

BAÑOS ULTRASONIDOS REDONDO CON CALEFACCIÓN
ROUND ULTRASONIC BATHS WITH HEATING
BAINS À ULTRASONS ROUNDS AVEC CHAUFFAGE

Ref. | Code | Réf. ZCC031-32-33



Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.

Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.

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1. PREPARATION

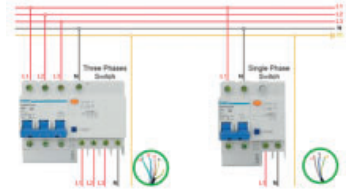
1. Unpacking and verification: Carefully unpack the equipment, remove all packaging materials and check that no parts have come loose or been damaged during transport.

Contents:

- a: Main machine
- b: Soundproofing cover
- c: Power cable
- d: Outlet filter
- e: Mesh basket
- f: Manual

2. Equipment placement: Place the equipment on a flat, clean surface, ensuring that the cooling fan has adequate ventilation, that all controls are in the off position, and that the drain valve is closed.

3. Electrical connection: Ensure that the power cables are securely and correctly connected to the single-phase (220 V) or three-phase (380 V) switch, and that no part of the cables can meet moisture or water. NOTE: In the case of ZCC033, the power cable can be connected to a power outlet if it has a power rating greater than 2000 W.



4. Carefully fill at least half of the tank with a solvent solution. Depending on the cleaning requirements, it is recommended to use a small amount of cleaning solution, as this helps to improve cleaning performance.

2. EQUIPMENT SETUP AND OPERATION

Filling and switching on

- Fill the stainless-steel tank with the appropriate cleaning solution. Switch on the equipment using the single-phase or three-phase switch, depending on the model.
- Once connected, the temperature LED display will show the current ambient temperature, while the time LED display will show the default value of 3 minutes (default ultrasound time).

Time adjustment

- Briefly press the “TIME– / TIME+” buttons to decrease or increase the time in 1-minute intervals.
- Press and hold either button to adjust the time in continuous 10-minute increments.
- Cleaning will stop automatically when the timer reaches 00:00.
- If you wish to stop the process before the programmed time has elapsed, press the “Ultrasonic” button.

Temperature adjustment

- Briefly press the ‘TEMPERATURE-/TEMPERATURE+’ buttons to decrease or increase the temperature in 1°C increments.
- Press and hold either button to adjust the temperature in continuous 10°C increments.

NOTE:

The optimum cleaning temperature is usually between 40°C and 60°C. The temperature shown on the display corresponds to the actual temperature of the liquid. The default temperature setting is 0°C.

The heating function will not activate unless:

- The set temperature is higher than the ambient temperature, and
- The ‘Heating’ button is pressed after adjusting the temperature

When the actual temperature of the liquid exceeds the set temperature, the heating indicator will turn off. However, the heating function will not be automatically deactivated if the equipment remains in ultrasonic cleaning mode; in this case, heating will automatically resume when the water temperature falls below the set value.

To manually stop the heating function, press the 'Heating' button. However, if the ultrasonic cleaning time ends, heating will stop automatically.

Operation

- Once the time and temperature have been set, press the 'Ultrasonic' or 'Heating' button to start the ultrasonic or heating functions.
- Pressing the same button again will stop the corresponding function.

Power control

- The power can be adjusted between 0% and 100%. The user can modify the power value according to the characteristics of the objects to be cleaned, thus adapting the intensity of the cleaning process.

Cleaning after use

- Empty the tank and clean both the inside and outside of the equipment with a clean, dry cloth to keep it in good condition for its next use.

3. CARE AND PRECAUTIONS FOR USE

- During cleaning, some loose components may come off.
- Do not use the equipment to clean fabrics, leather, wood, shells, tortoiseshell or electronic devices.
- Do not use flammable detergents.
- Under normal conditions, the equipment produces a uniform sound, with small splashes due to microbubbles.
- If you notice irregular knocks or noises, slightly adjust the cleaning solution level.
- Do not operate the equipment continuously for more than 24 hours to prevent overheating and damage to internal components.
- DO NOT operate the equipment without liquid in the tank. Keep the level between the maximum mark and a minimum depth of 7 cm.
- Prevent water or cleaning solution from entering the interior or transducers, as this could cause short circuits or electrical leaks.
- If liquid or an object enters the interior, switch off the equipment and remove the material immediately.
- Do not touch the switch with wet hands or place the equipment on soft surfaces that block ventilation.
- Do not disassemble the equipment, except by qualified technical personnel.
- Before emptying the tank, ensure that the liquid is at room temperature, the ultrasonic function is turned off, and the equipment is disconnected.
- Avoid overloading the tank; leave space between objects for effective cleaning.
- Keep the lid on during use to prevent splashing and evaporation.
- Clean the tank and external surface with a clean, dry cloth after each use.
- If an anomaly is detected, switch off the equipment immediately and contact the supplier.

4. APPLICATIONS

Ultrasonic cleaning is suitable for a wide variety of objects and components. If the material is non-porous and can be submerged in water, it can be effectively cleaned using this method. Common applications include jewellery, coins, PCB boards, electrical components, surgical instruments, needles, and more.

It is not recommended for delicate gemstones such as opal, pearl, emerald, tanzanite, malachite, turquoise, lapis lazuli, or coral, as they could be damaged by ultrasonic vibration.

5. CLEANING METHODS

Ultrasonic equipment allows for different levels of cleaning depending on the type of application:

- General cleaning: use only water at a temperature of approximately 50°C.
- Intensive cleaning: add a few drops of standard cleaning solution, liquid soap or neutral (non-acidic) detergent to improve performance.
- Deep cleaning: to remove rust, carbon deposits or stains on uncoated metals, it is recommended to use a specific solution for ultrasonic cleaners.

With use, the effectiveness of the cleaning solution decreases, so it should be replaced periodically. It is also important to clean the inside of the tank regularly to maintain performance and prolong the life of the equipment.

Do not use abrasive tools or corrosive products for cleaning. The tank must be completely dry before reconnecting the equipment to the mains.

NOTE:

If during operation the equipment produces sparks, smoke, a burning smell or any electrical anomaly, stop operation, disconnect it from the power supply and contact the supplier.

6. RECOMMENDATIONS FOR BETTER CLEANING RESULTS

■ Power density:

A higher power density produces a more intense cavitation effect, which improves efficiency and reduces cleaning time.

- For large parts, use a high-power density
- For high-precision parts, use a low power density
- Typical value between 12 and 20 W/L

■ Working frequency:

- Low frequencies (20-40 kHz): better cavitation, suitable for simple surfaces.
 - High frequencies (80 kHz-0.8 MHz): better refraction and penetration, recommended for parts with deep cavities or areas that are difficult to access.

■ Preparation of the bath:

- Completely submerge the parts below the maximum level ('MAX').
- Add a small amount of suitable cleaning solution
- Avoid contact or overlap between parts so as not to reduce cleaning effectiveness

■ Use of basket:

Do not place the parts directly on the bottom of the tank. Use a metal basket, which only absorbs approximately 8% of the ultrasonic energy and protects the internal tank.

■ Cleaning temperature:

The best cavitation effect is obtained between 40°C and 50°C. Although a higher temperature facilitates the dissolution of contaminants, above 70°C and 80°C the effectiveness may decrease.

■ Cleaning time:

Adjust according to the type of material. In general, a longer time improves the result, except for sensitive or special materials.

7. TECHNICAL SPECIFICATIONS

- AISI 304 stainless steel tank: corrosion-resistant and highly durable material, suitable for industrial use
- Industrial-grade integrated circuit ensures stable and reliable operation during prolonged use.
- Temperature range: 0-80°C
- Adjustable operating time: 1-99 minutes
- Adjustable power: allows the cleaning intensity to be adapted to the type of application.
- Wax removal and degreasing functions: suitable for removing oils, waxes and stubborn residues.
- Operating frequency:
 - 28 kHz for general cleaning or pre-washing
 - 40 kHz for intensive or precision cleaning
- Automatic standby and sleep modes, activated with a single key
- High-precision, long-life digital controller facilitates accurate adjustment of operating parameters and easy maintenance

Code	ZCC031	ZCC032	ZCC033
Tank dimensions	Ø300x220 mm	Ø350x240 mm	Ø450x280 mm
Overall dimensions	410x350x520 mm	460x400x540 mm	560x500x580 mm
Volume	15 L	22 L	44 L
Ultrasonic power	360 W	480 W	900 W
Heating power	400 W	600 W	1000 W
Frequency	28/40 kHz		
Time	1-99 min		
Temperature	0-80 °C		
Voltage	AC 220V		