



AERONAUTICS SECTOR

INTEGRATION OF ULTRASONIC CLEANING SYSTEMS INTO AERONAUTICS INDUSTRY

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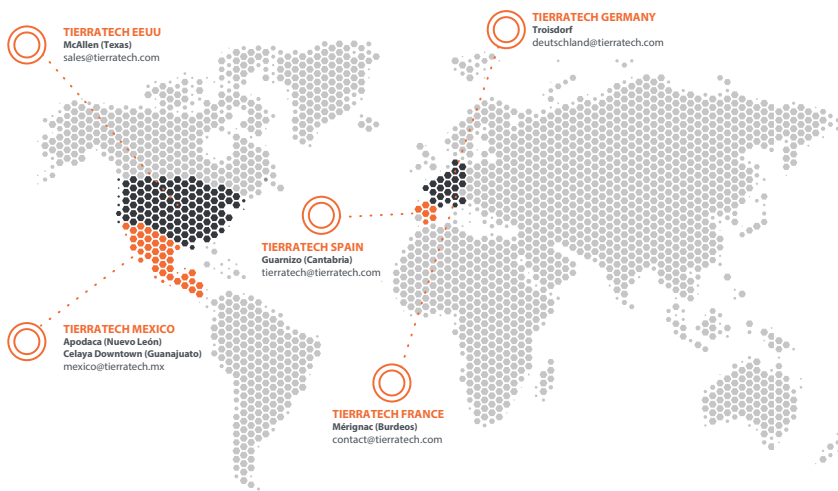
APPLICATION OF ULTRASONIC EQUIPMENT IN THE AERONAUTICS INDUSTRY



THE COMPANY



Presence in more than 40 countries



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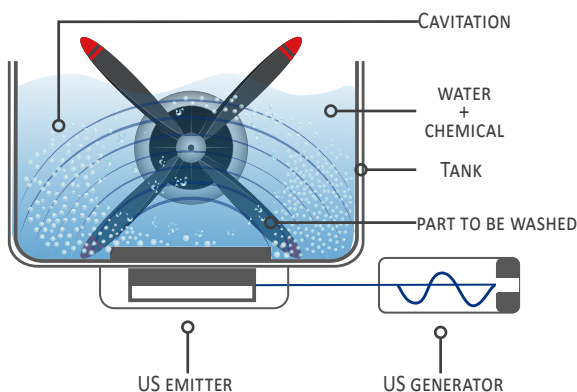
TierraTech® is a leading company in the manufacturing and commercialization of ultrasonic cleaning systems and equipment with over 20 years of experience in ultrasonic technology.

Our highly qualified technical and sales team provides personalized service and advising according to the needs of each customer. You will get the most advanced and efficient ultrasonic cleaning technology at your facility with immediate delivery for our standard range.

We provide solutions thanks to the permanent work of our efficient R+D+I team on new technologies and applications around the ultrasonic cleaning. They incorporate state-of-the-art components and materials with an agile design for the realization of custom-made projects. TierraTech® complies with the highest quality standards in all processes. Our Quality Management System was certified by TÜV Rheinland according to UNE EN ISO 9001:2008 with register number 0.04.09057.



Ultrasonic Cleaning



Fast

Effective

Ecological

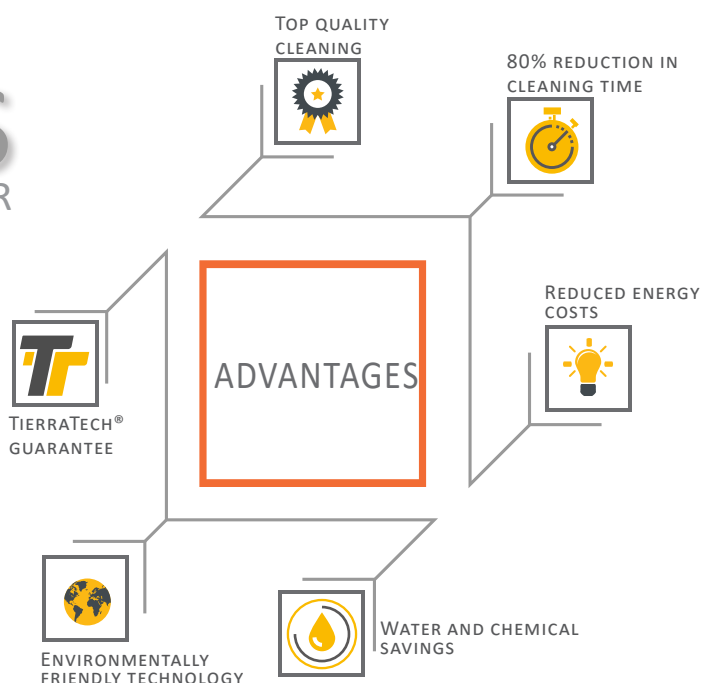
The ultrasonic cleaning system is the most efficient way to keep the part to be washed in perfect condition, thus saving production time and achieving a high level of quality in the final product.

A generator and transformer modify the electric current in high-frequency (ultrasound) waves that generate vibrations. Due to the working frequency and density of the liquid, continuous dehd overpressions form, appearing and disappearing in a matter of microseconds throughout the liquid producing a micro brushing that acts around any element that is introduced. Dirt is removed from the surface of submerged parts, even at the hardest-to-reach points.

Ultrasonic cleaning, degreasing, and descaling offers cleaning quality as advantages, especially with delicate or difficult parts and lower costs, due to savings in washing times.

THE AERONAUTICAL SECTOR FINDS IN OUR ULTRASONIC CLEANING EQUIPMENT THE MOST CONVENIENT OPTION FOR THE MAINTENANCE AND IMPROVEMENT IN ANY PRODUCTION PROCESS AND, AT THE SAME TIME, SAVING LARGE AMOUNTS OF PRODUCTIVE TIME ACHIEVING THE BEST RESULT.

INTEGRATION OF ULTRASONIC EQUIPMENT AERONAUTICS SECTOR



Ultrasonic cleaning has been established over the last few years as the best cleaning system in the aeronautical industry, encompassing the production, renovation, and maintenance of components and machinery, eliminating any type of dirt and incrustations on parts and production lines.

Residues adhering to surfaces and tools affect the quality of the final product, hinder the maintenance of parts and increase the possibility of errors. Ultrasonic cleaning systems are used for both production and integral maintenance in injection molding, extrusion, machining processes. This ultrasonic method completely removes the dirt that remains agglutinated on hard-to-reach surfaces and hollows in hydraulic systems, heat exchangers, engine parts, blades, fuselage elements, filters, propellers, etc., such as release agents, oils, dust, waste gases, etc., including rust and material residues such as aluminum, steel, paint and all types of welding residues.

TierraTech® offers ultrasonic cleaning equipment with a wide variety of capacities, specially designed for the cleaning and maintenance of parts of any size and weight using a combination of ultrasound and a proportion of non-harmful detergent.

The cleaning is far superior to traditional methods (manual scraping, chemical agents, pneumatic methods, cryogenic cleaning, laser...), being a guarantee in the maintenance of equipment and tools in an industry with such high precision requirements.



Some of our customers



STANDARD EQUIPMENT

aeronautics
sector

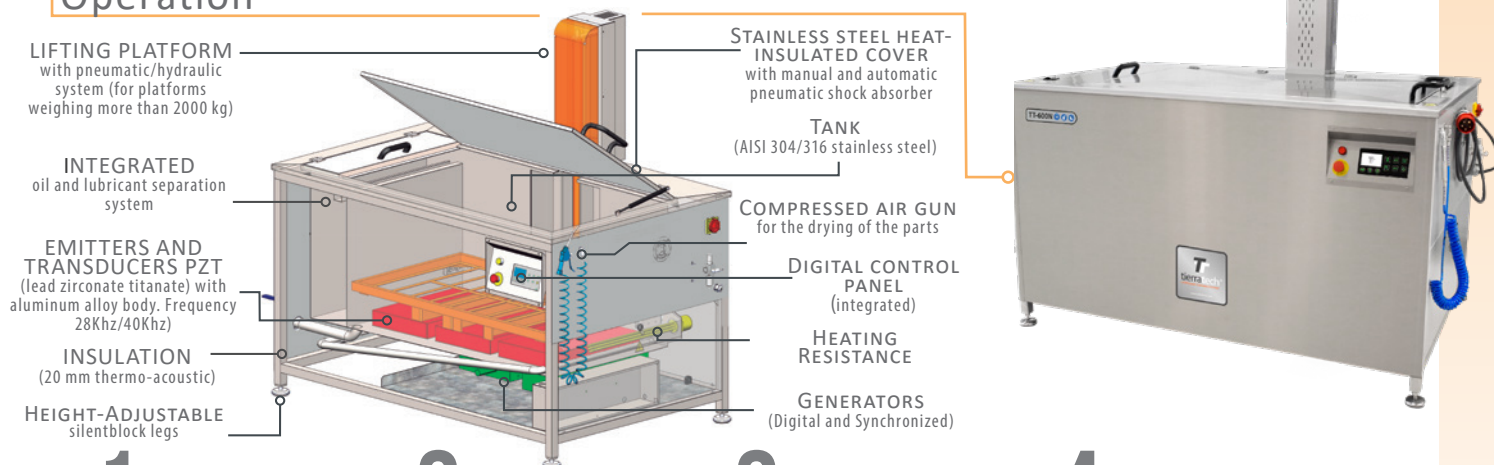
The range of TierraTech® standard equipment offers a wide variety of equipment with different capacities that are perfectly adapted to the cleaning requirements of specific parts of the sector. (Blades and vanes, compressors, engine components, brakes, covers and housings, shafts and gears, stators, propellers, bearings, rotors, nozzles, hydraulic hoses, etc.).

They can be complemented with pneumatic lifting platform to facilitate loading and unloading, filtering systems, oil separation and water treatment among others.

IMMEDIATE DELIVERY

MODEL	VOLUME	INTERNAL MEASUREMENTS	USEFUL MEASUREMENTS	EXTERNAL MEASUREMENTS	WEIGHT	ULTRASONIC POWER	MAXIMUM LOAD PNEUMATIC LIFTING PLATFORM
TT-30	30 liters	550x300x250 mm	500x250x175 mm	720x420x500 mm	34 kg	600Wp (1.200 Wp-p)	
TT-50	50 liters	600x300x300 mm	550x250x225 mm	775x420x540 mm	40 kg	700Wp (1.400 Wp-p)	
TT-75	75 liters	700x350x400 mm	650x300x290 mm	1075x575x900 mm	71 kg	800Wp (1.600 Wp-p)	
TT-75N	75 liters	650x390x470 mm	620x325x270 mm	1260x730x925 mm	130 kg	800Wp (1.600 Wp-p)	30 kg
TT-150N	150 liters	700x480x540 mm	670x415x345 mm	1355x825x945 mm	175 kg	1700Wp (3.400Wp-p)	60 kg
TT-300N	300 liters	900x615x640 mm	860x525x390 mm	1620x1020x1045 mm	275 kg	3.400Wp (6.800 Wp-p)	250 kg
TT-400N	400 liters	1100x615x690 mm	1060x525x440 mm	1820x1020x1095 mm	320 kg	3.400Wp (6.800 Wp-p)	250 kg
TT-600N	600 liters	1300x735x665 mm	1230x650x430 mm	2050x1200x1070 mm	350 kg	5.100Wp (10.200 Wp-p)	350 kg
TT-1000N	1.000 liters	1500x810x875 mm	1410x720x580 mm	2915x1395x1100 mm	500kg	6.800Wp (13.600Wp-p)	500 kg
TT-2000N	1.250 liters	1750x1010x1080 mm	1650x910x790 mm	3300x1660x1345 mm	3500 kg	10.200Wp (20.400 Wp-p)	1000 kg
TT-3000N	3.000 liters	2050x1200x1205 mm	1930x1080x900 mm	3675x1800x1465 mm	1850 kg	13.600Wp (27.200 Wp-p)	1500 kg
TT-4000N	4.000 liters	2400x1500x1260 mm	2280x1380x900 mm	4165x2260x1560 mm	2800 kg	20.400Wp (40.800 Wp-p)	2000 kg
TT-8000N	8.000 liters	3000x2000x1495 mm	2800x1800x1175 mm	4000x2640x1795 mm	3500 kg	34.000Wp (68.000 Wp-p)	

Operation



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

2 The parts are placed on the lifting platform or on the bottom grid of the tank and immersed in the bath

3 This automatic cleaning process can take from a few minutes to several hours, depending on the cleaning application

4 Finally, the parts are removed from the bath

SPECIAL EQUIPMENT

aeronautics
sector

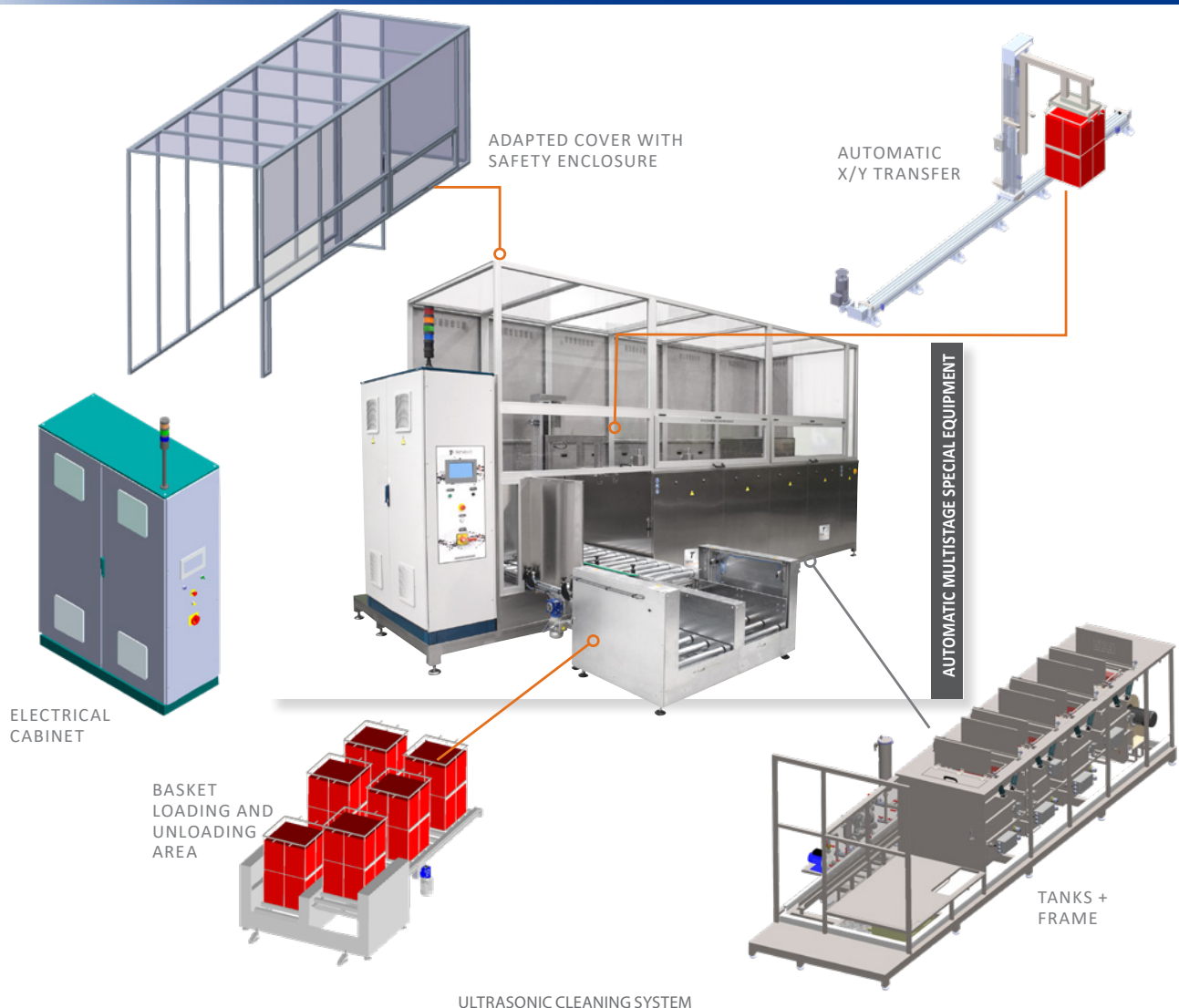
TierraTech® has the capacity to cover the special needs of customers by manufacturing customized equipment, of special sizes, with different number of tanks (one or more tanks) according to the cleaning treatments required.

The loading/unloading and transport systems can be either manual or automatic (x/y transfer, galloping transfer or gantry crane for the loading of parts weighing more than 100 kg).



- ONE-TANK SPECIAL EQUIPMENT
- MANUAL MULTISTAGE SPECIAL EQUIPMENT
- MULTISTAGE SPECIAL AUTOMATIC EQUIPMENT WITH LOADING SYSTEM

x/y transfer
Galloping transfer
Gantry crane



T | ULTRASONIC CLEANING & MAINTENANCE

TierraTech® equipment is the best solution for the comprehensive cleaning and maintenance of installations for all processes in the aeronautical industry: injection, extrusion, machining, etc.

Improving and facilitating:

The comprehensive cleaning of welding installations (robots, welding guns, structures, devices) and installations for bending, profiling, rolling, rolling, water cutting, laser cutting, plasma cutting, etc. and the cleaning of welds (removal of thermo-coloring stains).

- The cleaning of hydraulic systems, heat exchangers, engine parts, injection pumps, blades, etc.
- Cleaning and maintenance of machinery for the manufacture of fuselage elements, stabilizers, wings and other structures (injectors, extruders, all types of CNC machinery).
- Cleaning and maintenance of air supply units, air inlet and outlet ducts (welding fumes, production facilities, hall ventilation).
- Exhaustive cleaning of sector-specific components and parts (blades and vanes, motor components, compressors, covers and housings, shafts and gears, stators, brakes, propellers, bearings, rotors, nozzles, hydraulic hoses, etc.).
- The cleaning, maintenance and management of filters (supply / cleaning and change of industrial filters according to technical specifications).
- Pickling of all types of surfaces, structures, parts, tools, hooks and tubes.



Achieving the best results while respecting the service life of the materials is our best guarantee. We help improve our customers' production efficiency, thanks to innovative cleaning and maintenance solutions that optimize facilities in the aerospace industry.

Contact and tell us your cleaning needs



ULTRASONIC CLEANING SYSTEMS



Parque empresarial Morero Nave 27
39611 Guarnizo, Cantabria (España)
Tel (+34) 942 269 543
Fax (+34) 942 269 544
tierratech@tierratech.com

1111 E Whitewing Ave
78501 McAllen, Texas (USA)
Tel. +1 (956) 584-2277
sales@tierratech.com

Avda. Martell 550. Parque Industrial Martell
66600 Apodaca, Nuevo León (México)
Tel (+52) 81 1095 65 67 // (+52) 81 1095 65 78
mexico@tierratech.mx

Z.I. Activité St. Exupéry, 17 Rue des Genêts
33700 Mérignac (France)
Tel (+33) (0)5 56 24 65 49
Fax (+33) (0)5 56 24 67 14
contact@tierratech.com

Junkersring 52
53844 Troisdorf, Köln (Alemania)
Tel (+49) (0) 224 184 547 76
deutschland@tierratech.com



VERSPANINGSTECHNIEK



REINIGINGSTECHNIEK



STRAAL-EN OPPERVLAKTECHNIEK

Leering Hengelo
Barnsteenstraat 1
7554 TC Hengelo [Ov.]

T+31 (0)74 255 82 82
info@leering.nl
www.leering.nl

