

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 all over the world. Norway, UK, France, Germany, Netherlands, Switzerland, Italy, Greece, Poland, Czech Republic, Colombia, Ecuador, Chile, Portugal and Morocco are just some of the countries to which we have exported our equipment for well-known customers from 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 location 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.





BRIC) Advantages

BRIC) ULTRASONICS ADAPTED TO EACH APPLICATION



High power for tough dirt 20-30 kHz



Low power for mild dirt 30-60 kHz

UNIQUE BRIC) **ULTRASONIC EMITTERS SYSTEM**



Superior cleaning



Reduced cleaning times



Longer service life



Optimised electrical installation

BRIC) DESIGN & MANUFACTURING RELIABLE AND RUGGED EQUIPMENT

BRCLEAN CHEMICALS

SPECIFIC FOR EACH APPLICATION



Optimised

design

3



Maximum insulation





Adapted to the client



More resistant emitters





Maximum performance



Maximum energy efficiency







Modular emitter system



BRIC) 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.



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

- **3.** The pressure increases and the bubbles are compressed.
- 4. The temperature is increased until the bubbles implode, producing the micro-brushing.



Dubbles are generated.The bubbles implode with low

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.

power.

BRIC) 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 EFICIENCY

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.

BRIC) Advantages UNIQUE SYSTEM OF ULTRASONIC EMITTERS



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:

- 75-85 °C Hot bonding:
- 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:

- Hour 1000 3520 N/cm² Hour 2000 - 3508 N/cm² Hot bonding:
- 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.

BRIC) Advantages UNIQUE SYSTEM OF ULTRASONIC EMITTERS



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 SERIES

Conventional transmitters are mounted with the same cable passing from one transducer to another. Consequently, all the transducers are dependent on each other. If a problem occurs in one of the transducers, the rest 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



- 2 kW continue operating.
- 1 kW emitter 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.

BRIC) 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.



BRIC) Advantages | DESIGN & MANUFACTURING RELIABLE AND RUGGED EQUIPMENT



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 tanks 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.

BRCLEAN 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.

AVALIABLE 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.

ULTRASONIC (1)**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.

DUAL 2 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.

PASSIVATION 3 STAGE

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

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

• 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.

AVALIABLE STAGES

DRYING 4 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.

Multi-stage equipment

BR-AMS line MULTI-STAGE AUTOMATIC MACHINES

Our Automatic Multi-Stage (AMS) line of machines comprises multi-stage installations that carry out all processes in a fully automated manner. We design and manufacture tailor-made AMS systems according to the needs of our customers. Our machines can be integrated in continuous production lines in which human intervention is not necessary, and in the case of independent machines, the operator only has to place and remove the pieces at the end of the process. We have extensive experience in AMS installations for the optical, medical, pharmaceutical and industrial sectors.

BR-150 AMS, AUTOMATIC CLEANING MACHINE WITH ROTATING BASKETS.c

Machine for the final cleaning of components in the automotive sector according to strict specifications. It has the following stages: ultrasonic cleaning, double rinsing, hot passivation and vacuum drying. It also has a double filter system with filter bag, rotating baskets and a complete enclosure.



• BR-10 AMS, MULTI-STAGE AUTOMATIC MACHINE FOR SMALL PARTS

Machine for cleaning small parts that require a multi-step process (implants, printer nozzles, contact lenses, etc.). With customised baskets & tools and robot arm to perform the complete cycle automatically. With programmes developed on customer's request. Available with full enclosure, filter systems, coloured warning beacon and other optional features.

Automatic displacement systems

We install inter-stage movement systems with gantry carriage, PLC-controlled robot arm and other systems according to the needs of each customer.

Customised tools & baskets

We design specific tools for each type of part to ensure the best results. They can be part-holder fixtures or baskets, with oscillation, rotation, etc.



BR-MOLD line INJECTION MOULD CLEANING MACHINES

Thanks to our experience in injection moulds cleaning and feedback with our customers, we developed the BR-MOLD line, multi-stage machines designed and manufactured to measure with exclusive specifications for the sector. Our machines are designed according to the size of the mould and the production and automation needs of each customer. They include stages such as: BRIO ultrasonic washing, rinsing, anti-corrosion protection, drying, etc. We are able to speed up the mould change process with minimum consumption and maximum efficiency. We obtain optimal results in injection molds of zamak, magnesium, plastic, rubber, etc.

BR-MOLD 800. MOULD CLEANING MACHINE WITH GANTRY CARRIAGE

Cleaning installation for aluminium, magnesium and zamak injection moulds. With ultrasonic cleaning, rinsing and anti-corrosion protection stages. Includes automatic lids, made-to-measure baskets, active carbon filter and gantry carriage for moving between stages.



a pneumatic arm system, all controlled from the touch screen with PLC.



Special equipment

BRIC)

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In BRIO Ultrasonics we are experts in developing solutions that cover any need of our customers. In order to treat pieces with special characteristics, it is necessary to carry out a custom design and manufacture to ensure an optimum result. These developments may include specific systems for holding and transporting the parts, lifting systems prepared for very heavy loads, special dimensions of the cleaning tanks, continuous integration into the customer's facilities, etc. Whatever the type of dirt, the shape, the material or the weight of the parts, at BRIO Ultrasonics we always get the best cleaning and/or treatment solution for each customer.

MACHINE FOR LARGE PARTS CLEANING

15000 L machine for large pieces, with an elevator designed for very heavy loads. Conceived for all the industrial sectors that need to treat pieces of great dimensions, especially naval, energetic, nuclear and aeronautical.

BRIC)

Elevators for heavy loads

work with heavy parts.

Custom parts support design

We design reinforced elevators with hydraulic technology that allow us to

We design specific supports for all types of pieces, regardless of their shape or size. We carry out the necessary optimizations so that our machines perform to the maximum with both the largest and the smallest piece.

MACHINE IN PRODUCTION LINE. INDUSTRIAL SECTOR

Automated machine introduced in a continuous production line. Producing for 24 hours, 7 days a week, with maximum cleaning times per piece of 45 seconds. We meet the cleaning requirements of the customer in specifications under cleaning standard or ISO.

Automation and integration in production lines

Our machines can be coordinated with robot arms, work in continuous lines and adapt to all types of automations of our customers, ensuring their production objectives.



Automatic machines with our high-power ultrasonic technology and maximum energy efficiency. With PRO functions: Lift with load grid for easy parts loading, sway function to enhance the cleaning effect, exclusive oil removal system (OPS) and intuitive touch panel. Standard models and customised designs to meet all industry needs.

• 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 tank. 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.



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.









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 tank. This function extends the useful life of the bath against saturation thus increasing the efficiency of the equipment. The auxiliary tank has a drain valve used for recycling the liquid and a detector for controlling the fluid level.

PROCESS OF DECANTING OILS TO THE AUXILIARY TANK



- Weekly programming by time periods.

- FILTERING SYSTEM

1. Filtering cloth with automatic advance system

> 2. Sleeve or cartridge filtering system.

3. Filter press systems.

- AUTOMATIC FILLING







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.
- · Alerts system for detecting and resolving faults.

OPTIONAL EQUIPMENT

AUTOMATIC OR MANUAL COVER

THERMAL-ACOUSTIC INSULATION OF THE COVER

TAILOR-MADE STAINLESS BASKETS BATH SATURATION CONTROL AUTOMATIC DOSING OF DETERGENT

VAPOURS EXTRACTION SYSTEM

BR-150 PRO



BR-300 PRO





See the optional equipment on page 18.

External measurements of the machine	1,680x1,130x1,720 mm		
Internal measurements of the tank	900x600x640 mm		
Useful measurements of the load grid	870x525x400 mm		
Height of the worktop	970 mm		
Capacity of the tank	346 L		
Capacity of the auxiliary tank	36 L		
Ultrasonic power	2,000 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 18.			



External measurements of the machine	2,055x1,260x1,670 mm		
Internal measurements of the tank	1,110x645x650 mm		
Useful measurements of the load grid	1,080x560x435 mm		
Height of the worktop	970 mm		
Capacity of the tank	465 L		
Capacity of the auxiliary tank	53 L		
Ultrasonic power	3,000 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 18.

BR-650 PRO



BR-1000 PRO





External measurements of the machine	2,260x1,560x1,700 mm		
Internal measurements of the tank	1,300x780x680 mm		
Useful measurements of the load grid	1,250x675x510 mm		
Height of the worktop	970 mm		
Capacity of the tank	680 L		
Capacity of the auxiliary tank	65 L		
Ultrasonic power	4,000 W		
Heating element	15 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 18.			

2,700x1,955x2,265 mm External measurements of the machine Internal measurements of the tank 1,510x860x910 mm Useful measurements of the load grid 1,450x730x700 mm Height of the worktop 1,210 mm Capacity of the tank 1,182 L Capacity of the auxiliary tank 191 L 5,000 W Ultrasonic power Heating element 18 kW **Control panel** Touch screen 7" 230 - 400 V Power supply voltage Pneumatic lift with sway Yes Maximum load of the lift 800 Kg OPS system for removing oil Yes Cover Auto 2" Drain valve

See the optional equipment on page 18.

External measurements of the machine	2,950x1,900x2,520 mm		
Internal measurements of the tank	1,760x1,195x1,170 mm		
Useful measurements of the load grid	1,700x1,050x880 mm		
Height of the worktop	1,455 mm		
Capacity of the tank	2,228 L		
Capacity of the auxiliary tank	204 L		
Ultrasonic power	10,000 W		
Heating element	27 kW		
Control panel	Touch screen 7"		
Power supply voltage	230 - 400 V		
Hydraulic 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 18.

BR-3000 PRO





BR-600 PRO

External measurements of the machine	3,530x2,275x3,164 mm		
Internal measurements of the tank	2,120x1,250x1,425 mm		
Useful measurements of the load grid	2,070x1,190x1,135 mm		
Height of the worktop	1,760 mm		
Capacity of the tank	3,776 L		
Capacity of the auxiliary tank	292 L		
Ultrasonic power	14,000 W		
Heating element	36 kW		
Control panel	Touch screen 7"		
Power supply voltage	230 - 400 V		
Hydraulic 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 18.

External measurements of the machine	3,530x2,380x3,407 mm			
Internal measurements of the tank	2,120x1,445x1,523 mm			
Useful measurements of the load grid	2,070x1,290x1,215 mm			
Height of the worktop	1,860 mm			
Capacity of the tank	4,665 L			
Capacity of the auxiliary tank	338 L			
Ultrasonic power	16,000 W			
Heating element	36 kW			
Control panel	Touch screen 7"			
Power supply voltage	230 - 400 V			
Hydraulic lift with sway	Yes			
Maximum load of the lift	1,800 Kg			
OPS system for removing oil	Yes			
Cover	Auto			
Drain valve	2 1/2"			

See the optional equipment on page 18.

External measurements of the machine	3,840x2,707x3,640 mm
Internal measurements of the tank	2,430x1,692x1,623 mm
Useful measurements of the load grid	2,380x1,512x1,335 mm
Height of the worktop	1,900 mm
Capacity of the tank	6,673 L
Capacity of the auxiliary tank	395 L
Ultrasonic power	18,000 W
Heating element	45 kW
Control panel	Touch screen 7"
Power supply voltage	230 - 400 V
Hydraulic 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 18.



External measurements of the machine	4,120x3,400x3,640 mm			
Internal measurements of the tank	2,800x1,900x1,623 mm			
Useful measurements of the load grid	2,750x1,800x1,335 mm			
Height of the worktop	1,950 mm			
Capacity of the tank	8,634 L			
Capacity of the auxiliary tank	425 L			
Ultrasonic power	25,000 W			
Heating element	63 kW			
Control panel	Touch screen 7"			
Power supply voltage	230 - 400 V			
Hydraulic 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 18.				

SPECIFICATIONS SUMMARY TABLE

Model	Tank capacity (L)*	Internal measurements (mm)*	Useful measurements of the load grid (mm)*	Heating element (kW)*	Ultrasonic power (W)*	Maximum load of the lift (kg)*
BR-150 PRO	183	710x500x540	680x435x400	3.75	1,000	80
BR-300 PRO	346	900x600x640	870x525x400	7.5	2,000	250
BR-450 PRO	465	1,110x645x650	1,080x560x435	9	3,000	300
BR-650 PRO	680	1,300x780x680	1,250x675x510	15	4,000	400
BR-1000 PRO	1,182	1,510x860x910	1,450x730x700	18	5,000	800
BR-2000 PR0	2,446	1,760x1,195x1,170	1,700x1,050x880	27	10,000	1,100
BR-3000 PR0	3,776	2,120x1,250x1,425	2,070x1,190x1,135	36	14,000	1,500
BR-4000 PR0	4,665	2,120x1,445x1,523	2,070x1,290x1,215	36	16,000	1,800
BR-6000 PR0	6,673	2,430x1,692x1,623	2,380x1,512x1,335	45	18,000	2,000
BR-8000 PR0	8,634	2,800x1,900x1,623	2,750x1,800x1,335	63	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 machines with our unique technology for high cleaning power and maximum energy efficiency. With touch screen or analogue control panel with cleaning time and temperature control. PRO series features can be added as an option. Standard models up and customised designs to meet individual customer requirements.

CONTROL PANEL

Simple and intuitive control. Touch screen and PLC for cycle start-up, temperature setting and wash time. With main switch and safety button. Also available with push button panel.

MANUAL WORK BASKET

Stainless steel baskets for safe loading of the parts. It has a grid shape, which allows the fluid to pass through.

Its design allows it to be fixed above the tank, leaving the pieces in draining position. In addition, this worktop-height fixing allows the pieces to be loaded more comfortably.





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 emitters. It may be removed in order to clean the bottom of the tank.

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

BR-60



BR-80



920x600x970 mm		
550x400x400 mm		
500x350x230 mm		
970 mm		
88 L		
600 W		
2.4 kW		
Touch panel or push-button controls with digital thermostat		
230 - 400 V		
Manual		
1 1/4"		

See the optional equipment on page 23.

External measurements of the machine	970x670x970 mm	
Internal measurements of the tank	600x400x460 mm	
Useful measurements of the work basket	550x350x250 mm	
Height of the worktop	970 mm	
Capacity of the tank	110 L	
Ultrasonic power	800 W	
Heating element	3 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23.

External measurements of the machine	1,070x720x970 mm	
Internal measurements of the tank	710x500x540 mm	
Useful measurements of the work basket	680x435x400 mm	
Height of the worktop	970 mm	
Capacity of the tank	183 L	
Ultrasonic power	1,000 W	
Heating element	3.75 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	
See the optional equipment on page 23		

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External measurements of the machine	1,490x900x970 mm	
Internal measurements of the tank	900x600x640 mm	
Useful measurements of the work basket	870x525x400 mm	
Height of the worktop	970 mm	
Capacity of the tank	351 L	
Ultrasonic power	2,000 W	
Heating element	7.5 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23



BR-300



BR-450



BR-650



BR-1000



BR-2000



External measurements of the machine	1,680x900x970 mm	
Internal measurements of the tank	1,110x645x650 mm	
Useful measurements of the work basket	1,080x560x435 mm	
Height of the worktop	970 mm	
Capacity of the tank	465 L	
Ultrasonic power	3,000 W	
Heating element	9 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/2"	
Cas the entire of environment on more 22		

See the optional equipment on page 23.

External measurements of the machine	1,930x1,040x970 mm	
Internal measurements of the tank	1,300x780x680 mm	
Useful measurements of the work basket	1,250x675x510 mm	
Height of the worktop	970 mm	
Capacity of the tank	680 L	
Ultrasonic power	4,000 W	
Heating element	15 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23.

External measurements of the machine	2,360x1,360x1,120 mm	
Internal measurements of the tank	1,510x860x910 mm	
Useful measurements of the work basket	1,450x730x700 mm	
Height of the worktop	1,120 mm	
Capacity of the tank	1,182 L	
Ultrasonic power	5,000 W	
Heating element	18 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23

External measurements of the machine	2,610x1,700x1,380 mm	
Internal measurements of the tank	1,760x1,195x1,170 mm	
Useful measurements of the work basket	1,700x1,050x880 mm	
Height of the worktop	1,380 mm	
Capacity of the tank	2,228 L	
Ultrasonic power	10,000 W	
Heating element	27 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23

BR-3000



BR-4000



BR-6000



BR-8000



External measurements of the machine	2,970x1,750x1,660 mm	
Internal measurements of the tank	2,120x1,250x1,425 mm	
Useful measurements of the work basket	2,070x1,190x1,135 mm	
Height of the worktop	1,660 mm	
Capacity of the tank	3,776 L	
Ultrasonic power	14,000 W	
Heating element	36 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/2"	

See the optional equipment on page 23.

External measurements of the machine	2,970x1,945x1,733 mm	
Internal measurements of the tank	2,120x1,445x1,523 mm	
Useful measurements of the work basket	2,070x1,290x1,215 mm	
Height of the worktop	1,733 mm	
Capacity of the tank	4,665 L	
Ultrasonic power	16,000 W	
Heating element	36 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23.

External measurements of the machine	3,280x2,192x1,833 mm	
Internal measurements of the tank	2,430x1,692x1,623 mm	
Useful measurements of the work basket	2,380x1,512x1,335 mm	
Height of the worktop	1,833 mm	
Capacity of the tank	6,673 L	
Ultrasonic power	18,000 W	
Heating element	45 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23

External measurements of the machine	3,650x2,400x1,833 mm	
Internal measurements of the tank	2,800x1,900x1,623 mm	
Useful measurements of the work basket	2,750x1,800x1,335 mm	
Height of the worktop	1,833 mm	
Capacity of the tank	8,634 L	
Ultrasonic power	25,000 W	
Heating element	63 kW	
Touch panel or push-button controls with digital thermostat		
Power supply voltage	230 - 400 V	
Cover	Manual	
Drain valve	1 1/4"	

See the optional equipment on page 23

SPECIFICATIONS SUMMARY TABLE

Model	Tank capacity (L)*	Internal measurements (mm)*	Useful dimensions of the work basket (mm)*	Heating element (kW)*	Ultrasonic power (W)*
BR-60	88	550x400x400	500x350x230	2.4	600
BR-80	110	600x400x460	550x350x250	3	800
BR-150	183	710x500x540	680x435x400	3.75	1,000
BR-300	351	900x600x640	870x525x400	7.5	2,000
BR-450	465	1,110x645x650	1,080x560x435	9	3,000
BR-650	680	1,300x780x680	1,250x675x510	15	4,000
BR-1000	1,182	1,510x860x910	1,450x730x700	18	5,000
BR-2000	2,228	1,760x1,195x1,170	1,700x1,050x880	27	10,000
BR-3000	3,776	2,120x1,250x1,425	2,070x1,190x1,135	36	14,000
BR-4000	4,665	2,120x1,445x1,523	2,070x1,290x1,215	36	16,000
BR-6000	6,673	2,430x1,692x1,623	2,380x1,512x1,335	45	18,000
BR-8000	8,634	2,800x1,900x1,623	2,750x1,800x1,335	63	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.

Custom equipment

In addition to standard models, we also conceive customised designs for our PRO and manual machines. We add functions and modify capacities according to the needs, characteristics and preferences of each customer. We design and manufacture the machine you need, no more, no less.

BRIO

BR-2000 EX

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BR-2100 C

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. Available with integrated or stand-alone ultrasonic generator.

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.

MANUAL WORK BASKET

Stainless steel tray where the objects to be cleaned are placed inside the main tank. It is shaped like a grate, which allows the fluid to flow through it.



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.



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 ultrasonics in compact laboratory equipment. Tabletop equipment perfect for the sanitisation and treatment of watchmaking, optics, jewellery, medical and dental tools and much more. With bi-frequency technology and exclusive functions to enhance the cleaning effect and adapt to all types of dirt and requirements of each sector. Easy to transport and available in volumes from 3 L to 30 L.

• END OF DAY MANUAL COVER

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

FUNCTIONS & CONTROL PANEL

The control panel is user-friendly and intuitive. From it you can select the working frequency, the bi-frequency functions to enhance the effect of the bath, temperature control, and start/stop of the ultrasounds.

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.



Interior view

• 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.





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	Tank capacity (L)*	External measurements (mm)*	Internal useful measurements (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	400x300x150	1	500
BR-30 WT	30	690x480x500	400x300x230	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	Tank capacity (L)*	External measurements (mm)*	Internal measurements (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.







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

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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.







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.

















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, intercoolers, 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.





























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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