



**ULTRATECNO**  
POWER ULTRASONIC CLEANING



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**50+**  
YEARS OF  
EXPERIENCE

**70+**  
PROJECTS  
PER YEAR



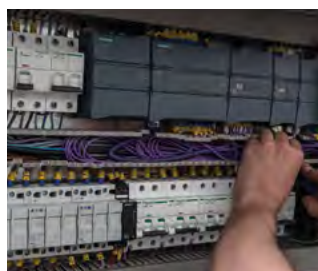
**304/316**  
FULL STAINLESS  
STEEL



**15.000L**  
OUR BIGGEST  
TANK VOLUME



**2**  
INDUSTRIAL  
PATENTS



**45+**  
COUNTRIES  
PRESENCE



**28KHZ**  
HIGH POWER  
SPECIALIST





# UltraTecno Technology

## UltraTecno, the most efficient Ultrasonic cleaning

Our unique **Digital & Synchronized** Generators and Transducers deliver market the most efficient cavitation, resulting in a micro-brushing/blasting phenomenon for **best performance on the hardest cleaning applications at Industry**.

**UltraTecno Green Label features provide up to 45% reduction at running costs** (electricity and detergent) in comparison with standard ultrasonic cleaners. This can mean up to 120.000 € savings for a 1000 liter size cleaner during its lifetime.

Our **design and manufacturing concept is aimed for Heavy Duty industrial daily use**. We use robust oversized stainless steel (up to 55% thicker than competitors) and reliable parts **for the longest lifetime** under extreme conditions.




Synchronized Generators to build the largest tanks on the market.

## Benefits of UltraTecno Ultrasonic Cleaning

- The highest quality of cleaning, and homogeneous results.
- The best performance for complex parts, as ultrasonic cleaning reaches everywhere, even inside holes and cavities.
- Non-abrasive process, the safest for your most valuable parts.
- Savings of 80% labor cost and reduction in detergents use by 6 times.
- Environmental-friendly, the lowest power and water consumption.
- Highest work safety environment, as reduces operator exposition to chemicals.
- User-friendly touch screen, easy operation process.
- Low noise emission under 78 dB (A), as our patented & exclusive ARF Technology.

Powerful and homogeneous effect of our 28kHz technology is clearly visible at aluminium foil cavitation test.



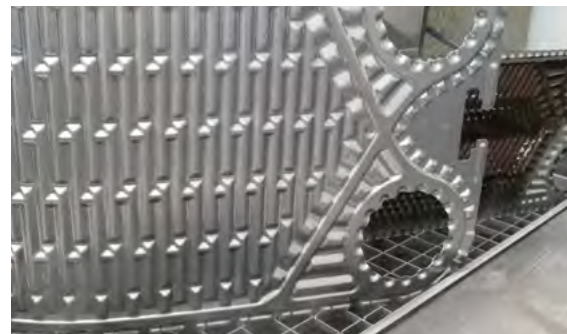
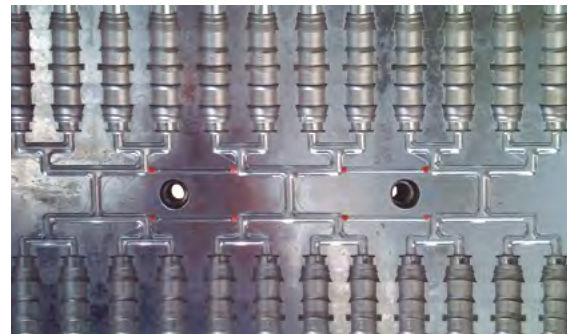
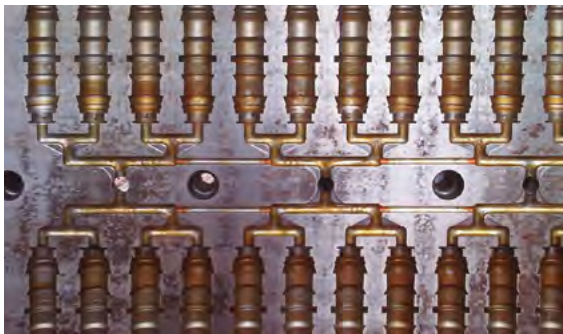
-  Best Cleaning Performance
-  Safest Work Environment
-  80% Labor Cost Reduction
-  Detergent Consumption Reduction
-  Lowest Power Consumption
-  Easy operation Interface
-  Lowest Noise Emission
-  Lifetime Robust Construction

# Cleaning Applications for Industry

For more than 50 years, UltraTecno has developed complete cleaning solutions for Industry:

<b>INDUSTRY</b>	<b>PARTS TO BE CLEANED</b>	<b>DIRT TO REMOVE</b>
<b>Plastic or Rubber parts manufacturing</b>	Plastic Injection molds, Thermoforming molds, Extrusion molds	Burned plastic/Rubber, Paint, Demoulding agent, Grease
<b>Paint Removal</b>	Paint or rust removal, surface pre-treatment for new coating	Paint, Oil, Dust
<b>Industrial thermal transfer or Filtering processes</b>	Heat Exchangers and Filters	Fluids, Filtered particles
<b>Metalfforming</b>	Die casting, Punch tools, Pres tools, Extrusion molds	Oil, Dust, Molding, Materials
<b>Metal cutting / Machining industry</b>	Fabrication of high precision parts	Machining oil, Metal chips, Dust, Rust
<b>Wood working</b>	Saw blades, Wood cutters	Burned resin, Rust
<b>Marine Maintenance</b>	Large engine parts (Cylinder Heads, Pistons, Engine blocks, Manifolds, Turbochargers), Filters, Heat Exhangers	Carbon dust, Oil, Grease, Rust
<b>Mining</b>	Large engine parts, Conveyers	Carbon dust, Oil, Grease, Rust
<b>Aircraft Industry</b>	Rotors, Engine components	Oil, Dust, Rust, Contamination particles
<b>Automotive &amp; Truck Engine Repair</b>	Cylinder Heads, Pistons, Engine Blocks, Manifolds EGR Valves, Turbochargers Catalytic Converters/DPF, Filters, Injectors/Carburetors	Carbon dust, Burnt Oil, Grease
<b>Parts Remanufacturing</b>	Pumps, Brake systems, Engine parts, Turbochargers	Paint, Oil, Grease, Rust, Dust
<b>Railway Maintenance</b>	Train engine and Mechanical components	Carbon dust, Oil, Grease, Rust
<b>Power Generation Industry</b>	Thermal, Electric and solar plant components, Heat exchangers, Gear motors	Carbon dust, Oil, Grease, Rust
<b>Printing Industry</b>	Printing rolls, Anilox sleeves, Lacquering roller, Glue roller, Screen printing roller	Ink, Dust, Oil, Glue, Paper or Fabric rests
<b>Manufacturing Industry</b>	Processed parts, before boxing and delivery to customer	Dust, processing oil, contamination particles
<b>Food industry</b>	Baking trays, Parts of production machinery, Filters	Oil, grease, waste, encrustations
<b>3d prototyping</b>	New printed parts	Support material





## ACM and ICM Series

### Single Tank solution for the highest cleaning performance

Our ACM/ICM Series have been engineered to provide most efficient ultrasonic cleaning and lowest running cost, with a single tank solution. All these standard models benefit from technical solutions we developed at major projects.

ACM models include **pneumatic or hydraulic platform lift** (up to 2t) for parts during cleaning. This swing will increase dramatically cleaning performance especially at heavy duty applications or complex parts.

**Exclusive & patented ARF Technology.** Results in the most powerful cleaning, while keeping noise below 78 dB (A).

**Digital & Synchronized ultrasonic generators** 28 or 40 kHz, which provides best cleaning performance by avoiding any pressure waves absorption phenomenon between different sets at large tanks.

The **Highest Quality Transducers** placed at tank walls to ensure 100% cleaning power always manufactured with aeronautical adhesive welding to avoid any energy loss due to mechanical attachments.

**Triple Extra Thickness Insulated tank** (including sealed top lid) to avoid energy thermal loss, and detergent steam emissions.



Model*	Main Tank (lt)	Elevator Max Load (kg) (6 Bar)	Platform lift	Max static load** (kg)	Ultrasound Power (kW)	Heating Power (kW)
ACM-100E	113	50	Pneumatic	100	1	3,75
ACM-200E	200	75	Pneumatic	150	2	7,5
ACM-350N	405	250	Pneumatic	470	3	11
ACM-500N	587	350	Pneumatic	700	4	11
ACM-750N	840	500	Pneumatic	1.000	5	11
ACM-1000N	1224	800	Pneumatic	1.600	7	15
ACM-2000N	2178	1.000	Hydraulic	2.000	9	23
ACM-3000NW	3279	1.000	Hydraulic	2.000	10	30
ACM-3000N	3276	1.000	Hydraulic	2.000	12	30
ACM-4500N	5190	1.800	Hydraulic	3.600	15	37,5
ACM-5500N	6010	1.800	Hydraulic	5.000	18	45
ICM-8000N	9184			8.000	27	60
ICM-12000N	13258			12.000	36	75

\*All ACM models available also in ICM execution, without the platform lift

\*\*ICM model maximum load or ACM model with platform lift static on the lowest position



## Cleaning Process

1. The tank is filled with water and cleaning product (standard concentration from 5-15%) and heated to 60-90°C.
2. Parts are located on the platform (ACM models) or into the basket (ICM models) and immersed into the cleaning solution.
3. The automatic ultrasonic cleaning process takes from several minutes up to two hours depending on the cleaning application.
4. Parts are removed from the tank, rinsed by water and dried.



**Oil Separation Tank LFS** for quick and easy oil removal from main tank by using a recirculation pump.

**Multilanguage Color Large (7") Touch Screen** for easy user interface. Full process parameters can be modified as user request.

**Green Label** features include Automatic night Eco Mode, Programmable Heating and US Timer, Electricity Consumption Monitoring.

**Heavy duty stainless steel full construction** with 50% extra thickness for highest reliability and longest lifetime.

## Options



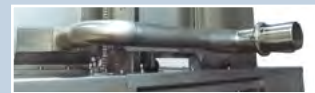
- Filtering unit or system



- Hybrid Heating



- Small Parts Basket



- Steam Extraction
- Automatic Water Refilling
- Automatic Lid Opening
- Automatic Dosing System for Liquid Detergent
- Safety Retention tank
- Customized baskets
- Ethernet connection to PLC

Main Tank Internal Measures (mm)	Platform Tray Dimension (mm)	Useful Height (mm)	External Measures with Top Lid Open (mm)	Oil Separator LFS	Automatic Top Lid Opening
600 x 400 x 470	550 x 290	310	1070 x 720 x 1360	YES	NO
800 x 500 x 500	750 x 370	300	1270 x 850 x 1520	YES	NO
1000 x 650 x 625	952 x 495	381	1807 x 1100 x 1735	YES	OPTION
1200 x 670 x 730	1150 x 520	450	2010 x 1220 x 1810	YES	OPTION
1400 x 800 x 750	1335 x 630	480	2270 x 1360 x 1890	YES	OPTION
1600 x 900 x 850	1550 x 725	556	2450 x 1490 x 2090	YES	YES
1800 x 1100 x 1100	1666 x 915	754	2610 x 1830 x 2740	YES	YES
1700 x 1590 x 1215	1565 x 1340	850	2255 x 2180 x 3280	YES	YES
2100 x 1300 x 1200	1965 x 1110	850	2750 x 1800 x 3000	YES	YES
2400 x 1590 x 1360	2217 x 1251	900	3293 x 2306 x 3340	YES	YES
2700 x 1590 x 1400	2600 x 1400	1000	3543 x 2442 x 3660	YES	YES
3200 x 2050 x 1400		1260	4100 x 2850 x 4350	YES	YES
4600 x 1950 x 1460		1320	5920 x 2890 x 4335	YES	YES

To get the best cleaning performance parts should be separated from each other and from the tank walls **at least 100 mm**.

# Ultrasonic Multistage Systems

UltraTecno offers a wide range of **modular technical solutions** to build up a custom complete system for **each industry cleaning requirements**. Each line is adjusted and configured with the desired wash, rinse and drying stages according customer needs.

**Flexible, reliable and robust systems** starting from **100 liters tank capacity up to 15.000 liters for each stage**.

**Multistage lay-out allows easy parts handling** by using overhead cranes, custom automated manipulation systems or robotized systems. **Customized baskets** can be used to ensure perfect integration at customer manufacturing or maintenance process.

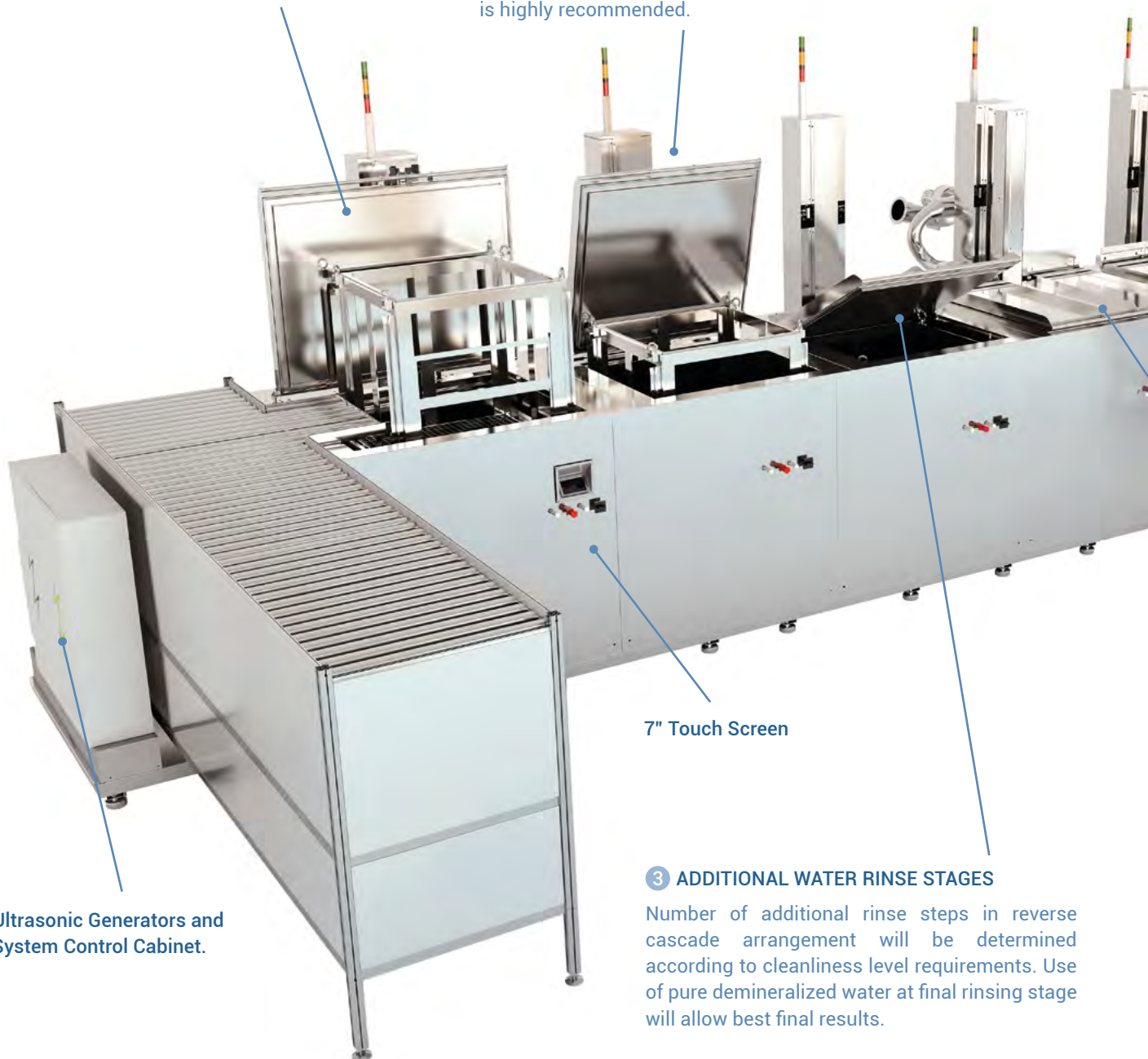
Ultrasonic Multistage systems are ideal for customers searching for **repetitive cleaning** of parts during their process.

## 1 ULTRASONIC CLEANING

Our powerful cavitation will loosen dirt on parts. Bath includes water and specific detergent (5-15%) for each application. Heating up to 90°C increases overall performance.

## 2 WATER RINSE

Rinsing is as important as cleaning. It will remove detergent and remaining dirt from parts. Air bubbling jets increase rinsing effectiveness. Water must be kept clean, so active carbon filter is highly recommended.



Ultrasonic Generators and System Control Cabinet.

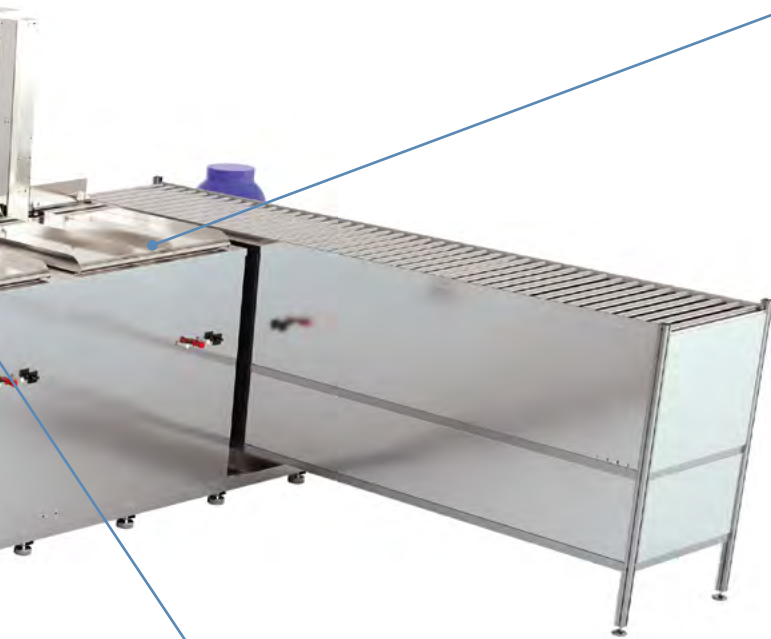
7" Touch Screen

## 3 ADDITIONAL WATER RINSE STAGES

Number of additional rinse steps in reverse cascade arrangement will be determined according to cleanliness level requirements. Use of pure demineralized water at final rinsing stage will allow best final results.

## UltraTecno offers optional equipment for an optimal match with each customer cleanliness requirements

- Pneumatic or hydraulic platform lift for parts swing to increase effectiveness while cleaning or rinsing stages.
- Cartridge or bag filtration for ultrasonic tank.
- Automatic water refilling.
- Automatic Liquid Detergent Dosing System .
- Detergent preparation (pre-mix) tank.
- Automatic Oil Separation for US tank.
- Air bubbling or water jets for rinsing tanks.
- Active carbon filtering for rinsing stages.
- Sprinklers system for parts rinsing while being extracted.
- Osmosis plant for demineralized water generation for final rinsing stages.
- Safety enclosure for loading system.
- Customized basket and lifting beams.
- Steam extraction to ensure healthy plant environment.
- Loading/unloading conveyors, manual or motorized.
- Ultrasonic sets at rinsing stages for special applications.



### 5 DRYING

Hot air cyclone chamber quickly removes water from just cleaned parts, so they are ready to continue their manufacturing process. Proper thermal insulation ensures lowest electrical consumption.

### 4 PARTS PROTECTION

Passivation agents bath will protect your parts against corrosion. A complete range of products is available depending on customer parts material and temporal protection range desired.

### Automated Handling Systems

Total integration of Ultrasonic Cleaning System into customer's lay-out will minimize process takt time. Our engineering team will design the best handling system according to customer parts size and daily volume.

Overhead cranes, custom automated manipulation device, or robotized systems can be used for integration. Customized baskets are key factor to ensure efficient handling, and avoid unneeded parts loading/unloading. UltraTecno can design and manufacture them specifically for each application.



# Ultrasonic Cleaning System for Printing Industry

This equipment is specially designed for cleaning of printing rolls, gravure cylinders and anilox rolls.

During the cleaning of the rolls extreme caution must be taken because any inappropriate physical action can destroy the delicate rolls' surface.

That's why ultrasonic cleaning technology is recommended for this cleaning application. Cavitation bubbles created by ultrasounds smoothly remove dirt from the rolls' surface avoiding any wear or tear on the rolls. The cleaning time takes from 10 to 45 minutes depending on type of roller and printing medium.

## 1 ULTRASONIC CLEANING

The roll is partially immersed to the Ultrasonic bath and located to the fixture.

The tank is equipped with clamping device able to **adjust different lengths of printing rolls.**

Turning of the roll is performed by sophisticated **traction system.**

Temperature of cleaning solution is from 60-70C°.

Part can be rinsed by water gun over the ultrasonic tank so no dirt neither detergent is transferred to rinsing tank.

## 2 RINSING

Rinsing operation with pure demi-water to wash all the released dirt.

Anilox roll is located in the rising tank to the identical turning system as in Ultrasonic tank.

Rinsing is made by pure demi-water produced **by osmosis plant.** Osmosis plant is optional part of the machine and it is controlled by equipment control unit.

## 3 DRYING

After rinsing, the operator dries printing by the air gun.



## Cleaning products range

UltraTecnico provides specially designed chemicals, tested for many years at our worldwide markets.

When used together with our Ultrasonic Tanks, cleaning products provide the **best cleaning performance**, with working temperatures up to (90°C), and the longest lifetime with **significant running cost savings**. Water based formulas ensure highest health and safety environment.

	PRODUCT	SUITABLE MATERIAL	TYPE OF PRODUCT	% in water	CLEANING TEMPERATURE
ALKALINE	PDU-50	Aluminum or non ferrous alloys	Standard degreaser	3 - 5%	40° - 70°
	PDU-200	Aluminum or non ferrous alloys	Heavy duty cleaning	3 - 5%	70° - 80°
	PDU-39	Steel, stainless steel, cast iron	Standard degreaser	3 - 10%	40° - 80°
	PDU-45	Steel, stainless steel, cast iron	Heavy duty cleaning	5-15%	70° - 90°
ACID	PDU- MK	Steel, stainless steel, aluminum, copper	Standard cleaning	1-5%	40° - 80°
	PDU- FS	Steel, stainless steel, cast iron	Rust removal, Scale Removal	3-5%	40° - 80°
STRIPPER	PDU GMS	Steel, stainless steel, cast iron	Standard paint stripper	0,5-2%	40° - 80°
	PDU 501-502	Steel, stainless steel, cast iron	Heavy duty paint stripper	50%-50%	60° - 80°
	PDU AL	Aluminum or non ferrous alloys	Paint stripper	15-100%	60° - 80°
	PDU MDR	Wooden parts	Paint stripper	0,5-2%	
SOLVENTS	PDU CC		Heavy duty degreaser	15-100%	40° - 70°
OTHER	PDU-201	Aluminum or non ferrous alloys	Engine parts maintenance	0,5-2%	70° - 80°
	PDU-202	Aluminum or non ferrous alloys	Engine parts maintenance	0,5-2%	70° - 80°
	PASSIVATING	Steel, cast iron	Temporal rust protection	2-5%	Environment
	WATER REPELLENT	Steel, cast iron	Oil based water repellent and long rust protection	100%	Environment
	PDU-45A	Steel, stainless steel, cast iron	Cavitation enhancer additive for PDU-45 heavy duty applications	0,5-1,5%	70° - 90°
	DESCALE				40° - 80°
	ACTIVATED CARBON			Rinse water filtering	

# UltraTecno Customers Worldwide



**ACM-3000E**  
Singapore



**ACM-1000E**  
United Kingdom



**3S-ICM-7500**  
Mexico



**ACM-5000E & ACM-1000E**  
Netherlands



**ICM-7500**  
USA



**AUT-UL-08**  
Spain



MAN Diesel & Turbo







**3S-ICM-1500**  
Germany



**ICM-11600**  
Qatar



**2S-ICM-500**  
China



**2S-ICM-500**  
France



**ACM-650E**  
Australia



**ACM-5000E**  
Indonesia





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