Absolute pressure gauge
Stainless steel version, with diaphragm element
Models 532.51 to 532.54, class 0.6 ... 2.5

for further approvals
see page 4

Applications

- Pressure measurement independent of fluctuations in the atmospheric pressure
- For gaseous, liquid and aggressive media, also in aggressive ambience
- Monitoring of vacuum pumps
- Control of vacuum packing machines
- Monitoring of condensation pressures and determination of the vapour pressure of liquids

Special features

- High overpressure safety
- Long service life due to metallic media chamber sealing
- Media chamber protected against unauthorised intervention DT-GM 86 08 176
- Gauges compatible with switch contacts
- Scale ranges from 0 … 25 mbar absolute pressure

Absolute pressure gauge, model 532.51

Description

Nominal size in mm
100, 160

Accuracy class
Model 532.51 NS 160: 0.6
Model 532.52: 1.0
Model 532.53: 1.6
Model 532.54: 2.5
The measuring accuracy is ensured for fluctuations in atmospheric pressure between 955 and 1,065 mbar (min. and max. of atmospheric pressure).

Scale ranges
0 ... 25 mbar to 0 ... 25 bar absolute pressure

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

Overpressure safety
Minimum 1 bar absolute pressure (atmospheric pressure), in addition 10 x full scale value, max. 25 bar absolute pressure

Permissible temperature
Ambient: -20 ... +60 °C
Medium: +100 °C maximum

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

Ingress protection
IP 54 per EN 60529 / IEC 60529

Data sheets showing similar products:
Absolute pressure gauges, compact design; model 516.1x; see data sheet PM 05.01

Standard version

Process connection (wetted)
Stainless steel 1.4571, lower mount (LM)
G ½ B (male), 22 mm flats

Pressure element (wetted)
≤ 0.25 bar: Stainless steel 1.4571
> 0.25 bar: NiCr-alloy (Inconel)

Measuring chamber (wetted)
Stainless steel 1.4571

Movement
Stainless steel

Dial
Aluminium, white, black lettering

Pointer
Adjustable pointer, aluminium, black

Case
Stainless steel, with blow-out device
Gauges with liquid filling with compensating valve to vent case

Window
Laminated safety glass

Bezel ring
Cam ring (bayonet type), stainless steel

Mounting by means of:
- Rigid measuring lines
- Mounting bracket for wall or pipe mounting (option)
- Panel or surface mounting flange (option)

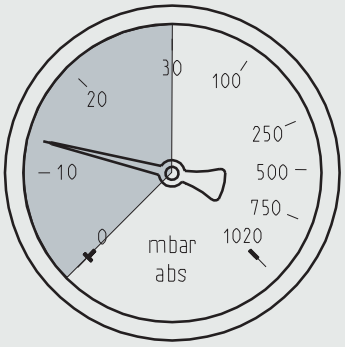
Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Liquid filling (models 533.52, 533.53, 533.54)
- Safety version (models 532.3x, 533.32, 533.33, 533.34)
- Overpressure safety > 10 x full scale value
- Wetted parts from Monel (models 56x.3x, 56x.5x, application test required)
- Medium temperature stability > 100 °C
- Permissible ambient temperature -40 ... +60 °C (silicone oil filling, application test required)
- Open connecting flanges DN 15/50 PN 16/40 (wetted)
- Small flange for vacuum applications DN 10/32 DIN 28403 (wetted)
- Panel or surface mounting flange (consider measuring cell!)
- Mounting bracket for wall or pipe mounting (data sheet AC 09.07)
- Pressure gauge with switch contacts, see data sheet PV 25.02
- Pressure gauge with electrical output signal, see model APGT43, data sheet PV 15.02

Special versions

Model 532.53 with expanded lower scale range
Scale range 0 ... 1,020 mbar absolute pressure, working range 0 ... 30 mbar in class 1.6 expanded to approx. 130 °

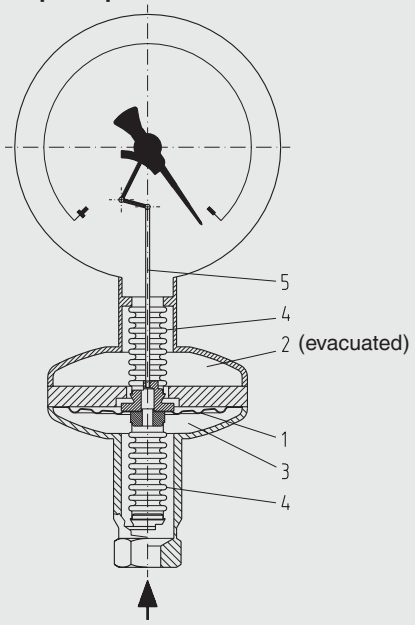
Working range
Class 1.6



Design and operating principle

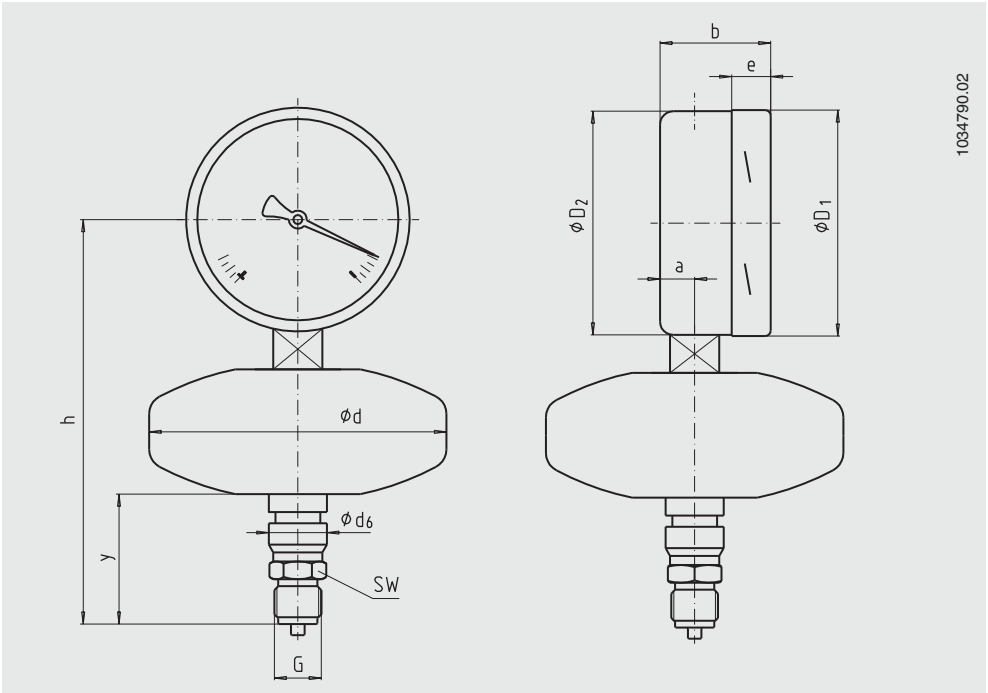
- The diaphragm (1) separates the media chamber (3) and the reference pressure chamber (2) with absolute pressure zero
- Pressure differential between media chamber (3) and reference pressure chamber (2) will deflect the diaphragm (1)
- In case of an overpressure overload the pressure element will be protected by a contoured metal bolster
- The deflection is transferred from the pressure chambers through bellows or corrugated tubes (4), transmitted to the movement via the link (5) and indicated

Illustration of the principle



Dimensions in mm

Standard version



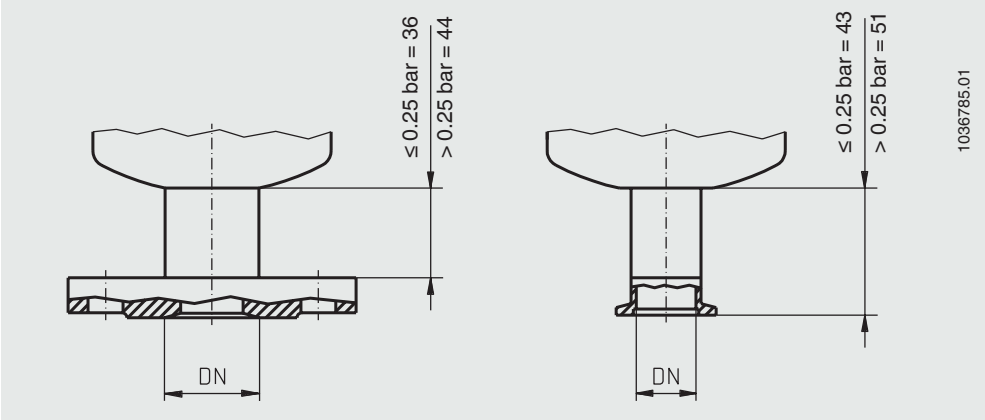
NS	Scale range in bar	Dimensions in mm a	b	D_1	D_2	d	d_6	e	G	h ±1	y	SW	Weight in kg
100	≤ 0.25	15.5	49.5	101	99	133	26	17.5	G ½ B	185	58	22	1.8
100	> 0.25	15.5	49.5	101	99	76	26	17.5	G ½ B	177	66	22	1.2
160	≤ 0.25	15.5	49.5	161	159	133	26	17.5	G ½ B	215	58	22	2.3
160	> 0.25	15.5	49.5	161	159	76	26	17.5	G ½ B	207	66	22	1.6

Process connection per EN 837-3/7.3

Option connecting flange

Open connecting flange,
DN 15 ... 50, PN 6 / 40
Connection dimensions per DIN 2501

Small flange for vacuum applications,
DN 10 ... 32
Connection dimensions per DIN 28403



CE conformity

ATEX directive 1)
94/9/EC, II 2 GD c TX

Approvals

- **EAC**, import certificate, customs union Russia/Belarus/ Kazakhstan
- **GOST**, metrology/measurement technology, Russia
- **CRN**, safety (e.g. electr. safety, overpressure, ...), Canada

Certificates 1)

- 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. material proof wetted parts metal component, indication accuracy)

1) Option

Approvals and certificates, see website

Ordering information
Model / Nominal size / Scale range / Connection size / 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

04/2015 EN