

LINE

Standard and special equipment

INDUSTRIAL

ULTRASONIC CLEANING EQUIPMENT



T | **tierratech**®
ULTRASONIC CLEANING SYSTEMS

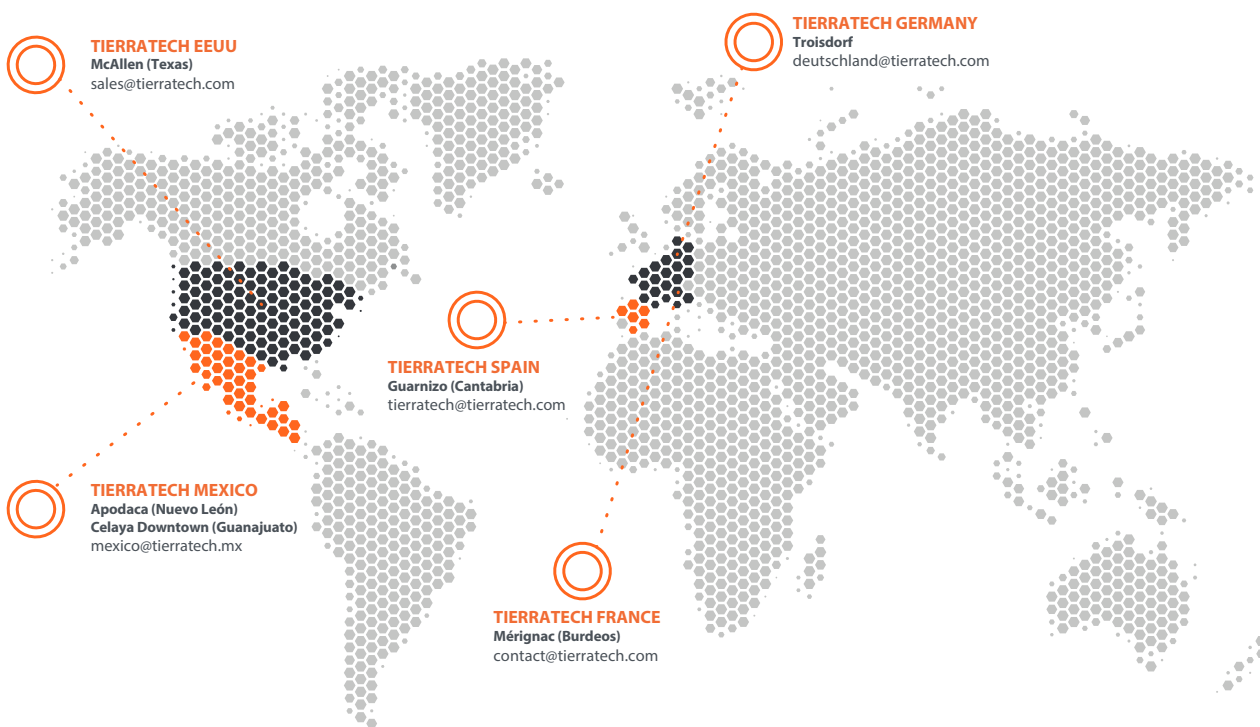
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TierraTech® WORDLWIDE

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 around the world, offering commercial and technical support to all our customers worldwide.



ULTRASONIC CLEANING EQUIPMENT

INDUSTRIAL LINE



WHO WE ARE

TierraTech® is a leading company in the manufacturing and marketing of ultrasonic cleaning equipment and systems with more than 25 years of experience in ultrasonic technology.

Our highly qualified technical and commercial team allows us to provide personalized service and advice according to the needs of each client.

WHAT WE DO

TierraTech® offers standard ultrasonic cleaning equipment and systems or turnkey projects that use a combination of ultrasound, detergent and water to provide impeccable cleaning.

Large national and international companies in the naval, aeronautical, automotive, molds, food, sanitary, graphic arts, electronics, energy, cosmetics, and many other industries, trust our industrial line with standardized or customized equipment, manual or completely automated, specially designed for the cleaning of their parts improving their production processes.

HOW WE DO

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.

At TierraTech® we meet the highest quality standards in all our processes. Certified according to ISO 9001:2008 by TÜV Rheinland with registration number 0.04.09057 and certified ISO 14001:2015, complying with a set of standards linked to the management of environmental systems, which are related to the protection, prevention, contamination and socioeconomic needs



TRAINING PROGRAM
SUSTAINABLE
SUPPLIERS



ADVANTANGES 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.



**HIGH-QUALITY
CLEANING**



**REDUCES LABOUR
TIME, BY 80%,
BENEFITING
OTHER TASKS IN
THE PRODUCTION
PROCESS**



**REDUCES ENERGY
COSTS**



**SAVINGS IN
WATER AND
CLEANING
PRODUCTS BY
IMMERSION
CLEANING**



**TECHNOLOGY
IS CLEANER
AND MORE
ENVIRONMENTALLY
FRIENDLY**



**TIERRATECH®
GUARANTEE**

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 comply 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.

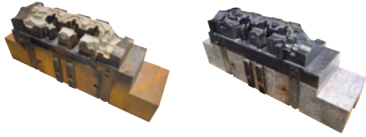
GRAPHICS INDUSTRY



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



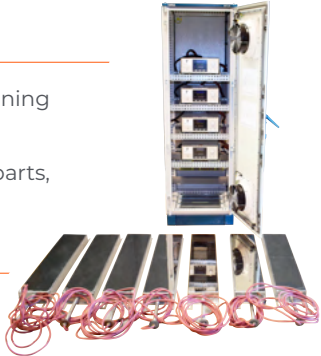
Washing by immersion in our ultrasonic tanks is an effective and quality solution for cleaning all types of injection molds as plastic, rubber, rubber-metal, aluminum injection, zamac, etc.,

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 INDUSTRIES



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.

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 AND MAINTENANCE

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.

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. Naval cylinder head cleaning



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.



Before and after. Cylinder sleeves.

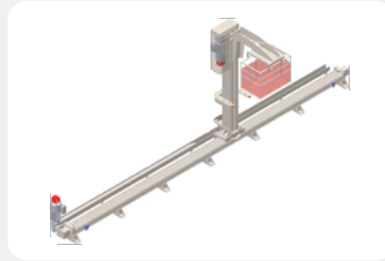


SOME OF OUR CLIENTS

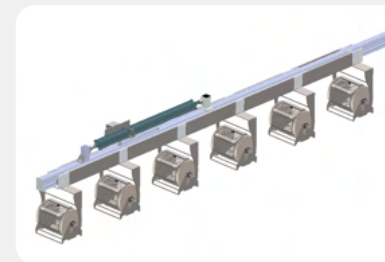


CUSTOMIZED SOLUTIONS

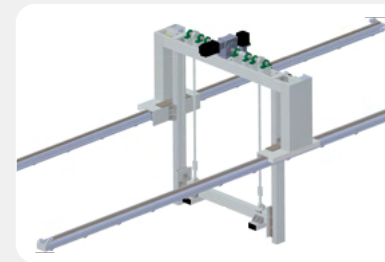
Special Multi-Tank Automatic Equipment with Loading System



X/Y Transfer



Gallopan transfer



Gantry crane

SINGLE TANK, CUSTOMIZED 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..

SINGLE-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 liters



SINGLE TANK
TT-2900N

Specially manufactured single tank with a 3000 liters 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 liters

SINGLE-TANK
TT-3300N

Ultrasonic cleaning equipment with 1 tank of approximately 3300 liters capacity with automatic heat-insulated lid, manufactured for cleaning coolers in the naval sector.



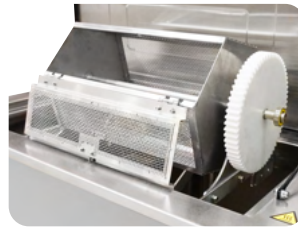
Useful dimensions: 1200x1200x1700 mm
Internal dimensions: 1300x1300x2070 mm
Capacity: 3300 liters

SINGLE-TANK
TT-400AC

Customized 400 liters 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 liters



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.

MANUAL, MULTI-TANK CUSTOMIZED EQUIPMENT

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 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 TANK MANUAL TT-150NC

Customized manual multi-tank 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 liters



MULTI TANK MANUAL TT-3X150N

Multi-stage, manual, tri-tank for the medical-pharmaceutical sector with ultrasonic tank, hot rinsing tank and drying tank with pneumatic lifting platform for loading and immersing parts in baskets with a maximum lifting capacity of 60 kg.

Useful dimensions: 640x400x325 mm
Internal dimensions: 700x480x620 mm
Capacity: 190 liters



MULTI TANK
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 AISI 304L stainless steel.

Useful dimensions: 550x400x400 mm
Internal dimensions: 630x480x730 mm
Capacity: 195 liters



MULTI TANK
MANUAL

TT-5X150N

Manual, multi-tank 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 liters

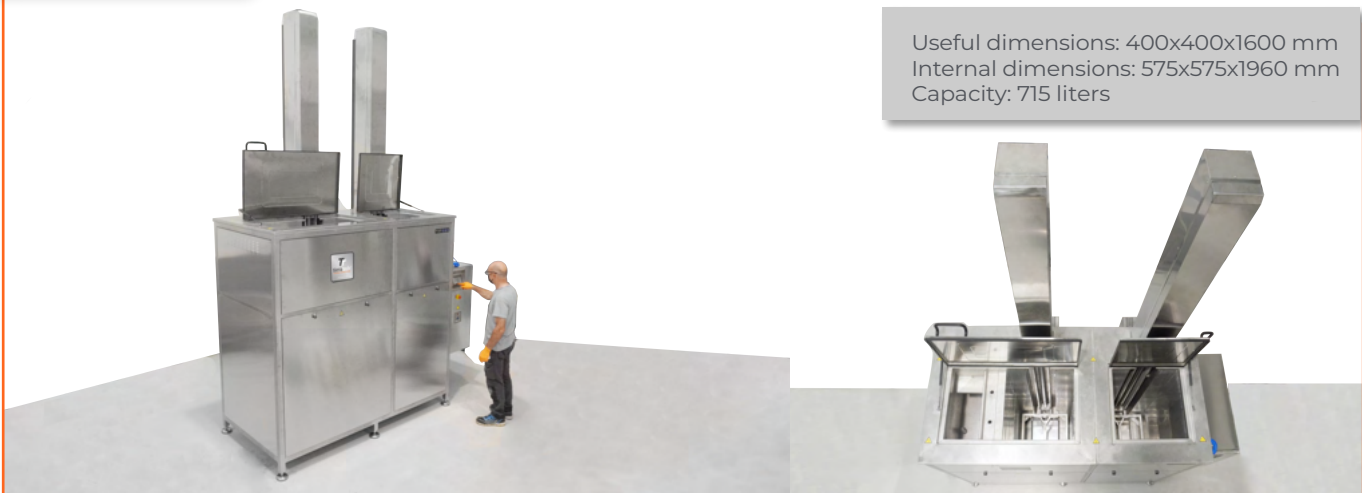


MULTI TANK
MANUAL

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 304L 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 liters



CUSTOMIZED AUTOMATIC MULTI-TANK EQUIPMENT

Since the quality and quantity requirements of the pieces to be washed vary, each cleaning system is made taking into consideration the production and characteristics of the pieces to be washed accordingly.

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.

- TRANSFER X/Y-

The automatic multi tank 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.



MULTI-TANK AUTOMATIC TT-3X150

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.

Useful dimensions: 600x380x330 mm
Internal dimensions: 700x480x640 mm
Capacity: 180 liters



MULTI-TANK
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 liters 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 liters



MULTI-TANK
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 liters



- GALLOPING TRANSFER

In the automatic equipment that incorporates this horizontal loading system, all 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-TANK
AUTOMATIC
TT-250
US+AC+AS
CON US+AC+S

Modular automatic ultrasonic cleaning system of 5 tanks with a useful capacity of 250 liters 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 liters



MULTI-TANK
AUTOMATIC
TT-7X500

Automatic multistage installation for cleaning components in the industrial sector with 7 tanks with a capacity of 625 liters each. It has 2 ultrasound tanks + 3 for rinsing and 2 for drying.

The loading and movement system is a galloping transfer made up of carriages linked 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 liters



MULTI-TANK
AUTOMATIC
TT-5X1050

Automatic multistage installation with 5 tanks for cleaning steel tools in the aeronautical sector.

The equipment has an ultrasonic tank, cold rinsing, drying, treatment and drying. Loading and movement system is a horizontal transfer for vertical movement using lifting platforms.

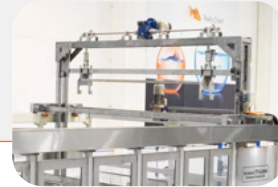
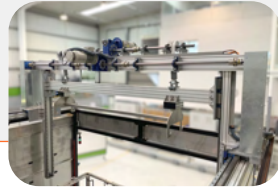
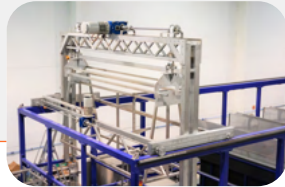
Useful dimensions: 850 x 1850 x 250 mm
Internal dimensions: 2015 X 1000 X 675 mm
Capacity: 1090 liters



- 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 that are very robust and functional equipment of the latest generation.



MULTI-TANK AUTOMATIC SPECIAL AUTOMATIC ULTRASONIC LINE

Special automatic installation for cleaning parts in the automotive sector with a multi-stage ultrasonic cleaning line with 4 tanks: 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 a frontal layout and the installation has been completely enclosed with folding security windows that allow access to the interior of the equipment.

Useful dimensions: 1320x1320x750 mm
Internal dimensions: 1500x1500x1080 mm
Capacity: 2.000 liters



MULTI-TANK AUTOMATIC TT-7x400N

Automatic multistage installation with 5 tanks for cleaning steel tools in the aeronautical sector.

The equipment has an ultrasonic tank, cold rinsing, drying, treatment and drying. Loading and movement system is a horizontal transfer for vertical movement using lifting platforms.

Useful dimensions: 300 x 620 x 580 mm
Internal dimensions: 550 x 970 x 1030 mm
Capacity: 400 liters



MULTI-TANK AUTOMATIC TT-3X5000N

Automatic multistage with 3 tanks: cleaning, rinsing and drying. for the automotive sector. With a capacity of 5000 liters, loading system and gantry carriage movement. The horizontal movement is transmitted by rack and pinion and the vertical movement by means of a belt with steel core.

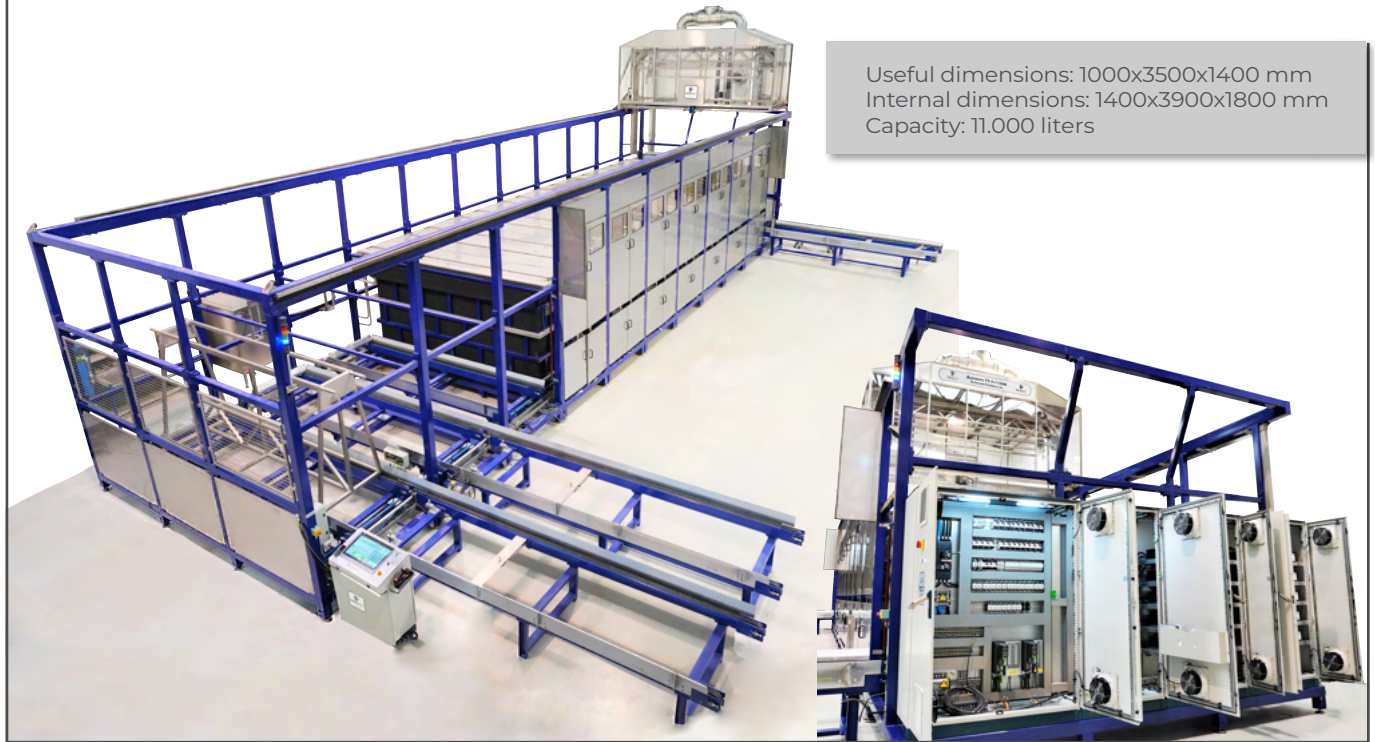
Useful dimensions: 1200x1670x2160 mm
Internal dimensions: 1470x2070x2420 mm
Capacity: 5000 liters



MULTI-TANK
AUTOMATIC
TT-7X11000

Large fully automated multi-tank installation of 7 tanks with 11,000 liters 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 crane incorporates a passive suction system.



Useful dimensions: 1000x3500x1400 mm
Internal dimensions: 1400x3900x1800 mm
Capacity: 11.000 liters

MULTI-TANK
AUTOMATIC
**TT-5x1850
US+CR+US
(ACID)+HR+D**

Ultrasonic cleaning installation of 5 tanks with a capacity of 2150 liters 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: 2.150 liters

"The future of ultrasonic cleaning equipment is already a reality with Tierratech®"



TT-100N ADVANCED 115 liters

- **Useful dimensions:** 620 x 325 x 280 mm.
- **Internal dimensions:** 650 x 390 x 490 mm.
- **Power supply:** 240V / 400V.
- **Heating element:** 2250W.
- **Ultrasonic power:** 1000Wp (2000Wp-p).
- **1 Ultrasonic generator with 1000Wp (2000Wp-p) output power.**
- **1 Submersible emitter** with 1000Wp (2000Wp-p), made of 2.5 mm AISI 316L stainless steel, equipped with 20 PZT (lead zirconate titanate) piezoelectric transducers in an aluminum alloy housing.
- **Operating frequency:** 40 kHz with frequency sweep system ($\pm 2\%$).
- **Pneumatic platform:** Built in AISI 304L stainless steel, with a load capacity of up to 60 Kg.
- **Control panel:** 7" touchscreen, preheating time control, weekly calendar, alarms, platform and water level control, and programmable work cycles.



TT-200N ADVANCED 215 liters

- **Useful dimensions:** 730 x 460 x 380 mm.
- **Internal dimensions:** 760 x 520 x 590 mm.
- **Power supply:** 240V / 400V.
- **Heating element:** 3750W.
- **Ultrasonic power:** 1700Wp (3400Wp-p).
- **1 Ultrasonic generator with 1700Wp (3400Wp-p) output power.**
- **1 Submersible emitter**, 1700Wp (3400Wp-p), made of 2.5 mm AISI 316L stainless steel with 34 PZT (lead zirconate titanate) piezoelectric transducers in aluminum alloy housing.
- **Operating frequency:** 40 kHz with frequency sweep system ($\pm 2\%$).
- **Pneumatic platform:** Built in AISI 304L stainless steel, with adjustable tilt and a load capacity of up to 200 Kg.
- **Control panel:** 7" touchscreen, preheating time control, weekly calendar, alarms, platform and water level control, and programmable work cycles.



TT-400N ADVANCED 415 liters

- **Useful dimensions:** 1060 x 520 x 430 mm.
- **Internal dimensions:** 1100 x 615 x 680 mm.
- **Power supply:** 400V
- **Heating element:** 7500W
- **Ultrasonic power:** 3400Wp (6800Wp-p)
- **1 Ultrasonic generator with 3400Wp (6800Wp-p) output power**
- **2 submersible emitters**, each 1700Wp (3400Wp-p), made of 2.5 mm AISI 316L stainless steel, equipped with 34 PZT (lead zirconate titanate) piezoelectric transducers housed in aluminum alloy bodies
- **Operating frequency:** 40 kHz with frequency sweep system ($\pm 2\%$).
- **Pneumatic platform:** Built from AISI 304L stainless steel, with a load capacity of up to 300 Kg.
- **Control panel:** 7" touchscreen with preheating time control, weekly calendar, alarms, platform and water level management, and programmable work cycles.



TT-600N ADVANCED 575 liters

- **Useful dimensions:** 1510 x 565 x 430 mm.
- **Internal dimensions:** 1550 x 635 x 680 mm.
- **Power supply:** 400V.
- **Heating element:** 9000W.
- **Ultrasonic power:** 5100Wp (10200Wp-p).
- **2 Ultrasonic generators with a combined output of 5100Wp (10200Wp-p)**
- **3 submersible emitters**, each 1700Wp (5100Wp-p), made of 2.5 mm AISI 316L stainless steel, equipped with 34 PZT (lead zirconate titanate) piezoelectric transducers in aluminum alloy housings.
- **Operating frequency:** 40 kHz with frequency sweep system ($\pm 2\%$).
- **Pneumatic platform:** Made of AISI 304L stainless steel, with a load capacity of up to 350 Kg, includes platform oscillation and automatic lid.
- **Control panel:** 7" capacitive touchscreen with preheating time control, weekly calendar, alarms, platform and water level control, and programmable work cycles.

STANDARD EQUIPMENT

30 LITERS TO 8000 LITERS

The industrial standard equipment includes modular equipment specially designed for cleaning, degreasing and descaling of all types of parts, components and accessories.

All the equipment in this line, from 75 liters upwards, can incorporate a pneumatic elevating platform to facilitate the loading and unloading of parts. All of them incorporate filtering, oil separation and water treatment systems, among others, to facilitate and provide the best solution for the industrial sector.



- **Capacity:** 30 liters
- **Internal dimensions:** 550 x 300 x 250 mm
- **Useful measurements:** 500 x 250 x 175 mm
- **External dimensions:** 740 x 450 x 520 mm
- **Power supply:** 240V
- **Heating element:** 900W
- Ultrasound generator with an output power of 600Wp (1200Wp-p)
- **Ultrasonic power:** 600Wp (1200Wp-p)
- **Working frequency:** 40 KHz. Frequency (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 316L**

TT-30


- **Capacity:** 50 liters
- **Internal dimensions:** 600 x 300 x 300 mm
- **Useful measurements:** 550 x 250 x 225 mm
- **External dimensions:** 790 x 450 x 570 mm
- **Power supply:** 240V
- **Heating element:** 900W
- Ultrasound generator with an output power of: 700Wp (1400Wp-p)
- **Ultrasonic power:** 700Wp (1400W p-p)
- **Working frequency:** 40 KHz. Frequency (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 316L**

TT-50


- **Capacity:** 75 liters
- **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 \pm 2%)
- **1 submersible emitter** with 16 piezoelectric PZT (lead zirconate titanate) transducers, with an aluminum alloy housing.
- **Tank made of 2 mm thick stainless steel AISI 316L**

TT-75


- **Capacity:** 100 liters
- **Internal dimensions:** 650 x 390 x 470 mm
- **Useful measurements:** 620 x 325 x 260 mm
- **External dimensions:** 1260 x 730 x 925mm
- **Power supply:** 240V/ 400V
- **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 \pm 2%)
- **1 submersible emitter** with 20 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 30 kg

TT-75N



TT-150N

- **Capacity:** 165 liters
- **Internal dimensions:** 700 x 480 x 540 mm
- **Useful measurements:** 670 x 415 x 330 mm
- **External dimensions:** 1355 x 825 x 945 mm
- **Power supply:** 240V/400V
- **Heating element:** 3750W
- Ultrasound generator with an output power of 1700Wp (3400Wp-p)
- **Ultrasonic power:** 1700Wp (3400Wp-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **1 submersible emitter with** 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 60 kg



TT-300N

- **Capacity:** 320 liters
- **Internal dimensions:** 900 x 615 x 640 mm
- **Useful measurements:** 860 x 520 x 380 mm
- **External dimensions:** 1620 x 1020 x 1045 mm
- **Power supply:** 400V
- **Heating element:** 7500W
- Ultrasound generator with an output power of: 3400Wp (6800Wp-p)
- **Ultrasonic power:** 3400Wp (6800Wp-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **2 submersible emitters** with 30 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 250 kg



TT-400N

- **Capacity:** 420 liters
- **Internal dimensions:** 1100 x 615 x 690 mm
- **Useful measurements:** 1060 x 520 x 430 mm
- **External dimensions:** 1820 x 1020 x 1095 mm
- **Power supply:** 400V
- **Heating element:** 7500W
- Ultrasound generator with an output power of: 3400Wp (6800Wp-p)
- **Ultrasonic power:** 3400Wp (6800Wp-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **2 submersible emitters** with 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 250 kg



TT-600N

- **Capacity:** 600 liters
- **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 5100Wp (10200W p-p)
- **Ultrasonic power:** 5100Wp (10200W p-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **3 submersible emitters** with 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 350 kg



TT-1000N

- **Capacity:** 1000 liters
- **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 6800Wp (13600W p-p)
- **Ultrasonic power:** 6800Wp (13600W p-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **4 submersible emitters** with 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 500 kg



TT-2000N

- **Capacity:** 1900 liters
- **Internal dimensions:** 1750 x 1010 x 1080 mm
- **Useful measurements:** 1650 x 910 x 800 mm
- **External dimensions:** 3300 x 1660 x 1350 mm
- **Power supply:** 400V
- **Heating element:** 18000W
- Ultrasound generators with an output power of 10200Wp (20400Wp-p)
- **Ultrasonic power:** 10200Wp (20400Wp-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **6 submersible emitters with** 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 750 kg



TT-3000N

- **Capacity:** 2850 liters
- **Internal dimensions:** 2050 x 1200 x 1205 mm
- **Useful measurements:** 1930 x 1080 x 900 mm
- **External dimensions:** 3740x1830 x 1470mm
- **Power supply:** 400V
- **Heating element:** 28000W
- Ultrasound generators with an output power of 13600Wp (27200Wp-p)
- **Ultrasonic power:** 13600Wp (27200Wp-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **8 submersible emitters with** 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 2,5 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 1500 kg



TT-4000N

- **Capacity:** 4200 liters
- **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:** 28000W
- Ultrasound generators with an output power of: 20400Wp (40800Wp-p)
- **Ultrasonic power: 20400Wp (40800Wp-p)**
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **12 submersible emitters with** 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 3 mm thick stainless steel AISI 304L**
- **Pneumatic load platform:** Up to 2000 kg



TT-8000

- **Capacity:** 8600 liters
- **Internal dimensions:** 3000 x 2000 x 1495 mm
- **Useful measurements:** 2900 x 1900 x 1180 mm
- **External dimensions:** 4820 x 2485 x 1840 mm
- **Power supply:** 400V
- **Heating element:** 60000W
- Ultrasound generators with an output power of 34000Wp (68000Wp-p)
- **Ultrasonic power:** 40000Wp (80000Wp-p)
- **Working frequency:** 40 KHz. Frequency (Sweep System \pm 2%)
- **20 submersible emitters with** 34 PZT (lead zirconate titanate) piezo-electric transducers with aluminium alloy body
- **Tank made of 3 mm thick stainless steel AISI 304L**

ULTRASONIC GENERATORS

We offer our customers a wide range of ultrasound generators. Depending on the application, material of the parts and dirt to be removed, Tierra Tech will always recommend the most appropriate generator.

From 28/40kHz single frequency equipment with Sweep System $\pm 2\%$, to the latest generation generators models SB-2K-D and SB-2K-L completely digital and BURST and MULTITECH frequency system.

GENERATOR SB-2K-D



Available powers: 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.
- Control Ext: Ultrasonidos ON/OFF, sweep ON/OFF, burst ON/OFF, degas ON/OFF y comunicación RS-485.

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.

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.



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

	POWER / FREQUENCES
HIGH FREQUENCY EMITTERS	from 600 to 1700 W / 28 kHz
	from 600 to 1700 W / 40 kHz
	from 600 to 1700 W / 90-40kHz
	MULTIFREQUENCY
	from 600 to 1000 W / 80-28 Khz
	from 600 to 1000 W / 105-40 Khz

OUR DETERGENTS

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

ALKALINE

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

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

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

OTHERS

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

NEUTRALS

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

SURFACTANTS

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



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



T | **tierratech**®
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