

New compact radar level instruments defy buildup to deliver reliable measurement

In many level measurement applications, sensors constantly struggle with buildup. For example, when using ultrasonic sensors, buildup influences the reliability of the measuring signal and increases the dead zone, also called the 'dead zone'. The situation is quite different with radar technology. Because of their optimized signal processing, radar sensors can suppress interference caused by buildup on the antenna system. Radar sensors are not sensitive to dirt and contamination, so they don't require cleaning. For this reason, VEGA has now extended the [proven VEGAPULS level sensors](#) with a new radar series for continuous level measurement. This new product range is based on 80 GHz technology and, in terms of price and performance, represents a real alternative to ultrasonic technology. That means these new VEGAPULS sensors deliver very reliable and precise measured values due to their ability to ignore environmental influences.

Unaffected by dirt, dust and condensation

In the [wastewater industry](#) for example, level measurement of lime in silos, which is used to stabilize the pH value, is an ideal area of application for the new instrument series. The radar sensors measure reliably irrespective of the intense dust generation during filling. Buildup and deposits on the container wall or on the sensor itself are also no problem thanks to the strong signal focusing.



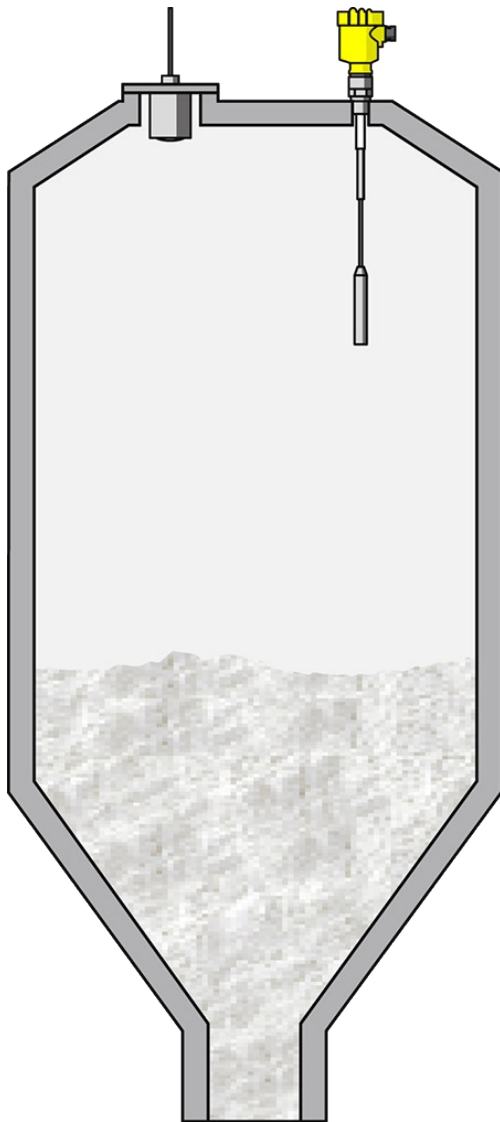
VEGAPULS with on-site indication.

Related applications

Level measurement and high level detection in the lime silo

In the nitrogen and phosphorus removal stage, lime is used to stabilize the pH value. Stored in silos, the lime is added to the wastewater as a solid or as an aqueous suspension. The silo content is measured by a radar sensor and a point level sensor detects the maximum level and transmits a full signal.

Measuring task



Level measurement and point level detection

Measuring point
Silo

Measuring range up to
0 ... 8 m

Medium
Lime

Process temperature
0 ... +30 °C

Process pressure
1 ... 3 bar

Special challenges
Abrasion, caked deposits, silo internals

Reliable

Certain measurement even during filling

Cost effective

Reliable measurement of the total material volume in the silo

User friendly

Simple installation and setup

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Another place of application is in sewage treatment plants, e.g. in [mechanical pre-cleaning](#), where floating materials are removed with screens or sieves. The difference measurement of the water level in front of and behind the screen is used to determine the degree of contamination and control the cleaning of the screen. Even in direct sunlight or heavy rain, the new radar sensors deliver accurate performance.

Very simple setup and commissioning thanks to wireless operation

With their compact dimensions, the new devices lend themselves to quick and easy installation, too. Of course, these specifications also apply to the general handling of the sensors and their parameterisation. Thanks to the proven [VEGA Tools app](#), any user can set up and operate the instruments via Bluetooth - quickly, wirelessly and from a safe distance. Reliable and accurate level readings are available after just a few simple steps. The remote operation makes setup, display and diagnostics considerably easier, especially in harsh environments or Ex areas. Along with higher accuracy and reliability, these are important additional reasons for choosing radar technology on standard measuring tasks.

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