

Pressure gauge per EN 837-1 with mounted diaphragm seal

For sanitary applications

Model DSS19F, with SMS threaded connection

WIKA data sheet DS 95.21

Applications

- Hygienic pressure measurement in sanitary applications for the food and beverage industry
- Mechanical pressure display on pipelines and vessels
- For gases, vapour; liquid, pasty, powdery and crystallising media

Special features

- Quick cleaning, without residue
- Threaded connection per SMS standard (SS 3352)
- Suitable for cleaning out of place (COP)



Diaphragm seal system, model DSS19F

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 DSS19F complies with all requirements of the food industry. The threaded connection enables a hygienic process connection.

The requirements of COP (cleaning out of place) are fulfilled.

The diaphragm seal systems can withstand the cleaning vapour temperatures occurring in the SIP processes and thus ensure a sterile connection between the medium to be measured and the diaphragm seal.

The diaphragm seal is directly welded to the measuring instrument.

The DSS19F is used for pressure measurement in various process steps, e.g. filtration, separation, pasteurisation, and in filling systems.

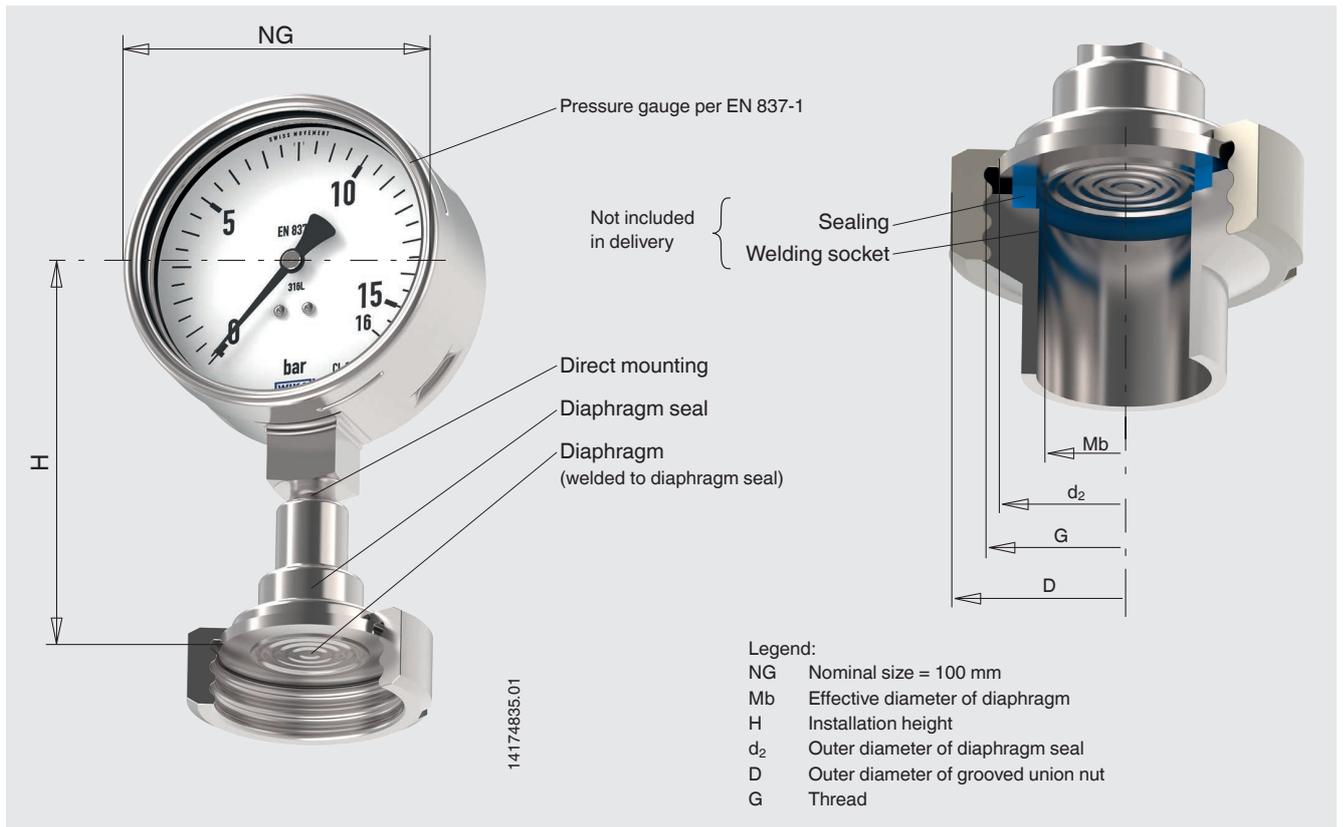
Specifications

Model DSS19F	
Design	Pressure gauge with Bourdon tube per EN 837-1, welded to diaphragm seal
Nominal size (NS)	100
Accuracy class	1.0
Pressure limitation	Steady: Full scale value Fluctuating: 0.9 x full scale value Short time: 1.3 x full scale value
Permissible temperature range	Medium: 10 ... 80 °C (50 ... 176 °F) for SIP and CIP max. 130 °C (266 °F) Ambient: 10 ... 40 °C (50 ... 104 °F) Storage: 10 ... 60 °C (50 ... 140 °F)
Ingress protection	IP65 per IEC/EN 60529
Material	
wetted	Upper body of diaphragm seal: Stainless steel 1.4435 (316L) Diaphragm of diaphragm seal: Stainless steel 1.4435 (316L)
non-wetted	Case: Stainless steel 1.4301 (304) Window: Laminated safety glass Dial, pointer: Aluminium
Surface roughness	
wetted	Ra ≤ 0.76 µm (30 µin) per ASME BPE SF3 (except for weld seam)
non-wetted	Case: Ra ≤ 0.76 µm (30 µin) (except for weld seam)
Level of cleanliness of wetted parts	Oil and grease free per ASTM G93-03 level E (WIKA standard) and ISO 15001 (< 550 mg/m ²)
System fill fluid	Medicinal white mineral oil KN 92 (FDA 21 CFR 172.878, 21 CFR 178.3620(a); USP, EP, JP), recommendation for pharmaceutical and cosmetics applications

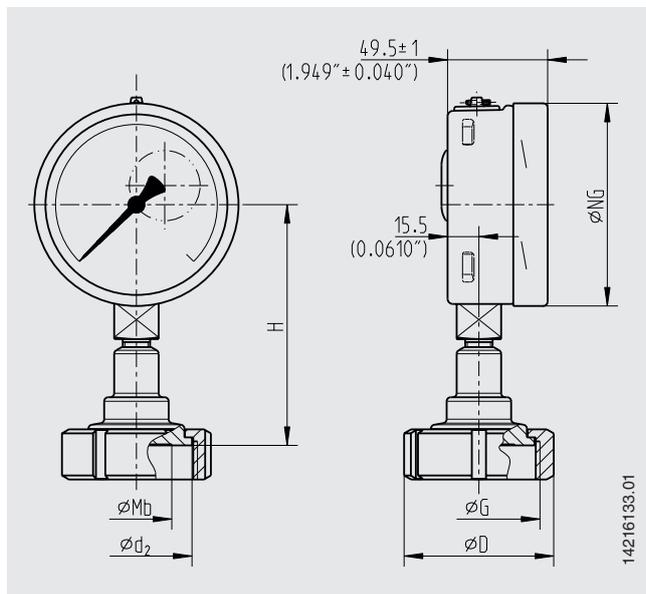
Measuring ranges in bar (psi)

Gauge pressure			
0 ... 1 (0 ... 15)	0 ... 1.6 (0 ... 25)	0 ... 2.5 (0 ... 40)	0 ... 4 (0 ... 60)
0 ... 6 (0 ... 100)	0 ... 10 (0 ... 160)	0 ... 16 (0 ... 250)	0 ... 25 (0 ... 300)
Vacuum and +/- measuring range			
-1 ... +5 (-30 inHg ... +70)	-1 ... +9 (-30 inHg ... +130)	-1 ... +10 (-30 inHg ... +145)	

Model DSS19F illustrated on a pipe socket



Dimensions in mm (in)



Type of process connection: SMS threaded connection

Pipe standard: Threaded connection per SMS standard (SS 3352)

DN	For pipe Outer Ø x wall thickness	PN	Dimensions in mm (in)					
			NG	G	H	D	d ₂	Mb
1 ½"	38 x 1.2 (1.102 x 0.047)	40	100 (3.937)	RD 60 x 1/6 (2.362 x 1/6)	120 (4.724)	74 (2.913)	55 (2.165)	35 (1.378)
2"	51 x 1.2 (2.008 x 0.059)	40	100 (3.937)	RD 70 x 1/6 (2.756 x 1/6)	120 (4.724)	84 (3.307)	65 (2.559)	45 (1.772)

Certificates (option)

- 3.1 inspection certificate per EN 10204 (e.g. material proof for wetted metallic parts, calibration certificate)
- 3.1 calibration certificate (list of single measured values; 5 measuring points)

Approvals and certificates, see website

Ordering information

Scale range / Process connection (type of process connection, pipe standard, pipe dimension) / Material of wetted parts / Certificates

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