Ultrasonic Cleaning Equipment
INDUSTRIAL LINE
Tierra Tech® is a leading international company involved in the manufacturing and distribution of Ultrasonic Cleaning Equipment and Systems.

In addition to our 15 years of experience in ultrasound technology, we have two production plants; one, in Europe and one in America, with distribution centers in the United States and France, we also have an extensive network of distributors that represent us in more than 30 countries.

Our technical sales team is highly qualified enabling us to offer a personalized service and advice, and an ability to meet the needs of each client. With standard equipment available for immediate despatch, you will have the most advanced and efficient ultrasonic cleaning technology at your facilities.

Here at Tierra Tech®, we have a very efficient Research & Development Department, who are working continuously with new cutting-edge technology and applications for the ultrasonic cleaning environment, therefore, enabling us to offer individual solutions to today’s problems.

We cater for the industrial sector and in addition to standard models, we have special equipment available enabling them to be adapted to suit every requirement. We also have an automatic multi-stage line, divided into two categories: Smart or Heavy, according to the loading capacity required.

At Tierra Tech®, we comply with the highest quality standards in all our processes. We are certified according to the ISO 9001:2008, endorsed by TÜV Rheinland under registry number 0.04.09057.
TierraTech® worldwide

TierraTech® is located directly in Spain, Mexico, USA and France; Countries where we have design, produc on and sales facilities. In addi on to our subsidiaries, we have an extensive distri bu on network in more than 30 countries, providing commercial and technical support to all our customers worldwide.

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Aplications by Industry

Automotive Industry
TierraTech® have a wealth of experience in supplying standard and special equipment to the automotive and related industries. According to the application and the size and quantity of components to be washed, we will recommend either a standard or custom-made machine best suited to that application.

Aeronautical Industry
The precision of ultrasound cleaning helps both the manufacturers of the components and MRO centres to meet the high-quality specifications and the strict safety standards of this sector. Where safety is of the utmost importance, the equipment offered by TierraTech® is essential for the cleaning of hydraulic systems, heat exchangers, engine components, injectors, pumps, vanes, etc. since ultrasonic cleaning does not affect the materials or alter the dimensions or geometry of the surfaces. TierraTech® has extensive experience in the aeronautical industry and can offer you the most suitable solution to your requirements.

Graphics Industry
Ultrasonic cleaning systems are used to clean rollers and anilox sleeves, etching plates, cartridge holders, ceramic rollers and other removable parts that accumulate oil, water, alcohol or UV-based ink. The accumulation of dirt causes a progressive deterioration on the drum, which affects the printing quality. The advantages of ultrasound cleaning are the recovery of the transfer level of the cells from the anilox rollers (recovery of the cell volume) and also rotogravure cylinders in all sizes. Therefore, using our machines for your cleaning needs, ensures you obtain a consistent and high printing quality.

Plastics Industry (Moulds)
Immersion washing in our ultrasound tanks is an efficient and high-quality solution for cleaning all kinds of plastic, rubber, rubber/metal, aluminium and zamak injection moulds. They also enable cleaning the complete mould without having to dismantle the piece and damaging the parts. This is why our equipment offers you the most efficient alternative to traditional cleaning systems. We take into account the amount of moulds you need to clean and any specific requirements and design and manufacture multi-stage cleaning equipment to meet these needs.

Aplications by Industry

Treatment of Surfaces and Electroplating
Ultrasonic cleaning before coating components results in considerable time-saving and labour costs because it replaces manual cleaning and the long immersion times required by using traditional cleaning methods. It removes polishing pastes, grease and dirt quickly and efficiently from all types of metal and plastic components, reaching any hidden areas. This means a better adherence to the surface of an electrocoat and, therefore, an enhanced appearance and quality of the product.

Stripping
In the field of stripping, the use of ultrasound enables accelerated processes and eliminates all the organic coating from metallic surfaces. This is why we use the latest generation of strippers. Strippers combined with the mechanical action of ultrasound enables the full removal of paint or coating. TierraTech® has considerable experience in industrialised stripping processes for steel, aluminium, etc. We also have considerable experience in restoring valuable parts, for example, alloy wheels, automotive components, aluminium profiles for architectural purposes, etc. and in maintaining instruments used in painting lines.

Energy Industry (nuclear, wind power, thermal, electricity, solar)
The energy industry encompasses sectors such as nuclear, wind, thermal, electric and solar. We have different solutions adapted to the different sectors, such as cleaning of heat exchanger plates and heads in the nuclear sector.
For the Electric Industry, we decarbonise and degrease engines and clean heat exchangers. In the Wind Turbine Industry, ultrasound is used to maintain gear motors.

Food Industry
Our equipment is ideal to remove oil, grease, waste and calcareous encrustation. With the recommended ultrasound system, we achieve a better cleaning result compared to traditional methods. This constitutes a guarantee for the maintenance of equipment and instruments in an industry with such high hygiene standards.
Aplications by Industry

Pharmaceutical and Laboratory Industry
TierraTech® equipment is used in the pharmaceutical industry. Our ultrasonic equipment is used to remove traces of chemical products, oils, pigments, among other residues. We remove dirt from complex components with cracks, joints or restricted access without damaging them. Ultrasonic equipment achieves a superior cleanliness and saves time and effort compared to conventional washing.

Electronics
Ultrasound cleaning in the electronics field is used for printed circuit boards and electronic components in order to remove soldering residues, dust, grease and other contaminants that reduce the performance. We achieve a high-quality cleanliness even in areas that are hard to reach or blind holes, but at the same time it is delicate with fragile soldering and small components. A modular ultrasonic cleaning system, the electronic components improve cleanliness and achieve improved results in SIR tests.

Machining and Precision Parts
Ultrasound cleaning is the most efficient solution in industrial bar turning and component machining. It is an excellent method for cleaning and removing residue such as shavings, grease, rust, etc. Our systems are being implemented in all machining sub-sectors and bar turning in the ancillary automotive industries, including connectors, couplings, implants/medical prostheses, etc.

Industrial Maintenance
Ultrasound cleaning is an essential task in the industrial maintenance industry to ensure reduced downtime in the manufacturing process. Preventive maintenance is essential to extend the life of machinery used in this industry and to ensure smooth operation and reduce the possibility of unexpected breakdowns. Our ultrasonic cleaning equipment facilitates cleaning chains, gears, electro-valves, transmissions, hydraulic gears, heat exchangers, etc.

TT Multistage Automatic Smart

TierraTech® has designed a standardised line both in capacity and in cleaning or treatment stages. Since the requirements for quality and quantity of the parts to be cleaned are different, each cleaning system is built according to the prospective customers' specifications.

The Automatic Smart series are fully automated systems with useful capacities ranging from 50-350 litres. This equipment is designed to meet the highest requirements for industrial cleaning, thereby achieving cleaning results that meet our customers' specifications.

TT Automatic 50
A modular ultrasonic cleaning system with a useful capacity of 50-70 litres. Different modules are incorporated depending on the components to be cleaned, such as rinsing, passivation, drying, etc. The model shown is a standardised system composed of an ultrasonic cleaning system, two cold rinses, one hot rinse and drying.

Technical specifications
- Power supply: 400V
- Max. capacity of the tank: 70 Litres
- 5 cleaning process stations:
  - Ultrasonic cleaning
  - Cold rinse 1
  - Cold rinse 2
  - Hot rinse
  - Drying
- Ultrasonic generator with an output power of 800W
- Tank built in stainless steel AISI 316 of 2mm
- External paneling: fingerprint-free steel in 1mm
- Thermal acoustic insulation: K-Flex Duct Net of 20mm
- Automatic covers operated by pneumatic cylinders in all tanks
- Level detectors
- 9” module PLC with touch screen
- Dimensions (length x width x height):
  - Internal: 500 x 380 x 300 mm
  - Total external: 2770 x 2600 x 2130 mm

System with Enclosure
The equipment shown has similar characteristics to the standard system, but it is fully equipped with an enclosure and vapour extraction. Optional equipment can be supplied such as oil extraction, pneumatic covers, cleaning systems, rotary baskets, hot air drying, vacuum drying, automatic loading and unloading, or any other options you may require.

www.tierratech.com
TT Multi-Stage Automatic Smart

TT Automatic 100
A modular ultrasonic cleaning system with a useful capacity of 100 litres. Different modules are incorporated depending on the components to be cleaned, such as rinsing, passivation, drying, etc. The model illustrated below is a standard system consisting of ultrasonic cleaning, two cold rinses, hot rinsing and drying.

Technical specifications
- Power supply: 400V
- Max. capacity of the tank: 100 Litres
- 5 cleaning process stations:
  - Ultrasonic cleaning
  - Cold rinse 1
  - Cold rinse 2
  - Hot rinse
  - Drying
- Ultrasonic generator with an output power of 1000W.

TT Automatic 150
A modular ultrasonic cleaning system with a useful capacity of 150 litres. Different modules are incorporated depending on the components to be cleaned, such as rinsing, passivation, drying, etc. The model shown below is a standard system consisting of ultrasonic cleaning, two cold rinses, hot rinsing and drying.

Technical specifications
- Power supply: 400V
- Max. capacity of the tank: 150 Litres
- 5 cleaning process stations:
  - Ultrasonic cleaning
  - Cold rinse 1
  - Cold rinse 2
  - Hot rinse
  - Drying
- Ultrasonic generator with an output power of 1700W.

TT Automatic 300
A modular ultrasonic cleaning system with a useful capacity of 300 litres. The shown model below is a standard system that consists of two ultrasonic cleans, a cold rinse, hot rinse and drying; with built-in enclosure, vapour extraction, and a system for decanngng oils. Optional extras include the addition of more stations, rinses, passivations, pneumatic covers, filtering systems, rotary baskets, vacuum drying and automatic loading and unloading.

Technical specifications
- Power supply: 400V
- Max. capacity of the tank: 350 Litres
- 5 cleaning process stations:
  - Ultrasonic cleaning
  - Cold rinse 1
  - Cold rinse 2
  - Hot rinse
  - Drying
- Ultrasonic generator with an output power of 3400W.

System with Enclosure
The equipment shown has similar specifications to the standard system, but it is fully equipped with an enclosure and vapour extraction. Optional equipment can be supplied such as oil extraction, pneumatic covers, filtering systems, rotary baskets, hot air drying, vacuum drying, automatic loading and unloading, or any other option you may require.

Technical specifications
- Power supply: 400V
- Max. capacity of the tank: 350 Litres
- 5 cleaning process stations:
  - Ultrasonic cleaning
  - Cold rinse 1
  - Cold rinse 2
  - Hot rinse
  - Drying
- Ultrasonic generator with an output power of 1700W.

Providing Solutions
Detailed picture of the basket leaving the hot rinse stage. Multiple cleaning systems can integrate different drying types and passivation options.
The TT Automatic Heavy line is a bespoke system for heavy and very large parts that require high-quality cleaning processes. This equipment is designed to meet the customer’s specifications and provides a cutting-edge robust and functional system. You will find illustrated, some examples of bespoke equipment:

**TT-4 x 800**
Bespoke system for cleaning stainless steel heat exchangers, with a loading capacity of 750kg and useful capacity of 800 litres per tank. The vertical/horizontal conveyor process is performed using an overhead gantry. The four-stage system consists of: ultrasonic cleaning; rinsing; rinsing with demineralised water; drying and includes automatic covers and an area for loading and unloading.

**TT-3 x 750**
Bespoke system designed for cleaning stainless steel cutting discs with a loading capacity of 50kg and a useful capacity of 750 litres per tank. The vertical/horizontal conveyor process is performed using an overhead gantry. The three-stage system consists of: ultrasonic cleaning; cold rinsing and drying. There is also an area for loading and unloading.

**TT-5 x 720**
Bespoke Multistage system for cleaning aluminium frames with a loading capacity of 500kg and a useful capacity of 720 litres. The integrated conveyor process is performed using an overhead gantry. The five-stage system consists of: ultrasonic cleaning; double cold rinsing, hot rinsing and drying. There are also automatic covers and an area for loading and unloading.

**TT-4 x 750**
Bespoke system designed for cleaning cutting tools and components used in manufacturing. This machine has a loading capacity of 300kg and a useful capacity of 750 litres. The four-stage system consists of: ultrasonic cleaning; 2 cold rinses and hydrophobizing through oily agents. There are also automatic covers and an area for loading and unloading.
TierraTech® specialises in the manufacture of large cleaning tanks for the marine industry, nuclear industry, electroplating industry etc. With our own expert engineering team we are continually developing systems suitable for ultrasonic cleaning of very large components. You will find illustrated, some examples of cleaning tanks capable of cleaning large engines and components.

**TT-8000**

Large 8,000 litre capacity ultrasonic cleaning tank for marine engines. With 20 emitters and a power of 1700W each, this system has a total power of 34000W. It has an auxiliary tank for the extraction of oil and grease therefore reducing the contamination of the cleaning tank.

**TT-10000**

Bespoke ultrasonic cleaning tank with a 10,000-litre double tank. Before the painting process, metal parts in the production industry are cleaned and degreased. One tank is used for hot degreasing and the second is used for the dewaxing of the parts.

**TT-12000**

Specially designed for the nuclear industry and the cleaning of cooler-plates in nuclear reactors, this machine has internal dimensions of (length x width x height): 5000mm x 400mm x 5600mm and a 12,000 litre capacity tank.

**TT-17000**

Specially designed, extra large tank with a 17,000 litre capacity, for the cleaning and 'pickling' of steel parts. This System features TTF2 Filter system and pneumatic pump to recirculate the liquid and for the removal of metallic residues on the bottom of the tank.
Special Equipment / Manual Multi-Stage

These units are aimed at companies with specific cleaning requirements, either due to the characteristics of the parts to be cleaned or due to requirements specific to their fabrication process. They can incorporate several processes such as rinsing, drying or alternate wash treatments in addition to cleaning. From the initial enquiry, we liaise very closely with our customers to ensure the specific solutions best suited to their needs. Below are some examples of bespoke equipment developed specially for our customers.

**TT-60-1000N+RN**

Machine with a 1,000 litre capacity and a double tank for cleaning automotive rubber injection moulds. The unit has a high power ultrasonic cleaning tank and a second tank for the rinsing process. The machine also has automatic covers.

**TT-150+AC+S**

This machine has a 50 litre capacity and has been specially manufactured for the cleaning of precision-turned parts. It has been designed with an anchoring system for loading, draining and unloading of parts and has three stages: ultrasonic cleaning, rinsing and drying.

**TT-2 x 150 NS + Passivating with Air bubbles**

Ultrasonic cleaning system, specially designed according to the internal requirements of ZF. This system provides high power ultrasonic cleaning and passivation and is used to clean mechanical components.

**TT-90-2000-US+A+P+S**

Special 2,000 litre capacity, multi-stage tank for cleaning plastic injection moulds used in the manufacturing of razors and disposable razors. The system includes ultrasonic cleaning, rinsing tank with air bubbles, passivation tank and air drying. It has automatic covers.
**Special Equipment / Automatic Multi-Stage**

To provide the correct ultrasonic cleaning system to suit your requirements, we can customize our machines to fulfill your specifications exactly. We can design special baskets, racks, frames or circular drums, that best suits the components to be cleaned, which can incorporate oscillation, swivelling or turning.

**TT-6 x 30-US+A+US+A+P+SV**

Special, 370 litre capacity, completely automated Multi-Stage system for cleaning springs in the automotive sector. This machine contains a rotary system powered by a gear and mechanical transfer system with anchorage for the transport baskets. Six stages are carried out: ultrasonic cleaning; rinsing in a bath with ultrasound; double rinsing; passivation; and vacuum drying. All tanks include a 5 μm Filter system, Automatic loading and unloading, security enclosure and vapour extraction.

**TT-45-600US+E+E+S+S**

Automation stage equipment with 6 tanks of 600 litres each. It is used for the cleaning of aluminium and other metal parts and programmed for the degreasing of 32,000 parts in 120 hours.

**Standard Model**

The standard industrial ultrasonic cleaning line ranges from 30 to 7,000 litres. They are designed to clean, descale and strip all types of components, parts and accessories.

All the equipment in this line, from the 75-litre model onwards, can incorporate an elevation platform to facilitate loading and unloading of parts. They can also be fitted with filters, oil separators, water treatment systems, amongst others.

**Large stocks available**

IMMEDIATE DELIVERY

To provide the correct ultrasonic cleaning system to suit your requirements, we can customize our machines to fulfill your specifications exactly. We can design special baskets, racks, frames or circular drums, that best suits the components to be cleaned, which can incorporate oscillation, swivelling or turning.
Standard Model

TT-6030 - 30 litres

Capacity: 30 litres
Internal dimensions: 550 x 300 x 250 mm
Useful basket measures: 500 x 250 x 175 mm
External dimensions: 740 x 420 x 490 mm
Power supply: 240V
Heat resistance: 2x350W

1 ultrasonic generator with a power output of 600W (1200W p-p)
Ultrasonic power: 600W (1200W p-p)
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
12 piezoelectric transducers in IBL, high performance titanium steel
Tank built in stainless steel AISI 316 steel of 2mm
Weight: 34kg

TT-7050 - 50 litres

Capacity: 50 litres
Internal dimensions: 600 x 300 x 300 mm
Useful basket measures: 550 x 250 x 225 mm
External dimensions: 810 x 420 x 540 mm
Power supply: 240V
Heat resistance: 2x450W

1 ultrasonic generator with an output power of 700W (1400W p-p)
Ultrasonic power: 700W (1400W p-p)
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
14 piezoelectric transducers in IBL, high performance titanium steel
Tank built in stainless steel AISI 316 steel of 2mm
Weight: 40kg

TT-7075 - 75 litres

Capacity: 75 litres
Internal dimensions: 700 x 350 x 400 mm
Useful basket measures: 650 x 300 x 230 mm
External dimensions: 960 x 550 x 900 mm
Power supply: 240V
Heat resistance: 3x450W

1 ultrasonic generator with a power output of 800W (1600W p-p)
Ultrasonic power: 800W (1600W p-p)
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
16 piezoelectric transducers in IBL, high performance titanium steel
Tank built in stainless steel AISI 316 steel of 2mm
Weight: 71kg

TT-7075N - 75 litres

Capacity: 75 litres
Internal dimensions (excluding auxiliary tank): 700 x 390 x 470 mm
Useful measures: 670 x 425 x 335 mm
External dimensions: 1270 x 825 x 920 mm
Power supply: 240V / 400V
Heat resistance: 3750W
Ultrasonic power: 1700W (3400W p-p)
1 ultrasonic generator with an output power of 1700W (3400W p-p)
1 submersible transmi er with a power of 1700W (3400W p-p)
The transmi er contains 16 piezoelectric transducers in IBL, high performance titanium steel.
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
Tank built in AISI 304 stainless steel of 2mm
Pneumatic system reinforced load on dive platform
Maximum load capacity: 60kg
Auxiliary tank for the separate on of lubricants and oils
Op onal: Filter for sludge and waste system
Weight: 175 kg

TT-150N - 150 litres

Capacity: 150 litres
Internal dimensions (excluding auxiliary tank): 700 x 480 x 540 mm
Useful measures: 670 x 425 x 335 mm
External dimensions: 1270 x 825 x 920 mm
Power supply: 240V / 400V
Heat resistance: 3750W
Ultrasonic power: 1700W (3400W p-p)
1 ultrasonic generator with an output power of 1700W (3400W p-p)
1 submersible transmi er with a power of 1700W (3400W p-p)
The transmi er contains 16 piezoelectric transducers in IBL, high performance titanium steel.
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
Tank built in AISI 304 stainless steel of 2mm
Pneumatic system reinforced load on dive platform
Maximum load capacity: 60kg
Auxiliary tank for the separate on of lubricants and oils
Op onal: Filter for sludge and waste system
Weight: 175 kg

TT-300N - 300 litres

Capacity: 300 litres
Internal dimensions (excluding auxiliary tank): 900 x 615 x 640 mm
Useful measures: 860 x 520 x 385 mm
External dimensions: 1520 x 1020 x 1030 mm
Power supply: 400V
Heat resistance: 7500W
Ultrasonic power: 3000W (6000W p-p)
1 ultrasonic generator with a power output 3000W output (6000W p-p)
2 submersible transmi er with a power of 1500W each / 3000W (6000W p-p)
each transmi er contains 34 piezoelectric transducers in IBL, high performance titanium steel.
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
Tank built in AISI 304 stainless steel of 2mm
Pneumatic system reinforced load on dive platform
Maximum load capacity: 250kg
Auxiliary tank for the separate on of lubricants and oils
Op onal: Filter for sludge and waste system
Weight: 300kg

TT-7075 - 75 litres

Capacity: 75 litres
Internal dimensions: 700 x 350 x 400 mm
Useful basket measures: 650 x 300 x 230 mm
External dimensions: 960 x 550 x 900 mm
Power supply: 240V
Heat resistance: 3x450W

1 ultrasonic generator with a power output of 800W (1600W p-p)
Ultrasonic power: 800W (1600W p-p)
Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
16 piezoelectric transducers in IBL, high performance titanium steel
Tank built in stainless steel AISI 316 steel of 2mm
Weight: 71kg
Standard Model

**TT-400N - 400 litres**
- Capacity: 400 litres
- Internal dimensions (excluding auxiliary tank): 1100 x 615 x 690 mm
- Useful measures: 1060 x 520 x 410 mm
- External dimensions: 1720 x 1010 x 1080 mm
- Power supply: 400V
- Heat resistance: 7500W
- Ultrasonic power: 3400W (6800W p-p)
- 1 ultrasonic generator with a power output of 3400W (6800W p-p)
- Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
- Tank built in AISI 304 stainless steel 2mm
- Pneumatic and reinforced load on dive platform
- Maximum load capacity: 250kg
- Auxiliary tank for the separation of lubricants and oils
- Op.onal: filter for dudge and waste system
- Weight: 1300kg

**TT-600N - 600 litres**
- Capacity: 600 litres
- Internal dimensions (excluding auxiliary tank): 1300 x 735 x 665 mm
- Useful measures: 1230 x 650 x 450 mm
- External dimensions: 1950 x 1195 x 1070 mm
- Power supply: 400V
- Heat resistance: 9000W
- Ultrasonic power: 5100W (10200W p-p)
- 1 ultrasonic generator with a power output of 5100W (10200W p-p)
- 2 submersible transducers with a power of 1700W each / 5100W (10200W p-p). Each transducer contains 34 piezoelectric transducers in IBL, high performance titanium steel.
- Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
- Tank built in AISI 304 stainless steel 2mm
- Pneumatic and reinforced loading, batting and unloading platform
- Maximum load capacity: 350kg
- Auxiliary tank for the separation of lubricants and oils
- Op.ional: filter for dudge and waste system
- Weight: 2800kg

**TT-1000N - 1000 litres**
- Capacity: 1000 litres
- Internal dimensions (excluding auxiliary tank): 1500 x 810 x 875 mm
- Useful measures: 1410 x 720 x 570 mm
- External dimensions: 2820 x 1390 x 1100 mm (incl. tank generators Assistant and wardrobe)
- Power supply: 400V
- Heat resistance: 2x7000W
- Ultrasonic power: 6800W (13600W p-p)
- 2 generators of ultrasound with a power output of 6800W (13600W p-p)
- 4 submersible transducers with a power of 1700W each / 6800W (13600W p-p). Each transducer contains 34 piezoelectric transducers in IBL, high performance titanium steel.
- Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
- Tank built in AISI 304 stainless steel 2.5mm
- Pneumatic and reinforced loading, batting and unloading platform
- Maximum load capacity: 500kg
- Auxiliary tank for the separation of lubricants and oils
- Op.ional: filter for dudge and waste system
- Weight: 5500kg

**TT-3000N - 3000 litres**
- Capacity: 3000 litres
- Internal dimensions: 2050 x 1200 x 1205 mm
- Useful measures: 1930 x 990 x 880 mm
- Overall dimensions: 3610 x 1780 x 1465 mm (incl. auxiliary tank and distributor board)
- Power supply: 400V
- Heat resistance: 2x12000W
- Ultrasonic power: 13600W (27200W p-p)
- 4 generators of ultrasound with a power output of 13600W (27200W p-p)
- 8 submersible transducers with a power of 1700W each / 13600W (27200W p-p). Each transducer contains 34 piezoelectric transducers in IBL, high performance titanium steel.
- Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
- Tank built in AISI 304 stainless steel 2.5mm
- Pneumatic and reinforced loading, batting and unloading platform
- Maximum load capacity: 1500kg
- Auxiliary tank for the separation of lubricants and oils
- Op.ional: filter for waste and sludge system
- Peso: 1850kg

**TT-4000N - 4000 litres**
- Capacity: 4000 litres
- Internal dimensions: 2400 x 1500 x 1260 mm
- Useful measures: 2280 x 1380 x 890 mm
- Overall dimensions: 3130 x 1610 x 1345 mm (incl. auxiliary tank and distributor board)
- Power supply: 400V
- Heat resistance: 2x15000W
- Ultrasonic power: 20400W (40800W p-p)
- 6 generators of ultrasound with a power output of 20400W (40800W p-p)
- 12 submersible transducers with a power of 1700W each / 20400W (40800W p-p). Each transducer contains 34 piezoelectric transducers in IBL, high performance titanium steel.
- Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
- Tank built in AISI 304 stainless steel 3mm
- Pneumatic and reinforced loading, batting and unloading platform
- Maximum load capacity: 15000kg
- Auxiliary Tank for the separation of lubricants and oils
- Op.ional: filter for waste and sludge system
- Weight: 2800kg
Standard Model

Table of Specifications for Standard Models

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<tr>
<td>TT-8000</td>
<td>800L</td>
<td>1300 x 755 x 665</td>
<td>900 x 620 x 410</td>
<td>400W</td>
<td>40 kHz</td>
<td>2</td>
<td>250</td>
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<tr>
<td>TT-1000</td>
<td>1000L</td>
<td>1500 x 810 x 785</td>
<td>1140 x 720 x 570</td>
<td>680W</td>
<td>40 kHz</td>
<td>2</td>
<td>500</td>
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<td></td>
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<tr>
<td>TT-1200</td>
<td>1200L</td>
<td>1750 x 1100 x 1080</td>
<td>1650 x 910 x 790</td>
<td>1000W</td>
<td>40 kHz</td>
<td>2</td>
<td>1000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-1500</td>
<td>1500L</td>
<td>2050 x 1200 x 1205</td>
<td>1910 x 990 x 880</td>
<td>1500W</td>
<td>40 kHz</td>
<td>2</td>
<td>1500</td>
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<td></td>
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<tr>
<td>TT-2000</td>
<td>2000L</td>
<td>2400 x 1500 x 1260</td>
<td>2280 x 1380 x 890</td>
<td>2000W</td>
<td>40 kHz</td>
<td>2</td>
<td>1500</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-3000</td>
<td>3000L</td>
<td>3000 x 2000 x 1500</td>
<td>2900 x 1900 x 1180</td>
<td>3400W</td>
<td>40 kHz</td>
<td>4</td>
<td>3500</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*All specifications are subject to changes
*Hydraulic liquid system 2000 - 7000kg

Ultrasonic Generators

We offer our clients a wide range of ultrasonic generators. TierraTech® will always recommend the most suitable generator according to its intended use, the material of the components and the dirt to be removed. From single-frequency equipment 28/40 kHz with Sweep System ±2% to the cutting-edge model SB10 generator, the completely digital SB30 generator and the Burst and Multi tech frequency system.

Generator TT-10

Available power: 600W, 700W, 800W, 1000W and 1500W.

Operating system:
- Sweep System ±2% modulation on frequency setting set.

Generator S-10

Available power: from 1000W to 1700W, with 7 levels of power indicated on LEDs, Analogue Display, Power Control, Start/Stop, PLC alarm, preheating alarm and Open Short.

Ext control: ultrasonic ON/OFF contact.

Operating system:
- Normal tracking of frequency wave.
- Sweep System ±2% frequency modulation on (adjustment set).

Generator S-30

Available power: from 2000W to 3400W, 7 power levels indicated by LEDs, Analog Display, Power Control, Start/Stop, PLC, Preheat Alarm and Open Short.

Ext control: ultrasonic ON/OFF contact.

Operating system:
- Normal tracking of frequency wave.
- Sweep System ±2% frequency modulation on (adjustment set).

Generator SB-10 digital

Available power: from 1000W to 1700W, with automatic power monitoring, and monitoring of frequency wave. Display: ranges of power, frequency, power, ng state, limit alarm. Communica on (PC): RS 422, on monitoring, Control (ON/OFF, opera ng system, power, alarm control).

Operating system:
- Normal tracking of frequency wave.
- Sweep System ±2% frequency modulation on (adjustment set).
- Burst: Modulation on (adjustment set).
- Ext: control, ultrasonic ON/OFF contact.

Generator SB-30 digital

Available power: from 2000W to 3400W, with automatic power monitoring, and monitoring of frequency wave. Display: ranges of power, frequency, power, ng state, limit alarm. Communica on (PC): RS 422, on monitoring, Control (ON/OFF, opera ng system, power, alarm control).

Operating system:
- Normal tracking of frequency wave.
- Sweep System ±2% frequency modulation on (adjustment set).
- Burst: Modulation on (adjustment set).
- Ext: control, ultrasonic ON/OFF contact.

Generator Multitech

Available power: from 600W, 800W and 1000W to 35-70-105kHz. Display (choice of): power, alarm, power limit, opera ng status. Ext control: ultrasonic ON/OFF by contact, Communica on (PC) control: Control (ON/OFF, opera ng system, power, control, 3 frequencies 2 alarms.

Operating system:
- Normal tracking of frequency wave.
- Sweep System ±2% frequency modulation on (adjustment set).
In addition to the standard dimensions, we are able to alter these to meet your specifications and provide an anchoring system that best suits these specifications.

We have a wide range of ultrasound emitters in standard measurements, as required. We design the emitter according to the customers' special application requirements.

Ultrasonic-2
Type of product: Degreaser.
Characteristics: Ink and light acrylic paint stripping. Ideal to remove grease and oils from any type of surface.
Suitable for: All kinds of surfaces
Dosage: 2-5%
Colour: Transparent
Appearance: Liquid

Ultrasonic-5P
Type of product: Degreaser.
Characteristics: Cleaning and descaling of grease, oils, and all types of stubborn dirt, prevening it from setting on clean parts again. Surfactants, solvents and alcalis.
Dosage: 3%
Color: White
Appearance: Powder

Ultrasonic-6
Type of product: Degreaser.
Characteristics: Alkaline cleaner formulated to degrease steel surfaces and also to remove phosphate layers.
Suitable for: Iron
Dosage: 5%
Colour: White
Appearance: Powder

Ultrasonic-22
Type of product: Degreaser.
The strongest alkaline degreaser for ferrous metals.
Suitable for: Ferrous materials
Dosage: 3-5%
Colour: White
Appearance: Powder

Ultrasonic-20
Type of product: Degreaser and decarboniser.
Characteristics: High degreasing cleaner. Its carefully selected surfactants facilitate the penetration of the product into the dirt. Specially formulated to be used in hard water, because it prevents the precipitation of calcium and magnes c-salts.
Suitable for: Iron
Dosage: 5%
Colour: White
Appearance: Liquid

Ultrasonic-23
Type of product: Degreaser and decarboniser.
Characteristics: Alkaline cleaner formulated to degrease steel surfaces and also to remove phosphate layers.
Suitable for: Iron
Dosage: 5%
Colour: White
Appearance: Powder

Ultrasonic-7W
Product type: degreaser.
Features: Cleaning and descaling carbon. To achieve these results it should be used together with Ultrasonic-A.
Suitable materials: iron, galvanized steel and aluminum.
Dosage: 3%
Colour: Beige
Appearance: Powder

Table of powers and measures

<table>
<thead>
<tr>
<th>Power</th>
<th>Standard measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>600 W.</td>
<td>450 x 250 mm</td>
</tr>
<tr>
<td>1000 W.</td>
<td>550 x 350 mm</td>
</tr>
<tr>
<td>1500 W. / 1700 W.</td>
<td>550 x 350 mm / 700 x 350 mm</td>
</tr>
</tbody>
</table>

*For different sizes please contact our Technical Department

Ultrasound Cleaning Emitters

Ultrasonic-2
Type of product: degreaser.
Characteristics: Detergent for iron and carbon steel. Removes encrusted grease sediments, oils and all types of stubborn dirt, prevening it from setting on clean parts again. Surfactants, solvents and alcalis.
Dosage: 2-5%
Color: Yellow
Appearance: Liquid

In addition to the standard dimensions, we are able to alter these to meet your specific requirements and provide an anchoring system that best suits these specifications.
### Cleaning Product

**Cleaning Product**

**Ultrasonic-24**
- **Type of product:** Alkaline degreaser
- **Characteristics:** Removes stubborn dirt, preventing it from applying on the surfaces to treat in a dose from 1:1 to 1:10.
- **Suitable for:** Iron, steel alloys
- **Dosage:** 2-5%
- **Appearance:** Powder

**Ultrasonic-550**
- **Type of product:** Decalifying cleaner.
- **Characteristics:** It is a high performance acid detergent that cleans and decales all types of calcareous incrustations.
- **Suitable materials:** Iron materials.
- **Dosage:** It is used by immersion or applied on the surfaces to treat in a dose from 1:1 to 1:10.
- **Colour:** White
- **Appearance:** Liquid.

**Ultrasonic-MP**
- **Type of product:** Degreaser
- **Characteristics:** Very powerful degreaser designed to remove oils and animal and vegetable fat.
- **Dosage:** 3-10%
- **Colour:** Brownish
- **Appearance:** Liquid

**Ultrasonic-PRO**
- **Type of product:** Decalifying cleaner.
- **Characteristics:** It is a high performance acid detergent that cleans and decales all types of calcareous incrustations.
- **Suitable materials:** Iron materials.
- **Dosage:** It is used by immersion or applied on the surfaces to treat in a dose from 1:1 to 1:10.
- **Colour:** White
- **Appearance:** Liquid.

**Ultrasonic-51**
- **Product type:** Paint remover.
- **Features:** Hot it has unique proper es for stripping in short periods of me, synte c resins, primers, paints and baked powder paint, water paints and very resist ant paints of Cataphoresis.
- **Suitable materials:** Aluminium.
- **Dosage:** 100%
- **Color:** Beige.
- **Appearance:** Liquid.

**Ultrasonic-250**
- **Product type:** Rust remover.
- **Features:** Very useful in applica ons where rust and dirt accumulated are a problem for the use of metal parts and machinery.
- **Suitable materials:** Ferrous metals.
- **Dosage:** 2%
- **Color:** Transparent.
- **Appearance:** Liquid.

**Ultrasonic-53**
- **Product type:** Stripper.
- **Features:** Hot it has unique proper es for stripping in short periods of me, synte c resins, primers, paints and baked powder paint, water paints including pain ng from anaphoresis and Cataphoresis, baked paint. Not causes problems of forma ons on of vapours.
- **Dosage:** 40%
- **Color:** Transparent.
- **Appearance:** Liquid.

**Ultrasonic-24**
- **Type of product:** Alkaline degreaser
- **Characteristics:** Removes embedded sediments of fat, oils and any kind of stubborn dirt, prevent ng it from redeposi ng on parts already cleaned.
- **Suitable for:** Aluminium, iron and alloys
- **Dosage:** 3%
- **Colour:** Blue
- **Appearance:** Liquid

**Aliquat**
- **Product type:** San iting acid cleaner.
- **Features:** Moderately acid product for use in the integral cleaning by contact surfaces and utensils strongly contaminated in the food industry, catering, large collec ons.
- **Dosage:** 1-10%
- **Color:** Blue
- **Appearance:** Liquid.

**Ultrasonic-52**
- **Product type:** Alkaline degreaser
- **Features:** Hot presents a very high capacity for stains on synte c resins, primers, paints and baked powder paint, water paints and very resist ant paints of Cataphoresis.
- **Suitable materials:** Aluminium.
- **Dosage:** 50%
- **Color:** Orange
- **Appearance:** Liquid.

**Ultrasonic-54**
- **Product type:** Stripper.
- **Features:** Hot presents a very high capacity for stains on synte c resins, primers, paints and baked powder paint, water paints and very resist ant paints of Cataphoresis.
- **Suitable materials:** Iron.
- **Dosage:** 50%
- **Color:** Brown
- **Appearance:** Liquid.

**Electro**
- **Product type:** Detergent
- **Characteristics:** A dielectric detergent to clean electronic cards, engines and electric parts. Removes encrusted grease sediments, oils or all kinds of dirt difficult to remove, prevent ng it from setting on clean parts again.
- **Suitable for:** Electronic boards.
- **Dosage:** 2-5%
- **Color:** Purple
- **Appearance:** Liquid.
Cleaning Product

### Table of products and specifications

<table>
<thead>
<tr>
<th>Product</th>
<th>How to use</th>
<th>Suitable material</th>
<th>Waste that removes</th>
<th>Type of product</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Antioxidante</strong></td>
<td></td>
<td></td>
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<tr>
<td>Antioxidante</td>
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<td><strong>Adisec</strong></td>
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<td>Adisec</td>
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</tbody>
</table>

**Observations:**
- *It should be used with Ultrasonic 7 (3%)*
- *It should be used with Ultrasonic A (0.5%)

### Some of our clients:

- ExxonMobil
- AIRBUS
- BOSCH
- IBERIA
- PEMEX
- IBERDROLA
- ArcelorMittal
- Heineken
- Enel
- Gamesa
- General Electric
- CELSA GROUP
- BOMBARDIER
- indra
- GRUPO SIRO
- Michelin
- CATERPILLAR
- Snema
- Saint-Gobain
- SANDOZ
- DELPHI
- FAGOR
- TAROM
- leica
- BALKAN
- BASF
- SIEMENS
- ZE
- Tetra Pak
- MERCK
- PEACEDO
- P&G
- DÜRR
- KONGSBERG
- Hutchinson
- ferrovial
- greiner packaging
- TRW