



# Ultrasonic Level Controller is answer for superior bar screen level monitoring

## Situation

Bar screens are typically located at the entrance of the water treatment section of many industrial plants, including power generation plants. They are used to remove large objects such as rags, plastics bottles, bricks, and other solids from the water stream entering the plant. Bar screens help prevent damage to valves, pumps, and other accessories.

## Challenge

A power plant that has both coal-fired and nuclear power generation units was using bubbler level measurement systems to monitor the tide level of their influent bar screens. The reliability of their bubbler level systems was a major issue because they were maintenance-intensive. In addition, the customer had to maintain a large inventory of spare parts because a bubbler level system required numerous components.

## Solution

After a visit from the local Siemens representative, the plant manager decided to try an alternate technology that was reliable and required less

maintenance. He found an alternative in the Siemens HydroRanger 200 ultrasonic level system.

A HydroRanger 200 system is made up of two components: a controller and an ultrasonic transducer. The transducer is mounted above the water, and the controller can be mounted up to 1200 feet away in a protected cabinet that is safely accessible.

With the Siemens solution, the customer had to stock only two components. This freed up inventory capital and shelf space. The Siemens HydroRanger system has no moving parts, so it requires very little, if any, maintenance. No calibrations are required since the unit is electronic.

This ultrasonic technology does not come into contact with the water, which was appealing to the customer.

The HydroRanger 200 configuration parameters can be uploaded to a laptop using Siemens SIMATIC PDM software. If an "in service" unit needs to be replaced, a new unit can be pulled off the shelf and cloned. This saves the customer from having to re-enter the parameters.

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## Benefits

- Non-contacting – The transducer is immune to problems caused by suspended solids, harsh corrosives, grease, or silt in the influent, all of which effect the reliability of a contacting measurement technology.
- Simple setup – It's easy to install and program with the handheld infrared programmer or via SIMATIC PDM.
- Sonic Intelligence® – Our field-proven echo processing algorithms guarantee the most reliable performance available.
- Unmatched beam angle – A strong pulse and sensitivity in a compact beam make our ultrasonic transducers the most reliable in the industry.
- Million-in-one – Our products have the field experience of over a million points of level built into every device.
- Global network – sales and support in your neighborhood. Our extensive global coverage means you get sales and support when and where you need it.

## About the HydroRanger Controller

HydroRanger 200 is an ultrasonic level controller for up to six pumps that provide control, differential control, and open channel flow monitoring.

For water authorities, municipal and industrial water and wastewater plants, the HydroRanger 200 level controller is an economical, low-maintenance solution delivering the control efficiency and productivity needed to meet today's exacting standards. It offers single-point monitoring with all models, and optional dual-point monitoring with the 6 relay model. It has digital communications with built-in Modbus RTU via RS-485.

Siemens Industry, Inc.  
Industry Automation  
3333 Old Milton Parkway  
Alpharetta, GA 30005

1-800-964-4114  
info.us@siemens.com

[www.usa.siemens.com/pi](http://www.usa.siemens.com/pi)

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