

Pressure gauge per EN 837-1 with mounted diaphragm seal With milk thread fitting Model DSS18F

WIKA data sheet DS 95.04



Applications

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

Special features

- Quick cleaning, without residue
- Milk thread fitting per DIN 11851
- Suitable for cleaning out of place (COP)



Diaphragm seal system, model DSS18F

Configurator



Standard articles



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 DSS18F complies with all requirements of the food industry. The milk thread fitting 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 DSS18F is used for pressure measurement in various process steps, e.g. filtration, separation, pasteurisation, and in filling systems.

Specifications

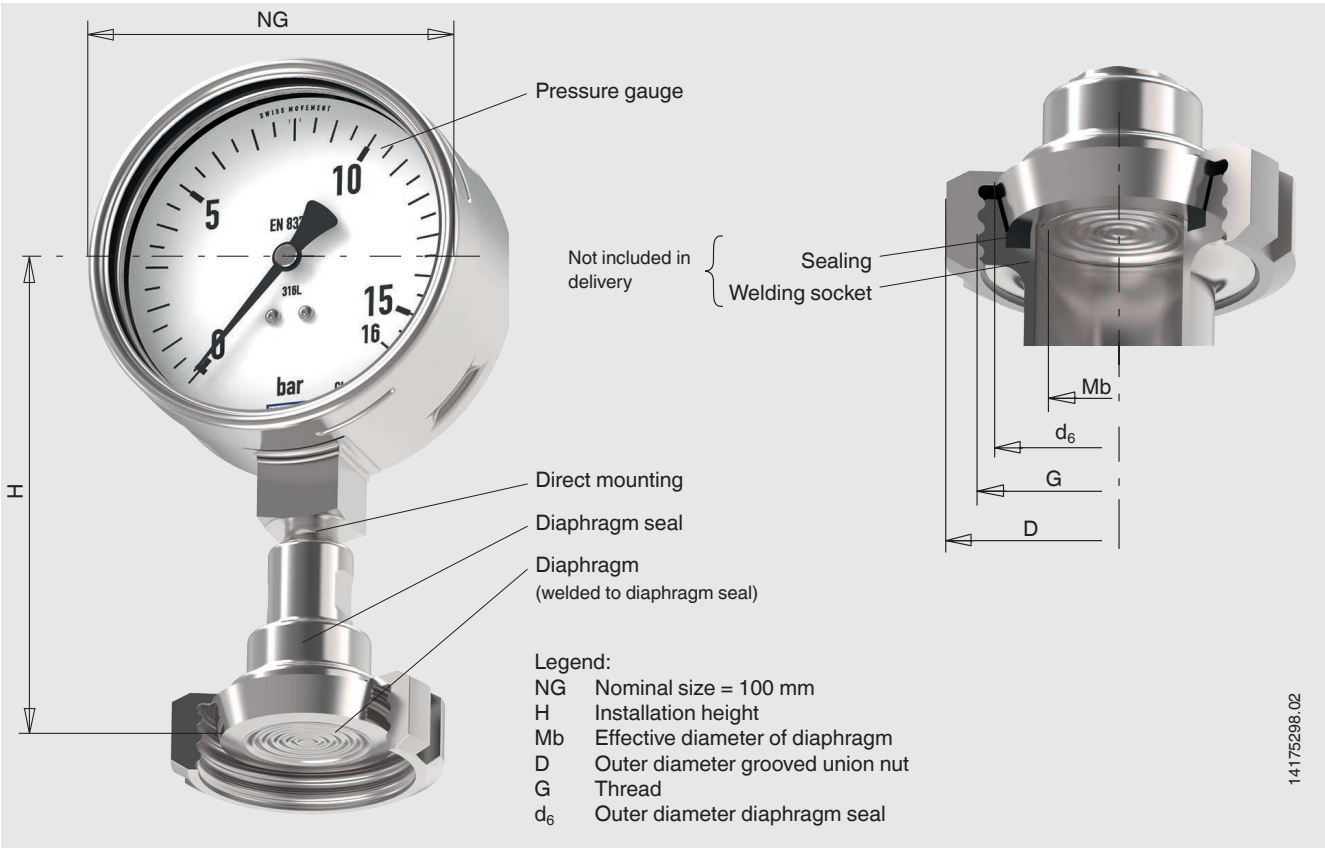
Model DSS18F	
Design	Pressure gauge with Bourdon tube per EN 837-1, welded to diaphragm seal
Nominal size (NS)	100
Accuracy class	1.0
Scale range	0 ... 1 to 0 ... 25 bar [0 ... 15 to 0 ... 360 psi] or all other equivalent vacuum or combined pressure and vacuum ranges
Pressure limitation	Steady: Full 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 CIP and SIP 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	Diaphragm: Stainless steel 1.4435 [316L] Diaphragm seal: Stainless steel
non-wetted	Dial, pointer: Aluminium Case: Stainless steel 1.4301 [304] Window: Laminated safety glass
Surface roughness	
wetted	$R_a \leq 0.76 \mu\text{m}$ [30 μin] per ASME BPE SF3 (except for weld seam)
non-wetted	Case: $R_a \leq 0.76 \mu\text{m}$ [30 μin] (except for weld seam)
Level of cleanliness of wetted parts	Oil and grease free per ASTM G93-03 level F (WIKA standard) (< 1,000 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)

Measuring ranges in bar [psi]

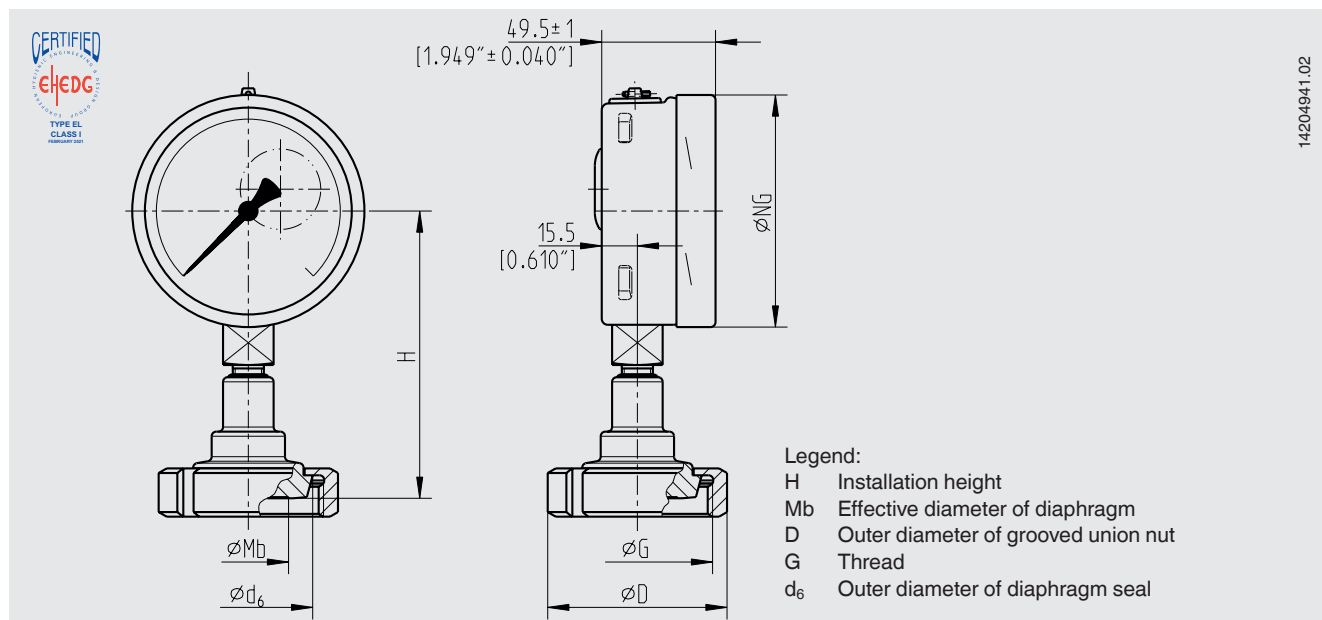
Gauge pressure			
0 ... 1 [0 ... 15]	0 ... 1.6 [0 ... 25]	0 ... 2.5 [0 ... 40]	0 ... 4 [0 ... 60]
0 ... 6 [0 ... 100]	0 ... 10 [0 ... 160]	0 ... 16 [0 ... 250]	0 ... 25 [0 ... 300]

Vacuum and +/- measuring range		
-1 ... +5 [-30 inHg ... +70]	-1 ... +9 [-30 inHg ... +130]	-1 ... +10 [-30 inHg ... +145]

Model DSS18F illustrated on a pipe socket



Dimensions in mm [in]



Type of process connection: Milk thread fitting following DIN 11851

Pipe standard: Pipes per DIN 11850 row 2

DN	For pipe Outer Ø x wall thick- ness	PN	Dimensions in mm [in]					
			NS	G	H	D	d_6	Mb
25	29 x 1.5 [1.142 x 0.059]	40	100 [3.937]	RD 52 x 1/6 [2.047 x 1/6]	123 [4.843]	63 [2.48]	44 [1.732]	26 [1.024]
40	41 x 1.5 [1.614 x 0.059]	40	100 [3.937]	RD 65 x 1/6 [2.559 x 1/6]	125 [4.921]	78 [3.071]	56 [2.205]	35 [1.378]
50	53 x 1.5 [2.087 x 0.059]	25	100 [3.937]	RD 78 x 1/6 [3.071 x 1/6]	125 [4.921]	92 [3.622]	68.5 [2.697]	52 [2.047]

Approvals

Logo	Description	Country
	EHEDG 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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