



ULTRASONIC CLEANING EQUIPMENT



brioultrasonics.com



EXPERIENCE, COMMITMENT, R&D&I

For more than 30 years now, the A&J Tecno Innovacions S.L. team has been engaged in designing, manufacturing and in the national and international sales of ultrasonic cleaning equipment.

From the beginning, we have been strongly customer oriented, focussed on satisfying the cleaning, hygiene and disinfection needs of our customers, developing solutions and specific applications for every sector. Always with an R&D&I approach and a constant preoccupation with reducing the impact on the environment and the energy costs of our equipment.

BRIO is the result of years of research and constant improvement in the field of ultrasonic cleaning. A technology with many advantages and innovations and a name that represents our values of ruggedness, reliability, energy efficiency and superior cleaning results.





BRIO ULTRASONICS AROUND THE WORLD

We manufacture for companies around the world: Norway, United Kingdom, France, Czech Republic, Colombia, Ecuador, Chile, Portugal and Morocco are just some of the countries where we have exported our equipment for renowned clients in all sectors.

Our objective is to provide cleaning, disinfection and hygiene solutions to all companies that require them at any location, ensuring that our exclusive ultrasonic cleaning technology reaches every client regardless of their origin or sector.





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About Us



EXPERIENCE AND KNOW-HOW

Our constant dedication towards improving our products have brought us to constantly research all aspects related with ultrasonic cleaning technology. The result of our research and our experience with over 30 years in the sector have brought us to develop the rugged, efficient and high-performance equipment we currently offer.



RELIABILITY: IN-HOUSE MANUFACTURING

100% of our equipment is manufactured in-house, all the way from the design to the final product. All the main components are designed, built and inspected by us. As far as the commercial components are concerned, we only work with top worldwide brands.



About Us



APPLICATIONS CONSULTING

We can cover all cleaning, hygiene, preliminary or subsequent treatment requirements for parts in all industrial sectors. We carry out the entire process of determining and certifying the proper equipment or the installation for each project.

We implement solutions via turnkey projects involving all areas. Each department actively participates in the process under the direction of professionals with an established experience in the sector. From engineering to processes, passing through the installation and assembling areas.



BRIO SUPPORT AND WARRANTY

All our equipment come with a 3 year warranty. This is how we show our commitment towards our clients and the trust we place in the quality, ruggedness and durability of our equipment.

Our staff has a broad professional experience, which guarantees that the installation and subsequent maintenance will be carried out properly.



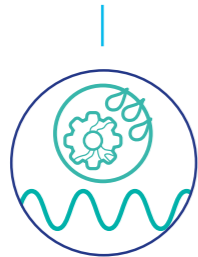
TURNKEY DELIVERY

All our machines are delivered tested and certified by our quality department. Rigorous checks are carried out to ensure the best results in the application the equipment is going to be used for. We will be present during the installation and commissioning according to the characteristics and needs of each client.



BRICO) Advantages

BRICO) ULTRASONICS ADAPTED TO EACH APPLICATION

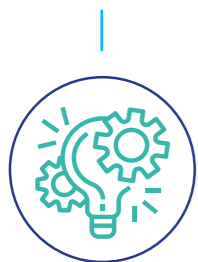


High power
for tough dirt
20-30 kHz

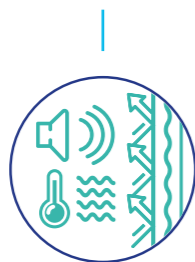


Low power
for mild dirt
30-60 kHz

BRICO) DESIGN & MANUFACTURING RELIABLE AND RUGGED EQUIPMENT



Optimised
design



Maximum
insulation



Superior
durability



Adapted
to the client

BRICLEAN CHEMICALS SPECIFIC FOR EACH APPLICATION

UNIQUE BRICO) ULTRASONIC EMITTERS SYSTEM



Superior
cleaning



Maximum
performance



Maximum
energy efficiency



Reduced
cleaning times



Longer
service life



More resistant
emitters



Modular emitter
system



Optimised electrical
installation

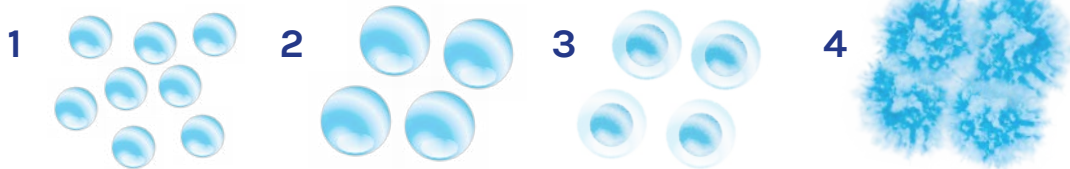
BRICO

Advantages

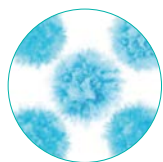
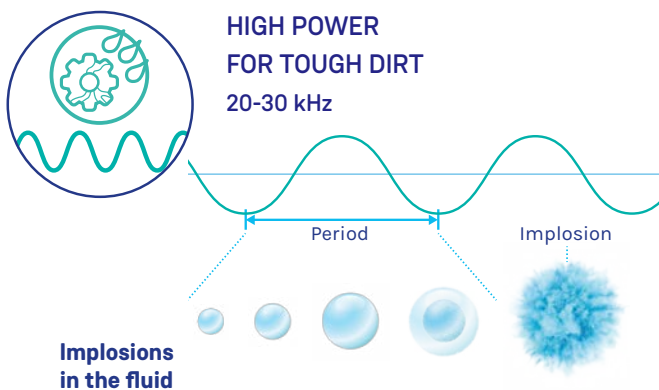
ULTRASONIC TECHNOLOGY ADAPTED TO EACH APPLICATION

We are experts in determining the most suitable ultrasonic frequency and power for each application, achieving the best results in terms of cleaning, disinfection and hygiene. Ultrasounds produce a micro-brushing of the parts, which varies according to the applied frequency and power. Below we will explain how this effect is produced as well as provide a general view of the most suitable frequency ranges for each application.

ULTRASONIC PROPAGATION PRINCIPLE (CAVITATION)



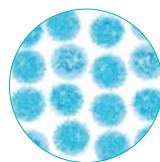
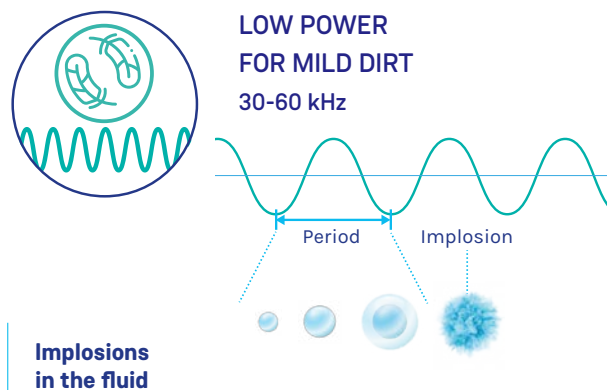
1. The pressure decreases and a large amount of bubbles are generated.
2. The bubbles grow in a greater or lesser measure and power according to the frequency.
3. The pressure increases and the bubbles are compressed.
4. The temperature is increased until the bubbles implode, producing the micro-brushing.



- A lower number of large size bubbles are generated.
- The bubbles implode with high power.

Suitable frequency range to remove tough dirt, incrustations, carbon deposits, etc.

For mechanical components, injection moulds and all types of parts that are heavily soiled or that require high power treatments.



- A greater number of small size bubbles are generated.
- The bubbles implode with low power.

Suitable frequency range for mild cleaning processes, in clean rooms, final finishes, etc.

For medical, surgical, pharmaceutical, optical, prosthetic equipment and all types of parts that require a mild treatment.

BRIO) Advantages |

UNIQUE SYSTEM OF ULTRASONIC EMITTERS

BRIO emitters are comprised of high power piezoelectric transducers. They are the result of 30 years of research where we have been able to develop an optimised design and a unique manufacturing process. Our exclusive technology provides multiple advantages, cost savings and superior cleaning in minimal time.



MAXIMUM PERFORMANCE

In the paragraphs below we explain how our technology produces a superior cleaning with maximum energy efficiency and reduced cleaning times. With less consumption we are able to produce optimum results in minimal times, generating a great cost savings in all the processes.



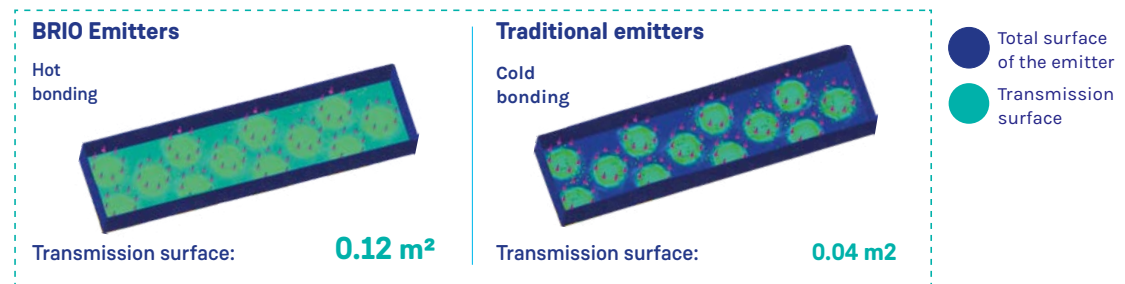
BETTER CLEANING WITH MINIMUM CONSUMPTION

Our unique process for manufacturing emitters guarantees that 100% of the ultrasonic energy dissipated by the emitter will be transmitted to the bath, maximising its performance and cleaning effect. To accomplish this, the transducers are fixed to the emitter by means of an elastic laminate of special resins using an exclusive hot bonding process.

BRIO emitters are standardised, of a size adapted to the model to ensure an optimum transmission of the ultrasonic energy. Depending on the application, we will position the emitters at strategic locations to achieve the greatest possible homogeneity.

COMPARISON OF ULTRASONIC ENERGY TRANSMISSION SURFACES

Emitters with 12 transducers with different bonding processes. Size: 700x180 mm



Our hot bonding system provides a transmission surface that is three times larger than the traditional. In the comparison we see how the transmission surface is not reduced to the circular surface of the transducers; instead, it is extended to the entire transmission surface of the emitter.



REDUCTION OF THE TRANSMISSION TIMES

Our equipment is at least 20% faster than the rest of equipment that is available on the market. This reduction is achieved thanks to the homogeneous transmission of 100% of the ultrasonic energy to the bath. Our ultrasonic equipment reach every corner of the part at all times and with the maximum power, regardless of its size, shape or location in the fluid.



MAXIMUM ENERGY EFFICIENCY

BRIO ultrasonic emitters require less amount of energy for the same amount of fluid, achieving better cleaning finishes. Additionally, our exclusive closed cell elastomer lagging system allows maintaining the operating temperatures with a minimal energy consumption.



LONGER SERVICE LIFE

The exclusive BRIO emitters technology includes our unique hot bonding system for transducers, an optimised electrical installation and a modular emitter distribution system. These advances ensure a stronger mechanical strength as well as a greater durability.



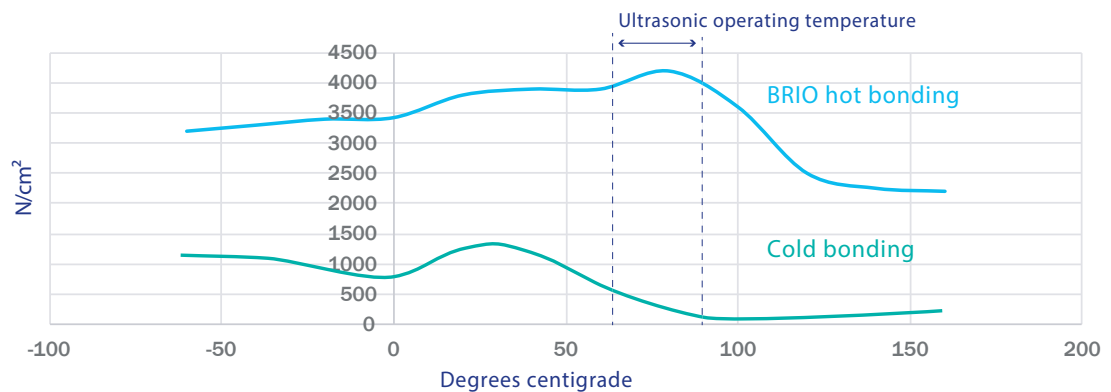
MORE RESISTANT EMITTERS

The mechanical strength of our BRIO emitters is greater under ultrasonic operating conditions (65-90 °C). Our unique hot bonding process provides a notable increase in the mechanical strength compared to traditional bonding systems that use cold resins. Thanks to this increased strength we are able to achieve a longer service life of the ultrasonic emitter with the machine experiencing minimal technical stoppages.

The data and conclusions of our mechanical strength tests are provided below:

MECHANICAL STRENGTH OF TRANSDUCER BONDING SYSTEMS COMPARISON

Bonding of aluminium (transducers) to stainless steel (surface of the emitter).



Operating temperature with the largest range of mechanical strength:

- Hot bonding: 75-85 °C
- Cold bonding: 28-30 °C

Average mechanical strength under ultrasonic operating conditions (65-90 °C):

- Hot bonding: 3815 N/cm²
- Cold bonding: 498 N/cm²

Mechanical strength after 2000 hours of ultrasonic operation at 80 °C:

- Hot bonding: Hour 1000 - 3520 N/cm² Hour 2000 - 3508 N/cm²
- Cold bonding: Hour 1000 - 340 N/cm² Hour 2000 - 281 N/cm²

Our hot bonding system has an average of 3300 N/cm² more of mechanical strength at the operating temperature of the ultrasonic equipment. Therefore our emitters are more rugged as a result of the mechanical wear produced by the ultrasonic transmission.

In time, the constant vibration the emitters are subjected to affect the mechanical strength of the bonding. After 2000 hours of operation, our system maintains a durability that is much longer, with minimal deterioration and 12 times more mechanical strength. When the rest of emitters fail due to wear, ours will continue operating like the first day.

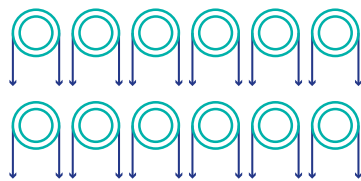


OPTIMISED CABLING OF THE EMITTERS

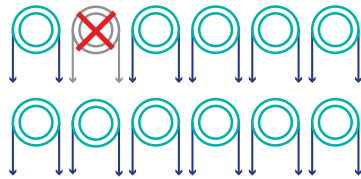
INDEPENDENT ELECTRICAL INSTALLATION (BRIO)

At BRIO we have developed a wiring system that ensures each transducer is electrically independent. If a problem occurs in any transducer, the BRIO ultrasonic emitter will continue operating with a minimum loss of performance.

Proper operation



Effect on transducer

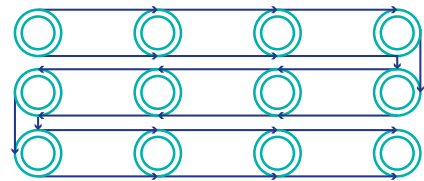


Just one transducer stops working.
The emitter continues operating.

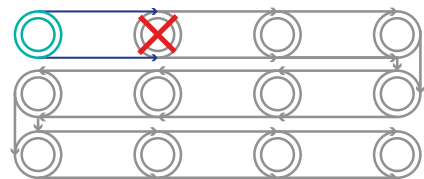
ELECTRICAL INSTALLATION IN PARALLEL

The wiring of traditional emitters on the market is installed in parallel. Consequently, all the transducers are dependent on each other. If a problem occurs in one of the transducers, the other transducers will stop working as well and the emitter will be inoperative.

Proper operation



Effect on transducer



All the other transducers stop working.
The emitter will be inoperative.

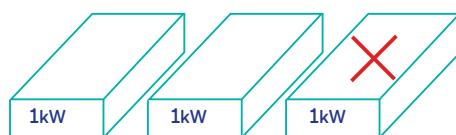


MODULAR SYSTEM OF EMITTERS

At BRIO we have developed a modular system which we use to install standardised emitters of a variable size and distribution that is dependent on the unit. The modular distribution provides the best possible performance and if a failure occurs, the machine will continue operating without needing to stop the production.

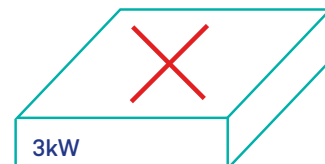
MACHINE EQUIPPED WITH 3 KW OF ULTRASONIC POWER COMPARATIVE

Modular system of BRIO emitters



- The 2kW continue operating.
- One of the 1 kW emitters must be replaced.

Traditional 3kW ultrasonic emitter



- The machine stops.
- The 3kW must be replaced.

In the case of a 3kW unit, the 2kW units would continue operating and therefore the system would maintain a good cleaning performance without needing to stop production. Also, the repair costs would be much lower since only one of the 1kW emitters would need to be replaced instead of a 3 kW emitter.

BRIO) Advantages |

DESIGN & MANUFACTURING

RELIABLE AND RUGGED EQUIPMENT

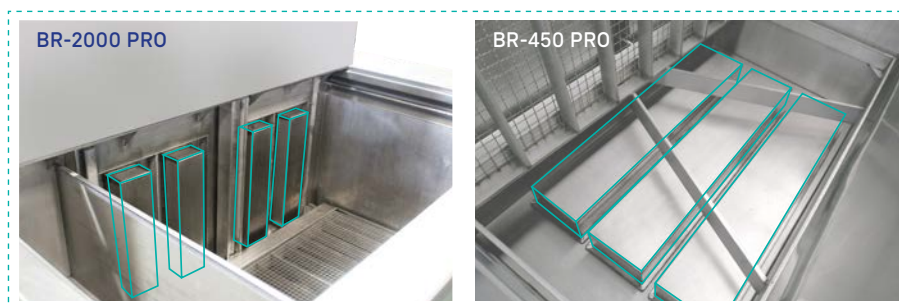
Our ultrasound cleaning equipment is designed to achieve maximum durability and ruggedness and is ready to be used in any industrial environment. We use the best materials and our designs are optimised to achieve maximum performance as well as a higher service life.



OPTIMISED DESIGN

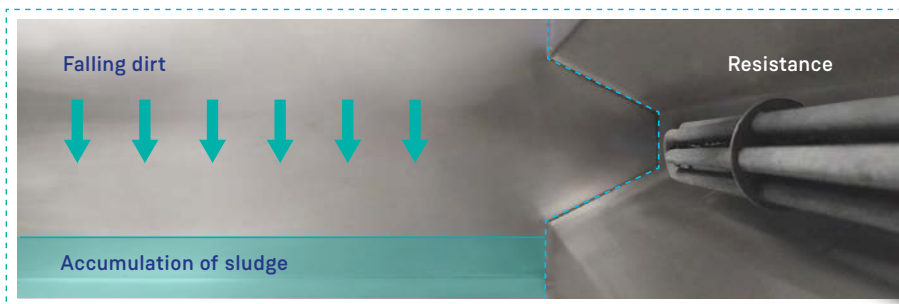
LOCATION OF THE ULTRASONIC EMITTERS

We position our emitters at the location that provides the best performance for each unit. Also, our design and manufacturing allows easy access for conducting maintenance or replacing the emitters. There is no need to cut sheet metal, dissolving adhesives or ship the machine to the factory.



LOCATION OF THE HEATING ELEMENTS

The heating elements are protected against dirt and saturation of the fluid. We prevent them from being covered by the accumulated dirt by installing them in a place that is located at a certain distance from the bottom. We also avoid contact with the detached dirt by ensuring it is not below the part.



LOCATION OF THE ELECTRICAL PANEL AND GENERATORS

BRIO equipment incorporate spaces in the chassis to install the electrical panel and the ultrasonic generators. This way they are protected from spills, splashing and corrosive environments, ensuring a proper ventilation.





MAXIMUM THERMAL-ACOUSTIC INSULATION

Our exclusive thermal-acoustic insulation system is comprised of an elastomer with a closed cell structure. This material provides a superior thermal insulation and a lower noise level in all our equipment, which results in a large cost savings and a quieter environment.

The elastomer is a highly insulating material given that its thermal conductivity coefficient is minimal at operating temperature (0.04 W/mK) and the closed cell structure provides it with great durability as it prevents vapours and bacteria from penetrating through it and also reduces the noise by 35 dB.



GREATER DURABILITY

BRIO ultrasonic vats are built using AISI-304/316, which is a stainless steel with an excellent resistance to corrosion and an extreme tolerance to high and low temperatures. Its durability is ensured with a material thickness ranging between 2 and 4 mm depending on the model. The chassis is designed to withstand the operation of the machine and is manufactured using construction profiles with a material thickness ranging between 1.5 and 3 mm (STAINLESS). The exterior panelling of the machine is rugged, easy to disassemble in order to access the equipment that is installed inside it.



TOTAL ADAPTATION TO EACH APPLICATION

At BRIO we are experts in tailor-made projects, providing the best turnkey solutions. Our machines are adapted to each application according to the established rules and standards in each sector. We carry out the cleaning process together with the client and in compliance with all the quality finishes as required.

BRICLEAN CHEMICALS SPECIFIC FOR EACH APPLICATION

It is strictly required for the ultrasonic action to be supplemented with an efficient chemical action. Otherwise it is impossible to achieve the desired effect for each application.

This is the reason why at BRIO Ultrasonics we develop our own chemicals, with varieties specifically developed for each material and type of dirt. All in compliance with the environmental regulations applicable to the worker and the working environment.

Do not hesitate to contact us and we will advise you without compromise about the machine and chemical that best suits your needs.



Multi-stage equipment

We are specialists in multi-stage systems designed and manufactured exclusively for each client, covering every cleaning and treatment requirements.

We manufacture manual, semi-automatic and fully automatic equipment with a complete programming of all the functions. We offer the latest technologies for washing processes, achieving a maximum optimisation and the best results. Depending on the application and parts to be treated, we can include several stages such as BRIO ultrasonic cleaning, rinsing, passivation, blowing, different systems of drying, etc.

AVAILABLE EQUIPMENT

• AUTOMATIC LIFTERS

To easily insert and extract parts. It has a sway function for better cleaning. Pneumatic lifter for loads up to 1000 kg or hydraulic lifter for loads above 1000 kg.

• COVERS DEPENDING ON YOUR NEEDS

Manual or automatic covers with the possibility of including lagging, heat-acoustic insulation and pre-frame to prevent any steam from leaking.

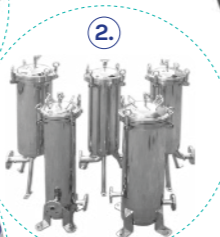
• FILTERING SYSTEM

Filtering systems for removing particles and contaminants that may be present in the cleaning vat.

1. Filtering cloth with automatic advance system

2. Sleeve or cartridge filtering system.

3. Filter press systems.



1 ULTRASONIC CLEANING

Ultrasonic cleaning stage where we clean, disinfect or sanitise the parts that are going to be treated.

We tailor-make our own BRIO exclusive vats and emitters in order to produce the best results in each application.

2 DUAL RINSING

Rinsing stage aimed at removing any traces of detergent from the treated parts.

A filtering system is available to ensure a good rinsing and optimising the water consumption.

A water treatment plant is available for producing distilled water, softened water, reverse osmosis water, etc.

3 PASSIVATION STAGE

Stage aimed at providing corrosion protection to the part through different processes:

- Passivation treatments.
- Water-repellents.
- Oiling, etc.

4 DRYING STAGE

Stage aimed at drying the part. The unit is equipped with different systems:

- Hot air through convection.
- Air blade blowing.
- Vacuum drying.



• EXTRACTORS

Air extraction system that filters the air and efficiently removes the mist, gases and oil vapours.

• PERSONALISED CONTROL PANEL

Touch screen and PLC for monitoring and operating the unit. From this screen we can control the automation and programming of the entire system.

• OPS (OIL PUSH SYSTEM)

The exclusive process of removing oils, lubricants, grease and impurities via a laminar sweep and settling to the auxiliary vat. This function extends the useful life of the bath against saturation thus increasing the efficiency of the equipment.

PRO Series equipment

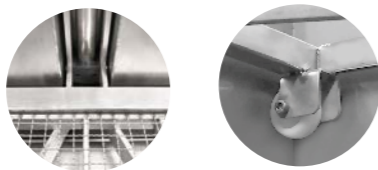
Automate your cleaning process by using a top brand unit with BRIO Ultrasonics optimised technology. PRO Series includes lift with load grid for handling the parts without effort, sway system for separating the dirt, OPS (Oil Push System) for oil removal and an intuitive touch screen. Standard 150 L and 7500 L models are available.

• LIFT WITH LOAD GRID AND SWAY FUNCTION

To easily insert and extract parts. It has a sway function for better cleaning. Pneumatic lifter for loads up to 1000 kg or hydraulic lifter for loads above 1000 kg.

More rugged and reliable design, with STAINLESS thickness and density much higher than other equivalent models on the market. For example, the reinforced structure of our 200 litre model is made using a 40 x 8 mm plate.

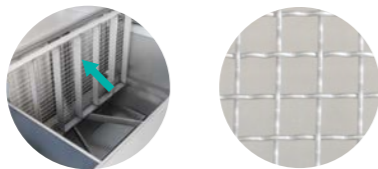
With a solid bar, slide bearings with a metal frame and linear ball bearings for guiding and support.



LOAD GRID

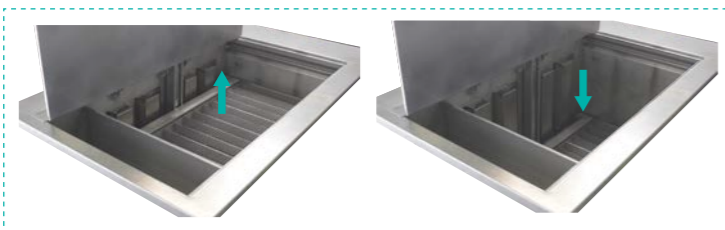
Removable parts-holder grid that allows cleaning the base of the vat. Made using a 25 x 5 x 6 mm STAINLESS plate.

With a STAINLESS entwined mesh measuring 2 mm ø and 20 x 20 mm of clearance to allow water to flow through it.

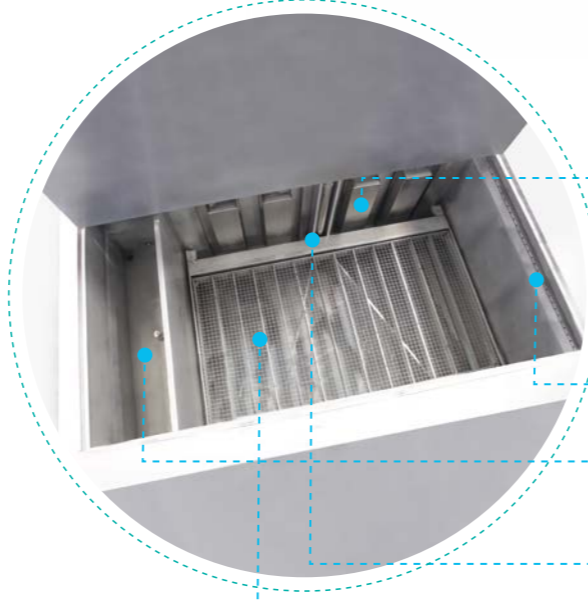


SWAY FUNCTION

Raises and drops the lift to separate the dirt that is on the surface of the parts. With adjustable position sensors for controlling the stops using a PLC.



Interior view



BRIO Ultrasonic Emitters

Modular emitters positioned to ensure a better transmission of the ultrasonic energy.

OPS system

- System that uses laminar sweep for removing oil.
- Auxiliary vat for collecting the oil that is removed.

Lift

Load grid

• OPS (OIL PUSH SYSTEM)

The exclusive process of removing oils, lubricants, grease and impurities via a laminar sweep and settling to the auxiliary vat. This function extends the useful life of the bath against saturation thus increasing the efficiency of the equipment. The auxiliary vat has a drain valve used for recycling the liquid and a detector for controlling the fluid level.

PROCESS OF DECANTING OILS TO THE AUXILIARY VAT



• CONTROL PANEL WITH TOUCH SCREEN

- Careful design with an intuitive user interface.
- Programming and control of the temperature.
- Programming the time and wash cycle.
- Programming of the OPS system for removing oils.
- Programming and control of the sway function.
- Weekly programming by time periods.
- Alerts system for detecting and resolving faults.

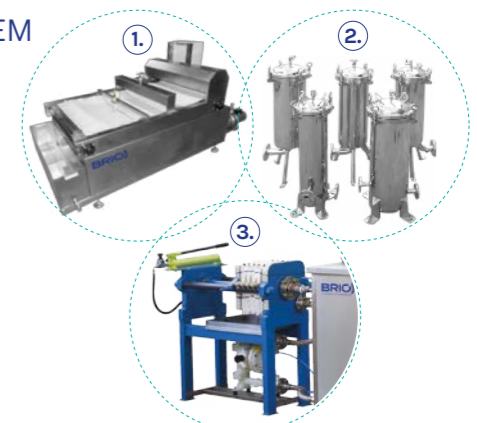
OPTIONAL EQUIPMENT

- AUTOMATIC OR MANUAL COVER
- THERMAL-ACOUSTIC INSULATION OF THE COVER
- FILTERING SYSTEM

1. Filtering cloth with automatic advance system.

2. Sleeve or cartridge filtering system.

3. Filter press systems.



- TAILOR-MADE STAINLESS BASKETS
- AUTOMATIC FILLING
- BATH SATURATION CONTROL
- AUTOMATIC DOSING OF DETERGENT
- VAPOURS EXTRACTION SYSTEM

PRO Series equipment

BR-150 PRO



Exterior dimensions of the machine	1,330x860x1,450 mm
Interior dimensions of the vat	710x500x560 mm
Useful measurements of the load grid	680x435x330 mm
Height of the worktop	970 mm
Capacity of the vat	195 L
Capacity of the auxiliary vat	28 L
Power of the ultrasonic generator	1,200 W
Heating element	3.75 kW
Control panel	Touch screen 4.3"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	80 Kg
OPS system for removing oil	Yes
Cover	Manual
Drain valve	1 1/4"

See the optional equipment on page 14.

BR-300 PRO



Exterior dimensions of the machine	1,680x1,130x1,720 mm
Interior dimensions of the vat	900x650x670 mm
Useful measurements of the load grid	870x520x385 mm
Height of the worktop	970 mm
Capacity of the vat	396 L
Capacity of the auxiliary vat	37 L
Power of the ultrasonic generator	2,400 W
Heating element	7.5 kW
Control panel	Touch screen 4.3"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	250 Kg
OPS system for removing oil	Yes
Cover	Manual
Drain valve	1 1/4"

See the optional equipment on page 14.

BR-450 PRO



Exterior dimensions of the machine	1,920x1,240x1,720 mm
Interior dimensions of the vat	1,120x660x670 mm
Useful measurements of the load grid	1,080x550x435 mm
Height of the worktop	970 mm
Capacity of the vat	480 L
Capacity of the auxiliary vat	53 L
Power of the ultrasonic generator	3,600 W
Heating element	9 kW
Control panel	Touch screen 4.3"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	300 Kg
OPS system for removing oil	Yes
Cover	Manual
Drain valve	1 1/2"

See the optional equipment on page 14.

PRO Series equipment

BR-650 PRO



Exterior dimensions of the machine	2,140x1,540x1,720 mm
Interior dimensions of the vat	1,300x795x670 mm
Useful measurements of the load grid	1,270x685x470 mm
Height of the worktop	980 mm
Capacity of the vat	692 L
Capacity of the auxiliary vat	64 L
Power of the ultrasonic generator	4,800 W
Heating element	12 kW
Control panel	Touch screen 4.3"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	400 Kg
OPS system for removing oil	Yes
Cover	Manual
Drain valve	1 1/2"

See the optional equipment on page 14.

BR-1000 PRO



Exterior dimensions of the machine	2,420x1,570x2,140 mm
Interior dimensions of the vat	1,500x930x880 mm
Useful measurements of the load grid	1,470x740x670 mm
Height of the worktop	1,255 mm
Capacity of the vat	1,200 L
Capacity of the auxiliary vat	133 L
Power of the ultrasonic generator	6,000 W
Heating element	18 kW
Control panel	Touch screen 7"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	800 Kg
OPS system for removing oil	Yes
Cover	Auto
Drain valve	2"

See the optional equipment on page 14.

BR-2000 PRO



Exterior dimensions of the machine	2,660x1,900x2,520 mm
Interior dimensions of the vat	1,730x1,120x1,150 mm
Useful measurements of the load grid	1,700x1,050x880 mm
Height of the worktop	1,455 mm
Capacity of the vat	2,228 L
Capacity of the auxiliary vat	204 L
Power of the ultrasonic generator	10,000 W
Heating element	24 kW
Control panel	Touch screen 7"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	1,100 Kg
OPS system for removing oil	Yes
Cover	Auto
Drain valve	2"

See the optional equipment on page 14.

PRO Series equipment

BR-3000 PRO



Exterior dimensions of the machine	3,020x1,900x2,520 mm
Interior dimensions of the vat	2,100x1,200x1,200 mm
Useful measurements of the load grid	2,070x1,110x1,115 mm
Height of the worktop	1,455 mm
Capacity of the vat	3,024 L
Capacity of the auxiliary vat	275 L
Power of the ultrasonic generator	14,000 W
Heating element	36 kW
Control panel	Touch screen 7"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	1,500 Kg
OPS system for removing oil	Yes
Cover	Auto
Drain valve	2 1/2"

See the optional equipment on page 14.

BR-5000 PRO



Exterior dimensions of the machine	3,220x2,200x2,720 mm
Interior dimensions of the vat	2,300x1,600x1,400 mm
Useful measurements of the load grid	2,250x1,500x1,315 mm
Height of the worktop	1,565 mm
Capacity of the vat	5,152 L
Capacity of the auxiliary vat	355 L
Power of the ultrasonic generator	20,000 W
Heating element	48 kW
Control panel	Touch screen 7"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	2,000 Kg
OPS system for removing oil	Yes
Cover	Auto
Drain valve	2 1/2"

See the optional equipment on page 14.

BR-7500 PRO



Exterior dimensions of the machine	3,520x2,600x2,720 mm
Interior dimensions of the vat	2,700x2,000x1,400 mm
Useful measurements of the load grid	2,650x1,900x1,415 mm
Height of the worktop	1,565 mm
Capacity of the vat	7,560 L
Capacity of the auxiliary vat	400 L
Power of the ultrasonic generator	25,000 W
Heating element	60 kW
Control panel	Touch screen 7"
Power supply voltage	230 - 400 V
Pneumatic lift with sway	Yes
Maximum load of the lift	2,000 - 7,500 Kg
OPS system for removing oil	Yes
Cover	Auto
Drain valve	2 1/2"

See the optional equipment on page 14.

PRO Series equipment

SPECIFICATIONS SUMMARY TABLE

Model	Vat capacity (L)*	Interior dimensions (mm)*	Useful measurements of the Load Grid (mm)*	Heating element (kW)*	Ultrasonic power (W)*	Maximum load of the lift (kg)*
BR-150 PRO	195	710x500x550	680x435x330	3.75	1,200	80
BR-300 PRO	396	900x650x670	870x520x385	7.5	2,400	250
BR-450 PRO	480	1,120x660x670	1,080x550x435	9	3,600	300
BR-650 PRO	692	1,300x794x670	1,270x685x470	12	4,800	400
BR-1000 PRO	1,228	1,500x930x880	1,470x740x670	18	6,000	800
BR-2000 PRO	2,228	1,730x1,120x1,150	1,700x1,050x880	24	10,000	1,100
BR-3000 PRO	3,024	2,100x1,200x1,200	2,070x1,110x1,115	36	14,000	1,500
BR-5000 PRO	5,152	2,300x1,600x1,400	2,250x1,500x1,315	48	20,000	2,000
BR-7500 PRO	7,560	2,700x2,000x1,400	2,650x1,900x1,415	60	25,000	2,000 - 7,500

* The measurements, capacities and maximum loads of the machines are provided as a guide. Our continuous improvement process in the designs and performances may cause these characteristics to vary. When requesting a quote, the final price will be provided. Please contact us and we will answer all your questions.



Manual Series equipment

Manual working equipment with the best ultrasonic cleaning technology. As an option, PRO series features may be added. Standard 60 L and 7500 L models are available.

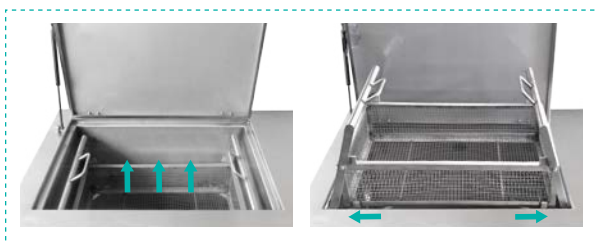
- **CONTROL PANEL**

Easy and efficient control. With a main power switch, safety push-button, digital thermostat with temperature control and push-button for turning on the heat and ultrasounds.

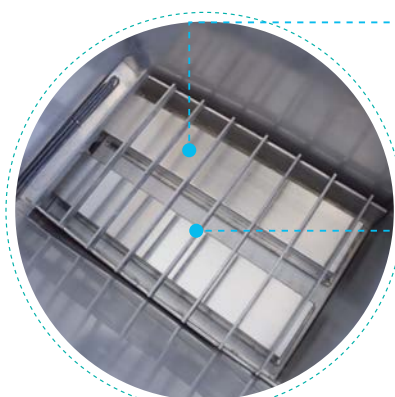
- **MANUAL WORK BASKET**

STAINLESS tray that protects the bottom of the vat. The objects to be cleaned are placed on the tray inside the main vat. It is shaped like a grate, which allows the fluid from flowing

Its design allows fastening it on the vat, making it easier to insert and remove objects.



Interior view



BRIO Emitters

Modular emitters positioned to ensure a better transmission of the ultrasonic energy.

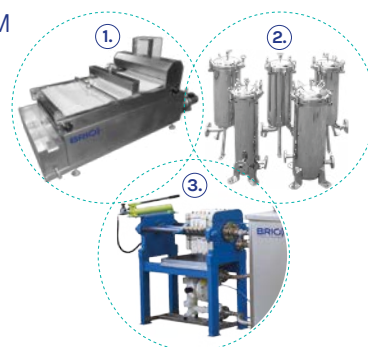
Protective grid

Avoid the parts coming in direct contact with the plates. It may be removed in order to clean the bottom of the vat.

OPTIONAL EQUIPMENT

- AUTOMATIC OR MANUAL COVER
- THERMAL-ACOUSTIC INSULATION OF THE COVER
- FILTERING SYSTEM

1. Filtering cloth with automatic advance system.
2. Sleeve or cartridge filtering system.
3. Filter press systems.



- TAILOR-MADE STAINLESS BASKETS
- AUTOMATIC FILLING
- BATH SATURATION CONTROL
- AUTOMATIC DOSING OF DETERGENT
- VAPOURS EXTRACTION SYSTEM
- PRO SERIES FEATURES

Manual Series equipment

BR-60



Exterior dimensions of the machine	920x600x970 mm
Interior dimensions of the vat	550x400x400 mm
Useful measurements of the work basket	513x350x230 mm
Height of the worktop	970 mm
Capacity of the vat	88 L
Power of the ultrasonic generator	600 W
Heating element	2.4 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	1 1/4"

See the optional equipment on page 19.

BR-80



Exterior dimensions of the machine	970x670x970 mm
Interior dimensions of the vat	600x400x460 mm
Useful measurements of the work basket	545x350x250 mm
Height of the worktop	970 mm
Capacity of the vat	110 L
Power of the ultrasonic generator	1,000 W
Heating element	3 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	1 1/4"

See the optional equipment on page 19.

BR-150



Exterior dimensions of the machine	1,070x720x970 mm
Interior dimensions of the vat	700x510x500 mm
Useful measurements of the work basket	680x460x415 mm
Height of the worktop	970 mm
Capacity of the vat	179 L
Power of the ultrasonic generator	1,200 W
Heating element	3.75 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	1 1/4"

See the optional equipment on page 19.

Manual Series equipment

BR-300



Exterior dimensions of the machine	1,490x900x970 mm
Interior dimensions of the vat	900x650x600 mm
Useful measurements of the work basket	880x600x515 mm
Height of the worktop	970 mm
Capacity of the vat	351 L
Power of the ultrasonic generator	2,400 W
Heating element	7.5 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	1 1/4"

See the optional equipment on page 19.

BR-450



Exterior dimensions of the machine	1,680x900x970 mm
Interior dimensions of the vat	1,100x650x650 mm
Useful measurements of the work basket	1,080x600x565 mm
Height of the worktop	970 mm
Capacity of the vat	465 L
Power of the ultrasonic generator	3,600 W
Heating element	9 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	1 1/2"

See the optional equipment on page 19.

BR-650



Exterior dimensions of the machine	1,930x1,040x970 mm
Interior dimensions of the vat	1,350x800x650 mm
Useful measurements of the work basket	1,330x750x565 mm
Height of the worktop	970 mm
Capacity of the vat	702 L
Power of the ultrasonic generator	4,800 W
Heating element	12 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	1 1/2"

See the optional equipment on page 19.

Manual Series equipment

BR-1000



Exterior dimensions of the machine	2,080x1,140x970 mm
Interior dimensions of the vat	1,500x900x750 mm
Useful measurements of the work basket	1,480x850x655 mm
Height of the worktop	970 mm
Capacity of the vat	1,010 L
Power of the ultrasonic generator	6,000 W
Heating element	18 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	2"

See the optional equipment on page 19.

BR-2000



Exterior dimensions of the machine	2,300x1,300x1,450 mm
Interior dimensions of the vat	1,750x1,100x1,100 mm
Useful measurements of the work basket	1,730x1,050x1,010 mm
Height of the worktop	1,450 mm
Capacity of the vat	2,118 L
Power of the ultrasonic generator	10,000 W
Heating element	24 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	2"

See the optional equipment on page 19.

BR-3000



Exterior dimensions of the machine	2,500x1,500x1,450 mm
Interior dimensions of the vat	2,100x1,200x1,200 mm
Useful measurements of the work basket	2,050x1,150x1,100 mm
Height of the worktop	1,450 mm
Capacity of the vat	3,024 L
Power of the ultrasonic generator	14,000 W
Heating element	36 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	2 1/2"

See the optional equipment on page 19.

Manual Series equipment

BR-5000



Exterior dimensions of the machine	2,850x1,900x1,450 mm
Interior dimensions of the vat	2,300x1,600x1,400 mm
Useful measurements of the work basket	2,250x1,550x1,300 mm
Height of the worktop	1,450 mm
Capacity of the vat	5,152 L
Power of the ultrasonic generator	20,000 W
Heating element	48 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	2 1/2"
See the optional equipment on page 19.	

BR-7500



Exterior dimensions of the machine	2,950x2,000x1,650 mm
Interior dimensions of the vat	2,700x2,000x1,400 mm
Useful measurements of the work basket	2,350x1,650x1,500 mm
Height of the worktop	1,650 mm
Capacity of the vat	7,560 L
Power of the ultrasonic generator	25,000 W
Heating element	60 kW
Control panel with push-buttons and digital thermostat	
Power supply voltage	230 - 400 V
Cover	Manual
Drain valve	2 1/2"
See the optional equipment on page 19.	

SPECIFICATIONS SUMMARY TABLE

Model	Vat capacity (L)*	Interior dimensions (mm)*	Useful measurements of the work basket (mm)*	Heating element (kW)*	Ultrasonic power (W)*
BR-60	88	920x600x970	513x350x230	2.4	600
BR-80	110	970x670x970	545x350x250	3	1,000
BR-150	179	1,070x720x970	680x460x415	3.75	1,200
BR-300	351	1,490x900x970	880x600x515	7.5	2,400
BR-450	465	1,680x900x970	1,080x600x565	9	3,600
BR-650	702	1,930x1,040x970	1,330x750x565	12	4,800
BR-1000	1,013	2,080x1,140x970	1,480x850x655	18	6,000
BR-2000	2,118	2,300x1,300x1,450	1,730x1,050x1,010	24	10,000
BR-3000	3,024	2,500x1,500x1,450	2,050x1,150x1,100	36	14,000
BR-5000	5,152	2,850x1,900x1,450	2,250x1,550x1,300	48	20,000
BR-7500	7,560	2,950x2,000x1,650	2,350x1,650x1,500	60	25,000

* The measurements, capacities and maximum loads of the machines are provided as a guide. Our continuous improvement process in the designs and performances may cause these characteristics to vary. When requesting a quote, the final price will be provided. Please contact us and we will answer all your questions.

WorkTable Series equipment

All the power of BRIO ultrasonic technology in small dimensions inside our WorkTable Series equipment. Desktop equipment with all the features of the Manual series. Perfect for small parts in workshops, factories and industrial installations. Standard 6 L and 30 L models are available.

• MANUAL COVER

Cover designed to prevent dripping with a pre-frame to avoid vapour leaks. Optional thermal-acoustic insulation.

Vulcanised handle with an ergonomic design.

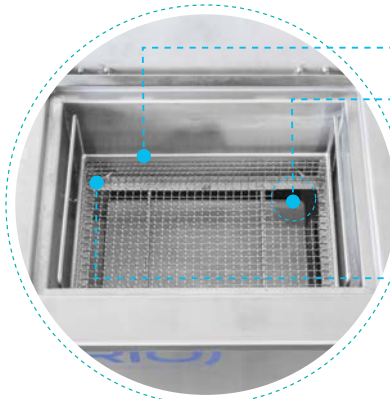
STAINLESS support for the cover.



• CONTROL PANEL

Easy and efficient control. With a Main power switch, safety push-button, digital thermostat with temperature control and push-button for turning on the heat and ultrasounds.

Interior view



Work basket

BRIO Ultrasonic Emitter

The design and power of the ultrasonic emitters is unique for each model in order to achieve the maximum performance.

Protective support edge

Support points for the basket that protects the emitter against impacts caused by parts.

• MANUAL WORK BASKET

STAINLESS tray where the objects to be cleaned are placed inside the main vat. It is shaped like a grate, which allows the fluid from flowing through it.



OPTIONAL EQUIPMENT

- THERMAL-ACOUSTIC INSULATION OF THE COVER
- FILTERING SYSTEM
- TAILOR-MADE STAINLESS BASKETS
- AUTOMATIC FILLING
- BATH SATURATION CONTROL
- AUTOMATIC DOSING OF DETERGENT
- VAPOURS EXTRACTION SYSTEM
- PRO SERIES FEATURES

Lab Series equipment

BRIO ultrasonic capabilities in compact laboratory equipment. Desktop equipment that are perfect for sanitising and treating parts in watches, optics, jewellery, medical tools, dental tools and much more. Easy to transport. 3 L and 30 L models are available.

- END OF DAY MANUAL COVER

STAINLESS steel cover with a handle designed to prevent vapour leaks.

- CONTROL PANEL

For easily adjusting the cleaning time and the temperature. With temperature control in real time.

- ISOLATED CIRCUIT

Isolated circuit with ventilation. Adjusted design, specific for each model to prevent any possible overload from occurring. With thermal insulation to protect the circuits and transducers.



- COMPACT AND INTELLIGENT DESIGN

Equipment designed for easy operation and transport. They can be adapted to any work space such as laboratories or workshops. The built-in side handles allow them to be relocated without running the risk of tipping over the unit. They also incorporate rubber slip-resistant feet.

- WORK BASKET

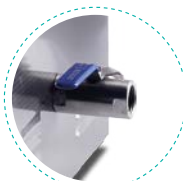
STAINLESS tray where the objects to be cleaned are placed on. It is shaped like a grate, which allows the fluid from flowing through it.



Interior view



Its interior design without edges allows to quickly and conveniently remove the accumulated dirt.



Just like the rest of equipment in the series, they incorporate drain valves for changing or recycling the cleaning fluid.

WorkTable Series equipment

SPECIFICATIONS SUMMARY TABLE

Model	Vat capacity (L)*	Exterior dimensions (mm)*	Interior dimensions (mm)*	Heating element (kW)*	Ultrasonic power (W)*
BR-6 WT	6	440x345x445	250x170x150	0.3	200
BR-10 WT	10	490x405x445	300x230x150	0.5	300
BR-20 WT	20	690x480x445	400x325x150	1	500
BR-30 WT	30	690x480x500	400x325x230	1	600

* The measurements, capacities and maximum loads of the machines are provided as a guide. Our continuous improvement process in the designs and performances may cause these characteristics to vary. When requesting a quote, the final price will be provided. Please contact us and we will answer all your questions.



Lab Series equipment

SPECIFICATIONS SUMMARY TABLE

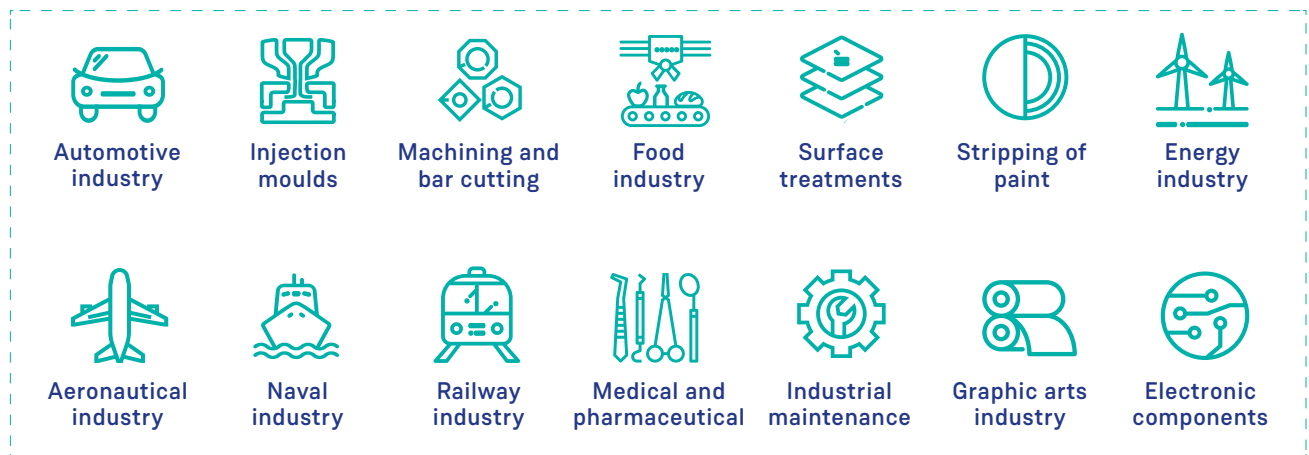
Model	Vat capacity (L)*	Exterior dimensions (mm)*	Interior dimensions (mm)*	Heating element (kW)*	Ultrasonic power (W)*
BR-3 Lab	3	270x170x240	240x140x100	0.1	100
BR-6 Lab	6	330x180x310	300x155x150	0.3	150
BR-10 Lab	10	330x270x310	300x240x150	0.3	200
BR-20 Lab	26	550x330x310	530x325x150	0.5	400
BR-30 Lab	34	550x330x360	530x325x200	0.5	500

* The measurements, capacities and maximum loads of the machines are provided as a guide. Our continuous improvement process in the designs and performances may cause these characteristics to vary. When requesting a quote, the final price will be provided. Please contact us and we will answer all your questions.



Sectors and Applications

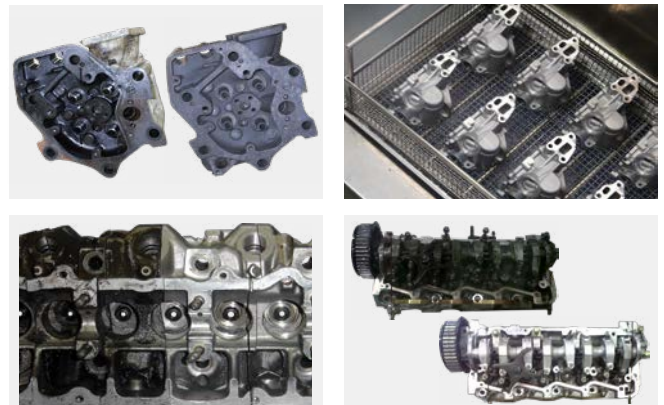
The exclusive BRIO Ultrasonics technology is ideal for cleaning and treating all types of parts and components made of any material. Therefore, even if your case is represented, please contact us so we can advise you and together we will develop the solution that is best suited for your needs.



Automotive industry

BRIO Ultrasonics equipment are the perfect supplement for rectification workshops, re-manufacturing of engines, scrapping, general mechanics and workshops specialised in any part of the engine.

Our exclusive technology fully radiates the inside of the parts to be cleaned, adapting to its size to accomplish a better cleaning and removal of carbon deposits. We achieve the best results on parts and components such as blocks, heads, turbos, injectors, collectors, radiators, coolers, particulate filters and EGR valves.



Injection moulds industry

Our BR MOLD line covers all the cleaning and treatment needs of the sector using tailor-made multi-stage equipment. We install BRIO ultrasonic cleaning stages, rinsing, anti-corrosion protection, etc.

We perform a complete cleaning of any mould, cooling duct, spare parts, extractors, figures, slotted parts, sliding parts, etc. We reach every crevice of parts without needing to disassemble them and we achieve optimum results on injection moulds for zamak, magnesium, plastic, rubber and any other material.



Sectors and Applications

Machining and bar cutting

Cleaning using BRIO ultrasonic equipment is the perfect solution for removing shavings, oxide, oils and any dirt. Also, it is applicable to all types of materials such as Stainless steel, carbon steel, brass, bronze, aluminium, zamak and technical plastics.

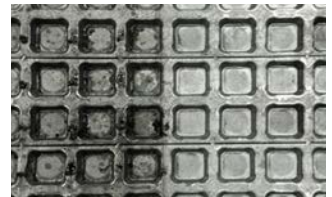
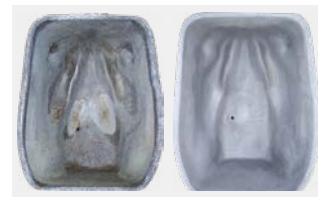
The parts cleaning process for this sector usually requires different treatments. We develop tailor-made multi-stage equipment that allows us to treat the parts in several phases: BRIO ultrasonics cleaning, rinsing, passivation and drying.



Food industry

Our BR FOOD line is developed exclusively to comply with the cleaning, hygiene and disinfection standards of the food sector. We provide superior hygiene results in the elimination of grease, oils, residue, burn deposits, lime deposits, etc.

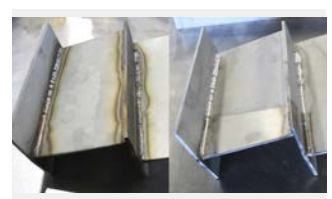
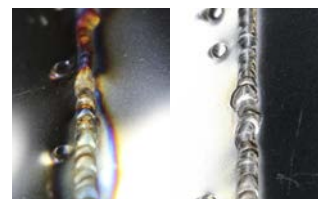
Our system works perfectly with the materials that are most commonly found in the food industry: Stainless steel and plastics. We achieve optimum results in the cleaning of pallets, trays, cutlery, hooks, continuous processes, etc.



Surface treatments

At BRIO Ultrasonics we have developed multiple cleaning solutions for surface treatments, stripping, degreasing, pre-treatments and baths designed for technical processes, galvanising techniques, nickel plating, chrome plating, paint lines, etc.

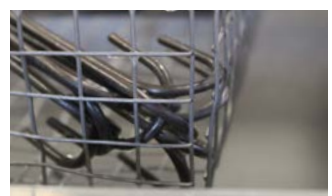
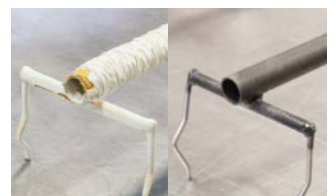
Our exclusive technology is used to perfectly treat and prepare parts for subsequent processing. We remove grease, polishing pastes, oils, graphites and dirt of all types on metal and plastic parts. All of this quickly and efficiently, reaching 100% of its geometry.



Stripping of paint

BRIO ultrasonics cleaning fully removes paints such as epoxy, polyester, water based, polyurethane and varnishes. All much faster and more efficiently than using traditional systems and without damaging the parts. It is also the best option for refurbishing scrap parts, stripping of frames, etc.

We are experts in industrialised processes for stripping iron and aluminium. We recover high value parts such as alloy wheels or aluminium profiles in architecture, frames and other scrap parts.

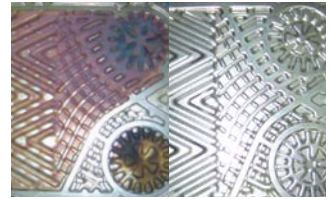


Sectors and Applications

Energy industry

At BRIO we develop solutions that are exclusively for the nuclear, wind, thermal, cogeneration and solar sectors. Some of the main applications are:

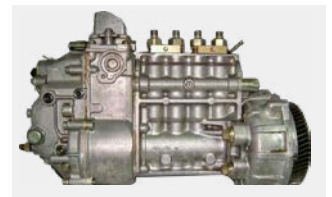
- **Nuclear.** Cleaning of heat exchangers, cleaning of heads and removal of radionuclides.
- **Cogeneration.** Removal of carbon deposits, cleaning of engines and cleaning of heat exchangers.
- **Wind.** Maintenance of engines, gear boxes, etc.



Aeronautical industry

Our exclusive ultrasonic cleaning technology provides the best cleaning solution for manufacturers of components for aviation and maintenance, repair and inspection (MRO) centres.

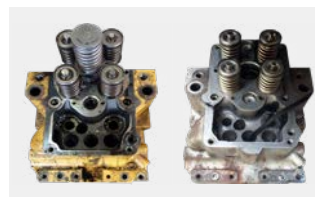
In a sector where safety is paramount, BRIO ultrasonic cleaning equipment do not cause damage to the materials nor do they alter the geometry of the surface of the parts. This makes them ideal for cleaning hydraulic systems, heat exchangers, engine parts, injection pumps, blades, turbines, etc.



Naval industry

The exclusive BRIO technology in installations that are designed and tailor-made for the naval sector. We cover all the cleaning requirements of the sector, while following the most stringent safety regulations.

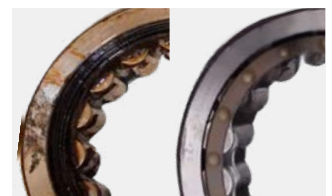
We provide turnkey projects aimed at removing deposits such as lime, carbon, oxides, grease, and paints from components such as heads, exchangers, blocks, inter-coolers, pistons, sleeves, valves and others.



Railway industry

Our BRIO equipment are the best cleaning solution for precision work such as construction and maintenance of railway networks and railway infrastructures. This is because we keep the shape of the parts unaltered, leaving them 100% free of impurities.

We adapt the designs of our machines, in size and shape, to cover any need of the sector. We clean rails, needles, check rails, crossing frogs, wheel sets, boogies, bearings, brake callipers, rotary and drive equipment, etc.



Sectors and Applications

Medical and pharmaceutical

At BRIO we strictly comply with the standards in terms of cleaning processes in production and clean rooms. Our equipment is designed and manufactured according to high standards that allow us to certify a cleaning and sanitising that is compliant with all the requirements of the sector.

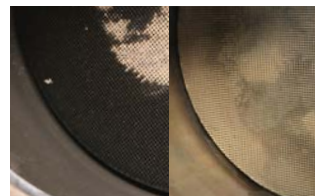
We have a wide experience providing solutions for manufacturers of orthopaedic prostheses and trauma, dental implants, instruments and for the medical and pharmaceutical industries in general.



Industrial maintenance

BRIO ultrasonic cleaning equipment offer the best solution for cleaning chains, gear boxes, solenoid valves, transmissions and hydraulic sets, heat exchangers, filters, etc.

The harsh operating conditions that industrial machinery is subjected to make preventive cleaning an essential task if you want to extend their service life and ensure they operate properly. Our ultrasonic cleaning for maintenance helps the machinery work more efficiently, decreasing the risk of unexpected failures from occurring.



Graphic arts industry

We develop systems that are specifically designed for the sector, perfect for cleaning rollers, anilox sleeves and rotogravure. We also design and manufacture equipment for cleaning stereotypes, ink pots, ceramic rollers and other removable printing parts that accumulate grease, water, alcohol based or UV inks.

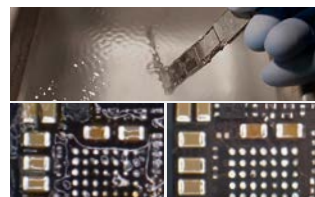
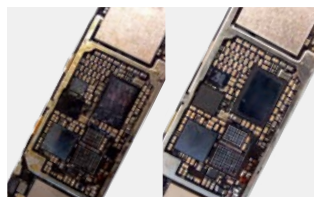
We completely recover the cells of rollers, leaving them at 100% of their printing capacity. This also occurs with rotogravure cylinders regardless of their size or complexity.



Electronic components

The exclusive technology offered by BRIO Ultrasonics is capable of carrying out an accurate and complete cleaning of electronic boards and circuits, saving time and reaching the smallest parts without causing any damage.

Our equipment is very efficient for treating electronic components on circuit-boards such as resistors, capacitors, transistors, coils, diodes and fuses. They are also the most effective solution for removing impurities deposited by solder flux.



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