



#### Reliable

Highly overload-resistant measuring systems

#### Cost effective

Accurate level measurement for optimal utilization of the container volumes

#### User friendly

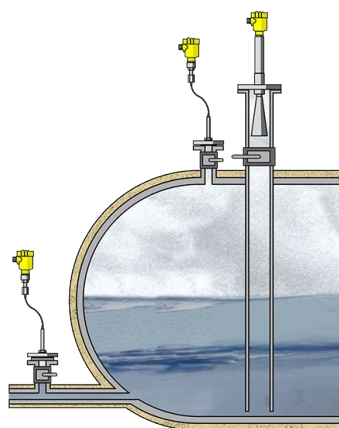
Easy instrument selection: one sensor version fits all tank sizes

## Expansion tank in a thermal solar plant

### Level and pressure measurement of heat transfer fluid (HTF) in expansion tanks

The solar heat captured in the mirror system of a thermal solar plant is transported via a heat transfer fluid (HTF) to the steam generator at the central turbine. The HTF normally has a temperature between 300 °C and 400 °C. There are different containers for the fluid across the plant and the varying temperatures cause volume changes to the HTF that need to be accurately measured to operate the plant safely and profitably.

[More details](#)



#### VEGAPULS 6X

Non-contact level measurement with radar in the expansion vessel for heat transfer fluid

- Reliable function, even at high temperatures
- High-resistance materials guarantee long service life
- Wear-free operation ensured through non-contact measuring method

[Show Product](#)



#### VEGABAR 81

Pressure measurement in the thermal solar plant pipeline systems

- Highly resistant to overloading due to pressure surges
- Long service life thanks to seal-free measuring cells
- Wear and maintenance-free due to high-resistance diaphragm materials

[Show Product](#)

| PRO                                                                                                              | PRO                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div>VEGAPULS 6X</div> <div>Show Product</div>                                                                   | <div>VEGABAR 81</div> <div>Show Product</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                               |
|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                               |
| <div>Measuring range - Distance</div> <div>120 m</div>                                                           | <div>Measuring range - Distance</div> <div>-</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                               |
| <div>Process temperature</div> <div>-196 ... 450 °C</div>                                                        | <div>Measuring range - Pressure</div> <div>-1 ... 1000 bar</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                               |
| <div>Process pressure</div> <div>-1 ... 160 bar</div>                                                            | <div>Process temperature</div> <div>-90 ... 400 °C</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                               |
| <div>Accuracy</div> <div>± 1 mm</div>                                                                            | <div>Process pressure</div> <div>-1 ... 1000 bar</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                               |
| <div>Frequency</div> <div>6 GHz</div> <div>26 GHz</div> <div>80 GHz</div>                                        | <div>Accuracy</div> <div>0.2 %</div> <div>0.1 %</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                               |
| <div>Beam angle</div> <div>≥ 3°</div>                                                                            | <div>Materials, wetted parts</div> <div>Alloy C22 (2.4602)</div> <div>Alloy 400 (2.4360)</div> <div>Tantalum</div> <div>Alloy C276 (2.4819)</div> <div>Duplex (1.4462)</div> <div>Titanium Grade 2 (3.7035)</div> <div>1.4435</div> <div>316/316L</div> <div>Titanium Grade 7 (3.7235)</div>                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                               |
| <div>Materials, wetted parts</div> <div>PTFE</div> <div>PVDF</div> <div>316L</div> <div>PP</div> <div>PEEK</div> | <div>Threaded connection</div> <div>≥ G¾, ≥ ¾ NPT</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                               |
| <div>Threaded connection</div> <div>≥ G¾, ≥ ¾ NPT</div>                                                          | <div>Flange connection</div> <div>≥ DN25, ≥ 1"</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                               |
| <div>Flange connection</div> <div>≥ DN20, ≥ ¾"</div>                                                             | <div>Hygienic fittings</div> <div>Clamp ≥ 1½" - DIN32676, ISO2852</div> <div>Slotted nut ≥ 2", DN50 - DIN 11851</div> <div>Varivent ≥ DN25</div> <div>hygienic fitting with tension flange DN32</div> <div>hygienic fitting F40 with compression nut</div> <div>Hygienic screw connections ≥ DN50 tube ø53 - DIN11864-1-A</div> <div>Hygienice flange connection ≥ DN50 DIN11864-2</div> <div>Hygienic clamp connection ≥ DN50 pipe Ø53 - DIN11864-3-A</div> <div>DRD connection ø 65 mm</div> <div>SMS 1145 DN51</div> | <div>Hygienic fittings</div> <div>Clamp ≥ 1" - DIN32676, ISO2852</div> <div>Slotted nut ≥ 1½", ≥ DN40 - DIN 11851</div> <div>hygienic fitting with tension flange DN32</div> <div>hygienic fitting F40 with compression nut</div> <div>Hygienice flange connection ≥ DN50 DIN11864-2</div> <div>Hygienic fittings ≥ DN40 - DIN11864-1-A</div> |
|                                                                                                                  | <div>Seal material</div> <div>no media contact</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                               |