

# Pressure gauge per EN 837-1 with mounted diaphragm seal With flange connection, flush diaphragm Model DSS27M

WIKA data sheet DS 95.12

## Applications

- For aggressive, highly viscous, crystallising or hot media
- Process industry
- Machine building and plant construction

## Special features

- Flange with a flush welded diaphragm
- Robust, all welded design
- Universal application



Diaphragm seal system, model DSS27M

## Description

Diaphragm seal systems are used to protect the pressure measuring instrument from aggressive, adhesive, crystallising, corrosive, highly viscous, environmentally hazardous or toxic media. The diaphragm made of stainless steel provides for the separation from the medium. The pressure is transmitted to the measuring instrument via the system fill fluid which is inside the diaphragm seal system.

The DSS27M with flange connection and flush diaphragm is available following currently used, international flange standards.

Mounting of the diaphragm seal to the measuring instrument is made via direct mounting as standard.

The DSS27M is particularly well suited for aggressive, highly viscous, crystallising or hot media. The measuring system is successfully used worldwide in the chemical process and petrochemical industries with high measuring requirements.

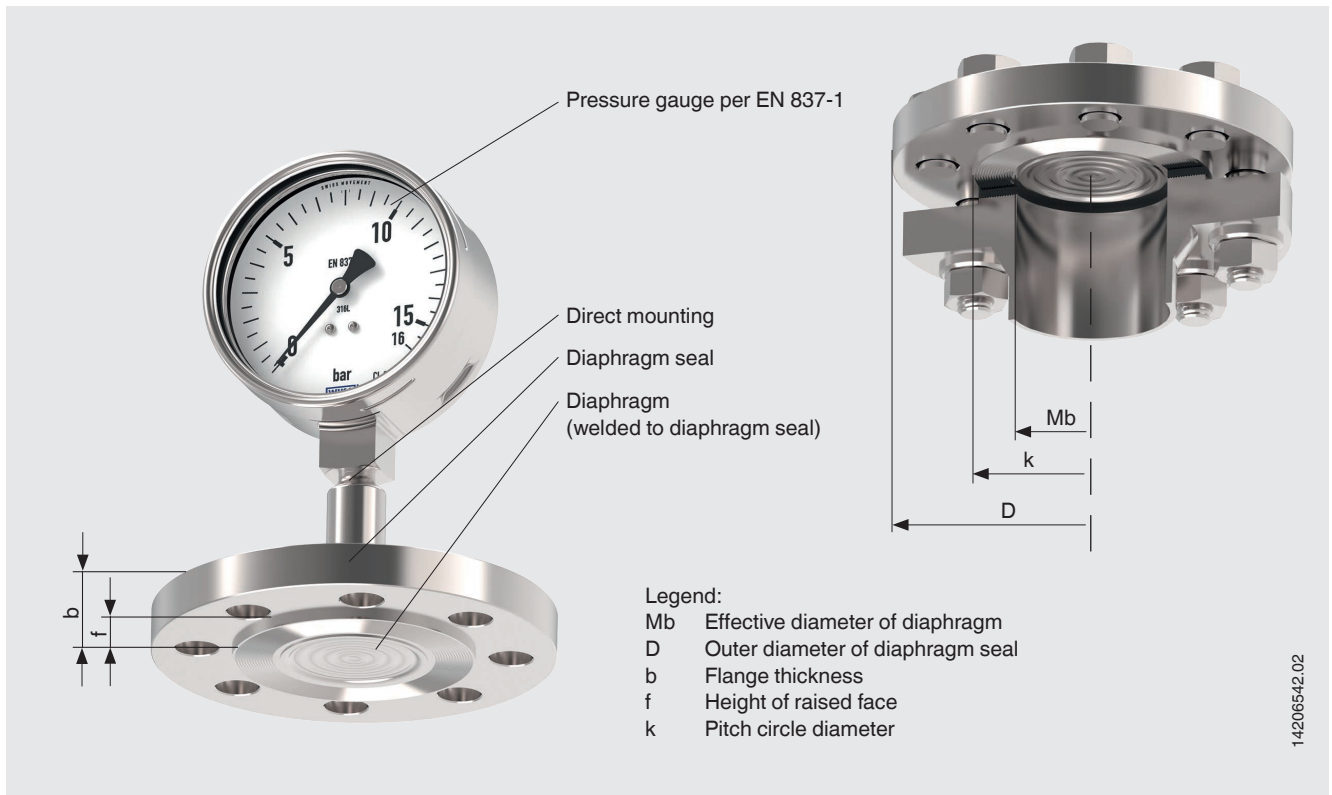
## Specifications

Model DSS27M	
<b>Design</b>	Pressure gauge with Bourdon tube per EN 837-1, diaphragm seal with flange connection, flush diaphragm
<b>Nominal size (NG)</b>	100
<b>Accuracy class</b>	1.0
<b>Pressure limitation</b>	
Steady	Full scale value
Fluctuating	0.9 x full scale value
Short time	1.3 x full scale value
<b>Permissible temperature range</b>	
Medium	-10 ... 150 °C [14 ... 302 °F]
Ambient	10 ... 40 °C [50 ... 104 °F]
Storage	10 ... 60 °C [50 ... 140 °F]
<b>Ingress protection</b>	IP65 per IEC/EN 60529
<b>Material</b>	
wetted	Diaphragm: Stainless steel 1.4435 [316L] Diaphragm seal: Stainless steel 1.4404 [316L]
non-wetted	Dial, pointer: Aluminium Case: Stainless steel 1.4301 [304] Window: Laminated safety glass
<b>Level of cleanliness of wetted parts</b>	Oil and grease free per ASTM G93-03 level F and ISO 15001 (< 1,000 mg/m <sup>2</sup> )
<b>System fill fluid</b>	Silicone oil KN 2 for general applications

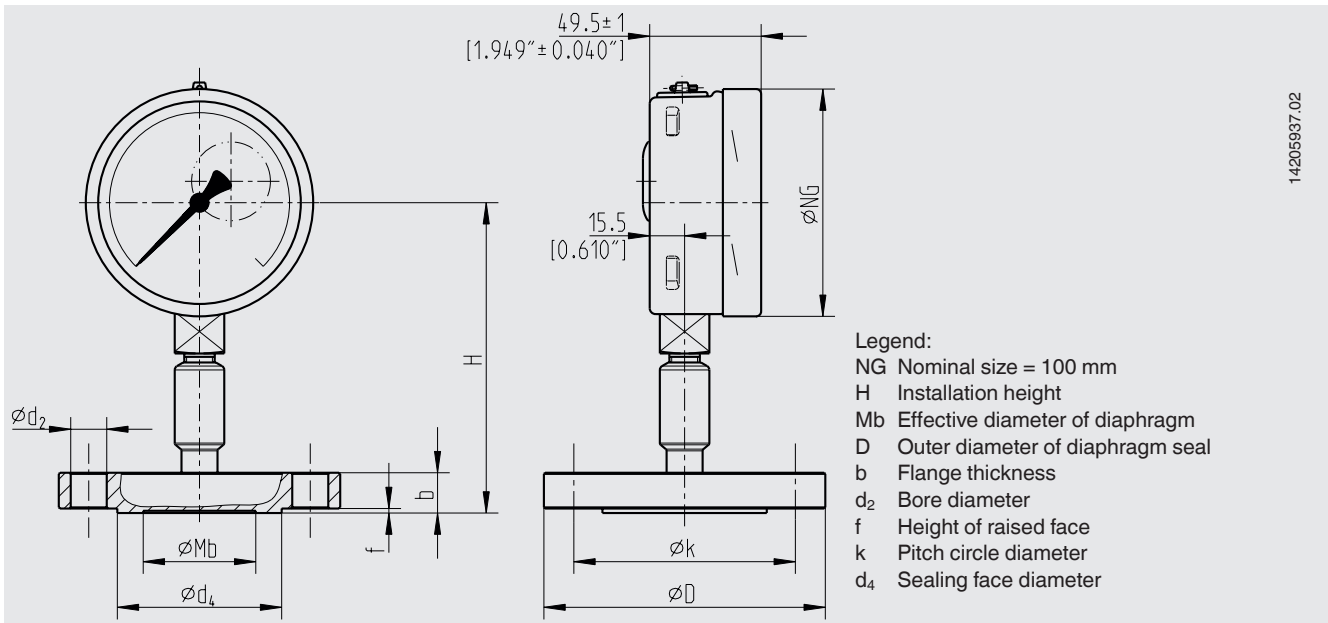
### Scale ranges in bar [psi]

Gauge pressure				
0 ... 1 [0 ... 15]	0 ... 1.6 [0 ... 20]	0 ... 2.5 [0 ... 30]	0 ... 4 [0 ... 60]	0 ... 6 [0 ... 100]
0 ... 10 [0 ... 160]	0 ... 16 [0 ... 200]	0 ... 25 [0 ... 300]	0 ... 40 [0 ... 600]	
Vacuum and +/- measuring range				
-1 ... +5 [-30 inHg ... +70]	-1 ... +9 [-30 inHg ... +130]		-1 ... +10 [-30 inHg ... +145]	

Installation example, model DSS27M



Dimensions in mm [in]



Type of process connection: Flange connection following EN 1092-1

Sealing face: Form B1

DN	PN	Dimensions in mm [in]								
		NG	H	Mb	D	b	k	d <sub>2</sub>	d <sub>4</sub>	f
50	10/40	100	140 [5.512]	59 [2.323]	165 [6.496]	20 [0.787]	125 [4.921]	18 [0.709]	102 [4.016]	2 [0.079]
80	10/16	[3.937]	140 [5.512]	89 [3.504]	200 [7.874]	20 [0.787]	160 [6.299]	18 [0.709]	138 [5.433]	
80	25/40		144 [5.669]			24 [0.945]				

Type of process connection: Flange connection following ASME B16.5

Sealing face: RF 125 ... 250 AA

DN	Class	Dimensions in mm [in]								
		NG	H	Mb	D	b	k	d <sub>2</sub>	d <sub>4</sub>	f
2"	150	100	139.5 [5.491]	59 [2.323]	150 [5.905]	19.5 [0.767]	120.7 [4.752]	19 [0.748]	92 [3.662]	2 [0.079]
	300	[3.937]	142.7 [5.618]		165 [6.496]	22.7 [0.894]	127 [5]			
3"	150		144.3 [5.683]	89 [3.504]	190 [7.48]	24.3 [0.957]	152.4 [6]	19 [0.748]	127 [5]	
	300		149 [5.866]		210 [8.268]	29 [1.142]	168.3 [6.626]	22 [0.866]		

## Certificates (option)

3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metallic parts, calibration certificate)

Approvals and certificates, see website

## Ordering information

Scale range / Process connection (type of process connection, pipe standard, pipe dimension) / Parts / Certificates

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