

#### Reliable

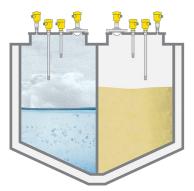
Precise measurement regardless of the medium

## Cost effective

Multi-sensor flange reduces costs in planning and commissioning

### **User friendly**

Simple installation of the radar, pressure and high level alarm sensors in one multi-sensor flange



# Cargo tank

# Measurement of level, point level and pressure in the cargo tanks on board

The levels in storage tanks, especially those on board chemical tankers must be continuously measured. This is especially important to monitor during loading and unloading operations, because of strict safety and environmental requirements. Any overfilling or product discharge on deck or into the sea could have devastating consequences for human life as well as the wider environment. Also, to prevent damage to the tanks caused via external temperature fluctuations, or overpressure and underpressure created by charging and discharging procedures, the internal tank pressures require continuous monitoring.

### More details



# **VEGAPULS 6X**

Radar sensor for continuous level measurement in cargo tanks

- Independent of medium properties, temperature, pressure or gas overlay
- PTFE-protected, front-flush antenna: optimal chemical resistance even in aggressive media
- Measurement all the way to the tank bottom, also in media with low dielectric constant
- Strong focusing of the radar beam allows accurate measurement even in tanks with heating coils

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### **VEGABAR 82**

Pressure transmitter for monitoring gas pressure in the cargo tank

- Precise measurement of the internal tank pressure by capacitive CERTEC® ceramic measuring cell
- Capacitive ceramic CERTEC® measuring cell offers excellent chemical resistance even in aggressive media

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# **VEGASWING 63**

Vibrating level switch for high alarm (95 %) and high-high alarm (98 %)

- Robust sensor in alloy or stainless steel, resistant to aggressive media
- Test key on instrument allows fast and secure verification of function
  Exact switch point even with changing media optimises tank capacity
  - Exact switch point even with changing media optimises tank

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| PRO  | PRO  | PRO   |
|--|--|---|
| VEGAPULS 6X<br>Show Product  | VEGABAR 82<br>Show Product   | VEGASWING 63<br>Show Product  |
|  |  |   |
| Measuring range - Distance<br>120 m  | Measuring range - Distance<br>-  | Process temperature<br>-50 250 °C   |
| Process temperature<br>-196 450 °C   | Measuring range - Pressure<br>-1 100 bar   | Process pressure<br>-1 64 bar   |
| Process pressure<br>-1 160 bar   | Process temperature<br>-40 150 °C  | Version<br>Standard<br>Hygienic applications  |
| Accuracy<br>± 1 mm   | Process pressure<br>-1 100 bar   | with gas-tight leadthrough<br>with tube extension<br>with temperature adapter   |
| Frequency<br>6 GHz<br>26 GHz   | Accuracy<br>0.05 %   | Materials, wetted parts PFA   |
| 80 GHz<br>Beam angle<br>≥ 3°   | Materials, wetted parts<br>PVDF<br>316L<br>Alloy C22 (2.4602)  | 316L<br>Alloy C22 (2.4602)<br>Alloy 400 (2.4360)<br>ECTFE   |
| Materials, wetted parts PTFE   | PP<br>1.4057   | Enamel  |
| PVDF<br>316L<br>PP   | 1.4410<br>Alloy C276 (2.4819)<br>Duplex (1.4462)<br>Titanium Grade 2 (3.7035)  | Threaded connection         ≥ G¾, ≥ ¼ NPT         Flange connection   |
| PEEK Threaded connection   | Threaded connection<br>≥ G½, ≥ ½ NPT   | - ≥ DN25, ≥ 1"<br>Hygenic fittings  |
| ≥ G¾, ≥¾ NPT<br>Flange connection  | Flange connection<br>$\geq DN15, \geq \frac{1}{2}$ "   | - Clamp ≥ 1" - DIN32676, ISO2852<br>Slotted nut ≥ 1½", ≥ DN40 - DIN 11851<br>Varivent ≥ DN25  |
| ≥ DN20, ≥ ¾" Hygenic fittings Clamp ≥ 1½" - DIN32676, ISO2852 Slotted nut ≥ 2", DN50 - DIN 11851 Varivent ≥ DN25 hygienic fitting with tension flange DN32 | Hygenic fittings<br>Clamp ≥ 1" - DIN32676, ISO2852<br>Slotted nut ≥ DN25 - DIN 11851<br>hygienic fitting with tension flange DN32<br>hygienic fitting F40 with compression nut<br>DRD connection $\emptyset$ 65 mm | hygienic fitting F40 with compression nut<br>SMS 1145 DN51<br>SMS DN38<br>Hygienic fittings ≥ DN25 - DIN11864-1-A<br>Hygienic flange connection DIN11864-2-A;<br>DN60(ISO)ø60,3 |
| hygienic fitting F40 with compression nut<br>Hygienic screw connections ≥ DN50 tube ø53 -<br>DIN11864-1-A<br>Hygienice flange connection ≥ DN50 DIN11864-2 | SMS 1145 DN51<br>SMS DN38<br>Swagelok VCR screwing<br>Varivent G125  | SMS socket piece DN38 PN6  Seal material no media contact   |
| Hygienic clamp connection ≥ DN50 pipe Ø53 - DIN11864-<br>3-A<br>DRD connection Ø 65 mm   | Varivent N50-40<br>for NEUMO BioControl D50 PN16 / 316L  | Housing material<br>Plastic<br>Aluminium  |
| SMS 1145 DN51  | Seal material<br>EPDM<br>FKM   | Stainless steel (precision casting)<br>Stainless steel (electropolished)  |
|  | FFKM   | Protection rating<br>IP66/IP67  |

Protection rating IP66/IP67 IP66/IP68 (1 bar) IP65

