

Pressure gauges with diaphragm for the chemical industry with or without filling

Accuracy class 1.6

Nominal sizes ND 100, 160

Connection position bottom, radial



Description

The design principle and material selection of pressure gauges allow them to meet the stringent demands occurring above all in service in the chemicals and petrochemicals industries.

Diaphragm pressure gauges have a relatively high actuating force. The annular clamped diaphragm is extensively insensitive to jarring or vibration. An extremely high resistance to overpressure is achieved by underpropping the diaphragm.

The special material coating on the components in contact with the process medium protects them from attack by chemically aggressive medium, CrNi steels for the case and instrument flange also make these diaphragm gauges resistant to chemically aggressive environments.

Open process connections ensure that the gauges are easy to clean even with highly viscous or crystallizing process media, thus guaranteeing process reliability.

Features

- o High corrosion resistance with chemically aggressive media and environments
- o High resistance to overpressure
- o Damping of the indicator by glycerine filling
- o Process reliability with highly viscous or crystallizing media
- o Protection IP 54 resp. IP 65

Ranges

0 ... 16 mbar to 0 ... 400 mbar

0 ... 0.6 bar to 0 ... 40 bar


and all corresponding ranges for negative or negative and positive gauge pressure

Applications

Chemical and petrochemical industry,
Food and beverages industry,
Mechanical engineering,
plant and apparatus construction.

Models: P2330, P2331, P2332, P2333

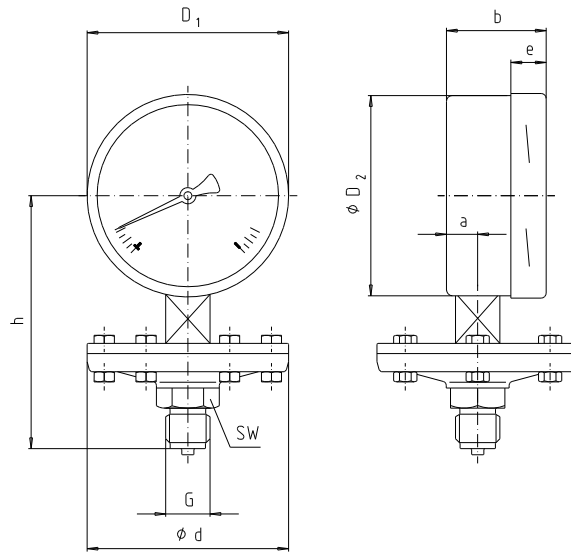
Technical data

Models	P2330	P2332	P2331	P2333	Options
Fill	without filling		with filling		
Nominal size	100	160	100	160	
Symbol					
Accuracy class ¹⁾	1.6 to 837-3				
In accordance with	EN 837-3				Safety pressure gauges
Ranges	0 ... 16 to 0 ... 250 mbar: flange diameter Ø 160 mm 0 ... 0.4 to 0 ... 40 bar: flange diameter Ø 100 mm plus all corresponding ranges for negative or negative and positive gauge pressure				Lower measurement ranges on request
Applications	Constant load: full scale value Alternating load: 0.9 x full scale value				
Overload protection	5 x full scale value, max. 40 bar				overloadable: 10 x full scale value; max. 40 bar vacuum proof to -1 bar
Liquid filling	none		Glycerine 86%, water 14%		
Temperatures - Medium - Ambient	Tmin. -20°C, Tmax. 100°C Tmin. -20°C, Tmax. 60°C,				
Temperature drift	≤0.8% / 10 K if deviation from normal temperature 20°C				
Protection to EN 60 529/IEC 529	IP 54		IP 65		
Case and upper flange	Stainless steel, with pressure relief opening				
Process connection and lower flange	Stainless steel 1.4571, G 1/2 B, SW 22				
Elastic measuring element	≤ 0,40 bar Edelstahl 1.4571 > 0,40 bar INCONEL 718 (Diaphragme Inconel 718)				
Movement	Stainless steel				
Dial	Aluminium, white, scale and imprint black				Dual scale
Pointer	Aluminium, black				
Window	Laminated safety glass				
Bezel	Bayonet ring, stainless steel 1.4301				
Seal to: -pressure chamber	FPM				
-filled internal chamber	---		NBR-bellow (Perbunan)		Metal bellow(stainless steel) coated with special materials: PTFE, PFA, Hastelloy, Monel, Nickel, Tantal, Titan, Silver
Components in contact with medium	see process connection and lower flange and elastic measuring element				
open process connection					to DIN / ANSI from DN 15 to DN 80 (preferred nominal diameter DN 25 and DN 50)

1) with liquid filling: ≤ 25 mbar accuracy class 2.5

Dimensions

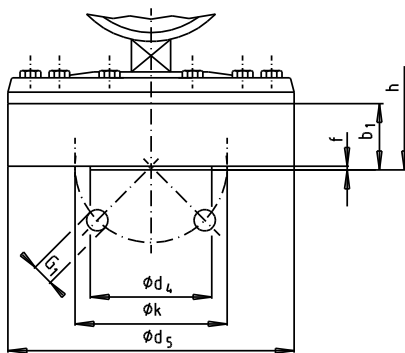
Standard version



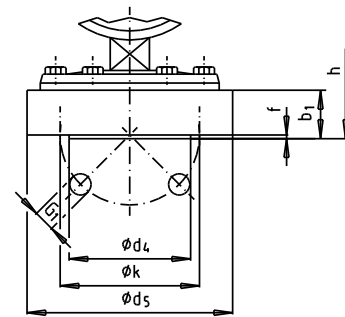
ND	Ranges (bar)	Dimensions (mm)									Weight (kg)	
		d	a	b	D ₁	D ₂	e	G	h ± 2	SW	without filling	filled
100	≤ 0,25	160	15,5	49,5	101	99	17,5	G 1/2 B	117	22	2,6	3,1
160			15,5	49,5	161	159	17,5	G 1/2 B	149	22	3,0	3,9
100	≥ 0,4	100	15,5	49,5	101	99	17,5	G 1/2 B	117	22	1,4	1,9
160			15,5	49,5	161	159	17,5	G 1/2 B	149	22	1,8	2,7

Connection to EN 837-3

Optionens with process connection DIN DN 25 ¹⁾, PN 10 to 40



Ranges 0 ... 16 to 0 ... 250 mbar



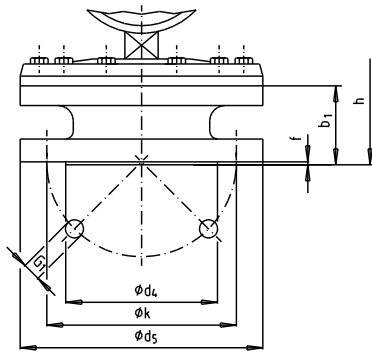
Ranges 0 ... 0.4 to 0 ... 40 bar

ND	process connection DIN DN 25 PN 10 bis 40	Dimensions (mm)							Weight (kg)
		d ₅	k	d ₄ ²⁾	b ₁	f	G ₁	h ± 2	
100	≤ 0,25 bar	160	85	68	36	2	4 x M 12	122	5,00
160			85	68	36	2	4 x M 12	152	5,70
100	≥ 0,4 bar	115	85	68	25	2	4 x M 12	111	3,70
160			85	68	25	2	4 x M 12	141	4,00

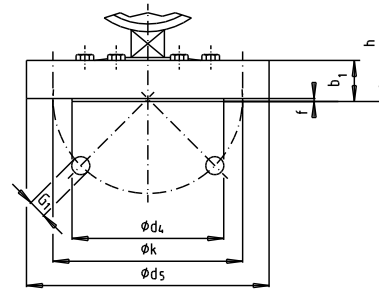
Other dimensions as in standard version

- 1) Suitable for connection to mating flange to DIN 2566, 2567, 2581, 2583, 2633, 2635, 2642, 2653, 2656 and 2673
- 2) Sealing strip form D.

Optionens with process connection DIN DN 25 ¹⁾, PN 10 to 40



Ranges 0 ... 16 to 0 ... 250 mbar



Ranges 0 ... 0.4 to 0 ... 40 bar

ND	process connection DIN DN 25 PN 10 bis 40	Dimensions (mm)							Weight (kg)
		d ₅	k	d ₄ ²⁾	b ₁	f	G ₁	h ± 2	
100	≤ 0,25 bar	160	85	68	36	2	4 x M 12	122	5,00
160			85	68	36	2	4 x M 12	152	5,70
100	≥ 0,4 bar	115	85	68	25	2	4 x M 12	111	3,70
160			85	68	25	2	4 x M 12	141	4,00

Other dimensions as in standard version

- 1) Suitable for connection to mating flange to DIN 2566, 2567, 2581, 2583, 2633, 2635, 2642, 2653, 2656 and 2673
- 2) Sealing strip form D.