



LG SONIC[®] e-line

Advanced Ultrasonic Algae Control

- Chameleon Technology™ to change the ultrasonic program according the type of algae
- Possible to treat multiple tanks or water surfaces with curves with one control box
- Integrated Aquawiper™ for minimal maintenance

Chemical-Free Algae Control Solution

The LG Sonic® e-line provides an environmentally friendly solution to control algae by making use of ultrasound technology.

The system has an ultrasonic treatment range of 200 meter (650 ft) and can be applied in;

- Ponds
- Cooling towers
- Golf course ponds
- Wastewater treatment plants
- and other applications

The Advantages of our Technology



Effective algae control

Eliminates up to 90% of existing algae and prevents the growth of new algae.



Safe for the environment

The ultrasound used by LG Sonic is safe for fish, plants, zooplankton, and insects. Our devices make use of low power (5-20 Watts), wherefore, no high voltages are transmitted into the water.



No release of toxins

The cell wall of the algae remains intact, preventing the release of toxins from the algae into the water.



Effective on larger water surfaces

The LG Sonic® products can efficiently control algae up to 200 meter (650 ft) per device with a power consumption of just 5-40 Watt.



Prevent damage to industrial systems

Avoid damage to industrial systems, for example, to filters in treatment plants.



Easy to install and maintain

The LG Sonic® devices are being placed in the water body itself, emitting sound waves through your water reservoir.

How does Ultrasonic Algae Control Work?

The algae control devices from LG Sonic are underwater systems that emit ultrasound waves in order to control common types of algae, including the toxic blue algae.

Chameleon Technology™

Together with several European universities we discovered that different types of algae require different types of ultrasonic treatment.

The LG Sonic® devices have 12 ultrasonic programs to effectively control different types of algae. Each program contains different types of ultrasonic parameters, such as frequency, amplitude, waveform, and signal duration.

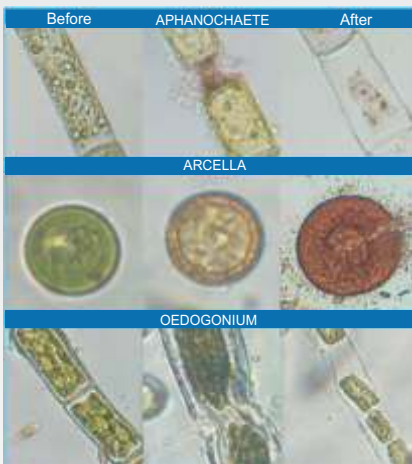
Chameleon Technology™ makes it possible to change the ultrasonic program according to the water conditions, type of algae, and type of application, thereby providing the most effective solution for each specific situation.

- **More efficient algae control**
- **Shorter treatment time**
- **Prevent the occurrence of resistant algae**



Impact of ultrasound on algae

Before and after ultrasonic algae control



The cell wall remains intact, preventing the release of toxins from the algae into the water.

The effects of LG Sonic® products have been tested by various universities and are proven to be safe for fish, plants, zooplankton, and insects.

Lack of light

Most types of algae will die from the ultrasonic pressure generated in the top layer of the water. This sound barrier prevents algae from rising up to the surface, keeping them from being exposed to sunlight, and the algae will die due to a lack of light.

Collapse of gas vesicles

Blue-green algae and some green algae are capable of traveling through the water vertically due to their possession of gas vesicles. The ultrasonic sound waves rupture these gas vesicles, thus preventing the algae from rising to the surface and absorbing light for photosynthesis.

LG Sonic[®] e-line Features

1 Weatherproof control box

Weatherproof aluminum design to protect against outdoor conditions. It is possible to install up to 4 ultrasonic transmitters on one control box for the treatment of multiple tanks or water surfaces with curves.

2 Remote control monitoring to prevent frequent site visits

GSM/GPRS control allows for the monitoring of the operating system by receiving status updates and alerts during power outages.

3 Advanced ultrasonic transmitter

Unique Chameleon Technology™ is used to adapt the ultrasonic program to water conditions, type of algae and type of applications

4 Integrated Aquawiper™ for minimal maintenance

The LG Sonic[®] e-line is equipped with an automatic cleaning system, the Aquawiper™, to prevent damage to the ultrasonic transmitter for minimal maintenance.



Optional: connect up to 4 ultrasonic transmitters to one control box



Integrated Aquawiper™ for minimal maintenance

Optional:

Installation bracket

Bracket to install LG Sonic e-line without a float. Easy removable for maintenance checks.

Check the ultrasonic transmitter with the e-line tester

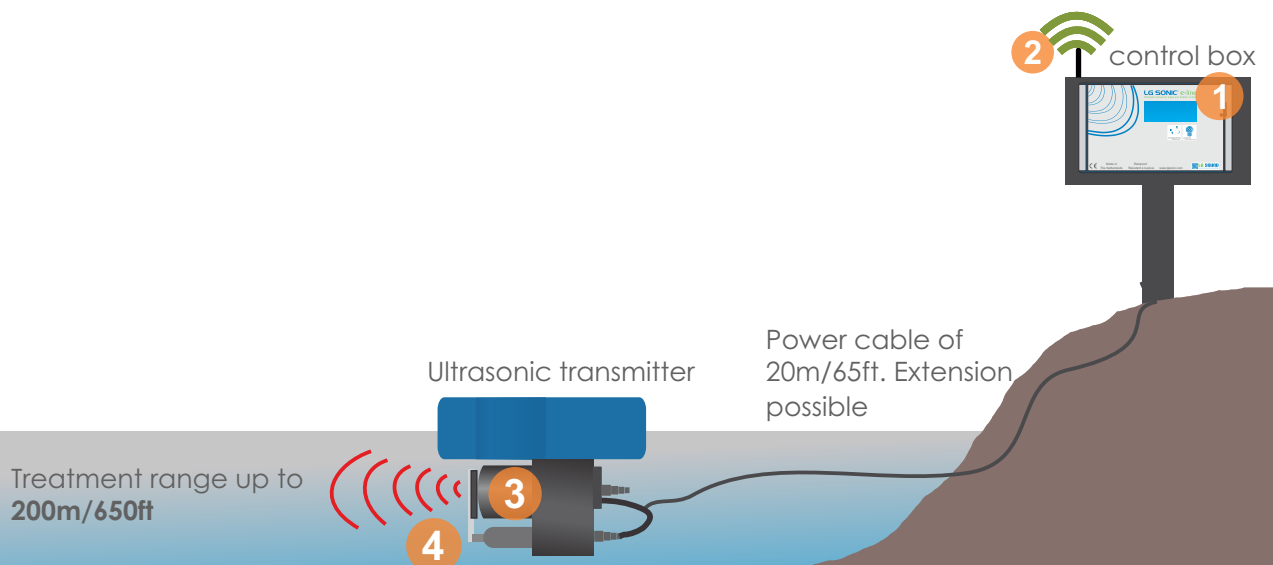
Device to check whether your LG Sonic device is still working, sending the correct frequency program and if the ultrasound is being spread throughout your whole water body.

Onshore solar system for autonomous power supply

The LG Sonic e-line can work autonomously on solar energy. LG Sonic[®] provides a complete solar system including a solar panel, batteries, and a charge regulator.

Easy installation with the flexi-arm

The flexi-arm can be adjusted to fit every application and can be extended up to 5 meters.



Specifications

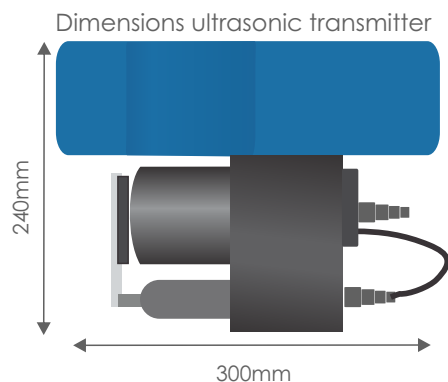
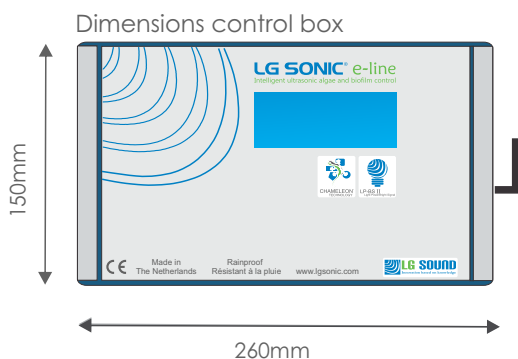
Compare our Products:

	L	XL	XXL
Treatment range in meter (feet)	<70(230)	<120 (393)	<200(650)
Ultrasonic transmitter	✓	✓	✓
Control box	✓	✓	✓
Aquawiper™	✓	✓	✓

Technical Specifications:

Component	Includes
Ultrasonic transmitter	<ul style="list-style-type: none"> - Unique Chameleon Technology™ - 12 pre-installed ultrasonic programs - Max freq/program, 80 - Ultrasonic generator integrated in the ultrasonic transmitter - Transmitter cable, 20m/65 ft (extension possible) - Float
Control box	<ul style="list-style-type: none"> - Choose between 1, 2, or 4 ultrasonic transmitter outputs to one control box - LCD display with control buttons - Remote control monitoring, GSM/GPRS - AC input voltage, 100-240V AC, 50/60hz - DC input voltage, 24V DC - Energy consumption, 5-40 Watt - Weatherproof design, Aluminum - Ingress protection, IP67
Aquawiper™	<ul style="list-style-type: none"> - IP69 underwater housing - 360° turning angle - Industrial-designed brush
Solar power system*	<ul style="list-style-type: none"> - 195 WP solar panel - 2x 12 Volt, 60Ah batteries - Solar regulator - Panel mounts or poles are optional
e-line tester™*	<ul style="list-style-type: none"> - Check whether the LG Sonic device is working, sending the correct program and if the ultrasound is spread throughout the whole water body - Including adjustable receiver stick, 100 to 200 cm (3-6 ft)
Flexi-arm™ *	<ul style="list-style-type: none"> - 1 meter arm for easy installation - The flexi-arm can be extended up to 3 meters
Installation bracket™*	<ul style="list-style-type: none"> - Install ultrasonic transmitter without float - Easily remove ultrasonic transmitter for maintenance checks - Coated stainless steel - Length of 40 cm

* The solar power system, e-line tester, flexi-arm and installation bracket are optional



Typical Applications



Cooling towers

The most effective algae and biofilm control solution in cooling towers with the multiple frequency programs of the LG Sonic® e-Line. Due to its high efficiency, you can now reduce biocide consumption in the cooling tower and improve the water quality.



Ponds

Reduce algal blooms and bad odour, thereby increasing the recreational value of ornamental and golf course ponds. Thanks to the Chameleon technology™, targeted algae are being controlled without harming fish, frogs, zooplankton, water plants and other types of life present in the water.



Water treatment plants

Controls suspended and filamentous algae without using chemicals and without killing beneficial bacteria in different stages of the wastewater treatment plant. Aids to reduce levels of TSS, BOD, COD and PH facilitating easier discharge of the wastewater.



Irrigation reservoirs

Eliminates current algae and prevent the growth of new algae, even in tanks with a low retention time. The LG Sonic® e-line prevents the clogging of filters, drip installations, and nozzles. This way maintenance and labor costs can be reduced.

Company Profile

Leading in Algae Control and Water Quality Monitoring

Since 1999, LG Sonic has been a leading international manufacturer of **algae control systems**. Our products provide an environmentally friendly solution to effectively control algae in lakes, reservoirs, treatment plants, and other applications.

Over the last decade, more than **10,000 LG Sonic® products** have been successfully installed in **52 different** countries.



Certificates

We manage to keep at the edge of the market by holding worldwide approved certificates, patents and know-how for algae control, ultrasound technology, and continuous monitoring under the trademark LG Sonic™ and MPC-Buoy™.



Mission

Our objective has always been to reduce or eliminate harmful chemicals in our environment. Therefore we have developed a chemical-free technology that controls algae without disturbing the natural balance within water ecosystems.

Award-Winning Technology

Global TAG Excellence Award 2015 for most developed technology from ISLE Utilities

Business Achievement Award 2015 from Environmental Business Journal for algae control project with American Water

Shell LiveWIRE Award 2014 from Shell and the Dutch Chamber of Commerce

WssTP Water Innovation Award 2014 from Water Innovation Europe

Engineering Solutions Award 2014 from the Institute of Water Innovation Awards