Ultrasonic Cleaning Equipment
INDUSTRIAL LINE

www.tierratech.com
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 centres 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 thus enabling us to offer a personalised 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, production and sales facilities. In addition to our subsidiaries, we have an extensive distribution 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 Tierra Tech® is essential for the cleaning of hydraulic systems, heat exchangers, engine components, injection pumps, vanes, etc. since ultrasonic cleaning does not affect the materials or alter the dimensions or geometry of the surfaces. Tierra Tech® 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 printing pieces that accumulate oil, water, alcohol or UV-based ink. The accumulation of dirt causes a progressive deterioration of 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 zamakinjection 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.

Treatment of Surfaces and Electroplating

Ultrasound 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 electrolytic coating 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 interchangers. 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 utilised in the pharmaceutical industry. Our ultrasound 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. Ultrasound 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. After the ultrasound cleaning process, the electronic components improve effectiveness 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 connections, couplings, implants/medical prosthetics 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, filters, 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 panelling in 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 300 x 500 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, filtering systems, rotary baskets, hot air drying, vacuum drying, automatic loading and unloading, or any other options you may require.

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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.

**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:** 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 decanting 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:** 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.

- **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:** 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.

- **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 3400W.
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 Multi-Stage 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 Multistage Automatic HEAVY**

**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 the 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 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 alternatively can include different treatments in addition to cleaning. From the initial enquiry, we liaise very closely with our customers to ensure the specific solution 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 suit 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**

Automatic multistage 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

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Large stocks available

IMMEDIATE DELIVERY
### Standard Model

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<tbody>
<tr>
<td>TT-6030</td>
<td>30 litres</td>
<td>550 x 300 x 250 mm</td>
<td>500 x 250 x 175 mm</td>
<td>740 x 420 x 490 mm</td>
<td>240V</td>
<td>2x350W</td>
<td>600W (1200W p-p)</td>
<td>40kHz</td>
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<tr>
<td>TT-7050</td>
<td>50 litres</td>
<td>600 x 300 x 300 mm</td>
<td>650 x 300 x 225 mm</td>
<td>810 x 420 x 540 mm</td>
<td>240V</td>
<td>2x450W</td>
<td>700W (1400W p-p)</td>
<td>40kHz</td>
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<tr>
<td>TT-7075</td>
<td>75 litres</td>
<td>700 x 350 x 400 mm</td>
<td>650 x 300 x 290 mm</td>
<td>960 x 550 x 900 mm</td>
<td>240V</td>
<td>2x650W</td>
<td>800W (1600W p-p)</td>
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<td>TT-7075</td>
<td>75 litres</td>
<td>700 x 350 x 400 mm</td>
<td>650 x 300 x 290 mm</td>
<td>960 x 550 x 900 mm</td>
<td>240V</td>
<td>2x650W</td>
<td>800W (1600W p-p)</td>
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<tr>
<td>TT-300N</td>
<td>300 litres</td>
<td>900 x 615 x 640 mm</td>
<td>900 x 390 x 470 mm</td>
<td>1170 x 735 x 900 mm</td>
<td>240V / 400V</td>
<td>750W (1350W p-p)</td>
<td>1700W (3400W p-p)</td>
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<tr>
<td>TT-150N</td>
<td>150 litres</td>
<td>700 x 480 x 540 mm</td>
<td>700 x 480 x 540 mm</td>
<td>1270 x 825 x 920 mm</td>
<td>240V / 400V</td>
<td>3750W</td>
<td>3400W (6800W p-p)</td>
<td>40kHz</td>
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<td>240V / 400V</td>
<td>750W (1350W p-p)</td>
<td>1700W (3400W p-p)</td>
<td>40kHz</td>
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**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
- 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
- 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 290 mm
- External dimensions: 960 x 550 x 900 mm
- Power supply: 240V
- Heat resistance: 3x450W
- 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-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
- Ultrasonic power: 1700W (3400W 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 AISI 304 stainless steel of 2mm
- Weight: 130kg

**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
- Ultrasonic power: 3400W (6800W p-p)
- Working frequency: 40kHz with system of frequency sweep (sweep system ±2%)
- 34 piezoelectric transducers in IBL, high performance titanium steel
- Tank built in AISI 304 stainless steel of 2mm
- Weight: 300kg
Standard Model

**TT-400N - 400 litres**
- **Capacity:** 400 litres
- **Internal dimensions:** 1100 x 615 x 690 mm
- **Useful measures:** 1060 x 520 x 435 mm
- **External dimensions:** 1210 x 1010 x 1200 mm
- **Power supply:** 400V
- **Heat resistance:** 7000W
- **Ultrasonic power:** 3400W (68000W p-p)
  - 1 ultrasonic generator with a power output of 3400W (68000W p-p)
  - 2 submersible transmitters with a power of 1700W each / 3400W (68000W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in AISI 304 stainless steel of 2mm**
- **Pneumatic lifting reinforced load on dive platform.**
- **Maximum load capacity:** 250kg
- **Optional:** filter for the separation of lubricants and oils
- **Weight:** 1200kg

**TT-600N - 600 litres**
- **Capacity:** 600 litres
- **Internal dimensions:** 1350 x 735 x 665 mm
- **Useful measures:** 1230 x 650 x 435 mm
- **External dimensions:** 1395 x 1195 x 1070 mm
- **Power supply:** 400V
- **Heat resistance:** 9000W
- **Ultrasonic power:** 5300W (10600W p-p)
  - 1 ultrasonic generator with a power output of 5300W (10600W p-p)
  - 3 submersible transmitters with a power of 1700W each / 5300W (10600W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in AISI 304 stainless steel of 2mm**
- **Pneumatic lifting reinforced load on dive platform.**
- **Maximum load capacity:** 350kg
- **Optional:** filter for the separation of lubricants and oils
- **Weight:** 400kg

**TT-1000N - 1000 litres**
- **Capacity:** 1000 litres
- **Internal dimensions:** 1500 x 900 x 860 mm
- **Useful measures:** 1410 x 720 x 550 mm
- **External dimensions:** 2780 x 1350 x 1100 mm (incl. auxiliary tank and distribution board)
- **Power supply:** 400V
- **Heat resistance:** 2x7000W
- **Ultrasonic power:** 6800W (136000W p-p)
  - 2 generators of ultrasound with a power output of 6800W (136000W p-p)
  - 4 submersible transmitters with a power of 1700W each / 6800W (136000W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in AISI 304 stainless steel 2mm**
- **Pneumatic lifting reinforced for loading, batting and unloading platform.**
- **Maximum load capacity:** 750kg
- **Optional:** filter for the separation of lubricants and oils
- **Weight:** 550kg

**TT-2000N - 2000 litres**
- **Capacity:** 2000 litres
- **Internal dimensions:** 1750 x 1100 x 1260 mm
- **Useful measures:** 2240 x 1380 x 890 mm
- **External dimensions:** 2400 x 1500 x 1200 mm (incl. auxiliary tank and distribution board)
- **Power supply:** 400V
- **Heat resistance:** 2 x 13500W
- **Ultrasonic power:** 20400W (40800W p-p)
  - 6 generators of ultrasound with a power output of 20400W (40800W p-p)
  - 12 submersible transmitters with a power of 1700W each / 20400W (40800W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in AISI 304 stainless steel 2mm**
- **Pneumatic lifting reinforced for loading, batting and unloading platform.**
- **Maximum load capacity:** 1500kg
- **Optional:** filter for the separation of lubricants and oils
- **Weight:** 1850kg

**TT-3000N - 3000 litres**
- **Capacity:** 3000 litres
- **Internal dimensions:** 2050 x 1280 x 1050 mm
- **Useful measures:** 1930 x 990 x 880 mm
- **External dimensions:** 2400 x 1500 x 1205 mm
- **Power supply:** 400V
- **Heat resistance:** 2 x 13500W
- **Ultrasonic power:** 13600W (27200W p-p)
  - 4 generators of ultrasound with a power output of 13600W (27200W p-p)
  - 8 submersible transmitters with a power of 1700W each / 13600W (27200W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Weight:** 2800kg
- **Uses:** 2x12000W
- **Power supply:** 400V
- **Heat resistance:** 2 x 13500W
- **Ultrasonic power:** 13600W (27200W p-p)
  - 4 generators of ultrasound with a power output of 13600W (27200W p-p)
  - 8 submersible transmitters with a power of 1700W each / 13600W (27200W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in AISI 304 stainless steel 2mm**
- **Pneumatic lifting reinforced for loading, batting and unloading platform.**
- **Maximum load capacity:** 1500kg
- **Optional:** filter for the separation of lubricants and oils
- **Weight:** 3200kg

**TT-4000N - 4000 litres**
- **Capacity:** 4000 litres
- **Internal dimensions:** 2400 x 1500 x 1260 mm
- **Useful measures:** 2280 x 1380 x 890 mm
- **External dimensions:** 4090 x 2260 x 1560 mm (incl. auxiliary tank and distribution board)
- **Power supply:** 400V
- **Heat resistance:** 2 x 13500W
- **Ultrasonic power:** 20400W (40800W p-p)
  - 6 generators of ultrasound with a power output of 20400W (40800W p-p)
  - 12 submersible transmitters with a power of 1700W each / 20400W (40800W p-p).
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in AISI 304 stainless steel 2mm**
- **Pneumatic lifting reinforced for loading, batting and unloading platform.**
- **Maximum load capacity:** 2800kg
- **Optional:** filter for the separation of lubricants and oils
- **Weight:** 3800kg
**Hydraulic lifting system 2000 - 7000kg**

All specifications are subject to changes

**Table of Specifications for Standard Models**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Tankage</th>
<th>Internal dimensions (mm)</th>
<th>Useful dimensions (mm)</th>
<th>Ultrasonic power</th>
<th>Frequency</th>
<th>Heating</th>
<th>Pneumatic loading capacity (kg)</th>
<th>Waterflow System</th>
</tr>
</thead>
<tbody>
<tr>
<td>TT-8000</td>
<td>8000L</td>
<td>3000 x 2000 x 1500</td>
<td>2400 x 1500 x 1260</td>
<td>2280 x 1380 x 890</td>
<td>20400 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>4 x 15000 W</td>
<td></td>
</tr>
<tr>
<td>TT-4000N</td>
<td>4000L</td>
<td>2050 x 1200 x 1205</td>
<td>1930 x 990 x 880</td>
<td>13600 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>2000 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-3000N</td>
<td>3000L</td>
<td>1750 x 1100 x 1080</td>
<td>1650 x 910 x 790</td>
<td>10200 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>1500 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-2000N</td>
<td>2000L</td>
<td>1500 x 900 x 860</td>
<td>1410 x 720 x 550</td>
<td>6800 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>1000 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-1000N</td>
<td>1000L</td>
<td>1300 x 735 x 665</td>
<td>1230 x 650 x 435</td>
<td>5100 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>500 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-600N</td>
<td>600L</td>
<td>1100 x 615 x 640</td>
<td>1060 x 520 x 435</td>
<td>3400 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>300 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-400N</td>
<td>400L</td>
<td>900 x 615 x 630</td>
<td>860 x 520 x 385</td>
<td>1700 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>200 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-30N</td>
<td>300L</td>
<td>700 x 390 x 400</td>
<td>650 x 300 x 290</td>
<td>800 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>100 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-705N</td>
<td>75L</td>
<td>580 x 250 x 175</td>
<td>550 x 250 x 125</td>
<td>700 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>50 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TT-7050</td>
<td>50L</td>
<td>500 x 200 x 120</td>
<td>450 x 150 x 80</td>
<td>600 W</td>
<td>40 KHz (Sweep System ±2%)</td>
<td>30 kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| TT-8000        | 8000L   | 3300 x 2100 x 1500       | 3000 x 2000 x 1200     | 2900 x 2000 x 1200| 24000 W (68000 p-p)| 20000 kg (68000 p-p)| 70000 kg (68000 p-p)| 50 L (68000 p-p)| 28/40 KHz with Sweep System ±2% to the cutting-edge model SB10 generator, the completely digital SB30 generator and the Burst and Multitech frequency system.**

**Ultrasonic Generators**

- **Generator TT-10**
  - Available power: 600W, 700W, 800W, 1000W and 1500W.
  - Operating system:
    - Sweep System ±2% modulation of frequency (setting set).

- **Generator TT-10**
  - Available power: from 1000W to 1700W, with 7 levels of power indicated on LEDs, Analogue Display, Power Control, Start/Stop, PLC alarms, preheating alarm and Open Short.
  - Operating system:
    - Sweep System ±2% modulation of frequency (adjustment set).

- **Generator S-30**
  - Available power: from 2000W to 3400W, 7 power levels indicated by LEDs, analog display, Control power, Start/Stop, PLC alarm and Open Short.
  - Operating system:
    - Sweep System ±2% modulation of frequency (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, time, power, operating state, limit alarm. Communication (PLC): RS 422, condition monitoring, Control (ON/OFF, operating system, power, alarm control).
  - Operating system:
    - Sweep System ±2% modulation of frequency (adjustment set).

- **Generator SB-30 Digital**
  - Available power: from 2000W to 3400W, with automatic power monitoring, and monitoring of frequency wave. Display: ranges of power, time, power, operating state, limit alarm. Communication (PLC): RS 422, condition monitoring, Control (ON/OFF, operating system, power, alarm control).
  - Operating system:
    - Sweep System ±2% modulation of frequency (adjustment set).

- **Generator Multitech**
  - Available power: from 600W, 800W and 1000W to 35-70-105kHz. Display: choice of time, power, alarm, power limit, operating status. Ext control: ultrasonic ON/OFF by contact. Communication (PLC) control: Control ON/OFF, operating system, power, control, 3 frequencies 2 alarms.
  - Operating system:
    - Sweep System ±2% modulation of frequency (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 Emitters**

![Ultrasonic set for special applications for the petrochemical industry (large tanks).](image1)

![Ultrasonic set for continual degassing of liquids.](image2)

![Emitters covered in 30 micron hard chrome layer.](image3)

**Cleaning Product**

<table>
<thead>
<tr>
<th>Ultrasonic-2 Alkaline</th>
<th>Ultrasonic-5P Alkaline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of product: degreaser.</td>
<td>Type of product: degreaser.</td>
</tr>
<tr>
<td>Characteristics: Detergent for iron and carbon steel. Removes encrusted grease sediments, oils and all types of stubborn dirt, preventing it from setting on clean parts again. Surfaceactants, solvents and alkalis</td>
<td>Characteristics: Cleaning and descaling of grease, oils and all types of stubborn dirt, preventing it from setting on clean parts again. Suitable for: All types of materials and metals (including aluminium and its alloys).</td>
</tr>
<tr>
<td>Dosage: 2-5%</td>
<td>Dosage: 3%</td>
</tr>
<tr>
<td>Color: yellow</td>
<td>Color: white</td>
</tr>
<tr>
<td>Appearance: liquid</td>
<td>Appearance: powder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ultrasonic-6 Alkaline</th>
<th>Ultrasonic-7W Alkaline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of product: Degreaser.</td>
<td>Product type: degreaser.</td>
</tr>
<tr>
<td>Characteristics: Ink and light acrylic paint stripping. Ideal to remove grease and oils from any type of surface.</td>
<td>Features: Cleaning and descaling carbon. To achieve these results it should be used together with Ultrasonic-A.</td>
</tr>
<tr>
<td>Suitable for: All kinds of surfaces</td>
<td>Suitable materials: iron, galvanized steel and aluminum.</td>
</tr>
<tr>
<td>Dosage: 2-5%</td>
<td>Dosage: 3%</td>
</tr>
<tr>
<td>Color: transparent</td>
<td>Color: beige</td>
</tr>
<tr>
<td>Appearance: Liquid</td>
<td>Appearance: Liquid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ultrasonic-17 Alkaline</th>
<th>Ultrasonic-20 Alkaline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of product: Degreaser.</td>
<td>Type of product: degreaser and decarboniser</td>
</tr>
<tr>
<td>Characteristics: Alkaline based degreaser. Highly concentrated, developed to clean very soiled steel and light metal components (spare parts). Suitable for: Iron.</td>
<td>Characteristics: High degreasing cleaner. It's 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 magnetic salts. Suitable for: Iron</td>
</tr>
<tr>
<td>Dosage: 8-12%</td>
<td>Dosage: 5%</td>
</tr>
<tr>
<td>Colour: White</td>
<td>Colour: White</td>
</tr>
<tr>
<td>Appearance: liquid</td>
<td>Appearance: liquid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ultrasonic-22 Alkaline</th>
<th>Ultrasonic-23 Alkaline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of product: degreaser.</td>
<td>Type of product: degreaser and decarboniser</td>
</tr>
<tr>
<td>The strongest alkaline degreaser for ferrous metals. Suitable for: Ferrous materials</td>
<td>Characteristics: Alkaline cleaner formulated to degrease steel surfaces and also to remove phosphate layers. Suitable for: Iron</td>
</tr>
<tr>
<td>Dosage: 3-5%</td>
<td>Dosage: 5%</td>
</tr>
<tr>
<td>Colour: white</td>
<td>Colour: White</td>
</tr>
<tr>
<td>Appearance: powder</td>
<td>Appearance: powder</td>
</tr>
<tr>
<td>Cleaning Product</td>
<td>Cleaning Product</td>
</tr>
<tr>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td><strong>Ultrasonic-24</strong></td>
<td><strong>Ultrasonic-250</strong></td>
</tr>
<tr>
<td><strong>Type of product:</strong> alkaline degreaser to ‘pickle’ carbon steel and stainless steel</td>
<td><strong>Product type:</strong> rust from metals.</td>
</tr>
<tr>
<td><strong>Characteristics:</strong> Specific pretreatment before phosphatization, galvanization or coating</td>
<td><strong>Features:</strong> Removes stubborn dirt and lime scale from all kinds. Very useful in applications where rust and dirt accumulated are a problem for the use of metal parts and machinery.</td>
</tr>
<tr>
<td><strong>Suitable for:</strong> Steel, iron and copper alloys</td>
<td><strong>Suitable Materials:</strong> ferrous metals.</td>
</tr>
<tr>
<td><strong>Dosage:</strong> 2.5%</td>
<td><strong>Dosage:</strong> 2%</td>
</tr>
<tr>
<td><strong>Appearance:</strong> powder</td>
<td><strong>Appearance:</strong> liquid.</td>
</tr>
<tr>
<td><strong>Ultrasonic-MP</strong></td>
<td><strong>Ultrasonic-4</strong></td>
</tr>
<tr>
<td><strong>Type of product:</strong> degreaser</td>
<td><strong>Type of product:</strong> degreasing additive</td>
</tr>
<tr>
<td><strong>Characteristics:</strong> Very powerful degreaser designed to remove oils and animal and vegetable fat. To be used as a degreasing detergent for food circuits, pasteurisers and recirculation cleaning systems. Suitable for: aluminum, iron and alloys</td>
<td><strong>Characteristics:</strong> Additive for degreasing detergents, tensioactivator</td>
</tr>
<tr>
<td><strong>Suitable for:</strong> Iron, steel</td>
<td><strong>Dosage:</strong> 0.2%-0.5%</td>
</tr>
<tr>
<td><strong>Dosage:</strong> 3-10%</td>
<td><strong>Colour:</strong> red</td>
</tr>
<tr>
<td><strong>Appearance:</strong> liquid</td>
<td><strong>Appearance:</strong> liquid.</td>
</tr>
<tr>
<td><strong>Ultrasonic-A</strong></td>
<td><strong>Ultrasonic-Tenso</strong></td>
</tr>
<tr>
<td><strong>Type of product:</strong> degreasing additive</td>
<td><strong>Type of product:</strong> Detergent</td>
</tr>
<tr>
<td><strong>Characteristics:</strong> Additive for degreasing detergents, tensioactivator</td>
<td><strong>Characteristics:</strong> NEUTRAL detergent and cleaning additive. It is used as a product enhancer to increase the cavitation strength of acid and alkaline products used in ultrasonic cleaning. Indicated to remove encrusted sediments on grease, oils and any type of tough dirt. Suitable for: All materials.</td>
</tr>
<tr>
<td><strong>Dosage:</strong> 0.2%-0.5%</td>
<td><strong>Dosage:</strong> 0.2%-0.5%</td>
</tr>
<tr>
<td><strong>Colour:</strong> transparent</td>
<td><strong>Colour:</strong> transparent</td>
</tr>
<tr>
<td><strong>Appearance:</strong> liquid</td>
<td><strong>Appearance:</strong> liquid</td>
</tr>
<tr>
<td><strong>Ultrasonic-PRO</strong></td>
<td><strong>Ultrasonic-550</strong></td>
</tr>
<tr>
<td><strong>Type of product:</strong> stripper.</td>
<td><strong>Type of product:</strong> Acid</td>
</tr>
<tr>
<td><strong>Features:</strong> Pickling Gel for stainless steel suitable for the cleaning of austenitic stainless steels and alloy steels very strong base of nickel and chromium. The parts with anti-rust treatment is recommended. Suitable materials: steels</td>
<td><strong>Characteristics:</strong> It is a high performance acid detergent that cleans and descals all types of calcareous incrustations.</td>
</tr>
<tr>
<td><strong>Dosage:</strong> 0.5 - 3%</td>
<td><strong>Dosage:</strong> 3%</td>
</tr>
<tr>
<td><strong>Appearance:</strong> liquid</td>
<td><strong>Appearance:</strong> liquid.</td>
</tr>
<tr>
<td><strong>Ultrasonic-Tenso</strong></td>
<td><strong>Ultrasonic-A</strong></td>
</tr>
<tr>
<td><strong>Product type:</strong> Acid</td>
<td><strong>Product type:</strong> Acid</td>
</tr>
<tr>
<td><strong>Surface:</strong> liquid.</td>
<td><strong>Surface:</strong> liquid.</td>
</tr>
<tr>
<td><strong>Suitable Materials:</strong> plastics.</td>
<td><strong>Suitable Materials:</strong> plastics.</td>
</tr>
<tr>
<td><strong>Appearance:</strong> liquid.</td>
<td><strong>Appearance:</strong> liquid.</td>
</tr>
</tbody>
</table>
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>
<td></td>
<td>Type of product: A corrosion inhibitor and metal protector. Characteristics: It can be used on grinders, sharpeners and all kinds of machining. Suitable for cases where a passivating acid bath and metal protection are required, and especially for ferrous materials. Suitable for: Iron, Precision metal. Dosage: 0.2-0.5% Colour: Orange Appearance: Liquid.</td>
</tr>
<tr>
<td><strong>Adisec</strong></td>
<td></td>
<td></td>
<td></td>
<td>Type of product: Drying additive. Characteristics: Product indicated to lower the superfluous tension of the water during cleaning processes. Suitable for: All kinds of surfaces. Dosage: 0-3% Colour: Transparent. Appearance: Liquid</td>
</tr>
</tbody>
</table>

<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>Ultrasonic-2</td>
<td>3-5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-5F</td>
<td>5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-6</td>
<td>2-5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-7M</td>
<td>2-5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-17</td>
<td>8-13%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-20</td>
<td>5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-22</td>
<td>3-5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-23</td>
<td>5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-24</td>
<td>6-9%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-MP</td>
<td>3-10%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-4</td>
<td>3%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-A</td>
<td>0,2-0,5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-B</td>
<td>0,2-0,5%</td>
<td>40º - 80º</td>
<td></td>
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</tr>
<tr>
<td>Bano</td>
<td>0-10%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-253</td>
<td>2%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-PRO</td>
<td>0,5-3%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-303</td>
<td>1-3%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-Atlasmag</td>
<td>40-80%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-Mag</td>
<td>1-5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-01</td>
<td>100%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-02</td>
<td>50%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-03</td>
<td>40%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultrasonic-04</td>
<td>50%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antioxidante</td>
<td>0,2-1%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electro</td>
<td>2-5%</td>
<td>40º - 80º</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observations: *It should be used with Ultrasonic 7 (3%) **It should be used with Ultrasonic A (0,5%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>