Capsule pressure gauge, stainless steel
For the process industry
Models 632.50, 633.50, NS 63, 100, 160

WIKA data sheet PM 06.03

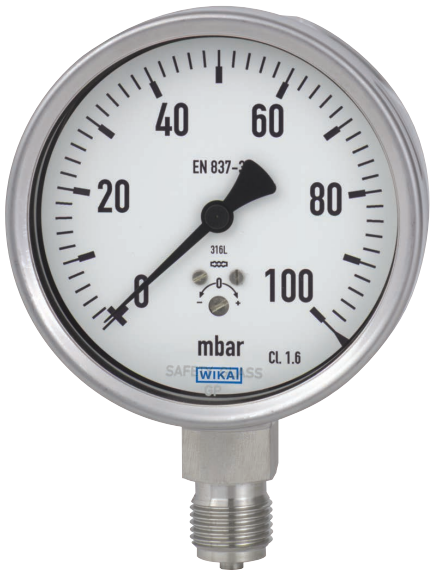
for further approvals
see page 3

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.

Data sheets showing similar products:
Test gauge, stainless steel; model 610.20, class 0.6, NS 160; see data sheet PM 06.09
Capsule pressure gauge, copper alloy; model 612.20, NS 63, 100, 160; see data sheet PM 06.02

Part of your business

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 [1)]
- In front, through opening the window [2)]
- In front, via adjustment screw in the window [3)]

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 [4)]
  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 [5)]
  – 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)

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.

Approvals

Logo	Description	Country
CE Ex	**EU declaration of conformity** ■ 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 Ex	**EAC (option)** ■ 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)

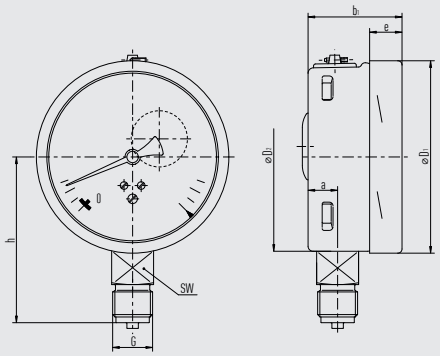
- 2.2 test report
- 3.1 inspection certificate
- SCS calibration certificate, traceable and accredited in accordance with ISO/IEC 17025

Approvals and certificates, see website

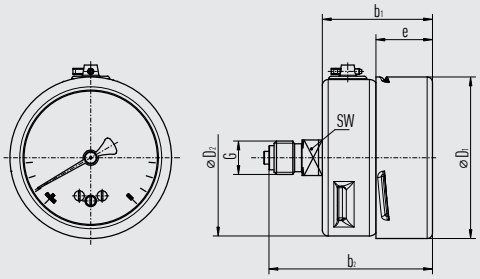
Dimensions in mm

Standard version

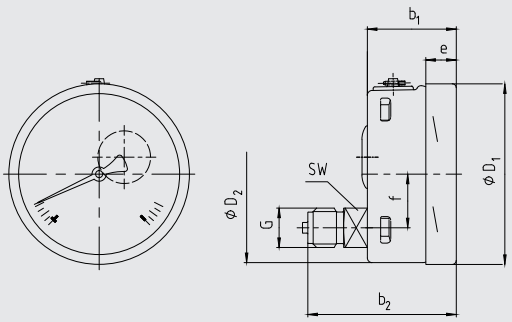
Lower mount (radial)



Centre back mount (NS 63)



Lower back mount (NS 100, 160)



NS	Dimensions in mm											Weight in kg
	a	b	b_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

WIKA Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. +49 9372 132-0
Fax +49 9372 132-406
info@wika.de
www.wika.de