Bourdon tube pressure gauge, stainless steel
For high pressure applications to 85,000 psi
Model PG23HP-P, performance version

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

Special features
- Safety pressure gauge in solid front design with blow-out back.
- In compliance with the requirements and test conditions of the DIN 16001 high-pressure standard
- High load cycle stability
- Standard accuracy ± 1% of full span, optionally ± 0.5% per ASME B40.100
- Scale ranges from 0 ... 30,000 psi up to 0 ... 85,000 psi

Description
The model PG23HP-P Bourdon tube pressure gauge has been designed specifically for high-pressure applications up to 85,000 psi (6000 bar).

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

WIKA manufactures and qualifies model PG23HP-P in accordance with the requirements of the new DIN 16001 high pressure standard in the “S3” safety version. The safety version solid-front design features a laminated safety glass, a solid wall between the measuring system and a blow-out back. In the event of a Bourdon tube failure, the release of energy and media is directed to the back of gauge, protecting the operator in front of the gauge.

Due to the use of high-quality stainless steel and nickel based alloys model PG23HP-P features excellent load cycle stability and a long service life. The gauge performs with great reliability and repeatability in both static and highly dynamic pressure applications.

The standard accuracy of model PG23HP-P is ±1.0% of full span per ASME B40.100 Grade 1A. For pressure ranges up to 60,000 psi an increased accuracy of ± 0.5% of full span per ASME B40.100 Grade 2A is available as an option. A silicone oil case filling to increase the dampening effect in applications where shocks and vibrations are present is available as an option.
Specifications

Design
DIN 16001

Nominal size in mm
4" (100 mm) and 6" (160 mm)

Accuracy class
±1.0% of full span per ASME B40.100 Grade 1A
Class 1.0 per EN 837-1
For range 0...85,000 psi (6,000 bar) ±2/1/2% of full span per ASME B40.100 Grade A and class 1.6 per EN 837-1

Scale ranges
0 ... 30,000 psi (2,000 bar) 0 ... 60,000 psi (4,000 bar)
0 ... 40,000 psi (2,500 bar) 0 ... 75,000 psi (5,000 bar)
0 ... 50,000 psi (3,500 bar) 0 ... 85,000 psi (6,000 bar)

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 … +140°F (-40…+60 °C)
Medium: +392°F (+200 °C) maximum (dry gauges)
+212°F (+100 °C) maximum (liquid filled gauges)

Temperature effect
Additional temperature error if the media temperature deviates from the reference temperature of 67°F (+20°C):
Max. ±0.4 % of full scale value per 18°F temperature change

Ingress protection
IP65 per IEC/EN 60529

Process connection
Stainless steel 316L
NS 100: Lower mount or back mount
NS 160: Lower mount only
G1½B (up to max. 40,000 psi / 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°

Pressure element
NiFe-alloy, helical type

Movement
Stainless steel

Dial
Aluminium, white, black lettering

Options
- Increased accuracy ±0.5% of full span per ASME B40.100 Grade 2A for ranges up to 60,000 psi (4,000 bar)
- Ingress protection IP66 (NEMA 4/4X)
- 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>
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<tbody>
<tr>
<td>EU declaration of conformity</td>
<td>Pressure equipment directive PS &gt; 200 bar, module A, pressure accessory</td>
<td>European Union</td>
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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>
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<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
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<tr>
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<td>59</td>
</tr>
<tr>
<td>160</td>
<td>27</td>
<td>65</td>
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#### Process connection

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

#### Ordering information

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

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