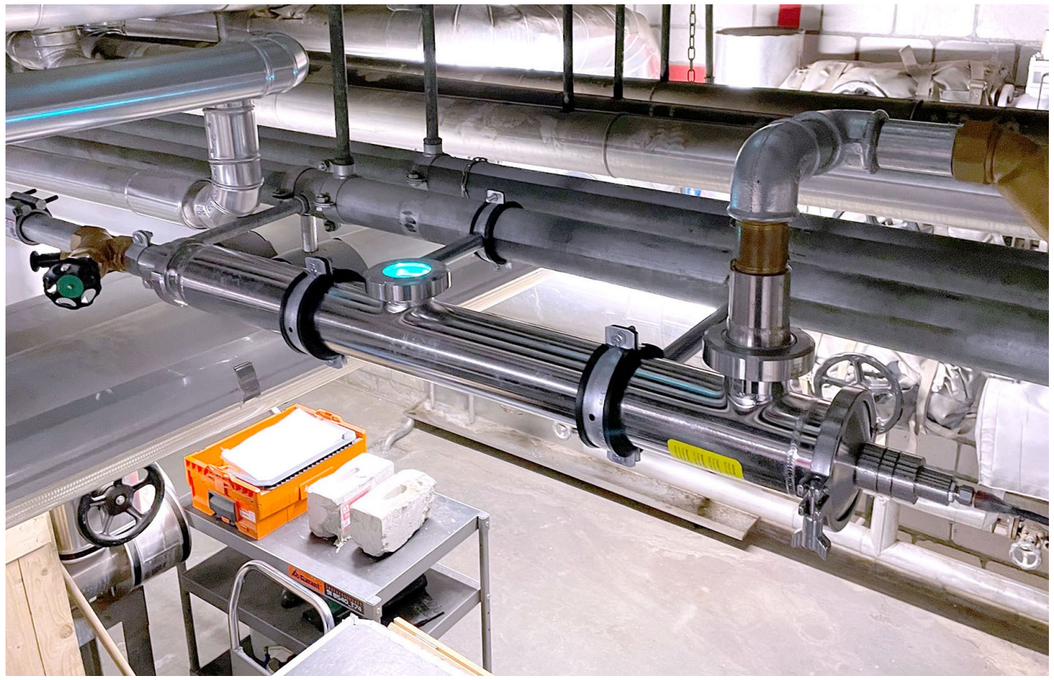


The commissioning of sterilAir UVC devices showed a positive effect after a short time: the bacterial load gradually decreased.

No chemicals at all: Flawless ice and process water thanks to UVC disinfection

The Emmi Schweiz AG plant in Ostermundigen specialises in the production of dairy products, in particular various yoghurt specialities and other fresh products. The well-known Emmi CAFFÈ LATTE is also produced in Ostermundigen. Emmi attaches great importance to quality and hygiene in all production processes as well as the safety of the food produced. With UVC installations from sterilAir AG, Emmi has succeeded in establishing a chemical-free solution for water treatment that is not only ecologically sustainable, but also saves costs.

Bacterial contamination in the water and high chemical costs

Efficient cooling of plants and products requires powerful and efficient cooling systems. To prevent the growth of microbiology, Christian Rohrbach, responsible for the maintenance of process and energy systems at Emmi in Ostermundigen, recognised the potential of UVC disinfection. This allows Emmi to make the process even more efficient and sustainable. Experience with sterilAir UVC air disinfection in quark production was a decisive factor in this, helping to dispel doubts about the effectiveness of the 'blue lamps'. In 2021, the first sterilAir AQD-ST system for UVC disinfection of ice water was procured.

„With the introduction of sterilAir UVC technology, we have drastically reduced the conventional, intensive use of chlorine and now rely on environmentally friendly, chemical-free water treatment that optimally supports our sustainability standards.“, says Christian Rohrbach, Team Leader Maintenance Process and Energy Systems at Emmi Schweiz AG.

First successes with UVC technology in ice water

In order to optimise the acquisition and operating costs, a conscious decision was made in favour of bypass operation, in which part of the pool contents are continuously disinfected. Commissioning took place in August and showed a positive effect after just a short time: the bacterial load in the ice water gradually decreased. Christian Rohrbach also noticed other advantages: In addition to the improved water quality, the changeover also meant a reduction in the maintenance of the ice water basin.

Extension to recooling water and overcoming resistance

Following the positive experience with ice water, Rohrbach also discussed UVC disinfection for recooling water in 2022. Especially as the water is exposed to the outside air – and therefore a wide variety of particles – when the wet recoolers on the roof are in operation. At the beginning of 2023, the decision was made to reduce the bacterial load in the recooling water with the help of a second AQD-ST6 from sterilAir, which went into operation in May of the same year. The results speak for themselves here too: just two months after the AQD-ST was installed, water samples showed a significant reduction in the bacterial load in the recooling water – despite the recoolers operating in the warm summer months. In the large concrete cisterns in which the water is collected, the bacterial load decreased noticeably – a confirmation of the effectiveness and reliability of sterilAir's UVC technology. The investment in the second UVC system also led to measurable savings in operating costs. By gradually reducing the use of additives, Emmi was able to sustainably reduce expenditure on the recooling water system and at the same time fulfil the company's environmental and sustainability goals.

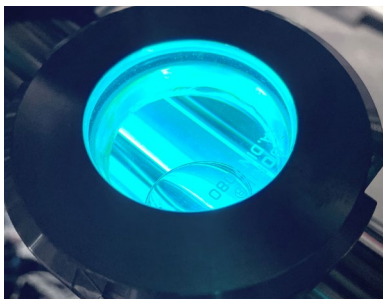
Just two months after the installation of the AQD-ST, water samples showed a significant reduction in the bacterial load of the recooling water.

UVC technology to combat legionella

The success of UVC disinfection in the ice water and recooling

„The use of sterilAir UVC devices has led to a significant reduction in our operating costs - the targeted use of the AQD-ST system in our water circuits has enabled us to achieve savings without compromising our processes.“

„The close and trusting cooperation with sterilAir was crucial to the success of our conversion: from planning to implementation, we have a competent partner at our side who has always fulfilled our expectations.“, concludes Christian Rohrbach.



water system has prompted Emmi to further expand the use of this technology. A sterilAir system is now also used in a hot water circuit to combat legionella. Following the discovery of legionella and a temporary increase in temperature, the temperature of the circuit was lowered back to the desired target range of 60–63° C. This expansion demonstrates Emmi's confidence and willingness to promote innovative solutions that are both economically and ecologically convincing. Christian Rohrbach is now a firm believer in sterilAir's UVC technology and sees it as an important building block for the sustainable treatment of water.

To optimise costs, the decision was made to use bypass operation, in which part of the tank contents are continuously sterilised.

Sustainability and cost savings as key benefits

The introduction of sterilAir's UVC technology at Emmi Schweiz AG is a convincing example of a sustainable and economically sensible investment. By using the AQD-ST devices for UVC disinfection of ice and re-cooling water, Emmi was able to demonstrably and sustainably reduce the bacterial load. The decision in favour of UVC disinfection underlines the company's ecological responsibility and future-oriented thinking. Emmi has thus taken a further step towards sustainable production processes and at the same time reduced operating costs – a successful model that shows how established procedures and processes can be improved by innovative UVC technology.

■ **www.sterilair.com**