

Test gauge, copper alloy

Class 0.6, NS 160 [6"]

Model 312.20

WIKA data sheet PM 03.01



for further approvals
see page 3

Applications

- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts
- Precision measurement in laboratories
- High-accuracy pressure measurement
- Testing of industrial type pressure gauges

Special features

- Knife edge pointer for optimal accuracy of reading
- Precise movement with wear parts of argentan
- Scale ranges from 0 ... 0.6 bar to 0 ... 600 bar [0 ... 10 psi to 0 ... 10,000 psi]



Test gauge, model 312.20

Description

The model 312.20 mechanical test gauge has been specifically designed for the measurement of pressures with high accuracy. With its accuracy class of 0.6, the Bourdon tube pressure gauge is suitable for testing industrial type pressure gauges or for precision measurement in laboratories.

For the respective measuring requirement, a scale range between 0 ... 0.6 bar to 0 ... 600 bar [0 ... 10 psi to 0 ... 10,000 psi] can be selected.

The model 312.20 is constructed with a case from stainless steel and wetted parts from copper alloy. The instrument meets the requirements of the international industry standard EN 837-1 for Bourdon tube pressure gauges.

The optimal readability of the instrument, with a nominal size of 160 mm, is achieved via a knife edge pointer and a dial with fine divisions. In addition, a mirror scale can be chosen to avoid the parallax error.






On request, a calibration certificate will be provided for this instrument.

Safe storage and transport is ensured by a transport case (accessory).

Specifications

Model 312.20	
Standard	EN 837-1 See Technical Information IN 00.05 for information on "Selection, installation, handling and operation of pressure gauges".
Nominal size (NS)	Ø 160 mm [6"]
Accuracy class	<ul style="list-style-type: none"> ■ 0.6 ■ 0.25 (selectable for scale ranges ≤ 400 bar) ■ Grade 3A per ASME B40.100 (selectable for scale ranges ≤ 400 bar)
Scale ranges	0 ... 0.6 bar to 0 ... 600 bar [0 ... 10 psi to 0 ... 10,000 psi] other units (e.g. psi, kPa) available or all other equivalent vacuum or combined pressure and vacuum ranges
Scale	<ul style="list-style-type: none"> ■ Single scale ■ Mirror band scale
Zero point setting	<ul style="list-style-type: none"> ■ Without ■ From outside through adjustable dial
Pressure limitation	
Steady	Full scale value
Fluctuating	0.9 x full scale value
Short time	1.3 x full scale value
Connection location	<ul style="list-style-type: none"> ■ Lower mount (radial) ■ Lower back mount
Process connection	G ½ B Others on request
Permissible temperature	
Medium	<ul style="list-style-type: none"> ■ +80 °C [+176 °F] ■ +100 °C [+212 °F] (version with special soft solder) ■ +200 °C [+392 °F] (model 332.50, see data sheet PM 03.06)
Ambient	-20 ... +60 °C [-4 ... +140 °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
Case filling	<ul style="list-style-type: none"> ■ Without ■ With case filling (model 333.50, see data sheet PM 03.06)
Wetted materials	
Process connection	Copper alloy
Pressure element	< 100 bar: Copper alloy, C-type ≥ 100 bar: Stainless steel 316L, helical type
Non-wetted materials	
Case	Stainless steel <ul style="list-style-type: none"> ■ Safety level "S0" per EN 837 ■ Safety level "S1" per EN 837: With blow-out device in case back
Ring	<ul style="list-style-type: none"> ■ Bayonet ring, stainless steel ■ Triangular profile ring, polished stainless steel, with clamp
Movement	Copper alloy, wear parts argentan
Dial	Aluminium, white, black lettering
Pointer	Knife edge pointer, aluminium, black
Window	Instrument glass
Ingress protection per IEC/EN 60529	IP54
Adjustment medium	<ul style="list-style-type: none"> ■ Liquid for scale ranges > 25 bar; gas for scale ranges ≤ 25 bar ■ Gas for all scale ranges

Approvals

Logo	Description	Country
	EU declaration of conformity Pressure equipment directive, PS > 200 bar; module A, pressure accessory	European Union
	GOST (option) Metrology, measurement technology	Russia
	KazInMetr (option) Metrology, measurement technology	Kazakhstan
-	MTSCHS (option) Permission for commissioning	Kazakhstan
	UkrSEPRO (option) Metrology, measurement technology	Ukraine
	Uzstandard (option) Metrology, measurement technology	Uzbekistan
-	CPA (option) Metrology, measurement technology	China
-	CRN Safety (e.g. electr. safety, overpressure, ...)	Canada

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. indication accuracy)
- PCA calibration certificate, traceable and accredited in accordance with ISO/IEC 17025
- Calibration certificate by the national accreditation body, traceable and accredited in accordance with ISO/IEC 17025 on request

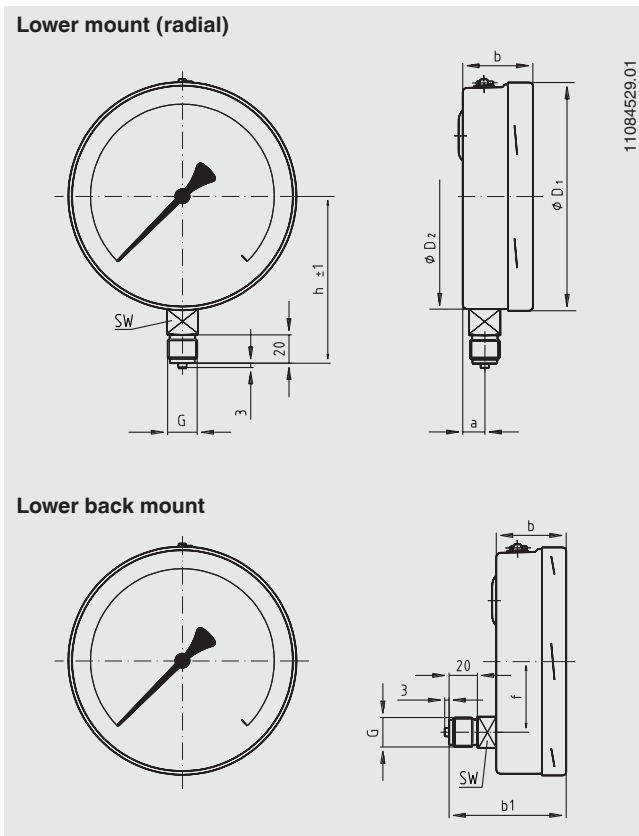
Approvals and certificates, see website

Accessories

- Sealings (model 910.17, see data sheet AC 09.08)
- Panel or surface mounting flange, stainless steel
- Transport case

Dimensions in mm [in]

Standard version



NS	Dimensions in mm [in]									Weight in kg [lbs]
	a	b	b ₁	D ₁	D ₂	f	G	h ±1	SW	
160	15.5 [0.61]	49.5 [1.949] ¹⁾	83 [3.268] ¹⁾	161 [6.339]	159 [6.26]	50 [1.969]	G ½ B	118 [4.646]	22	1.10 [2.947]

1) Plus 16 mm with scale ranges ≥ 100 bar

Process connection per EN 837-1 / 7.3

Ordering information

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

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