

NAVAL Sector

The difference is TierraTech®

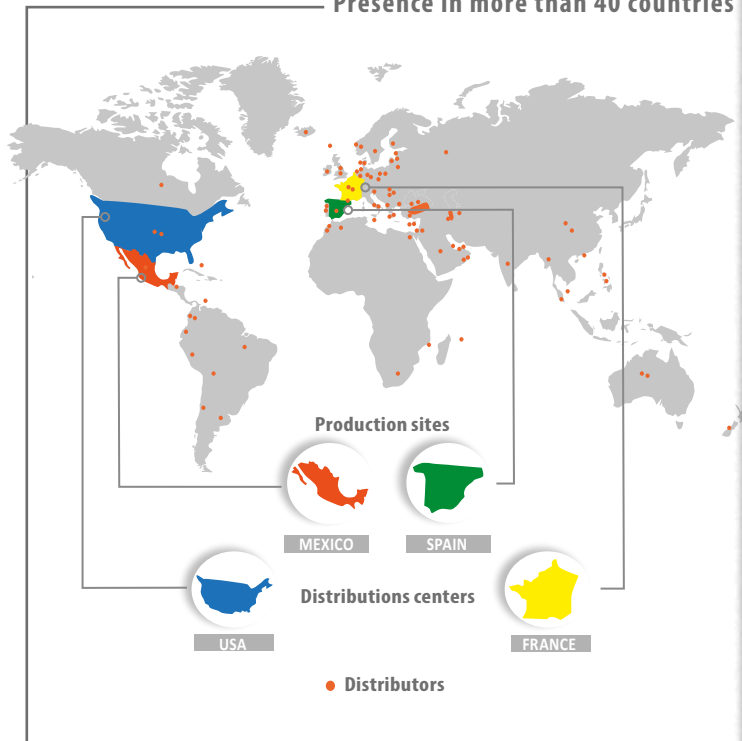


T | **tierratech**®
ULTRASONIC CLEANING SYSTEMS

COMPANY

tierratech

Presence in more than 40 countries



TierraTech® is a leading company in the manufacturing and commercialization of ultrasonic cleaning systems and equipment with over 18 years of experience in ultrasonic technology. Our highly qualified technical and sales team provides personalized service and advising according to the needs of each customer. You will get the most advanced and efficient ultrasonic cleaning technology at your facility with immediate delivery for our standard range.

We provide solutions thanks to the permanent work of our efficient R+D+I team on new technologies and applications around the ultrasonic cleaning, they incorporate state-of-the-art components and materials with an agile design for the realization of custom-made projects.

TierraTech® complies with the highest quality standards in all processes, our Quality Management System was certified by TÜV Rheinland according to UNE EN ISO 9001:2008 with register number 0.04.09057.

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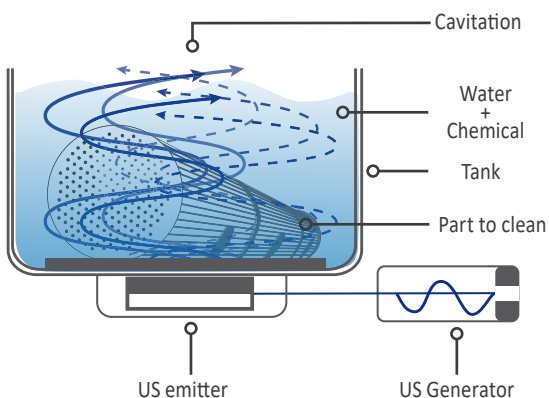


ULTRASONIC CLEANING

Fast

Effective

Ecological



The ultrasonic cleaning is the most effective method to get optimal results in the cleaning of mechanical elements of engines and coolers among others. A generator and a transformer turn the electrical current into high frequency (ultrasonic) waves which generate vibrations. The work frequency and the liquid density cause under- and overpressures, which appear and disappear in micro-seconds producing a micro-brushing that acts on any element which is immersed into the tank.

The dirt on the surface and in any possible nooks of the submersed parts is removed completely. The ultrasonic cleaning and degreasing offer quality cleaning, particularly important for delicate and difficult parts, as well as cost reduction thanks to the saving in washing times.

NAVAL MAINTENANCE



INTEGRATION OF ULTRASONIC CLEANING SYSTEM IN THE NAVAL INDUSTRY



TT-2000N



TierraTech®
Warranty



Technology
respectful to the
environment



Maximum
quality cleaning



80% reduction of
cleaning time



Energy cost reduction

ADVANTAGES



Water and
chemical saving



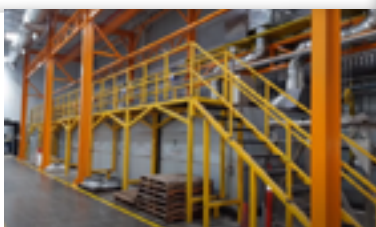
Ultrasonic cleaning has established as the best cleaning system in the field of naval industry over the last years. It encompasses shipbuilding, renovation and maintenance as well as oil platforms and offshore wind farms.

Ultrasonic cleaning systems are used to clean heat-exchangers, cylinder heads, turbos, intercoolers, tubular bundles or propellers and other parts with rust, grease, oil, paint, varnish, lubricants, sediments, coal or other buildup.

TierraTech® provides ultrasonic cleaning systems of large capacity specially designed for the cleaning of parts of big dimensions and weight.

The parts are fully cleaned from rust residues and sediments among others through a combination of ultrasonic vibrations and a percentage of chemical product.

Our ultrasonic cleaning systems can be adapted to the different kinds of ship or container, thus widening the maintenance scope in various places and conditions.



SOME OF OUR CUSTOMERS



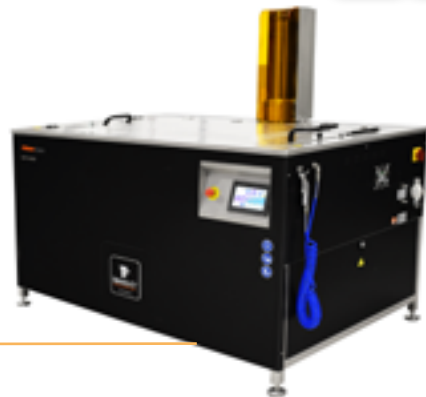


The naval industry finds in our ultrasonic cleaning machines the most suitable option for maintenance and repair of all kinds of engines, as it facilitates the cleaning of parts such as heat-exchangers, cylinder heads, turbos, plates, condensers, intercoolers, tubular bundles and other large and heavy parts, reducing 80% the cleaning time and effort of the traditional systems.



STANDARD MACHINES

The Motor Clean series of TierraTech® offers a wide range of different capacity machines which adapt perfectly to the requirements of the naval industry and the parts to clean. Our machines can be supplemented with a pneumatic platform for an easy load and unload and systems for filtration, oil separation and water treatment among others.



CUSTOM-MADE MACHINES

TierraTech® counts on the capacity to assist the particular needs of each customer, being able to manufacture personalized systems with special dimensions and different numbers of tanks (one or more stages) according to the necessary treatments. The load/unload and movement systems can be operated manually or automatically with gantry cranes or different kinds of transfers.



ON-BOARD MACHINES

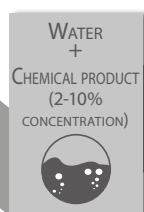
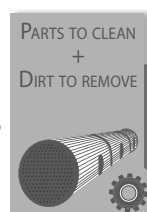
TierraTech® offers a wide range of machines which are adapted for maintenance and repair works on board in optimal conditions. These machines have a hermetic lid and special legs that can be anchored to the floor.



**Correct
cleaning**

The frameworks to hold the parts to clean are designed according to the needs of each customer. They can be baskets, special racks, frames or drums with up and down shaking movement, inclination or rotating systems.

Which is the most suitable ultrasonic cleaning machine for me?



COMMISSIONING



STANDARD MACHINES NAVAL INDUSTRY

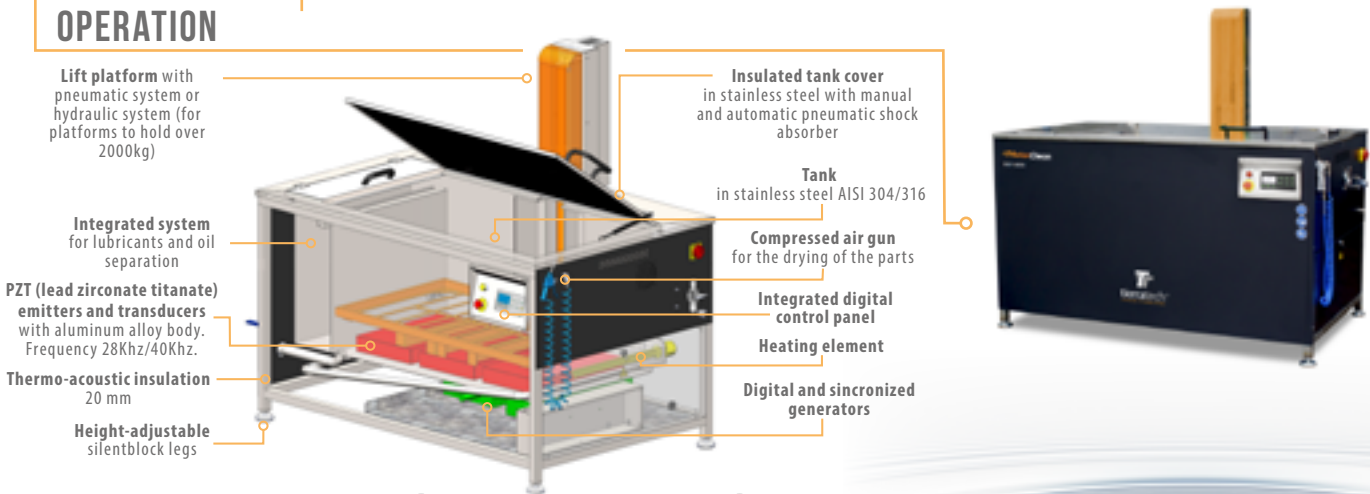
Our Motor Clean series was designed to provide a more efficient ultrasonic cleaning at a lower operating cost. The solutions we develop for big projects are applied to our standard machines, thus ensuring always the best cleaning result.



MODEL	VOLUME	INTERNAL DIMENSIONS	USABLE DIMENSIONS	EXTERNAL DIMENSIONS	WEIGHT	ULTRASONIC PEAK POWER	MAX. LOAD LIFT-PLATFORM
MOT-150N	150 litres	700X480X540 mm*	670X420X345 mm	1260X825X920 mm	175 kg	1.700Wp (3.400 Wp-p)	60 kg
MOT-300N	300 litres	900X615X640 mm*	860X575X390 mm	1520X1020X1030 mm	275 kg	3.000Wp (6.000 Wp-p)	250 kg
MOT-400N	400 litres	1100X615X690 mm*	1060X575X440 mm	1720X1020X1080 mm	320 kg	3.400Wp (6.800 Wp-p)	250 kg
MOT-600N	600 litres	1300X735X665 mm*	1230X650X435 mm	1940X1200X1070 mm	350 kg	5.100Wp (10.200 Wp-p)	350 kg
MOT-1000N	1000 litres	1500X810X875 mm	1410X720X585 mm	2810X1395X1100 mm*	550 kg	6.800Wp (13.600 Wp-p)	750 kg
MOT-2000N	2000 litres	1750X1010X1080 mm	1650X910X790 mm	3165X1675X1345 mm*	1250 kg	10.200Wp (20.400 Wp-p)	1000 kg
MOT-3000N	3000 litres	2050X1200X1205 mm	1930X1080X900 mm	3600X1795 x1465 mm*	1850 kg	13.600Wp (27.200 Wp-p)	1500 kg
MOT-4000N	4000 litres	2400X1500X1260 mm	2280X1380X900 mm	4090X2260X1560 mm*	2800 kg	20.400Wp (40.800 Wp-p)	2000 kg
MOT-8000	8000 litres	3000X2000X1495 mm	2800X1800X1175 mm	3910X2570X1800 mm	3500 kg	34.000Wp (68.000 Wp-p)	-

* Auxiliary tank excluded.
* Including auxiliary tank and generator cabinet.

OPERATION



1

The tank is filled with water and chemical product (standard concentration of 2-10%) and heated to 70-85°C

2

The parts are placed on the lift-platform or on the grid at the bottom of the tank. They are submerged into the bath.

3

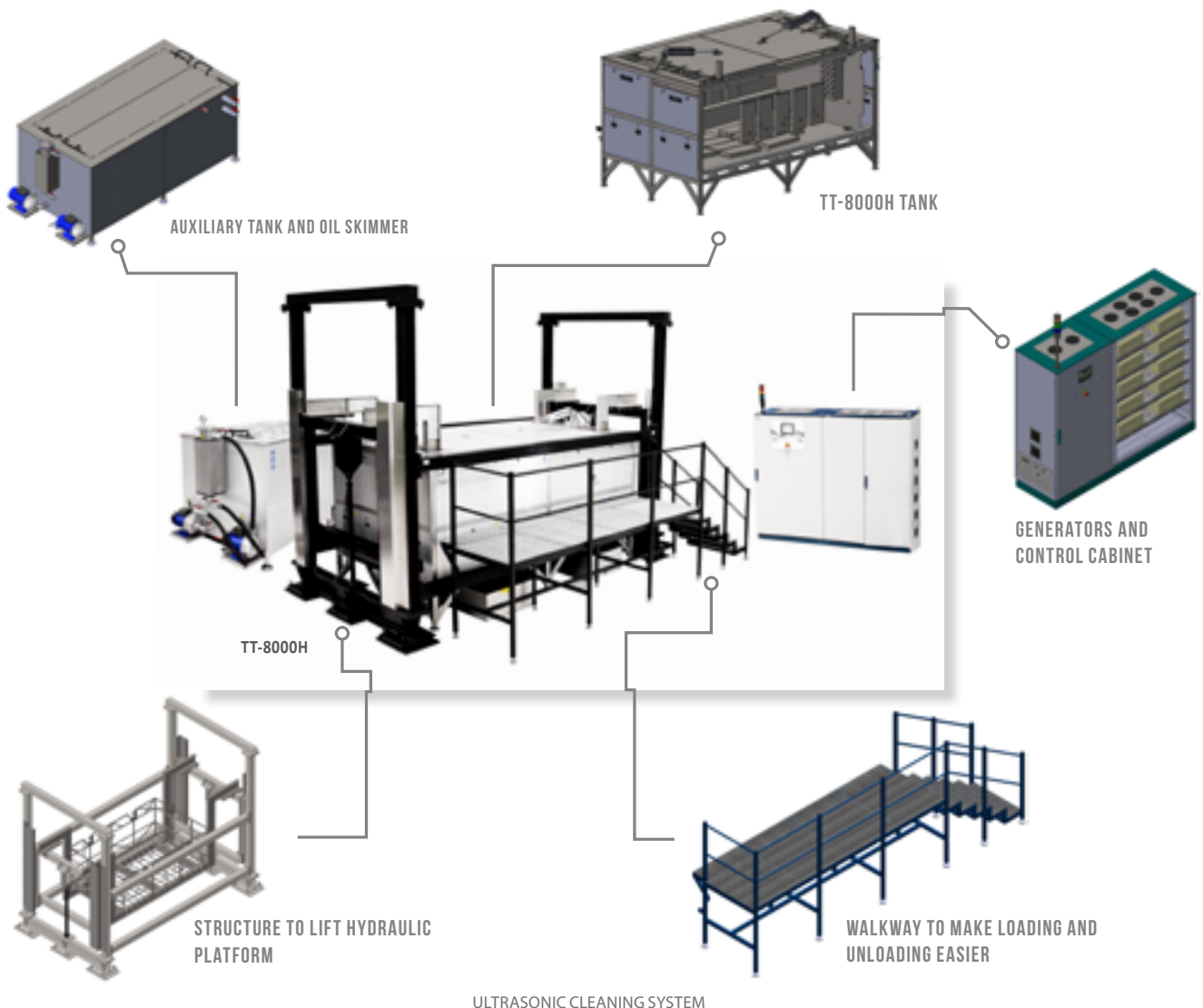
This automatic cleaning process can take from some minutes to some hours depending on the cleaning application.

4

Finally, the parts are taken out of the bath.

CUSTOM-MADE MACHINES NAVAL INDUSTRY

TierraTech® provides custom-made machines addressed to the particular needs of each cleaning, considering the characteristics of the parts as well as the production process requirements.



ON BOARD MACHINES

The ON-BOARD range of TierraTech® is based on our standard machines with hermetic lid and anchoring to the floor.



MODEL	VOLUME	INTERNAL DIMENSIONS	USABLE DIMENSIONS	EXTERNAL DIMENSIONS	WEIGHT	ULTRASONIC POWER PEAK	MAX. LOAD LIFT-PLATFORM
MOT-50 ON BOARD	50 litres	600X300X300 mm	550X250X225 mm	790X420X540 mm	40 kg	700Wp (1.400Wp-p)	-
MOT-75 ON BOARD	75 litres	700X350X400 mm	650X300X290 mm	960X550X900 mm	71 kg	800Wp (1.600Wp-p)	-
MOT-150 ON BOARD	150 litres	700X480X540 mm	670X420X345mm	1260X825X1020 mm	175 kg	1.700Wp (3.400 Wp-p)	-
MOT-400N ON BOARD	400 litres	1100X615X690 mm	1060X525X440 mm	1720X1020X1080 mm	320 kg	3.400Wp (6.800Wp-p)	250 kg
APPLICATION	Cleaning, degreasing and maintenance of engines and other components of a ship. Degreasing and decarbonization of injectors, pumps, cylinder heads and other components.						



ULTRASONIC CLEANING: BEFORE & AFTER



TIERRATECH® ULTRASONIC CLEANING SYSTEMS



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