



# Radar

Overview	14
VEGAPULS series 60	18



## VEGAPULS

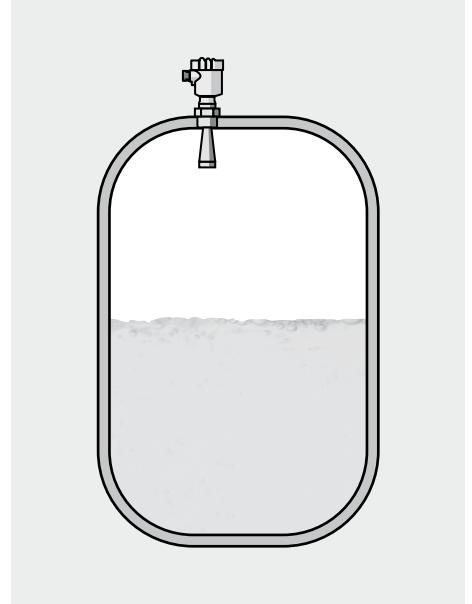
### Non-contact measurement under arduous process conditions

#### Measuring principle

Extremely short microwave impulses are emitted by the antenna system to the measured product, reflected by the product surface and received again by the antenna system. They spread with light velocity and the time from emission to reception of the signals is proportional to the level in the vessel. A special time spreading procedure enables the reliable and precise measurement of the extremely short times. The radar sensors work with low emitted power in the C and K-band frequency range. The proven ECHOFOX signal processing selects the correct level echo reliably from a number of false reflections. An adjustment with empty and full vessel is not necessary.

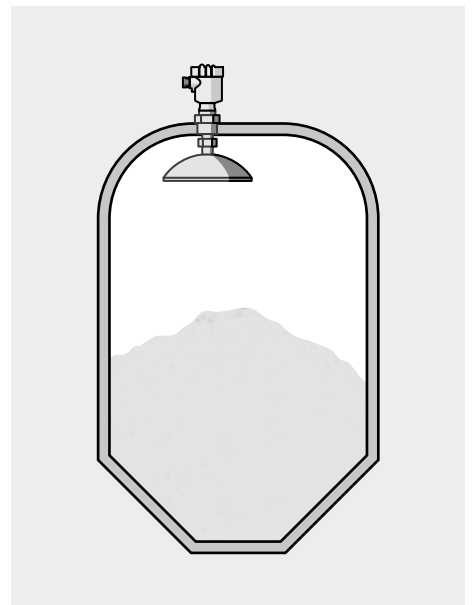
#### Applications in liquids

Two different emitting frequencies are available for these applications. The compact, high frequency K-band sensors VEGAPULS 61, 62 and 63 are particularly suitable for applications for which high accuracy is required. Even with small antenna sizes, an excellent signal focusing is reached. The low frequency C-band sensors VEGAPULS 65 and 66 can penetrate foam and strong condensation and are thus particularly suitable for arduous process conditions. Unaffected by steam, gas composition, pressure and temperature changes the sensors detect the product surface of different products reliably.



#### Applications in bulk solids

The high frequency sensors VEGAPULS 67 and 68 in K-band technology are used for these applications. Thanks to the very good focusing of the signals, the influences of silo installations or buildup on the vessel wall are gated out. A high sensitivity electronics adapted to the requirements of the bulk solids measurement, enables a reliable level measurement of different products up to 75 m. The measuring principle is unaffected by strong dust generation, filling noise, air turbulence by pneumatic filling and temperature fluctuations. The application area covers applications in the food processing industry and the plastic processing up to the steel generation and mineral rock processing.





## Overview – Radar sensors for liquids



**VEGAPULS WL 61**

<b>Application</b>	Liquids, mainly in the water and sewage management
<b>Measuring range</b>	up to 15 m
<b>Process fitting</b>	Mounting strap, thread G1½ A, flange
<b>Process temperature</b>	-40 ... +80 °C
<b>Process pressure</b>	-1 ... +2 bar (-100 ... +200 kPa)
<b>Accuracy</b>	+/- 2 mm



**VEGAPULS 61**

<b>Application</b>	Aggressive liquids in vessels under easy process conditions
<b>Measuring range</b>	up to 35 m
<b>Process fitting</b>	Thread G1½ A, mounting strap, flange
<b>Process temperature</b>	-40 ... +80 °C
<b>Process pressure</b>	-1 ... +3 bar (-100 ... +300 kPa)
<b>Accuracy</b>	+/- 2 mm



**VEGAPULS 62**

<b>Application</b>	Storage tanks and process vessels under arduous process conditions
<b>Measuring range</b>	up to 35 m
<b>Process fitting</b>	Thread, flange
<b>Process temperature</b>	-200 ... +450 °C
<b>Process pressure</b>	-1 ... +160 bar (-100 ... +16000 kPa)
<b>Accuracy</b>	+/- 2 mm



**VEGAPULS 63**

<b>Application</b>	Aggressive liquids under arduous process conditions
<b>Measuring range</b>	up to 35 m
<b>Process fitting</b>	Flange, hygienic fitting
<b>Process temperature</b>	-200 ... +200 °C
<b>Process pressure</b>	-1 ... +16 bar (-100 ... +1600 kPa)
<b>Accuracy</b>	+/- 2 mm



**VEGAPULS 65**

<b>Application</b>	Aggressive liquids under easy process conditions
<b>Measuring range</b>	up to 35 m
<b>Process fitting</b>	Thread G1½ A, flange
<b>Process temperature</b>	-40 ... +150 °C
<b>Process pressure</b>	-1 ... +16 bar (-100 ... +1600 kPa)
<b>Accuracy</b>	+/- 8 mm



**VEGAPULS 66**

<b>Application</b>	Storage tanks and process vessels under arduous process conditions
<b>Measuring range</b>	up to 35 m
<b>Process fitting</b>	Flange
<b>Process temperature</b>	-60 ... +400 °C
<b>Process pressure</b>	-1 ... +160 bar (-100 ... +16000 kPa)
<b>Accuracy</b>	+/- 8 mm



## Overview – Radar sensors for bulk solids



**VEGAPULS 67**

**VEGAPULS SR 68**

**VEGAPULS 68**

**Application**

Bulk solids

Bulk solids

Bulk solids under arduous process conditions

**Measuring range**

up to 15 m

up to 30 m

up to 75 m

**Process fitting**

Mounting strap, flange

Thread G1½ A, flange

Thread G1½ A, flange

**Process temperature**

-40 ... +80 °C

-40 ... +250 °C

-200 ... +450 °C

**Process pressure**

-1 ... +2 bar  
(-100 ... +200 kPa)

-1 ... +100 bar  
(-100 ... +10000 kPa)

-1 ... +160 bar  
(-100 ... +16000 kPa)

**Accuracy**

+/- 2 mm

+/- 2 mm

+/- 2 mm



Thank you for reading this data sheet.

For pricing or for further information, please contact us at our UK Office, using the details below.



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