

Multiparameter Measurement

How to measure multiple parameters in water with zero water loss

With increasing water scarceness worldwide, the need for reliable instrumentation combined with low or no water consumption is continuously rising. Additionally, water works are interested in optimizing their operational expenses, such as the reduction of energy or maintenance costs. How is it feasible to continuously surveil multiple parameters in an effective way to ensure a high quality of drinking water?



The AquaGuard PR 30 with Sicon M

The Solution

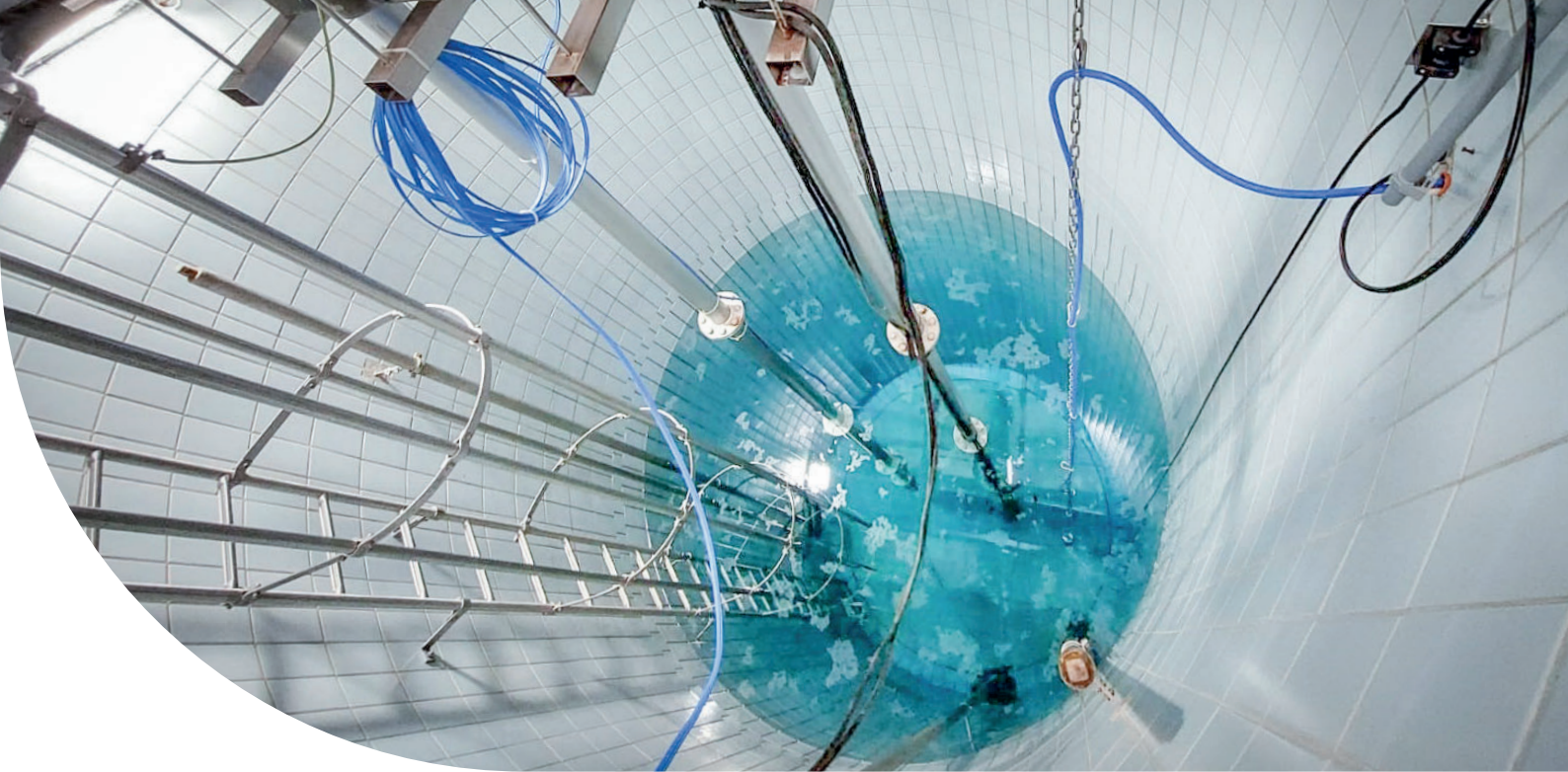
The AquaGuard PR 30 was developed as a reliable multiparameter measurement system with zero water loss as it is for the usage directly in the water. The AquaGuard PR 30 measures:

- Turbidity according to ISO7027
- pH
- Redox
- Electrical conductivity
- Dissolved Oxygen
- Temperature

With this instrument, Sigrist is expanding its portfolio in the drinking water industry and addressing the fact of water scarceness. With up to five measurable parameters a broad span of quality points can be covered or derived from it. A measurement of turbidity, conductivity, dissolved Oxygen, and temperature for example can provide some qualitative information on microbiological activities in water.

Customer Benefits

- Direct measurement in water catchment area without expensive or complex installation => results in a reduction of operational costs for energy-consumption, maintenance, and installations
- Reliable measurement already at a water level



The AquaGuard PR 30 measures water quality parameters in the drinking water treatment plant in Laax, Canton Graubünden, Switzerland.

- of 0.1 m => Employable even in very dry regions or seasons
- High precision measurements for compliance with current drinking water directives (EU 2020/2184, TBDV 817.022.11)
- Flexible installation according to specific customer needs with possibility of upgrade => Adaptable to water depths of 50 m and combination of measurement tasks

Typical Application

Groundwater catchments can be as low as 30 m below ground. This requires expensive and high-maintenance installations (pumps, additional lines) to provide water to analytical equipment. Here, the AquaGuard PR 30 is the ideal device as it comes with a cable length of 10 m or 20 m, or according to the waterwork's need.

Further Measuring Tasks (Examples)

So far, Sigrist has been focusing on measuring water quality parameters in drinking water catchments. However, the AquaGuard PR 30 can also be used in other applications such as:

- Environmental monitoring in lakes, rivers, or other surface water biospheres
- Monitoring of possibly hazardous areas close to industrial sites or highways.
- Temporary monitoring of water quality on construction sites

Technical Data

Turbidity:	0 ... 4000 FNU (Resolution: 0.001 FNU)
pH:	0 ... 14
Redox:	-1500 mV ... 1500 mV
Conductivity:	1 ... 300'000 μ S/cm
Dissolved Oxygen:	0.004 ... 25 ppm
Temperature:	0 ... 130°C
Sample conditions:	0 ... 50°C, max. 0.5 MPa