ULTRASONIC CLEANING EQUIPMENT FOR THE AUTOMOTIVE INDUSTRY

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.

The Motor Clean series offers equipment and ultrasonic cleaning systems designed specially for professionals of the motoring world. At Tierra Tech, we know and understand the cleaning needs of the industry, so we have developed the most efficient cleaning system, ensuring an optimum quality in the cleaning processes of our clients.

Equipment from the Motor Clean series offer indisputable advantages over traditional cleaning systems. They are the best choice for degreasing, decarbonising and descaling engine pieces and components since they achieve the best results for being able to access the most hard-to-reach pieces regardless of their complexity and with no effort.

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.

The Motor Clean series covers the needs of all types of businesses within the motor industry, regardless of their size or specialisation, because it includes standard equipment that adapts to any piece, no matter its measurement. We also design tailor-made equipment for special cleaning needs.

At TierraTech, we comply with the highest quality standards in all our processes, certified by TÜv Rheinland with registration No. 0.04.09057, according to the ISO 9001:2008 Quality Standard.
TierraTech® worldwide

TierraTech® is directly represented in Spain, the U.S.A., France and Mexico; and with a distribution network in more than 30 countries, we are able to provide commercial and technical consultations worldwide. TierraTech® has two Design and Production plants. One is located in Spain for the European market, with a Sales and Logistics centre in France; the second plant is in Mexico and serves the American market; with a commercial and logistics centre in the United States serving North America.

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The efficiency of the TierraTech® ultrasonic cleaning systems over automotive pieces is outstanding. Oils, grease and carbon build-ups are removed quickly and efficiently. The Motor Clean series is specially designed to clean all types of components related to engines, such as engine blocks, cylinder heads, turbochargers, injectors or particle filters, as well as for cleaning brakes, gearboxes, radiators, transmission systems, etc.

Applications

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This range of equipment uses a working frequency of 40 kHz (sweep system +2%), which is the most adequate for cleaning in the motor industry because it achieves optimal cleaning without damaging any soft materials such as aluminium, magnesium, brass, etc. For other, more specific, types of cleaning, we use other frequencies such as 40-09 kHz (Multifrequency) to clean electronic boards or certain soft materials where the quality requisite of the reconstructor is very high and 28 kHz (sweep system ±2%) in the cleaning of certain large steel pieces in industrial and naval engineering.

Motor Clean in the automotive industry

- High-quality cleaning, regardless of whether the pieces have internal recesses or parts that are hard to reach.
- Reduces energy costs.
- Reduces labour time, benefiting other tasks in the production process.
- Technology is cleaner and more environmentally friendly, thanks to waste separation in the unit (oils, sludge, water).
- Savings in water and cleaning products by immersion cleaning.

Applications

General workshop

Daily cleaning of all kinds of pieces in general workshops becomes a complex task if you do not have the adequate cleaning means. Ultrasonic cleaning is ideal for removing different types of dirt (grease, carbon deposits, oils, etc.) in pieces such as cylinder heads, pumps, particle filters, etc., both on the surfaces and parts which are hard to reach, reducing the effort and time employed by traditional systems.

Diesel injection workshops

Cleanliness plays an important role in diesel injection laboratories, both in respect of the quality of the final result and productivity. Ultrasonic cleaning is ideal for these laboratories, because it enables cleaning the pumps in a maximum of 10-15 minutes without having to dismantle them and once dismantled in another 10 minutes we have complete assurance that all the internal conduits are perfectly clean, thus avoiding the typical problem that arises when a repair is carried out without adequate cleaning.

Grinding workshops

Regardless of the type of grinding to be carried out or the piece to be treated, ultrasonic cleaning ensures an optimum finish and precision in the grinding industry. Removes carbon deposits, oils and grease, as well as the usual residue we find in cylinder heads and engine blocks easily. The use of ultrasonic cleaning considerably reduces the time employed in cleaning, obtaining the highest quality and avoiding the use of acids, brushes and grit blasting, simplifying the cleaning process and removing the bottleneck all grinding workshops have in this part of the process.
Turbocharger workshops

Ultrasonic cleaning is the fastest and most efficient solution for turbocharger workshops because it removes carbon deposits and burnt oils, regardless of the complexity of the turbocharger structure. It also allows cleaning a great number of turbochargers in one single process, which improves quality and production times compared to traditional processes.

Engine rebuilding work

In engine rebuilding work, ultrasonic cleaning prevails as an efficient, fast and adaptable system for any place within the production chain. Ultrasonic cleaning removes all kinds of residue in cylinder heads, valves, pistons, engine blocks, commutators, alternators, etc. caring for the most delicate surfaces and ensuring an optimum finish both for later assembly processes and the final presentation of the engines.

Gearbox repair shops

In these repair shops, cleaning the pieces from the transmission system is a daily necessity that requires a fast and efficient system. The Motor Clean series covers this requirement, regardless of the complexity of the piece or amount of pieces to be cleaned, removing grease, oils and metallic shavings for instance, fast and efficiently, without the hard-to-access pieces becoming a challenge.

Marine

The Motor Clean series has large capacity equipment ideal for cleaning large pieces. The naval sector finds our ultrasonic cleaning equipment the most adequate option for the maintenance and repair of all types of engines because they facilitate the cleaning of pieces such as heat interchangers, cylinder heads, turbochargers, intercoolers, tube bundle, coolers or propellers, and other large and heavy pieces, thus reducing the time and effort involved with the traditional systems.

Heavy machinery

The harsh working conditions to which this type of machinery is subjected to makes preventive maintenance a fundamental task to lengthen their useful life and ensure smooth operation. The Motor Clean ultrasonic cleaning equipment facilitates cleaning radiators, cylinder heads, engine blocks, transmissions, hydraulic systems and working tools, such as shovels or chains, thus contributing towards a proper maintenance that favours efficient work of heavy machinery and decreases the possibility of unexpected breakdowns.

Aeronautics

The precision of ultrasonic cleaning helps both the manufacturers of the components, as well as MRO centres to satisfy the high-quality requirements and the strict safety standards of the industry. In an industry where safety is essential, the Motor Clean series are indispensable for the cleaning of hydraulic systems, heat interchangers, engine pieces, injection pumps, vanes, etc. since it does not damage the materials or modify the dimensions or geometry of the surfaces. The frequencies used for aeronautical applications are 40 kHz (sweep system ±2%) and 40-90 kHz, multi-frequency.
The Motor Clean standard series includes equipment with capacities ranging from 30 to 8000 litres, specially designed to clean, degrease, decarbonise and descale all sorts of pieces, components and accessories. All the equipment in this series, from 75 litres upward, incorporate an elevating platform to facilitate loading and manipulating pieces. Optionally, and depending on the application, we have water filtering and treatment systems, to adapt the standard system to the appropriate conditions required by our client.

The quietest ultrasound equipment on the market

Tierra Tech produces the quietest equipment on the market due to the high quality of the generator-emitter set, managing to transform almost 100% of the energy generated into ultrasounds and avoiding the loss in noise that penalises cleaning time and generate an unpleasant ambient noise. Between 70-78 dB depending on the size of the equipment.
### Standard Model

#### MOT-30 - 30 litres

- **Capacity:** 30 litres
- **Useful basket measures:** 500 x 250 x 210 mm
- **External dimensions:** 670 x 412 x 490 mm
- **Power supply:** 240V
- **Heat resistance:** 700W
- **Ultrasonic power:** 600W (1200W p-p)
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **Tank built in stainless steel AISI 316 steel of 2mm**
- **Weight:** 34kg

#### MOT-50 - 50 litres

- **Capacity:** 50 litres
- **Useful basket measures:** 550 x 260 x 225 mm
- **External dimensions:** 720 x 420 x 540 mm
- **Power supply:** 240V
- **Heat resistance:** 700W
- **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

#### MOT-75 - 75 litres

- **Capacity:** 75 litres
- **Useful basket measures:** 660 x 330 x 290 mm
- **External dimensions:** 860 x 510 x 900 mm
- **Power supply:** 240V
- **Heat resistance:** 1350W
- **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:** 73kg

### Standard Model

#### MOT-75N - 75 litres

- **Capacity:** 75 litres
- **Useful basket measures:** 660 x 420 x 468 mm
- **External dimensions:** 1034 x 650 x 905 mm
- **Power supply:** 240V
- **Heat resistance:** 2250W
- **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:** 310kg

#### MOT-150N - 150 litres

- **Capacity:** 150 litres
- **Useful basket measures:** 700 x 510 x 540 mm
- **External dimensions:** 1120 x 730 x 920 mm
- **Power supply:** 240V / 400V
- **Heat resistance:** 3500W (240V) and 3750W (400V)
- **Ultrasonic power:** 1700W (3400 p-p)
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **1 submersible transmitter with a power of 1700W (3400 p-p)**
- **Tank built in AISI 304 stainless steel of 2mm**
- **Maximum load capacity:** 60kg
- **Weight:** 175kg

#### MOT-300N - 300 litres

- **Capacity:** 300 litres
- **Useful basket measures:** 900 x 650 x 640 mm
- **External dimensions:** 1340 x 950 x 1020 mm
- **Power supply:** 400V
- **Heat resistance:** 7000W
- **Ultrasonic power:** 3000W (6000W p-p)
- **Working frequency:** 40kHz with system of frequency sweep (sweep system ±2%)
- **2 submersible transmitter with a power of 1500W (3000W p-p)**
- **Tank built in AISI 304 stainless steel of 2mm**
- **Maximum load capacity:** 30kg
- **Weight:** 140kg

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**General workshop**

**Diesel injection workshops**

**Turbocharger workshops**

**Aeronautics**

**Grinding workshops**

**Marine workshops**

**Engine rebuilding work**

**Gearbox repair shops**

**Heavy machinery**

**Aeronautics**
**Standard Model**

**MOT-400N - 400 litres**

- Capacity: 400 litres
- Internal dimensions (excluding auxiliary tank): 1100 x 860 x 665 mm
- Useful measures: 1240 x 636 x 415 mm
- Platform measures: 1240 x 636 mm
- External dimensions: 1770 x 1040 x 1070 mm
- Power supply: 400V
- Heat resistance: 9000W
- Ultrasonic power: 5100W (10200W p-p)
- 3 submersible transmitter with a power of 1700W each / 5100W (10200W p-p). Each transmitter 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 lifting reinforced load on dive platform.
- Maximum load capacity: 350kg
- Optional: filter for sludge and waste system
- Weight: 400kg

**MOT-600N - 600 litres**

- Capacity: 600 litres
- Internal dimensions (excluding auxiliary tank): 1300 x 860 x 665 mm
- Useful measures: 1340 x 636 x 415 mm
- Platform measures: 1240 x 636 mm
- External dimensions: 1770 x 1040 x 1070 mm
- Power supply: 400V
- Heat resistance: 10000W
- Ultrasonic power: 3400W (6800W p-p)
- 2 submersible transmitter with a power of 1700W each / 3400W (6800W p-p). Each transmitter 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 lifting reinforced load on dive platform.
- Maximum load capacity: 250kg
- Optional: filter for sludge and waste system
- Weight: 400kg

**MOT-1000N - 1000 litres**

- Capacity: 1000 litres
- Internal dimensions: 1500 x 900 x 860 mm
- Useful measures: 1400 x 720 x 560 mm
- Platform measures: 1400 x 720 mm
- External dimensions: 2666 x 1330 x 1098 mm (incl. tank generators Assistant and war- drobe).
- Power supply: 400V
- Heat resistance: 12000W
- Ultrasonic power: 6800W (13600W p-p)
- 2 generators of ultrasound with a power output of 6800W (13600W p-p). Each transmitter 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 lifting reinforced for loading, batting and unloading platform.
- Maximum load capacity: 750kg
- Optional: filter for sludge and waste system
- Weight: 550kg

**MOT-2000N - 2000 litres**

- Capacity: 2000 litres
- Internal dimensions: 2100 x 1100 x 1080 mm
- Useful measures: 1610 x 910 x 880 mm
- Platform measures: 1650 x 910 mm
- External dimensions: 3025 x 1580 x 1323 mm (incl. auxiliary tank and distribution board).
- Power supply: 400V
- Heat resistance: 18000W
- Ultrasonic power: 10200W (20400W p-p)
- 6 generators of ultrasound with a power output of 10200W (20400W p-p). Each transmitter 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 lifting reinforced for loading, batting and unloading platform.
- Maximum load capacity: 1000kg
- Optional: filter for the separation of lubricants and oils
- Weight: 1250kg

**MOT-3000N - 3000 litres**

- Capacity: 3000 litres
- Internal dimensions: 2500 x 1200 x 1240 mm
- Useful measures: 1930 x 990 x 880 mm
- Platform measures: 1930 x 990 mm
- Overall dimensions: 3496 x 1725 x 1465 mm (incl. auxiliary tank and distribution board)
- Power supply: 400V
- Heat resistance: 24000W
- Ultrasonic power: 13600W (27200W p-p)
- 8 generators of ultrasound with a power output of 13600W (27200W p-p). Each transmitter 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 lifting reinforced for loading, batting and unloading platform.
- Maximum load capacity: 1500kg
- Optional: filter for the separation of lubricants and oils
- Weight: 1500kg

**MOT-4000N - 4000 litres**

- Capacity: 4000 litres
- Internal dimensions: 2400 x 1500 x 1260 mm
- Useful measures: 2340 x 1320 x 880 mm
- Platform measures: 2340 x 1320 mm
- Overall dimensions: 2700 x 1920 x 1558 mm (incl. auxiliary tank and distribution board).
- Power supply: 400V
- Heat resistance: 30000W
- Ultrasonic power: 20400W (40800W p-p)
- 12 generators of ultrasound with a power output of 20400W (40800W p-p). Each transmitter 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 lifting reinforced for loading, batting and unloading platform.
- Maximum load capacity: 2000kg
- Optional: filter for the separation of lubricants and oils
- Weight: 2800kg
Standard Model

**MOT-8000 - 8000 litres**

Capacity: 8000 litres
Internal dimensions: 3000 x 2160 x 1500 mm
Useful measures: 2900 x 1900 x 1180 mm
Overall dimensions: 3383 x 2435 x 1800 mm
Power supply: 400V
Heat resistance: 60000W
Ultrasonic power: 34000W (68000W p-p)
20 submersible transmitter with a power of 1700W each / 34000W (68000W p-p) each transmitter contains 34 piezoelectric transducers in IBL, high performance titanium steel
Working frequency: 40KHz with system of frequency sweep (±2%)
Tank built in AISI 304 stainless steel 3mm
Optional: filter for waste and sludge system
Weight: 3500kg

Motor Clean models and specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Tankage</th>
<th>Internal dimensions (mm)</th>
<th>Ultrasonic power</th>
<th>Frequency</th>
<th>Heating</th>
<th>Pneumatic loading capacity (kg)</th>
<th>Basket and platform measurements</th>
<th>Waterflow system</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOT-30</td>
<td>30L</td>
<td>550 x 300 x 250</td>
<td>600 W (1200 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>700 W</td>
<td>500 to 1100</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>MOT-50</td>
<td>50L</td>
<td>600 x 300 x 300</td>
<td>700 W (1500 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>700 W</td>
<td>550 to 225</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>MOT-75</td>
<td>75L</td>
<td>700 x 350 x 400</td>
<td>800 W (1600 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>900 W</td>
<td>680 to 290</td>
<td>--</td>
<td>--</td>
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<tr>
<td>MOT-75N</td>
<td>75L</td>
<td>652 x 420 x 468</td>
<td>800 W (1600 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>2250 W</td>
<td>30 kg</td>
<td>620 x 325</td>
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<tr>
<td>MOT-150N</td>
<td>150L</td>
<td>700 x 500 x 540</td>
<td>1700 W (3400 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>3500 W</td>
<td>60 kg</td>
<td>670 x 415</td>
<td>✓</td>
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<tr>
<td>MOT-300N</td>
<td>300L</td>
<td>900 x 650 x 640</td>
<td>3000 W (6000 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>7000 W</td>
<td>250 kg</td>
<td>830 x 495</td>
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<tr>
<td>MOT-400N</td>
<td>400L</td>
<td>1100 x 650 x 890</td>
<td>3400 W (6800 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>7000 W</td>
<td>250 kg</td>
<td>1050 x 495</td>
<td>✓</td>
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<tr>
<td>MOT-600N</td>
<td>60L</td>
<td>1300 x 800 x 865</td>
<td>5100 W (10200 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>9000 W</td>
<td>350 kg</td>
<td>1240 x 636</td>
<td>✓</td>
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<tr>
<td>MOT-1000N</td>
<td>1000L</td>
<td>1500 x 900 x 860</td>
<td>6800 W (13600 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>12000 W</td>
<td>750 kg</td>
<td>1400 x 720</td>
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<tr>
<td>MOT-2000N</td>
<td>2000L</td>
<td>1750 x 1100 x 1080</td>
<td>10200 W (20400 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>18000 W</td>
<td>100 kg</td>
<td>1650 x 910</td>
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<tr>
<td>MOT-3000N</td>
<td>3000L</td>
<td>2050 x 1200 x 1240</td>
<td>13600 W (27200 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>24000 W</td>
<td>1500 kg</td>
<td>1930 x 990</td>
<td>✓</td>
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<tr>
<td>MOT-4000N</td>
<td>4000L</td>
<td>2400 x 1500 x 1260</td>
<td>20400 W (40800 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>30000 W</td>
<td>2000 kg</td>
<td>2340 x 1320</td>
<td>✓</td>
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<tr>
<td>MOT-8000</td>
<td>8000L</td>
<td>3000 x 2160 x 1500</td>
<td>34000 W (68000 p-p)</td>
<td>40 KHz (sweep sys. ±2%)</td>
<td>60000 W</td>
<td>--</td>
<td>√</td>
<td>✓</td>
</tr>
</tbody>
</table>

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

Applicatons by Industries

- **Motor Clean**
  - Workshop
  - Heavy machinery
  - Marine
  - Aeronautics

- **Recommended models**
  - MOT-30
  - MOT-50
  - MOT-75
  - MOT-75N
  - MOT-150N
  - MOT-300N
  - MOT-400N
  - MOT-600N
  - MOT-1000N
  - MOT-2000N
  - MOT-3000N
  - MOT-4000N
  - MOT-8000

- **Applications by Industries**
  - General workshop
  - Heavy machinery workshop
  - Grinding workshop
  - Turbine workshop
  - Engine rebuilding work
  - Gearbox repair shops
  - Marine
  - Heavy machinery
  - Aeronautics

- **Applications**
  - Injection pumps, hydraulic circuits, vanes, etc
  - Heat interchangers, cylinder heads, valves, pistons, engine motors, turbochargers
  - Injection pumps, hydraulic circuits, vanes, etc
  - Turbochargers, diesel injection pumps, injectors, cylinder heads, pistons, alternators, parts in general
  - Heavy machinery rebuilding work
  - Marine
  - Aeronautics

- **Related Products**
  - Heavy machinery, hydraulic, industrial machinery, etc
In addition to the standard model, we also manufacture models made to measure and Multi-stage systems. These units are designed for companies with special cleaning needs, be it for the characteristics of the pieces to be cleaned or for the requirements of their fabrication process. They can incorporate several processes such as rinsing, drying or different treatments other than cleaning.

Right from the start, we have worked in tandem with our clients seeking the specific solution best suited to their needs.

Examples of special equipment:

**MOT-3X1000 US+A+S: Ultrasonic cleaning + Rinsing + Drying**
High-powered ultrasound system and three stages for cleaning, rinsing and drying turbo chargers.

**MOT-75+AC+S: Ultrasonic cleaning + Warm Rinsing + Drying**
Multistage equipment with ultrasonic cleaning plus warm rinsing and drying, designed for cleaning injection pumps.

**MOT-2X150NS + Passivation with bubbles**
A two-stage high-powered ultrasonic cleaning system for the cleaning and passivation of engine parts.

**MOT-150NS+V**
Tailor-made equipment for the cleaning of interchangers with water circulating system and filters to retain sludge and internal shavings.
Cleaning Product

Ultrasonic-7W  Alkaline
Product type: degreaser.
Features: Cleaning and descaling charcoal. To achieve these results it should be used together with Ultrasonic-A.
Suitable materials: iron, galvanized steel and aluminum.
Dosage: 3%
Color: beige
Appearance: liquid.

Ultrasonic-5P  Alkaline
Type of product: degreaser.
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).
Dosage: 3%
Color: white
Appearance: powder.

Ultrasonic-20  Alkaline
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 magnetic salts.
Suitable for: Iron
Dosage: 5%
Colour: white
Appearance: liquid

Ultrasonic-23  Alkaline
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

Cleaning Product

Ultrasonic-A  Alkaline
Type of product: degreasing additive
Characteristics: Additive for degreasing detergents, tensioactivator
Dosage: 0.2%-0.5%
Colour: red
Appearance: liquid

Ultrasonic-B  Alkaline
Type of product: degreasing additive
Characteristics: Additive for degreasing detergents, tensioactivator
Dosage: 0.2%-0.5%
Colour: yellowish
Appearance: liquid

Ultrasonic-5P  Alkaline
Type of product: paint stripper
Characteristics: When hot, it has unique stripping properties in short periods of time for synthetic resins, primers, paints and baked powder paints, water paints and very resistant cataphoretic coatings.
Suitable for: Aluminium
Dosage: 1%
Colour: yellowish
Appearance: Liquid

Ultrasonic-250  Acid
Type of product: Metal deoxidiser
Characteristics: Removes stubborn dirt and all types of lime build-up. Very useful for applications where accumulated rust and dirt cause a problem for the use of metallic parts and machinery.
Suitable for: Ferrous materials
Dosage: 2%
Colour: transparent
Appearance: liquid

Ultrasonic-51  Solvent
Type of product: metal deoxidiser
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).
Dosage: 3%
Color: beige
Appearance: liquid.

1kg 5kg 10kg 25kg 30kg

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Cleaning Product

Ultrasonic-54

Type of product: paint stripper
Characteristics: When hot it has the ability to remove stains on synthetic resins, baked paints, primers, water paints and cataphoretic coatings.
Suitable for: Iron
Dosage: 50%
Colour: Brownish
Appearance: Liquid

Ultrasonic-4

Type of product: degreaser
Characteristics: Removes embedded sediments of fat, oils and any kind of stubborn dirt, preventing it from redepositing on parts already cleaned.
Suitable for: Aluminium, iron and alloys
Dosage: 3%
Colour: Blue
Appearance: Liquid

Products and specifications

<table>
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<tr>
<th>Product</th>
<th>How to use</th>
<th>Suitable material</th>
<th>Waste to be removed</th>
<th>Type of product</th>
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<tbody>
<tr>
<td></td>
<td>Concentration in water (%)</td>
<td>Temperature</td>
<td>Aluminu</td>
<td>Iron</td>
</tr>
<tr>
<td>Ultrasonic-7W</td>
<td>3%</td>
<td>40-80°C</td>
<td>✔</td>
<td>✔</td>
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<tr>
<td>Ultrasonic-5P</td>
<td>3%</td>
<td>40-80°C</td>
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<tr>
<td>Ultrasonic-20</td>
<td>5%</td>
<td>40-80°C</td>
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<tr>
<td>Ultrasonic-23</td>
<td>5%</td>
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<tr>
<td>Ultrasonic-A</td>
<td>0.2-0.5%*</td>
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<tr>
<td>Ultrasonic-B</td>
<td>0.2-0.5%*</td>
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<td>✔</td>
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<tr>
<td>Ultrasonic-25S</td>
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<td>40-80°C</td>
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<td>Ultrasonic-51</td>
<td>10%</td>
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<td>✔</td>
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<tr>
<td>Ultrasonic-54</td>
<td>30%</td>
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<td>✔</td>
<td>✔</td>
</tr>
<tr>
<td>Ultrasonic-4</td>
<td>3%</td>
<td>40-80°C</td>
<td>✔</td>
<td>✔</td>
</tr>
</tbody>
</table>

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

TierraTech® Customers

Some of our clients:

![Logos of various companies including Mercedes-Benz, MAN, and others]