

SONIHULL

Ultrasonic Anti-foul Protection



SONI8

Sonihull Ultrasonic Anti-foul Protection

Ordering Information

NRG-SH8 12.80kg
DATASHEET NO. WEIGHT

Product Code	Description	Weight (kg.)
SH08	Ultrasonic Anti-foul Protection	12.80kg

How does it work?

All Sonihull systems produce multiple bursts of ultrasonic energy in a range of targeted ultrasonic pulse frequencies. These pulses are transmitted through the material that the transducer is attached to; your hull, prop shaft, pipework, jet drive, sea chest etc...

The pulses produce a pattern of alternating positive and negative pressure on the surface of the material. Microscopic bubbles are created during the negative pressure cycle and are imploded during the positive pressure 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 movement of water also prevents barnacle and mussel larvae from embedding on the surface.

Environmentally friendly

Sonihull can protect every part of your vessel from marine fouling. From hulls, shafts, propellers and waterjets, to sea-chests, tanks, keel-coolers, box-coolers, pipework, intakes and valves. Unlike biocidal coatings and impressed-current systems, Sonihull is low cost, low maintenance with zero poisonous environmental legacy

Fit & Forget Anti-fouling For All Marine Applications

Ultrasonic antifouling protection inside and out.

Wherever your vessel is exposed to raw seawater you need to protect against biofouling. On the outside, the build-up of algae, weeds, barnacles and other unwanted marine life will slow you down and increase your fuel bill. On the inside, marine organisms can restrict cooling water and cause premature equipment failure.

SONIHULL – PROTECTING THE OUTSIDE OF YOUR VESSEL

HULLS, SHAFTS, PROPELLERS, WATERJETS, STERN DRIVES & STEERING GEAR

SONIHULL – PROTECTING THE INSIDE OF YOUR VESSEL

SEA-CHESTS, TANKS, KEEL-COOLERS, BOX-COOLERS, PIPEWORK, INTAKES & VALVES

The benefits

- A clean hull and drive train will reduce fuel bills by 20-30%.
- Reduced vibration and improved performance.
- Reduce maintenance costs and expensive lift-outs.
- No expensive anodes to replace and zero poisonous legacy.
- Suppresses diesel bug and keeps stored water fresher for longer.



NRG Marine Ltd.

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DATASHEET

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Soni8 ultrasonic anti-foul system includes

- 8 independent ultrasonic transducer outputs
- Industrial grade LCD screen full 65K colour
- Full critical path fault monitoring
- Run time hour timer
- Event history
- Programmable transducer control
- RS422 Port for repeater panel and future upgrades.
- Status remote output for integration with management systems.

Construction

- Soni8 panel Metal construction
- Full colour graphical LCD screen
- Function keyboard for viewing interrogating & programming the complete system

Connections

- Modular design (configurable as 4, 6 or 8 transducer outputs)
- Each transducer channel is fully monitored for fault condition
- Power supply protection supports over-load/under-load monitoring of AC/DC input voltage, and operating system voltage
- DC Low voltage cut-off to prevent deep discharge of batteries

System status LEDs

Power on | System healthy | System fault

Networking & Programming

- Programmable timer enables individual/ group/ all outputs to be switched ON/OFF
- RS232 communication interface, Supports remote monitoring & control of the Soni8 system
- Networkable up to 32x Soni8 panels (total network size 256 transducers) for centralized monitoring and controlling of large installations
- Fully compatible and interfaceable with SCADA and vessel management systems
- Mobile App* enabling the user to view, monitor and control the full system

(*network and Wi-Fi / 4G interface module, required)

LCD display

- Overall system status
- Status of each individual transducer channels
- Run times for each channel
- AC and DC system voltage and status.

Keypads



Technical specification

Brand	NRG Marine Ltd.
Product name	Soni8
Product code	SH08
PSU approval	CE and UL
Voltage	110-240V AC 24V DC (DC range 22/30V)
DC supply cable 2 core	1.5m
Mains supply cable 3 core	1.5m
Transducer	8 pcs.
Average power consumption	<30watts
Control box rating	IP65
Transducer rating	IP68
Transducer Cable	7.5m. in length
Weight	12.80kg. (Total weight) 4.80 kg. (Control box) 1kg. per Transducer (x8)
Dimensions	388mm x 340mm x 100mm
Warranty	2 years

Transducer x8 pieces



- 50 watts dual coil incorporating bespoke PFM technology
- Water proof IP68 with fully encapsulated cable entry.
- 7.5 metre cable length, (extendable to 80 metres).
- Commercial grade IP67 connector
- Mounting ring DN95mm x 20mm high
- Overall dimensions of transducer and mounting ring DN 95mm x 75mm high



Simple installation

Sonihull Transducers are bonded to the surface of the equipment or area that they are protecting, using our range of fitting accessories.

Mounting the Control Box

Find a suitable dry location above the waterline, with suitable access to either mains or battery power. Remove the lid to expose mounting holes for the control box.

Mounting the Transducer

- Use sandpaper to prepare the surface for mounting the transducer.
- For the best transmission of the ultrasonic pulses, the surface needs to be flat and smooth to ensure good contact.
- Use a hard epoxy resin to bond the mounting ring to the hull – ensuring there is no glue residue on the inside of the ring.
- Allow epoxy to dry before screwing in the transducer.
- Ensure surface to surface contact, with no air trapped between the transducer and hull.
- Add a smear of petroleum jelly (1mm) to the surface of the transducer before screwing into the mounting ring.
- Run the cables back to the control box and attach
- Power on

Installation tips

To get the best performance from the system there are 3 main considerations, if you follow these simple rules you will get the maximum benefit from the system.

1. Location

For hull protection, the transducer needs to be mounted on an obstruction free area below the water line and on the inside of the external skin. To enable the transducer to create resonance it must be away from any bulkheads, bracing and ribs etc, ideally in the centre of a panel and not closer than 300mm from any obstruction. Compare this to the skin of a drum. To make the best noise you would hit in the middle, not at the edges, ultrasound transducers need the same consideration.

2. Installing the transducer mounting ring.

The Transducer needs complete face-to-face contact for good transmission, and that means flat, not curved, bowed or rough. Only flat contact will work. Also, ensure that there are no drips of glue inside the ring. A little pimple of glue can hold the transducer off the surface and will prevent correct transmission of ultrasound. If there are any concerns that the surface is not flat, follow the manual for using the aluminium disk as a problem solver.

3. Applying the petroleum jelly.

The transducer needs to have a smear of petroleum jelly on the face to ensure correct transmission. An even 1mm application will ensure that good contact can be made. Do not apply too much as the transducer face will not get close to the surface and the signal will be insulated.

As good practice, when you first screw in the transducer, screw it in finger-tight. Then remove the transducer and observe the swirl marks in the petroleum jelly on the transducer, and look for the corresponding wetting on the surface inside the ring. This will give you a clear indication of the quality of the surface contact.

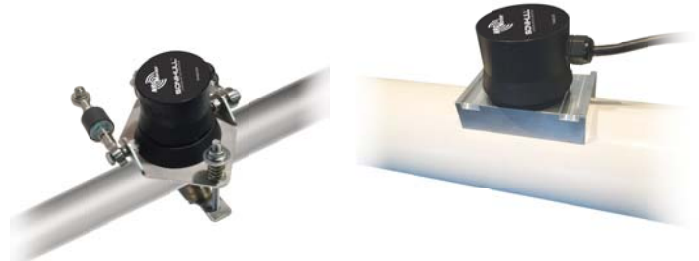
What's in the box?

- 1 x Soni8 ultrasonic pulse generator control unit with eight transducer outputs
- 8 x Ultrasonic transducers, each with 7.5 metres of cable
- Mains cable with UK standard 3-pin fused plug
- Marine Grade epoxy glue
- Petroleum jelly

Items required but not supplied with the kit.

- 4 x screws for mounting control box.

Soni8 Accessories



Sonishaft – Universal vibration-absorbing stabilizing mount to protect shafts and props.

Pipe Adaptors – Bespoke milled aluminium adaptors to protect all types and sizes of pipework.



Stern Drive Adaptor – Bolt-on adaptor to protect hard-to-reach equipment.

Extension Cable – Available for both 10m. and 20m. cable for connecting transducers further away from the control box.



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