

# Capsule pressure gauge, copper alloy Stainless steel case Model 612.20, NS 63 [2 ½"], 100 [4"], 160 [6"]

WIKA data sheet PM 06.02



for further approvals, see  
page 7

## Applications

- For gaseous, dry and non-aggressive media
- Medical, vacuum, environmental, laboratory technology, for contents measurement and filter monitoring

## Special features

- Zero point correction in front
- Case from stainless steel
- Robust design and ingress protection IP54
- Low scale ranges from 0 ... 6 mbar to 0 ... 600 mbar or 0 ... 2.4 inH<sub>2</sub>O to 0 ... 240 inH<sub>2</sub>O



Capsule pressure gauge, model 612.20

## Description

The model 612.20 capsule pressure gauge is based upon the proven capsule measuring system. The capsule element measurement principle is suitable for very low pressures. On pressurisation, the expansion of the capsule element, proportional to the incident pressure, is transmitted to the movement and indicated.

The modular design enables a multitude of combinations of case materials, process connections, nominal sizes and scale ranges. Due to this high variance, the instrument is suitable for use in a wide range of applications within industry.

The case and the bayonet bezel are made from stainless steel. The material of the process connection is a copper alloy.

For mounting in control panels, the capsule pressure gauges can, depending on the process connection, be fitted with a mounting flange or with a triangular profile ring and mounting bracket.

The scale ranges of 0 ... 6 mbar to 0 ... 600 mbar or 0 ... 2.4 inH<sub>2</sub>O to 0 ... 240 inH<sub>2</sub>O and the vacuum and +/- scale ranges ensure the measuring ranges required for a wide variety of applications.

## Specifications

| Basic information          |   |
|----------------------------|---|
| <b>Standard</b>            | EN 837-3<br>→ For information on the "Selection, installation, handling and operation of pressure gauges", see technical information IN 00.05   |
| <b>Further version</b>     | <ul style="list-style-type: none"> <li>■ Oil- and grease-free</li> <li>■ For oxygen, oil- and grease-free</li> </ul>  |
| <b>Nominal size (NS)</b>   | <ul style="list-style-type: none"> <li>■ Ø 63 mm [2 ½"]</li> <li>■ Ø 100 mm [4"]</li> <li>■ Ø 160 mm [6"]</li> </ul>  |
| <b>Connection location</b> | <ul style="list-style-type: none"> <li>■ Lower mount (radial)</li> <li>■ Lower back mount</li> <li>■ Centre back mount (only for NS 63 [2 ½"])</li> </ul>   |
| <b>Window</b>              | Instrument glass  |
| <b>Case</b>                |   |
| Design                     | <ul style="list-style-type: none"> <li>■ Without blow-out device</li> <li>■ With blow-out device in case back (only for NS 100 [4"] and NS 160 [6"])</li> </ul>   |
| Material                   | Stainless steel   |
| Ring                       | Bayonet bezel, stainless steel  |
| <b>Mounting</b>            | <ul style="list-style-type: none"> <li>■ Without</li> <li>■ Surface mounting flange, stainless steel</li> <li>■ Panel mounting flange, stainless steel</li> <li>■ Panel mounting flange, polished stainless steel</li> <li>■ Panel mounting flange, black stainless steel</li> <li>■ Triangular profile ring with mounting bracket, stainless steel <sup>1)</sup></li> <li>■ Triangular profile ring with mounting bracket, polished stainless steel <sup>1)</sup></li> </ul> <p>→ For information on "Mounting types, mounting flanges, panel cutouts", see technical information IN 00.04</p> |
| <b>Movement</b>            | Copper alloy  |

1) Only for back mount

| Measuring element                |   |
|----------------------------------|---|
| <b>Type of measuring element</b> | Capsule element   |
| <b>Material (wetted)</b>         |   |
| Capsule element                  | Copper alloy  |
| Sealing                          | NBR   |
| Process connection               | Copper alloy  |
| <b>Leak tightness</b>            | <ul style="list-style-type: none"> <li>■ Leakage rate: <math>&lt; 1 \cdot 10^{-3}</math> mbar l/s</li> <li>■ Helium tested, leakage rate: <math>&lt; 1 \cdot 10^{-5}</math> mbar l/s</li> </ul> |

| Accuracy specifications                         |   |
|---|---|
| <b>Accuracy class</b>                           |   |
| EN 837-3  | <ul style="list-style-type: none"> <li>■ Class 1.6</li> <li>■ Class 1.0 <sup>1)</sup></li> </ul>  |
| ASME B40.100                                    | <ul style="list-style-type: none"> <li>■ <math>\pm 2\%</math>   <math>\pm 1\%</math>   <math>\pm 2\%</math> of measuring span (grade A)</li> <li>■ <math>\pm 1\%</math> of measuring span (grade 1A) <sup>1)</sup></li> </ul> |
| <b>Zero point setting with adjustment screw</b> | <ul style="list-style-type: none"> <li>■ In front, after opening the bayonet bezel <sup>2)</sup></li> <li>■ In front, through the opening in the window <sup>3)</sup></li> </ul>  |
| <b>Temperature error</b>                        | On deviation from the reference conditions at the measuring system:<br>$\leq \pm 0.6\%$ per 10 °C [ $\leq \pm 0.6\%$ per 18 °F] of full scale value   |
| <b>Reference conditions</b>                     |   |
| Ambient temperature                             | +20 °C [+68 °F]   |

1) Selectable for scale range  $\geq 0 \dots 40$  mbar [0 ... 16 inH<sub>2</sub>O]

2) For versions without mounting flange

3) For versions with mounting flange, the opening of the window for the zero point setting is sealed with a taper plug.

## Scale ranges

| mbar                   |           |
|------------------------|-----------|
| 0 ... 6 <sup>1)</sup>  | 0 ... 100 |
| 0 ... 10 <sup>2)</sup> | 0 ... 160 |
| 0 ... 16 <sup>2)</sup> | 0 ... 250 |
| 0 ... 25               | 0 ... 400 |
| 0 ... 40               | 0 ... 600 |
| 0 ... 60               |           |

| kg/cm <sup>2</sup>        |            |
|---------------------------|------------|
| 0 ... 0.006 <sup>1)</sup> | 0 ... 0.1  |
| 0 ... 0.01 <sup>2)</sup>  | 0 ... 0.16 |
| 0 ... 0.016 <sup>2)</sup> | 0 ... 0.25 |
| 0 ... 0.025               | 0 ... 0.4  |
| 0 ... 0.04                | 0 ... 0.6  |
| 0 ... 0.06                |            |

| kPa                     |          |
|-------------------------|----------|
| 0 ... 0.6 <sup>1)</sup> | 0 ... 10 |
| 0 ... 1 <sup>2)</sup>   | 0 ... 16 |
| 0 ... 1.6 <sup>2)</sup> | 0 ... 25 |
| 0 ... 2.5               | 0 ... 40 |
| 0 ... 4                 | 0 ... 60 |
| 0 ... 6                 |          |

| Pa                        |              |
|---------------------------|--------------|
| 0 ... 600 <sup>1)</sup>   | 0 ... 10,000 |
| 0 ... 1,000 <sup>2)</sup> | 0 ... 16,000 |
| 0 ... 1,600 <sup>2)</sup> | 0 ... 25,000 |
| 0 ... 2,500               | 0 ... 40,000 |
| 0 ... 4,000               | 0 ... 60,000 |
| 0 ... 6,000               |              |

| psi                      |           |
|--------------------------|-----------|
| 0 ... 0.1 <sup>1)</sup>  | 0 ... 1.5 |
| 0 ... 0.15 <sup>2)</sup> | 0 ... 2.5 |
| 0 ... 0.25 <sup>2)</sup> | 0 ... 3.6 |
| 0 ... 0.36               | 0 ... 6.0 |
| 0 ... 0.6                | 0 ... 10  |
| 0 ... 1.0                |           |

| mmH <sub>2</sub> O      |             |
|-------------------------|-------------|
| 0 ... 60 <sup>1)</sup>  | 0 ... 1,000 |
| 0 ... 100 <sup>2)</sup> | 0 ... 1,600 |
| 0 ... 160 <sup>2)</sup> | 0 ... 2,500 |
| 0 ... 250               | 0 ... 4,000 |
| 0 ... 400               | 0 ... 6,000 |
| 0 ... 600               |             |

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

| inH <sub>2</sub> O      |           |
|-------------------------|-----------|
| 0 ... 2.4 <sup>1)</sup> | 0 ... 40  |
| 0 ... 4 <sup>2)</sup>   | 0 ... 60  |
| 0 ... 6 <sup>2)</sup>   | 0 ... 100 |
| 0 ... 10                | 0 ... 160 |
| 0 ... 16                | 0 ... 240 |
| 0 ... 24                |           |

| oz/in <sup>2</sup>      |           |
|-------------------------|-----------|
| 0 ... 1.5 <sup>1)</sup> | 0 ... 25  |
| 0 ... 2.5 <sup>2)</sup> | 0 ... 40  |
| 0 ... 4 <sup>2)</sup>   | 0 ... 60  |
| 0 ... 6                 | 0 ... 100 |
| 0 ... 10                | 0 ... 150 |
| 0 ... 15                |           |

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

### Vacuum and +/- scale ranges

| mbar                    |                         |
|-------------------------|-------------------------|
| -6 ... 0 <sup>1)</sup>  | -3 ... +3 <sup>1)</sup> |
| -10 ... 0 <sup>2)</sup> | -5 ... +5 <sup>2)</sup> |
| -16 ... 0 <sup>2)</sup> | -8 ... +8 <sup>2)</sup> |
| -25 ... 0               | -12.5 ... +12.5         |
| -40 ... 0               | -20 ... +20             |
| -60 ... 0               | -30 ... +30             |
| -100 ... 0              | -50 ... +50             |
| -160 ... 0              | -80 ... +80             |
| -250 ... 0              | -125 ... +125           |
| -400 ... 0              | -200 ... +200           |
| -600 ... 0              | -300 ... +300           |

| kg/cm <sup>2</sup>         |                                 |
|----------------------------|---------------------------------|
| -0.006 ... 0 <sup>1)</sup> | -0.003 ... +0.003 <sup>1)</sup> |
| -0.01 ... 0 <sup>2)</sup>  | -0.005 ... +0.005 <sup>2)</sup> |
| -0.016 ... 0 <sup>2)</sup> | -0.008 ... +0.008 <sup>2)</sup> |
| -0.025 ... 0               | -0.0125 ... +0.0125             |
| -0.04 ... 0                | -0.02 ... +0.02                 |
| -0.06 ... 0                | -0.03 ... +0.03                 |
| -0.1 ... 0                 | -0.05 ... +0.05                 |
| -0.16 ... 0                | -0.08 ... +0.08                 |
| -0.25 ... 0                | -0.125 ... +0.125               |
| -0.4 ... 0                 | -0.2 ... +0.2                   |
| -0.6 ... 0                 | -0.3 ... +0.3                   |

| kPa                      |                             |
|--------------------------|-----------------------------|
| -0.6 ... 0 <sup>1)</sup> | -0.3 ... +0.3 <sup>1)</sup> |
| -1 ... 0 <sup>2)</sup>   | -0.5 ... +0.5 <sup>2)</sup> |
| -1.6 ... 0 <sup>2)</sup> | -0.8 ... +0.8 <sup>2)</sup> |
| -2.5 ... 0               | -1.25 ... +1.25             |
| -4 ... 0                 | -2 ... +2                   |
| -6 ... 0                 | -3 ... +3                   |
| -10 ... 0                | -5 ... +5                   |
| -16 ... 0                | -8 ... +8                   |
| -25 ... 0                | -12.5 ... +12.5             |
| -40 ... 0                | -20 ... +20                 |
| -60 ... 0                | -30 ... +30                 |

| Pa                         |                             |
|----------------------------|-----------------------------|
| -600 ... 0 <sup>1)</sup>   | -300 ... +300 <sup>1)</sup> |
| -1,000 ... 0 <sup>2)</sup> | -500 ... +500 <sup>2)</sup> |
| -1,600 ... 0 <sup>2)</sup> | -800 ... +800 <sup>2)</sup> |
| -2,500 ... 0               | -1,250 ... +1,250           |
| -4,000 ... 0               | -2,000 ... +2,000           |
| -6,000 ... 0               | -3,000 ... +3,000           |
| -10,000 ... 0              | -5,000 ... +5,000           |
| -16,000 ... 0              | -8,000 ... +8,000           |
| -25,000 ... 0              | -12,500 ... +12,500         |
| -40,000 ... 0              | -20,000 ... +20,000         |
| -60,000 ... 0              | -30,000 ... +30,000         |

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

| psi                       |                                 |
|---------------------------|---------------------------------|
| -0.1 ... 0 <sup>1)</sup>  | -0.05 ... +0.05 <sup>1)</sup>   |
| -0.15 ... 0 <sup>2)</sup> | -0.075 ... +0.075 <sup>2)</sup> |
| -0.25 ... 0 <sup>2)</sup> | -0.125 ... +0.125 <sup>2)</sup> |
| -0.36 ... 0               | -0.18 ... +0.18                 |
| -0.6 ... 0                | -0.3 ... +0.3                   |
| -1 ... 0                  | -0.5 ... +0.5                   |
| -1.5 ... 0                | -0.75 ... +0.75                 |
| -2.5 ... 0                | -1.25 ... +1.25                 |
| -3.6 ... 0                | -1.8 ... +1.8                   |
| -6 ... 0                  | -3 ... +3                       |
| -10 ... 0                 | -5 ... +5                       |

| mmH <sub>2</sub> O       |                           |
|--------------------------|---------------------------|
| -60 ... 0 <sup>1)</sup>  | -30 ... +30 <sup>1)</sup> |
| -100 ... 0 <sup>2)</sup> | -50 ... +50 <sup>2)</sup> |
| -160 ... 0 <sup>2)</sup> | -80 ... +80 <sup>2)</sup> |
| -250 ... 0               | -125 ... +125             |
| -400 ... 0               | -200 ... +200             |
| -600 ... 0               | -300 ... +300             |
| -1,000 ... 0             | -500 ... +500             |
| -1,600 ... 0             | -800 ... +800             |
| -2,500 ... 0             | -1,250 ... +1,250         |
| -4,000 ... 0             | -2,000 ... +2,000         |
| -6,000 ... 0             | -3,000 ... +3000          |

| inH <sub>2</sub> O       |                             |
|--------------------------|-----------------------------|
| -2.4 ... 0 <sup>1)</sup> | -1.2 ... +1.2 <sup>1)</sup> |
| -4 ... 0 <sup>2)</sup>   | -2 ... +2 <sup>2)</sup>     |
| -6 ... 0 <sup>2)</sup>   | -3 ... +3 <sup>2)</sup>     |
| -10 ... 0                | -5 ... +5                   |
| -16 ... 0                | -8 ... +8                   |
| -24 ... 0                | -12 ... +12                 |
| -40 ... 0                | -20 ... +20                 |
| -60 ... 0                | -30 ... +30                 |
| -100 ... 0               | -50 ... +50                 |
| -160 ... 0               | -80 ... +80                 |
| -240 ... 0               | -120 ... +120               |

| oz/in <sup>2</sup>       |                               |
|--------------------------|-------------------------------|
| -1.5 ... 0 <sup>1)</sup> | -0.75 ... +0.75 <sup>1)</sup> |
| -2.5 ... 0 <sup>2)</sup> | -1.25 ... +1.25 <sup>2)</sup> |
| -4 ... 0 <sup>2)</sup>   | -2 ... +2 <sup>2)</sup>       |
| -6 ... 0                 | -3 ... +3                     |
| -10 ... 0                | -5 ... +5                     |
| -15 ... 0                | -7.5 ... +7.5                 |
| -25 ... 0                | -12.5 ... +12.5               |
| -40 ... 0                | -20 ... +20                   |
| -60 ... 0                | -30 ... +30                   |
| -100 ... 0               | -50 ... +50                   |
| -150 ... 0               | -75 ... +75                   |

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

### Further details on: Scale ranges

|   |   |   |
|---|---|---|
| <b>Unit</b>   | <input type="checkbox"/> mbar<br><input type="checkbox"/> kg/cm <sup>2</sup><br><input type="checkbox"/> kPa<br><input type="checkbox"/> Pa | <input type="checkbox"/> psi<br><input type="checkbox"/> mmH <sub>2</sub> O<br><input type="checkbox"/> inH <sub>2</sub> O<br><input type="checkbox"/> oz/in <sup>2</sup> |
|   | Other units on request  |   |
| <b>Overpressure safety</b>                                |   |   |
| Scale range < 0 ... 40 mbar [0 ... 16 inH <sub>2</sub> O] | <input type="checkbox"/> Without<br><input type="checkbox"/> 3 x full scale value   |   |
| Scale range ≥ 0 ... 40 mbar [0 ... 16 inH <sub>2</sub> O] | <input type="checkbox"/> Without<br><input type="checkbox"/> 10 x full scale value  |   |
| <b>Vacuum safety</b>                                      |   |   |
| Scale range < 0 ... 40 mbar [0 ... 16 inH <sub>2</sub> O] | <input type="checkbox"/> Without<br><input type="checkbox"/> 3 x full scale value   |   |
| Scale range ≥ 0 ... 40 mbar [0 ... 16 inH <sub>2</sub> O] | <input type="checkbox"/> Without<br><input type="checkbox"/> 10 x full scale value  |   |

| Further details on: Scale ranges |   |           |
|----------------------------------|---|-----------|
| <b>Dial</b>                      |   |           |
| Scale layout                     | <ul style="list-style-type: none"> <li>■ Single scale</li> <li>■ Dual scale</li> </ul>  |           |
| Scale colour                     | Single scale  | Black     |
|                                  | Dual scale  | Black/red |
| Serial number                    | <ul style="list-style-type: none"> <li>■ Without</li> <li>■ Consecutive number * ... *</li> </ul>   |           |
| Material                         | Aluminium   |           |
| Special scale                    | Other scales or customer-specific dials, e.g. with red mark, circular arcs or circular sectors, on request  |           |
| <b>Pointer</b>                   |   |           |
| Instrument pointer               | Aluminium, black  |           |
| Mark pointer/drag pointer        | <ul style="list-style-type: none"> <li>■ Without</li> <li>■ Red mark pointer on dial, fixed</li> <li>■ Red mark pointer on window, adjustable (only available for NS 100 [4"] and NS 160 [6"])</li> <li>■ Red drag pointer on window, adjustable</li> </ul> |           |
| <b>Pointer stop pin</b>          | <ul style="list-style-type: none"> <li>■ Without</li> <li>■ At zero point</li> <li>■ At 6 o'clock</li> </ul>  |           |



| Process connection       |  |  |
|--------------------------|--|--|
| <b>Standard</b>          | <ul style="list-style-type: none"> <li>■ EN 837-3</li> <li>■ ISO 7</li> <li>■ ANSI/B1.20.1</li> </ul>  |  |
| <b>Size</b>              |  |  |
| EN 837-3                 | <ul style="list-style-type: none"> <li>■ G 1/8 B, male thread</li> <li>■ G 1/4 B, male thread</li> <li>■ G 1/2 B, male thread</li> <li>■ M20 x 1.5, male thread</li> </ul> |  |
| ISO 7                    | <ul style="list-style-type: none"> <li>■ R 1/4, male thread</li> <li>■ R 1/2, male thread</li> </ul>   |  |
| ANSI/B1.20.1             | <ul style="list-style-type: none"> <li>■ 1/4 NPT, male thread</li> <li>■ 1/2 NPT, male thread</li> </ul>   |  |
| <b>Restrictor</b>        | <ul style="list-style-type: none"> <li>■ Without</li> <li>■ Ø 0.5 mm [0.02"], copper alloy</li> <li>■ Ø 0.3 mm [0.012"], copper alloy</li> </ul>                           |  |
| <b>Material (wetted)</b> |  |  |
| Capsule element          | Copper alloy   |  |
| Sealing                  | NBR  |  |
| Process connection       | Copper alloy   |  |

Other process connections on request



| Operating conditions                |  |
|-------------------------------------|--|
| Medium temperature                  | -20 ... +100 °C [-4 ... +212 °F]<br>≤ 80 °C [≤ 176 °F] with NS 160 [6"]                                |
| Ambient temperature                 | -20 ... +60 °C [-4 ... +140 °F]  |
| Pressure limitation                 |  |
| Steady                              | Full scale value   |
| Fluctuating                         | 0.9 x full scale value   |
| Short time                          | 1.3 x full scale value   |
| Ingress protection per IEC/EN 60529 | <ul style="list-style-type: none"> <li>■ IP54</li> <li>■ IP55</li> <li>■ IP65 <sup>1)</sup></li> </ul> |

1) Only available for NS 100 [4"] and NS 160 [6"]

## Approvals

| Logo  | Description  | Region         |
|---|--|----------------|
|  | <b>EU declaration of conformity</b>  | European Union |
|   | Pressure Equipment Directive<br>PS > 200 bar, module A, pressure accessory |                |
|   | RoHS directive   |                |
|  | <b>UKCA</b>  | United Kingdom |
|   | Pressure equipment (safety) regulations                                    |                |
|   | Restriction of hazardous substances (RoHS) regulations                     |                |

## Optional approvals

| Logo  | Description  | Region     |
|---|--|------------|
|  | <b>PAC Kazakhstan</b><br>Metrology, measurement technology | Kazakhstan |
| -   | <b>MChS</b><br>Permission for commissioning                | Kazakhstan |
| -   | <b>PAC Ukraine</b><br>Metrology, measurement technology    | Ukraine    |
|  | <b>PAC Uzbekistan</b><br>Metrology, measurement technology | Uzbekistan |
| -   | <b>CPA</b><br>Metrology, measurement technology            | China      |

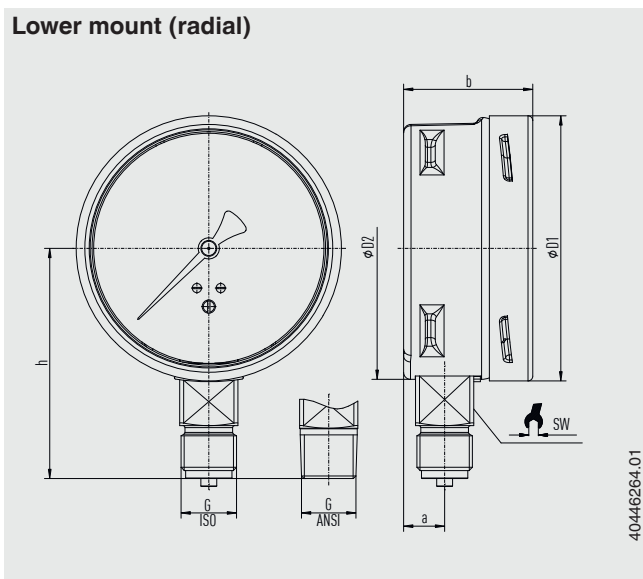
## Certificates (option)

| Certificates                            |  |
|---|--|
| <b>Certificates</b>                     | <ul style="list-style-type: none"> <li>■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy)</li> <li>■ 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metal parts, indication accuracy)</li> </ul>   |
| <b>Calibration</b>                      | <ul style="list-style-type: none"> <li>■ Factory calibration certificate</li> <li>■ SCS calibration certificate (traceable and accredited in accordance with ISO/IEC 17025)</li> <li>■ Calibration certificate by a national accreditation body, traceable and accredited in accordance with ISO/IEC 17025 on request</li> </ul> |
| <b>Recommended calibration interval</b> | 1 year (dependent on conditions of use)  |

→ For approvals and certificates, see website

## Dimensions in mm [in]

### Lower mount (radial)



| NS       | Weight                   |
|----------|--------------------------|
| 63 [2½"] | approx. 0.2 kg [0.44 lb] |
| 100 [4"] | approx. 0.6 kg [1.32 lb] |
| 160 [6"] | approx. 1.0 kg [2.2 lb]  |

### Process connection with thread per EN 837-3

| NS       | G         | Dimensions in mm [in] |             |             |            |            |           |
|----------|-----------|-----------------------|-------------|-------------|------------|------------|-----------|
|          |           | h ±1 [0.04]           | a           | b           | D1         | D2         | SW        |
| 63 [2½"] | G ½ B     | 49 [1.93]             | 9.5 [0.37]  | 43 [1.69]   | 63 [2.48]  | 62 [2.44]  | 14 [0.55] |
|          | G ¼ B     | 52 [2.05]             | 9.5 [0.37]  | 43 [1.69]   | 63 [2.48]  | 62 [2.44]  | 14 [0.55] |
| 100 [4"] | G ¼ B     | 80 [3.15]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.9]   | 22 [0.87] |
|          | G ½ B     | 87 [3.43]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.9]   | 22 [0.87] |
|          | M20 x 1.5 | 87 [3.43]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.9]   | 22 [0.87] |
| 160 [6"] | G ¼ B     | 111 [4.37]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |
|          | G ½ B     | 118 [4.65]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |
|          | M20 x 1.5 | 118 [4.65]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |

### Process connection with thread per ISO 7

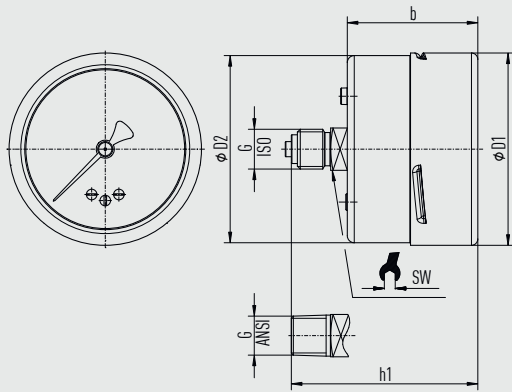
| NS       | G   | Dimensions in mm [in] |             |             |            |            |           |
|----------|-----|-----------------------|-------------|-------------|------------|------------|-----------|
|          |     | h ±1 [0.04]           | a           | b           | D1         | D2         | SW        |
| 63 [2½"] | R ½ | 49 [1.93]             | 9.5 [0.37]  | 43 [1.69]   | 63 [2.48]  | 62 [2.44]  | 14 [0.55] |
|          | R ¼ | 52 [2.05]             | 9.5 [0.37]  | 43 [1.69]   | 63 [2.48]  | 62 [2.44]  | 14 [0.55] |
| 100 [4"] | R ¼ | 80 [3.15]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 22 [0.87] |
|          | R ½ | 86 [3.39]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 22 [0.87] |
| 160 [6"] | R ¼ | 111 [4.37]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |
|          | R ½ | 117 [4.60]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |

### Process connection with thread per ANSI/B1.20.1

| NS       | G     | Dimensions in mm [in] |             |             |            |            |           |
|----------|-------|-----------------------|-------------|-------------|------------|------------|-----------|
|          |       | h ±1 [0.04]           | a           | b           | D1         | D2         | SW        |
| 63 [2½"] | ½ NPT | 49 [1.93]             | 9.5 [0.37]  | 43 [1.69]   | 63 [2.48]  | 62 [2.44]  | 14 [0.55] |
|          | ¼ NPT | 52 [2.05]             | 9.5 [0.37]  | 43 [1.69]   | 63 [2.48]  | 62 [2.44]  | 14 [0.55] |
| 100 [4"] | ¼ NPT | 80 [3.15]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 22 [0.87] |
|          | ½ NPT | 86 [3.39]             | 15.5 [0.61] | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 22 [0.87] |
| 160 [6"] | ¼ NPT | 111 [4.37]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |
|          | ½ NPT | 117 [4.60]            | 15.5 [0.61] | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 22 [0.87] |



**NS 63 [2 ½"], centre back mount**



40446266.01

| NS       | Weight                   |
|----------|--------------------------|
| 63 [2½"] | approx. 0.2 kg [0.44 lb] |

**Process connection with thread per EN 837-3**

| NS        | G     | Dimensions in mm [in] |           |           |           |           |
|-----------|-------|-----------------------|-----------|-----------|-----------|-----------|
|           |       | h1 ±1 [0.04]          | b         | D1        | D2        | SW        |
| 63 [2 ½"] | G ½ B | 59 [2.32]             | 43 [1.69] | 63 [2.48] | 62 [2.44] | 14 [0.55] |
|           | G ¼ B | 62 [2.44]             | 43 [1.69] | 63 [2.48] | 62 [2.44] | 14 [0.55] |

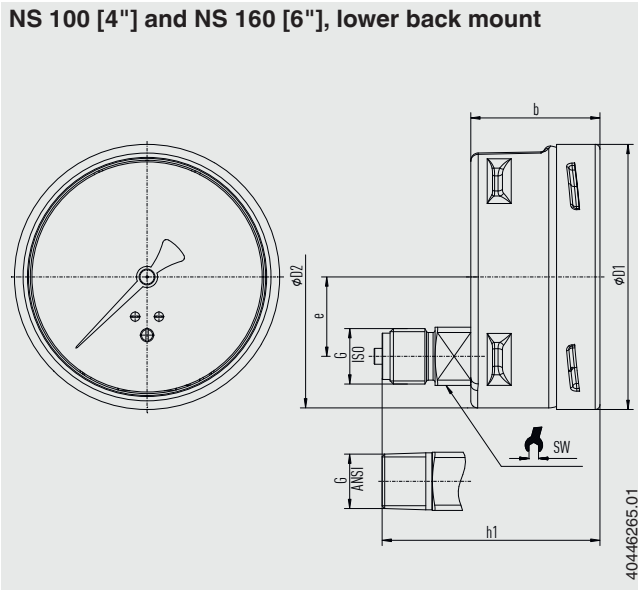
**Process connection with thread per ISO 7 or ANSI/B1.20.1**

| NS        | G   | Dimensions in mm [in] |           |           |           |           |
|-----------|-----|-----------------------|-----------|-----------|-----------|-----------|
|           |     | h1 ±1 [0.04]          | b         | D1        | D2        | SW        |
| 63 [2 ½"] | R ¼ | 62 [2.44]             | 43 [1.69] | 63 [2.48] | 62 [2.44] | 14 [0.55] |

**Process connection with thread per ISO 7 or ANSI/B1.20.1**

| NS        | G     | Dimensions in mm [in] |           |           |           |           |
|-----------|-------|-----------------------|-----------|-----------|-----------|-----------|
|           |       | h1 ±1 [0.04]          | b         | D1        | D2        | SW        |
| 63 [2 ½"] | ½ NPT | 59 [2.32]             | 43 [1.69] | 63 [2.48] | 62 [2.44] | 14 [0.55] |
|           | ¼ NPT | 62 [2.44]             | 43 [1.69] | 63 [2.48] | 62 [2.44] | 14 [0.55] |

NS 100 [4"] and NS 160 [6"], lower back mount



| NS       | Weight                    |
|----------|---------------------------|
| 100 [4"] | approx. 0.55 kg [1.21 lb] |
| 160 [6"] | approx. 1 kg [2.2 lb]     |

Process connection with thread per EN 837-3

| NS       | G         | Dimensions in mm [in] |             |            |            |            |           |
|----------|-----------|-----------------------|-------------|------------|------------|------------|-----------|
|          |           | h1 ±1 [0.04]          | b           | D1         | D2         | e          | SW        |
| 100 [4"] | G ¼ B     | 76 [2.99]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
|          | G ½ B     | 83 [3.27]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
|          | M20 x 1.5 | 83 [3.27]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
| 160 [6"] | G ¼ B     | 76 [2.99]             | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 50 [1.97]  | 22 [0.87] |
|          | G ½ B     | 83 [3.27]             | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 50 [1.97]  | 22 [0.87] |
|          | M20 x 1.5 | 83 [3.27]             | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 50 [1.97]  | 22 [0.87] |

Process connection with thread per ISO 7

| NS       | G   | Dimensions in mm [in] |             |            |            |            |           |
|----------|-----|-----------------------|-------------|------------|------------|------------|-----------|
|          |     | h1 ±1 [0.04]          | b           | D1         | D2         | e          | SW        |
| 100 [4"] | R ¼ | 76 [2.99]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
|          | R ½ | 82 [3.23]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
| 160 [6"] | R ½ | 82 [3.23]             | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 50 [1.97]  | 22 [0.87] |

Process connection with thread per ANSI/B1.20.1

| NS       | G     | Dimensions in mm [in] |             |            |            |            |           |
|----------|-------|-----------------------|-------------|------------|------------|------------|-----------|
|          |       | h1 ±1 [0.04]          | b           | D1         | D2         | e          | SW        |
| 100 [4"] | ¼ NPT | 76 [2.99]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
|          | ½ NPT | 82 [3.23]             | 49.5 [1.95] | 101 [3.98] | 99 [3.90]  | 30 [1.181] | 22 [0.87] |
| 160 [6"] | ¼ NPT | 76 [2.99]             | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 50 [1.97]  | 22 [0.87] |
|          | ½ NPT | 82 [3.23]             | 49.5 [1.95] | 161 [6.34] | 159 [6.26] | 50 [1.97]  | 22 [0.87] |

## Ordering information

Model / Nominal size / Scale range / Connection location / Process connection / Options

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