

DUMO[®]
algacleaner



Ultrasounds
against algae



toscano

> Algae removal with ultrasounds

Algae mitigation and growth inhibition using ultrasound, avoids the use of chemicals and does not generate waste. Therefore it is a clean technology that meet the legislative requirements of environmental policy.



> Algae growth inhibition by ultrasound

The propagation of sound in a medium such as water is carried out by a continuous transition of pressure waves. In the case of ultrasound, alternating between increasing and decreasing pressure in relation to a normal pressure is produced at a rate higher than 20,000 times per second (20kHz).

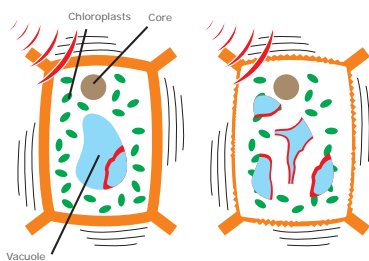
DUMO Algacleaner emits ultrasonic pulses that causes damage to the internal structure of cells. Under the effect of ultrasound, the vacuoles - that provide buoyancy to algae - breaks, in addition of further damages in the pores of the cell wall, which makes the acquisition of vital nutrients to the algae (pict. 1).

DUMO system emits different frequencies that generate different wave fronts effective against algae. This covers a wide range of applications over various species, by the combination of frequency, power and pulse sequence.

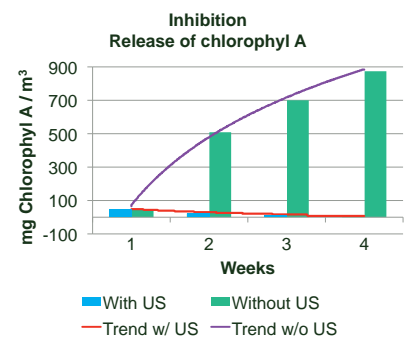
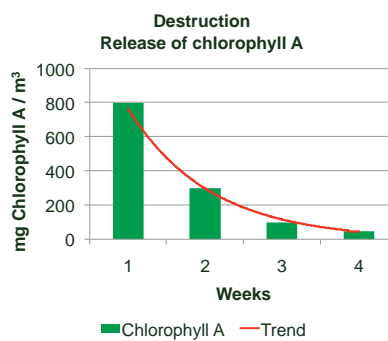
Depending on environmental conditions, nutrients in water, the effects of destruction and inhibition as well as the type and characteristics of existing algae populations, the effect of DUMO Algacleaner begins to be felt from fourth to eighth week from its application.



Discover DUMO Algacleaner



Pict. 1



Pict. 2



> **The most effective and environmentally friendly way to eliminate algae**

Now it is possible to alleviate algae blooms in your irrigation reservoir, pond, lake, fountain, etc, without the need for chemicals.

Our ultrasonic system will ensure algae control with the most sustainable method. Installation is simple and easy. All you need to do is place the device in the water and connected it to the power or energy source.



> **Advantages**



Ecological



Non-toxic

It does not cause harm to people, animals or plants.



Clean

No need for chemical products



Minimal maintenance



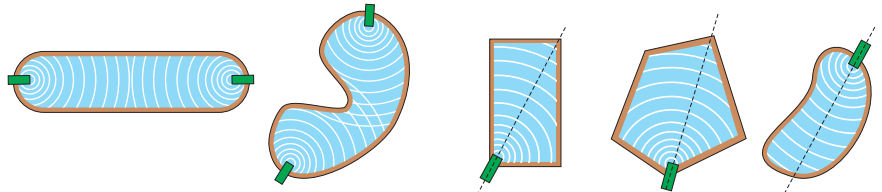
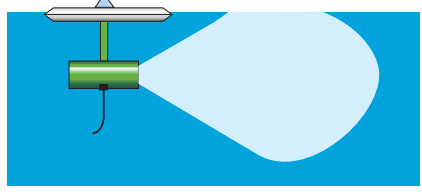
Easy to install

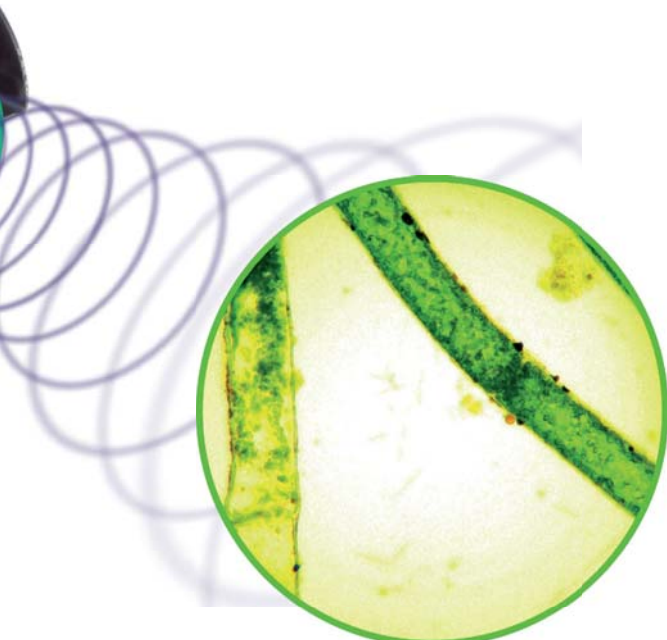


24/7
service



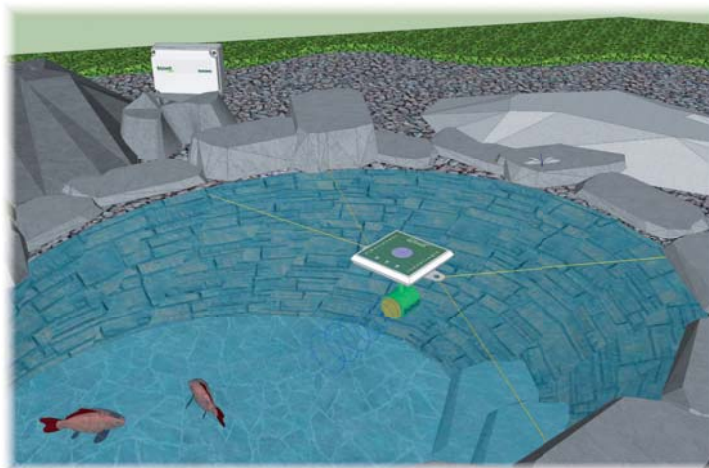
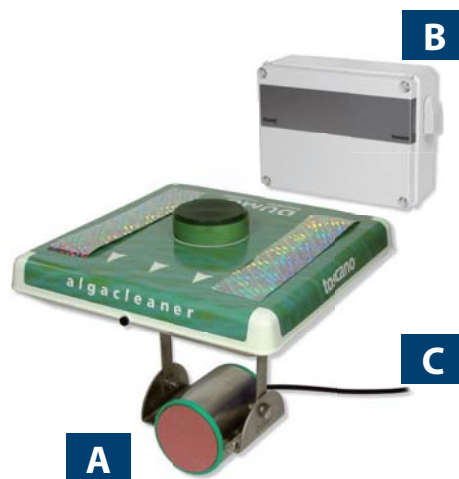
Low power
consumption





> System description

- A. Ultrasonic transmitter located, thanks to the float, to the optimum depth for the proper emission and propagation of ultrasounds.
- B. DUMO control module installed in a dry area, powered by 110/220V mains.
- C. 30m cable (optionally 40m) connecting the transmitter to the control module.



"... the fish showed no change in their behavior."

University of Huelva



> Reference letters

"We continually had the filters clogged by algae; this was a real problem for drip irrigation that we tried to avoid, even with chemical bicides. It was definitively solved with the installation of DUMO Algacleaner."

Christophe Bouchet - Production Manager
Primor Fruit S.A. (Five Senses), Sevilla, Spain

"The addition of this equipment has exceed the objective of removing algae, without operational problems. We express nodoubts about its efficacy."

Olivier Lannuzel
Fleurs de l'Odet, Elliant, France

"We can only recommend this type of installation that does not harm the fish or the environment."

Laurent Boutier - Manager
Armorvif EURL, Kerpert, France

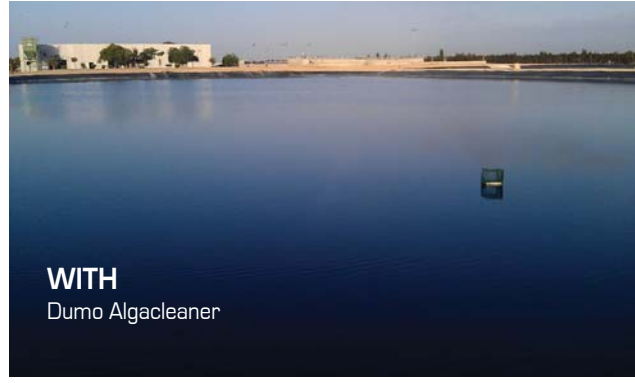
"DUMO Algacleaner system prevented the formation of a kind of major algae (lemnas) floating on the surface of the lakes. Ultrasounds also prevented the formation of bubbles of methane and other gases, generated during the fermentation process."

Sergi Rebull - Ulldecona WWTP Plant Manager
Acciona Agua, Tarragona, Spain

See more references at www.dumo.es



San Javier WWTP
Murcia, Spain



> Technical specifications

- > Ultrasonic waves generator: multifrequency digital generator with automatic sequence programs.
- > Alarm output for emission fault: relay output (3A, 250V).
- > Protections: overload, overheating and breakage of the transmitter cable.
- > Pilot lights: ultrasound emission, power ON.



*Maximum range in optimal conditions.

Model	AC-360	AC-60	AC-180
Supply voltage	230 Vac (50/60 Hz)		
Transmitter cable	-	20 m	30 m
Med./Max. power	180/390 W	35/80 W	60/130 W
Maximum range*	3x100...180 m	25...60 m	100...180 m
Control box	Ø 800 mm float	300x220x120 mm	300x220x120 mm

> Other DUMO products

Ultrasound Level Analyzer



AC-360
Special design
OEM projects



ACM
Marina



toscano

Electronics for the environment



Overvoltage
Protection

Control &
Energy

Sensors

Marine
Ultrasound

Algacleaner
Ultrasound

Pump
Controllers

TDS drives
inverters

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