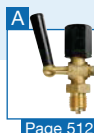


# Standard Bourdon tube pressure gauges

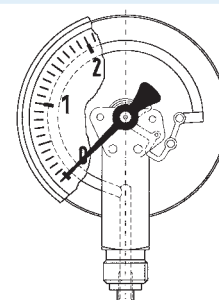
EN 837-1



- For pneumatic and heating system applications
- Design as per EN 837-1
- Accuracy class 1.6
- Corrosion-resistant, highly impact-resistant plastic housing
- Many customised versions available



Page 512



**Application** For gaseous and liquid media which are not highly viscous, do not crystallise and do not attack copper alloys.  
! For measuring gas or vapour, observe the table "Selection Criteria as per EN 837-2" (see appendix)!

## Technical specifications

**Type**  
D 1

**Nominal size**  
40 – 50 – 63 – 80 – 100

**Accuracy class (EN 837-1/6)**  
1.6

**Ranges (EN 837-1/5)**  
-1/0 to -1/+15 bar  
0/0.6 to 0/400 bar

**Application area**  
Static load:  $\frac{3}{4}$  x full scale value  
Dynamic load:  $\frac{2}{3}$  x full scale value  
Short-term: full scale value

## Operating temperature range

Medium:  $T_{max} = +60\text{ }^{\circ}\text{C}$   
Ambient:  $T_{min} = -20\text{ }^{\circ}\text{C}$   
 $T_{max} = +60\text{ }^{\circ}\text{C}$

## Temperature performance

Indication error when the temperature of the measuring system deviates from the normal temperature of 20 °C:  
rising temperature approx.  $\pm 0.4\text{ } \%$ /10 K  
falling temperature approx.  $\pm 0.4\text{ } \%$ /10 K  
of full scale value

## Degree of protection

IP 32 (EN 60529)

## Standard version

**Connection**  
Brass, bottom or centre back  
NG 40 G $\frac{1}{8}$ B – SW 12  
NG 50-63 G $\frac{1}{4}$ B – SW 14  
NG 80-100 bottom G $\frac{1}{2}$ B – spanner size SW 22  
NG 80-100 centre back G $\frac{1}{4}$ B – spanner size SW 14  
(EN 837-1/7.3)

**Measuring element**  
Bourdon tube, copper alloy  
 $\leq 60\text{ bar}$  "C" type tube  
 $> 60\text{ bar}$  helical tube

**Movement**  
Brass

## Dial

Plastic, white  
Dial marking black

## Pointer

Plastic, black

## Housing

Black ABS, highly impact-resistant and corrosion-resistant

## Window

Clip-in plastic, NG 80-100 with adjustable red reference pointer

## Options

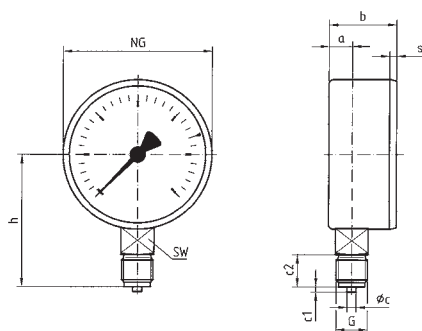
- Throttle screw
- Reference pointer
- Special scales
- Other process connections

# Standard Bourdon tube pressure gauges

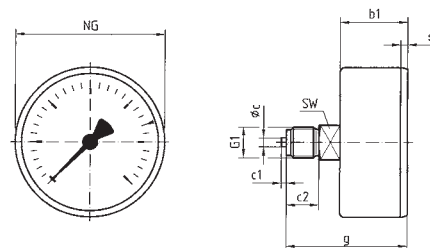
Type D 1 – NG 40/50/63/80/100

## Housing types and dimensions

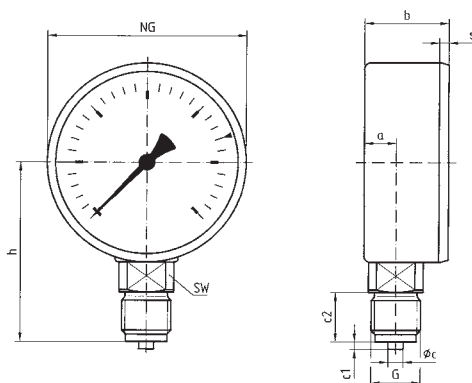
NG 40/50/63 – bottom connection



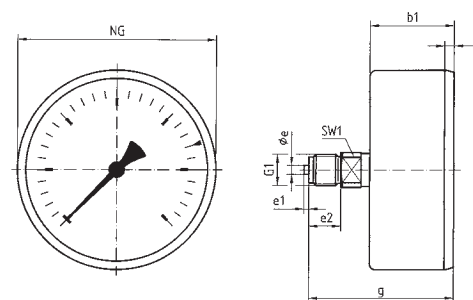
NG 40/50/63 – centre back connection



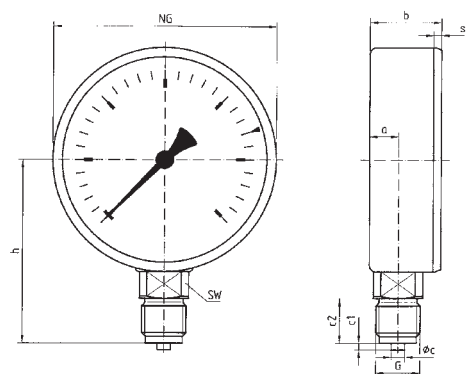
NG 80 – bottom connection



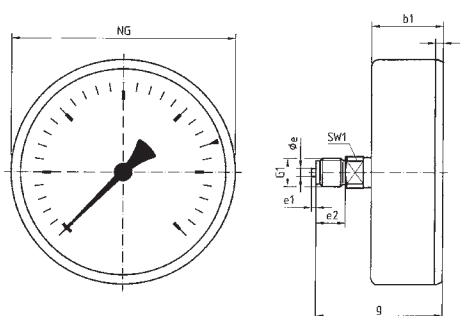
NG 80 – centre back connection



NG 100 – bottom connection



NG 100 – centre back connection



## Dimensions (mm)

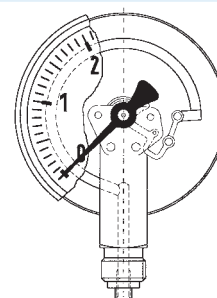
| Nominal size (NG) | a    | b    | b <sub>1</sub> | Øc | c <sub>1</sub> | c <sub>2</sub> | Øe | e <sub>1</sub> | e <sub>2</sub> | g    | G                               | G <sub>1</sub>                  | h    | s   | SW | Spanner size SW <sub>1</sub> |
|-------------------|------|------|----------------|----|----------------|----------------|----|----------------|----------------|------|---------------------------------|---------------------------------|------|-----|----|------------------------------|
| 40                | 9.5  | 25   | 25             | 4  | 2              | 10             | -  | -              | -              | 41.5 | G <sup>1</sup> / <sub>8</sub> B | G <sup>1</sup> / <sub>8</sub> B | 36   | 3   | 12 | -                            |
| 50                | 10.3 | 26.8 | 27.1           | 5  | 2              | 13             | -  | -              | -              | 47.1 | G <sup>1</sup> / <sub>4</sub> B | G <sup>1</sup> / <sub>4</sub> B | 45   | 3.8 | 14 | -                            |
| 63                | 9.8  | 29.7 | 30.4           | 5  | 2              | 13             | -  | -              | -              | 50.4 | G <sup>1</sup> / <sub>4</sub> B | G <sup>1</sup> / <sub>4</sub> B | 51.5 | 3.7 | 14 | -                            |
| 80                | 12.8 | 32.8 | 32.8           | 6  | 3              | 20             | 5  | 2              | 13             | 55.8 | G <sup>1</sup> / <sub>2</sub> B | G <sup>1</sup> / <sub>4</sub> B | 72   | 2.8 | 22 | 14                           |
| 100               | 15.5 | 34.5 | 32             | 6  | 3              | 20             | 5  | 2              | 13             | 55   | G <sup>1</sup> / <sub>2</sub> B | G <sup>1</sup> / <sub>4</sub> B | 82   | 3.5 | 22 | 14                           |

# Standard Bourdon tube pressure gauges

EN 837-1



- For pneumatic and heating system applications
- Robust steel or stainless steel housing
- Accuracy class 1.6
- Many customised versions available



**Application** For gaseous and liquid media which are not highly viscous, do not crystallise and do not attack copper alloys.  
! For measuring gas or vapour, observe the table "Selection Criteria as per EN 837-2" (see appendix)!

## Technical specifications

**Type**  
D 2/D 3

**Nominal size**  
40 – 50 – 63

**Accuracy class (EN 837-1/6)**  
1.6

**Ranges (EN 837-1/5)**  
-1/0 to -1/+15 bar  
0/0.6 to 0/400 bar

**Application area**  
Static load:  $\frac{3}{4}$  x full scale value  
Dynamic load:  $\frac{2}{3}$  x full scale value  
Short-term: 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.  $\pm 0.4\text{ %}/10\text{ K}$   
falling temperature approx.  $\pm 0.4\text{ %}/10\text{ K}$   
of full scale value

## Degree of protection

IP 32 (EN 60529)

## Standard version

**Connection**  
Brass, bottom or centre back  
NG 40 G $\frac{1}{8}$ B – spanner size SW 12  
NG 50-63 G $\frac{1}{4}$ B – spanner size SW 14  
(EN 837-1/7.3)

**Measuring element**  
Bourdon tube, copper alloy  
 $\leq 60\text{ bar}$  "C" type tube  
 $> 60\text{ bar}$  helical tube

**Movement**  
Brass

## Dial

Plastic, white  
Dial marking black

## Pointer

Plastic, black

## Housing

D 2 – black sheet steel  
D 3 – stainless steel 304

## Window

Clip-in plastic

## Options

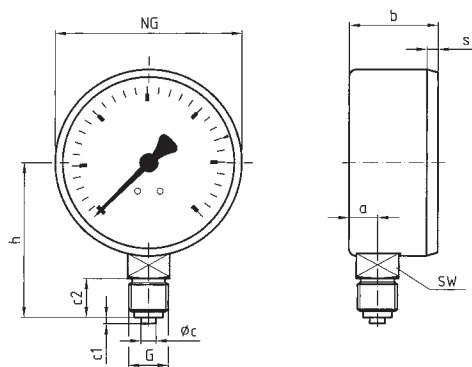
- Panel mounting bezel
- 3-hole fixing, panel mounting bezel
- Throttle screw
- Reference pointer
- Special scales
- Other process connections

# Standard Bourdon tube pressure gauges

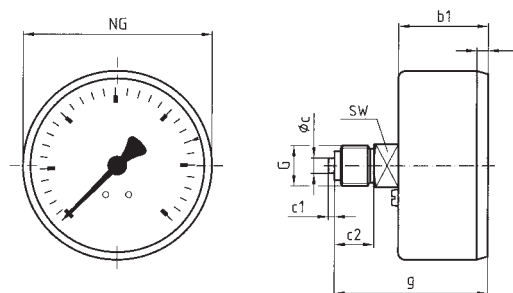
Type D 2/D 3 – NG 40/50/63

## Housing types and dimensions

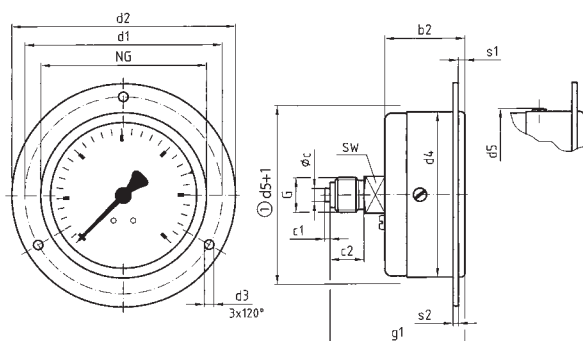
Bottom connection



Centre back connection

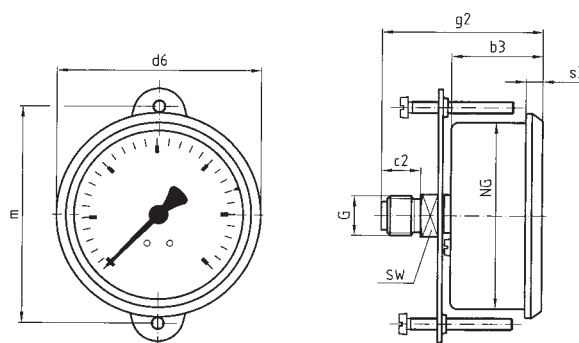


Centre back connection, 3-hole fixing, panel mounting bezel



① Panel cut-out

Centre back connection, panel mounting bezel with clamp fixing



### Dimensions (mm)

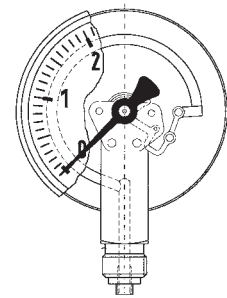
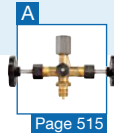
| Nominal size (NG) | a    | b    | b1   | b2   | b3   | Øc | c1 | c2 | d1 | d2 | d3  | d4 | d5   | d6   | g    | g1   | g2   | G                  | h    | m  |
|-------------------|------|------|------|------|------|----|----|----|----|----|-----|----|------|------|------|------|------|--------------------|------|----|
| 40                | 8.5  | 23.5 | 25   | 26   | 28   | 4  | 2  | 10 | 51 | 61 | 3.6 | 41 | 45   | 44   | 41.5 | 42.5 | 46.6 | G <sub>1/8</sub> B | 36   | 50 |
| 50                | 10.5 | 26   | 26   | 27.5 | 30.3 | 5  | 2  | 13 | 60 | 71 | 3.6 | 50 | 54   | 54   | 47   | 49   | 51.3 | G <sub>1/4</sub> B | 45   | 58 |
| 63                | 9.5  | 29.4 | 29.4 | 30.3 | 30.3 | 5  | 2  | 13 | 75 | 85 | 3.6 | 63 | 66.5 | 67.8 | 50.4 | 51.3 | 53.3 | G <sub>1/4</sub> B | 51.5 | 72 |
| Nominal size (NG) | s    | s1   | s2   | s3   | SW   |    |    |    |    |    |     |    |      |      |      |      |      |                    |      |    |
| 40                | 3    | 2.5  | 2    | 5.2  | 12   |    |    |    |    |    |     |    |      |      |      |      |      |                    |      |    |
| 50                | 3.8  | 2.5  | 2    | 5.4  | 14   |    |    |    |    |    |     |    |      |      |      |      |      |                    |      |    |
| 63                | 3.7  | 2.5  | 2    | 5.6  | 14   |    |    |    |    |    |     |    |      |      |      |      |      |                    |      |    |

# Standard Bourdon tube pressure gauges

EN 837-1



- For domestic and mechanical engineering applications
- Robust steel housing
- Window with adjustable reference pointer
- Many customised versions available



**Application** For gaseous and liquid media which are not highly viscous, do not crystallise and do not attack copper alloys.  
! For measuring gas or vapour, observe the table "Selection Criteria as per EN 837-2" (see appendix)!

## Technical specifications

**Type**  
D 2

**Nominal size**  
80 – 100

**Accuracy class (EN 837-1/6)**  
1.6

**Ranges (EN 837-1/5)**  
-1/0 to -1/+15 bar  
0/0.6 to 0/400 bar

**Application area**  
Static load:  $\frac{3}{4}$  x full scale value  
Dynamic load:  $\frac{2}{3}$  x full scale value  
Short-term: 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.  $\pm 0.4\text{ ‰}/10\text{ K}$   
falling temperature approx.  $\pm 0.4\text{ ‰}/10\text{ K}$   
of full scale value

## Degree of protection

IP 32 (EN 60529)

## Standard version

**Connection**  
Brass, bottom:  
NG 80 – 100 G $\frac{1}{2}$ B – spanner size SW 22  
Brass, centre back:  
NG 80 – 100 G $\frac{1}{4}$ B – spanner size SW 14  
(EN 837-1/7.3)

**Measuring element**  
Bourdon tube, copper alloy  
 $\leq 60\text{ bar}$  "C" type tube  
 $> 60\text{ bar}$  helical tube

**Movement**  
Brass

## Dial

Plastic, white  
Dial marking black

## Pointer

Plastic, black

## Housing

Sheet steel, black

## Window

Clip-in plastic, with adjustable red reference pointer

## Options

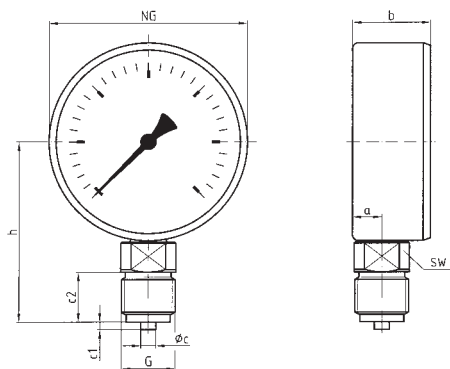
- Stainless steel housing (NG 100)
- Push on bezel
- Instrument glass window
- Throttle screw
- Special scales
- Other process connections

# Standard Bourdon tube pressure gauges

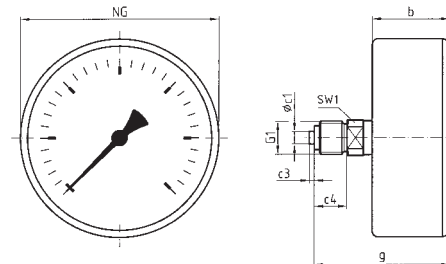
Type D 2 – NG 80/100

## Housing types and dimensions

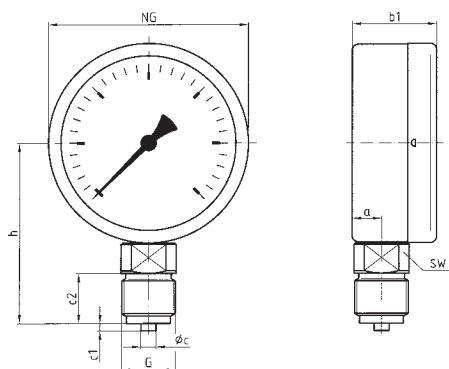
Bottom connection



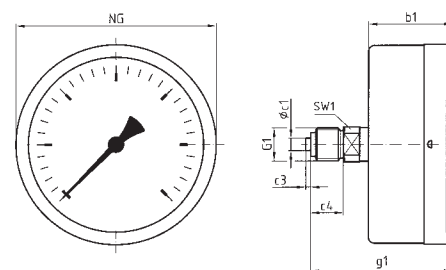
Centre back connection



Bottom connection, with push on bezel



Centre back connection, with push on bezel



### Dimensions (mm)

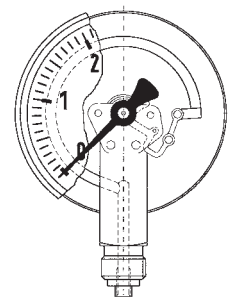
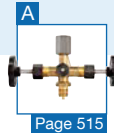
| Nominal size (NG) | a    | b    | b1   | Øc | c1 | c2 | Øc1 | c3 | c4 | g    | g1   | G   | G1  | h  | SW | Spanner size SW1 |
|-------------------|------|------|------|----|----|----|-----|----|----|------|------|-----|-----|----|----|------------------|
| 80                | 11.7 | 31   | 33.5 | 6  | 3  | 20 | 5   | 2  | 13 | 54   | 56.5 | G½B | G¼B | 72 | 22 | 14               |
| 100               | 11   | 29.5 | 34   | 6  | 3  | 20 | 5   | 2  | 13 | 52.5 | 57   | G½B | G¼B | 82 | 22 | 14               |

# Standard Bourdon tube pressure gauges

EN 837-1



- For domestic and mechanical engineering applications
- With reference pointer on dial
- Robust steel housing
- Many customised versions available



**Application** For gaseous and liquid media which are not highly viscous, do not crystallise and do not attack copper alloys.  
! For measuring gas or vapour, observe the table "Selection Criteria as per EN 837-2" (see appendix)!

## Technical specifications

**Type**  
D 2

**Nominal size**  
160

**Accuracy class (EN 837-1/6)**  
1.6

**Ranges (EN 837-1/5)**  
-1/0 to -1/+15 bar  
0/0.6 to 0/40 bar

**Application area**  
Static load:  $\frac{3}{4}$  x full scale value  
Dynamic load:  $\frac{2}{3}$  x full scale value  
Short-term: full scale value

## Operating temperature range

Medium:  $T_{max} = +60\text{ }^{\circ}\text{C}$   
Ambient:  $T_{min} = -20\text{ }^{\circ}\text{C}$   
 $T_{max} = +60\text{ }^{\circ}\text{C}$

## Temperature performance

Indication error when the temperature of the measuring system deviates from the normal temperature of  $20\text{ }^{\circ}\text{C}$ :  
rising temperature approx.  $\pm 0.4\text{ } \%/10\text{ K}$   
falling temperature approx.  $\pm 0.4\text{ } \%/10\text{ K}$   
of full scale value

## Degree of protection

IP 32 (EN 60529)

## Standard version

### Connection

Brass, bottom:  $G\frac{1}{2}B$  – spanner size SW 22

### Measuring element

Bourdon tube, copper alloy  
 $\leq 60\text{ bar}$  "C" type tube  
 $> 60\text{ bar}$  helical tube

### Movement

Brass

### Dial

Aluminium, white  
Dial marking black with adjustable reference pointer

### Pointer

Aluminium, black

### Housing

Sheet steel, black

### Push on bezel

Sheet steel, black

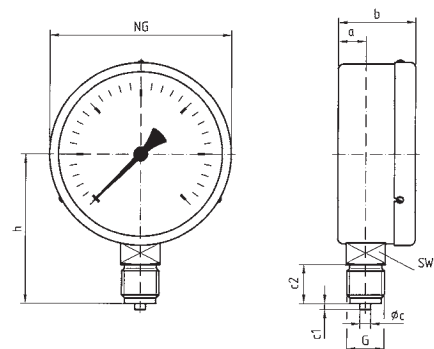
## Options

- Throttle screw
- Special scales
- Other process connections

## Window

Instrument glass

### Bottom connection



## Dimensions (mm)

| Nominal size (NG) | a    | b               | Øc  | c1 |
|-------------------|------|-----------------|-----|----|
| 160               | 15.5 | 50              | 6   | 3  |
| Nominal size (NG) | c2   | G               | h   | SW |
| 160               | 20   | $G\frac{1}{2}B$ | 116 | 22 |

# Standard Bourdon tube pressure gauges

EN 837-1

DG: M, PG: 2

| Type              | RF40, D101                                                                        | RF40, D111                                                                        | RF50, D101                                                                        | RF50, D111                                                                        | RF63, D101                                                                         | RF63, D111                                                                          | RF80, D101                                                                          | RF100, D101                                                                         |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Version           |  |  |  |  |  |  |  |  |
| Housing Ø         | 40                                                                                | 40                                                                                | 50                                                                                | 50                                                                                | 63                                                                                 | 63                                                                                  | 80                                                                                  | 100                                                                                 |
| Housing           | ABS highly impact-resistant, clip-in plastic window                               |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
| Measuring element | Bourdon tube, copper alloy                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
| Accuracy class    | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                                | 1.6                                                                                 | 1.6                                                                                 | 1.6                                                                                 |
| Connection        | G $\frac{1}{8}$ B                                                                 | G $\frac{1}{8}$ B                                                                 | G $\frac{1}{4}$ B                                                                 | G $\frac{1}{4}$ B                                                                 | G $\frac{1}{4}$ B                                                                  | G $\frac{1}{4}$ B                                                                   | G $\frac{1}{2}$ B                                                                   | G $\frac{1}{2}$ B                                                                   |
| PU*               | 100 pieces                                                                        | 100 pieces                                                                        | 100 pieces                                                                        | 100 pieces                                                                        | 100 pieces                                                                         | 100 pieces                                                                          | 50 pieces                                                                           | 50 pieces                                                                           |
|                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | With adjustable red reference pointer on window                                     |                                                                                     |
| Range (bar)       | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                           | Part no.                                                                            | Part no.                                                                            | Part no.                                                                            |
| -1/0              | <b>85001101</b>                                                                   | <b>85001111</b>                                                                   | <b>85051101</b>                                                                   | <b>85051111</b>                                                                   | <b>85101101</b>                                                                    | <b>85101111</b>                                                                     | 85151101                                                                            | 85201101                                                                            |
| -1/+0.6           | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | 85102101                                                                           | 85102111                                                                            | 85152101                                                                            | 85202101                                                                            |
| -1/+1.5           | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | <b>85103101</b>                                                                    | <b>85103111</b>                                                                     | 85153101                                                                            | 85203101                                                                            |
| -1/+3             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | <b>85104101</b>                                                                    | 85104111                                                                            | 85154101                                                                            | 85204101                                                                            |
| -1/+5             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | <b>85105101</b>                                                                    | <b>85105111</b>                                                                     | 85155101                                                                            | 85205101                                                                            |
| -1/+9             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | 85106101                                                                           | 85106111                                                                            | 85156101                                                                            | 85206101                                                                            |
| -1/+15            | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | <b>85107101</b>                                                                    | 85107111                                                                            | 85157101                                                                            | 85207101                                                                            |
| 0/0.6             | 85009101                                                                          | 85009111                                                                          | 85059101                                                                          | 85059111                                                                          | <b>85109101</b>                                                                    | <b>85109111</b>                                                                     | 85159101                                                                            | 85209101                                                                            |
| 0/1               | <b>85010101</b>                                                                   | <b>85010111</b>                                                                   | <b>85060101</b>                                                                   | <b>85060111</b>                                                                   | <b>85110101</b>                                                                    | <b>85110111</b>                                                                     | 85160101                                                                            | 85210101                                                                            |
| 0/1.6             | <b>85011101</b>                                                                   | <b>85011111</b>                                                                   | <b>85061101</b>                                                                   | <b>85061111</b>                                                                   | <b>85111101</b>                                                                    | <b>85111111</b>                                                                     | 85161101                                                                            | 85211101                                                                            |
| 0/2.5             | <b>85012101</b>                                                                   | <b>85012111</b>                                                                   | <b>85062101</b>                                                                   | <b>85062111</b>                                                                   | <b>85112101</b>                                                                    | <b>85112111</b>                                                                     | 85162101                                                                            | 85212101                                                                            |
| 0/4               | <b>85013101</b>                                                                   | <b>85013111</b>                                                                   | <b>85063101</b>                                                                   | <b>85063111</b>                                                                   | <b>85113101</b>                                                                    | <b>85113111</b>                                                                     | 85163101                                                                            | 85213101                                                                            |
| 0/6               | <b>85014101</b>                                                                   | <b>85014111</b>                                                                   | <b>85064101</b>                                                                   | <b>85064111</b>                                                                   | <b>85114101</b>                                                                    | <b>85114111</b>                                                                     | 85164101                                                                            | 85214101                                                                            |
| 0/10              | <b>85015101</b>                                                                   | <b>85015111</b>                                                                   | <b>85065101</b>                                                                   | <b>85065111</b>                                                                   | <b>85115101</b>                                                                    | <b>85115111</b>                                                                     | 85165101                                                                            | 85215101                                                                            |
| 0/16              | <b>85016101</b>                                                                   | <b>85016111</b>                                                                   | <b>85066101</b>                                                                   | <b>85066111</b>                                                                   | <b>85116101</b>                                                                    | <b>85116111</b>                                                                     | 85166101                                                                            | 85216101                                                                            |
| 0/25              | <b>85017101</b>                                                                   | <b>85017111</b>                                                                   | <b>85067101</b>                                                                   | <b>85067111</b>                                                                   | <b>85117101</b>                                                                    | <b>85117111</b>                                                                     | 85167101                                                                            | 85217101                                                                            |
| 0/40              | <b>85018101</b>                                                                   | <b>85018111</b>                                                                   | <b>85068101</b>                                                                   | <b>85068111</b>                                                                   | <b>85118101</b>                                                                    | <b>85118111</b>                                                                     | 85168101                                                                            | 85218101                                                                            |
| 0/60              | 85019101                                                                          | 85019111                                                                          | <b>85069101</b>                                                                   | <b>85069111</b>                                                                   | <b>85119101</b>                                                                    | <b>85119111</b>                                                                     | 85169101                                                                            | 85219101                                                                            |
| 0/100             | 85020101                                                                          | 85020111                                                                          | <b>85070101</b>                                                                   | <b>85070111</b>                                                                   | <b>85120101</b>                                                                    | <b>85120111</b>                                                                     | 85170101                                                                            | 85220101                                                                            |
| 0/160             | 85021101                                                                          | 85021111                                                                          | <b>85071101</b>                                                                   | <b>85071111</b>                                                                   | 85121101                                                                           | <b>85121111</b>                                                                     | 85171101                                                                            | 85221101                                                                            |
| 0/250             | 85022101                                                                          | 85022111                                                                          | 85072101                                                                          | 85072111                                                                          | 85122101                                                                           | <b>85122111</b>                                                                     | 85172101                                                                            | 85222101                                                                            |
| 0/400             | ---                                                                               | ---                                                                               | 85073101                                                                          | 85073111                                                                          | 85123101                                                                           | <b>85123111</b>                                                                     | 85173101                                                                            | 85223101                                                                            |

\* Minimum order quantity for non-stock items = 100 pieces.

Blue part no. = in-stock items



See page 401 for options.

# Standard Bourdon tube pressure gauges

EN 837-1

DG: M, PG: 2

| Type              | RF40, D201                                                                        | RF40, D211                                                                        | RF40, D231*                                                                       | RF40, D251*                                                                       | RF50, D201                                                                         | RF50, D211                                                                          | RF50, D231*                                                                         | RF50, D251*                                                                         |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Version           |  |  |  |  |  |  |  |  |
| Housing Ø         | 40                                                                                | 40                                                                                | 40                                                                                | 40                                                                                | 50                                                                                 | 50                                                                                  | 50                                                                                  | 50                                                                                  |
| Housing           | Black sheet steel, plastic clip-in window                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
| Measuring element | Bourdon tube, copper alloy                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
| Accuracy class    | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                                | 1.6                                                                                 | 1.6                                                                                 | 1.6                                                                                 |
| Connection        | G $\frac{1}{8}$ B                                                                 | G $\frac{1}{8}$ B                                                                 | G $\frac{1}{8}$ B                                                                 | G $\frac{1}{8}$ B                                                                 | G $\frac{1}{4}$ B                                                                  | G $\frac{1}{4}$ B                                                                   | G $\frac{1}{4}$ B                                                                   | G $\frac{1}{4}$ B                                                                   |
|                   |                                                                                   |                                                                                   | 3-hole fixing, panel mounting bezel, stainless steel                              | Panel mounting bezel stainless steel, polished, with clamp fixing                 |                                                                                    |                                                                                     | 3-hole fixing, panel mounting bezel, stainless steel                                | Panel mounting bezel stainless steel, polished, with clamp fixing                   |
| Range (bar)       | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                           | Part no.                                                                            | Part no.                                                                            | Part no.                                                                            |
| -1/0              | <b>85001201</b>                                                                   | <b>85001211</b>                                                                   | 85001231                                                                          | 85001251                                                                          | 85051201                                                                           | 85051211                                                                            | 85051231                                                                            | <b>85051251</b>                                                                     |
| -1/+0.6           | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 |
| -1/+1.5           | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 |
| -1/+3             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 |
| -1/+5             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 |
| -1/+9             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 |
| -1/+15            | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                                | ---                                                                                 | ---                                                                                 | ---                                                                                 |
| 0/1               | 85010201                                                                          | <b>85010211</b>                                                                   | 85010231                                                                          | 85010251                                                                          | 85060201                                                                           | 85060211                                                                            | 85060231                                                                            | <b>85060251</b>                                                                     |
| 0/1.6             | 85011201                                                                          | 85011211                                                                          | 85011231                                                                          | 85011251                                                                          | 85061201                                                                           | 85061211                                                                            | 85061231                                                                            | 85061251                                                                            |
| 0/2.5             | 85012201                                                                          | 85012211                                                                          | 85012231                                                                          | 85012251                                                                          | 85062201                                                                           | 85062211                                                                            | <b>85062231</b>                                                                     | <b>85062251</b>                                                                     |
| 0/4               | <b>85013201</b>                                                                   | <b>85013211</b>                                                                   | 85013231                                                                          | <b>85013251</b>                                                                   | <b>85063201</b>                                                                    | <b>85063211</b>                                                                     | <b>85063231</b>                                                                     | <b>85063251</b>                                                                     |
| 0/6               | <b>85014201</b>                                                                   | <b>85014211</b>                                                                   | <b>85014231</b>                                                                   | <b>85014251</b>                                                                   | <b>85064201</b>                                                                    | <b>85064211</b>                                                                     | <b>85064231</b>                                                                     | <b>85064251</b>                                                                     |
| 0/10              | <b>85015201</b>                                                                   | <b>85015211</b>                                                                   | <b>85015231</b>                                                                   | <b>85015251</b>                                                                   | <b>85065201</b>                                                                    | <b>85065211</b>                                                                     | <b>85065231</b>                                                                     | <b>85065251</b>                                                                     |
| 0/16              | <b>85016201</b>                                                                   | <b>85016211</b>                                                                   | <b>85016231</b>                                                                   | <b>85016251</b>                                                                   | <b>85066201</b>                                                                    | <b>85066211</b>                                                                     | <b>85066231</b>                                                                     | <b>85066251</b>                                                                     |
| 0/25              | <b>85017201</b>                                                                   | <b>85017211</b>                                                                   | 85017231                                                                          | 85017251                                                                          | 85067201                                                                           | 85067211                                                                            | 85067231                                                                            | 85067251                                                                            |
| 0/40              | 85018201                                                                          | 85018211                                                                          | 85018231                                                                          | 85018251                                                                          | 85068201                                                                           | 85068211                                                                            | 85068231                                                                            | 85068251                                                                            |
| 0/60              | 85019201                                                                          | 85019211                                                                          | 85019231                                                                          | 85019251                                                                          | 85069201                                                                           | 85069211                                                                            | 85069231                                                                            | 85069251                                                                            |
| 0/100             | 85020201                                                                          | 85020211                                                                          | 85020231                                                                          | 85020251                                                                          | 85070201                                                                           | 85070211                                                                            | 85070231                                                                            | 85070251                                                                            |
| 0/160             | 85021201                                                                          | 85021211                                                                          | 85021231                                                                          | 85021251                                                                          | 85071201                                                                           | 85071211                                                                            | 85071231                                                                            | 85071251                                                                            |
| 0/250             | 85022201                                                                          | 85022211                                                                          | 85022231                                                                          | 85022251                                                                          | 85072201                                                                           | 85072211                                                                            | 85072231                                                                            | 85072251                                                                            |
| 0/400             | ---                                                                               | ---                                                                               | ---                                                                               | ---                                                                               | 85073201                                                                           | 85073211                                                                            | 85073231                                                                            | 85073251                                                                            |

\* Dual scale, bar outer, black – psi inner, red.  
Minimum order quantity for non-stock items = 100 pieces.

Blue part no. = in-stock items



See page 401 for options.

# Standard Bourdon tube pressure gauges

EN 837-1

DG: M, PG: 2

| Type              | RF63, D201                                                                        | RF63, D211                                                                        | RF63, D231*                                                                       | RF63, D251*                                                                       | RF80, D201                                                                        | RF100, D201                                                                         | RF100, D211                                                                         | RF160, D201                                                                         |
|-------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Version           |  |  |  |  |  |  |  |  |
| Housing Ø         | 63                                                                                | 63                                                                                | 63                                                                                | 63                                                                                | 80                                                                                | 100                                                                                 | 100                                                                                 | 160                                                                                 |
| Housing           | Black sheet steel, plastic clip-in window                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     | Push on bezel, instrument glass                                                     |
| Measuring element | Bourdon tube, copper alloy                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |                                                                                     |
| Accuracy class    | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                               | 1.6                                                                                 | 1.6                                                                                 | 1.6                                                                                 |
| Connection        | G¼B                                                                               | G¼B                                                                               | G¼B                                                                               | G¼B                                                                               | G½B                                                                               | G½B                                                                                 | G¼B                                                                                 | G½B                                                                                 |
|                   |                                                                                   |                                                                                   | 3-hole fixing, panel mounting bezel, stainless steel                              | Panel mounting bezel stainless steel, polished, with clamp fixing                 | With adjustable red reference pointer                                             |                                                                                     |                                                                                     |                                                                                     |
| Range (bar)       | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                          | Part no.                                                                            | Part no.                                                                            | Part no.                                                                            |
| -1/0              | <b>85101201</b>                                                                   | <b>85101211</b>                                                                   | 85101231                                                                          | <b>85101251</b>                                                                   | <b>85151201</b>                                                                   | <b>85201201</b>                                                                     | 85201211                                                                            | <b>85251201</b>                                                                     |
| -1/+0.6           | 85102201                                                                          | 85102211                                                                          | 85102231                                                                          | 85102251                                                                          | 85152201                                                                          | <b>85202201</b>                                                                     | 85202211                                                                            | 85252201                                                                            |
| -1/+1.5           | 85103201                                                                          | 85103211                                                                          | 85103231                                                                          | 85103251                                                                          | 85153201                                                                          | <b>85203201</b>                                                                     | 85203211                                                                            | 85253201                                                                            |
| -1/+3             | 85104201                                                                          | 85104211                                                                          | 85104231                                                                          | 85104251                                                                          | 85154201                                                                          | <b>85204201</b>                                                                     | 85204211                                                                            | 85254201                                                                            |
| -1/+5             | 85105201                                                                          | 85105211                                                                          | 85105231                                                                          | 85105251                                                                          | <b>85155201</b>                                                                   | <b>85205201</b>                                                                     | 85205211                                                                            | 85255201                                                                            |
| -1/+9             | 85106201                                                                          | 85106211                                                                          | 85106231                                                                          | 85106251                                                                          | 85156201                                                                          | <b>85206201</b>                                                                     | 85206211                                                                            | 85256201                                                                            |
| -1/+15            | 85107201                                                                          | 85107211                                                                          | 85107231                                                                          | 85107251                                                                          | 85157201                                                                          | <b>85207201</b>                                                                     | 85207211                                                                            | 85257201                                                                            |
| 0/0.6             | 85109201                                                                          | 85109211                                                                          | 85109231                                                                          | 85109251                                                                          | <b>85159201</b>                                                                   | <b>85209201</b>                                                                     | 85209211                                                                            | <b>85259201</b>                                                                     |
| 0/1               | <b>85110201</b>                                                                   | 85110211                                                                          | 85110231                                                                          | 85110251                                                                          | <b>85160201</b>                                                                   | <b>85210201</b>                                                                     | 85210211                                                                            | <b>85260201</b>                                                                     |
| 0/1.6             | <b>85111201</b>                                                                   | 85111211                                                                          | 85111231                                                                          | 85111251                                                                          | <b>85161201</b>                                                                   | <b>85211201</b>                                                                     | 85211211                                                                            | <b>85261201</b>                                                                     |
| 0/2.5             | <b>85112201</b>                                                                   | <b>85112211</b>                                                                   | <b>85112231</b>                                                                   | <b>85112251</b>                                                                   | <b>85162201</b>                                                                   | <b>85212201</b>                                                                     | 85212211                                                                            | <b>85262201</b>                                                                     |
| 0/4               | <b>85113201</b>                                                                   | <b>85113211</b>                                                                   | <b>85113231</b>                                                                   | <b>85113251</b>                                                                   | <b>85163201</b>                                                                   | <b>85213201</b>                                                                     | <b>85213211</b>                                                                     | <b>85263201</b>                                                                     |
| 0/6               | <b>85114201</b>                                                                   | <b>85114211</b>                                                                   | <b>85114231</b>                                                                   | <b>85114251</b>                                                                   | <b>85164201</b>                                                                   | <b>85214201</b>                                                                     | <b>85214211</b>                                                                     | <b>85264201</b>                                                                     |
| 0/10              | <b>85115201</b>                                                                   | <b>85115211</b>                                                                   | <b>85115231</b>                                                                   | <b>85115251</b>                                                                   | <b>85165201</b>                                                                   | <b>85215201</b>                                                                     | <b>85215211</b>                                                                     | <b>85265201</b>                                                                     |
| 0/16              | <b>85116201</b>                                                                   | <b>85116211</b>                                                                   | <b>85116231</b>                                                                   | <b>85116251</b>                                                                   | <b>85166201</b>                                                                   | <b>85216201</b>                                                                     | <b>85216211</b>                                                                     | <b>85266201</b>                                                                     |
| 0/25              | <b>85117201</b>                                                                   | <b>85117211</b>                                                                   | 85117231                                                                          | <b>85117251</b>                                                                   | <b>85167201</b>                                                                   | <b>85217201</b>                                                                     | 85217211                                                                            | <b>85267201</b>                                                                     |
| 0/40              | <b>85118201</b>                                                                   | 85118211                                                                          | 85118231                                                                          | 85118251                                                                          | <b>85168201</b>                                                                   | <b>85218201</b>                                                                     | 85218211                                                                            | <b>85268201</b>                                                                     |
| 0/60              | 85119201                                                                          | 85119211                                                                          | 85119231                                                                          | 85119251                                                                          | <b>85169201</b>                                                                   | <b>85219201</b>                                                                     | 85219211                                                                            | ---                                                                                 |
| 0/100             | 85120201                                                                          | 85120211                                                                          | 85120231                                                                          | 85120251                                                                          | 85170201                                                                          | 85220201                                                                            | 85220211                                                                            | ---                                                                                 |
| 0/160             | 85121201                                                                          | 85121211                                                                          | 85121231                                                                          | 85121251                                                                          | 85171201                                                                          | 85221201                                                                            | 85221211                                                                            | ---                                                                                 |
| 0/250             | 85122201                                                                          | 85122211                                                                          | 85122231                                                                          | 85122251                                                                          | 85172201                                                                          | 85222201                                                                            | 85222211                                                                            | ---                                                                                 |
| 0/400             | 85123201                                                                          | 85123211                                                                          | 85123231                                                                          | 85123251                                                                          | 85173201                                                                          | 85223201                                                                            | 85223211                                                                            | ---                                                                                 |

\* Dual scale, bar outer, black – psi inner, red.

Minimum order quantity for non-stock items = 100 pieces (RF 160, D 201 = 10 pieces).

Blue part no. = in-stock items



See page 401 for options.

# Options for standard Bourdon tube pressure gauges

DG: M

| Housing diameter (mm)                                                                       | PG | 40         | 50            | 63         | 80         | 100        | 160        |
|---------------------------------------------------------------------------------------------|----|------------|---------------|------------|------------|------------|------------|
| Description                                                                                 |    | Part no.   | Part no.      | Part no.   | Part no.   | Part no.   | Part no.   |
| Housing nickel-plated                                                                       | 3  | 38064      | 38065         | 38066      | ---        | ---        | ---        |
| Push on bezel nickel-plated                                                                 | 3  | 38250      | 38251         | 38252      | 38253      | 38254      | ---        |
| Housing stainless steel 304, vibratory-finished (extra charge, instead of steel housing)    | 3  | 38256      | 38257         | 38258      | ---        | 38300      | ---        |
| Housing stainless steel 304, polished (extra charge, instead of steel housing)              | 3  | 38259      | 38260         | 38261      | ---        | 38314      | ---        |
| Push on bezel stainless steel 304 DNV type approval, polished                               | 3  | 38262      | 2.60<br>38263 | 38264      | ---        | ---        | ---        |
| Connection socket nickel-plated                                                             | 3  | 38082      | 38083         | 38084      | 38085      | 38086      | 38087      |
| Connection socket with special thread                                                       | -  | On request | On request    | On request | On request | On request | On request |
| Throttle screw brass – hole 0.3 – 0.5 – 0.7 mm (please specify)                             | 2  | 38095      | 38096         | 38097      | 38098      | 38099      | 38100      |
| Red mark on dial                                                                            | 0  | 38182      | 38183         | 38184      | 38185      | 38186      | 38187      |
| 1 reference pointer, red, printed on window                                                 | 1  | 38315      | 38316         | 38109      | Standard   | Standard   | ---        |
| 2 reference pointers, red, on dial, adjustable                                              | 1  | ---        | ---           | ---        | ---        | 38123      | ---        |
| Printing block costs per scale and colour (scale design as per EN 837-1, others on request) | 0  | 38151      | 38152         | 38153      | 38154      | 38155      | 38156      |
| Printing costs per additional colour                                                        | 0  | 38163      | 38164         | 38165      | 38166      | 38167      | 38168      |

\* Minimum order quantity for special versions (non-stock items) = 100 pieces per version and delivery.

Blue part no. = in-stock items

## Spare windows for standard Bourdon tube pressure gauges

DG: M, PG: 1

| Housing diameter (mm)                        | 40       | 50       | 63       | 80       | 100      | 160      |
|----------------------------------------------|----------|----------|----------|----------|----------|----------|
| Description                                  | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. |
| Plastic window, clip-in, for plastic housing | 38285    | 38271    | 38272    | 38273    | 38274    | ---      |
| Plastic window, clip-in, for steel housing   | 38275    | 38276    | 38277    | 38317    | 38318    | ---      |
| Instrument glass window                      | ---      | ---      | ---      | 38278    | 38279    | 38280    |

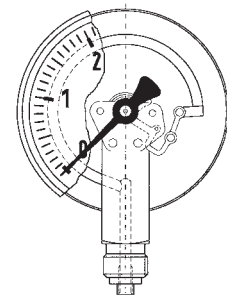
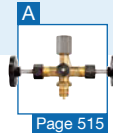
Blue part no. = in-stock items

# Bourdon tube pressure gauges for industrial applications

EN 837-1



- For machine and plant engineering
- Robust, stainless steel housing with bayonet bezel
- Can be equipped with electrical contact
- DNV type approval and GOSSTANDART-certified



**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, observe 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 0/1,000 bar

**Application area**  
Static load:  
≤ 600 bar = full scale value  
> 600 bar =  $\frac{3}{4}$  x full scale value  
Dynamic load:  
≤ 600 bar = 0.9 x full scale value  
> 600 bar =  $\frac{2}{3}$  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.  $\pm 0.4\text{ %}/10\text{ K}$   
falling temperature approx.  $\pm 0.4\text{ %}/10\text{ K}$   
of full scale value

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

## Standard version

**Connection**  
Brass, bottom or bottom back  
G $\frac{1}{2}$ B – 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

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