



NUMBER ONE
WORLDWIDE

PREMIUM-QUALITY IRRIGATION WATER



Eliminates
microorganisms



Minimal monitoring,
no maintenance



7-year operational
guarantee



Sustainable &
environmentally
friendly



ultramins

Serious about water quality

Want to create the best irrigation water effectively and sustainably?

You can, with USAF™ cavitating ultrasonic transmitters!

USAF™ cavitating ultrasonic transmitters make sustainable, effective water management achievable and controllable. Why? Because they:

- eliminate algae in reservoirs, silos and drain pits, and remove biofilm
- control bacteria, fungi and viruses in irrigation water (rainwater and recirculated drain water)
- reduce the use of chemical agents, or can even make them unnecessary
- require no maintenance and only minimal monitoring
- are easy to install (plug & play)
- consume little power (70 watts)
- operate 24/7, 365 days a year!

Conclusion:

USAF™ cavitating ultrasonic transmitters ensure that you gain maximum benefit from healthy irrigation water, making a substantial contribution to healthier crops.



Healthy water
= lower crop losses
= higher yield

30-DAY
money-back
guarantee*



* When our transmitters are installed as advised, we will refund your money if the results agreed in advance are not achieved.

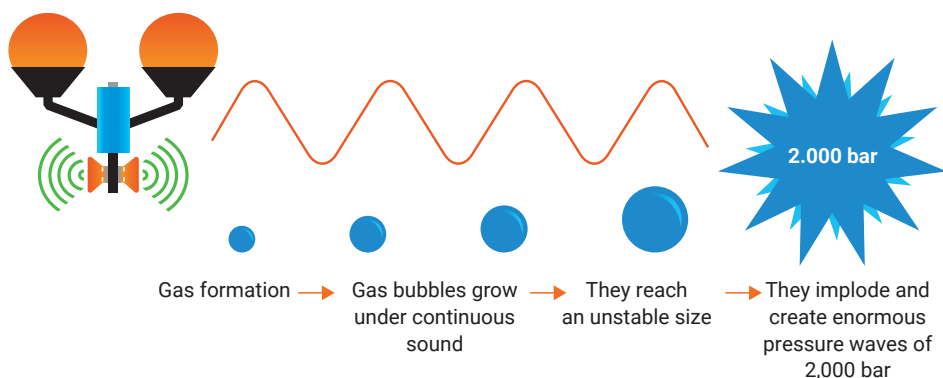
How does it work?

The ultrasonic sound frequency causes cavitation, forming microscopic gas bubbles among the water molecules. These gas bubbles become unstable and implode, releasing a large amount of energy.

Cavitation continuously generates pressure waves of 2,000 bar that damage algae, bacteria, fungi and viruses. Harmful viral particles lose their infectivity; algae, bacteria and fungi die as a result of rupturing of their cell walls and/or cell membranes rupture.

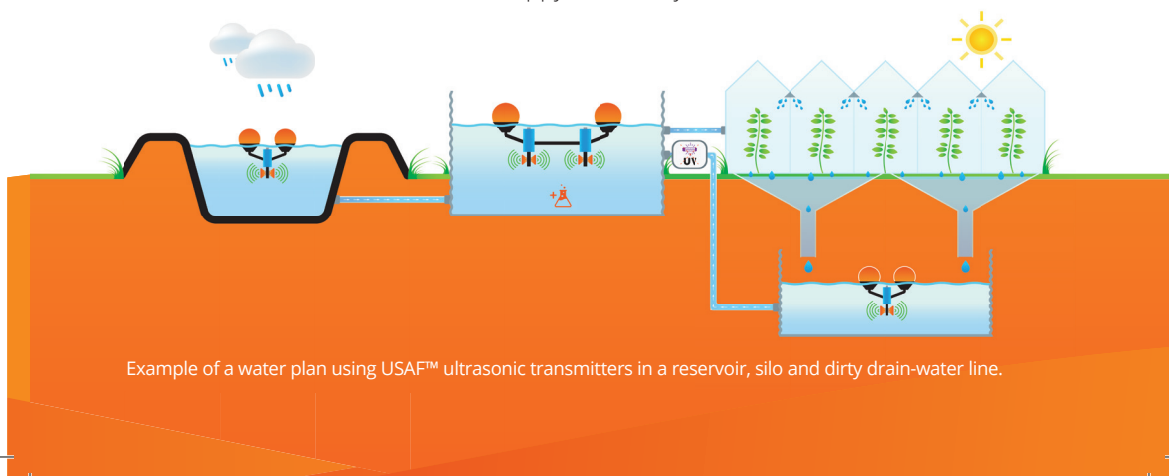
Because USAF™ works through natural cavitation and without chemical additives, nutrients, EC and pH remain unchanged.

Ultrasonic cavitation



Where can it be used?

The number of transmitters required depends on the overall water quality, the possible pathogen pressure and the objectives you want to achieve. It is always a customized solution, and we are happy to advise you.



USAF™ transmitters are used in, among others, the following crops:



Tomatoes



Soft fruit



Sweet peppers



Ornamental crops



Cucumbers



Plants



Chicory



Leafy crops

Which pathogens are controlled?

USAF™ targets a broad spectrum of waterborne microorganisms, including algae, bacteria, fungi/oomycetes and viruses. Effectiveness depends on the conditions; we validate performance for each situation. The agreed results are, of course, guaranteed.

When the water in the silo has a short retention time, a low supplementary dose of an oxidizing agent (such as hydrogen peroxide, ozone or chlorine) may be applied in some situations.



Products



USAF™ DT100



USAF™ MT400



USAF™ MT600

The USAF™ DT 100 is the base unit for every required configuration. Reservoirs of any size can be treated effectively.

As a guideline, for controlling algae formation and biofilm, one DT 100 is sufficient to effectively treat up to 2,000 m² of reservoir water. If maximum pathogen reduction in the reservoir is also being targeted, we recommend a higher installation density of one DT 100 per 1,000-1,250 m².

In silos, the water retention time is generally considerably shorter. As a result, several transmitters are usually required there, particularly in the silo that supplies water directly to the greenhouse. If water consumption is less than 250 m³ per day, the USAF™ MT 400 is the solution; if daily consumption is higher, the USAF™ MT 600 is available. In upstream silos, one DT 100 is generally sufficient to control algae and biofilm formation.

Our USAF™ transmitters come with a unique operational guarantee of no less than 7 years!



Tip: integrate USAF™ into the existing water chain and improve the performance of other installations.

- less biofilm/suspended organic matter → **higher UV transmittance**
- less fouling → **longer ultrafiltration run time**
- lower ozone demand (where relevant) → **lower dosing requirement**

Research and practice

The effect of cavitation in water has been widely studied. Its lethal effect on microorganisms has been scientifically demonstrated. Ultrasound is used in multiple industries for a wide range of disinfection purposes, but USAF™ adds cavitation to the process, making it unique.

For greenhouse horticulture, Proeftuin Ron Peters, among others, has conducted research on the use of USAF™ transmitters to control ToBRFV. The results were very positive. The full report is available on our website under Ron Peters' review.



Ron Peters
Proeftuin Ron Peters

Netherlands
Tomatoes

"For me it is clear that this USAF™ system works to eliminate ToBRFV and other microorganisms in drain and irrigation water..."



**For all testimonials,
scan the QR code:**



Selected quotes:

"The system meets our high standards, and we recommend that other growers also let Ultramins take a look at their situation."



Koen Saris
Van Gog Kwekerijen

Netherlands
Sweet peppers/
cucumbers

"Ultramins is a highly valuable partner for us. Their solution demonstrates that water quality does not have to be an uncertainty but can be a manageable and reliable foundation for cultivation."



Richard Schenkeveld

Schenkeveld / Prominent

Netherlands

Tomatoes



Robin van Dijk

Mastergrowers

Netherlands

Hydrangeas

"Apart from the fact that algae growth and biofilm quickly disappeared from the silo, a measurement showed that the fungal pressure had also been reduced enormously."

"We also know that cucumber spotted virus (CGMMV) is no longer spread through our recirculated water as it normally would."



Thomas Höfler

Höfler Gemüsebau

Germany

Cucumbers - Tomatoes



Patrick de Craen

Family Fresh

Australia

Baby cucumbers

"Even at extreme temperatures and in strong sunlight, the transmitters work excellently for controlling algae in reservoir water. In addition, we have established that no waterborne virus is present in the drain water."

Interested in finding out more?

We would be pleased to help you help you create optimal irrigation water.
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