          |    |    |     |     |     |     |     |     |      |                   |    |    |     |     |
| 250               | -    | -    | -   | 22   |    |    |          |    |    |     |     |     |     |     |     |      |                   |    |    |     |     |

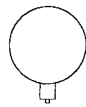
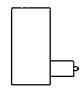
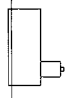
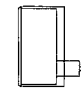
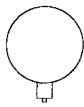
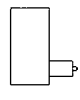
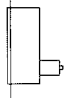
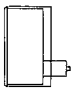
\* Dimensions for NG 100 according to DIN 16064.

# Bourdon tube pressure gauges for industrial applications

EN 837-1

DG: M, PG: 2

1

| Type                  | RF100 I,<br>D401  | RF100 I,<br>D411  | RF100 I,<br>D431  | RF100 I,<br>D451  | RF160 I,<br>D401   | RF160 I,<br>D411  | RF160 I,<br>D431  | RF160 I,<br>D451  |
|-----------------------|---|---|---|---|--|---|---|---|
| Version               |  |  |  |  |  |  |  |  |
| Housing Ø             | 100   | 100   | 100   | 100   | 160  | 160   | 160   | 160   |
| Housing               | Stainless steel 304 with bayonet bezel, instrument glass window                   |   |   |   |  |   |   |   |
| Measuring element     | Bourdon tube, copper alloy (> 60 bar stainless steel 316 Ti/316 L)                |   |   |   |  |   |   |   |
| Accuracy class        | 1.0   | 1.0   | 1.0   | 1.0   | 1.0  | 1.0   | 1.0   | 1.0   |
| Connection            | G½B   | G½B   | G½B   | G½B   | G½B  | G½B   | G½B   | G½B   |
|                       |   |   | 3-hole fixing,<br>panel mounting<br>bezel, 304, pol-<br>ished                     | Panel mounting<br>bezel, 304, pol-<br>ished, with clamp<br>fixing                 |  |   | 3-hole fixing,<br>panel mounting<br>bezel, 304, pol-<br>ished                       | Panel mounting<br>bezel, 304, pol-<br>ished, with clamp<br>fixing                   |
| Range (bar)           | Part no.  | Part no.  | Part no.  | Part no.  | Part no.   | Part no.  | Part no.  | Part no.  |
| <b>Price €</b>        |   |   |   |   |  |   |   |   |
| -1/0                  | <b>85301401</b>   | 85301411  | 85301431  | 85301451  | 85351401   | 85351411  | 85351431  | 85351451  |
| -1/+0.6               | 85302401  | 85302411  | 85302431  | 85302451  | 85352401   | 85352411  | 85352431  | 85352451  |
| -1/+1.5               | <b>85303401</b>   | 85303411  | 85303431  | 85303451  | 85353401   | 85353411  | 85353431  | 85353451  |
| -1/+3                 | <b>85304401</b>   | 85304411  | 85304431  | 85304451  | 85354401   | 85354411  | 85354431  | 85354451  |
| -1/+5                 | <b>85305401</b>   | 85305411  | 85305431  | 85305451  | 85355401   | 85355411  | 85355431  | 85355451  |
| -1/+9                 | 85306401  | 85306411  | 85306431  | 85306451  | 85356401   | 85356411  | 85356431  | 85356451  |
| -1/+15                | 85307401  | 85307411  | 85307431  | 85307451  | 85357401   | 85357411  | 85357431  | 85357451  |
| <b>Price €</b>        |   |   |   |   |  |   |   |   |
| 0/0.6                 | 85309401  | 85309411  | 85309431  | 85309451  | 85359401   | 85359411  | 85359431  | 85359451  |
| 0/1                   | <b>85310401</b>   | 85310411  | 85310431  | 85310451  | <b>85360401</b>  | 85360411  | 85360431  | 85360451  |
| 0/1.6                 | <b>85311401</b>   | 85311411  | 85311431  | 85311451  | <b>85361401</b>  | 85361411  | 85361431  | 85361451  |
| 0/2.5                 | <b>85312401</b>   | 85312411  | 85312431  | 85312451  | <b>85362401</b>  | 85362411  | 85362431  | 85362451  |
| 0/4                   | <b>85313401</b>   | 85313411  | 85313431  | 85313451  | <b>85363401</b>  | 85363411  | 85363431  | 85363451  |
| 0/6                   | <b>85314401</b>   | 85314411  | 85314431  | 85314451  | <b>85364401</b>  | 85364411  | 85364431  | 85364451  |
| 0/10                  | <b>85315401</b>   | 85315411  | 85315431  | 85315451  | <b>85365401</b>  | 85365411  | 85365431  | 85365451  |
| 0/16                  | <b>85316401</b>   | 85316411  | 85316431  | 85316451  | <b>85366401</b>  | 85366411  | 85366431  | 85366451  |
| 0/25                  | <b>85317401</b>   | 85317411  | 85317431  | 85317451  | <b>85367401</b>  | 85367411  | 85367431  | 85367451  |
| 0/40                  | <b>85318401</b>   | 85318411  | 85318431  | 85318451  | 85368401   | 85368411  | 85368431  | 85368451  |
| <b>Price €</b>        |   |   |   |   |  |   |   |   |
| 0/60                  | <b>85319401</b>   | 85319411  | 85319431  | 85319451  | 85369401   | 85369411  | 85369431  | 85369451  |
| 0/100                 | <b>85320401</b>   | 85320411  | 85320431  | 85320451  | 85370401   | 85370411  | 85370431  | 85370451  |
| 0/160                 | <b>85321401</b>   | 85321411  | 85321431  | 85321451  | 85371401   | 85371411  | 85371431  | 85371451  |
| 0/250                 | <b>85322401</b>   | 85322411  | 85322431  | 85322451  | 85372401   | 85372411  | 85372431  | 85372451  |
| 0/400                 | <b>85323401</b>   | 85323411  | 85323431  | 85323451  | 85373401   | 85373411  | 85373431  | 85373451  |
| <b>Price €</b>        |   |   |   |   |  |   |   |   |
| 0/600                 | 85324401  | 85324411  | 85324431  | 85324451  | 85374401   | 85374411  | 85374431  | 85374451  |
| 0/1000                | 85325401  | 85325411  | 85325431  | 85325451  | 85375401   | 85375411  | 85375431  | 85375451  |
| <b>Extra charge €</b> |   |   |   |   |  |   |   |   |
| Nominal size 250      | ---   | ---   | ---   | ---   |  | ---   | ---   | ---   |

Minimum order quantity for non-stock items = 10 pieces.

Blue part no. = in-stock items



See page 72 for extra charges.