

# Capsule pressure gauge, stainless steel

## For the process industry

### Models 632.50, 633.50, NS 63, 100, 160

WIKA data sheet PM 06.03



for further approvals  
see page 3

### Applications

- With liquid-filled case for applications with high dynamic pressure loads or vibrations (model 633.50)
- 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
- Special connection location on request
- Low scale ranges from 0 ... 2.5 mbar



Capsule pressure gauge model 632.50

### Description

The model 632.50 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 within 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.

## Standard version

### Design

EN 837-3

### Nominal size in mm

63, 100, 160

### Accuracy class

1.6

### Scale ranges

NS 63: 0 ... 40 mbar to 0 ... 600 mbar

NS 100: 0 ... 16 mbar to 0 ... 600 mbar

NS 160: 0 ... 2.5 mbar to 0 ... 600 mbar

or all other equivalent vacuum or combined pressure and vacuum ranges

### Pressure limitation

Steady: Full scale value

Fluctuating: 0.9 x full scale value

### Permissible temperature

Ambient: -20 ... +60 °C

Medium: ≤ 100 °C

### Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C): max. ±0.6 %/10 K of full scale value

### Ingress protection per IEC/EN 60529

IP54 for model 632.50 (without case filling)

IP65 for model 633.50 (with case filling)

### Process connection

Stainless steel 316L

NS 63: Male thread G ¼ B, SW 14, lower mount (radial) or centre back mount

NS 100, 160: Male thread G ½ B, SW 22, lower mount (radial) or lower back mount

### Pressure element

Stainless steel 316L

### Sealing

FPM/FKM

### Movement

Stainless steel

### Zero point setting with adjustment screw

- In front, after opening the bayonet ring <sup>1)</sup>
- In front, through opening the window <sup>2)</sup>
- In front, via adjustment screw in the window <sup>3)</sup>

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

2) 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.

3) For model 633.50 (with case filling).

4) Only available for back mount versions.

5) Only available for NS 100, 160.

### Dial

Aluminium, white, black lettering

### Pointer

Aluminium, black

### Case

Stainless steel

### Window

Laminated safety glass

(for case filling: Polycarbonate or acrylic glass)

### Ring

Bayonet ring, stainless steel





### Case filling (model 633.50)

Glycerine-water mixture for scale ranges ≥ 60 mbar

## Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Accuracy class 1.0 for model 632.50 and scale range ≥ 40 mbar (without fill fluid)
- Accuracy class 1.0 for model 633.50 and scale range ≥ 100 mbar (with fill fluid)
- Permissible ambient temperatures -40 ... +60 °C:  
Model 632.50: Movement wetted with Fomblin® Z03  
Model 633.50: Case filling with silicone oil
- Overload or vacuum safety with  
scale ranges < 40 mbar: 3 x full scale value  
scale ranges ≥ 40 mbar: 10 x full scale value
- Mounting
  - Panel or surface mounting flange
  - Triangular profile ring with clamp <sup>4)</sup>For information on “Instrument mounting, mounting flanges, panel cutouts”, see Technical information IN 00.04
- Mark pointer/drag pointer
  - Red mark pointer on dial, fixed
  - Red mark pointer on window, adjustable <sup>5)</sup>
  - Red drag pointer on window, adjustable
- Switch contact for model 632.50.100, from scale range ≥ 100 mbar (model 831, see data sheet AC 08.01)

## Approvals

Logo	Description	Country
 	<b>EU declaration of conformity</b> <ul style="list-style-type: none"> <li>■ Pressure equipment directive</li> <li>■ ATEX directive (option) Hazardous areas Zone 1 gas    II 2G Ex h IIC T6 ... T1 Gb Zone 20 dust    II 2D Ex h IIIC T85°C ... T450°C Db Ignition protection type "c", constructive safety</li> </ul>	European Union
	<b>EAC (option)</b> <ul style="list-style-type: none"> <li>■ Pressure equipment directive</li> <li>■ Hazardous areas</li> </ul>	Eurasian Economic Community
	<b>GOST (option)</b> Metrology, measurement technology	Russia
	<b>KazInMetr (option)</b> Metrology, measurement technology	Kazakhstan
-	<b>MTSCHS (option)</b> Permission for commissioning	Kazakhstan
	<b>BelGIM (option)</b> Metrology, measurement technology	Belarus
	<b>UkrSEPRO (option)</b> Metrology, measurement technology	Ukraine
	<b>Uzstandard (option)</b> Metrology, measurement technology	Uzbekistan
-	<b>CPA (option)</b> Metrology, measurement technology	China

## Certificates (option)

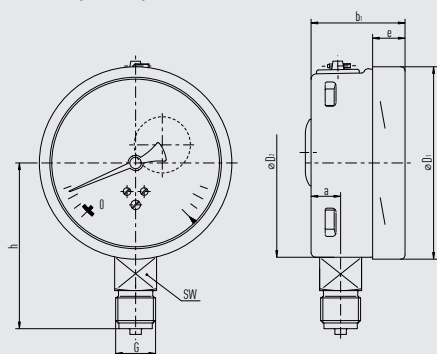
- 2.2 test report
- 3.1 inspection certificate
- SCS calibration certificate, traceable and accredited in accordance with ISO/IEC 17025

Approvals and certificates, see website

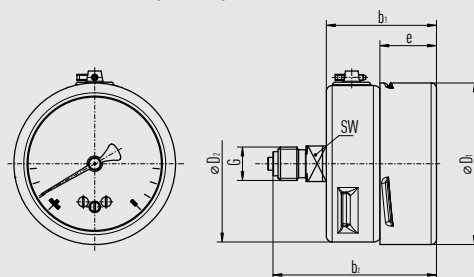
## Dimensions in mm

### Standard version

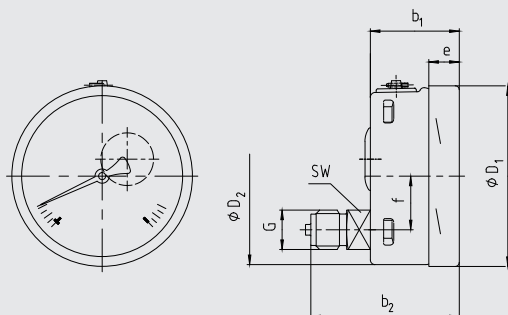
Lower mount (radial)



Centre back mount (NS 63)



Lower back mount (NS 100, 160)



NS	Dimensions in mm											Weight in kg
	a	b	b <sub>1</sub>	b <sub>2</sub>	D <sub>1</sub>	D <sub>2</sub>	e	f	G	h ±1	SW	
63	9.5	42	42	63	64	62	22	- 1)	G ¼ B	52	14	0.19
100	15.5	49.5	49.5	83	101	99	17.5	30	G ½ B	87	22	0.60
160	15.5	49.5	49.5	83	161	159	17.5	50	G ½ B	118	22	1.10

1) With NS 63: Centre back mount process connection

Process connection per EN 837-3 / 7.3

### Ordering information

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

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