

# H2oBioSonic.com

## Advanced Ultrasonic Bio Fouling Protection Systems Hull / Running Gear MGPS Overview

For use on Marine Hulls, Running Gear, Submerged Structures and more.



### The problem of bio-fouling & Algae formation

The purpose of the H2oBioSonic System is for the prevention of algae formation through the destruction of micro-organisms on submerged structures such as hulls, running gear, etc.

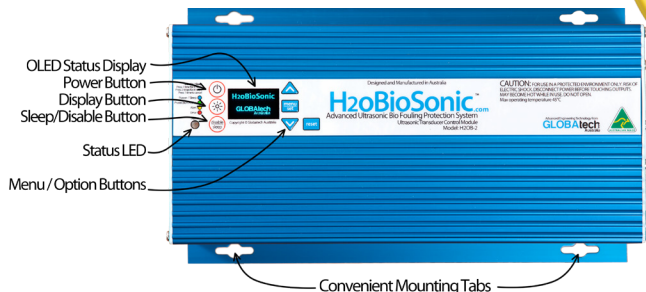
Fouling of submerged structures and running gear can drastically reduce efficiency of hulls and running gear causing increases in fuel consumption, reductions in performance and potential damage to ancillary systems / devices. Maintenance can be very costly due to down time, the high costs of coatings, labor required and costs of slipping or dry docking.

The H2oBioSonic system works in tandem with existing anti corrosive and antifoulant coatings to enhance / extend the lifecycle of the coatings while maintaining cleaner surfaces for reduced drag thus improving efficiency, reducing maintenance costs and improving operational up time.

### Ultrasonic benefits

Ultrasonic Bio Fouling protection with H2oBioSonic combats the common problems associated with algae and Bio Fouling in Marine systems including;

- Reduced maintenance requirements
- Extended Haul Out and Anti-Fouling intervals
- Improved Performance & Efficiency
- Reduced Fuel Consumption through reduced drag
- No Consumables (no electrodes to replace)
- Maintains submerged structures
- Destroys Algae & halts shell growth lifecycle



### How the H2oBioSonic Ultrasonic System Works

The Ultrasonic energy output generates microscopic bubbles of varying sizes which implode generating microscopic points of cavitation. The cavitation implosion has a cleansing effect and provides a constant scrubbing of the water protected. During these implosions the cell wall of algae and other single cell bacteria and organisms is split preventing the continued growth. This cavitation also provides a scrubbing effect on the surfaces protected and ancillary devices helping to prevent any settlement and improving flow, reduce drag and so forth.

H2oBioSonic also implements our advanced **!BLAST!** Function for added protection effectively supercharging the output for short blasts of energy that drastically improves the effectiveness of the scrubbing effects.

### Installation

Installation of the H2oBioSonic system is simple and requires the strategic mounting of our Ultrasonic Transducers onto the objects where protection is desired. The number of transducers depends on the surface area, material and expected fouling. During installation there is no down time as there is no interfering with the active system. Additional transducers can easily be added where required for added protection.

### Preventing Settlement

During the short settlement period of bio fouling the Ultrasonic energy destroys the spores, larvae, algae and bacteria while the scrubbing effect on the object protected prevents a buildup.

Without Anti foul protection submerged structures can quickly become encrusted or grown over with algae or growth leading to drastic loss in efficiency and increases in running costs.

### Dual Action System

The H2oBioSonic system operates on two fronts with dual action, while destroying algae, larvae and micro organisms with the microscopic cavitation we also generate an advanced ultrasonic cleaning function within the protected objects or systems to help in maintaining a system free of obstruction and fouling.

### Your Local Agent

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