

Disinfection

Food &  
BeveragesRheinfelden,  
Switzerland

# Water Disinfection at Feldschlösschen Brewery in Switzerland

## The Challenge

Founded in 1876, Feldschlösschen is Switzerland's leading brewery with 1,300 employees and over 50 products, including beer, juice, and bottled water. Its annual production rate stands at 340 million liters a year. Feldschlösschen is part of the Carlsberg group. Among the company's facilities is a state-of-the-art plant in Rheinfelden, close to Basel.

The Rheinfelden plant suffered from intermittent microbial contamination downstream of the municipal water storage tank at the plant water entry point, impacting the entire facility's water supply.

The decision to disinfect water was prompted by fluctuations in the quality of the incoming water, with recorded levels reaching up to 800 CFU/ml per analyzed sample. While the water met the allowable range under European drinking water regulations, the brewery did not consider it acceptable quality.

The brewery was looking for a high-performance, reliable solution, to ensure complete disinfection of all water used in production, particularly for CIP and push water, while minimizing occurrences of high microbial counts.

## The Solution

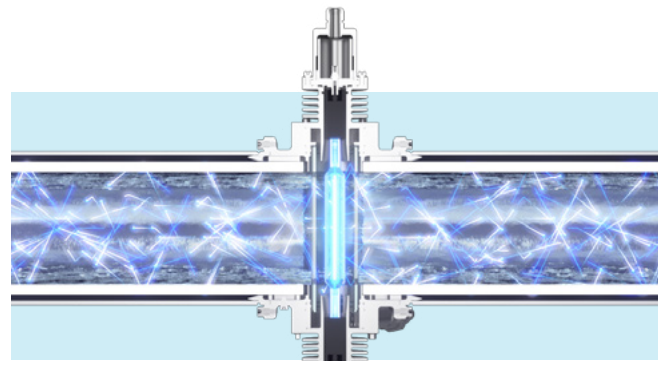
The RZ series HOD™ (Hydro-Optic Disinfection) UV system was installed at the water tank outlet to guarantee microbial integrity of the push water, CIP water, and process water at all points of use. With a nominal capacity of 65 m<sup>3</sup>/hr and 98.5% UVT (UV Transmittance), the system is designed to consistently deliver a validated UV dose. The system's integrated software enables real-time monitoring and automatic adjustment of the UV lamp's power, ensuring that the required dose is always maintained.

Atlantium's HOD UV system treats the water added to the brew water just before bottling. It is crucial that this water is kept uncontaminated with no residual taste or odor. Atlantium's HOD UV solution guarantees water safety without chemicals and disinfection by-products.

The Medium Pressure UV lamps operate effectively at high and low water temperatures and ensure high quality water on demand for the brewing process.

Atlantium's HOD UV systems effectively inactivate pathogens and bacteria without using chemicals. It inactivates even highly resistant microorganisms such as chlorine-resistant pseudomonas, cryptosporidium, and giardia, that may spoil beer production. It also inactivates viruses and heat-resistant spores.

HOD UV performance is achieved by combining ultraviolet water disinfection technology with hydraulic and optic principles. The HOD UV system features the unique Total Internal Reflection (TIR) technology that recycles UV light energy, ensures homogenous UV dose distribution, provides superior power (kW) efficiency compared to traditional UV, and achieves unprecedented micro-organism inactivation.



## Results

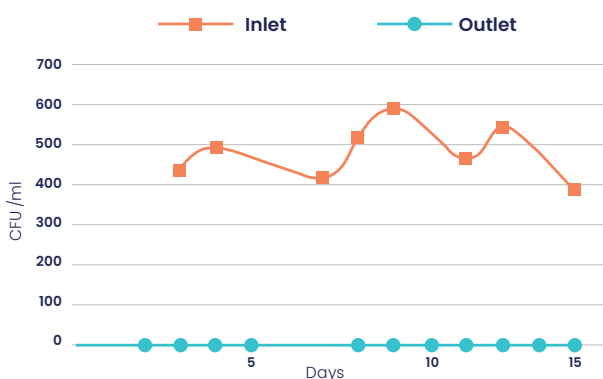
Since the HOD UV system was installed at the beginning of 2013, there have been no microbial outbreaks.

No more than 2-3 CFU/ml have been found in the samples collected. This alone has convinced the brewery of the effectiveness of the system.

Results of microbial counts confirm that all microbes entering the HOD UV system are completely inactivated instantaneously, ensuring microbial integrity by continuously delivering safe water to the production line.



Total Microbial Counts



We are very happy with the Atlantium HOD UV water disinfection system that we installed in our Rheinfelden plant. It is doing an excellent job of ensuring microbial integrity for all our production water, and it provides us with great tools for monitoring and reporting.

Christian Hoch Leiter Production  
Brauereien, Feldschlösschen

## About us

For more than two decades, Atlantium Technologies has helped to ensure water safety with its innovative HOD™ (Hydro-Optic Disinfection) UV technology and novel approach to performance, monitoring, and control. Atlantium's superior, environmentally friendly water treatment solutions ensure stable, efficient, and dependable production.

With thousands of full-scale installations for leading brands in various industries globally, we're committed to consistently meeting our customers' water quality needs, ensuring pure results.

