Bourdon tube pressure gauge, stainless steel
For extremely low ambient temperatures down to -70 °C
Model PG23LT, with case filling

Applications
- For outdoor use with ambient temperatures down to -70 °C [-94 °F]
- For gaseous and liquid aggressive media that are not highly viscous or crystallising, also in aggressive environments
- Oil and gas industry, chemical and petrochemical industries

Special features
- Special instrument design for extremely low ambient temperatures down to -70 °C [-94 °F]
- Ingress protection IP66 and IP67
- Completely from stainless steel
- Measuring ranges from 0 ... 0.6 to 0 ... 1,000 bar [0 ... 10 to 0 ... 15,000 psi]
- Optionally as safety version “S3” per EN 837-1

Description
The model PG23LT high-quality pressure gauge has been designed specifically for extremely low ambient temperatures down to -70 °C [-94 °F]. The stainless steel pressure gauge finds applications in particularly cold regions such as Russia, Canada, Scandinavia or China.

The PG23LT pressure gauge is used primarily in the oil and gas industries and in the petrochemical industry. The typical measuring points are found on pipelines or in pumping stations for oil and gas transportation.

As a result of the specific low-temperature design of the instrument, the use of special seals and the case filling, the model PG23LT is suitable for outdoor applications down to an ambient temperature of -70 [-94 °F]. The same instrument design fulfils the requirements for both IP66 and IP67 ingress protection for pressure ranges greater than 0 ... 40 bar.

The proof of the instrument’s suitability for ambient temperatures down to -70 °C [-94 °F] was provided in the in-house laboratory and can optionally be confirmed by a 2.2 test report.
Standard version

Nominal size (NS) in mm [in]
63 [2 ½"], 100 [4"], 160 [6"]

Accuracy class
NS 63 [2 ½"]: 1.6
NS 100 [4"], 160 [6"]: 1.0

Scale ranges
0 ... 0.6 to 0 ... 1,000 bar [0 ... 10 to 0 ... 15,000 psi]
or all other equivalent vacuum or combined pressure and vacuum ranges

Pressure limitation
Steady: Full scale value
Fluctuating: 0.9 x full scale value
Short time: 1.3 x full scale value

Permissible temperature
Ambient: -70 ... +60 °C [-94 ... 140 °F]
Medium: ≤ 100 °C [≤ 212 °F]

Temperature effect
When the temperature at the measuring system deviates from the reference temperature 20 °C [68 °F]: ≤ ±0.4 %/10 °C [≤ ±0.4 %/18 °F] of full scale value

Ingress protection per IEC/EN 60529
IP65 for scale ranges ≤ 0 ... 40 bar [≤ 0 ... 580 psi]
IP66/IP67 for scale ranges > 0 ... 40 bar [≤ 0 ... 580 psi]

For further information on the ingress protection, see Technical information IN 00.18.

Process connection
Stainless steel 316L
Lower mount (radial) or lower back mount
■ G ¼ B (male), SW 14 (only NS 63 [2 ½"])
■ G ½ B (male), SW 22 (not for NS 63 [2 ½"])
■ ½ NPT (male), SW 22 (not for NS 63 [2 ½"])
■ M20 x 1.5 (male), SW 22 (not for NS 63 [2 ½“])

Pressure element
Stainless steel 316L
< 100 bar [≤ 1,450 psi]: C-type
≥ 100 bar [≥ 1,450 psi]: Helical type

Movement
Stainless steel

Dial
Aluminium, white, black lettering

Pointer
Aluminium, black

Case
Stainless steel, scale ranges ≤ 0 ... 40 bar [≤ 0 ... 580 psi] with compensating valve to vent case

Window
Laminated safety glass

Ring
Bayonet ring, stainless steel

Case filling
Silicone oil

Options
■ Sealing for the process connection (model 910.17, see data sheet AC 09.08, stainless steel recommended as sealing material)
■ Safety version “S3” with solid baffle wall and blow-out back per EN-837-1, for lower mount (radial)
■ Panel mounting flange, stainless steel
■ Surface mounting flange, stainless steel
■ Red mark printed on the dial
■ Mark pointer on bayonet ring adjustable from the outside with NS 100 [4"]
Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="CE" /></td>
<td>EU declaration of conformity</td>
<td>European Union</td>
</tr>
<tr>
<td><img src="image" alt="Ex" /></td>
<td>Pressure equipment directive</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="PS" /></td>
<td>Pressure accessory PS &gt; 200 bar, module A, pressure accessory</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="Ex" /></td>
<td>ATEX directive (option)</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="c" /></td>
<td>Ignition protection type “c”, constructive safety</td>
<td></td>
</tr>
<tr>
<td><img src="image" alt="EAC" /></td>
<td>EAC (option)</td>
<td>Eurasian Economic Community</td>
</tr>
<tr>
<td><img src="image" alt="GOST" /></td>
<td>GOST (option)</td>
<td>Russia</td>
</tr>
<tr>
<td><img src="image" alt="KazInMetr" /></td>
<td>KazInMetr (option)</td>
<td>Kazakhstan</td>
</tr>
<tr>
<td><img src="image" alt="UkrSEPRO" /></td>
<td>UkrSEPRO (option)</td>
<td>Ukraine</td>
</tr>
<tr>
<td><img src="image" alt="Uzstandard" /></td>
<td>Uzstandard (option)</td>
<td>Uzbekistan</td>
</tr>
<tr>
<td><img src="image" alt="Metrology" /></td>
<td>Metrology, measurement technology</td>
<td></td>
</tr>
</tbody>
</table>

Certificates (option)

- 2.2 test report per EN 10204
  “Confirmation of operational capability at ambient temperatures down to -70 °C [-94 °F]”
- 2.2 test report per EN 10204
  e.g. state-of-the-art manufacturing, material proof, indication accuracy
- 3.1 inspection certificate per EN 10204
  e.g. material proof for wetted metal parts, indication accuracy

Approvals and certificates, see website
### Dimensions in mm [in]

#### Standard version

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm [in]</th>
<th>Weight in kg [lbs]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>63 [2 ½&quot;]</td>
<td>9.5</td>
<td>33</td>
</tr>
<tr>
<td>100 [4&quot;]</td>
<td>15.5</td>
<td>49.5</td>
</tr>
<tr>
<td>160 [6&quot;]</td>
<td>15.5</td>
<td>49.5</td>
</tr>
</tbody>
</table>

Process connection per EN 837-1 / 7.3

1) Plus 16 mm [0.63 in] with scale ranges ≥ 0 ... 100 bar [≥ 0 ... 1,450 psi]

#### Safety version “S3”

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm [in]</th>
<th>Weight in kg [lbs]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
</tbody>
</table>
Ordering information
Model / Nominal size / Scale range / Process connection / Connection location / Options