Differential Pressure Gauges

With Diaphragm Element, Standard Series • Model 712.20

Pressure Gauges

Service intended
Suitable for noncorrosive and noncrystallizing gaseous and liquid media that are not highly viscous.

Design
Bottom pressure entry
Pressure chamber set radially below dial.

Nominal size
100 and 160 mm

Accuracy class per EN 837-3 /6
1.6

Scale ranges per EN 837-3 /5

Scale ranges	mbar							bar								
	0 ... 16	0 ... 25	0 ... 40	0 ... 60	0 ... 100	0 ... 160	0 ... 250	0 ... 0.4	0 ... 0.6	0 ... 1	0 ... 1.6	0 ... 2.5	0 ... 4	0 ... 6	0 ... 10	0 ... 16	0 ... 25
max. total static pressure	2.5 bar							10 bar								25 bar
overload limit either side	2.5 bar							bar								
								3		5	8	10				25

or other equivalent units for pressure or vacuum.
Scale range 0 ... 16 mbar: full scale length approx. 180 ∢ °

Working pressure
Steady: full scale value
Fluctuating: 0.9 x full scale value

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

Temperature effect
When temperature of the pressure element deviates from reference temperature (+20 °C):
max. ±0.5 %/10 K of true scale value

Ingress protection
IP 54 per EN 60 529 / IEC 529

Standard features

Pressure chamber and connection (exposed to pressure medium)
Material: Aluminium alloy
Threaded entry per EN 837-1 /7.3, 2 x G ¼ female

Pressure element (exposed to pressure medium)
≤ 0 ... 2.5 bar: stainless steel 1.4571
≥ 0 ... 4 bar: Duratherm (NiCrCo alloy)

Sealing bellows (exposed to pressure medium)
Cu alloy

Sealing rings (exposed to pressure medium)
NBR (Buna rubber), 1.4301

Linkage sealing bellows/pressure chamber (exposed to pressure medium)
Aluminous epoxy resin compound

Movement
Material: Cu alloy, wear parts argentan

Dial
White aluminium with black lettering

Pointer
Black aluminium adjustable pointer

Case
Stainless steel with pressure vent

Window
Instrument glass

Bezel ring
Cam ring (bayonet type), stainless steel

Gauge mounting
Pressure entries identified ⊕ and ⊖
⊕ high pressure, ⊖ low pressure
Mounting by means of:
- rigid tailpipes, or
- panel or surface mounting ring (optional extra), or
- pipe or surface mounting bracket (optional extra)

Optional extras

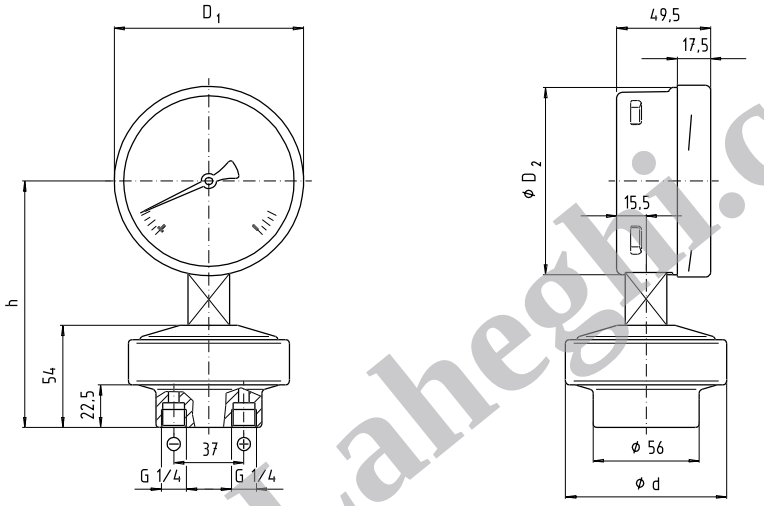
- Liquid filling (**model 713.20**)
- Pressure chamber venting (exposed to pressure medium): on inquiry
- Zero adjustment provisions
- Sealing ring (exposed to press. medium) material FPM (Viton)
- Pressure connection male
- Accuracy better than class 1.6
- Scale ranges < 0 ... 16 mbar upon check of technical feasibility in application
- Max. total overpressure (static) ≥ table given: on inquiry
- Pipe or surface mounting bracket (see data sheet AM 09.07)
- Panel or surface mounting rings (consider possible conflict with pressure chamber)
- Pressure equalizing valve (exposed to pressure medium) - (see data sheet AM 09.11)
- Alarm contacts (see data sheet AC 08.01)
- Transmitters (see data sheet AE 08.02)

Design and operating principle

- High ⊕ and low ⊖ process pressures are separated by a diaphragm element.
- Any pressure differential across high pressure and low pressure sides deflects the diaphragm in an axial direction.
- The deflection is transmitted by a connecting rod to the instrument's movement and pointer.
- Metal bellows provide sealing against ambient atmosphere.
- Overpressure protection is provided by metallic supporting surfaces for the diaphragm.

Dimensions

Standard version
NS 100, bottom entry 2 x G ¼ female



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Nominal size	Scale-range [bar]	Dimensions [mm]					Weight [kg]
		D_1	D_2	d	G	h ± 1	
100	≤ 0.25	101	99	149	G ¼	120	1.85
	> 0.25	101	99	85	G ¼	120	1.0
160	≤ 0.25	161	159	149	G ¼	150	2.25
	> 0.25	161	159	85	G ¼	150	1.4

Pressure connection per EN 837-1 /7.3

Ordering information

Model / Nominal size / Scale range / Scale layout, e.g. linear pressure or square root incrementation / Maximum static pressure rating ... bar / Size and location of connection / Optional extras required

Specifications and dimensions given in this leaflet represent the state of engineering at the time of printing.
Modifications may take place and materials specified may be replaced by others without prior notice.

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