Hydrostatic

Overview 162
VEGABAR series 60 164
VEGA WELL 52 168
Accessories 171
Hydrostatic
Level and pressure measurement

Measuring principle
The pressure measuring cell converting the pressure into an electrical signal is the heart of the pressure transmitter. This pressure-dependent signal is converted by the integrated electronics into a standardised output signal. Different measuring cells are used to detect the pressure. The ceramic cells characterize by an excellent long-term stability and high overload resistance. The metal METEC® measuring cell enables fully welded versions and covers even higher measuring ranges.

VEGABAR series 60
For all industries
The VEGABAR series 60 covers all requirements on suspension pressure transmitters. Excellent accuracy, overload resistance, temperature resistance and corrosion resistance are the main points which must be met. In conjunction with application-optimised housing versions and electronics, these suspension pressure transmitters are the ideal solution for use in harsh environments. Especially the front-flush, abrasion-resistant CERTEC® measuring cell with its double seal system offers high reliability.

VEGA WELL
For gauge measurements
The suspension pressure transmitters are designed for gauge measurements in water/waste applications. Different versions in combination with different cable materials offer all necessary options. The robust CERTEC® measuring cell as well as the integrated overvoltage arrester ensure the reliable operation.
## Overview

**VEGABAR 66**
- Measuring cell: CERTEC®
- Sensor diameter: 32 mm
- Measuring range: 0 … +25 bar (0 … +2500 kPa)
- Deviation in characteristics: 0.1 %
- Process temperature: -40 … +100 °C
- Process fitting: Thread from G1½, 1½ NPT, flanges from DN 40, 2”

**VEGABAR 67**
- Measuring cell: METEC®
- Sensor diameter: 40 mm
- Measuring range: 0 … +25 bar (0 … +2500 kPa)
- Deviation in characteristics: 0.1 %
- Process temperature: -12 … +100 °C
- Process fitting: Thread from G1½, 1½ NPT, flanges from DN 50, 2”

**VEGAWELL 52**
- Measuring cell: CERTEC® / MINI-CERTEC®
- Sensor diameter: From 22 mm
- Measuring range: 0 … +60 bar (0 … +6000 kPa)
- Deviation in characteristics: 0.1 %; 0.2 %
- Process temperature: -20 … +80 °C
VEGABAR 66

Suspension pressure transmitter with CERTEC® measuring cell

Application area
The VEGABAR 66 is a suspension pressure transmitter for level measurement in wells, basins and open vessels. The flexibility through different cable and rod versions offers the possibility to use VEGABAR 66 in a variety of applications.

Advantages
– High plant availability through maximum overload and vacuum resistance of the ceramic measuring cell
– Self-cleaning effect through front-flush design
– Low costs for maintenance through wear-free ceramic measuring cell

Technical data
Measuring cell: CERTEC®
Sensor diameter: 32 mm
Measuring range: 0 … +25 bar (0 … +2500 kPa)
Process fitting: thread from G1½, 1½ NPT
flanges from DN 40, 2”
Process temperature: -40 … +100 °C
Deviation of characteristics: 0.1 %
SIL qualification: up to SIL2

1 Version with suspension cable, threaded fitting unassembled G1½ and cable outlet / IP 68, ext. housing plastic / IP 66
2 Threaded version G1½, suspension cable
3 Threaded version G1½, connection tube
<table>
<thead>
<tr>
<th>Approval</th>
<th>XX without</th>
<th>UX FM(N)/CL I,II,III, DIV1, GP ABCDEFG</th>
<th>UF FM(S)/CL I,II,III, DIV 1, GP ABCDEFG</th>
<th>UG FM(XP)/CL I,II,III, DIV 1, GP ABCDEFG</th>
<th>KK CSA(N)/CL I,II,III, DIV1, GP ABCDEFG</th>
<th>KF CSA(S)/CL I,II,III, DIV1, GP ABCDEFG</th>
<th>KG CSA(XP)/CL I,II,III, DIV 1, GP ABCDEFG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version / Process temperature</td>
<td>E Suspension cable PE sensor diameter 32 mm / -20...60°C</td>
<td>F Suspension cable PUR sensor diameter 32 mm / -20...80°C</td>
<td>G Suspension cable FEP sensor diameter 32 mm/-20...100°C</td>
<td>H Connection tube 316L sensor diameter 32 mm/-20...100°C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Process fitting / Material</td>
<td>XX without</td>
<td>AA Straining clamp / 316L</td>
<td>NN Threaded fitting, unassembled 1½/NPT PN3 / 316L</td>
<td>GB Thread 1½/NPT (ASME B1.20.1) PN60 / 316L</td>
<td>FO Flange 2½150lb RF, ANSI B16.5/316L</td>
<td>EH Flange 2½300lb RF, ANSI B16.5/316L</td>
<td>FI Flange 3½150lb RF, ANSI B16.5/316L</td>
</tr>
<tr>
<td>Seal measuring cell</td>
<td>PE-plastic coating without</td>
<td>FFKM (Kalrez 6375)</td>
<td>EPDM (A+/P 75.5/KW75F)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pressure / Measuring range</td>
<td>A rel. / 0...10bar (0...1kPa)</td>
<td>D rel. / 0...10bar (0...10kPa)</td>
<td>E rel. / 0...2.5bar (0...25kPa)</td>
<td>F rel. / 0...5bar (0...50kPa)</td>
<td>G rel. / 0...10bar (0...100kPa)</td>
<td>H rel. / 0...25bar (0...250kPa)</td>
<td></td>
</tr>
<tr>
<td>1 abs. / 0...1bar (0...1kPa)</td>
<td>2 abs. / 0...2.5bar (0...250kPa)</td>
<td>3 abs. / 0...5bar (0...500kPa)</td>
<td>4 abs. / 0...10bar (0...1000kPa)</td>
<td>5 abs. / 0...25bar (0...2500kPa)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronics</td>
<td>H 4...20mA/HART®</td>
<td>P Profinbus PA</td>
<td>F Foundation Fieldbus</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cable entry / Plug connection</td>
<td>N %NPT / without</td>
<td>Indicating/adjustment module (PLICSCOM)</td>
<td>Additional equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>X without</td>
<td>A mounted</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total length
PE cable (400-250000 mm) per 100 mm
FEP cable (400-250000 mm) per 100 mm
PUR cable (400-250000 mm) per 100 mm
Tube 316L (250-6000 mm) per 100 mm
VEGABAR 67
Suspension pressure transmitter with METEC® measuring cell

Application area
The VEGABAR 67 is a suspension pressure transmitter for level measurement in wells, basins and open vessels. The VEGABAR 67 offers the possibility to detect also smallest measuring ranges from 0.1 bar. Measured products are liquids and viscous products with higher temperatures.

Advantages
– Maximum reliability even with quickly changing process temperatures
– High plant availability through vacuum-resistant version
– Very good cleanability and high chemical resistance through adapted materials

Technical data
Measuring cell: METEC®
Sensor diameter: 40 mm
Measuring range: 0 … +25 bar (0 … +2500 kPa)
Process fitting: thread from G1½, 1½ NPT flanges from DN 50, 2"
Process temperature: -12 … +100 °C
Deviation in characteristics: 0.1 %
SIL qualification: up to SIL2

1 Version with suspension cable, threaded fitting unassembled G1½ and cable outlet / IP 68, ext. housing plastic / IP 65
2 Threaded version G1½, suspension cable
3 Threaded version G1½, connection tube
### Approval
- **XX**: without 
- **XM**: Ship approval
- **UX**: FM(NI)CL I,II,III,IV,DIV1,GP ABCD (DIP)CL II,III,DIV1,GP EFG
- **UF**: FM(IS)CL I,II,III, DIV 1,GP ABCDEFG
- **UG**: FM(XP-IS) CL I,II,III, DIV 1, GP ABCDEFG
- **KX**: CSA(NI)CL I,II,III,IV,DIV1,GP ABCD(DIP)CL II,III,DIV1,GP EFG
- **KF**: CSA(IS)CL I,II,III, DIV 1, GP ABCDEFG
- **KG**: CSA(XP-IS) CL I,II,III, DIV 1, GP ABCDEFG

### Version / Process temperature
- B: Suspension cable FEP / -12...100°C
- D: Connection tube 316L / -12...100°C

### Process fitting / Material
- **XX**: without 
- **AA**: Straining clamp / 316L 
- **NN**: Threaded fitting, unassembled 1½NPT PN3 / 316L 
- **GB**: Thread 1½NPT (ASME B1.20.1) PN60 / 316L 
- **FO**: Flange 2½150lb RF ANSI B16.5/316L 
- **EH**: Flange 3½300lb RF ANSI B16.5/316L 
- **FI**: Flange 4½150lb RF ANSI B16.5/316L 
- **EC**: Flange 4½300lb RF ANSI B16.5/316L 
- **EB**: Flange 4½300lb RF ANSI B16.5/316L

### Pressure / Measuring range
- A: rel. / 0...0.1bar (0...10kPa) 
- B: rel. / 0...0.2bar (0...20kPa) 
- C: rel. / 0...0.4bar (0...40kPa) 
- D: rel. / 0...1bar (0...100kPa) 
- E: rel. / 0...2.5bar (0...250kPa) 
- F: rel. / 0...5bar (0...500kPa) 
- G: rel. / 0...10bar (0...1000kPa) 
- H: rel. / 0...25bar (0...2500kPa) 
- 1: abs. / 0...1bar (0...100kPa) 
- 2: abs. / 0...2.5bar (0...250kPa) 
- 3: abs. / 0...5bar (0...500kPa) 
- 4: abs. / 0...10bar (0...1000kPa) 
- 5: abs. / 0...25bar (0...2500kPa)

### Electronics
- H: 4...20mA/HART® 
- P: Profibus PA 
- F: Foundation Fieldbus

### Housing / Protection
- K: Plastic / IP66/IP67 
- A: Aluminium / IP66/IP67 
- D: Aluminium double chamber / IP66/IP67 
- 8: StSt (electropolished) 316L / IP66/IP67 
- R: Plastic 2-chamber / IP66/IP67

### Cable entry / Plug connection
- N: %NPT / without 
- Indicating/adjustment module (PLICSCOM)
- X: without 
- A: mounted 

### Additional equipment
- X: without

### Total length
- FEP cable (400-180000 mm) per 100 mm
- Tube 316L (250-6000 mm) per 100 mm
VEGAWELL 52

Suspension pressure transmitter with CERTEC® measuring cell

Application area
The VEGAWELL 52 is suitable for continuous level measurement of liquids. Typical applications are measurements in water/waste water, deep wells and in the shipbuilding industry.

Advantages
- High reliability through maximum overload and vacuum resistance of the ceramic measuring cell
- High plant availability through integrated overvoltage protection
- Versatile use through robust housing and cable design

Technical data
Measuring cell: CERTEC®
Sensor diameter: from 22 mm
Measuring range: 0 ... +60 bar (0 ... +6000 kPa)
Process temperature: -20 ... +80 °C
Deviation in characteristics: 0.2 %; 0.1 %
<table>
<thead>
<tr>
<th>Approval</th>
</tr>
</thead>
<tbody>
<tr>
<td>XX</td>
</tr>
<tr>
<td>XM</td>
</tr>
<tr>
<td>UX</td>
</tr>
<tr>
<td>UA</td>
</tr>
<tr>
<td>UF</td>
</tr>
<tr>
<td>UB</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fastening / Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>X4</td>
</tr>
<tr>
<td>A4</td>
</tr>
<tr>
<td>GB</td>
</tr>
<tr>
<td>GN</td>
</tr>
<tr>
<td>NK</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Version / Process temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>B</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
</tr>
<tr>
<td>E</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>T</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmitter material / Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
</tr>
<tr>
<td>K</td>
</tr>
<tr>
<td>P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Seal measuring cell</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
</tr>
<tr>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measuring range</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
</tr>
<tr>
<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
<tr>
<td>E</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Electronics</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
</tr>
<tr>
<td>D</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Deviation in characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmitter option</th>
</tr>
</thead>
<tbody>
<tr>
<td>V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total length</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE (400-550000 mm) per 100 mm</td>
</tr>
<tr>
<td>FEP (400-5550000 mm) per 100 mm</td>
</tr>
<tr>
<td>PUR (400-5550000 mm) per 100 mm</td>
</tr>
</tbody>
</table>
VEGABOX 02

Breather housing with ventilation filter

Application area
The VEGABOX 02 is used for electrical connection and ventilation of suspension pressure transmitters such as for example, the VEGAWELL 52. An optional transmitter module enables the conversion of the PT 100 signals into a 4...20 mA HART signal.

Advantages
- Use in arduous environment through high resistance plastic housing
- High plant availability through filtering of the ambient air
- Manifold mounting options through wall or C-rail mounting

Technical data
Protection: IP 66

Approval
XX without ............................................................
XM Ship approval ....................................................

Function
A Pressure compensation ...........................................
C Pressure compensation and temp. transmitter 4...20mA/HART ............................................

Protective cover
X without ...................................................................
W with .....................................................................

Designation label (measurement loop)
X without ............................................................... 
V of stainless steel, LASER marking ................................

BOX02

Technical data
Protection: IP 66

Application area
The VEGABOX 02 is used for electrical connection and ventilation of suspension pressure transmitters such as for example, the VEGAWELL 52. An optional transmitter module enables the conversion of the PT 100 signals into a 4...20 mA HART signal.

Advantages
- Use in arduous environment through high resistance plastic housing
- High plant availability through filtering of the ambient air
- Manifold mounting options through wall or C-rail mounting

Approval
XX without ............................................................
XM Ship approval ....................................................

Function
A Pressure compensation ...........................................
C Pressure compensation and temp. transmitter 4...20mA/HART ............................................

Protective cover
X without ...................................................................
W with .....................................................................

Designation label (measurement loop)
X without ............................................................... 
V of stainless steel, LASER marking ................................
Closing screw VEGAWELL 51/72/VEGABAR 66,67

**Version / Material**
- **GD** Screw connection 1NPT (ASME B1.20.1) PN3 / 316L ..........................................................
- **GB** Screw connection 1½NPT (ASME B1.20.1) PN3 / 316L ..........................................................

WLVSCHR.