

Bourdon tube pressure gauge, copper alloy Stainless steel case, NS 100 and 160 Model 212.20

WIKA data sheet PM 02.01



for further approvals
see page 3

Applications

- Machine building and plant construction
- Building services
- Refrigeration technology
- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts

Special features

- Durable and robust
- Cost-effective and reliable
- To combine with WIKA diaphragm seals
- Germanischer Lloyd approval
- Scale ranges up to 0 ... 1,000 bar



Bourdon tube pressure gauge model 212.20

Description

The mechanical model 212.20 Bourdon tube pressure gauge is constructed with a case from stainless steel and wetted parts from copper alloy.

The model 212.20 meets the requirements of the international industry standard EN 837-1 for Bourdon tube pressure gauges.

Frequent measuring points are found in the machine building, plant construction and building services industries. The model 212.20 can also be used in refrigeration applications.

The cases are available in nominal sizes of 100 and 160 mm and fulfil IP54 ingress protection. With an accuracy class of 1.0, this pressure gauge is suitable for the process industry.

The modular design enables a multitude of combinations of process connections, nominal sizes and scale ranges. This high variance enables universal use of the instrument in the industrial sector.

For mounting in control panels, the pressure gauges can be fitted with a mounting flange or with a triangular bezel and mounting bracket.

Specifications

Design

EN 837-1

Nominal size in mm

100, 160

Accuracy class

1.0

Scale ranges

0 ... 0.6 to 0 ... 1,000 bar

or all other equivalent vacuum or combined pressure and vacuum ranges

Pressure limitation

Steady: Full scale value

Fluctuating: 0.9 x full scale value

Short time: 1.3 x full scale value

Permissible temperature

Ambient: -40 ... +60 °C

Medium: +80 °C maximum

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 per IEC/EN 60529

IP54

Process connection

Copper alloy

Lower back mount

G ½ B (male), SW 22

Pressure element

< 100 bar: Copper alloy, C-type

≥ 100 bar: Stainless steel 316L, helical type

Movement

Copper alloy, wear parts argantan

Dial

Aluminium, white, black lettering

Pointer

Aluminium, black

Case

Stainless steel

Window

Instrument glass

Ring

Bayonet ring, stainless steel

Options









- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- NS 100: Liquid filling (model 213.53, see data sheet PM 02.12)
- NS 160: Liquid filling (model 233.50, see data sheet PM 02.02)
- Increased medium temperature up to 100 °C with special soft solder
- Increased medium temperature up to 200 °C (see data sheet PM 02.02)
- Panel or surface mounting flange, stainless steel
- Panel mounting flange, polished stainless steel
- Triangular bezel, polished stainless steel, with clamp
- Bourdon tube pressure gauge with switch contacts, model PGS21, see data sheet PV 22.01

Special versions

For Refrigeration plants

NS 100: With temperature scale for refrigerants in °C, refrigerant: R717, R404A, R407C, R22 or R134a

Approvals

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

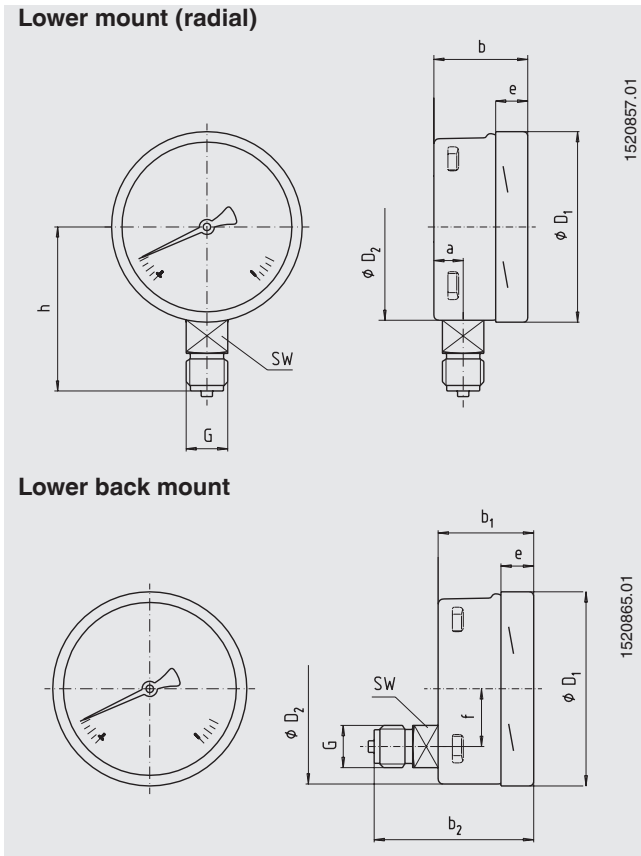
Certificates (option)

- 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)

Approvals and certificates, see website

Dimensions in mm

Standard version



NS	Dimensions in mm											Weight in kg
	a	b	b ₁	b ₂	D ₁	D ₂	e	f	G	h ±1	SW	
100	15.5	49.5	49.5	83	101	100	17.5	30	G ½ B	87	22	0.60
160	15.5	49.5	49.5 ¹⁾	83 ¹⁾	161	160	17.5	50	G ½ B	118	22	1.10

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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