

ULTRASONIC CLEANING EQUIPMENT

[STANDARD EQUIPMENT & CUSTOMIZED SOLUTIONS]



INDUSTRIAL LINE

T | **tierratech**
ULTRASONIC CLEANING SYSTEMS
tierratech.com



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TT TierraTech®
Ultrasonic Cleaning Systems
Industrial line
2022





ULTRASONIC CLEANING EQUIPMENT INDUSTRIAL LINE



WHO WE ARE

TIERRATECH® IS A LEADER IN THE MANUFACTURE AND PROMOTE OF ULTRASONIC CLEANING EQUIPMENT AND SYSTEMS FOR MORE THAN 20 YEARS OF EXPERIENCE IN ULTRASONIC TECHNOLOGY.

OUR HIGHLY QUALIFIED TECHNICAL AND COMMERCIAL TEAM ALLOWS US TO PROVIDE A PERSONALIZED SERVICE AND ADVICE ACCORDING TO THE NEEDS OF EACH CUSTOMER

WHAT WE MAKE

TIERRATECH® PROVIDES STANDARD ULTRASONIC CLEANING EQUIPMENT AND SYSTEMS OR TURN-KEY PROJECTS WHICH OFFER OPTIMAL CLEANABILITY THANKS TO THE COMBINATION OF ULTRASONICS, DETERGENT AND WATER.

LARGE NATIONAL AND INTERNATIONAL COMPANIES IN THE NAVAL, AERONAUTICAL AND AUTOMOTIVE INDUSTRY HAVE ALREADY RELIED ON OUR MOTORCLEAN LINE WITH CUSTOMIZED OR STANDARD EQUIPMENT, MANUAL OR FULLY AUTOMATED, SPECIALLY DESIGNED TO CLEAN THEIR PARTS AND IMPROVING THEIR PRODUCTION PROCESS.

We provide solutions, which is why we have an effective R+D+I team that continuously works with new technologies and applications in the ultrasonic cleaning environment, incorporating state-of-the-art components and materials, an agile design and a customized project execution.

TierraTech® complies with the highest quality standards in all our processes. Our Quality Management System is ISO 9001:2008 by TÜV Rheinland with registration number 0.04.09057.



TIERRATECH® WORLDWIDE

TierraTech® is located in Spain, USA, Mexico, France and Germany; Countries where we design, manufacture and distribute. In addition with our subsidiaries, we have an extensive distribution network in over 40 countries all over the world, offering commercial and technical support to all our customers worldwide.

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WE PROVIDE SOLUTIONS

1 ADVISING

TierraTech's® highly qualified technical and commercial team provides personalized support according to the needs of each client to offer the best service every day from the production process to after-sales.

2 SUITABLE EQUIPMENT

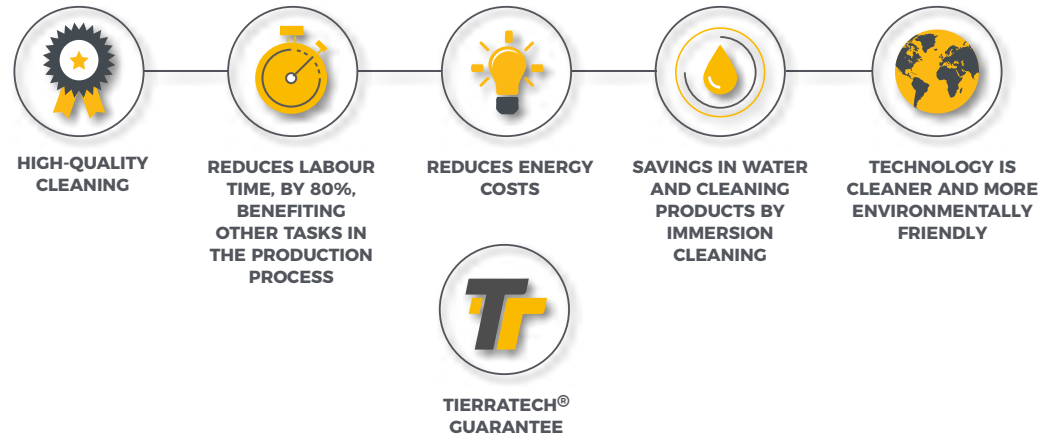
With an immediate delivery time for standard equipment and an agile design and development for custom equipment, you will have the most advanced and efficient ultrasonic cleaning technology in your facilities.

3 TECHNICAL SUPPORT

We have our own technical department with extensive experience, capable of resolving any incident in the shortest possible time, and thus guaranteeing the reliability of our customers' equipment, as well as the trust they have placed in us.

ADVANTAGES OF ULTRASONIC CLEANING

ULTRASONIC CLEANING HAS BEEN ESTABLISHED OVER THE LAST FEW YEARS AS THE BEST CLEANING METHOD IN THE INDUSTRY. THIS SYSTEM IS THE MOST EFFECTIVE FOR KEEPING PARTS IN PERFECT CONDITION, SAVING PRODUCTION TIME AND ACHIEVING A HIGH LEVEL OF QUALITY IN THE FINAL PRODUCT.



APPLICATIONS BY SECTOR

AUTOMOTIVE INDUSTRY

At TierraTech® we are backed by extensive experience in supplying standard and customized equipment for the automotive industry and its auxiliaries. Depending on the application and the number of pieces to be washed, the standard equipment or the customized equipment suitable for the needs of the client will be recommended.

AERONAUTICS INDUSTRY

The precision of ultrasonic cleaning helps both component manufacturers and MRO centers meet the stringent quality demands and strict industry safety standards. Tierratech® equipment is essential for cleaning hydraulic systems, heat exchangers, engine parts, injection pumps, blades, etc., as they do not damage materials and do not modify their geometry or dimensions.

GRAPHICS INDUSTRY

Ultrasonic cleaning systems are used for cleaning anilox rollers and sleeves, printing plates, inkwells, ceramic rollers and other removable printing parts with greasy, water-based, alcohol-based or UV ink build-up. Ultrasonic cleaning recovers the transfer level of the anilox roller cavities (cell volume recovery) and also on gravure cylinders of all sizes. TierraTech® equipment helps to maintain high print quality.

MOLD SECTOR INDUSTRY

Washing by immersion in our ultrasonic tanks is an effective and quality solution for cleaning all types of injection molds, that is, plastic, rubber, rubber-metal, aluminum injection, zamac, etc., since with its use, production times are optimized. It allows to obtain a total cleaning of the mold without the need to disassemble the piece and without damaging the materials. For this reason, it represents the most effective alternative to traditional cleaning systems.

SURFACE TREATMENT AND ELECTROPLATING

Ultrasonic pre-cleaning or part cleaning saves a great deal of time and labor, as it eliminates manual cleaning and long immersion times required by traditional washing methods.

Quickly and effectively removes polishing paste, grease and dirt of all kinds on metal and plastic parts, reaching all hard-to-reach areas.

NUCLEAR, WIND, THERMAL, COGENERATION, SOLAR INDUSTRY

The energy industry includes sectors such as nuclear, wind, thermal, cogeneration and solar. Depending on which one, we have different solutions, such as the cleaning of heat exchanger plates and heads in the nuclear sector. In the cogeneration industry, the main applications are the decarbonization and degreasing of engines and the cleaning of heat exchangers. In the wind industry it is used for the maintenance of geared motors.

FOOD INDUSTRY

Our equipment is suitable for the removal of oil, greasy dirt, residues and calcareous deposits. With the recommended ultrasonic system, we achieve a cleaning that is far superior to traditional methods, being a guarantee in the maintenance of equipment and tools in an industry with such high hygienic requirements.

PHARMACEUTICAL AND LABORATORY INDUSTRY

TierraTech® is present in the pharmaceutical industry. Our ultrasonic equipment is used to remove traces of chemical products, oils, pigments or fingerprints, among other residues.

We remove dirt from complex parts with cracks, difficult access or joints without damaging them. Ultrasound equipment achieves a high quality of cleaning and saves time and effort compared to manual washing.

ELECTRONICS INDUSTRY

Electronic applications are used on printed circuit boards and electronic components to remove weld residues, dust, grease and other contaminants that diminish their performance.

We achieve high quality cleaning in hard-to-reach areas or blind holes and gentle on delicate welded joints and small parts. After the ultrasonic cleaning process, electronic components improve their effectiveness and improve SIR test results.

BEFORE AND AFTER, PRINTED CIRCUIT BOARD CLEANING

MACHINING AND TURNING

Ultrasonic cleaning is the most effective solution in the industrial process of bar turning and machining. It is an excellent solution for cleaning and removing residues such as chips, traces of grease, rust, etc.

Our systems are being implemented in all subsectors of machining and bar turning in the automotive auxiliary industry, connectors, fittings, medical implants/prosthesis, etc.

MARINE INDUSTRY

In the marine industry, ultrasonic cleaning is applied in construction, renovation and maintenance, as well as oil drilling platforms and offshore/wind power generation platforms. Our cleaning equipment can also be used to work on different types of vessels or container, thus expanding the scope of maintenance in a variety of places and conditions.

Ultrasonic cleaning systems are used both for cleaning heat exchangers, cylinder heads, turbos, intercoolers, tubular bundles or propellers as well as for other parts with accumulation of rust, grease and oil, paint, varnish, lubricant, sediment or carbon among others.

BEFORE AND AFTER, CYLINDER HEAD AND CYLINDER LINERS

INDUSTRIAL MAINTENANCE

The harsh working conditions to which this type of machinery is subjected, make preventive maintenance a fundamental task to extend its useful life and for its proper functioning.

Our ultrasonic cleaning equipment facilitates the cleaning of chains, reducers, solenoid valves, transmissions or hydraulic units, heat exchangers, filters, etc., thus helping with correct maintenance that favors the efficient work of the machinery and reduces the possibility and risk of unforeseen breakdowns.

SOME OF OUR CLIENTS



CUSTOMIZED SOLUTIONS

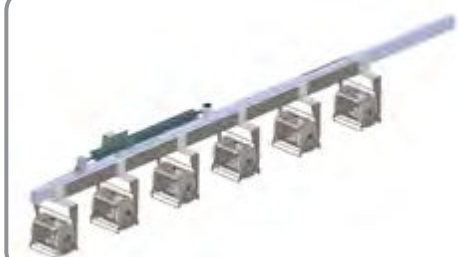
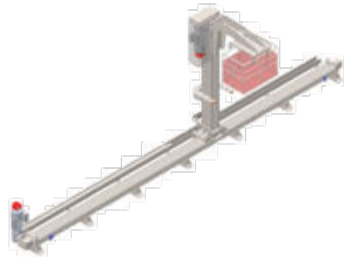
SPECIAL EQUIPMENT

- One - tank special equipment
- Special equipment manual multistage
- Multistage automatic special equipment ——— with loadig system

x/y TRANSFER

GALLOPANT TRANSFER

GANTRY CRANE



ONE - TANK SPECIAL EQUIPMENT

TIERRATECH® OFFERS CUSTOMIZED EQUIPMENT THAT SOLVES OUR CUSTOMERS' CLEANING NEEDS IN ANY APPLICATION IN THE INDUSTRIAL SECTOR. THE DIMENSIONS OF THE EQUIPMENT OF A TANK VARY FROM THOSE THAT ONLY REQUIRE SMALL CAPACITIES TO THE MANUFACTURE OF LARGE EQUIPMENT FOR THE NAVAL, ELECTRO-TECHNICAL, NUCLEAR INDUSTRY, ETC.



ONE TANK TT-350N

Customized single tank equipment designed and manufactured for cleaning molds for the manufacture of batteries in the energy sector. It includes a retention tank and a drainage pump with manifold and manual valve for emptying the tank.

USEFUL DIMENSIONS: 670x620x600 MM
INTERNAL DIMENSIONS: 740x715x862 MM
CAPACITY: 460 LITRES



ONE TANK TT-2900N

Specially manufactured single tank with a 3000 liter capacity. Designed for tire stripping, it has a tank made of AISI 304L stainless steel with a sloping bottom to guarantee the correct collection and evacuation of sludge. A manual press-type filtering system with 30 plates has been added to this equipment, which helps to separate the liquid remains from the solid with the greatest efficiency.

USEFUL DIMENSIONS: 3280x610x1030 MM
INTERNAL DIMENSIONS: 3400x720x1325 MM
CAPACITY: 3000 LITRES



ONE TANK TT-3300N

Ultrasonic cleaning equipment with 1 tank of approximately 3,300 litres capacity with automatic heat-insulated lid, manufactured for cleaning coolers in the naval sector.

USEFUL DIMENSIONS: 1200x1200x1700 MM
INTERNAL DIMENSIONS: 1300x1300x2070 MM
CAPACITY: 3300 LITRES



ONE TANK TT-400AC

Customized 400 liter capacity manual single tank with external stainless steel paneling and inclined tank bottom for proper cleaning and hot rinsing with spinners and filter discs for the removal of plastic and polymer components.

USEFUL DIMENSIONS: 4000x200x500 MM
INTERNAL DIMENSIONS: 4000x200x600 MM
CAPACITY: 400 LITRES





WE DESIGN, CUSTOMIZED TO THE REQUIREMENTS OF EACH CUSTOMER, SUPPORT STRUCTURES FOR WASHING PARTS, SUCH AS BASKETS, SPECIAL RACKS AND FRAMES WITH THE POSSIBILITY OF BATTING, INCLINATION OR ROTATING SYSTEMS.

SPECIAL EQUIPMENT MANUAL MULTISTAGE

THIS EQUIPMENT IS DESIGNED FOR COMPANIES WITH SPECIAL CLEANING NEEDS, EITHER DUE TO THE CHARACTERISTICS OF THE PARTS TO BE CLEANED OR DUE TO THE NEEDS OF THEIR MANUFACTURING PROCESS. THEY MAY INCORPORATE VARIOUS PROCESSES SUCH AS RINSING, DRYING OR DIFFERENT TREATMENTS IN ADDITION TO CLEANING. FROM THE VERY BEGINNING, WE WORK HAND IN HAND WITH OUR CUSTOMER TO FIND SPECIFIC SOLUTIONS THAT BEST FIT THEIR NEEDS BELOW ARE SOME EXAMPLES OF CUSTOMIZED EQUIPMENT DEVELOPED TO SPECIFICATION FOR OUR CUSTOMERS' NEEDS.

MULTI STAGE MANUAL TT-150NC

Customized manual multi-stage equipment for cleaning parts in a process of 6 tanks, ultrasonic, hot rinsing, cold rinsing and drying, with loading and unloading areas arranged in two sections with an angle of 90° between them.

USEFUL DIMENSIONS: 485x380x350 MM
INTERNAL DIMENSIONS: 700x430x590 MM
CAPACITY: 150 LITRES



MULTI STAGE MANUAL TT-3x150N

3 stage manual equipment for the medical-pharmaceutical sector with ultrasonic tank, hot rinsing tank and drying tank with pneumatic lifting platform for loading and immersion of the pieces in baskets with a maximum lifting capacity of 60 kg.

USEFUL DIMENSIONS: 640x400x325 MM
INTERNAL DIMENSIONS: 700x480x620 MM
CAPACITY: 190 LITRES



MULTI STAGE MANUAL TT-3x150N

Manual, ultrasonic cleaning equipment with three tanks having an approximate capacity of 195 litres. For the transport and immersion of the steel molds to be cleaned, it has 6 baskets with an upper anchoring system for loading - draining - unloading parts, built with rod and plates of SAE 304 stainless steel.

USEFUL DIMENSIONS: 550x400x400 MM
INTERNAL DIMENSIONS: 630x480x730 MM
CAPACITY: 195 LITRES



MULTI STAGE MANUAL TT-5x150N

Manual, multistage for cleaning parts and components in the aeronautical sector. The equipment is made up of 5 tanks: ultrasonic cleaning, hot ultrasonic rinsing, 2 hot rinsing tanks and a cold treatment tank.

USEFUL DIMENSIONS: 500x400x400 MM
INTERNAL DIMENSIONS: 581x480x725 MM
CAPACITY: 190 LITRES



MULTI STAGE MANUAL TT-2x600N

Manual double tank equipment with ultrasonic cleaning tank and hot ultrasonic rinsing tank, incorporates a pneumatic lifting platform for loading and immersion of the pieces, built in AISI 304 stainless steel, with a maximum load capacity of 500 Kg. The equipment integrates a waterflow system, a tank independent of the cleaning tank for capturing oils and particles in the main tank's surface.

USEFUL DIMENSIONS: 400x400x1600 MM
INTERNAL DIMENSIONS: 575x575x1960 MM
CAPACITY: 715 LITRES



MULTISTAGE AUTOMATIC SPECIAL EQUIPMENT

BECAUSE THE REQUIREMENTS OF QUALITY AND QUANTITY OF PARTS TO BE WASHED ARE DIFFERENT AND VARIED, EACH CLEANING SYSTEM IS MADE ACCORDING TO THE NEEDS, TAKING INTO ACCOUNT THE PRODUCTION AND CHARACTERISTICS OF THE PART TO BE WASHED.

OUR ULTRASONIC LINE IS COMPLETELY AUTOMATED AND MANUFACTURED TO MEET THE HIGHEST INDUSTRIAL CLEANING REQUIREMENTS AND ALSO MEETS THE DEMANDS AND STANDARDS OF OUR CLIENTS.

- X/Y TRANSFER -

The automatic multistage equipment incorporates a loading system of up to 100Kg for the displacement of baskets, racks and rotating drums in different working positions, with horizontal and vertical movements of variable speed. The type of transfer varies depending on the need for loading and immersion of the parts to be cleaned.



Customized automatic multi-stage, 3 tank equipment: ultrasonic cleaning, hot rinsing and drying, and tables for loading and unloading, for the baskets containing the parts to be cleaned. Specially designed for washing material from the medical-health sector. It integrates Waterflow System, independent tank of the cleaning tank for capturing oils and particles on the surface of the main tank plus a filtering system TTF1.

MULTI STAGE AUTOMATIC TT-3x150

USEFUL DIMENSIONS: 600x380x330 MM
INTERNAL DIMENSIONS: 700x480x640 MM
CAPACITY: 180 LITRES



MULTI STAGE AUTOMATIC TT-3x260

Modular ultrasonic cleaning system with automated lateral transfer for cleaning steel discs for the food sector. It integrates 3 tanks with a useful capacity of 260 litres each: ultrasonic tank + rinse tank in cold water by sprinkler + compressed air drying tank. The assembly has a security enclosure with light aluminum profile and steam extraction system.

USEFUL DIMENSIONS: 660x320x430 MM
INTERNAL DIMENSIONS: 800x400x800 MM
CAPACITY: 260 LITRES



MULTI STAGE AUTOMATIC CUSTOMIZED INSTALLATION

Customized installation manufactured for an automatic ultrasonic cleaning and degreasing line for medical instruments. It has been designed in the smallest and most compact way possible, according to customer requirements, separated into 3 different stages, US+2AF in one zone, AC in another area and vacuum drying in another area, automated in 2 zones with loading and unloading and manual drying.

USEFUL DIMENSIONS: 410x360x485 MM
INTERNAL DIMENSIONS: 410x360x600 MM
CAPACITY: 70 LITRES



- GALLOPING TRANSFER -

In the automatic equipment that incorporates this horizontal loading system, all the tanks are working at the same time. The transfer moves on the horizontal axis continuously loading the baskets that will be introduced and emerging from the tank with a vertical movement by means of a pneumatic platform.



MULTI STAGE AUTOMATIC TT-250
US+AC+AS
CON
US+AC+S

Modular automatic ultrasonic cleaning system of 5 tanks with a useful capacity of 250 litres each. Integrates: ultrasonic tank + hot rinse tank + hot rinse tank with ultrasound + hot rinse tank + drying tank + loading and unloading area. 15 rotating drums are included that will house the parts to be cleaned and will rotate in line in an automated way during the cleaning process with the help of a transfer of 1 galloping axis.

USEFUL DIMENSIONS: 460x400x460 MM
INTERNAL DIMENSIONS: 700x500x700 MM
CAPACITY: 250 LITRES



MULTI STAGE AUTOMATIC TT-7x500

Automatic multi-tank installation for cleaning of components of the industrial sector with 7 tanks of 625 litres of capacity each. 2 ultrasonic tanks + 3 for rinsing and 2 for drying. The loading and unloading system is a galloping transfer composed of carriages joined together, so that the thrust of the pneumatic actuator is transmitted from one to the other.

USEFUL DIMENSIONS: 500x750x210 MM
INTERNAL DIMENSIONS: 750x985x945 MM
CAPACITY: 625 LITRES



- GANTRY CRANE -

Loading of parts that exceed 100 kg in weight already requires this type of manipulator that we build with carbon steel beams and structural aluminum for the automatic movement of the basket or racks in different working positions with horizontal and vertical movements of variable speed. The automatic equipment that incorporates a gantry trolley is custom-made for large weight and volume parts that need high quality cleaning processes. They are designed according to the needs of the client and are very robust and functional equipment of the latest generation.



HEAVY EQUIPMENT
MULTI
STAGE
AUTOMATIC

SPECIAL AUTOMATIC
ULTRASONIC LINE

Special automatic installation for cleaning parts in the automotive sector with a 4-tank multistage ultrasonic cleaning line: Hot rinsing + ultrasonic cleaning + hot rinsing + drying. In this case the loading and unloading area to optimally adapt to the functionality of the equipment, has been designed in front arrangement and the installation has been fully faired with folding security windows that allow access to the interior of the equipment



USEFUL DIMENSIONS: 1320x1320x750 MM
INTERNAL DIMENSIONS: 1500x1500x1080 MM
CAPACITY: 2.000 LITRES

HEAVY EQUIPMENT
MULTI
STAGE
AUTOMATIC

CUSTOMIZED SYSTEM
US+AC

Special automated equipment with 2 tanks of 3,350 litres of capacity for degreasing large parts in the automotive sector. It has an ultrasonic cleaning tank + hot rinse tank + loading and unloading area. In addition to a security enclosure to prevent access to hazardous areas while the machine is running, but easily removable for maintenance work. It has an integrated steam suction system in both tanks with droplet separator.



USEFUL DIMENSIONS: 2395x985x1000 MM
INTERNAL DIMENSIONS: 2520x1120x1390 MM
CAPACITY: 3.350 LITRES

HEAVY EQUIPMENT
MULTI
STAGE
AUTOMATIC

AUTOMATIC
TT-7X11000

Large fully automated multi-tank installation of 7 tanks with 11,000 litres of capacity each for cleaning heat exchanger plates in the industrial sector. The line of tanks has been arranged from left to right to follow the washing process as follows: Hot rinsing + ultrasonic cleaning + hot rinsing (1) + hot rinsing (2) + hot rinsing (3) + ultrasonic cleaning + hot rinsing. The gantry carriage incorporates a passive suction system.



USEFUL DIMENSIONS: 1000x3500x1400 MM
INTERNAL DIMENSIONS: 1400x3900x1800 MM
CAPACITY: 11.000 LITRES



HEAVY EQUIPMENT
MULTI
STAGE
AUTOMATIC

TT-5x1850 US+CR+US
(ACID)+HR+D

Ultrasonic cleaning installation of 5 tanks with a capacity of 2,150 litres each for the automotive sector. The cleaning process is carried out in this case from left to right according to the customer's requirements with a gantry crane loading system to handle racks that transport parts up to 600 kg. The 5 tanks are arranged between the loading and unloading areas: Ultrasonic cleaning + cold rinsing + Ultrasonic cleaning + hot rinsing + drying tank.



USEFUL DIMENSIONS: 2300 x 400 x 1230 MM
INTERNAL DIMENSIONS: 2500 x 600 x 1425 MM
CAPACITY: 2.025 LITRES

STANDARD EQUIPMENT

30 LITRES
TO 8.000 LITRES



- **Capacity:** 30 litres
- **Internal dimensions:** 550 x 300 x 250 mm
- **Useful measurements:** 500 x 250 x 175 mm
- **External dimensions:** 720 x 420 x 500 mm
- **Power supply:** 240V
- **Heating element:** 700W
- Ultrasound generator with an output power of 600Wp (1200Wp-p)
- **Ultrasonic power:** 600Wp (1200Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 12 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 34 kg

TT-30



- **Capacity:** 50 litres
- **Internal dimensions:** 600 x 300 x 300 mm
- **Useful measurements:** 550 x 250 x 225 mm
- **External dimensions:** 775 x 420 x 540 mm
- **Power supply:** 240V
- **Heating element:** 900W
- Ultrasound generator with an output power of 700Wp (1400Wp-p)
- **Ultrasonic power:** 700Wp (1400Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 14 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 40kg

TT-50



- **Capacity:** 75 litres
- **Internal dimensions:** 700 x 350 x 400 mm
- **Useful measurements:** 650 x 300 x 290 mm
- **External dimensions:** 1075 x 575 x 900 mm
- **Power supply:** 240V
- **Heating element:** 1350W
- Ultrasound generator with an output power of 800Wp (1600Wp-p)
- **Ultrasonic power:** 800Wp (1600Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 16 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 71 kg

TT-75



- **Capacity:** 75 litres
- **Internal dimensions:** 650 x 390 x 470 mm
- **Useful measurements:** 620 x 325 x 270 mm
- **External dimensions:** 1260 x 730 x 925mm
- **Power supply:** 240V
- **Heating element:** 2250W
- Ultrasound generator with an output power of 1000Wp (2000Wp-p)
- **Ultrasonic power:** 1000Wp (2000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 16 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 130 kg

TT-75N



- **Capacity:** 150 litres
- **Internal dimensions:** 700 x 480 x 540 mm
- **Useful measurements:** 670 x 415 x 345 mm
- **External dimensions:** 1355 x 825 x 945 mm
- **Power supply:** 240V/400V
- **Heating element:** 3750W
- Ultrasound generator with an output power of 2000Wp (4000Wp-p)
- **Ultrasonic power:** 2000W (4000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 175 kg

TT-150N



- **Capacity:** 300 litres
- **Internal dimensions:** 900 x 615 x 640 mm
- **Useful measurements:** 860 x 525 x 390 mm
- **External dimensions:** 1620 x 1020 x 1045 mm
- **Power supply:** 400V
- **Heating element:** 7500W
- Ultrasound generator with an output power of 4000Wp (8000Wp-p)
- **Ultrasonic power:** 4000Wp (8000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 275 kg

TT-300N



- **Capacity:** 400 litres
- **Internal dimensions:** 1100 x 615 x 690 mm
- **Useful measurements:** 1060 x 525 x 440 mm
- **External dimensions:** 1820 x 1020 x 1095 mm
- **Power supply:** 400V
- **Heating element:** 7500W
- Ultrasound generator with an output power of 4000Wp (8000Wp-p)
- **Ultrasonic power:** 4000Wp (8000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 320 kg

TT-400N



- **Capacity:** 600 litres
- **Internal dimensions:** 1300 x 735 x 665 mm
- **Useful measurements:** 1230 x 650 x 430 mm
- **External dimensions:** 2050 x 1200 x 1070 mm
- **Power supply:** 400V
- **Heating element:** 9000W
- Ultrasound generators with an output power of 6000Wp (12000Wp-p)
- **Ultrasonic power:** 6000Wp (12000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 400 kg

TT-600N



- **Capacity:** 1000 litres
- **Internal dimensions:** 1500 x 810 x 875 mm
- **Useful measurements:** 1410 x 720 x 580 mm
- **External dimensions:** 2915 x 1395 x 1100 mm
- **Power supply:** 400V
- **Heating element:** 14000W
- Ultrasound generators with an output power of 8000Wp (16000Wp-p)
- **Ultrasonic power:** 8000Wp (16000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm$ 2%)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 550 kg

TT-1000N



- **Capacity:** 2000 litres
- **Internal dimensions:** 1750 x 1010 x 1080 mm
- **Useful measurements:** 1650 x 910 x 790 mm
- **External dimensions:** 3300 x 1660 x 1345 mm
- **Power supply:** 400V
- **Heating element:** 18000W
- Ultrasound generators with an output power of 12000Wp (24000Wp-p)
- **Ultrasonic power:** 12000Wp (24000Wp-p)
- **Working frequency:** 40kHz con sistema de barrido de frecuencia (sweep system $\pm 2\%$)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 1250 kg

TT-2000N

- **Capacity:** 3000 litres
- **Internal dimensions:** 2050 x 1200 x 1205 mm
- **Useful measurements:** 1930 x 1080 x 900 mm
- **External dimensions:** 3675 x 1800 x 1465 mm
- **Power supply:** 400V
- **Heating element:** 24000W
- Ultrasound generators with an output power of 16000Wp (32000Wp-p)
- **Ultrasonic power:** 16000Wp (32000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm 2\%$)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 1850 kg

TT-3000N

- **Capacity:** 4000 litres
- **Internal dimensions:** 2400 x 1500 x 1260 mm
- **Useful measurements:** 2280 x 1380 x 900 mm
- **External dimensions:** 4165 x 2260 x 1560 mm
- **Power supply:** 400V
- **Heating element:** 30000W
- Ultrasound generators with an output power of 24000Wp (48000Wp-p)
- **Ultrasonic power:** 24000Wp (48000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm 2\%$)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body.
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 2800 kg

TT-4000N

- **Capacity:** 8000 litres
- **Internal dimensions:** 3000 x 2000 x 1495 mm
- **Useful measurements:** 2800 x 1800 x 1175 mm
- **External dimensions:** 4000 x 2640 x 1795 mm
- **Power supply:** 400V
- **Heating element:** 60000W
- Ultrasound generators with an output power of 600Wp (1200Wp-p)
- **Ultrasonic power:** 40000Wp (80000Wp-p)
- **Working frequency:** 40 KHz. Frequency sweep System (Sweep System $\pm 2\%$)
- 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- Tank made of 2 mm thick stainless steel AISI 316
- **Weight:** 3500 kg

TT-8000**IMMEDIATE DELIVERY****ULTRASONIC GENERATORS****GENERATOR SB-2K-D**

AVAILABLE POWERS: from 1000W to 2000W with automatic power tracking, and optimum working point tracking, with three tracking modes, anti-stationary wave and anti-wave system in the tank.

AVAILABLE FREQUENCIES: 28KHz (With sweep system up to ± 1.5 KHz)
40KHz (With sweep system up to ± 1.5 KHz)
40-90KHz (With sweep system up to ± 1.5 KHz)

OPERATING SYSTEM:

- 3.5" TFT color display with access to power change and basic settings.
- Normal: Working point tracking, with three modes available.
- Sweep System: Up to ± 1.5 KHz frequency and speed modulation (adjustable parameters in model with display).
- Burst System: Amplitude and speed modulation (adjustable parameters on display model).
- Degas System: Degassing mode (adjustable between three modes in model with display)
- Ext Control: Ultrasonic ON/OFF, sweep ON/OFF, burst ON/OFF, degas ON/OFF and RS-485 communication.

GENERATOR SB-2K-L

AVAILABLE POWERS: from 1000W to 2000W with automatic power tracking, and optimum working point tracking, with three tracking modes, anti-stationary wave and anti-wave system in the tank.

AVAILABLE FREQUENCIES: 28KHz (With sweep system up to ± 1.5 KHz)
40KHz (With sweep system up to ± 1.5 KHz)
40-90KHz (With sweep system up to ± 1.5 KHz)

OPERATING SYSTEM:

- Power control from 10% to 100% on the front panel indicated with multicolor LED bar.
- Normal: Working point tracking, with three modes available.
- Sweep System: Up to ± 1.5 KHz frequency and speed modulation (adjustable parameters in model with display).
- Burst System: Amplitude and speed modulation (adjustable parameters on display model).
- Degas System: Degassing mode (adjustable between three modes in model with display)
- Ext Control: Ultrasonic ON/OFF, sweep ON/OFF, burst ON/OFF, degas ON/OFF and RS-485 communication.

GENERATOR SB-4K-D

AVAILABLE POWERS: from 2000Wp to 4000Wp, with automatic power tracking, and optimum working point tracking, with three tracking modes, anti-stationary wave and anti-wave system in the tank.

AVAILABLE FREQUENCIES: 28KHz (With sweep system up to ± 1.5 KHz)
40KHz (With sweep system up to ± 1.5 KHz)
40-90KHz (With sweep system up to ± 1.5 KHz)

OPERATING SYSTEM:

- 3.5" TFT color display with access to power change and basic settings.
- Normal: Working point tracking, with three modes available.
- Sweep System: Up to ± 1.5 KHz frequency and speed modulation (adjustable parameters in model with display).
- Burst System: Amplitude and speed modulation (adjustable parameters on display model).
- Degas System: Degassing mode (adjustable between three modes in model with display)
- Ext Control: Ultrasonic ON/OFF, sweep ON/OFF, burst ON/OFF, degas ON/OFF and RS-485 communication.

GENERATOR SB-4K-L

AVAILABLE POWERS: from 2000Wp to 4000Wp, with automatic power tracking, and optimum working point tracking, with three tracking modes, anti-stationary wave and anti-wave system in the tank.

AVAILABLE FREQUENCIES: 28KHz (With sweep system up to ± 1.5 KHz)
40KHz (With sweep system up to ± 1.5 KHz)
40-90KHz (With sweep system up to ± 1.5 KHz)

OPERATING SYSTEM:

- Power control from 10% to 100% on the front panel indicated with multicolor LED bar.
- Normal: Working point tracking, with three modes available.
- Sweep System: Up to ± 1.5 KHz frequency and speed modulation (adjustable parameters in model with display).
- Burst System: Amplitude and speed modulation (adjustable parameters on display model).
- Degas System: Degassing mode (adjustable between three modes in model with display)
- Ext Control: Ultrasonic ON/OFF, sweep ON/OFF, burst ON/OFF, degas ON/OFF and RS-485 communication.

GENERATOR SB - 10

AVAILABLE POWERS: from 1000Wp to 1700Wp, with automatic power tracking, and optimum working point tracking, with three tracking modes, anti-stationary wave and anti-wave system in the tank.

AVAILABLE FREQUENCIES: 28KHz (With sweep system up to $\pm 2\%$)
40KHz (Sweep System $\pm 2\%$)
40-90KHz (Sweep System $\pm 2\%$)

OPERATING SYSTEM:

- Normal: Working point tracking, with three modes available.
- Burst: Amplitude modulation (adjustment set)
- Sweep System $\pm 2\%$: Frequency Modulation (adjustment set)
- Ext control: ultrasonic ON/OFF by contact.

GENERATOR SB - 30

AVAILABLE POWERS: from 2000Wp to 3400Wp, with automatic power tracking, and optimum working point tracking, with three tracking modes, anti-stationary wave and anti-wave system in the tank.

AVAILABLE FREQUENCIES: 28KHz (With sweep system up to $\pm 2\%$)
40KHz (With sweep system up to $\pm 2\%$)
40-90KHz (With sweep system up to $\pm 2\%$)

OPERATING SYSTEM:

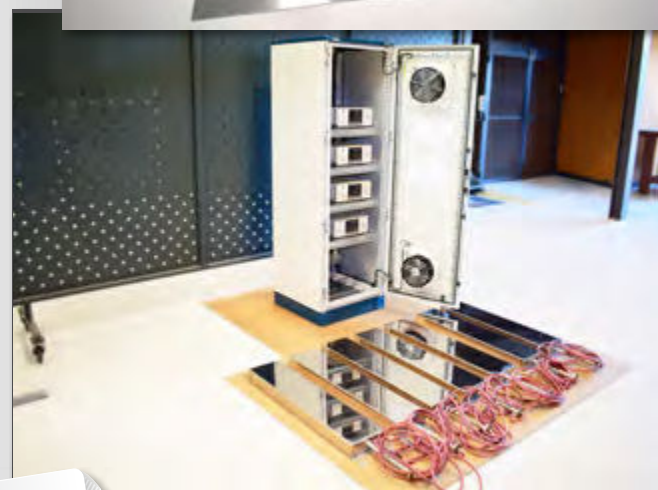
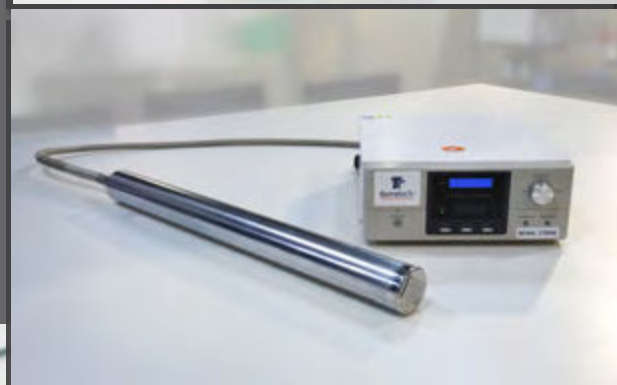
- Normal: Frequency wave tracking
- Burst: Amplitude modulation (adjustment set)
- Sweep System $\pm 2\%$: Frequency Modulation (adjustment set)
- Ext control: ultrasonic ON/OFF by contact.

WE OFFER OUR CUSTOMERS A WIDE RANGE OF ULTRASONIC GENERATORS. DEPENDING ON THE APPLICATION, MATERIAL OF THE PARTS AND DIRT TO BE REMOVED, TIERRATECH® WILL ALWAYS RECOMMEND THE MOST APPROPRIATE GENERATOR. FROM SINGLE FREQUENCY 28/40KHZ UNITS WITH SWEEP SYSTEM $\pm 2\%$ TO THE LATEST GENERATION GENERATORS MODELS SB-2K-D AND SB-2K-L FULLY DIGITAL AND BURST FREQUENCY SYSTEM AND MULTITECH.

SETS OF ULTRASONIC EMITTERS AND GENERATORS

AT TIERRATECH® WE HAVE A WIDE RANGE OF ULTRASONIC EMITTERS IN STANDARD MEASUREMENTS.

FOR CUSTOMIZED APPLICATIONS, WE DESIGN THE EMITTER ACCORDING TO THE NEEDS AND CLEANING REQUIREMENTS OF THE CLIENT, WITH MULTIPLE OPTIONS, MEASUREMENTS AND DIFFERENT ANCHORING SYSTEMS.



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DEPENDING ON THE APPLICATION, THE GRIME, AND THE MATERIAL THAT MAKES UP THE COMPONENTS TO BE CLEANED, TIERRATECH® WILL ALWAYS GIVE YOU THE MOST APPROPRIATE SOLUTION. CONSULT WITH OUR TECHNICAL DEPARTMENT.

STANDARD DIMENSIONS	POWER
550x350x70 mm	1500W / 1700W / 2000W
450x450x70 mm	
700x300x70 mm	
450x250x70 mm	600W / 1000W

EMITTERS HIGH FREQUENCY

POWER / FREQUENCIES

from 600 to 1700 W / 28 kHz
from 600 to 1700 W / 40 kHz
from 600 to 1700 W / 40-90kHz
Multifrequency
from 600 to 1000 W / 80 kHz
from 600 to 1000 W / 105 kHz

CLEANING PRODUCTS

Do you need to remove oil or grease? Remove welding residue? Remove calcium deposits?

Depending on the material that makes up the component to be cleaned, whether grime, or grease that needs to be removed, the appropriate cleaning agent is added to the base tank respectively.



ACIDS

- Acid sanitizing cleaner
- Food industry, hotel industry
- Descaling of limescale due to water hardness
- Rust remover/descaler for ferrous metals, steel, brass, sheet metal, etc. (depends on the type of metal)
- May attack certain coatings (chrome, nickel plating)
- Descaler
- Stripper for stainless steel and very high alloy steels

- ULTRASONIC - 251
- ULTRASONIC - 250
- ULTRASONIC - 550
- ULTRASONIC - 300
- ULTRASONIC - FLU
- NEUTRALIZADOR FO
- ULTRASONIC - 2513
- ULTRASONIC - AINOX
- ULTRASONIC - PRO
- ULTRASONIC - 350
- ALIQUAT
- ALIQUAT OXO
- ULTRASONIC-41
- ULTRASONIC-41 ADT

ALKALINE

- Degreaser
- Degreasing and descaling degreaser
- Removal of grease, oil and stubborn dirt deposits
- Degreasing and descaling degreaser
- Removal of grease, oil and stubborn dirt deposits
- Paint, enamels, varnishes, primers, inks, synthetic resins, paint stripper

- ULTRASONIC - 23
- ULTRASONIC - 22
- ULTRASONIC - 20
- ULTRASONIC - 52
- ULTRASONIC FORZA-N2
- ULTRASONIC-23 L
- ULTRASONIC-24
- ULTRASONIC-26
- ULTRASONIC-MP
- ALI COMPLET
- ULTRASONIC-5P
- ULTRASONIC-20 A
- ULTRASONIC-7 W
- ULTRASONIC-17
- ULTRASONIC-2
- ULTRASONIC-4 A
- ULTRASONIC-4
- ALIQUAT N
- ULTRASONIC-70
- ULTRASONIC-MX
- ULTRASONIC-7

STRIPPER

- Hot paint stripper, synthetic resins, primers, baked paints, powder paints, water-based paints, cataphoresis and anaphoresis paints
- Can be applied on ferrous base, aluminum and light alloys (depending on alkalinity)

- ULTRASONIC - 54
- ULTRASONIC - 53
- ULTRASONIC - 51
- ULTRASONIC - 101
- ULTRASONIC - D100W
- ULTRASONIC - 54
- ULTRASONIC - 51 N
- ULTRASONIC - 57
- ULTRASONIC - DECAP
- ULTRASONIC - 6

NEUTRALS

- ULTRASONIC - ELECTRO
- ULTRASONIC - MX
- ULTRASONIC - NE-W
- ULTRASONIC - 6

SURFACTANTS

- ULTRASONIC - A
- ULTRASONIC - B
- ULTRASONIC - TENSO

OTHERS

- ULTRASONIC - HIDRO
- ANTIOXIDANTE
- ULTRASONIC - LC
- ULTRASONIC - AR
- ULTRASONIC - BIO
- ANTIESPUMANTE
- ADITIVO SECANTE
- ADISEC
- NEUTRALIZADOR-FO

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*Always check the properties of each TierraTech® cleaning product before using it.



Follow us!



ULTRASONIC CLEANING SYSTEMS

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