Capsule pressure gauge, stainless steel
For the process industry
Models 632.50, 633.50, NS 63, 100, 160

Applications

- With liquid-filled case for applications with high dynamic pressure loads or vibrations (model 633.50)
- For gaseous, dry and aggressive media, also in aggressive environments
- Process industry: Chemical, petrochemical, pharmaceutical, biotechnology, machine and power generation industries

Special features

- Zero point correction in front
- Completely from stainless steel
- Special connection location on request
- Low scale ranges from 0 ... 2.5 mbar

Description

The model 632.50 capsule pressure gauges are completely manufactured from stainless steel and are therefore particularly suited for applications in the process industry. They are based upon the proven capsule measuring system. On pressurisation, the expansion of the capsule element, proportional to the incident pressure, is transmitted to the movement and indicated.

The modular design enables a multitude of combinations of case materials, process connections, nominal sizes and scale ranges. Due to this high variance, the instrument is suitable for use in a wide range of applications within the process industry.

For mounting in control panels, the capsule pressure gauges can, depending on the process connection, be fitted with a mounting flange or with a triangular profile ring and mounting bracket.

The model 633.50 with liquid-filled case is suitable for high dynamic pressure loads and vibrations.
Standard version

Design
EN 837-3

Nominal size in mm
63, 100, 160

Accuracy class
1.6

Scale ranges
NS 63: 0 ... 40 mbar to 0 ... 600 mbar
NS 100: 0 ... 16 mbar to 0 ... 600 mbar
NS 160: 0 ... 2.5 mbar to 0 ... 600 mbar
or all other equivalent vacuum or combined pressure and vacuum ranges

Pressure limitation
Steady: Full scale value
Fluctuating: 0.9 x full scale value

Permissible temperature
Ambient: -20 ... +60 °C
Medium: ≤ 100 °C

Temperature effect
When the temperature of the measuring system deviates from the reference temperature (+20 °C): max. ±0.6 %/10 K of full scale value

Ingress protection per IEC/EN 60529
IP54 for model 632.50 (without case filling)
IP65 for model 633.50 (with case filling)

Process connection
Stainless steel 316L
Lower mount (radial) or lower back mount ¹)
NS 63: Male thread G ¼ B, SW 14
NS 100, 160: Male thread G ½ B, SW 22

Pressure element
Stainless steel 316L

Sealing
FPM/FKM

Movement
Stainless steel

Zero point setting
In front

Dial
Aluminium, white, black lettering

Pointer
Aluminium, black

Case
Stainless steel

Window
Laminated safety glass
(for case filling: Polycarbonate or clear non-splintering plastic)

Ring
Bayonet ring, stainless steel

Case filling ¹)
Glycerine-water mixture for scale ranges ≥ 60 mbar ²)

Options

- Other process connection
- Sealings (model 910.17, see data sheet AC 09.08)
- Accuracy class 1.0 for model 632.50 and scale range ≥ 40 mbar (without fill fluid)
- Accuracy class 1.0 for model 633.50 and scale range ≥ 100 mbar (with fill fluid)
- Permissible ambient temperatures -40 ... +60 °C:
  Model 632.50: Movement wetted with Fomblin® Z03
  Model 633.50: Case filling with silicone oil
- Overload or vacuum safety with
  scale ranges < 40 mbar: 3 x full scale value
  scale ranges ≥ 40 mbar: 10 x full scale value
- Surface mounting flange
- NS 100 and 160: Panel mounting flange
- NS 100 and 160: Triangular profile ring with clamp
- Switch contact for model 632.50.100, from scale range ≥ 100 mbar (model 831, see data sheet AC 08.01)

¹) only available for model 633.50 with NS 100, 160
²) Option accuracy class 1.0 available from ≥ 100 mbar
## Approvals

<table>
<thead>
<tr>
<th>Logo</th>
<th>Description</th>
<th>Country</th>
</tr>
</thead>
</table>
| ![CE](Image) | EU declaration of conformity  
- Pressure equipment directive  
- ATEX directive (option)  
  Hazardous areas  
  Zone 1 gas II 2G Ex h IIC T6 ... T1 Gb  
  Zone 20 dust II 2D Ex h IIIIC T85°C ... T450°C Db  
  Ignition protection type "c", constructive safety | European Union |
| ![EAC](Image) | EAC (option)  
- Pressure equipment directive  
- Hazardous areas | Eurasian Economic Community |
| ![GOST](Image) | GOST (option)  
Metrology, measurement technology | Russia |
| ![KazMetr](Image) | KazinMetr (option)  
Metrology, measurement technology | Kazakhstan |
| ![KazMetr](Image) | MTSCHS (option)  
Permission for commissioning | Kazakhstan |
| ![BelGIM](Image) | BelGIM (option)  
Metrology, measurement technology | Belarus |
| ![UkrSEPRO](Image) | UkrSEPRO (option)  
Metrology, measurement technology | Ukraine |
| ![Uzstandard](Image) | Uzstandard (option)  
Metrology, measurement technology | Uzbekistan |
| ![CPA](Image) | CPA (option)  
Metrology, measurement technology | China |

## Certificates (option)

- 2.2 test report
- 3.1 inspection certificate

Approvals and certificates, see website
Dimensions in mm

Standard version

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimensions in mm</th>
<th>Weight in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>a</td>
<td>b</td>
</tr>
<tr>
<td>63</td>
<td>9.5</td>
<td>42</td>
</tr>
<tr>
<td>100</td>
<td>15.5</td>
<td>49.5</td>
</tr>
<tr>
<td>160</td>
<td>15.5</td>
<td>49.5</td>
</tr>
</tbody>
</table>

1) With NS 63: Centre back mount process connection

Process connection per EN 837-3 / 7.3

Ordering information

Model / Nominal size / Scale range / Process connection / Connection location / Options