Pressure gauge per EN 837-1 with mounted diaphragm seal
With threaded connection, threaded design
Model DSS10M

Applications
- For aggressive, hot, corrosive, environmentally hazardous or toxic media
- Chemical and petrochemical industries
- Process industry

Special features
- Process connection with thread for direct threaded connection
- Version with internal diaphragm
- Diaphragm seal parts screwed together
- Universal application

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, the DSS10M can be used universally. A replacement of the lower body is possible (e.g. when changing the process connection) without having to carry out modifications on the diaphragm seal system.

Mounting of the diaphragm seal to the measuring instrument is made via direct mounting as standard.

The DSS10M is particularly well suited for aggressive or hot media. This instrument is mainly geared to applications in the process industry.
### Specifications

**Model DSS10M**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Version</strong></td>
<td>Pressure gauge with Bourdon tube per EN 837-1, screwed to diaphragm seal</td>
</tr>
<tr>
<td><strong>Nominal size (NS)</strong></td>
<td>100</td>
</tr>
<tr>
<td><strong>Accuracy class</strong></td>
<td>1.0</td>
</tr>
<tr>
<td><strong>Scale range</strong></td>
<td>0 ... 1 to 0 ... 60 bar [0 ... 15 to 0 ... 800 psi] or all other equivalent vacuum or combined pressure and vacuum ranges</td>
</tr>
</tbody>
</table>
| **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]  
10 ... 40 °C [50 ... 104 °F]  
10 ... 60 °C [50 ... 140 °F]  
**Ambient**  
**Storage** |
| **Ingress protection**               | IP65 per IEC/EN 60529                                                  |
| **Material**                         | Diaphragm: Stainless steel CrNi-Stahl 1.4435 [316L] or Hastelloy C276  
Diaphragm seal: CrNi-Stahl 1.4435 [316L] or Hastelloy C276  
Dial, pointer: Aluminium  
Case: Stainless steel 1.4301 [304]  
Diaphragm seal, pressure element: Stainless steel  
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/m²) |
| **System fill fluid**                | Silicone oil KN 2 for general applications                               |

### Scale ranges in bar [psi]

<table>
<thead>
<tr>
<th>Gauge pressure</th>
<th>0 ... 1 [0 ... 15]</th>
<th>0 ... 1.6 [0 ... 25]</th>
<th>0 ... 2.5 [0 ... 40]</th>
<th>0 ... 4 [0 ... 60]</th>
<th>0 ... 6 [0 ... 100]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum and +/- scale range</td>
<td>-1 ... +5 [-30 inHg ... +70]</td>
<td>-1 ... +9 [-30 inHg ... +130]</td>
<td>-1 ... +10 [-30 inHg ... +145]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Model DSS10M illustrated on a pipe socket

Legend:
- NG Nominal size = 100 mm
- H Installation height
- Mb Effective diameter of diaphragm
- D Outer diameter diaphragm seal

Pressure gauge
Direct mounting
Diaphragm seal
Diaphragm (welded to diaphragm seal)

Not included in delivery

Sealing
Welding socket
Dimensions in mm [in]

Type of process connection: Threaded connection, threaded design

<table>
<thead>
<tr>
<th>Wetted parts</th>
<th>G</th>
<th>Dimensions in mm [in]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NG</td>
<td>H</td>
</tr>
<tr>
<td>1.4404/1.4435 [316L]</td>
<td>½ NPT</td>
<td>168 [6.614]</td>
</tr>
<tr>
<td>Hastelloy C276</td>
<td>G ½</td>
<td>203 [7.992]</td>
</tr>
<tr>
<td></td>
<td>½ NPT</td>
<td>202 [7.953]</td>
</tr>
</tbody>
</table>

Legend:
NG Nominal size = 100 mm
H Installation height
Mb Effective diameter of diaphragm
G Thread
D Outer diameter of diaphragm seal
h Thread length
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