“The intelligent anti-fouling solution”
SEEING IS BELIEVING
Before picture shows 2 seasons of growth with just antifoul paint. The vessel was then cleaned and a Sonihull installed. After picture shows the great results with Sonihull after a full season, the hull was completely barnacle free.

20,000+ Units Sold
15,000+ Vessels Protected

“The intelligent anti-fouling solution”
TRINITY YACHT 51M

Fitted with the NRG Sonihull System

The Solution: Engineers from E-Tech Group’s Dubai facility were asked to survey the problem and proposed the installation of the NRG marine Sonihull ultrasonic anti-foul system to the Sea Chests and Water Maker inlet. This already proven hull protection system had yet to be applied to aforementioned problem.

The Problem: Two raw water inlets (sea strainers) supplying all systems (engines, generators, air conditioning, fire pump and ballast). The two inlets have a conical shaped nylon mesh filter providing very fine filtration of the water entering the cooling system. Due to the fertile nature of the Dubai waters the filters were plagued with rapid algae, vegetation and barnacle growth, to such an extent that the filters required extensive cleaning every week in order to maintain the necessary flow of water. This cleaning process was time consuming, involving a lot of scraping and scrubbing to remove the growth that had managed to weave its roots into the fine filtration mesh.

The Installation: Given the layout of the engine room, the installation involved using 1x Sonihull duo and 1x Sonihull mono system. The IP67 Transducers were mounted on each of the sea chests below the water line and in this case were conveniently located below the floor plates. A third Transducer was mounted onto the side of the isolation valve for the water supply to the water maker, this was to provide protection not only to the valve from the build up of growth that could stop the valve from operating correctly, but also for the pipe work leading to the water making plant equipment. The IP65 Control boxes were mounted above the floor plates, allowing the crew to observe the indicator LEDs. The supply came directly from the 220VAC Distribution board at the aft of the engine room and all cabling was suitably dressed and secured on existing cable trays beneath the floor plates.

The Result: Following commissioning, the system was monitored over a four-week period, after which an inspection of the Strainers within the Raw Water Inlets (sea strainers) was carried out. The strainers were found to have very little growth and were still functional. The strainers did have a minor level of blockage due to the sand and silt, but this has to be expected and cannot be controlled by the Sonihull system.

Summary: Since the success of the trials, the solution has been widely accepted by many of Owners, Captains and Engineers. The recommendations and endorsements have resulted in a number of Super Yachts in the region having the system fitted.

One of the filters after a quick hose down - previously weekly scrubbing of heavy build up was needed.

Comments from the Crew: Captain Geoff Clarke stated, "It is fantastic to find an innovative marine product on the market that does the job that it’s designed to do, and as in our case, could be adapted to deal with other problems that arise from unwanted growth. I think NRG Marine along with E-Tech’s experience within the marine industry have a big future together”.

Chief Engineer Blake Holloway Commented, “I am delighted to see how effective NRG Marine’s ‘Sonihull’ product has performed during our trials. Previously when we removed the Strainers before having Sonihull I found up to 40 mm of growth per week. Now we find that we have very little around 5mm, and is mainly sand and silt. The sea strainers are cleaned on a fortnightly basis now and the system has had a great impact on the growth and minimised the time taken to clean.”
SUNSEEKER MANHATTAN 60

Fitted with the NRG Sonihull System

The aim of this installation was not just to cover the hull, but also to add extra protection to the running gear and rotating equipment.

Prior to using Sonihull this vessel was burning 280 litre’s of fuel an hour, due to the fouling, now with the clean hull being maintained by Sonihull the consumption has dropped to 240 LpH 40 litre’s an hour.

Transducer location: Duo, both mounted adjacent to the propellers shaft’s. Mono, mounted directly to the bow thruster tunnel.

The owner was keen to point out, that although the savings in fuel cost was nice, he was more impressed by the potential savings on wear and tear of his engines not having to work so hard.
NAUTOR'S SWAN SAILING YACHT ANEMOS

Fitted with the NRG Sonihull System

March 27, 2012

34m sailing yacht Anemos, built by the renowned Finnish shipyard Nautor's Swan is a modern cruising sloop with a composite hull construction. Designed by well known German Frers, the Anemos superyacht was fitted with the NRG Sonihull System by E-Tech Yachting in early 2011, as an addition to her regular paint based antifouling, before she started her busy season cruising the Central as well as Eastern Mediterranean.

Anemos superyacht’s captain, Richard Foster was really keen to see her underwater hull condition when she was hauled out at STP dockyard in Palma de Mallorca a year later in January 2012.

Richard was already pleased with the inconspicuous trouble free installation, and the fact that the system had required no onboard maintenance at all. Checking around the water line from the tender, and experiencing a noticeable improvement in the sailing performance of the luxury yacht Anemos throughout the season had shown very promising signs, so expectations were high!

Following our initial trials we decided to fit another 2 systems as hull anti-fouling, one duo unit on the hull plating above the propellers and another mono unit on a new 7 meter tender which we have not docked to date for final examination the transom area including the underwater lights has massively reduced as is the tender which is powered by solar panel.

And now the real test of Sonihull's antifouling effectiveness would be obvious as soon as the hull was clear of the water sitting in the travel lift slings. To Richard's delight there was no visible fouling at all on the hull, anywhere from the water line right down to the bottom of the keel.

He said: "I can only think of positives when it comes to commenting on this system! A friend who had it fitted on his boat in Dubai recommended it to us, so we had some track record to base our decision on. The major convincing factor in favour of us fitting Sonihull was the results from installation in the middle east, where there are serious growth problems due to warm water temperatures."

Would he continue using it and recommend it to others? "Based on these results I would say a resounding yes" said Richard. “Before Sonihull was installed the bottom would have to be physically cleaned by divers twice in a season. And the yacht’s performance is noticeably and consistently improved due to having a clean hull.”
45" RESPONSE BOAT MEDIUM (RBM)

Fitted with the NRG Sonihull System

January 9, 2014

In 2013 we sent a Kvichak Marine built all aluminum 45' Response Boat Medium (RBM) to the Middle East for a 6 country sales demonstration tour.

The weather conditions in the Middle East are extreme and require a lot of extra attention and forethought. The ambient air temperatures range from 65 to 120+ degrees Fahrenheit and water temperatures from 70 to 95+ degrees.

We installed a Dual Sonihull in June 2013 as our boat was going to sit idle for the next six months.

We installed one unit forward and one unit aft. Installation was easy with either 120V DC or 240V DC power input.

The extreme warm waters in this region normally create a very high rate of sea growth on the hull and running gear. Upon return to duty the boat was hauled and found to be in great condition with no adverse growth whatsoever on the hull.

We found no need for pressure washing or cleaning thereby eliminating any by-product or toxins going back into the local waters making this an environment friendly product that really works.

We were very pleased with the results from our Sonihull Duo.

Sincerely,

Steve Parker
Marine Operations Manager
VITERS 43M SAILING YACHT MYSTERE

Fitted with the NRG Sonihull System by E-Tech Yachting

Designed by renowned Bill Tripp, the 43m sailing yacht Mystere is an award winning spectacular sloop built by the prestigious Vitters Shipyard in Holland. The Mystere superyacht cruises and competes on both sides of the Atlantic and is often present in the various Superyacht Regattas.

Vitters 43m sailing yacht Mystere

E-Tech fitted the NRG Ultrasonic System to the Mystere superyacht’s sea chests which had experienced problems with calcium growth, worm casts and algae, all negatively affecting the efficiency of the cooling.

After a year in service the luxury yacht Mystere’s captain reported: “None of these substances were present at all, and the installation has been a ‘plug and play’ success, which just worked away quietly, and without any onboard attention required.”

He is now planning to have Sonihull fitted in some underwater duct areas around the Mystere yacht’s lifting keel.

NRG Sonihull system is an ultrasonic antifouling system marketed and installed by yacht electronics specialists E-Tech Yachting. Sonihull already has many years of research, development and proven practical use behind it. And E-Tech has all the expertise and resources needed to install it professionally and effectively, on all sizes of yacht from 10 metres up to superyachts.
NAUTOR'S SWAN 34M SAILING YACHT ANEMOS

Fitted with the NRG Sonihull System by E-Tech Yachting

34m sailing yacht Anemos, built by the renowned Finnish shipyard Nautor’s Swan is a modern cruising sloop with a composite hull construction. Designed by well known German Frers, the Anemos superyacht was fitted with the NRG Sonihull System by E-Tech Yachting in early 2011, as an addition to her regular paint based antifouling, before she started her busy season cruising the Central as well as Eastern Mediterranean.

Nautors Swan 34m sailing yacht ANEMOS fitted with the NRG Sonihull System by E-Tech Yachting Anemos superyacht’s captain, Richard Foster was really keen to see her underwater hull condition when she was hauled out at STP boatyard in Palma de Mallorca a year later in January 2012.

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Luxury yacht Anemos hauled out at STP boatyard in Palma de Mallorca

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To Richard’s delight there was no visible fouling at all on the hull, anywhere from the water line right down to the bottom of the keel.

He said: “I can only think of positives when it comes to commenting on this system! A friend who had it fitted on his boat in Dubai recommended it to us, so we had some track record to base our decision on. The major convincing factor in favour of us fitting SoniHull was the results from installation in the middle east, where there are serious growth problems due to warm water temperatures.”
MILITARY AND COAST GUARD PROJECTS.

Sonihull proves successful on coast guard MTR16 patrol boat.

Recent test carried out by ADSB on a 16 metre fast patrol boat with a composite Kevlar and carbon hull showed excellent results.

The test involved 2 similar boats, one with Sonihull Duo installed and one without. The vessels were left moored up within a few meters of each other for a 4 week period. After the first week a noticeable difference could be seen, by the end of the 4th week, the results were conclusive. The Vessel fitted with Sonihull had little or no growth over the entire hull, while the other vessel was found to have so much growth the vessel struggled get on the plane.

As a result of this test Sonihull will be included in all future standard project specifications.
MOTOR YACHT SIBELLE

12 June 2012

To Steve,

Engineer M.Y Hekinen

The yacht Sibelle a 44 meter Hessen has suffered from marine growth within the sea water manifold and associated systems causing blockages and the necessity to conduct regular cleaning in particular the hydraulic cooler and raised oil temperature during zero speed stabilization.

Following a full dismantle and cleaning of pipework’s, manifold and coolers during the docking period we fitted the duo Sonihull ultrasonic system to our sea chest as an alternative to the Cathelco system, one transducer was bonded to the top side of one sea chest and the other was mounted mid-way down the manifold on a spare blanking plate, the power control unit was located close by and the system was put into operation very easily.

Following tested and observations during the last 8 months the system has outperformed my best expectations, on weekly inspections we have seen no signs of growth nor have we had to clean the strainers only for light debris, we have inspected the manifold and coolers with an endoscope and again no signs of growth which in turn has benefited all auxiliary sea water systems thereafter.

Following our initial trials we decided to fit another 2 systems as hull anti-fouling, one dual unit on the hull plating above the propellers and another mono unit on a new 7 meter tender which we have not docked to date for final examination the transom area including the underwater lights has massively reduced as is the tender which is powered by solar panel.

I would have no hesitation to recommend NRG Sonihull system for marine Anti-fouling application.

Steve Whiteside
Chief Engineer
M.Y Sibelle
Email: eng@my-sibelle.com
Tel: +33 621 596 510
**SUPERYACHT**

- **Heesen M/Y You & Me**
  - Vessel: M/Y You And Me 147ft
  - Type: Superyacht
  - Unit installed: x2 Sonihull Duo
  - Location: Antigua

- **Vitters Mystere**
  - Vessel: Vitters Mystere 43m
  - Type: Sailing yacht
  - Unit installed: x4 Oceanic sea chest
  - Location: Holland

- **Heesen M/Y Sibelle**
  - Vessel: M/Y Sibelle 44m
  - Type: Sailing yacht
  - Unit installed: x3 Sonihull Duo
  - Location: Mediterranean

- **Nautor Swan S/Y Mystere**
  - Vessel: S/Y Mystere 35m
  - Type: Sailing yacht
  - Unit installed: x2 Sonihull Duo
  - Location: Palma de Mallorca

- **M/Y Douglas CtwoD**
  - Vessel: M/Y Douglas CtwoD
  - Type: Superyacht
  - Unit installed: x2 Sonihull Duo
  - Location: Palma de Mallorca

- **Moonen M/Y Phoebe**
  - Vessel: M/Y Phoebe 30m
  - Type: Superyacht
  - Unit installed: x2 Sonihull Duo
  - Location: United Kingdom

- **Heesen M/Y San Bernardo**
  - Vessel: M/Y San Bernado 45m
  - Type: Superyacht
  - Unit installed: x1 Sonihull Duo
  - Location:

- **Christensen M/Y Elisa**
  - Vessel: M/Y Elisa 45m
  - Type: Superyacht
  - Unit installed: x5 Sonihull Duo
  - Location:

- **M/Y Smyrna**
  - Vessel: M/Y Smyrna 37m
  - Type: Superyacht
  - Unit installed: x1 Sonihull Duo
  - Location:
Wally
M/Y Galeocerdo

Vessel: M/Y Galeocerdo
Type: 36m. super yacht
Unit installed: x4 Sonihull Duo
Location:

Heesen
M/Y Hayken

Vessel: M/Y Hayken 45m.
Type: Superyacht
Unit installed: x4 Sonihull Duo
Location:

M/Y Robusto

Vessel: M/Y Robusto 26m.
Type: Superyacht
Unit installed: x4 Sonihull Duo
Location:

Vitters
S/Y Unfurled

Vessel: S/Y Unfurled 46m.
Type: Sailing yacht
Unit installed: x7 Sonihull Duo
Location: George Town

M/Y Azumut 60

Vessel: M/Y Azumut 60
Type: Superyacht
Unit installed: x2 Sonihull Duo
Location: Brazil

Southerly
S/Y Dofeseba II

Vessel: S/Y Dofeseba II
Type: Superyacht
Unit installed: x4 Sonihull Duo
Location: United Kingdom

“The yacht had been in the water for two years and showing badly fouled. After I fitted the Sonihull system and when it was lifted out last weekend with very little fouling except for the propeller and drive shaft. Quite impressive.”

Mike Matthews
Westerly Falcon - New Zealand

“Volpower has been in the water for 11 months in up North in Opua. The Owner of this boat said “Don’t bother washing it.”

Dave
Volpower - Australia

“We took the boat out today for a scrub after 15 months in the water. The results were remarkable. I have a few photos I would like to share with you, both before and after a quick jet wash just a thin layer of slime on the hull, nothing more.”

Ian Pewson
Princess 42 - South Coast of England
**Volpower**
- **Type**: Motor yacht
- **Unit installed**: x2 Sonihull Duo
- **Location**: Australia

**Westerly Falcon**
- **Type**: Sailing yacht
- **Unit installed**: x2 Sonihull Duo
- **Location**: New Zealand

**Sunseeker Portofino**
- **Type**: Motor yacht
- **Unit installed**: x2 Sonihull Duo
- **Location**: France

**Malo 46 S/Y Nada**
- **Type**: Sailing yacht
- **Unit installed**: x1 Sonihull Duo
- **Location**: Scotland

**Beneteau S/Y Krisalya**
- **Type**: Sailing yacht
- **Unit installed**: x1 Sonihull Duo
- **Location**: United Kingdom

**Beneteau S/Y Oceanis**
- **Type**: Sailing yacht
- **Unit installed**: x1 Sonihull Duo
- **Location**: United Arab Emirates

**S/Y Bright Wings**
- **Type**: Sailing yacht
- **Unit installed**: x1 Sonihull Duo
- **Location**: Thailand

**Beneteau 37**
- **Type**: Sailing yacht
- **Unit installed**: x1 Sonihull Duo
- **Location**: United Kingdom

**S/Y Wind Dancer**
- **Type**: Sailing yacht
- **Unit installed**: x2 Oceanic see cheat & hull
- **Location**: Turkey
“Finally, I am proud to inform you that the first Sonihull anti-fouling system has been installed on one of the SAR vessels without any problem. We have installed two transducers on the intake of the Waterjets, one between engine & generator & one in accommodation. After finding this project successful, many vessels will be in the row.”

Ali Karsaz
SAR Vessel - Arabian Gulf

“Vigilant coming out to dry dock in Kuwait, she has been in the water for almost a year (February 2015) and is in a pretty impressive condition. There are no fouling at all.”

Dean Thomas
Vigilant Patrol Boat - Kuwait

“I have now used Sonihull on two Southern Yachts I have owned, and I have to admit I am delighted.”

Peter Bell
Southern Yachts - United Kingdom

“Just a quick note to let you know how well your sonihull system has worked on my 37 Ft Beneteau. The only growth is on the underwater lights with the flexible sealant Siloflex which has obviously isolated the ultrasonics from getting through! Impressive!!”

Capt. Rolando
Beneteau 37 - United Kingdom

“Before Sonihull was installed the bottom would have to be physically cleaned by divers twice a season. And the yacht’s performance is noticeably & consistently improved due to having a clean hull.”

Richard
Nautor’s Swan - Palma De Mallorca

“During the last 8 months, Sonihull system has outperformed my best expectations, on weekly inspections we have seen no signs of growth nor have we had to clean the strainers only for light debris, we have inspected the manifold and coolers with an endoscope and again no signs of growth which in turn has benefited all auxiliary sea water systems thereafter.”

Steve Whiteside
M/Y Sibelle 44 - United Kingdom
COMMERCIAL & INDUSTRIAL VESSELS

**Inverluasa**
- Vessel: Inverluasa
- Type: Support vessel
- Unit installed: x1 Sonihull Duo
- Location: Inverluasa

**Pentalina Ferry**
- Vessel: Pentalina Ferry
- Type: Transport ferry
- Unit installed: x2 Sonihull Duo
- Location: Orkney

**Norholm**
- Vessel: Norholm
- Type: Fishing vessel
- Unit installed: x3 Sonihull Duo
- Location: Shetland

**Resilient LK195**
- Vessel: Resilient LK195
- Type: Fishing vessel
- Unit installed: x2 Sonihull Duo
- Location: Whitby

**Windcat 3**
- Vessel: Windcat 3
- Type: Offshore wind vessel
- Unit installed: x4 Sonihull Duo
- Location: Lowestoft

**Daymen Shipyard**
- Vessel: Damen 2610
- Type: Offshore wind vessel
- Unit installed: x6 Sonihull Duo
- Location: Singapore

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“We are very impressed with Sonihull and glad we had it fitted to Prospero our Hardy 36 Sedan. Prospero only required a low power wash and no scrubbing!!”

Wendy Goddard
Hardy 36 Sondan - Guernsey

“I’m pleased with the results of the Sonihull System as they had managed to achieve excellent results with power boats keeping the stern drives clean.”

Stevor Worrall
E-Tech Regional Director - U.A.E.

“The Bright Wing Sailing Yacht would not be used for long periods of time, so fitting the Sonihull became “a no brainer” to the Owner who wanted to enjoy using his pride and joy from the moment he arrives rather than spending his time diving to clean the hull.”

Captain
S/Y Bright Wing - Thailand
BOX COOLERS

M/V Bourbon Supporter
Type: 3052 tonne support vessel
Unit installed: x12 Sonihull Duo
Location: Ireland

VB Reyser
Type: Tug boat
Unit installed: x2 Sonihull Duo
Location: Spain

Inverlussa
Type: Support vessel
Unit installed: x Sonihull Duo
Location: Inverlussa

Endeavour IV
Type: Fishing vessel
Unit installed: x2 Sonihull Duo
Location: Fraserburgh

VB Soñador
Type: Tug boat
Unit installed: x5 Sonihull Duo
Location: Spain

VB Poder
Type: Tug boat
Unit installed: x5 Sonihull Duo
Location: Spain

VB Muscle
Type: Tug boat
Unit installed: x5 Sonihull Duo
Location: Spain

VB Conqueridor
Type: Tug boat
Unit installed: x5 Sonihull Duo
Location: Spain

VB Llevant
Type: Tug boat
Unit installed: x5 Sonihull Duo
Location: Spain
SONIHULL
ULTRASONIC ANTIFOULING SYSTEM

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