

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
- Universal application
- Compact design



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.

Due to its design – with flange connection and flush diaphragm – the DSS27M is suitable for all commonly used standard flanges and is mounted for pressure measurement in lieu of a blind flange.

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.

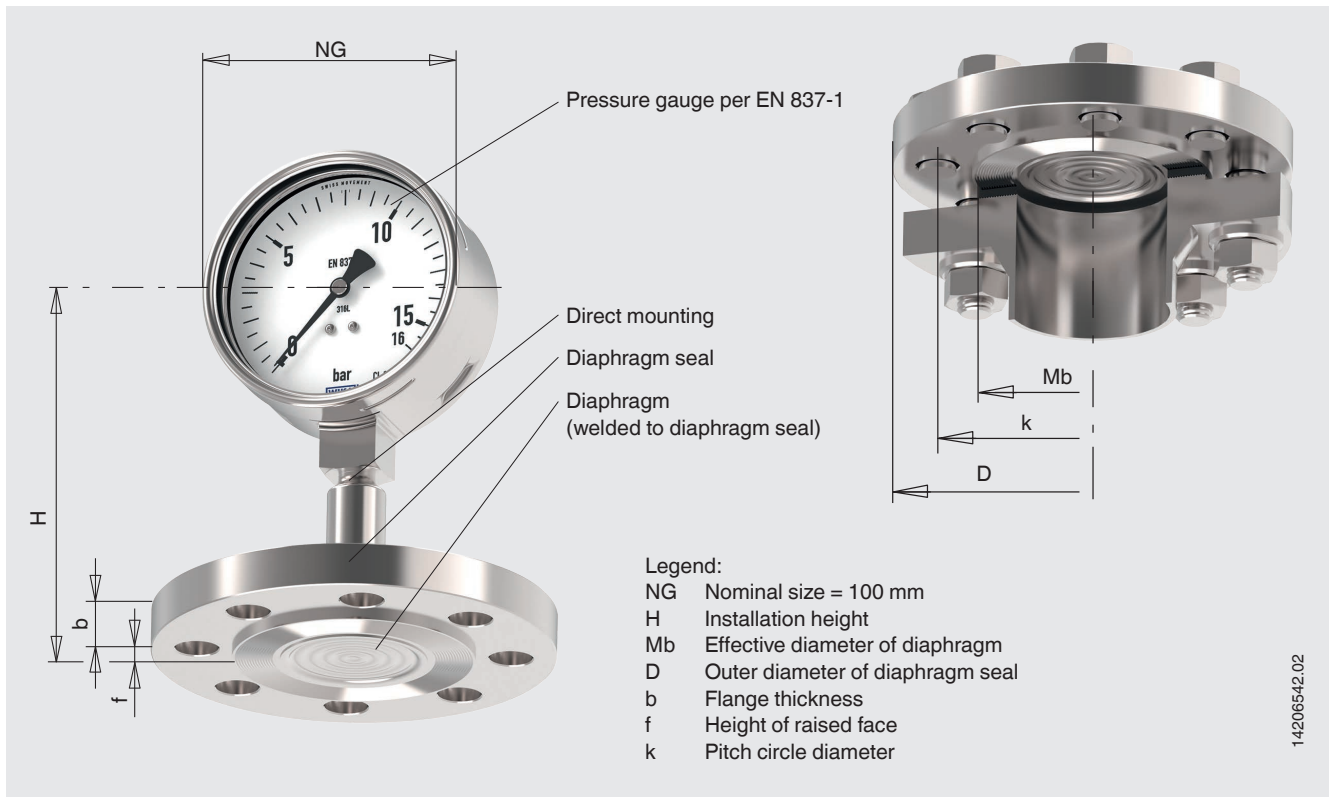
Specifications

| Model DSS27M | |
|---|---|
| Design | Pressure gauge with Bourdon tube per EN 837-1, diaphragm seal with flange connection, flush diaphragm |
| Nominal size (NG) | 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 ... 150 °C [14 ... 302 °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 1.4404 [316L] non-wetted: Dial, pointer: Aluminium Case: Stainless steel 1.4301 [304] Window: Laminated safety glass |
| Level of cleanliness of wetted parts | Oil and grease free per ASTM G93-03 level F and ISO 15001 (< 1,000 mg/m ²) |
| System fill fluid | Silicone oil KN 2 for general applications |

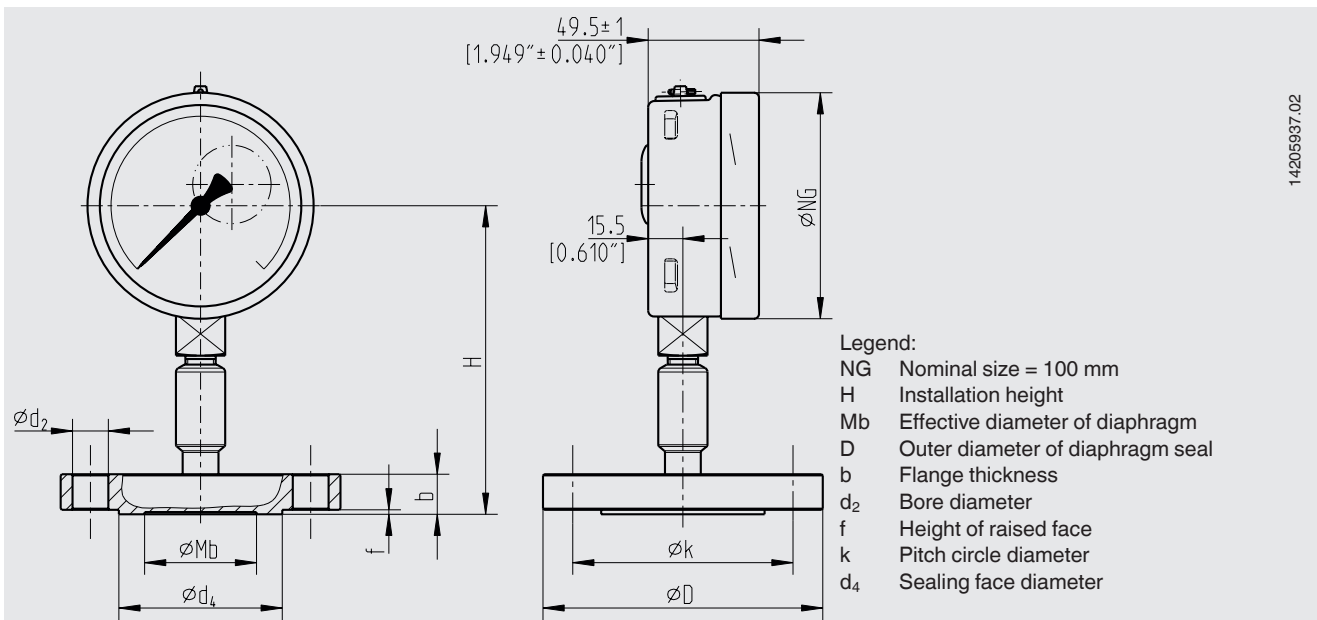
Scale ranges in bar [psi]

| 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]



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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_2 | d_4 | f |
| 50 | 10/40 | 100 | 138 [5.433] | 59 [2.323] | 165 [6.496] | 18 [0.709] | 85 [3.346] | 14 [0.551] | 68 [2.677] | 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_2 | d_4 | 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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