

# Bourdon tube pressure gauge, stainless steel

## For highest pressure applications to 6,000 bar

### Model PG23HP-P, heavy-duty version

WIKA data sheet PM 02.29



EAC



for further approvals  
see page 3

#### 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.



Bourdon tube pressure gauge model PG23HP-P

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)

Scale range in bar	Scale range in psi
0 ... 2,000	0 ... 30,000
0 ... 2,500	0 ... 40,000
0 ... 3,000	0 ... 50,000
0 ... 4,000	0 ... 60,000
0 ... 5,000	0 ... 75,000
0 ... 6,000	0 ... 85,000

### 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.  $\pm 0.4$  %/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 1/2 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

Logo	Description	Country
	<b>EU declaration of conformity</b> <ul style="list-style-type: none"><li>■ Pressure equipment directive PS &gt; 200 bar, module A, pressure accessory</li></ul>	European Union
	<b>EAC</b> <ul style="list-style-type: none"><li>■ EMC directive</li><li>■ Low voltage directive</li></ul>	Eurasian Economic Community
	<b>KazInMetr</b> Metrology, measurement technology	Kazakhstan
-	<b>MTSCHS</b> Permission for commissioning	Kazakhstan

## Certificates (option)

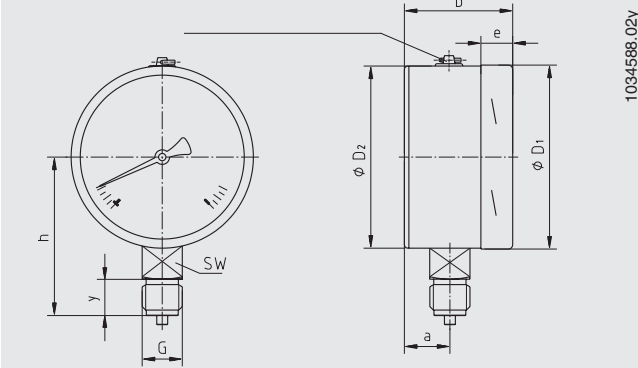
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metallic parts, indication accuracy)

Approvals and certificates, see website

# Dimensions in mm

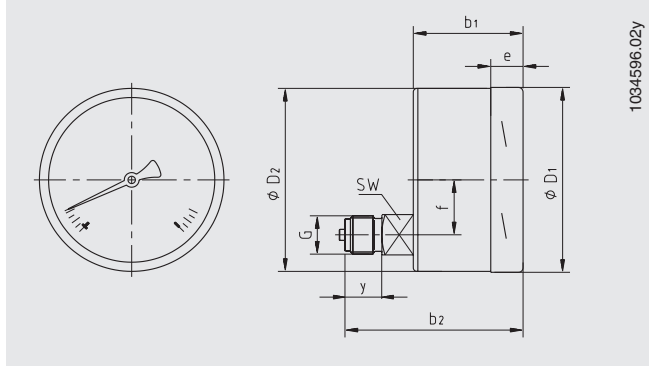
## Standard version

### Lower mount (radial)



1034588.02y

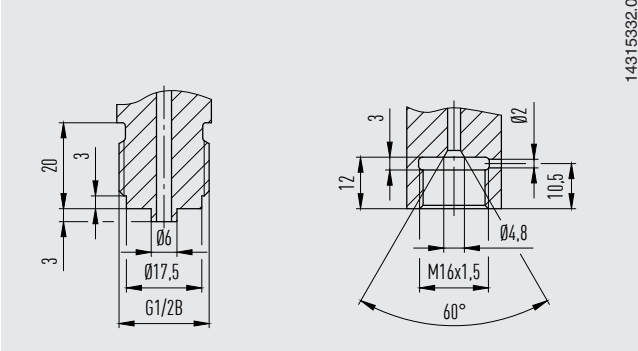
### Lower back mount (only NS 100)



1034596.02y

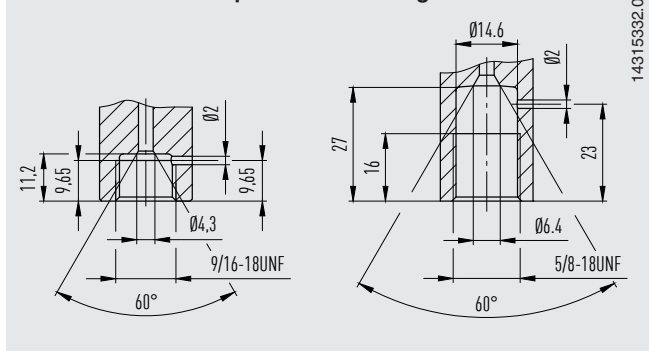
NS	Dimensions in mm												Weight in kg	
	a	b	b <sub>1</sub>	b <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	e	f	G	h ±1	y	SW	unfilled	filled
100	25	59	59.5	93	101	99	17	30	G ½ B	87	23	22	0.65	1.08
160	27	65	-	-	161	159	17.5	-	G ½ B	118	23	22	1.30	2.34

### Process connections



14315392.01

### Process connections per "Autoclave Engineers"



14315392.01

## Ordering information

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

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