

Capsule pressure gauge, stainless steel

For the process industry

Models 632.50 and 633.50, NS 63 [2 ½"], 100 [4"], 160 [6"]

WIKA data sheet PM 06.03



For further approvals,
see page 8

Applications

- For gaseous, dry and aggressive media, also in aggressive environments
- Process industry: Chemical, petrochemical, pharmaceutical, biotechnology, machine and power generation industries

Special features

- Zero point correction in front
- Completely from stainless steel
- With liquid-filled case for applications with high dynamic pressure loads and vibrations (model 633.50)
- Low scale ranges from 0 ... 2.5 mbar to 0 ... 600 mbar or 0 ... 1 inH₂O to 0 ... 240 inH₂O
- QR code on dial links to instrument-specific information



Capsule pressure gauge model 632.50

Configurator



Standard articles



Description

The model 632.50 and 633.50 capsule pressure gauges are completely manufactured from stainless steel and are therefore particularly suited for applications in the process industry. They are based upon the proven capsule measuring system. On pressurisation, the expansion of the capsule element, proportional to the incident pressure, is transmitted to the movement and indicated.

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

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

The model 633.50 with liquid-filled case is suitable for high dynamic pressure loads and vibrations.

The scale ranges of 0 ... 2.5 mbar to 0 ... 600 mbar or 0 ... 1 inH₂O to 0 ... 240 inH₂O and the vacuum and +/- scale ranges ensure the measuring ranges required for a wide variety of applications.

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	EN 837-3 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"> ■ For oxygen, oil- and grease-free ■ Per NACE ¹⁾ MR0175 / ISO 15156, use in H₂S-containing environments in oil and gas production ■ With integrated inductive contact, model 831 for model 632.50.100 and scale range $\geq 0 \dots 100$ mbar [0 ... 40 inH₂O] For information on switch contacts, see technical information IN 00.48
Nominal size (NS)	<ul style="list-style-type: none"> ■ Ø 63 mm [2 ½"] ■ Ø 100 mm [4"] ■ Ø 160 mm [6"]
Connection location	<ul style="list-style-type: none"> ■ Lower mount (radial) ■ Lower back mount ■ Centre back mount (only for NS 63 [2 ½"])
Window	<ul style="list-style-type: none"> ■ Laminated safety glass ■ Polycarbonate (with case filling)
Case	
Design	Safety level "S1" per EN 837-3 With blow-out device in case back (only for NS 100 [4"] and NS 160 [6"])
Material	<ul style="list-style-type: none"> ■ Stainless steel 1.4301 (304) ■ Stainless steel 1.4571 (316Ti)
Ring	<ul style="list-style-type: none"> ■ Bayonet ring, stainless steel ■ Bayonet ring, polished stainless steel
Mounting	<ul style="list-style-type: none"> ■ Without ■ Surface mounting flange, stainless steel ■ Panel mounting flange, stainless steel ■ Panel mounting flange, polished stainless steel ■ Triangular profile ring with mounting bracket, stainless steel ²⁾ ■ Triangular profile ring with mounting bracket, polished stainless steel ²⁾ <p>For information on "Mounting types, mounting flanges, panel cutouts", see technical information IN 00.04</p>
Case filling (model 633.50)	<ul style="list-style-type: none"> ■ Without ■ Glycerine-water mixture ³⁾ ■ Silicone oil ³⁾
Movement	<ul style="list-style-type: none"> ■ Stainless steel

1) For general information about NACE standards, see technical information IN 00.21

2) Only for back mount

3) Only available for scale range $\geq 0 \dots 60$ mbar [0 ... 24 inH₂O]

Measuring element	
Type of measuring element	Capsule element
Material (wetted)	
Capsule element	Stainless steel 316L
Seal	<ul style="list-style-type: none"> ■ FPM/FKM ■ PTFE ¹⁾
Process connection	Stainless steel 316L
Leak tightness	<ul style="list-style-type: none"> ■ Leakage rate: $< 1 \cdot 10^{-3}$ mbar l/s ■ Helium tested, leakage rate: $< 1 \cdot 10^{-5}$ mbar l/s

1) For instruments with a required ambient temperature of -40 ... +60 °C [-40 ... +140 °F]

Accuracy specifications	
Accuracy class	
EN 837-3	<ul style="list-style-type: none"> ■ Class 1.6 ■ Class 1.0 ¹⁾
ASME B40.100	<ul style="list-style-type: none"> ■ $\pm 2\%$ $\pm 1\%$ $\pm 2\%$ of measuring span (grade A) ■ $\pm 1\%$ of measuring span (grade 1A) ¹⁾
Zero point setting with adjustment screw	<ul style="list-style-type: none"> ■ In front, after opening the bayonet ring ²⁾ ■ In front, through the opening in the window ³⁾ ■ In front, via adjustment screw in the window ⁴⁾
Temperature error	On deviation from the reference conditions at the measuring system: $\leq \pm 0.6\%$ per 10 °C [$\leq \pm 0.6\%$ per 18 °F] of full scale value
Reference conditions	
Ambient temperature	+20 °C [+68 °F]

1) Selectable for model 632.50 (without case filling) and scale range $\geq 0 \dots 40$ mbar [0 ... 16 inH₂O] or for model 633.50 (with case filling) and scale range $\geq 0 \dots 100$ mbar [0 ... 40 inH₂O]

2) For model 632.50 (without case filling) and versions without mounting flange

3) For model 632.50 (without case filling) and versions with mounting flange, the opening of the window for the zero point setting is sealed with a taper plug

4) For model 633.50 (with case filling)

Scale ranges

mbar	
0 ... 2.5 ¹⁾	0 ... 60
0 ... 4 ¹⁾	0 ... 100
0 ... 6 ¹⁾	0 ... 160
0 ... 10 ¹⁾	0 ... 250
0 ... 16 ²⁾	0 ... 400
0 ... 25 ²⁾	0 ... 600
0 ... 40	-

kg/cm ²	
0 ... 0.0025 ¹⁾	0 ... 0.06
0 ... 0.004 ¹⁾	0 ... 0.1
0 ... 0.006 ¹⁾	0 ... 0.16
0 ... 0.01 ¹⁾	0 ... 0.25
0 ... 0.016 ²⁾	0 ... 0.4
0 ... 0.025 ²⁾	0 ... 0.6
0 ... 0.04	-

kPa	
0 ... 0.25 ¹⁾	0 ... 6
0 ... 0.4 ¹⁾	0 ... 10
0 ... 0.6 ¹⁾	0 ... 16
0 ... 1 ¹⁾	0 ... 25
0 ... 1.6 ²⁾	0 ... 40
0 ... 2.5 ²⁾	0 ... 60
0 ... 4	-

Pa	
0 ... 250 ¹⁾	0 ... 6,000
0 ... 400 ¹⁾	0 ... 10,000
0 ... 600 ¹⁾	0 ... 16,000
0 ... 1,000 ¹⁾	0 ... 25,000
0 ... 1,600 ²⁾	0 ... 40,000
0 ... 2,500 ²⁾	0 ... 60,000
0 ... 4,000	-

psi	
0 ... 0.036 ¹⁾	0 ... 1.0
0 ... 0.06 ¹⁾	0 ... 1.5
0 ... 0.1 ¹⁾	0 ... 2.5
0 ... 0.15 ¹⁾	0 ... 3.6
0 ... 0.25 ²⁾	0 ... 6.0
0 ... 0.36 ²⁾	0 ... 10
0 ... 0.6	-

mmH ₂ O	
0 ... 25 ¹⁾	0 ... 600
0 ... 40 ¹⁾	0 ... 1,000
0 ... 60 ¹⁾	0 ... 1,600
0 ... 100 ¹⁾	0 ... 2,500
0 ... 160 ²⁾	0 ... 4,000
0 ... 250 ²⁾	0 ... 6,000
0 ... 400	-

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

inH ₂ O	
0 ... 1 ¹⁾	0 ... 24
0 ... 1.6 ¹⁾	0 ... 40
0 ... 2.4 ¹⁾	0 ... 60
0 ... 4 ¹⁾	0 ... 100
0 ... 6 ²⁾	0 ... 160
0 ... 10 ²⁾	0 ... 240
0 ... 16	-

oz/in ²	
0 ... 0.6 ¹⁾	0 ... 15
0 ... 1 ¹⁾	0 ... 25
0 ... 1.5 ¹⁾	0 ... 40
0 ... 2.5 ¹⁾	0 ... 60
0 ... 4 ²⁾	0 ... 100
0 ... 6 ²⁾	0 ... 150
0 ... 10	-

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

Vacuum and compound scale ranges

mbar	
-2.5 ... 0 ¹⁾	-1.25 ... +1.25 ¹⁾
-4 ... 0 ¹⁾	-2 ... +2 ¹⁾
-6 ... 0 ¹⁾	-3 ... +3 ¹⁾
-10 ... 0 ¹⁾	-5 ... +5 ¹⁾
-16 ... 0 ²⁾	-8 ... +8 ²⁾
-25 ... 0 ²⁾	-12.5 ... +12.5 ²⁾
-40 ... 0	-20 ... +20
-60 ... 0	-30 ... +30
-100 ... 0	-50 ... +50
-160 ... 0	-80 ... +80
-250 ... 0	-125 ... +125
-400 ... 0	-200 ... +200
-600 ... 0	-300 ... +300

kg/cm ²	
-0.0025 ... 0 ¹⁾	-0.00125 ... +0.00125 ¹⁾
-0.004 ... 0 ¹⁾	-0.002 ... +0.002 ¹⁾
-0.006 ... 0 ¹⁾	-0.003 ... +0.003 ¹⁾
-0.01 ... 0 ¹⁾	-0.005 ... +0.005 ¹⁾
-0.016 ... 0 ²⁾	-0.008 ... +0.008 ²⁾
-0.025 ... 0 ²⁾	-0.0125 ... +0.0125 ²⁾
-0.04 ... 0	-0.02 ... +0.02
-0.06 ... 0	-0.03 ... +0.03
-0.1 ... 0	-0.05 ... +0.05
-0.16 ... 0	-0.08 ... +0.08
-0.25 ... 0	-0.125 ... +0.125
-0.4 ... 0	-0.2 ... +0.2
-0.6 ... 0	-0.3 ... +0.3

kPa	
-0.25 ... 0 ¹⁾	-0.125 ... +0.125 ¹⁾
-0.4 ... 0 ¹⁾	-0.2 ... +0.2 ¹⁾
-0.6 ... 0 ¹⁾	-0.3 ... +0.3 ¹⁾
-1 ... 0 ¹⁾	-0.5 ... +0.5 ¹⁾
-1.6 ... 0 ²⁾	-0.8 ... +0.8 ²⁾
-2.5 ... 0 ²⁾	-1.25 ... +1.25 ²⁾
-4 ... 0	-2 ... +2
-6 ... 0	-3 ... +3
-10 ... 0	-5 ... +5
-16 ... 0	-8 ... +8
-25 ... 0	-12.5 ... +12.5
-40 ... 0	-20 ... +20
-60 ... 0	-30 ... +30

Pa	
-250 ... 0 ¹⁾	-125 ... +125 ¹⁾
-400 ... 0 ¹⁾	-200 ... +200 ¹⁾
-600 ... 0 ¹⁾	-300 ... +300 ¹⁾
-1,000 ... 0 ¹⁾	-500 ... +500 ¹⁾
-1,600 ... 0 ²⁾	-800 ... +800 ²⁾
-2,500 ... 0 ²⁾	-1,250 ... +1,250 ²⁾
-4,000 ... 0	-2,000 ... +2,000
-6,000 ... 0	-3,000 ... +3,000
-10,000 ... 0	-5,000 ... +5,000
-16,000 ... 0	-8,000 ... +8,000
-25,000 ... 0	-12,500 ... +12,500
-40,000 ... 0	-20,000 ... +20,000
-60,000 ... 0	-30,000 ... +30,000

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

psi	
-0.036 ... 0 ¹⁾	-0.018 ... +0.018 ¹⁾
-0.06 ... 0 ¹⁾	-0.03 ... +0.03 ¹⁾
-0.1 ... 0 ¹⁾	-0.05 ... +0.05 ¹⁾
-0.15 ... 0 ¹⁾	-0.075 ... +0.075 ¹⁾
-0.25 ... 0 ²⁾	-0.125 ... +0.125 ²⁾
-0.36 ... 0 ²⁾	-0.18 ... +0.18 ²⁾
-0.6 ... 0	-0.3 ... +0.3
-1 ... 0	-0.5 ... +0.5
-1.5 ... 0	-0.75 ... +0.75
-2.5 ... 0	-1.25 ... +1.25
-3.6 ... 0	-1.8 ... +1.8
-6 ... 0	-3 ... +3
-10 ... 0	-5 ... +5

mmH ₂ O	
-25 ... 0 ¹⁾	-12.5 ... +12.5 ¹⁾
-40 ... 0 ¹⁾	-20 ... +20 ¹⁾
-60 ... 0 ¹⁾	-30 ... +30 ¹⁾
-100 ... 0 ¹⁾	-50 ... +50 ¹⁾
-160 ... 0 ²⁾	-80 ... +80 ²⁾
-250 ... 0 ²⁾	-125 ... +125 ²⁾
-400 ... 0	-200 ... +200
-600 ... 0	-300 ... +300
-1,000 ... 0	-500 ... +500
-1,600 ... 0	-800 ... +800
-2,500 ... 0	-1,250 ... +1,250
-4,000 ... 0	-2,000 ... +2,000
-6,000 ... 0	-3,000 ... +3000

inH ₂ O	
-1 ... 0 ¹⁾	-0.5 ... +0.5 ¹⁾
-1.6 ... 0 ¹⁾	-0.8 ... +0.8 ¹⁾
-2.4 ... 0 ¹⁾	-1.2 ... +1.2 ¹⁾
-4 ... 0 ¹⁾	-2 ... +2 ¹⁾
-6 ... 0 ¹⁾	-3 ... +3 ¹⁾
-10 ... 0 ²⁾	-5 ... +5 ²⁾
-16 ... 0	-8 ... +8
-24 ... 0	-12 ... +12
-40 ... 0	-20 ... +20
-60 ... 0	-30 ... +30
-100 ... 0	-50 ... +50
-160 ... 0	-80 ... +80
-240 ... 0	-120 ... +120

oz/in ²	
-0.6 ... 0 ¹⁾	-0.3 ... +0.3 ¹⁾
-1 ... 0 ¹⁾	-0.5 ... +0.5 ¹⁾
-1.5 ... 0 ¹⁾	-0.75 ... +0.75 ¹⁾
-2.5 ... 0 ¹⁾	-1.25 ... +1.25 ¹⁾
-4 ... 0 ²⁾	-2 ... +2 ²⁾
-6 ... 0 ²⁾	-3 ... +3 ²⁾
-10 ... 0	-5 ... +5
-15 ... 0	-7.5 ... +7.5
-25 ... 0	-12.5 ... +12.5
-40 ... 0	-20 ... +20
-60 ... 0	-30 ... +30
-100 ... 0	-50 ... +50
-150 ... 0	-75 ... +75

1) Only available for NS 160 [6"]

2) Only available for NS 100 [4"] and NS 160 [6"]

Further details on: scale ranges

Unit	<div><div></div>mbar</div> <div><div></div>kg/cm²</div> <div><div></div>kPa</div> <div><div></div>Pa</div>	<div><div></div>psi</div> <div><div></div>mmH₂O</div> <div><div></div>inH₂O</div> <div><div></div>oz/in²</div>
	Other units on request	
Overpressure safety		
Scale range < 0 ... 40 mbar [0 ... 16 inH ₂ O]	<div><div></div>Without</div> <div><div></div>3 x full scale value</div>	
Scale range ≥ 0 ... 40 mbar [0 ... 16 inH ₂ O]	<div><div></div>Without</div> <div><div></div>10 x full scale value</div>	
Vacuum safety		
Scale range < 0 ... 40 mbar [0 ... 16 inH ₂ O]	<div><div></div>Without</div> <div><div></div>3 x full scale value</div>	
Scale range ≥ 0 ... 40 mbar [0 ... 16 inH ₂ O]	<div><div></div>Without</div> <div><div></div>10 x full scale value</div>	

Further details on: scale ranges		
Dial		
Scale layout	<div><div></div> Single scale</div> <div><div></div> Dual scale</div>	
Scale colour	Single scale	Black
	Dual scale	Black/red
Serial number	Consecutive number * ... *	
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	Aluminium, black	
Mark pointer/drag pointer	<div><div></div> Without</div> <div><div></div> Red mark pointer on dial, fixed</div> <div><div></div> Red mark pointer on window, adjustable (only available for NS 100 [4"] and NS 160 [6"])</div> <div><div></div> Red drag pointer on window, adjustable (only available for scale range ≥ 0 ... 100 mbar [0 ... 40 inH₂O]) ¹⁾</div>	
Pointer stop pin	<div><div></div> Without</div> <div><div></div> At zero point</div> <div><div></div> At 6 o'clock</div>	

1) With model 633.50 (with case filling) only available for NS 100 [4"] or NS 160 [6"] with positive scale range

Process connection	
Standard	<ul style="list-style-type: none"> ■ EN 837-3 ■ ISO 7 ■ ANSI/B1.20.1
Size	
EN 837-3	<ul style="list-style-type: none"> ■ G 1/8 B, male thread ■ G 1/4 B, male thread ■ G 1/2 B, male thread ■ M20 x 1.5, male thread
ISO 7	<ul style="list-style-type: none"> ■ R 1/8, male thread ■ R 1/4, male thread ■ R 1/2, male thread
ANSI/B1.20.1	<ul style="list-style-type: none"> ■ 1/8 NPT, male thread ■ 1/4 NPT, male thread ■ 1/2 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)	
Capsule element	Stainless steel 316L
Sealing	<ul style="list-style-type: none"> ■ FPM/FKM ■ PTFE ¹⁾
Process connection	Stainless steel 316L


1) For instruments with a required ambient temperature of -40 ... +60 °C [-40 ... +140 °F]

→ Other process connections on request





Operating conditions	
Medium temperature	-20 ... +100 °C [-4 ... +212 °F]
Ambient temperature	
Unfilled instruments	-20 ... +60 °C [-4 ... +140 °F]
Movement wetted with Fomblin® Z03	-40 ... +60 °C [-40 ... +140 °F]
Instruments with silicone filling	-40 ... +60 °C [-40 ... +140 °F]
Pressure limitation	
Steady	Full scale value
Fluctuating	0.9 x full scale value
Short time	1.3 x full scale value
Ingress protection per IEC/EN 60529	<ul style="list-style-type: none"> ■ IP54 ■ IP55 ■ IP65 ¹⁾

1) For model 633.50 (with case filling)

Approvals

Logo	Description	Region
	EU declaration of conformity	European Union
	Pressure Equipment Directive PS > 200 bar, module A, pressure accessory	
	RoHS directive	

Optional approvals

Logo	Description	Region
 	EU declaration of conformity	European Union
	ATEX directive Hazardous areas Zone 1 gas II 2G Ex h IIC T6 ... T1 Gb Zone 21 dust II 2D Ex h IIC T85°C ... T450°C Db Ignition protection type "c", constructional safety	
	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

Certificates (option)

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)
Calibration	<ul style="list-style-type: none"> ■ Factory calibration certificate ■ SCS 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)

Patents, property rights

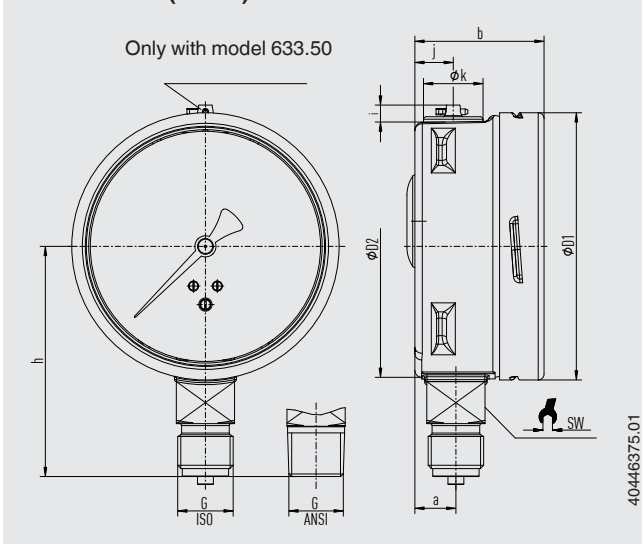
Patent number	Description
US Design D1051747S, CPC CN 01677074, DE Design 402022100171, EU Design 402022100171, IR Design DM/222416, EU 3D trademark 018659564	Design patent WIKA blue identity

The WIKA blue identity design is protected in various countries under various rights.

→ For approvals and certificates, see website

Dimensions in mm [in]

Lower mount (radial)



NS	Weight	
	Model 632.50	Model 633.50
63 [2 1/2"]	approx. 0.2 kg [0.44 lb]	approx. 0.26 kg [0.57 lb]
100 [4"]	approx. 0.6 kg [1.32 lb]	approx. 0.8 kg [1.76 lb]
160 [6"]	approx. 1.0 kg [2.2 lb]	approx. 1.7 kg [3.75 lb]

Process connection with thread per EN 837-3

NS	G	Dimensions in mm [in]								
		$h \pm 1$ [0.04]	a	b	D1	D2	i	j	k	SW
63 [2 1/2"]	G 1/8 B	49 [1.93]	9.5 [0.37]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	G 1/4 B	52 [2.05]	9.5 [0.37]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	G 1/4 B	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.9]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G 1/2 B	87 [3.43]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.9]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	87 [3.43]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.9]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	G 1/4 B	111 [4.37]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G 1/2 B	118 [4.65]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	118 [4.65]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

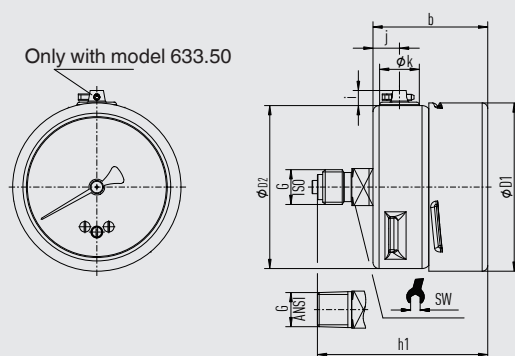
Process connection with thread per ISO 7

NS	G	Dimensions in mm [in]								
		$h \pm 1$ [0.04]	a	b	D1	D2	i	j	k	SW
63 [2 1/2"]	R 1/8	49 [1.93]	9.5 [0.37]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	R 1/4	52 [2.05]	9.5 [0.37]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	R 1/4	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R 1/2	86 [3.39]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	R 1/4	111 [4.37]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R 1/2	117 [4.60]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]								
		$h \pm 1$ [0.04]	a	b	D1	D2	i	j	k	SW
63 [2 1/2"]	1/8 NPT	49 [1.93]	9.5 [0.37]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	1/4 NPT	52 [2.05]	9.5 [0.37]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
100 [4"]	1/4 NPT	80 [3.15]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	1/2 NPT	86 [3.39]	15.5 [0.61]	49.5 [1.95]	101 [3.98]	99 [3.90]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	1/4 NPT	111 [4.37]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	1/2 NPT	117 [4.60]	15.5 [0.61]	49.5 [1.95]	161 [6.34]	159 [6.26]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

NS 63 [2 ½"], centre back mount



40446374.01

NS	Weight	
	Model 632.50	Model 633.50
63 [2½"]	approx. 0.2 kg [0.44 lb]	approx. 0.26 kg [0.57 lb]

Process connection with thread per EN 837-3

NS	G	Dimensions in mm [in]							
		h1 ±1 [0.04]	b	D1	D2	i	j	k	SW
63 [2 ½"]	G ½ B	67 [2.64]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	G ¼ B	72 [2.83]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]

Process connection with thread per ISO 7 or ANSI/B1.20.1

NS	G	Dimensions in mm [in]							
		h1 ±1 [0.04]	b	D1	D2	i	j	k	SW
63 [2 ½"]	R ¼	70 [2.76]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]

Process connection with thread per ISO 7 or ANSI/B1.20.1

NS	G	Dimensions in mm [in]							
		h1 ±1 [0.04]	b	D1	D2	i	j	k	SW
63 [2 ½"]	½ NPT	67 [2.64]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]
	¼ NPT	70 [2.76]	43 [1.69]	63 [2.48]	62 [2.44]	6 [0.24]	10 [0.39]	15 [0.59]	14 [0.55]

NS 100 [4"] and NS 160 [6"], lower back mount

Only with model 633.50

Technical drawing showing the dimensions and components of the NS 100 [4"] and NS 160 [6"], lower back mount. The drawing includes a top view of the circular gauge and a side view of the mounting assembly.

Dimensions and components labeled:

- $\phi D2$: Diameter of the mounting bracket.
- e : Total height of the assembly.
- f : Height of the gauge body.
- ISO: ISO mounting bracket.
- ANSI: ANSI mounting bracket.
- $h1$: Height of the back plate.
- b : Width of the back plate.
- j : Width of the gauge body.
- k : Width of the gauge body.
- ϕk : Diameter of the gauge body.
- $\phi D1$: Diameter of the back plate.
- SW: Width of the mounting bracket.

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NS	Weight	
	Model 632.50	Model 633.50
100 [4"]	approx. 0.5 kg [1.54 lb]	approx. 0.7 kg [1.54 lb]
160 [6"]	approx. 1.1 kg [2.43 lb]	approx. 1.7 kg [3.75 lb]

Process connection with thread per EN 837-3

NS	G	Dimensions in mm [in]								
		h1 ±1 [0.04]	b	D1	D2	e	i	j	k	SW
100 [4"]	G ¼ B	76 [2.99]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G ½ B	83 [3.27]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	83 [3.27]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	G ¼ B	76 [2.99]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	G ½ B	83 [3.27]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	M20 x 1.5	83 [3.27]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]









Process connection with thread per ISO 7

NS	G	Dimensions in mm [in]								
		h1 ±1 [0.04]	b	D1	D2	e	i	j	k	SW
100 [4"]	R ¼	76 [2.99]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R ½	82 [3.23]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	R ¼	76 [2.99]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	R ½	82 [3.23]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Process connection with thread per ANSI/B1.20.1

NS	G	Dimensions in mm [in]								
		h1 ±1 [0.04]	b	D1	D2	e	i	j	k	SW
100 [4"]	¼ NPT	76 [2.99]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	½ NPT	82 [3.23]	49.5 [1.95]	101 [3.98]	99 [3.90]	30 [1.181]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
160 [6"]	¼ NPT	76 [2.99]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]
	½ NPT	82 [3.23]	49.5 [1.95]	161 [6.34]	159 [6.26]	50 [1.97]	6.5 [0.26]	14.5 [0.57]	22.5 [0.89]	22 [0.87]

Accessories and spare parts

Model	Description	
	910.17	Seals → See data sheet AC 09.08
	910.15	Syphons → See data sheet AC 09.06
	910.13	Overpressure protector → See data sheet AC 09.04
	IV1	Needle valve and multiport valve → See data sheet AC 09.22
	IV2	Block-and-bleed valve → See data sheet AC 09.19
	IVM	Monoflange, process and instrument version → See data sheet AC 09.17
	BV	Ball valve, process and instrument version → See data sheet AC 09.28
	IBF2, IBF3	Monoblock with flange connection → See data sheet AC 09.25

Ordering information

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

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