



Level



Pressure



Flow



Temperature



Liquid  
Analysis



Registration



Systems  
Components



Services



Solutions

# FMU90 and FDU92 Sensor Provide Level Control in Aeration Basins- Wastewater

## Prosonic S ultrasonics monitoring level in aeration basins protects against overflow



Wastewater plant



FDU91 ultrasonic sensor with FMU90 transmitter



Aeration basin with FDU91 sensor

**The Prosonic S FMU90 and FDU91 ultrasonic system is used for automatic level control in aeration basins.**

### Company profile

Sewage treatment plants in Denmark.

This large wastewater treatment plant uses all kinds of instrumentation from different suppliers. Endress+Hauser has proven to be a reliable partner and is an important supplier due to the high quality and reliability of instruments.

### Application

After filtration, the sewage water is pumped to large basins where the water is aerated. To control the level, the customer initially used a competitive product, but the instrument was not suitable for mounting in the harsh environment.

### Results

Endress+Hauser offered a test unit and installed the Prosonic S FMU90 transmitter with an FDU91 ultrasonic sensor. The output signal controls the level by controlling a valve. After the test, 3 systems were purchased. The customer is very pleased with the ultrasonic system from Endress+Hauser, and has not experienced any problems.

### Instrument description

The compact Prosonic FMU90 with the FDU91 sensor is used for continuous, non-contact level measurement in fluids and coarse bulk materials. Additionally, the sensors can be used for flow measurement in open channels and measuring weirs.

In ultrasonic level measurement the operating principle is based on the measurement of the travel time of a sound signal transmitted from and received by the same sensor after reflection from the liquid or solids surface. The travel time of a sound pulse is a direct measure of the height of the material in a silo or tank. The distance in air traveled by the pulse in feet is equal to the travel time in seconds multiplied by the speed of sound in feet per second.

Signal process techniques, including temperature compensation and rejection of false echoes returned by tank obstructions, are used to maintain the integrity of the level information.

For more information, contact  
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FDU91 sensor mounted over basin

ISO 9001:2000 Certified

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