

Test gauge with high accuracy

From class 0.1, NS 250 [10"]

Model 342.11

WIKA data sheet PM 03.03



For further approvals,
see page 6

Applications

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

Special features

- Knife edge pointer and dial with mirror band scale for optimal accuracy of reading
- Precise movement with wear parts of Argentan
- Particularly easy-to-read scale due to 250 mm [10"] nominal size
- Scale ranges up to 0 ... 1,600 bar
- QR code on dial links to instrument-specific information



Fig. left: test gauge, model 342.11

Fig. right: model 342.11 in transport case

Description

The model 342.11 high-quality test gauge has been specifically designed to achieve the highest possible accuracy and is suited for on-site calibration tasks. With an accuracy class of up to 0.1, the Bourdon tube pressure gauge is suitable for indoor testing of industrial type pressure gauges.

The optimal readability of the instrument, with a nominal size of 250 mm [10"], is achieved via a knife edge pointer and a dial with fine divisions. In addition, the mirror band scale is helping to avoid the parallax error. The window is tinted green to prevent dazzling and thus improve reading conditions. The instrument is equipped with a zero point setting of the dial that allows the user to respond to variations in atmospheric pressure and altitude. Compensation for these environmental influences enables precise readings under laboratory conditions.

Safe storage and readiness for use are ensured by a transport case.

The QR code on the dial allows instrument-specific information such as the serial number, the order number, certificates and other product data to be retrieved from the internet easily and in the long term.

Specifications

Basic information	
Standard	Following EN 837-1 → For information on the "Selection, installation, handling and operation of pressure gauges", see technical information IN 00.05
Further version	<ul style="list-style-type: none"> ■ Surface mounting flange ■ Suitable for panel mounting (by means of clamp) ■ Oil- and grease-free ■ For oxygen, oil- and grease-free ■ Silicone-free
Nominal size (NS)	Ø 250 mm [10"]
Connection location	Lower mount
Window	Clear non-splintering plastic, green tinted to prevent dazzling
Case	Aluminium die-casting, black-silver
Ring	Flange ring, aluminium die-casting, black-silver
Movement	Copper alloy, wear parts Argentan
Adjustment medium	Liquid for scale ranges > 25 bar [400 psi]; gas for scale ranges ≤ 25 bar [400 psi]

Measuring element	
Type of measuring element	Bourdon tube, C-type or helical type
Material	NiFe alloy
Leak tightness	Helium tested, leakage rate: <math> < 1 \cdot 10^{-6}</math> mbar l/s

Accuracy specifications		
Accuracy class		
EN 837-1	Span < 400 bar [6,000 psi]	Class 0.1
	Span ≥ 400 bar [6,000 psi]	Class 0.25
ASME B40.100	Span < 400 bar [6,000 psi]	Grade 4A
	Span ≥ 400 bar [6,000 psi]	Grade 3A
Temperature error	On deviation from the reference conditions at the measuring system: ≤ ±0.1 % per 10 °C [≤ ±0.1 % per 18 °F] of full scale value	
Reference conditions		
Ambient temperature	+20 °C [+68 °F]	

Scale ranges

bar	
0 ... 1	0 ... 70
0 ... 1.6	0 ... 100
0 ... 2.5	0 ... 140
0 ... 4	0 ... 160
0 ... 6	0 ... 200
0 ... 7	0 ... 250
0 ... 10	0 ... 400
0 ... 14	0 ... 600
0 ... 16	0 ... 700
0 ... 20	0 ... 1,000
0 ... 30	0 ... 1,400
0 ... 40	0 ... 1,600
0 ... 60	-

kPa	
0 ... 100	0 ... 6,000
0 ... 160	0 ... 7,000
0 ... 200	0 ... 8,000
0 ... 250	0 ... 10,000
0 ... 300	0 ... 14,000
0 ... 400	0 ... 16,000
0 ... 600	0 ... 20,000
0 ... 700	0 ... 25,000
0 ... 1,000	0 ... 40,000
0 ... 1,400	0 ... 60,000
0 ... 1,600	0 ... 80,000
0 ... 2,500	0 ... 60,000
0 ... 3,000	0 ... 100,000
0 ... 4,000	-

kg/cm ²	
0 ... 1	0 ... 60
0 ... 1.6	0 ... 70
0 ... 2	0 ... 100
0 ... 2.5	0 ... 140
0 ... 4	0 ... 160
0 ... 6	0 ... 200
0 ... 7	0 ... 250
0 ... 10	0 ... 400
0 ... 14	0 ... 600
0 ... 16	0 ... 700
0 ... 20	0 ... 600
0 ... 25	0 ... 1,000
0 ... 30	0 ... 1,600
0 ... 40	-

psi	
0 ... 15	0 ... 800
0 ... 30	0 ... 1,000
0 ... 60	0 ... 1,500
0 ... 100	0 ... 2,000
0 ... 160	0 ... 3,000
0 ... 150	0 ... 4,000
0 ... 200	0 ... 5,000
0 ... 250	0 ... 6,000
0 ... 300	0 ... 10,000
0 ... 400	0 ... 15,000
0 ... 500	0 ... 20,000
0 ... 600	-

MPa	
0 ... 0.1	0 ... 6
0 ... 0.16	0 ... 7
0 ... 0.2	0 ... 10
0 ... 0.25	0 ... 14
0 ... 0.4	0 ... 16
0 ... 0.6	0 ... 20
0 ... 0.7	0 ... 25
0 ... 1	0 ... 40
0 ... 1.4	0 ... 60
0 ... 1.6	0 ... 70
0 ... 2	0 ... 100
0 ... 2.5	0 ... 140
0 ... 3	0 ... 160
0 ... 4	-

Vacuum and compound scale ranges

bar	
-1 ... 0	-1 ... +5
-1 ... +0.6	-1 ... +9
-1 ... +1	-1 ... +10
-1 ... +1.5	-1 ... +15
-1 ... +2	-1 ... +24
-1 ... +3	-1 ... +30
-1 ... +4	-

kPa	
-100 ... 0	-100 ... +500
-100 ... +60	-100 ... +900
-100 ... +100	-100 ... +1,000
-100 ... +150	-100 ... +1,500
-100 ... +200	-100 ... +2,400
-100 ... +300	-100 ... +3,000
-100 ... +400	-

kg/cm ²	
-1 ... 0	-1 ... +5
-1 ... +0.6	-1 ... +9
-1 ... +1	-1 ... +10
-1 ... +1.5	-1 ... +15
-1 ... +2	-1 ... +24
-1 ... +3	-1 ... +30
-1 ... +4	-

psi	
-30 inHg ... 0	-30 inHg ... +100
-30 inHg ... +15	-30 inHg ... +160
-30 inHg ... +30	-30 inHg ... +200
-30 inHg ... +60	-30 inHg ... +300

MPa	
-0.1 ... 0	-0.1 ... +0.5
-0.1 ... +0.06	-0.1 ... +0.9
-0.1 ... +0.1	-0.1 ... +1
-0.1 ... +0.15	-0.1 ... +1.5
-0.1 ... +0.2	-0.1 ... +2.4
-0.1 ... +0.3	-0.1 ... +3
-0.1 ... +0.4	-

Further details on: scale ranges	
Special scale ranges	→ Other scale ranges on request
Unit	<input type="checkbox"/> bar <input type="checkbox"/> psi <input type="checkbox"/> kg/cm ² <input type="checkbox"/> kPa <input type="checkbox"/> MPa
Increased overload safety	<input type="checkbox"/> Without <input type="checkbox"/> 1.3 times The possibility of selection depends on the scale range
Vacuum resistance	Vacuum-resistant to -1 bar [-30 inHg]
Dial	
Scale angle	330°, zero point setting rotatable by ±15°
Scale colour	Black
Material	Aluminium
Special scale	→ Other scales or customer-specific dials, e.g. with red mark, circular arcs or circular sectors, on request
Pointer	
Instrument pointer	Knife edge pointer, aluminium, black


Process connection	
Standard	<ul style="list-style-type: none"> ■ EN 837-1 ■ ANSI/B1.20.1
Size	
EN 837-1	■ G ½ B, male thread
ANSI/B1.20.1	■ ½ NPT, male thread
Restrictor	<ul style="list-style-type: none"> ■ Without ■ Ø 0.6 mm [0.024"], stainless steel ■ Ø 0.3 mm [0.012"], stainless steel
Material (wetted)	
Measuring element	NiFe alloy
Process connection	Stainless steel 1.4404 (316L)

→ Other process connections on request



Operating conditions	
Medium temperature	≤ +100 °C [+212 °F]
Ambient temperature	-20 ... +60 °C [-4 ... +140 °F]
Pressure limitation	
Steady	Full scale value
Fluctuating	0.9 x full scale value

Packaging	
Packaging	Transport case

Approvals

Logo	Description	Country
	EU declaration of conformity	European Union
	Pressure Equipment Directive PS > 200 bar, module A, pressure accessory	
-	CRN	Canada
	Safety (e.g. electr. safety, overpressure, ...) For scale ranges ≤ 1,000 bar	

Optional approvals

Logo	Description	Country
	PAC Kazakhstan Metrology, measurement technology	Kazakhstan
-	MChS Permission for commissioning	Kazakhstan
-	PAC Ukraine Metrology, measurement technology	Ukraine
	PAC Uzbekistan Metrology, measurement technology	Uzbekistan
-	PAC China Metrology, measurement technology	China

Manufacturer's declaration

Logo	Description
-	Pressure Equipment Directive (PED) for maximum allowable pressure PS ≤ 200 bar

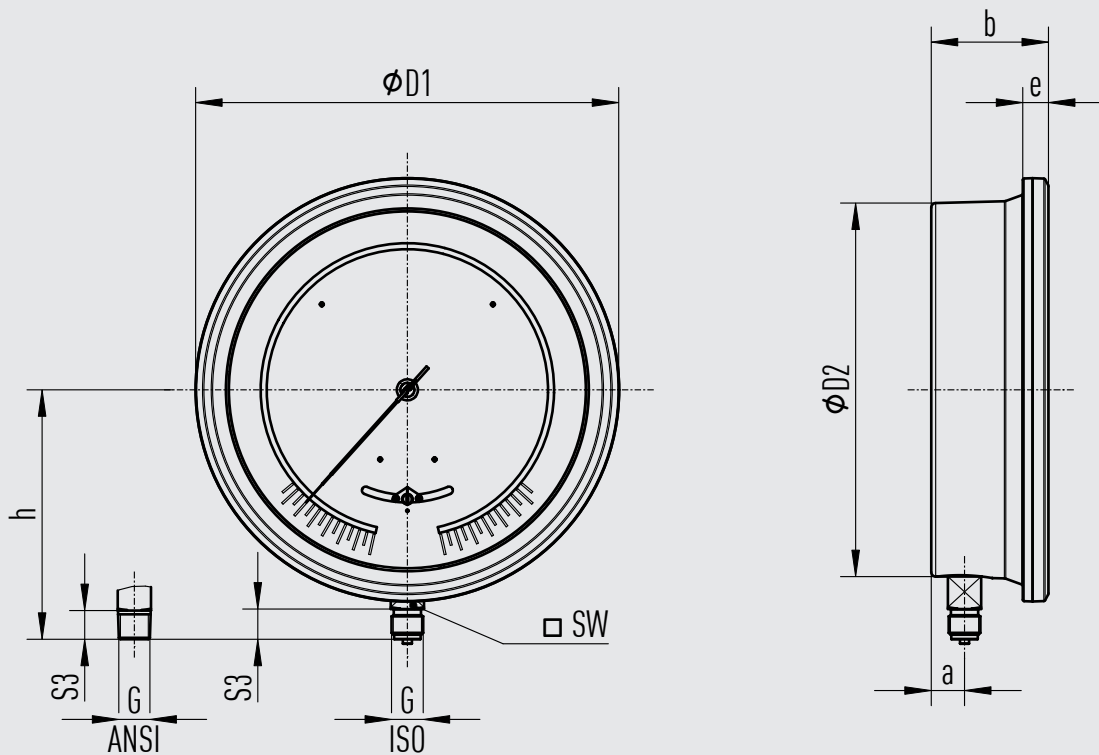
Certificates

Certificates	
Certificates	<ul style="list-style-type: none"> ■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy) ■ 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metal parts, indication accuracy) ■ PCA calibration certificate (traceable and accredited in accordance with ISO/IEC 17025) ■ Calibration certificate by a national accreditation body (traceable and accredited in accordance with ISO/IEC 17025) on request
Recommended calibration interval	1 year (dependent on conditions of use)

→ For approvals and certificates, see website

Dimensions in mm [in]


Test gauge, model 342.11



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G	Dimensions in mm [in]									Weight in kg [lb]
	$h \pm 1$ [0.04]	a	b	e	D1	D2	S3	SW		
G ½ B	165 [6.50]	22 [0.87]	78 [3.07]	16,5 [0.65]	277 [10.90]	250 [9.84]	20 [0.79]	22 [0.87]	Approx. 4 [8.8]	
½ NPT	164 [6.46]	22 [0.87]	78 [3.07]	16,5 [0.65]	277 [10.90]	250 [9.84]	19 [0.75]	22 [0.87]	Approx. 4 [8.8]	

Accessories and spare parts

Model	Description	Order number
 910.17	Seals → See data sheet AC 09.08	On request

Scope of delivery

- Test gauge, model 342.11
- Transport case
- Operating instructions
- Acceptance test certificate

Ordering information

Model / Scale range / Process connection / Options

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