

# Pressure gauge per EN 837-1 with mounted diaphragm seal With SMS threaded connection Model DSS19F

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 (SMS 1145)
- Suitable for cleaning out of place (COP)
- Suitable for SIP and CIP



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 proven, all-welded construction ensures a long service life and permanent sealing.

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

## Specifications

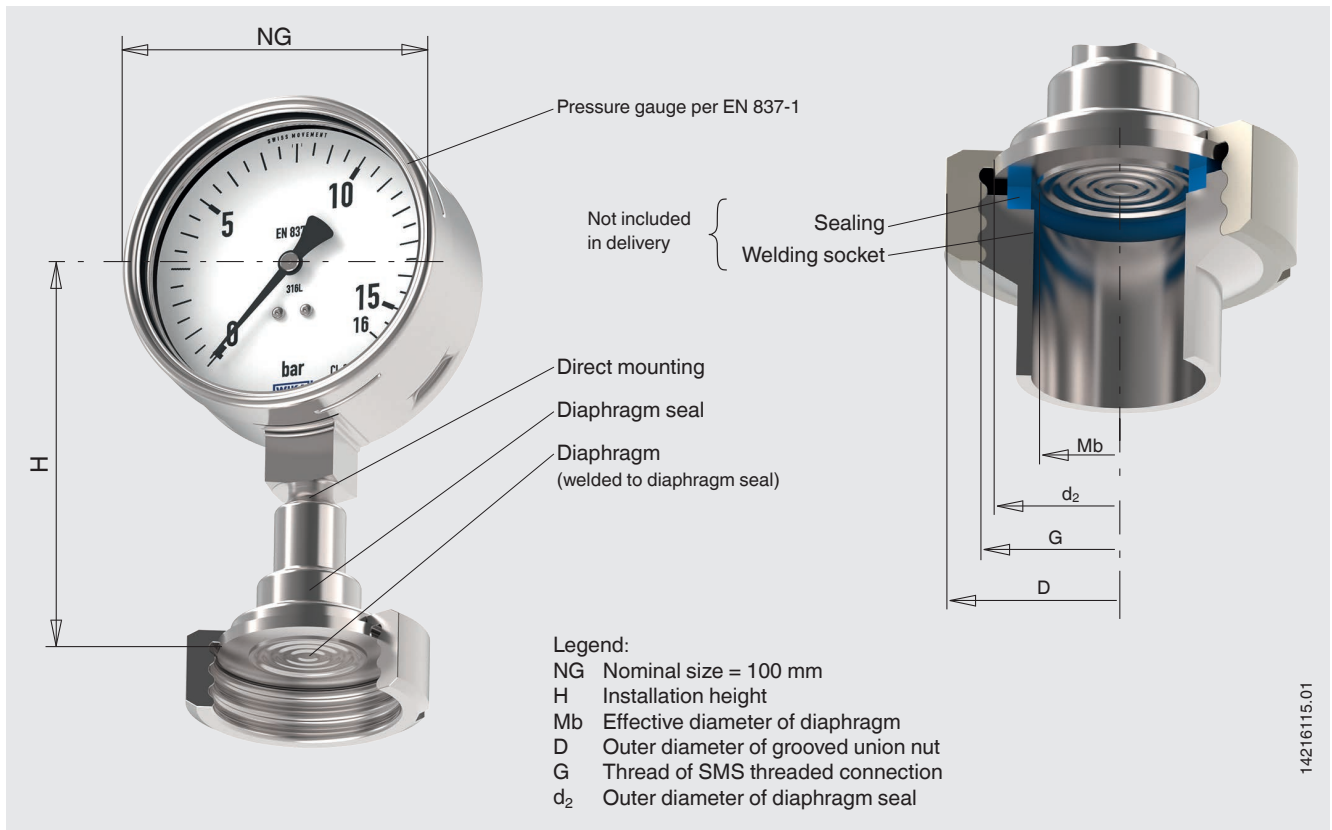
Model DSS19F	
<b>Design</b>	Pressure gauge with Bourdon tube per EN 837-1, welded to diaphragm seal
<b>Nominal size (NS)</b>	100
<b>Accuracy class</b>	1.0
<b>Pressure limitation</b>	Steady: Full scale value Fluctuating: 0.9 x full scale value Short time: 1.3 x full scale value
<b>Permissible temperature range</b>	Medium: 10 ... 80 °C [50 ... 176 °F] for CIP and SIP max. 130 °C [266 °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 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
<b>Surface roughness</b>	
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)
<b>Level of cleanliness of wetted parts</b>	Oil and grease free per ASTM G93-03 level F WIKA standard (< 1,000 mg/m <sup>2</sup> )
<b>System fill fluid</b>	Medicinal white mineral oil KN 92 (FDA 21 CFR 172.878, 21 CFR 178.3620(a); USP, EP, JP)

### Scale ranges in bar [psi]

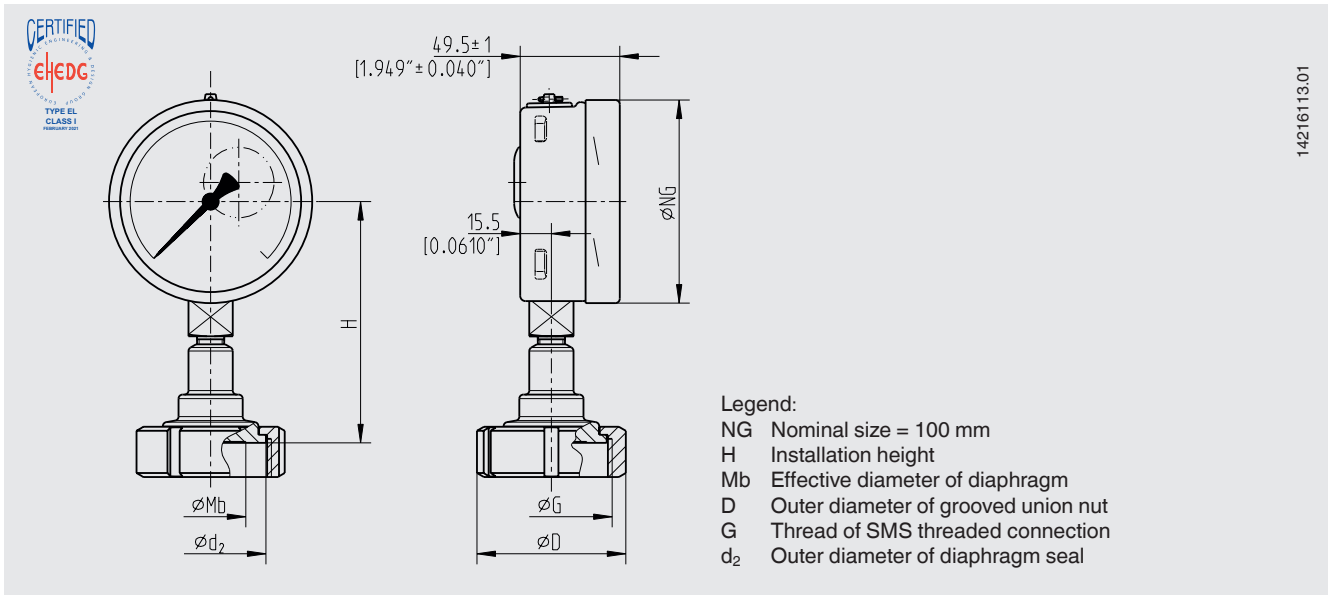
Gauge pressure			
0 ... 1 [0 ... 15]	0 ... 1.6 [0 ... 25]	0 ... 2.5 [0 ... 40]	0 ... 4 [0 ... 60]
0 ... 6 [0 ... 100]	0 ... 10 [0 ... 160]	0 ... 16 [0 ... 250]	0 ... 25 [0 ... 300]

Vacuum and +/- scale 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 (SMS 1145)

DN	For pipe Outer $\varnothing$ x wall thickness	PN	Dimensions in mm [in]					
			NG	G	H	D	d <sub>2</sub>	Mb
1 1/2"	38 x 1.2 [1.496 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 0.047]	40	100 [3.937]	RD 70 x 1/6 [2.756 x 1/6]	122 [4.803]	84 [3.307]	65 [2.559]	45 [1.772]

## Approvals

Logo	Description	Country
	<b>EHEDG</b> Hygienic Equipment Design	European Community

## 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) / Parts / Certificates

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