

# Ultrasonic Algastop

*Stop algae in its tracks with  
Greenworks Algastop*



*Newly installed Algastop*

Ultrasonic sound waves are produced in the water tearing the cell walls of the algae and causing death. The device also stops the development of fungi and bacteria. Different algae react in different ways eventually falling to the floor of the dam/tank or pond.

# Algastop



## Stop Algae

Algae are microscopic small organism in the following appearance-

### Thread Algae

These algae make small threads which are fixed on the bottom or sides of lakes, basins or tanks.

Be aware not to confuse thread algae with seaweed algae.

The seaweed algae have longer and stronger threads.

Seaweed algae cannot be treated with our **Algastop** at most the **Algastop** can slow down the growing.

### Floating Algae

These algae keep floating in the water. The water can be totally filled with these algae and become green.

Floating algae can grow extremely fast. They can overgrow the total water and kill all living organism in the water, like water plants and fish. Floating algae will only become a problem in water that is slowly moving or not moving at all.

### Cyanobacteria (blue algae)

Actually these are not algae but bacteria. These bacteria act as algae, so they can be treated with our **Algastop**.

Cyanobacteria separate cyanide at the moment they die.

Cyanide is a toxic material floating on the water as bright blue dregs. This substance is toxic for all living organism and it smells intensively, like rotten eggs.

Next to the direct risk for everything that is living in and on the water, the Cyanobacteria can become a danger to people as well.

## Treatment

The algae mentioned above can be terminated with our **Algastop** equipment.

### The way it works

Depending on the model, the transmitter (transducer) is built together with a float. The transmitter with float can be put into the water. During the operation the transmitter sends an ultrasonic sound into the water. Inside the algae there is a little airbag, called vacuole. The ultrasound brings this airbag in resonance and it will tear. This is the end of the algae.

After first use of the **Algastop** equipment the next will happen, depending on the type of algae.

# Ultrasonic Algastop



## **Thread Algae**

If the *Algastop* equipment is installed when there is already an algae problem, the problem will increase the first days. This is because the living algae will be destroyed and start to float. This thick floating blanket can be removed. When you don't remove these dead algae, they will sink to the bottom within a few weeks, after the first shower of rain.

## **Floating Algae**

When floating algae are killed they will start flaking. These flakes can be filtered out with a good filter. The choice of the filter is very important.

## **Cyanobacteria**

When the Cyanobacteria problem has to be treated in surface water, the currencies can become a problem. Analyzing the situation and making up a plan is important in these situations. We advise to start the treatment before there is a problem. *Algastop* is mentioned to use precautionary.

When the ultrasound equipment is switched on all the time, the new added algae will be killed instantly. This is a small amount and will not cause any problem. Even during winters we advise to keep the *Algastop* switched on, because in that period the germ cells will be killed.

As far as we know until now, Ultrasound equipment is not dangerous for other living organism, like water plants or fish.

At this moment there are several studies at the agricultural university from Wageningen to test the effects from ultrasound on fungus and virus.

*Algastop* equipment is almost maintenance free.

# Ultrasonic Algastop



## *Algae or Virus? No Problem!*

*Algastop*, the algae controller number one and also the solution for viruses in water,

### **Algae**

The transmitter sends an ultrasonic sound into the water.

Inside the algae there is a little bag filled with fluid, called vacuole. The ultrasound brings this bag in resonance and it will tear. This is the end of the algae. In combination with a filter the water will stay clear.

Bacteria and fungus need dead organic material to develop.

Minimal or no algae in the water will give less chance for them to develop.

Legionella is one of these bacteria inhaling water spray with legionella can cause the legionary's disease.

### **Virus**

It is scientifically proved that ultrasonic sound can deform or kill viruses.

Investigation on the van Hall Larenstein University of Leeuwarden has proved that viruses have reduced to a minimum within 2 hours treatment with *Algastop*. Report is available.

### **Fungus and bacteria**

Ultrasound can also removed or block the development of the biofilm. The biofilm is the mucous layer on the sides of tanks basins and pipes. Fungus and bacterial need this biofilm to develop.

# Ultrasonic Algastop



## Manual for *Algastop*

Parts:

Electronic box  
Transducer with or without float.

Install electronic box straight up on a suitable spot. When possible cover it or place it inside.

Connect the transducer with the plug on the electronic box. Lock the plug to get a waterproof connection.

### Install transducer with float

Put the transducer in the water. Fix the float with a rope or a chain, to make sure the transducer is always pointed to the water. Make sure the shore lines and electricity core have enough extra length, so when the water level is going down the transducer will stay in the water.

### Install transducer without float

Put the separate transducer on a stone or higher part in the pond. The transducer must be always minimal 10 centimeters below water surface. Place the transducer in a corner, on a side of the pond or basin or tank with the head of the transducer pointed to the water. Make sure the transducer is never covered up by water plants or lying in the mud or something like that.

### Electronic connection

When the transducer is connected to the electronic box, the box can be connected to the electric power supply with the plug. It is recommendable to use a power supply with an earth leaked circuit breaker.

When the electric power supply is alright, a green led on the electric box will flash or burn (depending on the type). A red light will flash when the ultrasound signal is correct; you can also hear a tick from the transducer.

# Ultrasonic Algastop



## How it works

The transducer sends an ultrasound wave into the water. This ultrasound brings the algae in resonance; this will kill the algae.

When **Algastop** is installed in the summer, when there is already a big amount of algae in the water, the dead algae will go floating because of the rotting gasses.

When possible remove this dead algae, otherwise they will sink within a few weeks or after a shower of rain to the bottom.

The dead algae will kept floating when there is fish in the water. To make the water clear, you will have to filter these dead algae out of the water.

## Bottle Test

When you want to know if the algae are dead or alive you can do the bottle test.

Get an empty plastic bottle with clear plastic and fill this with water from the basin or pond you want to test. Put the bottle for 24 to 48 hours in a still place. When the algae is dead it will sink to the bottom, otherwise it will keep on floating.

As far as we know at this moment ultrasound is harmless for fish.

The **Algastop** can stay in the water during the winter; in that period it already kills the germs. In a period with ice on the water we advice to remove the **Algastop** temporarily.