

# Bourdon tube pressure gauge, copper alloy

## Standard version

### Models 111.10, 111.12

WIKA data sheet PM 01.01



For further approvals,  
see page 6

### Applications

- For gaseous and liquid media that are not highly viscous or crystallising and will not attack copper alloy parts
- Pneumatics
- Heating and air-conditioning technology
- Medical engineering

### Special features

- Reliable and cost-effective
- Design per EN 837-1 or ASME B40.100
- Nominal size 40 [1 1/2"], 50 [2"], 63 [2 1/2"], 80 [3"], 100 [4"] and 160 [6"]
- Scale ranges to 0 ... 400 bar [0 ... 6,000 psi]



Fig. left: model 111.12, back mount

Fig. right: model 111.10, lower mount (radial)

Configurator



Standard articles



## Description

The model 111 pressure gauges are based on the proven Bourdon tube measuring system. The deflection of the Bourdon tube is transmitted to a movement and indicated.

The modular design enables a multitude of combinations of case materials, process connections, nominal sizes and scale ranges. Due to the high variance, the instrument is suitable for use in a wide range of applications within industry.

For mounting in control panels, the pressure gauges can, depending on the process connection, be fitted with a surface mounting flange or with a triangular profile ring and mounting bracket.

The standard version of the model 111 is manufactured, cost-optimised on modern production lines, in volumes of several million instruments per year.

# Specifications

Basic information	
Standard	<ul style="list-style-type: none"> <li>■ EN 837-1</li> <li>■ ASME B40.100</li> </ul> → 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"> <li>■ For closed heating systems Instrument with red mark pointer and adjustable green sector, scale range 0 ... 4 bar, red mark at 2.5 or 3 bar</li> <li>■ For water level indication (hydrometer) and heating systems Scale ranges 0 ... 0.6 to 0 ... 25 bar, with second scale in mWS and red mark pointer</li> </ul>
Nominal size (NS)	<ul style="list-style-type: none"> <li>■ Ø 40 mm [1 ½"]</li> <li>■ Ø 50 mm [2"]</li> <li>■ Ø 63 mm [2 ½"]</li> <li>■ Ø 80 mm [3"]</li> <li>■ Ø 100 mm [4"]</li> <li>■ Ø 160 mm [6"] (only for model 111.10 with steel case)</li> </ul>
Connection location	<ul style="list-style-type: none"> <li>■ Lower mount (radial)</li> <li>■ Centre back mount <sup>1)</sup></li> </ul>
Window <sup>2)</sup>	Plastic, crystal-clear, snap-fitted in case
Case	
Design	<ul style="list-style-type: none"> <li>■ Without safety level</li> <li>■ Safety level "S1" per EN 837-1: with blow-out device</li> </ul>
Material <sup>3)</sup>	<ul style="list-style-type: none"> <li>■ Plastic, black</li> <li>■ Steel, black</li> </ul>
Mounting	<ul style="list-style-type: none"> <li>■ Without</li> <li>■ Panel mounting flange</li> <li>■ Surface mounting flange <sup>4)</sup></li> <li>■ Triangular profile ring with mounting bracket <sup>5)</sup></li> </ul>
Movement	Copper alloy

1) Not available for NS 160 [6"]

2) Model 111.10, NS 160 [6"]: instrument glass

3) Model 111.10, NS 160 [6"] and model 111.12, NS 100 [4"]: steel, black

4) Not available for NS 40 [1 ½"], NS 50 [2"] and NS 160 [6"]

5) Not available for NS 40 [1 ½"], NS 50 [2"] and NS 63 [2 ½"]

Measuring element	
Type of measuring element	Bourdon tube, C-type or helical type
Material	Copper alloy
Leak tightness	Leakage rate: < 5 · 10 <sup>-3</sup> mbar l/s

Accuracy specifications	
Accuracy class	
EN 837-1	<ul style="list-style-type: none"> <li>■ Class 1.6</li> <li>■ Class 2.5</li> </ul>
ASME B40.100	Grade B
Temperature error	On deviation from the reference conditions at the measuring system: ≤ ±0.4 % per 10 °C [≤ ±0.4 % per 18 °F] of full scale value
Reference conditions	
Ambient temperature	+20 °C [68 °F]

## Scale ranges

bar	
0 ... 0.6	0 ... 25
0 ... 1	0 ... 40
0 ... 1.6	0 ... 60 <sup>1)</sup>
0 ... 2.5	0 ... 100 <sup>1)</sup>
0 ... 4	0 ... 160 <sup>1)</sup>
0 ... 6	0 ... 250 <sup>1)</sup>
0 ... 10	0 ... 315 <sup>1)</sup>
0 ... 16	0 ... 400 <sup>1)</sup>
0 ... 20	-

kPa	
0 ... 60	0 ... 2,500
0 ... 100	0 ... 4,000
0 ... 160	0 ... 6,000 <sup>1)</sup>
0 ... 250	0 ... 10,000 <sup>1)</sup>
0 ... 400	0 ... 16,000 <sup>1)</sup>
0 ... 600	0 ... 25,000 <sup>1)</sup>
0 ... 1,000	0 ... 31,500 <sup>1)</sup>
0 ... 1,600	0 ... 40,000 <sup>1)</sup>
0 ... 2,000	-

psi	
0 ... 10	0 ... 500
0 ... 15	0 ... 600 <sup>1)</sup>
0 ... 30	0 ... 800 <sup>1)</sup>
0 ... 60	0 ... 1,000 <sup>1)</sup>
0 ... 100	0 ... 1,500 <sup>1)</sup>
0 ... 150	0 ... 2,000 <sup>1)</sup>
0 ... 160	0 ... 3,000 <sup>1)</sup>
0 ... 200	0 ... 4,000 <sup>1)</sup>
0 ... 300	0 ... 5,000 <sup>1)</sup>
0 ... 400	0 ... 6,000 <sup>1)</sup>

1) Not available for NS 160 [6"]

kg/cm <sup>2</sup>	
0 ... 0.6	0 ... 25
0 ... 1	0 ... 40
0 ... 1.6	0 ... 60 <sup>1)</sup>
0 ... 2.5	0 ... 100 <sup>1)</sup>
0 ... 4	0 ... 160 <sup>1)</sup>
0 ... 6	0 ... 250 <sup>1)</sup>
0 ... 10	0 ... 315 <sup>1)</sup>
0 ... 16	0 ... 400 <sup>1)</sup>
0 ... 20	-

MPa	
0 ... 0.06	0 ... 2.5
0 ... 0.1	0 ... 4
0 ... 0.16	0 ... 6 <sup>1)</sup>
0 ... 0.25	0 ... 10 <sup>1)</sup>
0 ... 0.4	0 ... 16 <sup>1)</sup>
0 ... 0.6	0 ... 25 <sup>1)</sup>
0 ... 1	0 ... 31.5 <sup>1)</sup>
0 ... 1.6	0 ... 40 <sup>1)</sup>
0 ... 2.0	-

## Vacuum and compound scale ranges

bar	
-0.6 ... 0 <sup>1)</sup>	-1 ... +5
-1 ... 0	-1 ... +9
-1 ... +0.6	-1 ... +15
-1 ... +1.5	-1 ... +24
-1 ... +3	-1 ... +30

kPa	
-60 ... 0 <sup>1)</sup>	-100 ... +500
-100 ... 0	-100 ... +900
-100 ... +60	-100 ... +1,500
-100 ... +150	-100 ... +2,400
-100 ... +300	-100 ... +3,000

MPa	
-0.06 ... 0 <sup>1)</sup>	-0.1 ... +0.5
-0.1 ... 0	-0.1 ... +0.9
-0.1 ... +0.06	-0.1 ... +1.5
-0.1 ... +0.15	-0.1 ... +2.4
-0.1 ... +0.3	-0.1 ... +3

psi	
-15 inHg ... 0 <sup>1)</sup>	-30 inHg ... +100
-30 inHg ... 0	-30 inHg ... +160
-30 inHg ... +15	-30 inHg ... +200
-30 inHg ... +30	-30 inHg ... +300
-30 inHg ... +60	-30 inHg ... +400

1) Not available for NS 160 [6"]

→ Other scale ranges on request

### Further details on: scale ranges

Unit	<div><div></div> bar</div> <div><div></div> psi</div> <div><div></div> kg/cm<sup>2</sup></div> <div><div></div> kPa</div> <div><div></div> MPa</div>	
Increased overload safety	<div><div></div> Without</div> <div><div></div> 1.6 times</div> <div><div></div> 2 times</div>	
	The possibility of selection depends on scale range and nominal size	
Vacuum resistance	<div><div></div> Without</div> <div><div></div> Vacuum-resistant to -1 bar</div>	
Dial		
Scale colour	Black	
Material	NS 40 [1 ½"], 50 [2"], 63 [2 ½"]	Plastic, white
	NS 80 [3"], 100 [4"], 160 [6"]	Aluminium, white
Customer-specific version	<div><div></div> Without</div> <div><div></div> With temperature scale for refrigerant, e.g. for NH<sub>3</sub>: R 717</div>	
	Other scales, e.g. with red mark, circular arcs or circular sectors, on request → Alternatively, adhesive label set for red and green circular arcs; see data sheet AC 08.03	
Pointer		
Instrument pointer	NS 40 [1 ½"] ... 100 [4"]	Plastic, black
	NS 160 [6"]	Aluminium, black
Mark pointer/drag pointer	<div><div></div> Without</div> <div><div></div> Red mark pointer on dial, fixed <sup>1)</sup></div> <div><div></div> Red mark pointer on window, adjustable</div>	
Pointer stop pin	<div><div></div> Without</div> <div><div></div> At zero point</div>	

1) Red mark pointer with measuring ranges 0 ... 0.6 to 0 ... 60 bar

Process connection	
Standard	<ul style="list-style-type: none"> <li>■ EN 837-1</li> <li>■ ISO 7</li> <li>■ ANSI/B1.20.1</li> </ul>
Size	
EN 837-1	<ul style="list-style-type: none"> <li>■ G 1/8 B, male thread</li> <li>■ G 1/4 B, male thread</li> <li>■ G 1/2 B, male thread <sup>1)</sup></li> </ul>
ANSI/B1.20.1	<ul style="list-style-type: none"> <li>■ 1/8 NPT, male thread</li> <li>■ 1/4 NPT, male thread</li> <li>■ 1/2 NPT, male thread <sup>1)</sup></li> </ul>
ISO 7	<ul style="list-style-type: none"> <li>■ R 1/8, male thread</li> <li>■ R 1/4, male thread</li> <li>■ R 1/2, male thread <sup>1)</sup></li> </ul>
Restrictor	<ul style="list-style-type: none"> <li>■ Without</li> <li>■ Ø 0.5 mm [0.02"], copper alloy</li> <li>■ Ø 0.3 mm [0.012"], copper alloy</li> </ul>
Material (wetted)	
Process connection	Copper alloy
Bourdon tube	Copper alloy


1) Not available for NS 40 [1 1/2"], NS 50 [2"] and NS 63 [2 1/2"]

→ Other process connections on request





Operating conditions		
Medium temperature	-20 ... +60 °C [-4 ... +140 °F]	
Ambient temperature	-20 ... +60 °C [-4 ... +140 °F]	
Pressure limitation		
Steady	3/4 x full scale value	
Fluctuating	2/3 x full scale value	
Short time	Full scale value	
Ingress protection per IEC/EN 60529		
Model 111.10	NS 40 [1 ½"], NS 50 [2"], NS 63 [2 ½"]	IP33
	NS 80 [3"], NS 100 [4"], NS 160 [6"]	IP44
Model 111.12	NS 40 [1 ½"], NS 50 [2"], NS 63 [2 ½"]	IP41 <sup>1)</sup>
	NS 80 [3"], NS 100 [4"]	IP42

1) Ingress protection IP44 for steel case

## Approvals

Logo	Description	Country
	<b>EU declaration of conformity</b> Pressure equipment directive PS > 200 bar, module A, pressure accessory	European Union
-	<b>CRN</b> Safety (e.g. electr. safety, overpressure, ...)	Canada

### Optional approvals

Logo	Description	Country
	<b>PAC Kazakhstan</b> Metrology, measurement technology	Kazakhstan
-	<b>MChS</b> Permission for commissioning	Kazakhstan
-	<b>PAC Ukraine</b> Metrology, measurement technology	Ukraine
	<b>PAC Uzbekistan</b> Metrology, measurement technology	Uzbekistan
-	<b>PAC China</b> Metrology, measurement technology	China
-	<b>FM</b> <sup>1)</sup> FM 2311, Use in fire protection systems	International
	<b>UL</b> <sup>1)</sup> UL 393, Use in fire protection systems	International
	<b>NSF</b> NSF/ANSI 61 G and NSF/ANSI 372 Drinking water system components - Health effects	USA and Canada

1) Only available for NS 100 [4"] with selected scale ranges and process connections

## Manufacturer's declaration

Logo	Description
-	Pressure Equipment Directive (PED) for maximum allowable pressure $PS \leq 200$ bar
-	Suitability of wetted materials for drinking water in accordance with the European 4MS initiative

## Certificates

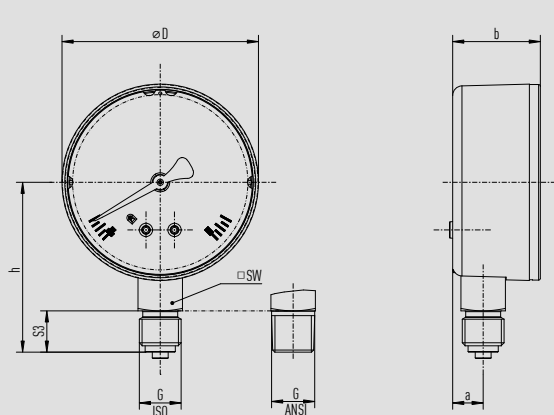
Certificates	
<b>Certificates</b>	<ul style="list-style-type: none"> <li>■ 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, indication accuracy)</li> <li>■ 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)</li> </ul>
<b>Recommended calibration interval</b>	1 year (dependent on conditions of use)

→ For approvals and certificates, see website

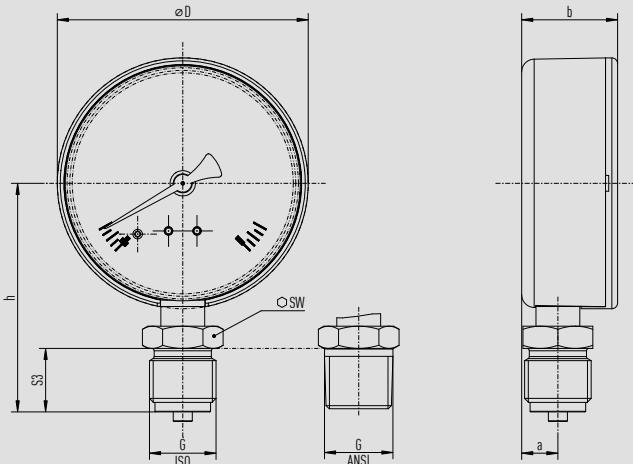
Dimensions in mm [in]

Model 111.10, lower mount (radial), plastic case

Instruments with SW = 14 [0.55]



Instruments with SW = 22 [0.87]



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NS	G <sup>1)</sup>	Dimensions in mm [in]					
		h ±1 [0.04]	S3	a	b ±0.5 [0.02]	D	SW
40 [1 ½"]	G ½ B, ½ NPT, R ½	36 [1.42]	10 [0.39]	9.5 [0.37]	26.5 [14]	39 [1.54]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	39 [1.54]	13 [0.51]	9.5 [0.37]	26.5 [14]	39 [1.54]	14 [0.55]
50 [2"]	G ½ B, ½ NPT, R ½	42 [1.65]	10 [0.39]	10 [0.39]	27.5 [18]	49 [1.93]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	45 [1.77]	13 [0.51]	10 [0.39]	27.5 [18]	49 [1.93]	14 [0.55]
63 [2 ½"]	G ½ B, ½ NPT, R ½	50,5 [1.99]	10 [0.39]	9.5 [0.37]	27.5 [18]	62 [2.44]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	53.5 [2.11]	13 [0.51]	9.5 [0.37]	27.5 [18]	62 [2.44]	14 [0.55]
80 [3"]	G ½ B, ½ NPT, R ½	58 [2.28]	10 [0.39]	11.5 [0.45]	30 [1.18]	79 [3.11]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	61 [2.40]	13 [0.51]	11.5 [0.45]	30 [1.18]	79 [3.11]	14 [0.55]
	G ½ B	72 [2.83]	20 [0.79]	11.5 [0.45]	30 [1.18]	79 [3.11]	22 [0.87]
	½ NPT, R ½	71 [2.80]	19 [0.75]	11.5 [0.45]	30 [1.18]	79 [3.11]	22 [0.87]
100 [4"]	G ½ B, ½ NPT, R ½	68 [2.68]	10 [0.39]	11.5 [0.45]	30.5 [1.2]	99 [3.90]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	71 [2.80]	13 [0.51]	11.5 [0.45]	30.5 [1.2]	99 [3.90]	14 [0.55]
	G ½ B	83.5 [3.29]	20 [0.79]	11.5 [0.45]	30.5 [1.2]	99 [3.90]	22 [0.87]
	½ NPT, R ½	82.5 [3.25]	19 [0.75]	11.5 [0.45]	30.5 [1.2]	99 [3.90]	22 [0.87]

1) The G ½ B process connection of this instrument is manufactured without a centring spigot and with a thread runout instead of a thread undercut.

NS	Weight in kg [lb]
40 [1 ½"]	0.08 [0.18]
50 [2"]	0.10 [0.22]
63 [2 ½"]	0.13 [0.29]
80 [3"]	0.18 [0.40]
100 [4"]	0.21 [0.46]

# Model 111.10, lower mount (radial), steel case

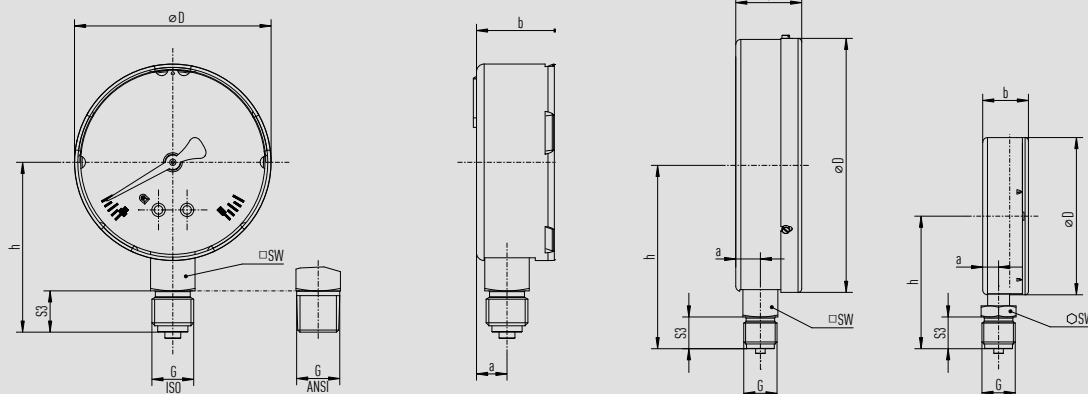
Instruments with SW = 14 [0.55]

NS 40 [2 ½"] ... 100 [4"]

Instruments with SW = 22 [0.87]

NS 160 [6"]

NS 100 [4"]



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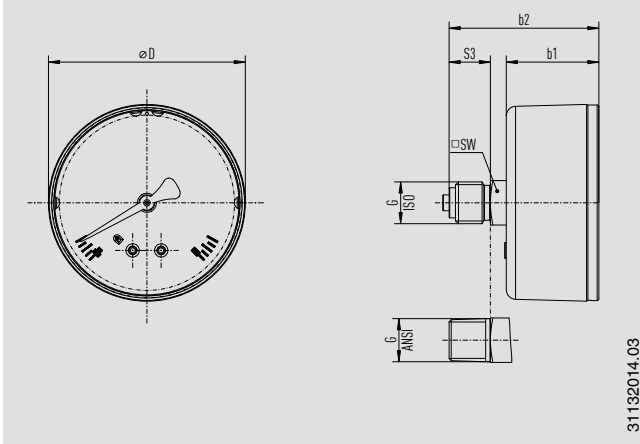
NS	G <sup>1)</sup>	Dimensions in mm [in]					
		h ±1 [0.04]	S3	a	b ±0.5 [0.02]	D	SW
40 [1 ½"]	G ½ B, ½ NPT, R ½	36 [1.42]	10 [0.39]	9.5 [0.37]	26 [1.02]	39 [1.54]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	39 [1.54]	13 [0.51]	9.5 [0.37]	26 [1.02]	39 [1.54]	14 [0.55]
50 [2"]	G ½ B, ½ NPT, R ½	42 [1.65]	10 [0.39]	9.5 [0.37]	28 [1.10]	49 [1.93]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	45 [1.77]	13 [0.51]	9.5 [0.37]	28 [1.10]	49 [1.93]	14 [0.55]
63 [2 ½"]	G ½ B, ½ NPT, R ½	50.5 [1.99]	10 [0.39]	9.5 [0.37]	28 [1.10]	61.9 [2.44]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	53.5 [2.11]	13 [0.51]	9.5 [0.37]	28 [1.10]	61.9 [2.44]	14 [0.55]
80 [3"]	G ½ B, ½ NPT, R ½	58 [2.28]	10 [0.39]	10 [0.39]	29 [1.14]	79 [3.11]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	61 [2.40]	13 [0.51]	10 [0.39]	29 [1.14]	79 [3.11]	14 [0.55]
	G ½ B	72 [2.83]	20 [0.79]	10 [0.39]	29 [1.14]	79 [3.11]	22 [0.87]
	½ NPT, R ½	71 [2.79]	19 [0.75]	10 [0.39]	29 [1.14]	79 [3.11]	22 [0.87]
100 [4"]	G ½ B, ½ NPT, R ½	68 [2.68]	10 [0.39]	10 [0.39]	29 [1.14]	99 [3.90]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	71 [2.80]	13 [0.51]	10 [0.39]	29 [1.14]	99 [3.90]	14 [0.55]
	G ½ B	83.5 [3.29]	20 [0.79]	10 [0.39]	29 [1.14]	99 [3.90]	22 [0.87]
	½ NPT, R ½	82.5 [3.25]	19 [0.75]	10 [0.39]	29 [1.14]	160 [6.30]	22 [0.87]
160 [6"]	G ½ B	115.5 [4.55]	20 [0.79]	15.5 [0.61]	41.5 [1.63]	160 [6.30]	22 [0.87]
	½ NPT, R ½	114.5 [4.51]	19 [0.75]	15.5 [0.61]	41.5 [1.63]	160 [6.30]	22 [0.87]

1) The G ½ B process connection of this instrument is manufactured without a centring spigot and with a thread runout instead of a thread undercut.

NS	Weight in kg [lb]
40 [1 ½"]	0.09 [0.2]
50 [2"]	0.11 [0.24]
63 [2 ½"]	0.15 [0.33]
80 [3"]	0.26 [0.57]
100 [4"]	0.31 [0.68]
160 [6"]	0.88 [1.94]



Model 111.12, centre back mount, plastic case

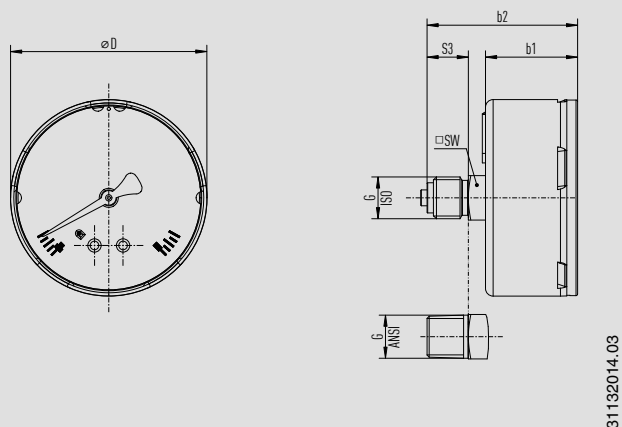


NS	G <sup>1)</sup>	Dimensions in mm [in]				
		b1 ±0.5 [0.02]	b2 ±1 [0.04]	S3	D	SW
<b>40 [1 ½"]</b>	G ⅝ B, ⅝ NPT, R ⅝	26.5 [1.04]	42 [1.65]	10 [0.39]	39 [1.53]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	26.5 [1.04]	45 [1.77]	13 [0.51]	39 [1.53]	14 [0.55]
<b>50 [2"]</b>	G ⅝ B, ⅝ NPT, R ⅝	29.5 [1.87]	44.5 [1.75]	10 [0.39]	49 [1.93]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	29.5 [1.87]	47.5 [1.87]	13 [0.51]	49 [1.93]	14 [0.55]
<b>63 [2 ½"]</b>	G ⅝ B, ⅝ NPT, R ⅝	29 [1.15]	44 [1.73]	10 [0.39]	62 [2.44]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	29 [1.15]	47 [1.85]	13 [0.51]	62 [2.44]	14 [0.55]
<b>80 [3"]</b>	G ⅝ B, ⅝ NPT, R ⅝	32 [1.25]	46 [1.81]	10 [0.39]	79 [3.11]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	32 [1.25]	49 [1.92]	13 [0.51]	79 [3.11]	14 [0.55]
	G ½ B, ½ NPT, R ½	32 [1.25]	55 [2.17]	19 [0.75]	79 [3.11]	14 [0.55]

1) The G ⅝ B process connection of this instrument is manufactured without a centring spigot and with a thread runout instead of a thread undercut.

NS	Weight in kg [lb]
<b>40 [1 ½"]</b>	0.06 [0.13]
<b>50 [2"]</b>	0.07 [0.15]
<b>63 [2 ½"]</b>	0.08 [0.18]
<b>80 [3"]</b>	0.11 [0.24]

Model 111.12, centre back mount, steel case




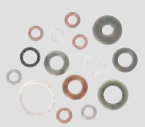



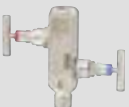


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NS	G <sup>1)</sup>	Dimensions in mm [in]				
		b1 ±0.5 [0.02]	b2 ±1 [0.04]	S3	D	SW
40 [1 ½"]	G ⅝ B, ⅝ NPT, R ⅝	26 [1.02]	41,5 [1.63]	10 [0.39]	39 [1.53]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	26 [1.02]	45 [1.77]	13 [0.51]	39 [1.53]	14 [0.55]
50 [2"]	G ⅝ B, ⅝ NPT, R ⅝	27.5 [1.10]	43 [1.69]	10 [0.39]	49 [1.93]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	27.5 [1.10]	46 [1.81]	13 [0.51]	49 [1.93]	14 [0.55]
63 [2 ½"]	G ⅝ B, ⅝ NPT, R ⅝	29 [1.14]	44.5 [1.75]	10 [0.39]	62 [2.44]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	29 [1.14]	47.5 [1.87]	13 [0.51]	62 [2.44]	14 [0.55]
80 [3"]	G ⅝ B, ⅝ NPT, R ⅝	31 [1.22]	46 [1.81]	10 [0.39]	79 [3.11]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	31 [1.22]	49 [1.93]	13 [0.51]	79 [3.11]	14 [0.55]
	G ½ B, ½ NPT, R ½	31 [1.22]	55 [2.16]	19 [0.75]	79 [3.11]	14 [0.55]
100 [4"]	G ⅝ B, ⅝ NPT, R ⅝	31 [1.22]	46 [1.81]	10 [0.39]	99 [3.90]	14 [0.55]
	G ¼ B, ¼ NPT, R ¼	31 [1.22]	49 [1.93]	13 [0.51]	99 [3.90]	14 [0.55]
	G ½ B, ½ NPT, R ½	31 [1.22]	55 [2.16]	19 [0.75]	99 [3.90]	14 [0.55]

1) The G ⅝ B process connection of this instrument is manufactured without a centring spigot and with a thread runout instead of a thread undercut.

NS	Weight in kg [lb]
40 [1 ½"]	0.07 [0.15]
50 [2"]	0.1 [0.22]
63 [2 ½"]	0.15 [0.33]
80 [3"]	0.27 [0.6]
100 [4"]	0.37 [0.82]

## Accessories and spare parts

Model	Description	
	<b>910.33</b>	Adhesive label set for red and green circular arcs → See data sheet AC 08.03
	<b>910.17</b>	Seals → See data sheet AC 09.08
	<b>910.15</b>	Syphons → See data sheet AC 09.06
	<b>910.13</b>	Overpressure protector → See data sheet AC 09.04
	<b>IV1</b>	Needle valve and multiport needle valve → See data sheet AC 09.22
	<b>IV2</b>	Block-and-bleed valve → See data sheet AC 09.19
	<b>IVM</b>	Monoflange, process and instrument version → See data sheet AC 09.17
	<b>BV</b>	Ball valve, process and instrument version → See data sheet AC 09.28

### Ordering information

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



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