Bourdon tube pressure gauge, stainless steel
For highest pressure applications to 6,000 bar
Model PG23HP-P, heavy-duty version

Applications
■ For liquid media in high-pressure applications (e.g. water, hydraulic oil)
■ Test benches (e.g. for autofrettage, burst pressure)
■ Water jet cutting
■ High-pressure cleaning
■ High-pressure generation

Special features
■ Safety pressure gauge with solid baffle wall designed in compliance with the requirements and test conditions of the DIN 16001 high-pressure standard
■ High load cycle stability, even with dynamic pressure profiles
■ High indication accuracy of 1 %, optionally 0.6 %
■ Scale ranges from 0 ... 2,000 bar to 0 ... 6,000 bar

Description
The model PG23HP-P Bourdon tube pressure gauge has been designed specifically for high-pressure applications up to 6,000 bar. This makes it one of the few pressure gauges available worldwide which can reliably display pressures of this order of magnitude.

Typical measuring points for this pressure gauge can be found in water jet cutting, high-pressure cleaning and test bench construction.

WIKA manufactures and qualifies the model PG23HP-P in accordance with the requirements of the new DIN 16001 high-pressure standard in the “S3” safety version. The safety version is made up of laminated safety glass, a solid baffle wall between measuring system and dial and a blow-out back. In the event of a failure, the operator is protected at the front side, as media or components can only be ejected via the back of the instrument.

Through the use of high-quality stainless-steel and nickel-based alloys, the model PG23HP-P features excellent load cycle stability and long service life. The instrument works reliably within the specification with both static and dynamic pressure profiles.

The standard accuracy of the model PG23HP-P is 1.0 %. For scale ranges up to and including 0 ... 4,000 bar, the instrument is optionally available with an improved indication accuracy of 0.6 %.

The resistance to shock and vibration can be increased by the optional silicone oil case filling.
Specifications

Design
DIN 16001

Nominal size in mm
100, 160

Accuracy class
1.0
1.6 (only for scale range 0 ... 6,000 bar)

<table>
<thead>
<tr>
<th>Scale range in bar</th>
<th>Scale range in psi</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 ... 2,000</td>
<td>0 ... 30,000</td>
</tr>
<tr>
<td>0 ... 2,500</td>
<td>0 ... 40,000</td>
</tr>
<tr>
<td>0 ... 3,000</td>
<td>0 ... 50,000</td>
</tr>
<tr>
<td>0 ... 4,000</td>
<td>0 ... 60,000</td>
</tr>
<tr>
<td>0 ... 5,000</td>
<td>0 ... 75,000</td>
</tr>
<tr>
<td>0 ... 6,000</td>
<td>0 ... 85,000</td>
</tr>
</tbody>
</table>

Pressure limitation
Steady: 3/4 x full scale value
Fluctuating: 2/3 x full scale value
Short time: Full scale value

Permissible temperature
Ambient: -40 ... +60 °C
Medium: +200 °C maximum with unfilled instruments
       +100 °C maximum with filled instruments

Temperature effect
When the temperature of the measuring system deviates from the reference temperature (+20 °C):
max. ±0.4 %/10 K of full scale value

Ingress protection
IP65 per IEC/EN 60529

Process connection
Stainless steel 316L
NS 100: Lower mount (radial) or back mount
NS 160: Lower mount (radial)
- G ½ B (up to max. 2,500 bar)
- 9/16 - 18 UNF (female) with 60° sealing cone per Autoclave Engineers
- M16 x 1.5 (female) with inner sealing cone 60°
- 5/8 - 18 UNF (female) with inner sealing cone 60°
- others on request

Pressure element
NiFe-alloy, helical type

Movement
Stainless steel

Dial
Aluminium, white, black lettering

Pointer
Aluminium, black

Case
Stainless steel, with solid baffle wall (Solidfront) and blow-out back

Window
Laminated safety glass

Ring
Bayonet ring, stainless steel

Filling liquid (option)
Silicone oil M50

Options
- Higher indication accuracy 0.6 % for scale ranges up to and including 0 ... 4,000 bar
- Ingress protection IP66
- Panel mounting flange, stainless steel or polished stainless steel
- Surface mounting lugs on the back, stainless steel
- Mark pointer adjustable from the outside
- Mark pointer on bayonet ring adjustable from the outside
Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>EU declaration of conformity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ Pressure equipment directive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ PS &gt; 200 bar, module A, pressure accessory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>European Union</td>
<td></td>
</tr>
<tr>
<td>EAC</td>
<td>EAC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ EMC directive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>■ Low voltage directive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Eurasian Economic Community</td>
<td></td>
</tr>
<tr>
<td>🇷🇺</td>
<td>KazInMetr</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Metrology, measurement technology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kazakhstan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MTSCHS</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Permission for commissioning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Kazakhstan</td>
<td></td>
</tr>
</tbody>
</table>

Certificates (option)

- 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 metallic parts, indication accuracy)

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

#### Standard version

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>100</td>
<td>25</td>
<td>59</td>
</tr>
<tr>
<td>160</td>
<td>27</td>
<td>65</td>
</tr>
</tbody>
</table>

#### Process connections

- Lower mount (radial)
- Lower back mount (only NS 100)

#### Process connections per “Autoclave Engineers”

**Ordering information**

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