

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

Certificates (option)

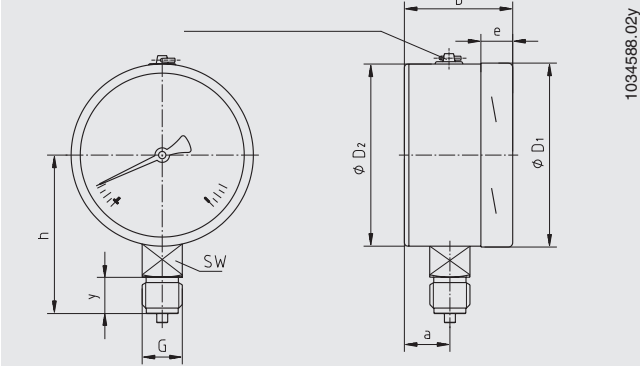
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metallic parts, indication accuracy)

Approvals and certificates, see website

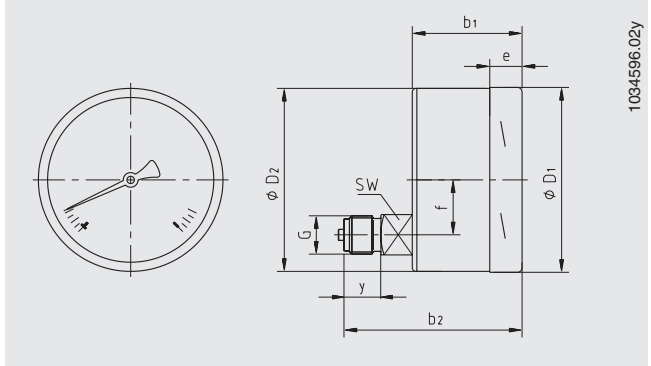
Dimensions in mm

Standard version

Lower mount (radial)

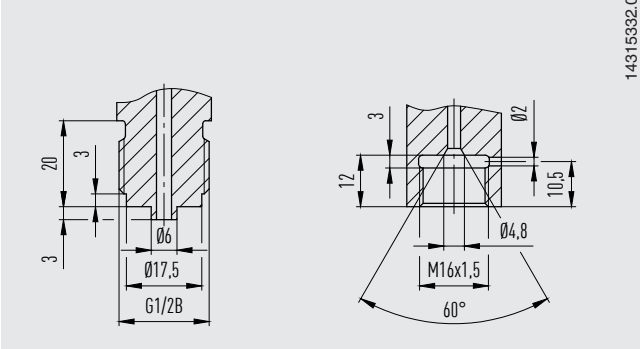


Lower back mount (only NS 100)

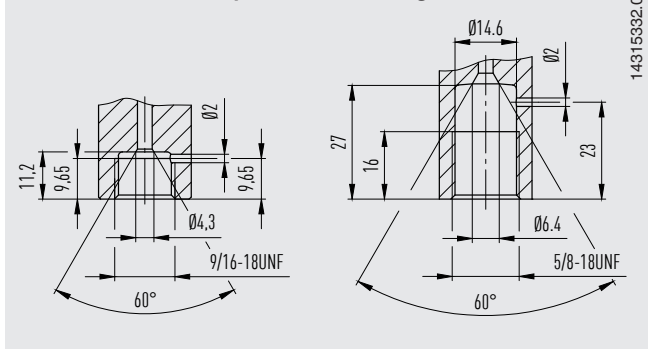


NS	Dimensions in mm												Weight in kg	
	a	b	b ₁	b ₂	D ₁	D ₂	e	f	G	h ±1	y	SW	unfilled	filled
100	25	59	59.5	93	101	99	17	30	G ½ B	87	23	22	0.65	1.08
160	27	65	-	-	161	159	17.5	-	G ½ B	118	23	22	1.30	2.34

Process connections



Process connections per "Autoclave Engineers"



Ordering information

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

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