

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

Lower mount (radial) or lower back mount ¹⁾

NS 63: Male thread G ¼ B, SW 14

NS 100, 160: Male thread G ½ B, SW 22

Pressure element

Stainless steel 316L

Sealing

FPM/FKM

Movement

Stainless steel

Zero point setting

In front

Dial

Aluminium, white, black lettering

Pointer

Aluminium, black

Case

Stainless steel

Window

Laminated safety glass

(for case filling: Polycarbonate or clear non-splintering plastic)

Ring

Bayonet ring, stainless steel

Case filling ¹⁾

Glycerine-water mixture for scale ranges ≥ 60 mbar ²⁾






¹⁾ only available for model 633.50 with NS 100, 160

²⁾ Option accuracy class 1.0 available from ≥ 100 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
- Surface mounting flange
- NS 100 and 160: Panel mounting flange
- NS 100 and 160: Triangular profile ring with clamp
- Switch contact for model 632.50.100, from scale range ≥ 100 mbar (model 831, see data sheet AC 08.01)

Approvals

Logo	Description	Country
 	EU declaration of conformity <ul style="list-style-type: none"> ■ Pressure equipment directive ■ 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 	European Union
	EAC (option) <ul style="list-style-type: none"> ■ Pressure equipment directive ■ Hazardous areas 	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 (option) Metrology, measurement technology	China

Certificates (option)

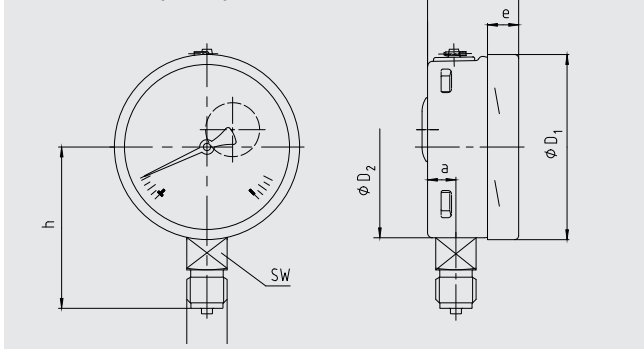
- 2.2 test report
- 3.1 inspection certificate

Approvals and certificates, see website

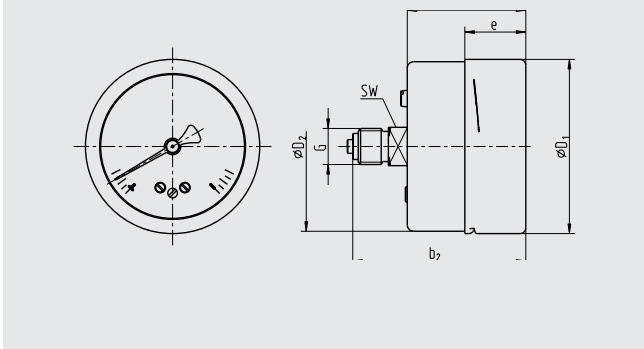
Dimensions in mm

Standard version

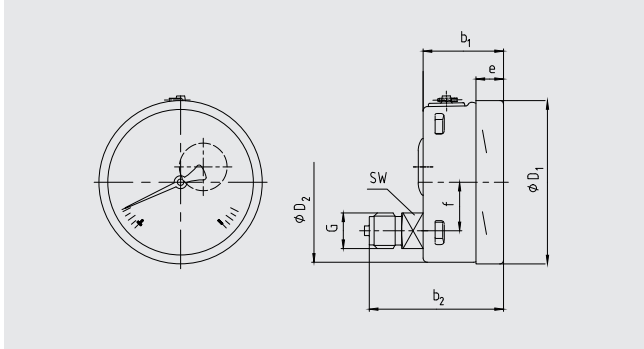
Lower mount (radial)



Centre back mount



Lower back mount



NS	Dimensions in mm											Weight in kg
	a	b	b ₁	b ₂	D ₁	D ₂	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