

# Biofouling Prevention in Sea Chests

---

- ✔ Improve the efficiency of cooling system
- ✔ Reduce fuel consumption
- ✔ Easy installation

# Biofouling Prevention in Sea Chests

The LG Sonic Industrial Line provides cost-effective solutions to prevent biofouling through the use of ultrasonic sound waves.

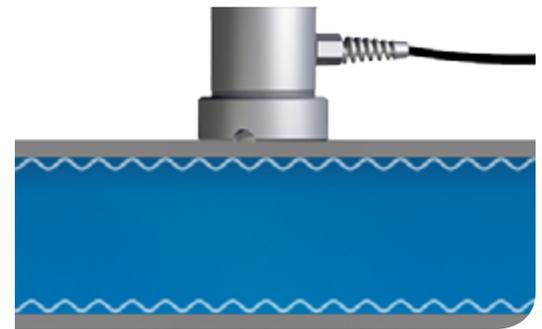
- ✔ Improve the efficiency of cooling system
- ✔ Reduce fuel consumption
- ✔ Easy installation

Within the Industrial Line, there is an Industrial Wet or Industrial Dry option available depending on the specific situation.

## LG Sonic Industrial Wet



## LG Sonic Industrial Dry

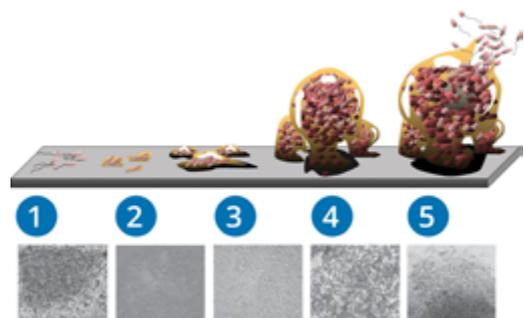


<b>How the ultrasound is transmitted</b>	Throughout the water body, within a pipe or mounted alongside a submerged surface	Through the dry side of a surfaces such as a pipe. The ultrasound is effectively transmitted through the material
<b>Which problem will be solved</b>	Reduce floating algae, prevent the growth of biofouling on the walls	Prevent the growth of biofouling in heat exchanges and pipes.
<b>Typical applications</b>	Cooling basins Clarifiers	Heat exchangers Sea chests
<b>Treatment range</b>	Up to 30m/100ft per device	Up to 10m/30ft per device

## How Ultrasound can Prevent Biofouling Formation

Specific ultrasonic frequencies, waveforms and amplitudes can be utilised to directly target biofilms. Benefits of the ultrasonic treatment:

1. Prevent bacteria from settling on a surface in the primary stages of biofilm formation
2. Alter the structure of an existing biofilm, eventually breaking it down
3. Control potential algae attaching to a biofilm



Five stages of biofilm formation

[Learn more about ultrasound](#) ↻

# LG Sonic Biofouling Prevention Products

## LG Sonic Industrial Wet

The LG Sonic Industrial Wet uses sound waves to prevent biofouling growth. The solution is to install one or multiple systems that transmit specific ultrasonic parameters depending on the level of contamination.

- ✔ Specific ultrasonic parameters reduce up to 70% of the biocide use
- ✔ Integrated Aquawiper™ automatically cleans the ultrasonic transmitter
- ✔ Remotely controlled, avoiding the need for frequent site visits



## LG Sonic Industrial Dry

The LG Sonic Industrial Dry uses sound waves to prevent biofouling growth. The solution is to install one or multiple systems that transmit specific ultrasonic parameters depending on the level of contamination.

- ✔ Multiple ultrasonic programs for effective biofouling prevention
- ✔ Ultrasonic treatment reduces chemical consumption
- ✔ No use of cavitation for a longer product lifetime



[Learn more about the LG Sonic Industrial Line](#) ↻

## No use of Cavitation

Some ultrasonic biofouling control solutions use cavitation to prevent biofouling, in which high-power ultrasound causes the formation of micro-bubbles that implode, causing intense heat pressure and the formation of hydrogen radicals. These radicals may kill bacteria and other organisms but they also cause oxidation reactions and may degrade anticorrosion layers. LG Sonic products are not based on cavitation.

### Benefits of LG Sonic versus cavitation based products

- ✔ **Not harmful to marine life**
- ✔ **Adaptable ultrasonic frequencies for effective treatment**
- ✔ **No side effects on the anti-corrosion layer**
- ✔ **Longer product lifetime**
- ✔ **Longer treatment distance**

LG Sonic Industrial Line allows for effective biofouling prevention without using cavitation