

# Pressure gauge per EN 837-1 with mounted diaphragm seal With clamp connection Model DSS22F

WIKA data sheet DS 95.06



## Applications

- Hygienic pressure measurement in sanitary applications for the food and beverage industry
- Mechanical pressure display on pipelines and vessels
- Pressure/vacuum monitoring during cleaning, sterilisation, pressure testing
- For gases, vapour; liquid, pasty, powdery and crystallising media

## Special features

- Quick cleaning, without residue
- Clamp connection easy to open for cleaning and seal replacement
- Suitable for SIP and CIP



Diaphragm seal system, model DSS22F

## 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 DSS22F complies with all requirements of the food industry. The particular suitability for foodstuffs rests on the fact that the measuring point can be cleaned while installed.

The requirements of CIP (cleaning in place) and SIP (sterilisation in place) are fulfilled.

The clamp connection enables the quick and easy dismantling and thus a simple cleaning with seal replacement.

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

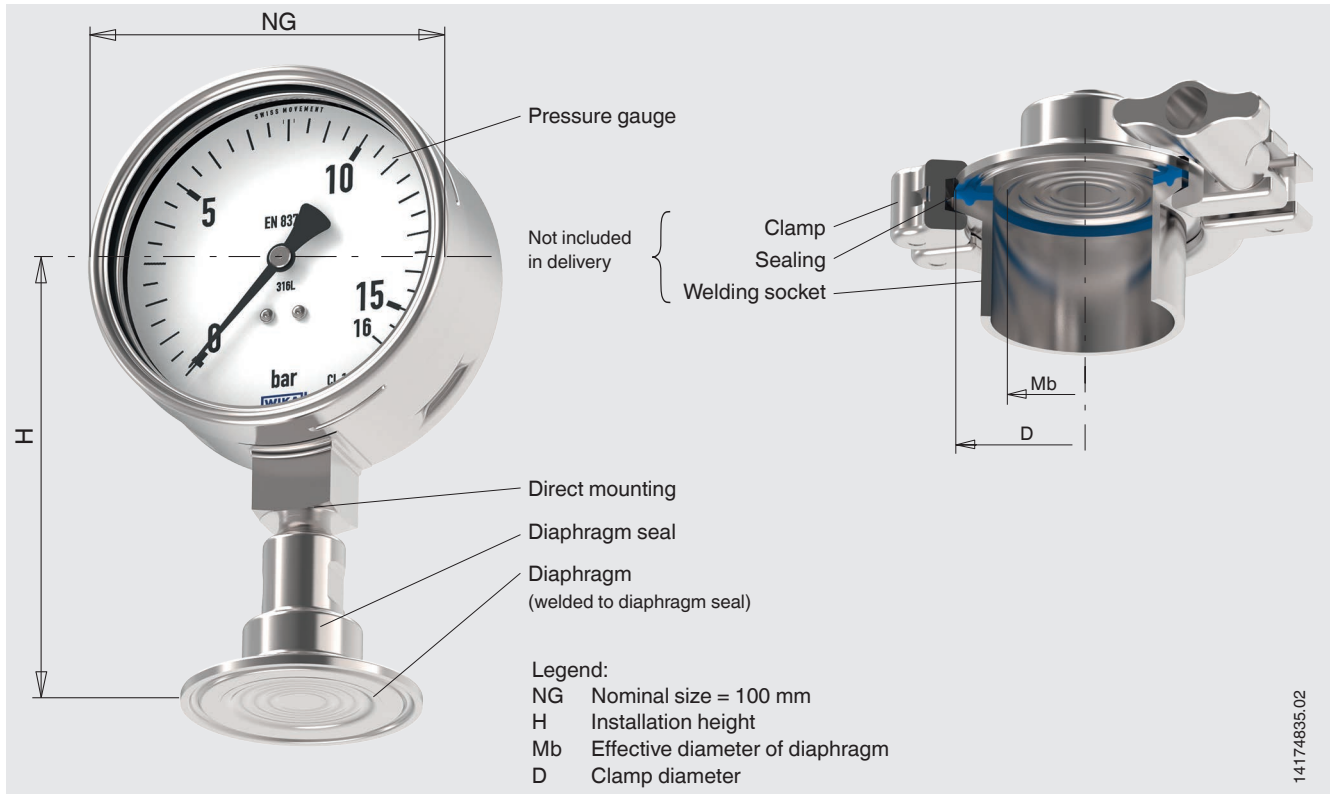
## Specifications

Model DSS22F	
<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>Scale range</b>	0 ... 0.6 to 0 ... 25 bar [0 ... 15 to 0 ... 360 psi] or all other equivalent vacuum or combined pressure and vacuum ranges
<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 SIP and CIP 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: Stainless steel 1.4435 [316L] Diaphragm seal, pressure element: Stainless steel
non-wetted	Dial, pointer: Aluminium Case: Stainless steel 1.4301 [304] Window: Laminated safety glass
<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 and ISO 15001 (< 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)

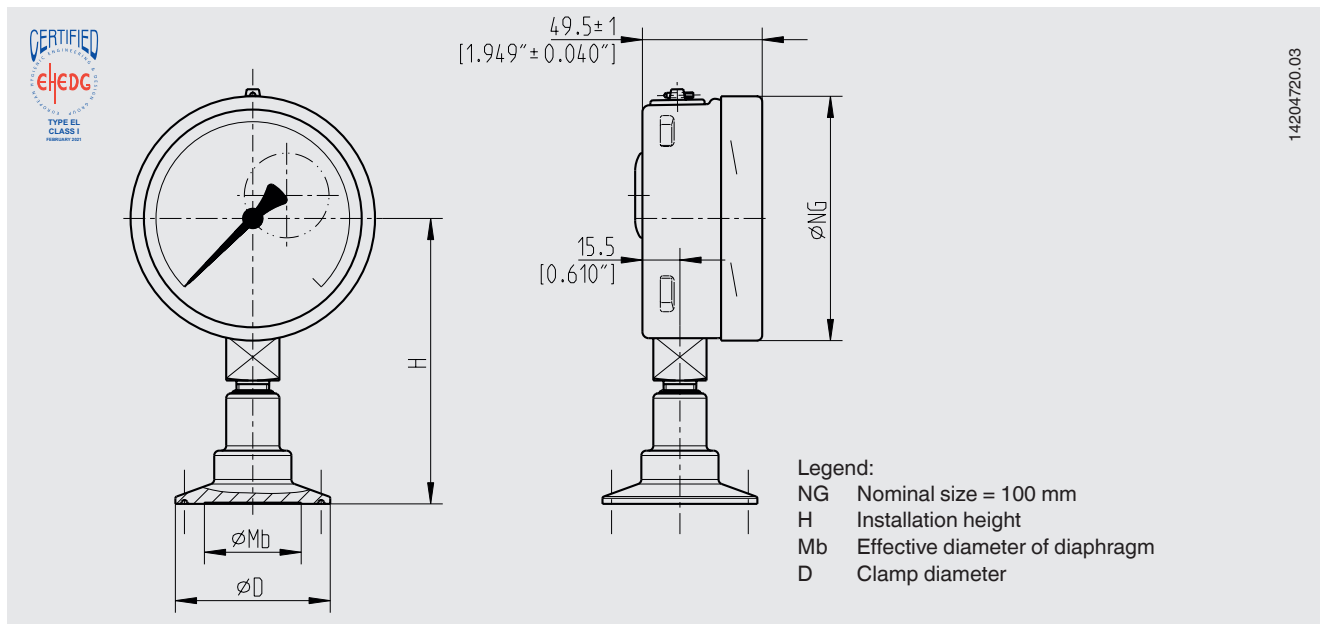
### Measuring ranges in bar [psi]

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 DSS22F illustrated on a pipe socket



## Dimensions in mm [in]



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### Type of process connection: Clamp connection per DIN 32676

Pipe standard: Pipes per DIN 11866 row C or ASME BPE

DN	For pipe Outer Ø x wall thickness	PN <sup>1)</sup>	Dimensions in mm [in]			
			NS	H	D	Mb
1 ½"	38.1 x 1.65 [1,5 x 0.065]	40	100 [3.937]	115 [4.528]	50.5 [1.988]	32 [1.26]
2"	50.8 x 1.65 [2 x 0.065]	40	100 [3.937]	118 [4.646]	64 [2.52]	40 [1.575]

### Type of process connection: Clamp connection per DIN 32676

Pipe standard: Pipes per DIN 11866 row B or ISO 1127 row 1

DN	For pipe Outer Ø x wall thickness	PN <sup>1)</sup>	Dimensions in mm [in]			
			NS	H	D	Mb
42.4 (DN 32)	42.4 x 2 [1,669 x 0,079]	40	100 [3.937]	118 [4.646]	64 [2.52]	32 [1.26]
48.3 (DN 40)	48.3 x 2 [1,906 x 0,079]	40	100 [3.937]	118 [4.646]	64 [2.52]	40 [1.575]

### Type of process connection: Clamp connection per BS4825 part 3

Pipe standard: Pipes per BS4825 part 1 and O.D. tube

DN	For pipe Outer Ø x wall thickness	PN <sup>1)</sup>	Dimensions in mm [in]			
			NS	H	D	Mb
1 ½"	38.1 x 1.6 [1.5 x 0.063]	40	100 [3.937]	115 [4.528]	50.5 [1.988]	32 [1.26]
2"	50.8 x 1.6 [2 x 0.063]	40	100 [3.937]	118 [4.646]	64 [2.52]	40 [1.575]

1) For maximum pressure range consider pressure rating of clamp.

## 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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