DCM Ultrasonic

Trusted technology

ULTRASONIC EQUIPMENT

www.dcmultrasonic.com

Global Vision

At **DCM Ultrasonic**, we manufacture ultrasonic equipment for the entire world. Our goal is to satisfy the needs of our customers, which is why at DCM Ultrasonic we offer a wide range of high-quality, high-performance equipment. In our R&D&I department, we have developed our **own patented** digital and synchronised ultrasonic generator, the result of more than 10 years of experience in ultrasonic generation. All our equipment is **manufactured entirely in Spain** at our facilities in Valencia.

THEY TRUST US

VESCOM

Carlsberg

HOWMET AEROSPACE

Smink GROUP

Real Casa de la Moneda
Fábrica Nacional
de Moneda y Timbre

SAFRAN

Roquet making moves

coniex Beyond with you

UTILCELL
CÉLULAS DE CARGA · LOAD CELLS

CRISTEMA
HANDS OF SOUL

TRES

TRAMONTINA

IMC
power to your passion

SERVIDAF

STMicroelectronics

UZAJE

OPTIONS

Quality Engine
Pagliarani Stefano

AL TAIF
الطيف

LEADING THE WAY IN ULTRASOUND

What sets us apart from other machines in the sector.

Submersible Ultrasound

When submerged in the ultrasonic tank, they enhance cleaning, optimise washing time and generate a more uniform cavitation effect.

Aeronautical Quality

Aeronautical-grade TIG welds that guarantee extreme precision, continuous reliability and stable performance even in demanding industrial environments.

Heavy Duty

Tanks built to withstand extreme industrial demands, offering the highest load capacity on the market.

Patented Technology

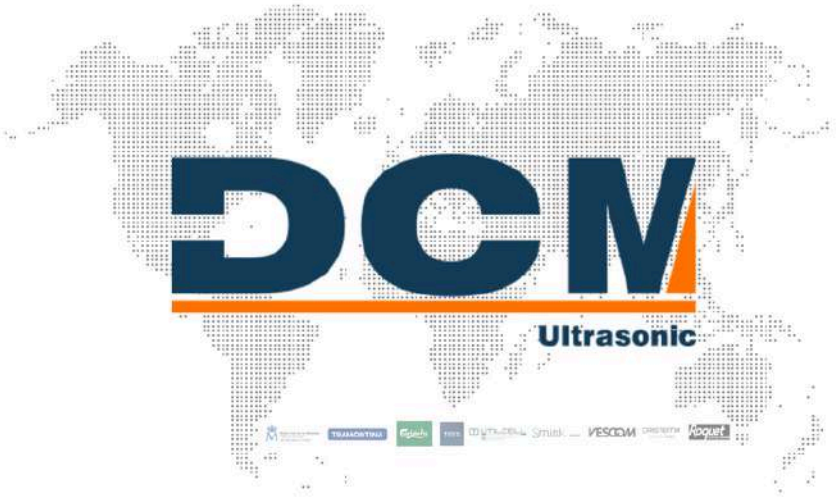
Ultrasound transmitters and generators patented in Spain. Proprietary technology designed and manufactured in our workshop located in Valencia.

Patented Technology

Quality standards

Sustainable cleaning

Index



About DCM Ultrasonic

At DCM Ultrasonic, we design and manufacture high-performance ultrasonic cleaning machines, optimised for various industries. We have our own workshop where each and every part is manufactured and assembled. Furthermore, we are one of the few manufacturers that has its own patented ultrasonic generation technology and 100% Spanish manufacturing.

Committed to offering innovative, efficient and high-quality solutions in the field of ultrasonic cleaning for the industrial sector.

Quality & Trust

Each of our devices is designed and manufactured under strict technical standards to ensure optimal and long-lasting performance, generating confidence thanks to our 100% Spanish manufacturing and efficient and effective ultrasound technology.

History + Patented Technology

Over a decade of experience in the design and manufacture of ultrasonic cleaning equipment. Patented ultrasonic generators, adaptable to all types of use and featuring synchronised digital technology.

GLOBAL VISION

Our global vision is to offer and supply the most advanced technology in ultrasonic cleaning to ATTEND the different demands in industrial cleaning and maintenance for all types of sectors and on all continents.

We aspire to transform the way industries approach technical cleaning, promoting sustainability, energy efficiency and reduced environmental impact. Through constant innovation and a commitment to excellence, we seek to contribute to the development of cleaner, safer and more efficient factories around the world.

Ultrasonics with environmental impact - ECO

APPLICATIONS

Parts cleaning - Degreasing - Rust removal - Anodising
Industrial maintenance - Descaling - Paint stripping
Surface & mould treatment - Dirt removal

INDUSTRIES

Naval Industry - Oil and Gas - Mining Industry - Graphic Industry
Food Industry - Railway Industry - Automotive Industry
Pharmaceutical Industry - Metallurgical Industry

DCM ultrasonic equipment
Advantages

Thermal and acoustic insulation

Prevent heat loss during the operation of our equipment by maintaining the temperature, thus avoiding unnecessary heating and cooling cycles, which directly results in lower electricity consumption and financial savings.

PLC+HMI control system

The equipment has a PLC and a colour HMI screen from which the entire machine can be easily controlled using a highly intuitive menu. The equipment has an Ethernet communications port, allowing remote monitoring and management.

Integrated stainless steel construction

The equipment is made entirely of AISI 304L stainless steel, with the exception of the ultrasonic transducers, which are made of AISI 316L stainless steel. The thicknesses of the tank and ultrasonic transducers have been carefully selected to ensure a long service life and obtain the best possible resonance from the system, thus achieving an efficiency of close to 98%, This means that all the electrical energy used to generate the ultrasound is delivered mechanically to the tank, thus reducing energy losses in the form of heat.

Oil separation

Comprising a recirculation pump with a stainless steel body and an auxiliary tank that acts as a decanter. The pump has a Roten 3 tungsten carbide mechanical seal and Viton gaskets, thus preventing premature seal failure due to the use of aggressive detergents. Oil separation extends the life of the bath and prevents parts from becoming dirty when removed from the bath.

Double Welding System

DWS

All our tanks are fully welded around their entire perimeter, both internally and externally, thus ensuring a completely watertight seal at any point in the tank and doubling safety against future leaks due to the continuous micro-erosion caused by ultrasound in the tank, which translates into a tank service life of more than 20 years.

Integrated electrical panel

The electrical panel is integrated into the interior of the tank, making it very compact. The electrical panel is easily accessible from the outside at the front via removable guides, thus facilitating maintenance operations and allowing the tank to be installed very close to walls.

Noise reduction system

Thanks to our noise reduction system, the sound pressure level is reduced to below 78db even at high frequencies such as 28kHz, allowing the machine to be used without the need for personal hearing protection equipment.

Daily ECO mode

The daily ECO mode allows you to save energy by keeping the machine at the desired temperature during the night or at weekends, thus preventing the temperature from dropping and the subsequent energy expenditure required to return to the desired working temperature.

V-shaped bottom

All tanks have a V-shaped bottom, which facilitates cleaning and prevents the accumulation of sludge at the bottom that causes premature deterioration of the tank.

Electrical resistance on the sides

The electrical resistors are located on the side of the tank at a sufficient height to prevent sludge accumulating at the bottom from coming into contact with them, thus preventing damage and increasing their useful life and performance.

Integrated light beacon

All our equipment has a configurable, integrated light beacon, making it easy for the user to see the status of the machine from a distance at a glance. We can quickly identify the status of ready, attention, working or emergency by means of its colour coding.

Modular transmitters

Our equipment features a modular ultrasonic emitter system, which means that unlike other manufacturers, if a module breaks, the machine continues to function until the module is replaced.

In-house technical service

At DCM Ultrasonic, we have our own technical service team capable of resolving any incident with a maximum response time of 48 hours. Thanks to our technical service, our customers' production chains are minimally affected in the event of a breakdown. We have all spare parts for our equipment in permanent stock.

Heavy Duty design

Our largest capacity tanks are specially built for heavy-duty industrial use, being the tanks with the highest load capacity on the market, satisfying the extreme needs of our customers.

Own PATENTED Digital Generator (ES 1 304 918 U)

Thanks to our experience in ultrasound generation, we have developed our own digital and synchronised generator, entirely designed and built in Spain. Since we have complete control over ultrasound generation, this allows us to understand the cavitation phenomena that occur in the bath and even modify the waveform to adapt to our customers' special needs.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B08B 3/12 (2006.01)

DETAILS THAT MATTER

Designed to facilitate the handling and use of our machines.





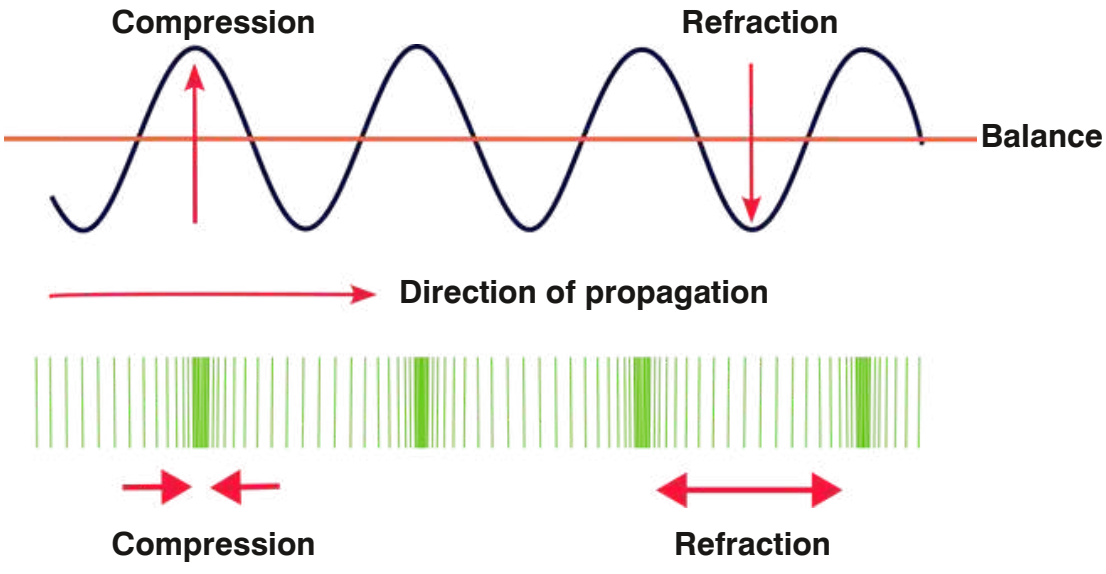

How ultrasonic cleaning works

Surface cleaning is probably one of the most successful applications of high-power ultrasound. The technique is simple: immerse the object to be cleaned in a tank filled with a cleaning solution and expose it to an intense ultrasonic field. The basic cleaning system consists, at a minimum, of a tank containing the cleaning solution, which also acts as a medium for transporting the ultrasonic energy, equipped with one or more ultrasonic transducers that are powered by a generator. Based on this basic model, there are more complex installations that incorporate conveyors, mechanical pre-washing, devices for filtering the used cleaning liquid and for drying the cleaned parts, etc.

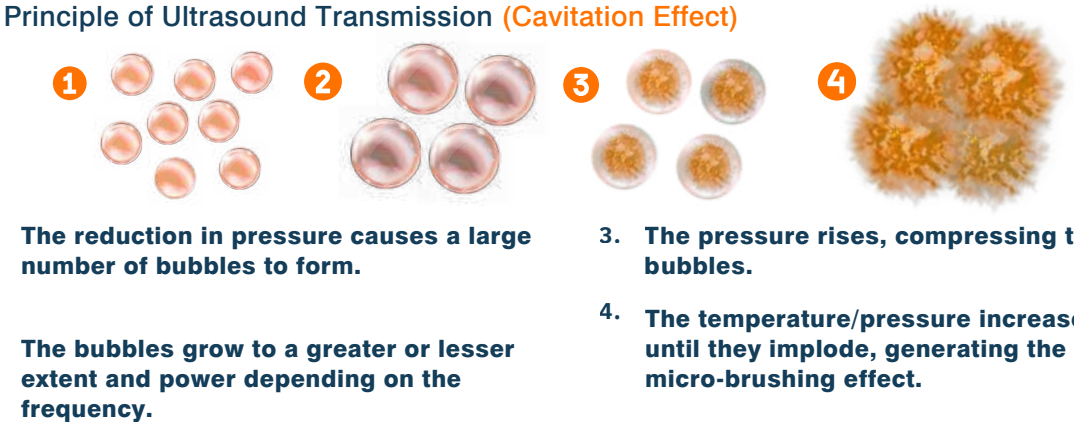
Any cleaning process in a liquid medium requires mechanical force to facilitate the complete removal of dirt after partial dissolution in the fluid. In conventional cleaning, this force is produced by friction, both internal and external, either by treating contaminated surfaces with brushes or by applying jets of cleaning solution. These techniques involve the application of a new cleaning solution in each process and the removal of the cleaning liquid, which becomes saturated with contaminants, after each wash. In ultrasonic cleaning, the phenomenon of cavitation carries out both the application of mechanical forces on the surface to be cleaned and the agitation of the cleaning liquid.

Cavitation.

Let us imagine that the green lines represent a spring. In the figure below, the green lines represent the individual molecules of the medium through which a sound wave is transmitted. The molecules of the medium are influenced by the adjacent molecules, just like the green lines. When a sound wave propagates, the compression generated by the source travels through the coil because each adjacent coil pushes the next one. It should be noted that although the wave travels from one end of the spring to the other, the relative position of the coils does not change, moving when the wave passes and returning to its original position afterwards. Therefore, each coil goes from being the first in the compression, when it is pushed towards the next one, to becoming part of the rarefaction as the wave moves away from the adjacent coil.



Similarly, any point in the medium through which an acoustic wave propagates is alternately subjected to compression and rarefaction. When subjected to compression, the pressure in the medium is positive, whereas during rarefaction the pressure is negative. In elastic media, such as air and most solids, when a sound wave propagates, the disturbance of its molecules occurs continuously, returning to its equilibrium position when the sound ceases. In non-elastic media, such as water and most liquids, propagation occurs continuously as long as the intensity (amplitude) of the sound is relatively low. As the amplitude increases, the magnitude of the negative pressure in the areas of rarefaction may be sufficient to cause the bubble to collapse in the 'rupture' of the liquid, causing the phenomenon known as cavitation. As a result of these fissures in the medium, cavitation bubbles are generated in the areas of rarefaction. When the wave fronts move, the bubbles oscillate under the influence of positive pressure, growing until they reach an unstable size.



Advantages

In most cases, cleaning aims to dissolve the contaminant on the surface to be treated (in the case of soluble residues) or to displace the contaminant (in the case of insoluble residues). In some cases, it even achieves both dissolution and displacement (when insoluble dirt particles are covered by a soluble layer). The mechanical effect of ultrasonic energy facilitates both processes, accelerating the dissolution and displacement of the particles. In addition to the cleaning process, ultrasonic energy is also useful in the rinsing process to completely remove chemical residues generated during the cleaning process. In the removal of contaminants by dissolution, the solvent comes into contact with the contaminant and dissolves it; therefore, the cleaning process takes place only at the interface between the cleaning solution and the contaminant. (Fig. 1)

As the contaminant dissolves, a saturation layer forms between the interface of the cleaning solution and the contaminant, making it impossible for the 'useful' cleaning liquid to reach the contaminant. At this point, the cleaning action stops because the saturated layer prevents the contaminant from being attacked. (Fig. 2)

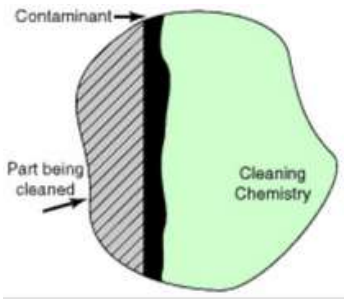


Fig.1

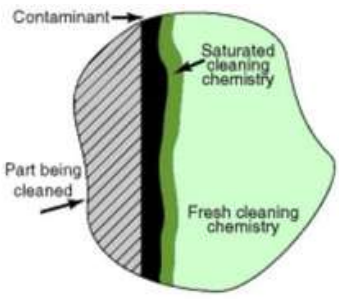


Fig.2

In some cases, contaminants are composed of insoluble particles strongly bound together by cohesive forces. In these cases, the particles must be displaced sufficiently to break the attractive forces that hold them tightly together. (Fig. 3)

The cavitation and implosion generated by ultrasonic activity displace and remove contaminants such as dust from surfaces. For cleaning to be effective, the coupling medium must be able to moisten the particles to be removed. (Fig. 5)

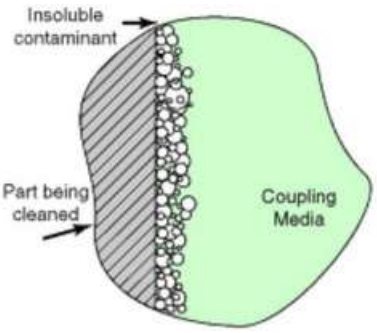


Fig.3

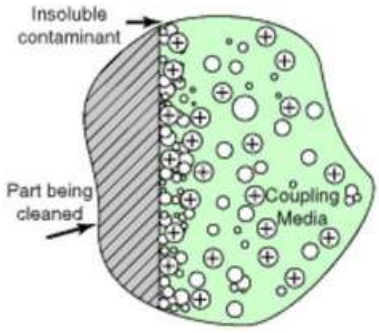


Fig.4

Cleaning Fluids. A necessary prerequisite for efficient cleaning is strong cavitation. To achieve this, the fluid used within the cleaning tank must not contain too much dissolved gas, as this could penetrate the cavitation bubbles and prevent them from collapsing quickly. One way to reduce the amount of gas is to heat the fluid, since its solubility decreases with increasing temperature. The choice of cleaning fluid depends primarily on the type of contaminant being treated and the material being treated, since any chemical attack must be avoided. A distinction is mainly made between aqueous and organic fluids. Aqueous fluids are useful if the wet objects are to be further processed, for example in electroplating. Furthermore, the electrical conductivity of the detergent is often an advantage, as it prevents the electrostatic charging of insoluble dirt particles and thus eliminates the electrical attraction between them and the treated surface. On the other hand, organic fluids have the advantage that treated areas can be dried more quickly after the cleaning process. Both fluids can be reused after filtration; only the organic fluids can be further regenerated by distillation.

DCM Ultrasonic

DL SERIES - DYNAMIC LOADING

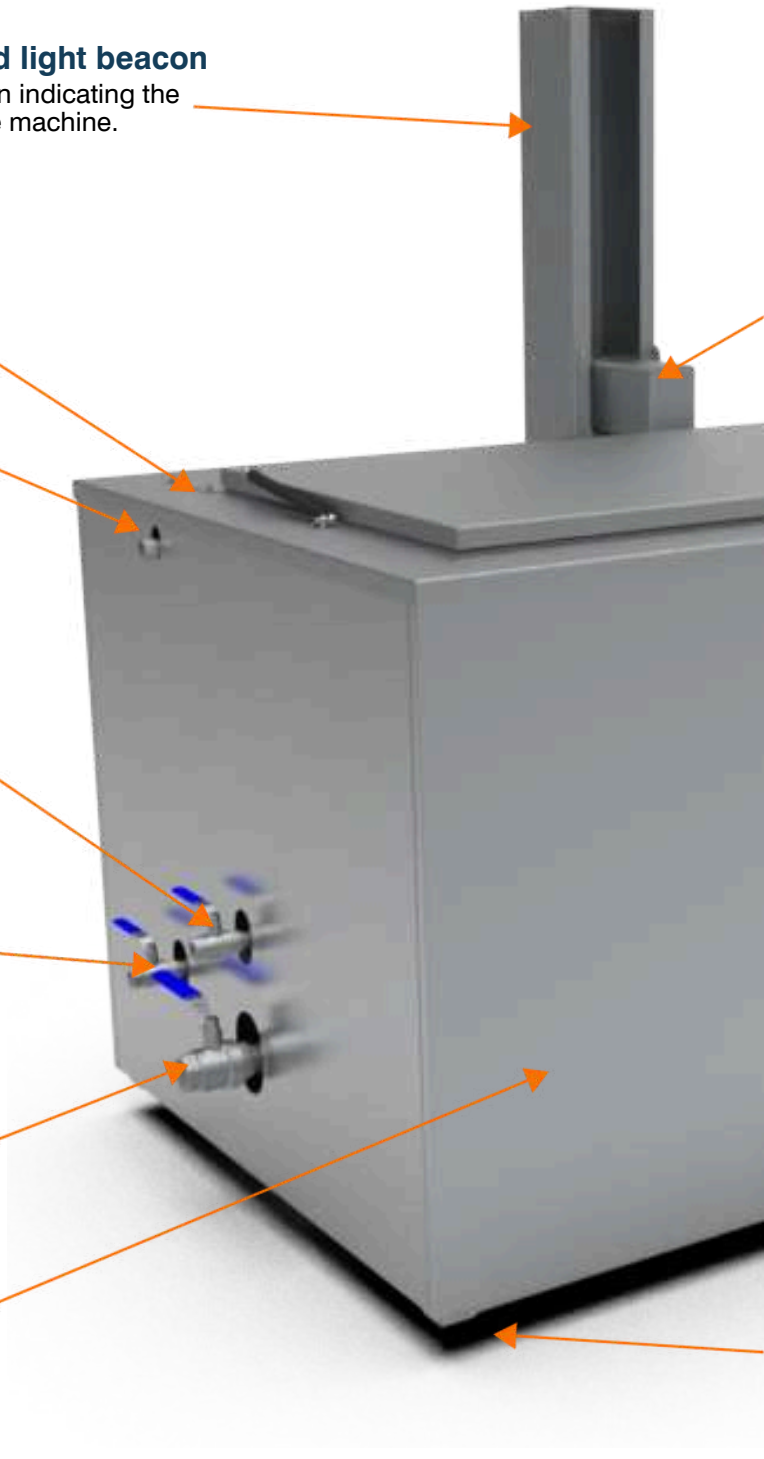
Ultrasonic cleaning machines with dynamic loading represent an advanced solution for cleaning, degreasing, stripping, disinfecting and descaling processes on a wide variety of materials, from metals to polymers and ceramics. These machines incorporate controlled mechanical movement, which improves the effectiveness of ultrasound compared to static systems. The entire DL series can be optionally equipped with: automatic lid, vapour extraction, automatic water filling, automatic detergent dispenser (liquid), filtration unit that extends the life of the bath, automatic oil extraction, tank and parts in contact with the chemical made of AISI 316 stainless steel.

Noise reduction system
Worktop equipped with noise reduction system up to 78db at 28kHz.

Integrated light beacon
Light beacon indicating the status of the machine.

Overflow
Overflow to prevent overflowing of the tank when introducing large pieces. 3/4" valve.

Auxiliary tank drain
Located at the bottom of the auxiliary tank, it is used to empty it easily. 3/4" valve.



Oil extraction
Used to extract the surface layer of oil from the auxiliary tank after separation. 3/4" valve.

Main drain
Located at the bottom of the main tank, it is used to empty it. 1" 1/2 valve.

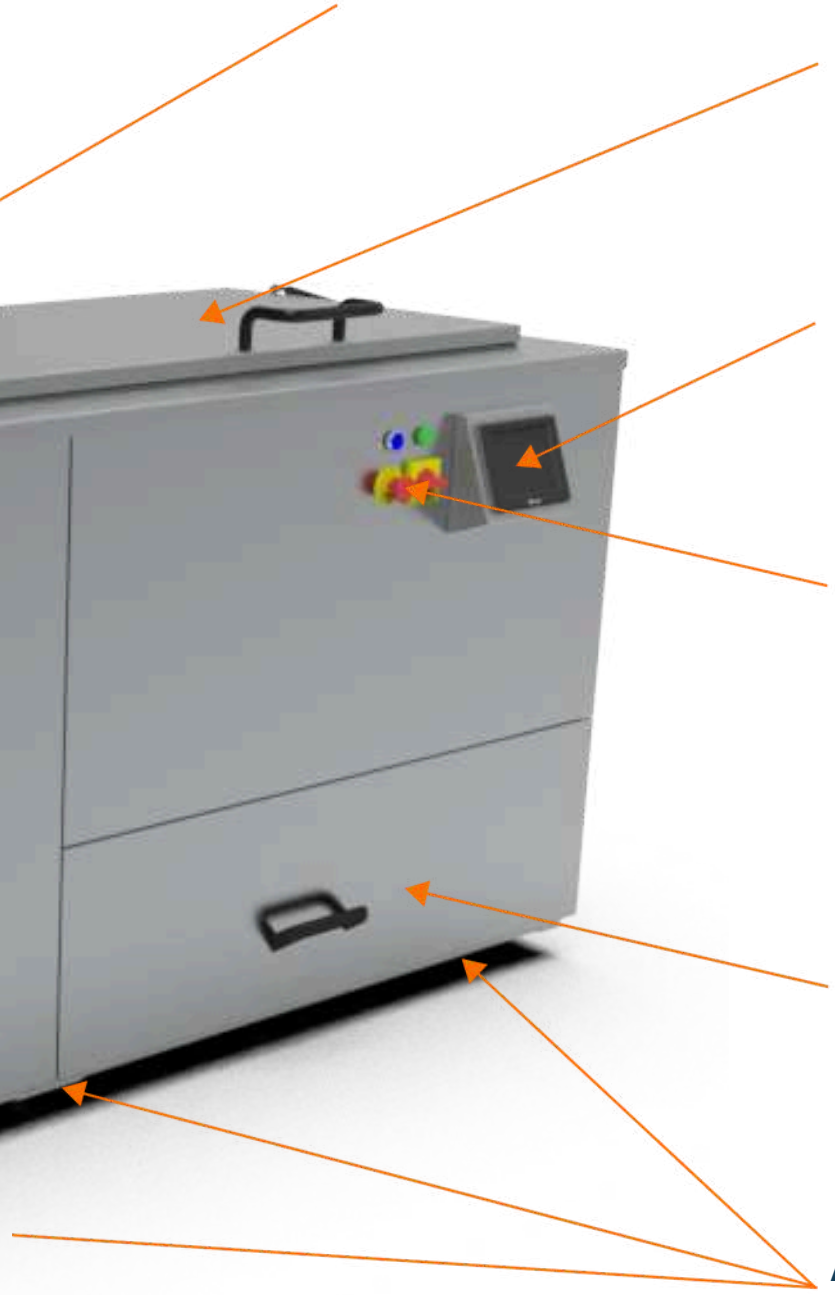
304 stainless steel panels
Satin-finish AISI 304 stainless steel panels.

Pneumatic lift up to 1500 kg

Pneumatic lift up to 1500 kg, 3000 kg static. Above 1500 kg, the system is hydraulic.

Manual/automatic heat-insulated cover

Manual heat-insulated cover maintains temperature and reduces noise emissions. Automatic as standard from 1000L. Optional on other models.



7" Color HMI IP67

7" color HMI touchscreen with intuitive interface and built-in help. Available in the customer's language.

IP67 Button

IP67 button designed to allow easy cleaning of the machine's surface without the risk of short circuits.

Integrated electrical panel

Removable integrated electrical panel facilitates maintenance and reduces the space required between the tank and the wall.

Adjustable Feet

Non-slip, height-adjustable feet allow for easy leveling of the machine.

Technical Characteristics

UCM-100 DL

Ultrasonic power (W)	1.000
Heating power (W)	3.750
Tank capacity (litres)	110
Internal measures LxWxH (mm)	600 x 395 x 465
Useful measures LxWxH (mm)	570 x 325 x 400
External measures LxWxH (mm)	1150 x 745 x 1500
Maximum dynamic load (kg)	60
Maximum static load (kg)	125

UCM-200 DL

Ultrasonic power (W)	2.000
Heating power (W)	3.750
Tank capacity (litres)	230
Internal measures LxWxH (mm)	675 x 600 x 575
Useful measures LxWxH (mm)	655 x 530 x 475
External measures LxWxH (mm)	1250 x 950 x 1675
Maximum dynamic load (kg)	80
Maximum static load (kg)	175

UCM-500 DL

Ultrasonic power (W)	4.000
Heating power (W)	9.000
Tank capacity (litres)	546
Internal measures LxWxH (mm)	1400 x 600 x 650
Useful measures LxWxH (mm)	1350 x 500 x 475
External measures LxWxH (mm)	1930 x 1043 x 1760
Maximum dynamic load (kg)	525
Maximum static load (kg)	1.050

UCM-1000 DL

Ultrasonic power (W)	8.000
Heating power (W)	15.000
Tank capacity (litres)	1.120
Internal measures LxWxH (mm)	1700 x 1100 x 650
Useful measures LxWxH (mm)	1560 x 1000 x 600
External measures LxWxH (mm)	2135 x 1365 x 2200
Maximum dynamic load (kg)	825
Maximum static load (kg)	1.650

UCM-2000 DL

Ultrasonic power (W)	10.000
Heating power (W)	22.000
Tank capacity (litres)	2.380
Internal measures LxWxH (mm)	1800 x 1150 x 1150
Useful measures LxWxH (mm)	1740 x 1005 x 865
External measures LxWxH (mm)	2710 x 1660 x 2975
Maximum dynamic load (kg)	1.500
Maximum static load (kg)	3.000

UCM-3000 DL

Ultrasonic power (W)	12.000
Heating power (W)	30.00
Tank capacity (litres)	3.350
Internal measures LxWxH (mm)	2100 x 1225 x 1300
Useful measures LxWxH (mm)	2040 x 1080 x 850
External measures LxWxH (mm)	2710 x 2010 x 2975
Maximum dynamic load (kg)	1.500
Maximum static load (kg)	3.000

SL SERIES - STATIC LOAD

Static load ultrasonic cleaning machines are an efficient and versatile solution for cleaning, degreasing, stripping, disinfecting and descaling a wide variety of materials, including metals, plastics, glass and ceramics. In this type of system, the parts remain stationary inside the tank during the cleaning process, allowing for uniform and controlled cavitation. These machines are perfect for delicate parts that cannot be moved at all or almost at all during washing. The entire SL series can be optionally equipped with: automatic lid, steam extraction, automatic water filling, automatic detergent dispenser (liquid), filtration unit that extends the life of the bath, automatic oil extraction, tank and parts in contact with the chemical made of AISI 316 stainless steel.

Noise reduction system

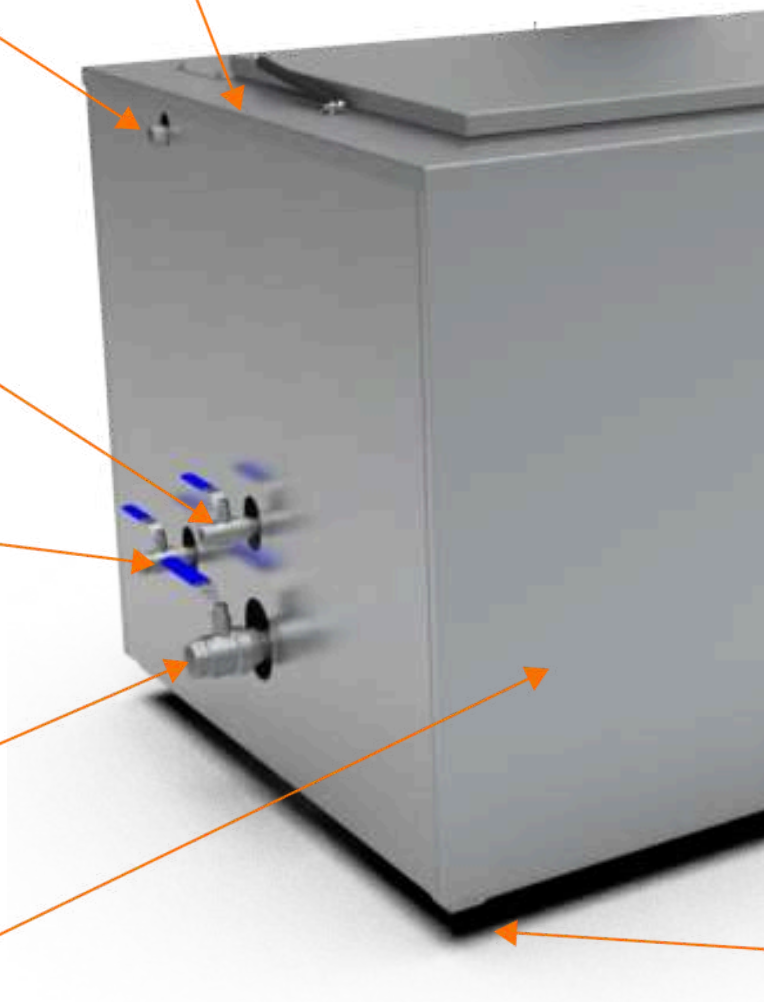
Worktop equipped with noise reduction system up to 78db at 28kHz.

Overflow

Overflow to prevent overflowing of the tank when introducing large items. 3/4" valve.

Auxiliary tank drain

Located at the bottom of the auxiliary tank, it is used to empty it easily. 3/4" valve.



Oil extraction

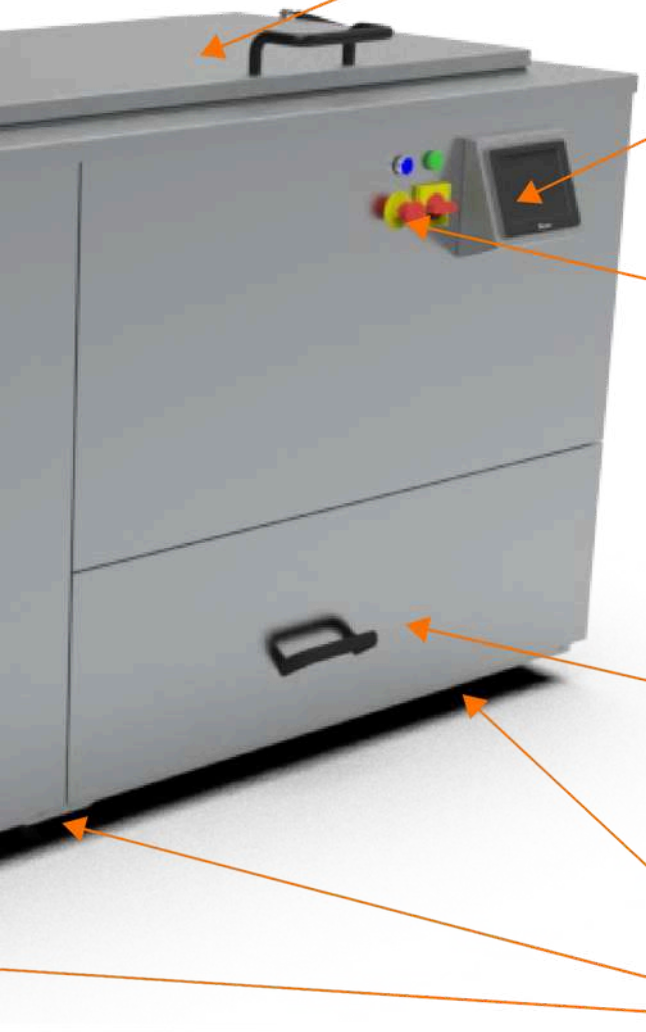
Used to extract the surface layer of oil from the auxiliary tank after separation. 3/4" valve.

Main drain

Located at the bottom of the main tank, it is used to empty it. 1" 1/2 valve

304 stainless steel panels

Satin-finish AISI 304 stainless steel panels



Manual/automatic heat-insulated cover

Manual heat-insulated cover maintains temperature and reduces noise emissions. Automatic as standard from 1000L. Optional on other models.

7" Colour IP67 HMI

7" colour HMI touchscreen with intuitive interface and integrated help. Available in the customer's language.

IP67 push button

IP67 pulse generator designed to allow easy cleaning of the machine surface without risk of short circuits.

Integrated electrical panel

Integrated removable electrical panel that facilitates maintenance and reduces the clearance required between the tank and the wall.

Adjustable feet

Height-adjustable non-slip feet. They allow for easy levelling of the machine.

Technical Characteristics

UCM-100 SL

Ultrasound power (W)	1.000
Heating power (W)	3.750
Tank capacity (litres)	136
Internal dimensions LxWxH (mm)	600 x 395 x 575
Useful dimensions LxWxH (mm)	570 x 365 x 435
External dimensions LxWxH (mm)	1150 x 745 x 925
Maximum static load (kg)	125

UCM-200 SL

Ultrasound power (W)	2.000
Heating power (W)	3.750
Tank capacity (litres)	211
Internal dimensions LxWxH (mm)	700 x 550 x 550
Useful dimensions LxWxH (mm)	670 x 520 x 520
External dimensions LxWxH (mm)	1250 x 950 x 1100
Maximum static load (kg)	175

UCM-350 SL

Ultrasound power (W)	3.000
Heating power (W)	7.500
Tank capacity (litres)	400
Internal dimensions LxWxH (mm)	1010 x 660 x 600
Useful dimensions LxWxH (mm)	970 x 630 x 550
External dimensions LxWxH (mm)	1610 x 1060 x 1125
Maximum static load (kg)	550

UCM-500 SL

Ultrasound power (W)	4.000
Heating power (W)	9.000
Tank capacity (litres)	546
Internal dimensions LxWxH (mm)	1400 x 600 x 650
Useful dimensions LxWxH (mm)	1360 x 680 x 550
External dimensions LxWxH (mm)	1930 x 910 x 1200
Maximum static load (kg)	1.050

UCM-750 SL

Ultrasound power (W)	6.000
Heating power (W)	12.000
Tank capacity (litres)	790
Internal dimensions LxWxH (mm)	1370 x 800 x 720
Useful dimensions LxWxH (mm)	1320 x 750 x 620
External dimensions LxWxH (mm)	1955 x 1100 x 1225
Maximum static load (kg)	1.050

UCM-1000 SL

Ultrasound power (W)	8.000
Heating power (W)	15.000
Tank capacity (litres)	1.120
Internal dimensions LxWxH (mm)	1700 x 1100 x 850
Useful dimensions LxWxH (mm)	1650 x 1050 x 750
External dimensions LxWxH (mm)	2135 x 1365 x 1300
Maximum static load (kg)	1.650

RL SERIES - ROTATING LOAD

Rotating load ultrasonic cleaning machines are designed for treating parts that require continuous movement to achieve uniform and effective cleaning. This system is ideal for components with complex geometries, irregular surfaces, or internal cavities where ultrasonic waves may have difficulty reaching all areas if the load remains static. Within this series, we can find multi-stage automatic machines with a capacity of up to 5 baskets simultaneously and machines specifically designed for cleaning printing rollers with a capacity for rollers weighing up to 500 kg.

Noise reduction system

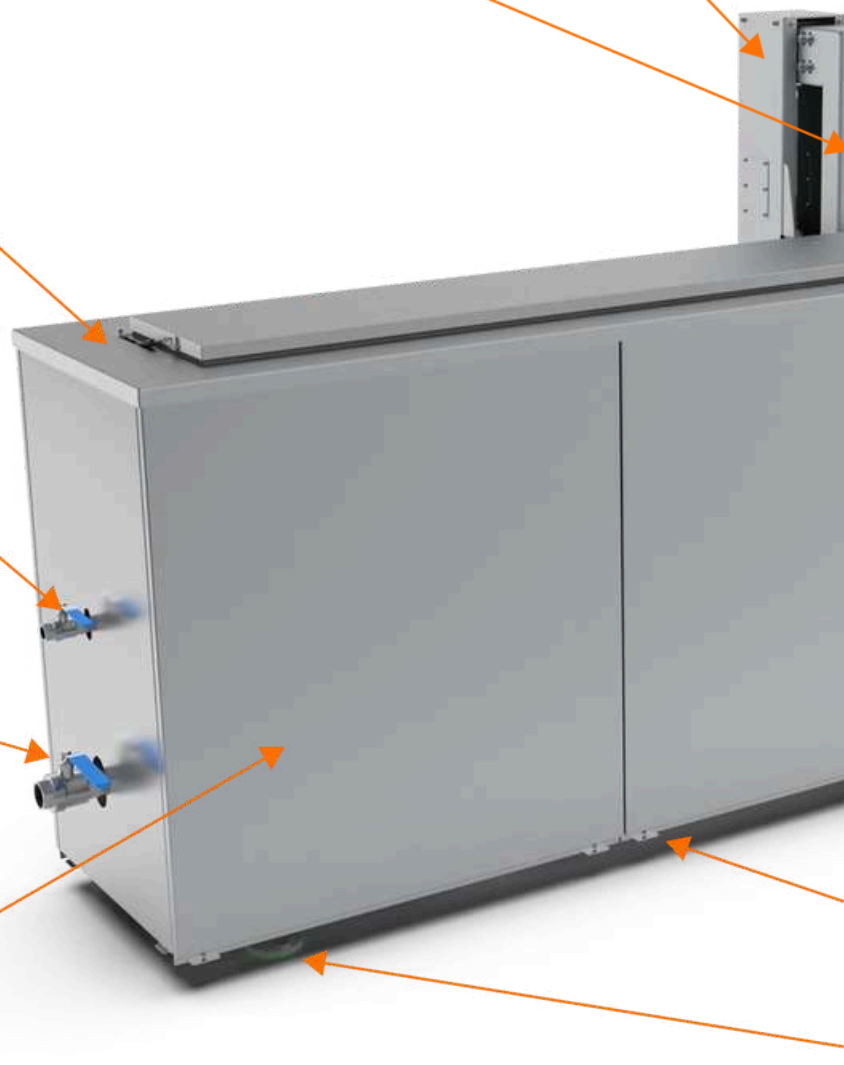
Countertop equipped with a noise reduction system up to 78db at 28kHz.

Pneumatic lift up to 500 kg

Pneumatic lift up to 500 kg, allows cleaning the rollers in any position.

Integrated beacon light

Light beacon indicating the status of the machine.



Auxiliary tank drain

Located at the bottom of the auxiliary tank, it is used for easy emptying. 3/4" valve

Main drain

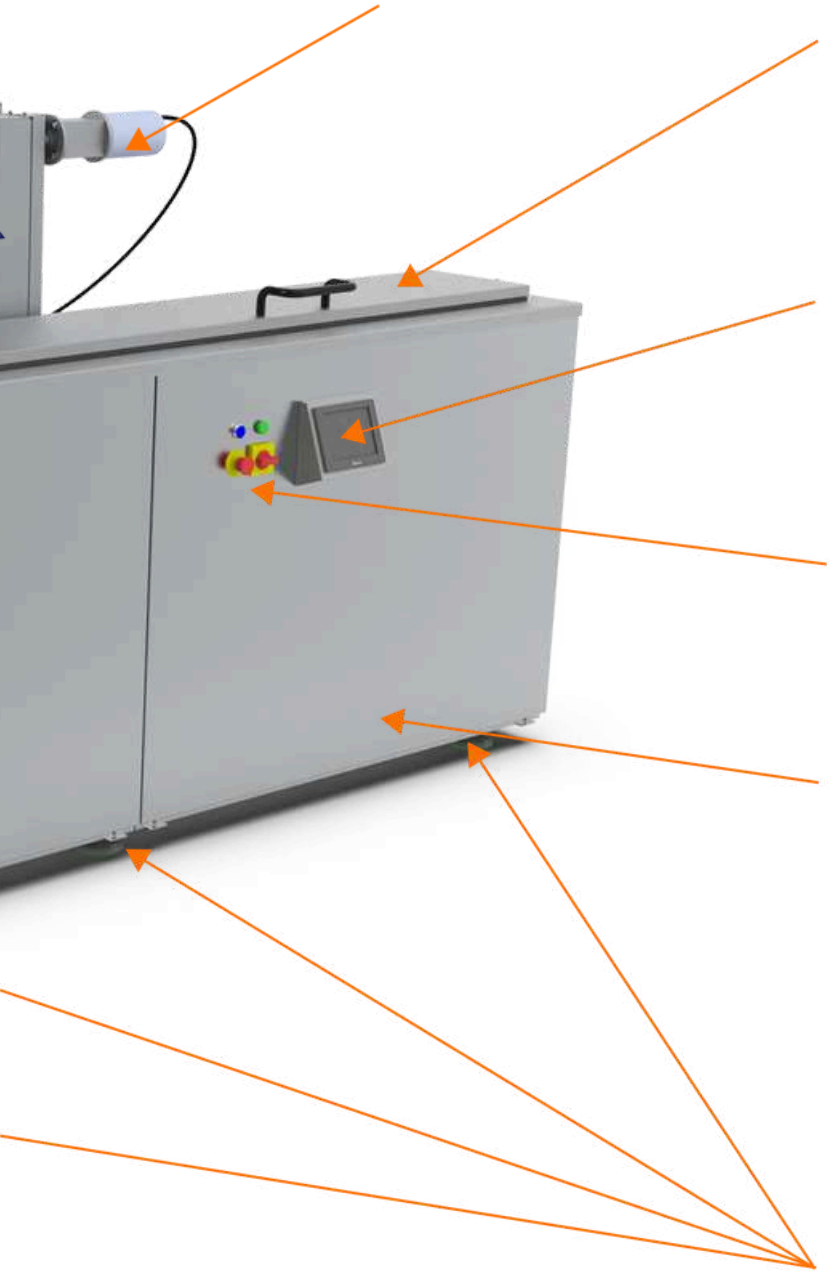
Located at the bottom of the main tank, it is used to empty it. 1" 1/2" valve

304 stainless steel panels

Satin-finished AISI 304 stainless steel panels.

Rotation system
Cylinder rotation system combined with the lifting system. Both systems can operate simultaneously.

Manual/automatic heat-insulated cover
Insulated manual cover maintains temperature and reduces noise emissions. An automatic cover can be installed as an option.



7" Colour IP67 HMI
7" colour HMI touchscreen with intuitive interface and integrated help. Available in the customer's language.

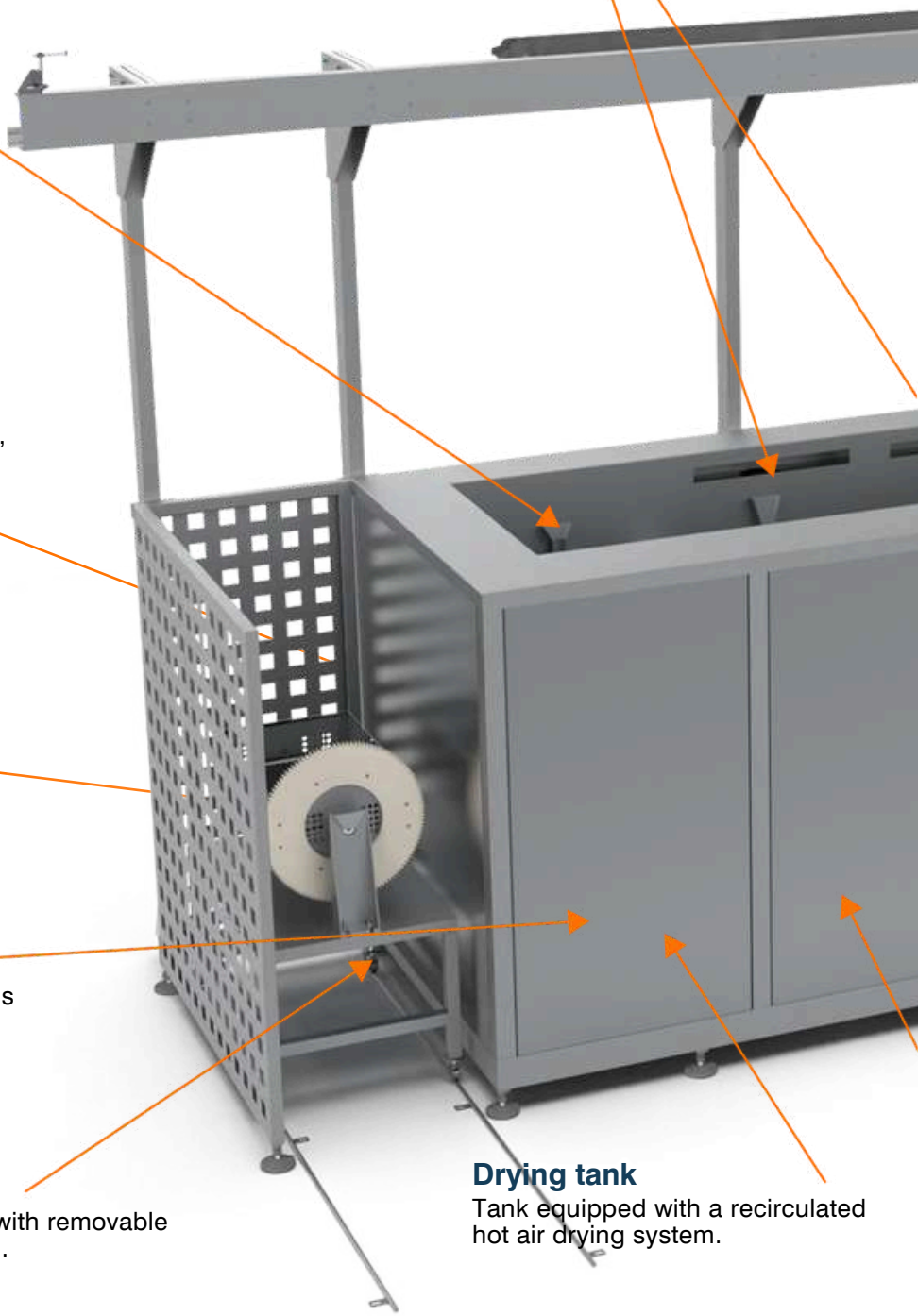
IP67 Button
IP67 button designed to allow easy cleaning of the machine's surface without the risk of short circuits.

Integrated electrical panel
Removable integrated electrical panel facilitates maintenance and reduces the space required between the tank and the wall.

Adjustable feet
Height-adjustable non-slip feet. They allow for easy levelling of the machine.

Vapour extraction
Connected to the customer's installation, it extracts vapours from the vat, preventing them from dissipating throughout the premises.

Rotary basket guide
Vertical guide system for the rotary basket to the rotation mechanism.



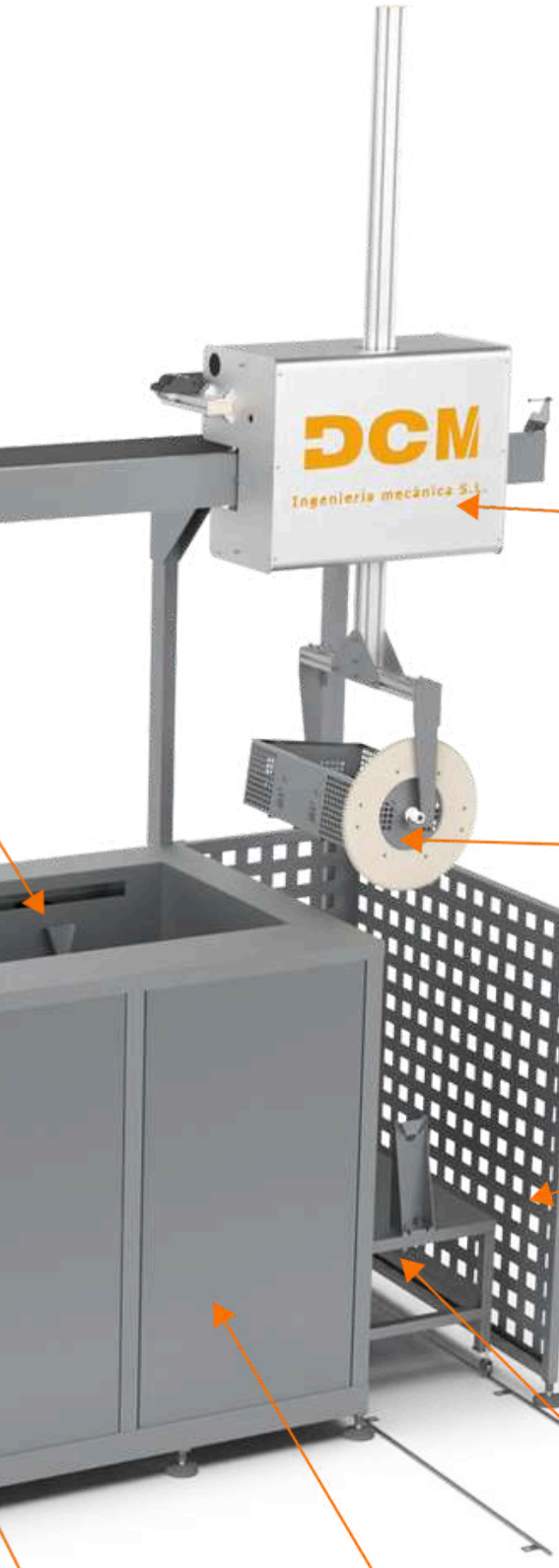
Auxiliary tank drain
Located at the bottom of the auxiliary tank, it is used to empty it easily. 3/4" valve

Main drain
Located at the bottom of the main tank, it is used to empty it. 1" 1/2 valve

304 stainless steel panels
Satin-finish AISI 304 stainless steel panels

Unloading station
Unloading station for parts with removable trolley to facilitate unloading.

Drying tank
Tank equipped with a recirculated hot air drying system.



Robot X Y Z maximum load 100 kg

Robot with movement in three axes X, Y, Z for fully automatic loading and unloading of different workstations. Maximum load 100 kg.

Rotating baskets

Equipped with 5 rotating baskets that operate in a continuous cycle.

Defences with photoelectric barrier

Anti-intrusion defence system equipped with a physical barrier and photo sensors that immediately stop the machine in the presence of any object.

Trolley extraction guides

Guiding system for the removable trolley. Facilitates loading of the basket and keeps it in its working position.

Rinse tank

Rinse tank for removing chemical residues before drying.

Ultrasonic tank

Ultrasonic cleaning tank

Loading station

Parts loading station with removable trolley for easy loading.

Technical Characteristics

UCM-500 RL

Ultrasound power (W)	4.000
Heating power (W)	11.000
Tank capacity (litres)	510
Internal dimensions LxWxH (mm)	2548 x 400 x 500
Useful dimensions LxWxH (mm)	Roller L2400 x Ø215
External dimensions LxWxH (mm)	3080 x 790 x 1600
Maximum dynamic load (kg)	500
Maximum static load (kg)	500

UCM-700 RL

Ultrasound power (W)	6.000
Heating power (W)	11.000
Tank capacity (litres)	764
Internal dimensions LxWxH (mm)	2548 x 600 x 500
Useful dimensions LxWxH (mm)	Roller L2400 x Ø250
External dimensions LxWxH (mm)	3080 x 990 x 1600
Maximum dynamic load (kg)	500
Maximum static load (kg)	500

5S UCM-250 RL

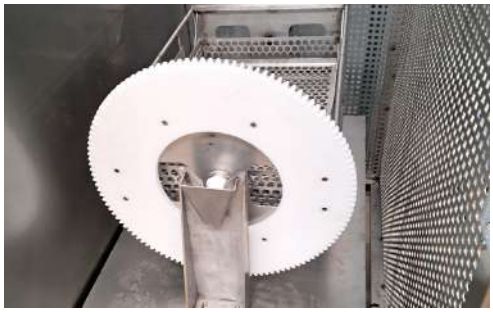
Ultrasound power (W)	2.000
Heating power (W)	7.500
Tank capacity (litres)	250
Internal dimensions LxWxH (mm)	826 x 732 x 456
Useful dimensions LxWxH (mm)	Custom made
External dimensions LxWxH (mm)	4800 x 1404 x 4300
Maximum dynamic load (kg)	100
Maximum static load (kg)	100

Main Features

- Dosing system.
- Stainless steel electric heating element.
- Double-welded system.
- Integrated ECO mode.
- Electric heating system.
- Made of AISI 304 stainless steel.
- Ultrasonic frequency of 28 kHz and 40 kHz.
- Cleaning machines with capacities from 200 to 750 liters.
- Intuitive digital display for easy machine control.

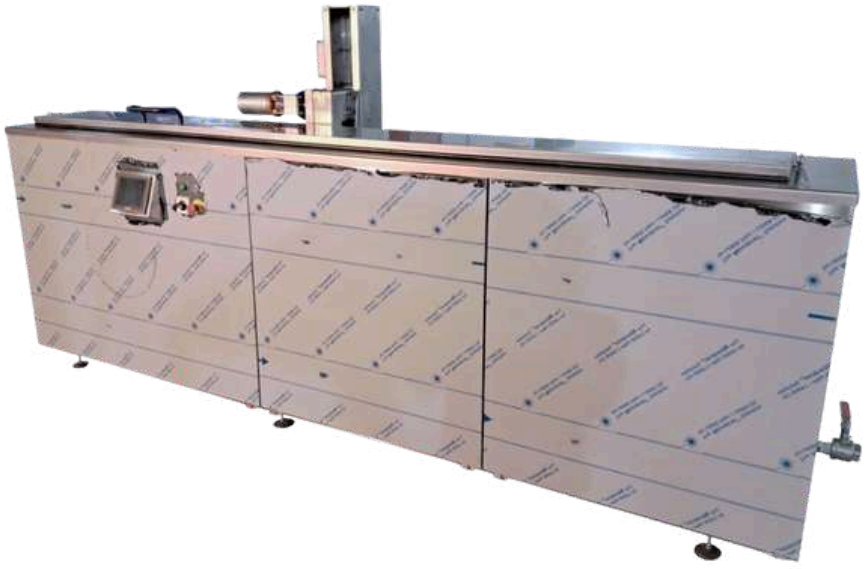
Cleaning for:

Printing rollers - Industrial parts - Degreasing
Uneven surfaces - Disinfection - Descaling



ROTARY CHARGE CLEANING

This system is ideal for components with complex geometries, irregular surfaces, or internal cavities where ultrasonic waves may have difficulty reaching all areas if the load remains static. The combination of rotation and ultrasonic cavitation reduces process time by enabling more uniform and effective cleaning action in fewer cycles. Continuous rotation of the parts improves the circulation of the cleaning liquid and increases the effectiveness of the ultrasound.



BT SERIES - BENCHTOP

The BT Series offers high-performance ultrasonic cleaning systems designed to be placed on any workbench. Our tabletop cleaning machines are designed to provide thorough and consistent cleaning of small and delicate components in workshops, laboratories, and industrial facilities.

These units have been designed to meet the demands of deep, delicate and uniform cleaning, even on the most complex geometries. Thanks to its high-performance ultrasonic technology, the BT range guarantees the effective removal of all types of residue without damaging the surface being cleaned. DCM Ultrasonic combines technological innovation, robust stainless steel construction and high quality standards.

The BT Series offers flexibility and convenience without sacrificing cleaning power. Manufactured for efficiency and durability, each unit is ideal for research applications as well as routine activities in precision workshops and industrial environments where quality is essential.

APPLICATIONS

Dental instruments - Small components - Contact lenses - Surgical instruments
Industrial parts - Laboratory

UCM-20 SL

Ultrasound power (W)	300
Heating power (W)	500
Tank capacity (litres)	29
Internal dimensions LxWxH (mm)	450 x 400 x 165
Maximum load (kg)	35

UCM-30 SL

Ultrasound power (W)	400
Heating power (W)	500
Tank capacity (litres)	39
Internal dimensions LxWxH (mm)	450 x 400 x 220
Maximum load (kg)	35

LAB SERIES - LABORATORY

The LAB series of DCM Ultrasonic offers an advanced and effective solution for ultrasonic cleaning in industrial and technical environments that require standardised processes. This equipment has been designed to meet the demands of deep, delicate and uniform cleaning, even on the most complex geometries. Thanks to its high-performance ultrasonic technology, the LAB series guarantees the effective removal of all types of residue without damaging the surface being cleaned. DCM Ultrasonic combines technological innovation, robust stainless steel construction and high quality standards.

- Drain (for easy emptying).
- Hinged lid (manual opening).
- Thermal and acoustic insulation.
- Electric heating system.
- Height-adjustable non-slip feet.
- Made of AISI 304 stainless steel.
- Ultrasonic frequency of 28 kHz and 40 kHz.
- Cleaning machines with a capacity of 30 to 100 litres.
- Intuitive digital display for easy machine control.

APPLICATIONS

Pharmaceutical industry - Truffle farming - Chemical sector
Food sector - Industrial cleaning - Laboratory

UCM-30 SL

Ultrasonic power (W)	400
Heating power (W)	500
Tank capacity (liters)	39
Internal dimensions LxWxH (mm)	450 x 400 x 220
Maximum load (kg)	35

UCM-50 SL

Ultrasonic power (W)	600
Heating power (W)	1.000
Tank capacity (liters)	50
Internal dimensions LxWxH (mm)	450 x 400 x 280
Maximum load (kg)	50

UCM-75 SL

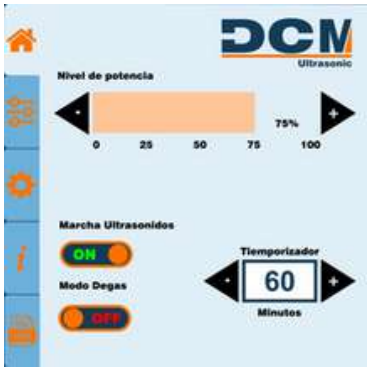
Ultrasonic power (W)	800
Heating power (W)	1.000
Tank capacity (liters)	75
Internal dimensions LxWxH (mm)	450 x 400 x 420
Maximum load (kg)	75

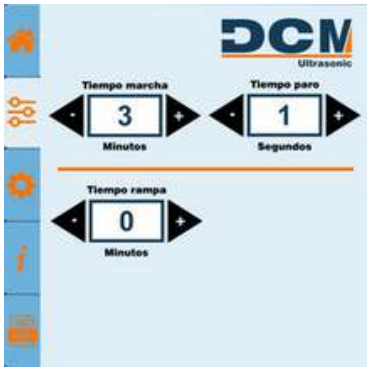
UCM-100 SL

Ultrasonic power (W)	1.000
Heating power (W)	1.500
Tank capacity (liters)	107
Internal dimensions LxWxH (mm)	510 x 500 x 420
Maximum load (kg)	100

Ultrasonic generators

At DCM Ultrasonic, we have developed our own digital generator synchronised with operating frequencies ranging from 24kHz to 40kHz, allowing you to select the best frequency depending on the application. Our generator is the result of more than 10 years of experience in ultrasonic cleaning, observing the needs of our customers on a daily basis. We offer a wide range of generators from 1000W to 300,000W. We are one of the few manufacturers of ultrasonic machines that have their **own patented generator**.





We can manufacture submersibles of any size according to customer requirements, with power ratings ranging from 500W to 3000W and frequencies of 24kHz, 25kHz, 28kHz, 33kHz, 38kHz and 40kHz. For other frequencies, please consult the manufacturer.

Heat exchangers

Cleaning heat exchangers and other components in the petrochemical sector.

Ultrasonic cleaning is a highly effective and efficient tool for cleaning heat exchangers and other components in refineries and other petrochemical companies. It is carried out by immersion in a bath, applying the physical principle of thermosonication together with specific detergents to clean dirt and oxides.

Heat exchangers.

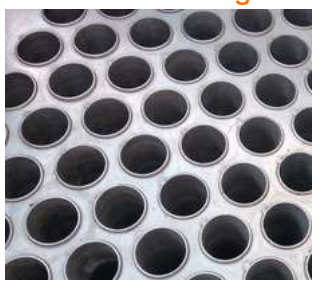
The process of cleaning heat exchangers is a manual process that consumes a lot of human, energy and water resources. This process is carried out using high-pressure washing equipment, which uses very large amounts of water. The ultrasonic cleaning process reduces labour, water and energy consumption, increasing the productivity of the process and significantly reducing maintenance downtime.

Before vs. After

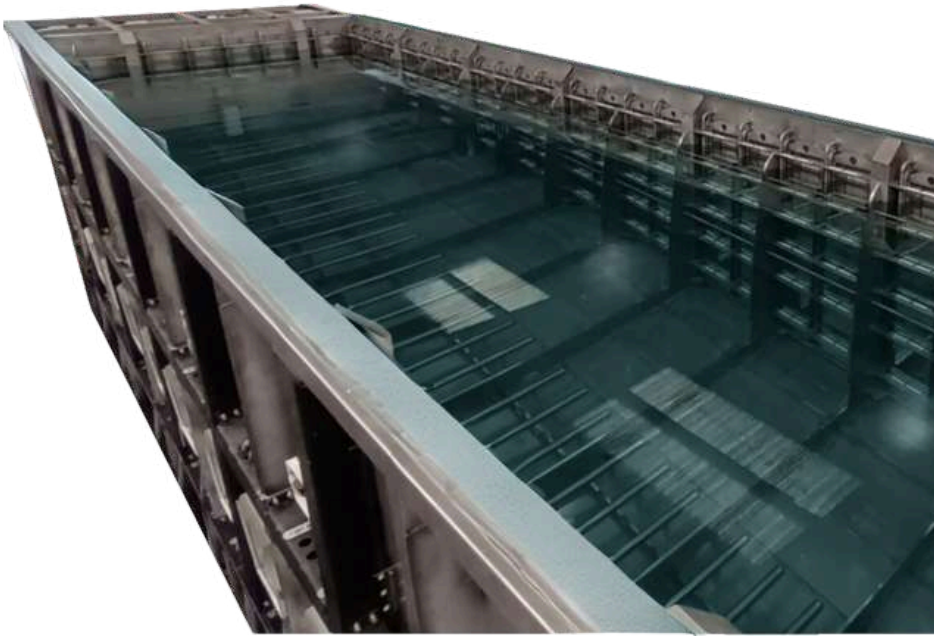
using our cleaning machines

Dirty exchanger

Clean exchanger



UCM 60000SL. Our 60,000-liter capacity machine model. One of the largest models on the market. Ideal for outdoor use.



DEFOAMING SYSTEM

Foam control for process plants

Increase productivity and efficiency on bottling, juice, canning, and brewery lines. Ultrasonic technology with low energy and operating costs for the food industry.

Ultrasonic Defoaming.

The ultrasonic foam control system in filling and packaging processes is designed to significantly reduce foam in bottles or cans during the packaging process, generating more compact foam that adheres more tightly to the can or bottle. This enables the system to offer significant increases in productivity, reduced product waste, reduced pollution, and energy and water savings.

DCM ULTRASONIC

The ultrasonic defoamer uses high-frequency ultrasonic waves to destabilize the foam on the surface of the liquid during the packaging process. Through the controlled application of ultrasonic energy, the microbubbles collapse before they can form a stable foam layer, allowing for faster and more efficient filling.

UDM 20K NexTgen

Ultrasonic power (W)	300
Frequency (Khz)	20
US Generator	NexTgen
Transmitter External dimensions (LxWxH)	380 x 380 x 210
Emitter/Electrical Cabinet Weight (kg)	6/15,4

UDM 30K NexTgen

Ultrasonic power (W)	300
Frequency (Khz)	30
US Generator	NexTgen
Transmitter External dimensions (LxWxH)	380 x 380 x 210
Emitter/Electrical Cabinet Weight (kg)	6/15,4

Opcional -Blower Aseptic

Material Type	Stainless steel
Optional	Yes
External dimensions (LxWxH)	418 x 76 x 173

Image gallery

DCM lifting platform.

DCM Ultrasonic light beacon.

Screen of a DCM machine.

UCM-350 DL machine ready
to go to national customers

Machine family of the RL Series

Shipment to international customer of two UCM-2000 DL machines.

Interior of the UCM-100 SL LAB tank.

Detail of the UCM-2000 DL machine.

UCM-1000 DL machine screen.

UCM-1000 DL machine packed.

Touch screen and interface in Italian language.

Ultrasonic plate manufacturing.

Submerged Ultrasound in Tank.

DCM Ultrasonic Flow Cell

UCM-1000 DL machine.

Custom made basket.

Foam removal process during bottling.

Cleaning the valve body of an industrial robot

Interior detail of auxiliary tank.

Ultrasonic transducers

Interior of the UCM-50 SL LAB tank.

Pneumatic shock absorber cylinder.

Machine shipped to Saudi Arabia.

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