

# SONIHULL8

ULTRASONIC ANTI-FOULING SYSTEM



SAVING THE OCEANS, ONE SHIP AT A TIME

# ANTI-FOULING PROTECTION INSIDE & OUT



Sonihull8 is the latest addition to NRG Marine's Sonihull range of ultrasonic anti-fouling technology. Sonihull's fit-and-forget systems prevent marine organisms colonising solid surfaces that are exposed to raw seawater.

With eight independent and programmable outputs, Sonihull8 can protect every part of your vessel or structure from marine fouling. Unlike biocidal coatings and impressed-current systems, Sonihull8 is low cost and low maintenance, with zero poisonous environmental legacy. With one panel and eight transducers, Sonihull8 has all of your equipment covered.

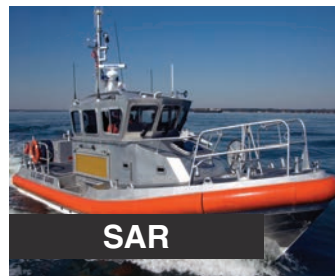
## Sectors Covered



**OFFSHORE**



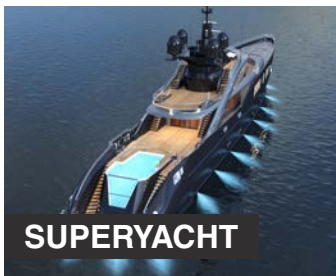
**WORKBOATS**



**SAR**



**COMMERCIAL**



**SUPERYACHT**



**FISHERIES**



**WINDFARM**



**NAVY**

## Items Protected

<b>INSIDE</b>	<b>Sea-chests</b> , Tanks, <b>Keel-coolers</b> , Box-coolers, <b>Pipework</b> , Intakes, <b>Valves</b>
<b>OUTSIDE</b>	<b>Hulls</b> , Structures, <b>Shafts</b> , Propellers, <b>Waterjets</b> , Stern Drives, <b>Steering Gear</b>

## Headline Figures

**256**

A possible network of up to 256 transducers

Sonihull8 networks with up to 32 other units, enough protection for even the largest vessels

**30%**

Reduce operating costs and improve profit margins

A fouled hull, propeller and steering gear can increase fuel consumption by 30%

**95%**

Save up to 95% of Cap-Ex and maintenance costs

No costly ICAF anodes to replace, no through-hull fittings or current isolation required

# Background

Fouling on your hull and props can increase fuel consumption by up to 30% and, in raw water pipes, fouling will block cooling systems and cause premature equipment failure.

Environmental legislation covering the use of poisonous metallic biocides in anti-fouling coatings is tightening and marine-based industries are looking for more effective means of preventing unwanted marine growth on their vessels and inside their equipment.

Since 2006, NRG Marine has protected over 15,000 vessels with its Sonihull Ultrasonic Anti-fouling systems, making it the world's leading ultrasonic anti-fouling specialist.

For decades, ultrasound has been used in the food, brewing and hydroponic farming industries to prevent algal blooms and to keep water-handling equipment clean and free from blockages.

By focusing the same technology into marine applications, Sonihull has become an effective anti-fouling solution.

Sonihull8 is the company's latest product. Born from the commercial marine market's demand for a cleaner, more cost-effective way to protect multiple areas and devices against marine bio-fouling, including hulls, structures, tanks, pipes, sea chests, coolers, pumps and valves.

## How It Works

Sonihull systems produce multiple bursts of ultrasonic energy in a range of targeted pulse frequencies. These pulses are transmitted through the material that the transducer is attached to.

The ultrasound produces a pattern of increasing and decreasing pressure on the surface of the material. Microscopic bubbles are created during the negative cycle and are imploded during the positive cycle.

This microscopic agitation has a cleansing effect which destroys surface algae.

Disrupting this first link in the food chain keeps the surface clean and makes it a much less inviting habitat for larger organisms that feed on the algae. The microscopic movement of water also prevents barnacle and mussel larvae from embedding on the surface.



## KEY FEATURES



Effective bio-fouling without the poisonous environmental legacy of biocides or metal compounds



Inaudible to humans and marine life with no interference to sonar and electronic equipment



Can connect up to 80m away with no loss in performance. This makes Sonihull8 suitable for modular pre-fabricated constructions



Easy Installation - no drydocking, no through-hull fittings, no expensive impressed current anodes to replace



Independent transducers ideal for large installations where multiple surfaces & equipment can be protected by one unit



Extended maintenance intervals mean less downtime and reduced running costs



Microbial Control - Sonihull also suppresses Diesel bug and keeps potable water fresher for longer



Fully Programmable & Integratable with RS232 / RS422 and Modbus communication interface for wired/ wireless remote control with critical path fault monitoring



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## Control Unit



### PIPEWORK

Before



After



### KEEL COOLER

Before

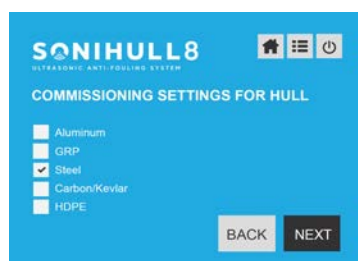
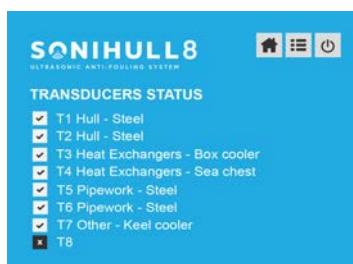
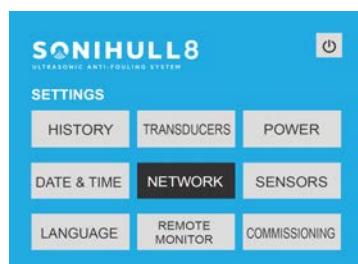


After



Dual-Processor Programming Interface via LCD screen

8 Transducers



# TECHNICAL SPECIFICATIONS

MODEL	Sonihull8
APPROVALS	CE and UL
VOLTAGE	110-240V 50/60Hz AC or 22-30V DC
TRANSDUCERS	8 Per Control Unit (extendable up to 256)
AVERAGE POWER	<30 Watts
CONTROL BOX RATING	IP65
TRANSDUCER RATING	IP68
TRANSDUCER CABLE	8m (extendable up to 80m)
WEIGHT	6kg (control box)
	12kg (1.5kg per transducer)
	18kg (total boxed weight)
DIMENSIONS	380mm x 340mm x 100mm (control box)
	Ø 95mm x 75mm (transducer & mounting ring)
WARRANTY	2 Years
EFFECTIVE BIO-FOULING PROTECTION FOR	Steel, Stainless Steel, Aluminium, GRP, FRP, Kevlar, Titanium, Rigid Plastics

## ✓ Sonihull8 system includes

- 8 independent ultrasonic transducer outputs
- Industrial grade LCD full colour screen
- Full critical path fault monitoring
- Runtime hour timer
- Event history
- Fully programmable transducer control
- RS232 port for repeater panel and future upgrades
- Status remote output for integration with management systems

## ✓ Connections

- Modular design (configurable as 4, 6 or 8 transducer outputs)
- Each transducer channel is fully monitored for fault condition
- Power supply protection supports overload/underload monitoring for input and operating voltages

## ✓ Networking & Programming

- Programmable timer enables individual/group/all control
- RS232 interface supports remote monitoring and control
- Networkable up to 32 x Sonihull8 panels (possible total network size 256) for centralized monitoring and control of large installations
- Fully compatible SCADA interface for vessel management systems
- Mobile app enabling remote viewing, monitoring and control (requires WiFi/4G interface module)

## ✓ Accessories

- Pipe adaptors
- Shaft adaptors
- Weldable mounting rings



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