

Reliable quality measurement with savings effect

Water treatment usually consists of several processes, some of which are costly. Raw water is purified in order to provide consumers with clean and safe drinking water. Water suppliers sometimes have to accept high operating costs in order to achieve the desired drinking water quality. At the same time, consumers want to pay the lowest possible price for water. Suppliers can therefore only control their process costs through optimized treatment.

In the following example, we show how our solutions lead to efficient water treatment while maintaining the necessary quality.

The Solution

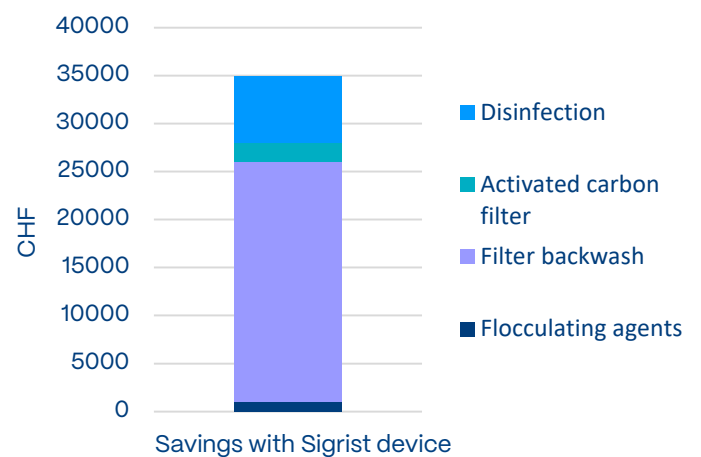
Sigrist offers quality and process control for each process step in water treatment using the appropriate photometers. Based on a typical surface water treatment plant, this consists of seven steps:

1. Raw water catchment
2. Addition of flocculant and sedimentation
3. Rapid filtration
4. Membrane filtration
5. Activated carbon filtration after treatment with ozone
6. Disinfection
7. Reservoir and network feed

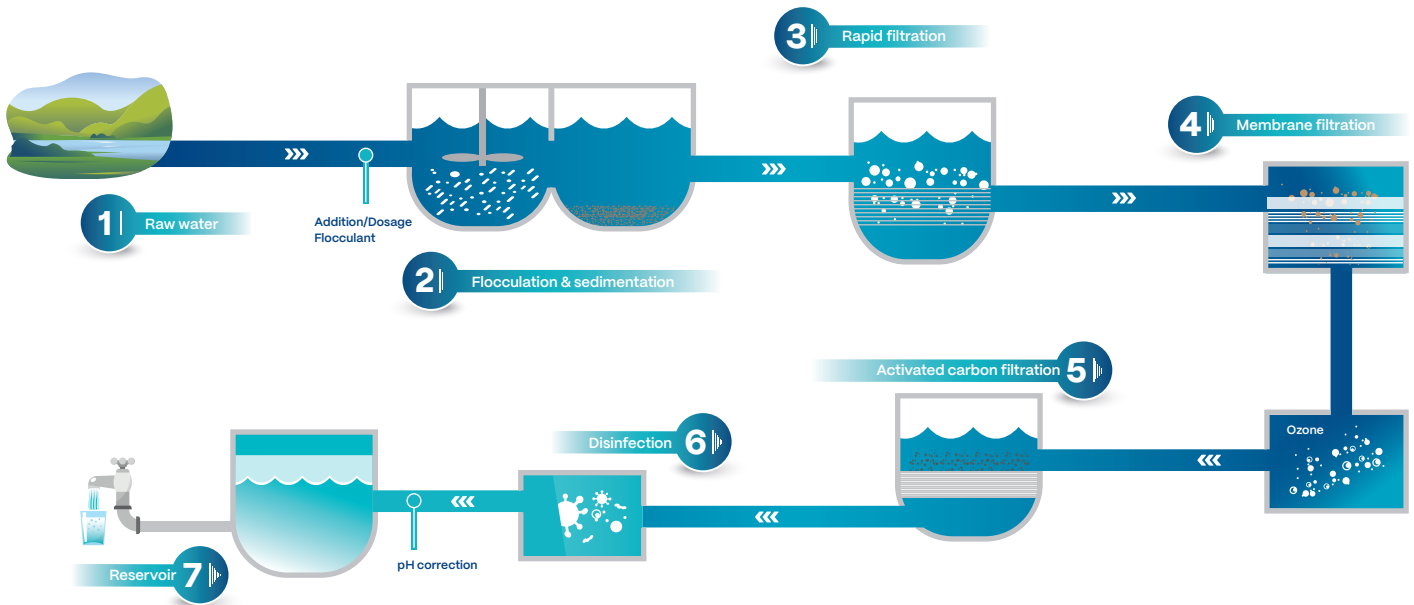
Typical Application

A medium sized waterwork pumps 1 million m³ of water per year. The price of drinking water is 1.5 CHF/m³. The suppliers do not operate on a profit-oriented basis, but on a cost-covering basis.

The Customer Benefit



- Controlled flocculant dosing using turbidity measurement can save a waterworks almost CHF 1000 per year.
- Monitoring the filters with turbidity and flow rate (or alternatively pressure drop) can save CHF 25'000 per year. The filters are only flushed as required, which reduces water and energy costs.
- Regenerating an activated carbon filter is very energy-intensive. The activated carbon is cleaned in a multi-stage process. Temperatures of up to 800°C are required. The filter service life can be optimized by measuring SAK 254 after filtration.



Scheme of the seven process treatment steps in a water treatment plant.

It is estimated that annual costs of CHF 2000 can be saved.

- During the disinfection step – especially when using UV light – the control of the input turbidity ensures that cleaning intervals are extended. This can save several thousand CHF per year because the service life of the lamps is extended.
- Overall, the operating costs of the waterworks are reduced by at least CHF 35'000 per year!

Technical Details

What makes our devices stand out:

- High accuracy; also enables control of critical process steps with the smallest change in measured value.
- We do not offer a measuring device, but a measuring solution!
- The standard version already includes 2x analog signal outputs, various digital signal outputs and Modbus TCP communication. This enables the customer to design a variety of flexible solutions.
- The low power consumption of our devices combined with the low maintenance requirements reduce the operating costs for operators to a minimum.

The right product for every process step:

AquaMaster

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AquaScat 2 WTM A

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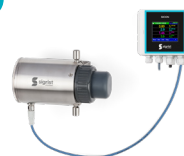
AquaScat S

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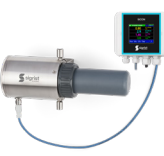
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ColorPlus 3 SAK 254

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OilGuard 2 W (A)

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AquaGuard PR 30

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