

MADE IN GERMANY

 VISION AQUA®



Biocide-free cooling water treatment

**VA-Hydro**

## The problem in the cooling water

A challenge for almost all industries is the removal of excess process heat. Cooling water systems and circuits are necessary but provide ideal living conditions for microorganisms such as Legionella. They cause corrosion and energy losses, reduce the dissipation of process heat and pose a significant health risk to people and the environment.

Constant decontamination of process water is required by law to prevent such hazards. It is often carried out through the increased use of "environmentally harmful" biocides. However, their effectiveness is limited because many microorganisms in cooling water develop resistance after a period of time and can therefore continue to multiply.

## Established technology with over 1,000 systems in use worldwide

The patented VA-Hydro by VISION AQUA® offers sustainable and environmentally friendly technology for the treatment of cooling and process water without the use of chemicals. The VA-Hydro is already in use at a wide variety of industrial sites worldwide.



### Avoidance of "environmentally harmful" biocides

Microbiological contamination is removed without "environmentally harmful" and health-hazardous biocides. Biofilm, algae growth, legionella and odour problems are sustainably reduced.

### Reduce costs, increase operating times

In addition to the reduction of chemicals, the amount of fresh and wastewater is significantly reduced. The equipment's service life and running times are extended, and the process water remains hygienically stable for longer.

### Hygienic operational safety

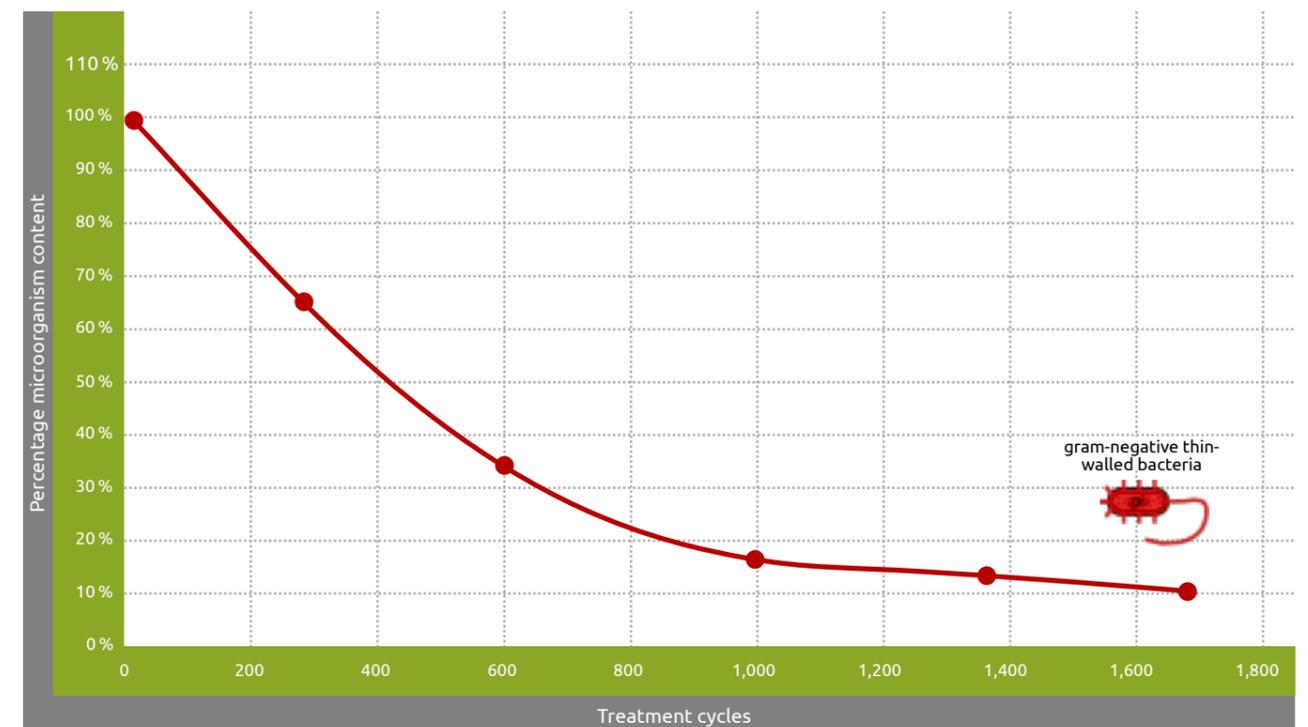
Following the German VDI Guideline 2047-2, the risk of contamination of spray mist by microorganisms is prevented, resulting in increased operational safety and reduced risk to people. The absence of biocides additionally reduces environmental pollution.

## Benefits at a glance

- Safety for companies, employees and the population
- Reliable removal of microorganisms such as Legionella
- Removal of existing and prevention of new biofilms
- Use in hot and cold water systems
- Cost reduction by eliminating the use of "environmentally harmful" biocides and fluorides
- Very low maintenance requirements and short amortization period

## Decontamination efficiency of the VA-Hydro

Using the example of gram-negative bacteria (e.g. Legionella), you can see that continuous treatment cycles significantly reduce the concentration of microorganisms in water.



Source:  
Fraunhofer

The available dimensions are from 0.1 up to 51 m<sup>3</sup>/h. Perfect for any cooling water application.

## Operating principle: hydrophysical water treatment

Very high flow and cavitation forces are generated in the VA-Hydro reactor, which mechanically destroys microorganisms such as Legionella without the use of chemicals. The oxygen dissolved in water completely oxidizes the destroyed cell material, resulting in permanently bacteria-free water.



Learn more about our products and capabilities

VISION AQUA® produces water filtration systems for industry, medical applications and solutions for end users as well as treatment plants for the biological purification of industrial process water.

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