## Bourdon tube pressure gauges for industrial applications en 837-1



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 Type <br> specifications <br> 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:
$\leq 600$ bar = full scale value
$>600$ bar $=3 / 4 \times$ full scale value
Dynamic load:
$\leq 600 \mathrm{bar}=0.9 \times$ full scale value
$>600$ bar $=2 / 3 \times$ full scale value

Connection
Brass, bottom or bottom back
G¹⁄2B - spanner size SW 22 (EN 837-1/7.3)

## Measuring element

Bourdon tube, $\leq 60$ bar "C" type tube, copper alloy> 60 bar helical tube, stainless steel 316 Ti/316 L

## Movement

Brass
Dial
Aluminium, white; dial marking black

Short-term:
$\leq 600 \mathrm{bar}=1.3 \times$ full scale value
$>600 \mathrm{bar}=$ full scale value
Operating temperature range

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

## Temperature performance

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

## Degree of protection

IP 54 (EN 60529)

## Pointer

Aluminium, black

## Housing

Stainless steel 304
with blow-out

## Bayonet type beze

Stainless steel 304
Window
Instrument glass

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


## Bourdon tube pressure gauges <br> for industrial applications Type D4-NG 100/160

Housing types and dimensions
Centre back connection connection

## Dimensions (mm)

| Nominal size (NG) | a | a1 | b | b1 | b2 | b3 | Øc | C1 | C2 | d $1^{*}$ | d2 | d3* | d4 | d5 | d6 | e | G | 9 | 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 | G1⁄2B | 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 112 B | 82 | 84 | 116 | 6 |
| 250 | 16 | - | 57 | 59 | - | - | 6 | 3 | 20 | 270 | 285 | 5.8 | - | - | - | - | $G 112 B$ | - | - | 165 | 2 |
| Nominal size (NG) | S2 | S3 | S4 | SW |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 100 | 4 | 2 | 4 | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 160 | 4 | 2 | 4.5 | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 250 | - | - | - | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

[^0]
## Bourdon tube pressure gauges for industrial applications en 837-1

DG: M

| Type | $\begin{gathered} \text { RF100 I, } \\ \text { D401 } \end{gathered}$ | $\begin{gathered} \text { RF100 I, } \\ \text { D411 } \end{gathered}$ | $\begin{gathered} \text { RF100 I, } \\ \text { D431 } \end{gathered}$ | $\begin{gathered} \text { RF100 I, } \\ \text { D451 } \end{gathered}$ | $\begin{gathered} \text { RF160 I, } \\ \text { D401 } \end{gathered}$ | $\begin{gathered} \text { RF160 I, } \\ \text { D411 } \end{gathered}$ | $\begin{gathered} \text { RF160 I, } \\ \text { D431 } \end{gathered}$ | $\begin{gathered} \text { RF160 I, } \\ \text { D451 } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Version |  |  |  |  |  |  |  |  |
| Housing $\varnothing$ | 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 $316 \mathrm{Ti} / 316 \mathrm{~L}$ ) |  |  |  |  |  |  |  |
| Accuracy class | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Connection | G 1 ²B | G 1 1 $B$ | G 1 ²B | G 1 ²B | G 1 ²B | G 1 ²B | G1⁄2B | G 1 ²B |
|  |  |  | 3-hole fixing, panel mounting bezel, 304, polished | Panel mounting bezel, 304, polished, with clamp fixing |  |  | 3-hole fixing, panel mounting bezel, 304, polished | $\begin{array}{\|c} \hline \text { Panel mounting } \\ \text { bezel, 304, pol- } \\ \text { ished, with clamp } \\ \text { fixing } \\ \hline \end{array}$ |
| Range (bar) | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. | Part no. |
| Price € |  |  |  |  |  |  |  |  |
| -1/0 | 85301401 | 85301411 | 85301431 | 85301451 | 85351401 | 85351411 | 85351431 | 85351451 |
| -1/+0.6 | 85302401 | 85302411 | 85302431 | 85302451 | 85352401 | 85352411 | 85352431 | 85352451 |
| -1/+1.5 | 85303401 | 85303411 | 85303431 | 85303451 | 85353401 | 85353411 | 85353431 | 85353451 |
| -1/+3 | 85304401 | 85304411 | 85304431 | 85304451 | 85354401 | 85354411 | 85354431 | 85354451 |
| -1/+5 | 85305401 | 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 |


| Price € |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $0 / 0.6$ | 85309401 | 85309411 | 85309431 | 85309451 | 85359401 | 85359411 | 85359431 | 85359451 |
| $0 / 1$ | 85310401 | 85310411 | 85310431 | 85310451 | 85360401 | 85360411 | 85360431 | 85360451 |
| $0 / 1.6$ | 85311401 | 85311411 | 85311431 | 85311451 | 85361401 | 85361411 | 85361431 | 85361451 |
| $0 / 2.5$ | 85312401 | 85312411 | 85312431 | 85312451 | 85362401 | 85362411 | 85362431 | 85362451 |
| $0 / 4$ | 85313401 | 85313411 | 85313431 | 85313451 | 85363401 | 85363411 | 85363431 | 85363451 |
| $0 / 6$ | 85314401 | 85314411 | 85314431 | 85314451 | 85364401 | 85364411 | 85364431 | 85364451 |
| $0 / 10$ | 85315401 | 85315411 | 85315431 | 85315451 | 85365401 | 85365411 | 85365431 | 85365451 |
| $0 / 16$ | 85316401 | 85316411 | 85316431 | 85316451 | 85366401 | 85366411 | 85366431 | 85366451 |
| $0 / 25$ | 85317401 | 85317411 | 85317431 | 85317451 | 85367401 | 85367411 | 85367431 | 85367451 |
| $0 / 40$ | 85318401 | 85318411 | 85318431 | 85318451 | 85368401 | 85368411 | 85368431 | 85368451 |


| Price € |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $0 / 60$ | 85319401 | 85319411 | 85319431 | 85319451 | 85369401 | 85369411 | 85369431 | 85369451 |
| $0 / 100$ | 85320401 | 85320411 | 85320431 | 85320451 | 85370401 | 85370411 | 85370431 | 85370451 |
| $0 / 160$ | 85321401 | 85321411 | 85321431 | 85321451 | 85371401 | 85371411 | 85371431 | 85371451 |
| $0 / 250$ | 85322401 | 85322411 | 85322431 | 85322451 | 85372401 | 85372411 | 85372431 | 85372451 |
| $0 / 400$ | 85323401 | 85323411 | 85323431 | 85323451 | 85373401 | 85373411 | 85373431 | 85373451 |


| Price € |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $0 / 600$ | 85324401 | 85324411 | 85324431 | 85324451 | 85374401 | 85374411 | 85374431 | 85374451 |
| $0 / 1000$ | 85325401 | 85325411 | 85325431 | 85325451 | 85375401 | 85375411 | 85375431 | 85375451 |

## Extra charge $€$

Nominal size 250
|r


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

See page 396 for extra charges.


[^0]:    * Dimensions for NG 100 according to DIN 16064.

