

# Diaphragm pressure gauge Stainless steel version Models 432.50, 433.50

WIKA data sheet PM 04.03



for further approvals  
see page 2

## Applications

- For measuring points with increased overpressure
- With liquid-filled case for applications with high dynamic pressure loads or vibrations <sup>1)</sup>
- For gaseous and liquid, aggressive and highly viscous or contaminated media, also in aggressive ambience
- Process industry: Chemical/petro-chemical, power stations, mining, on- and offshore, environmental technology, machine building and general plant construction

## Special features

- All stainless steel construction
- High overpressure safety
- Process connection thread or open flange
- Wide choice of special materials
- Scale ranges from 0 ... 16 mbar

## Description

### Design

EN 837-3

### Nominal size in mm

100, 160

### Accuracy class

1.6

### Scale ranges

0 ... 16 mbar to 0 ... 250 mbar (flange Ø 160 mm)  
0 ... 400 mbar to 0 ... 25 bar (flange Ø 100 mm)  
or all other equivalent vacuum or combined pressure and vacuum ranges

### Pressure limitation

Steady: Full scale value  
Fluctuating: 0.9 x full scale value

### Overpressure safety

5 x full scale value, however max. 40 bar

### Permissible temperature

Ambient: -20 ... +60 °C  
Medium: ≤ 100 °C  
Storage: -40 ... +70 °C  
(scale ranges ≤ 60 mbar: -20 ... +70 °C)

### Temperature effect

When the temperature of the measuring system deviates from the reference temperature (+20 °C):  
≤ ±0.8 %/10 K of full scale value

### Ingress protection

IP 54 per EN 60529 / IEC 60529  
(with liquid filling <sup>1)</sup> IP 65)

<sup>1)</sup> Model 433.50



Diaphragm pressure gauge model 432.50

## Standard version

### Process connection with lower measuring flange

Stainless steel 316L, G ½ B (male), 22 mm flats

### Pressure element

≤ 0.25 bar: Stainless steel 316L

> 0.25 bar: NiCr-alloy (Inconel)

### Pressure chamber sealing

FPM/FKM

### Movement

Stainless steel

### Dial

Aluminium, white, black lettering

### Pointer

Aluminium, black

### Case with upper measuring flange

Stainless steel, with pressure relief, gauges with liquid filling with compensating valve to vent case

### Window

Laminated safety glass

### Bezel ring

Cam ring (bayonet type), stainless steel

### Filling liquid (for model 433.50)

Glycerine 86.5 %

## Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Safety version (model 43x.30)
- Overpressure safe: 10 x full scale value, max. 40 bar
- Vacuum safe up to -1 bar
- Max. medium temperature +200 °C
- Admissible ambient temperature -40 ... +60 °C (silicone oil filling)
- Higher indication accuracy, class 1.0 and 0.6
- Open connecting flanges per DIN/ASME from DN 15 to DN 80 (preferred nominal widths DN 25 and 50 or DN 1" and 2"; see data sheet IN 00.10)
- Wetted parts lined/coated with special materials such as PTFE (model 45x.50), Hastelloy, Monel, nickel, tantalum, titanium, silver (accuracy class 2.5, overpressure safety on request)
- Pressure gauge with switch contacts, see model PGS43.1x0, data sheet PV 24.03
- Pressure gauge with electrical output signal, see model PGT43.1x0, data sheet PV 14.03

## CE conformity

### ATEX directive <sup>1)</sup>

Ignition protection type „c“, constructive safety

## Approvals

- **DVGW**, safety (e.g. electrical safety, overpressure, ...), Germany
- **VdTÜV**, safety (e.g. electrical safety, overpressure, ...), Germany
- **EAC**, import certificate, customs union Russia/Belarus/Kazakhstan
- **GOST**, metrology/measurement technology, Russia
- **PTB**, type approval for connection to hazardous zone 0
- **CRN**, safety (e.g. electr. safety, overpressure, ...), Canada
- **KOSHA**, ignition protection type „i“ - intrinsic safety, South Korea

## Certificates <sup>1)</sup>

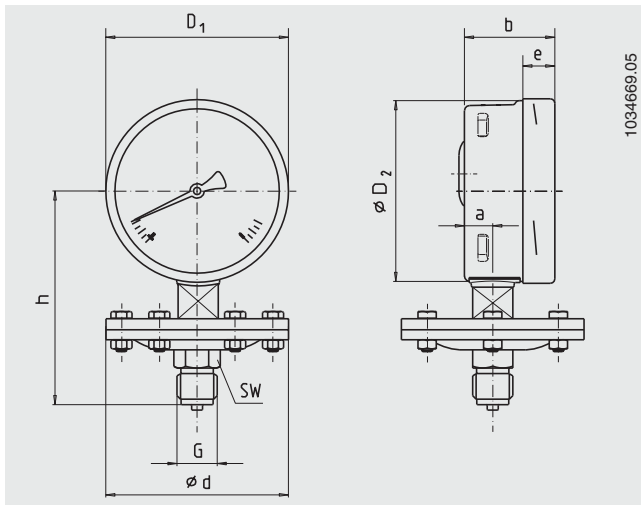
- 2.2 test report per EN 10204 (e.g. state-of-the-art manufacturing, material proof, indication accuracy)
- 3.1 inspection certificate per EN 10204 (e.g. indication accuracy)

<sup>1)</sup> Option

Approvals and certificates, see website

# Dimensions in mm

## Standard version



NS	Scale range in bar	Dimensions in mm									Weight in kg
		d	a	b	$D_1$	$D_2$	e	G	h $\pm 2$	SW	
100	$\leq 0.25$	160	15.5	49.5	101	99	17.5	G $\frac{1}{2}$ B	119	22	2.50
160	$\leq 0.25$	160	15.5	49.5	161	159	17.5	G $\frac{1}{2}$ B	149	22	2.90
100	$> 0.25$	100	15.5	49.5	101	99	17.5	G $\frac{1}{2}$ B	117	22	1.30
160	$> 0.25$	100	15.5	49.5	161	159	17.5	G $\frac{1}{2}$ B	147	22	1.70

Process connection per EN 837-3 / 7.3

## Ordering information

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

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