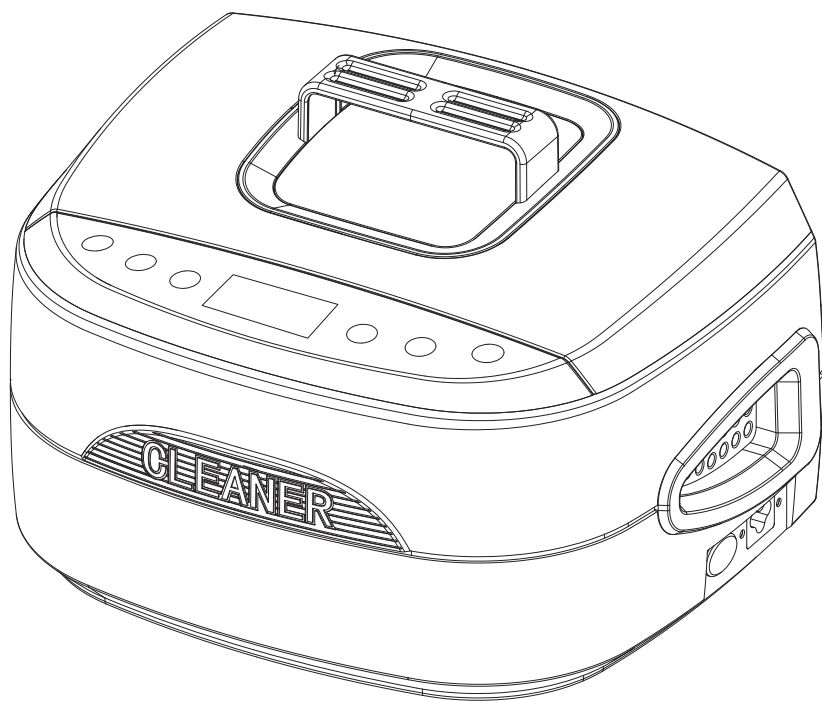


Ultrasonic Cleaner User Manual



Features:

- | | | |
|-----------|--|---|
| 1 | Large-capacity cleaning tank | Cleaning tank capacity: 2500 ml; dimensions: 24.5×15×7.5 cm; maximum cleaning item length: 26.0 cm |
| 2 | Capacitive sensing control panel | Better resistance to chemical solvents and water |
| 3 | Industrial ultrasonic generator | φ38 strong industrial ultrasonic generator to achieve great cleaning results |
| 4 | Dual-color LED display | 1~30 minutes free timing with 5 sets of temperature setting; cleaning liquid time |
| 5 | Ceramic heater | Ceramic heater (about 100W) |
| 6 | Multiple protection circuits | Partially power cut to prevent damage to the machine and ensure safety when there is overload and improper use |
| 7 | Cooling fan | Improve heat dissipation conditions to effectively extend the service life of the machine |
| 8 | Detachable power cable | Independent switch and detachable power cable for convenience |
| 9 | Moisture-proof PCB board and industrial-grade IC | Suitable for more application scenarios, with stronger anti-interference ability |
| 10 | Engineering plastic shell | 4mm thick engineering plastic and double seam allowance structure to obtain greater water and impact resistance |

Introduction

Generally, instead of special cleaning fluid, only ordinary tap water is required.

Principle of ultrasonic cleaning:

Ultrasonic cleaning uses liquid as a medium to generate numerous small bubbles under high-frequency vibration, and the energy generated when these small bubbles explode makes the dirt fall off the surface to achieve the cleaning effect.

- ⚠️ ■ In ultrasonic cleaning, using pure water or distilled water will achieve the same cleaning effect as ordinary tap water, so you can just use ordinary tap water.
- When the surface of silverware and copperware is oxidized and becomes dark, it is necessary to add a little special cleaning solution which can remove the oxidation layer to the water, so as to remove dirt as well as the oxidation layer.

Main Features

- Capacity of cleaning tank is 2500ml; dimensions: 24.5×15×7.5cm; the maximum length of the object to be cleaned is 26.0cm.
- φ38 powerful industrial-grade ultrasonic generator to obtain great cleaning effect.
- Using capacitive sensing technology, The control panel is fully sealed with good water resistance, which makes it durable and reliable.
- Ceramic heater (about 100W) and 60℃ temperature control.
- Dual-color LED display; free timing from 1 to 30 minutes with degassing function.
- Adopt industrial-grade IC, moistureproof PCB board, cooling fan, a thermal cutoff to offer dry-run protection, temperature control switch to prevent PCB board from overheating, and time controller for abnormal temperature control of heater, which makes the life of the device longer.
- Use 4mm thick engineering plastic shell and double seam allowance structure for better water and impact resistance.

Instruction Manual

Please read the instruction manual carefully before using this product, and carefully read the warnings in this manual. Please follow the instructions during operation.

Catalog

Safety Instructions	1, 2
Not Suitable for	2
Wide Application	3
Product Structure and Accessories	4
Product Exploded View	5, 6
Function Keys and Operation Guide on the control panel	7
Ordinary cleaning methods	8
Operating Guide	9
Care and maintenance	10
Product Specifications	11

Safety Instructions

Not suitable for children and people with disabilities!

-  Suitable for children over 8 years old, and they should be aware of the risk and use it in a proper way and under adult supervision. Only children over 8 years old are allowed to clean and maintain the machine. Keep the machine and socket out of the reach of children under 8 years old.
- Keep the machine away from children
- Watch out for children! Keep packaging materials away from children to avoid the danger of suffocation!
- The machine should not be used by children, and the machine and cable should be placed away from children.

Watch out for electric shock as it states in the following points:

-  It is forbidden to use the product while bathing! Never put the machine and socket in water and other liquids.
- It is forbidden to insert or pull the plug with wet hands to avoid electric shock.
- If the product accidentally falls into the water during your operation, do not touch the machine, and immediately cut off the power supply.
- It is forbidden to rinse the product directly with water or other liquids.
- Do not use the product without supervision.
- Use the product correctly in accordance with this user manual.
- Do not use accessories arbitrarily.
- When unplugging from the socket, pull on the plug instead of the cord; .
- To prevent the damage of the plug, don't let it caught by the door or stool foot, and avoid putting it on a hot body.
- Please do not use the product with damaged power cord and plug.
- Please do not disassemble and install the product by yourself unless you are a professional
- If the machine is damaged and fails to be operated, or dropped into the water, please take it to the designated maintenance facilities for repair.
- When you are required to unplug the socket:
 - If a malfunction occurs
 - Before cleaning the machine
 - The machine will not be used for a long time
 - After using the machine
- The rated current of the installed Earth leakage circuit breaker should not exceed 30MA to avoid leakage. The device must be operated by professionals.

Watch out for fire as it states in the following points:

- Avoid clogging of the machine and keep it away from thread, hair and other similar substances.
- It is forbidden to put the machine on a soft surface, such as a bed and a sofa, to avoid clogging of the vents.
- Pay attention to other warnings
- If the plug cable is damaged, you must replaced it with substitute provided by the manufacturer or service center to avoid danger.

Safety Instructions

Other matters needing attention:

It is forbidden to operate the product without water injected, for "dry running" will cause damage to the product.

It is forbidden to plug in the power supply before adding water, and do not exceed the maximum water level line to prevent overflow.

It is forbidden to use corrosive chemical reagents without permission from the manufacturer.

The product should be placed on a dry and flat surface.

When the machine malfunctions, stops operating or goes out of control due to electromagnetic interference, please unplug the power and then plug it in again.

Key Safety Instructions

When using this product, please observe the following instructions:

Read the manual thoroughly before use.

Take care of children when you are using it near them to reduce the risk of injury

Only use spare parts recommended by the manufacturer.

Outdoor use is prohibited.

After pressing the "OFF" key to turn off the machine, you also need to unplug the power. You need to pull out the plug, not just the plug cable. When the machine is not in use, the plug should be far away from the socket.

To reduce the risk of electric shock, it is forbidden to put the machine in water and other liquids. It is forbidden to put or store the product in a place where it can easily fall into buckets and sinks.

All services of the product, including generator replacement, must be performed by professionals.

It is forbidden to use machines with damaged plug cords or plugs or faulty functions, or broken caused by falling down.

You can take the machine to the nearest service site for inspection, repair or modification.

Not Suitable to Clean

Not Suitable to Clean

Jewelry: Tortoiseshell; pearl; emerald; ivory; coral; agate, etc.	Since some tortoiseshells and corals are not very hard, scratches caused by mutual friction may occur during cleaning.
Metal: Welding metal; electroplated metal; adhesively boned item, etc.	Ultrasonic cleaning may cause the original gaps of welding points, electroplated layers and bonded items to be wider, and peeling-off phenomenon may occur.
Watches Watches, pocket watches, etc. (except watches with over 50-meter water resistance)	With high permeability, ultrasonic waves may cause water to penetrate into watches that are not waterproof. (Can be cleaned using a watch stand)
other Wooden products; glass; contact lenses; ceramic products; camera filters lens, etc.	During the cleaning of coated glass lenses, ceramic, wooden and glass products, the original fine cracks may expand due to cleaning. (It will not appear if the product is intact)

Wide Application



(1). Biology/Chemistry Laboratory:

--Used for fine cleaning of various glassware/metalware in the laboratory to avoid solid and chemical residues affecting the accuracy of experiments.



(2). Medical equipment sterilization room:

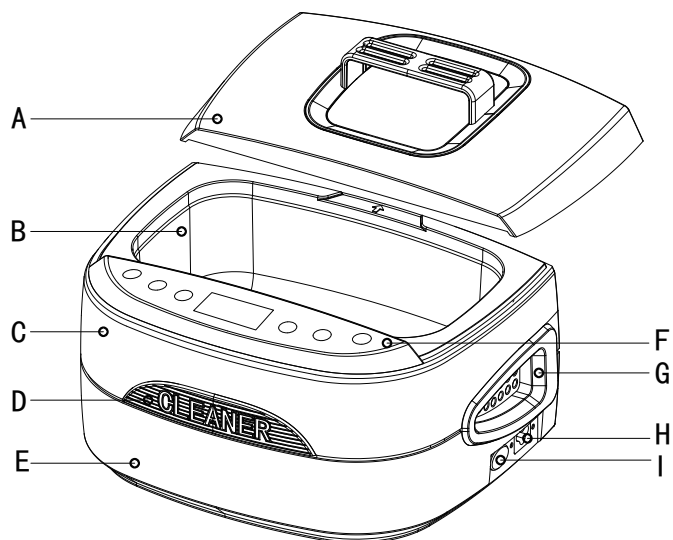
--For non-disposable medical devices, after use, there will be blood stains and body tissue residues in the gaps and small holes on the surface. Before sterilization, these residues need to be cleaned up with ultrasound to make for effectiveness of sterilization .



(3). Dental clinic:

Used for the cleaning of dental instruments before sterilization, to avoid blood stains and small solid residues in the gaps of the instruments, which will not make disinfection ineffectual.

Product Structure and Accessories



A.Silencer lid

D.Front decorative board

G.Handle

B.Stainless steel cleaning tank

E.Bottom shell

H.Power jack

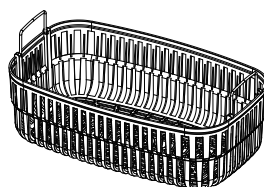
C.Upper shell

F.Operation control panel

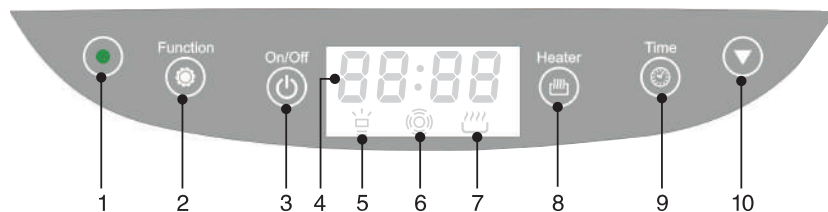
I.Switch



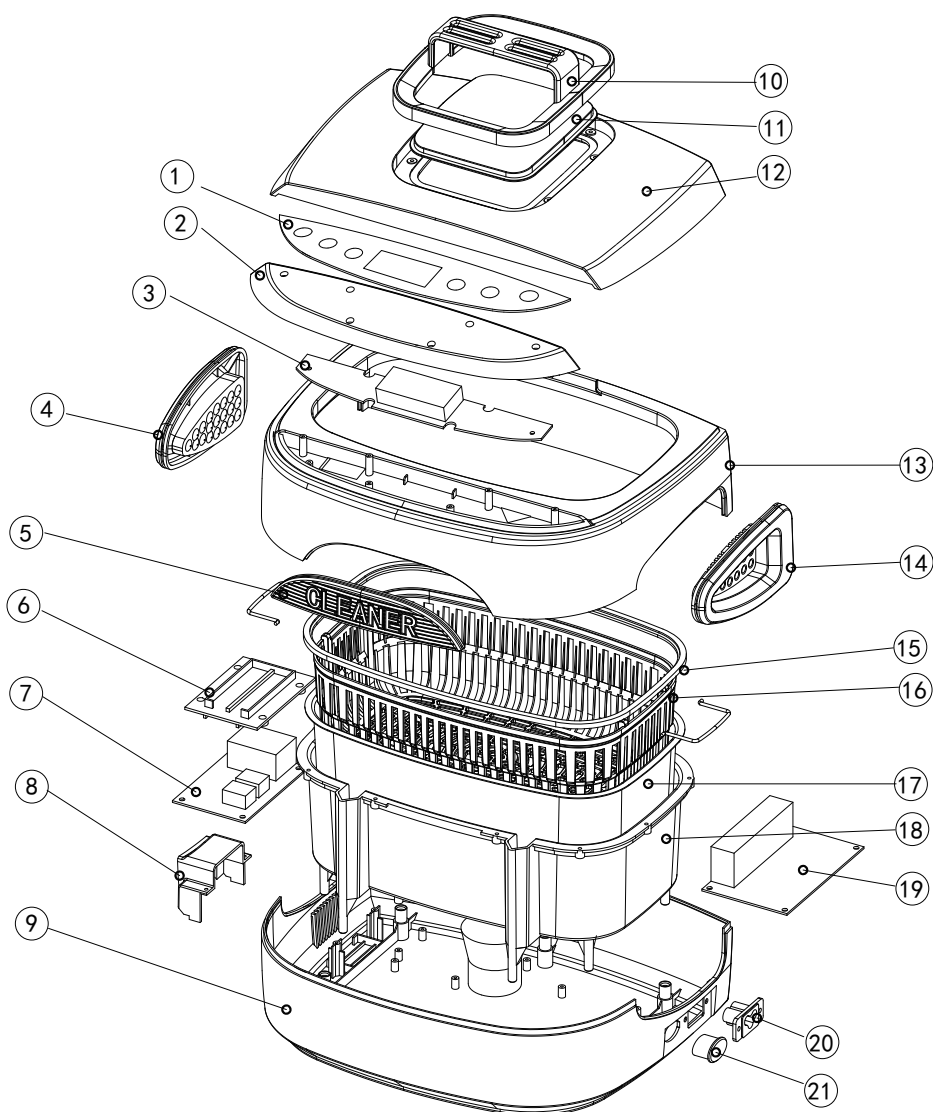
Power cord



Plastic cement cleaning basket



Product Exploded View



Serial number	Part Name
①	PVC surface sticker
②	Transparent part for control panel fixing
③	Control panel
④	Left armrest
⑤	Front decorative board
⑥	Heater pressure board
⑦	Inductive transformer
⑧	Fan bracket
⑨	Bottom shell
⑩	Handle
⑪	Transparent window
⑫	Silencer lid
⑬	Upper shell
⑭	Right armrest
⑮	Sealing ring
⑯	Net basket
⑰	Tank
⑱	Shell for tank fixing
⑲	Ultrasonic driver board
⑳	Three-pin socket
㉑	Switch

Function Keys and Operation Instructions of the Control Panel

1. Indicator light-working status indicator:

When the green light is on-the machine is in normal working status and can be used.

When the red light is on-the machine is in the overheat protection state. It needs to be out of service for more than 15 minutes, and it can not continue to work until the red light turns green.

2. Function key-function conversion key [degassing/normal]

Press the Function key and will light up, and you can select the [degassing]/function. Press the On/Off key to enter the [degassing] state. The on the display screen keeps flashing. After 1 minute and 30 seconds, it automatically returns to the [Normal] cleaning state.

If you need to increase the degassing time, press the Function key again. (To stop [degassing], just press the Function key)

Why degassing function is necessary

To clean items or silver and copper products with much oil stain, you need to add chemical cleaning solution to the tap water. Because the cleaning solution dissolves in water at a relatively slow speed at room temperature, which will cause a lot of droplets to be generated, and the newly added tap water will also cause many small bubbles attached to the tank wall, these factors will affect the cleaning effect at the beginning of the ultrasonic cleaning. When the degassing function is turned on, it usually takes only 1 minute and 30 seconds to break up the droplets and break the bubbles, which will enhance the cleaning efficiency.

3. On/Off key-switch for this cleaner:

After the power is turned on, it automatically displays on the LED display screen  , which indicates the commonly used cleaning duration and working status.

After you press the On/Off key, the ultrasonic wave starts to clean. When it displays on the  screen, the machine automatically stops cleaning. If you need to stop halfway, just press the On/Off button.

4. — LED display of cleaning duration

During the cleaning process, the countdown shows the remaining duration.

5. — Display degassing state

 — If the light is on: the degassing function has been selected

 — If the light flashes: the machine is conducting degassing

6. — Display normal cleaning state

 — If the light is on: the normal cleaning function has been selected

7. — Display heater working state

Press the Heater key; then flashes, indicating heater has been activated. Press the Heater key again; then is not illuminated, indicating the heater is off.

8. Heater key — Heater switch

Press the Heater key, the on the display screen flashes indicating the heater is turned on. During the heating process, if you need to cancel the heating, just press the Heater key again; then is not illuminated, indicating the heater is turned off.

When the water temperature reaches 55 C, the temperature sensor will automatically turn off the heater.

9 Time key — Shortcut keys for timing settings

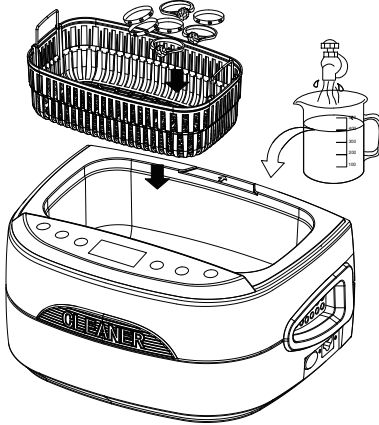
Press the Time key, it displays on the screen; press the Time key again, it transfers to the timing of, the timing will get added 5 minutes every time you press the key.

10. ▼ key — Time setting down key

Each time you press the ▼ key, the timing displayed on the screen will be reduced by 1 minute.

Ordinary Cleaning Methods

Ordinary cleaning



Just use ordinary tap water for cleaning.

Applicable places:

Jewelry shop; optical shop; biological/chemical laboratory; dentist clinic; home.

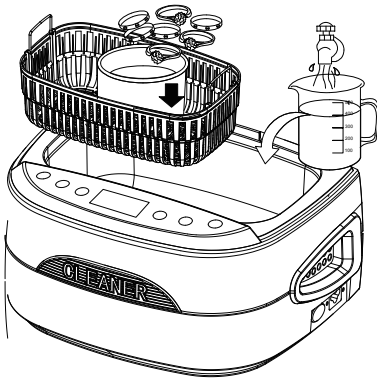
Operation instructions:

1. Put the items to be cleaned into the cleaning basket and put them into the cleaning tank together.
2. Add tap water directly to the cleaning tank at a water level which is between MIN and MAX, and you need to get the water cover over the area to be cleaned.
3. Turn on the power switch; press Time key to set 5~10 minutes of timing, and then press On/Off key to start cleaning.

Precautions for using the cleaning basket:

1. The cleaning basket can reduce the friction between the items to be cleaned and the cleaning tank, but will absorb 30% of the ultrasonic energy, which significantly reduces the cleaning ability.
2. During the cleaning process, you will see dirt floating out of the cracks of the item like "smoke", while the water is gradually cloudy. When you can't see the "smoke" floating out, it means the item has been basically completed cleaning.

Immersive cleaning



Immerse the items to be cleaned in the container, and then put the entire container in the cleaning tank for immersive cleaning.

Applicable places: watch repair shop; inkjet printing/print shop; mobile phone/electronic product repair shop; home.

Different applicable places use different immersion liquids:

1. Watch maintenance-commonly use aviation oil (prevent parts from rusting)
2. Inkjet printing/print shop-commonly use acetone solvents (dissolve ink)
3. Mobile phone / electronic product maintenance-commonly use anhydrous alcohol (volatile)
4. Home-rubbing alcohol (deodorization, cleaning and sterilization are completed at the same time)

Do not let the acetone solvent directly contact the ABS shell, and the immersive cleaning method can be used to avoid corrosion.

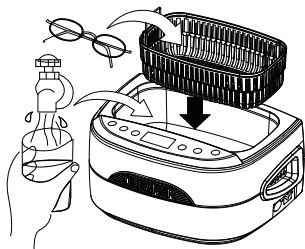
Operation instructions:

1. Immerse the items to be cleaned in the liquid of the container, the liquid level is higher than the max height of the parts to be cleaned.
2. Put the entire container directly into the cleaning tank; add water to the tank, and keep the water level between MIN and MAX, and not higher than the height of the container.
3. Turn on the power switch; press Time key and adjust the timing to 10 minutes; press On/Off key to turn on the machine, and then the ultrasonic wave will penetrate the container and clean the items in the container.

Container selection:

1. Plastic container-Because the surface material is soft, it will absorb about 30% of the ultrasonic waves, which reduces the cleaning ability.
2. Aluminum container-will absorb about 20% of ultrasonic waves.
3. Stainless steel container-will absorb about 8% of ultrasonic waves.

Operation Guide



- 1 Open the lid; put the items to be cleaned in the cleaning basket, and put them into the cleaning tank together; add tap water to keep the water level between MIN and MAX, and immerse the area where the items need to be cleaned.



When the machine runs with no the water added for more than 30 seconds, it may cause that the machine or seriously affect the life of the machine for the ultrasonic wave cannot be released outward.

- 2 Connect to the power source as shown in the figure. It automatically displayson the LED display screen,  which is the most commonly used timing and working state. To adjust the timing, you can press the Time key and ▼ key to freely set the cleaning time between 1 to 30 minutes. Commonly used cleaning time: 5 minutes/10 minutes/15 minutes.

Overlong cleaning duration may cause:

1. Loose screws
2. The original crack to be wider
3. The damaged plating layer flakes off

- 3 Press the On/Off key to start cleaning.

During cleaning, a "zizi" sound is emitted from the tank, indicating that the cleaning is in progress. Close the lid and the sound will be significantly reduced.

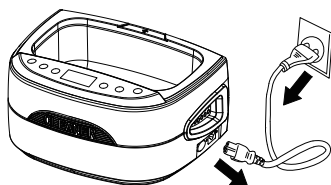
The countdown on the LED display shows the remaining working duration. When 00:00 is displayed, the cleaning is completed. To pause cleaning during the cleaning process, press the On/Off key.

This machine is equipped with overheat protection circuit to avoid continuous cleaning for a long time. When the red indicator light is on, the machine is in the overheat protection state. At that time, the ultrasonic wave will not work even if the machine is forcibly turned on. It needs to be shut down and be off for 20 minutes. After the green indicator light is on, the cleaning can continue.

- 4 Refer to "Ordinary Cleaning Methods" and select the proper cleaning method.
 1. When you need to use the heater, press the Heater key,  and thenflashes, indicating that the heater is working. When the water temperature reaches 55℃, the heater is automatically powered off.

This machine is designed with double protection circuit. When the heater works continuously for 45 minutes, it will automatically cut off the electricity.

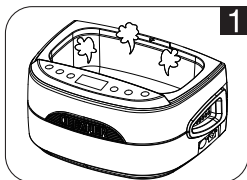
2. When the chemical cleaning solution is added to the water, the degassing function can be used to accelerate the fusion. First press the Time key to set the working time;then press the Function key, andlights up;press the On/Off key to turn on the machine. In this way, the degassing function will automatically switch to [normal] cleaning after 1.5 minutes of degassing.
3. When dirt cannot be seen overflowing from the item like "smoke", it means that the cleaning can be ended. If you need to clean again, you can press the Time key to reset the time and repeat the above process.



- 5** After cleaning, pull out the plug; open the lid; take out the cleaned items; pour the dirty water from the water outlet on the machine, and wipe to dry the cleaning tank. (as the figure shows)

When the machine is subjected to electromagnetic interference, there may be a shutdown or malfunction of the control. You need to unplug the power plug and insert it to restore control on it.

Care and maintenance

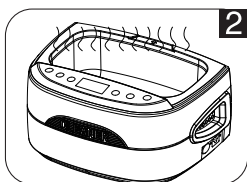


1 Do not operate it without water

Even though the machine consists of multiple protection circuits, the machine will get damaged or the service life of the machine will be largely shortened if it is runs without water for more than 30 seconds. If heated for more than 3 minutes, the heater will be destroyed.

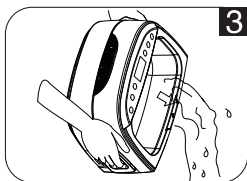


The machine is equipped with a heat insulation baffle. If there is no water in the cleaning tank during cleaning, the temperature will continue to rise, and the heat insulation baffle will open about 15 seconds later to ensure safety. The machine will not work until it is repaired.



2 Do not keep cleaning for a long time

The machine is equipped with an overheat protection circuit. After continuous cleaning for 45 minutes, it is recommended to stop the machine and keep it off for about 20 minutes to extend the service life of the machine.



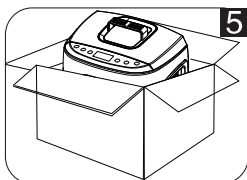
3 Do not store water in the cleaning tank for a long time

After use, connect the drain pipe as shown in the figure; open the drain valve; drain the dirty water, and wipe the cleaning tank to clean it.



4 Do not rinse the outer case directly with water

Use a dry towel to dry the cleaning tank and the machine casing.



5 Do not left out in the sun

Please keep the machine in a cool, dry and ventilated place.

Product Specification

Capacity of the cleaning tank	2.5L	
Dimensions of the cleaning tank	245*150*75mm	
Maximum length of items to be cleans	260mm	
Voltage and power	Ultrasonic power	60W、100W/AC 110/220-240V50/60HZ
	heating power	100W/AC 110/220-240V 50/60HZ
Ultrasonic frequency	40000Hz	
Digital timing	1-30min Free timing	
Material of the cleaning tank	SUS304 Stainless steel	
Shell material	ABS	
Product net weight	3.1 KG	
Product gross weight	3.5KG	
Product dimensions	320*235*205mm	
Inner box dimensions	350*285*240mm	
Box quantity	1PCS/2PCS/4PCS	
Outer box dimensions	2PCS/350*285*470mm	
	4PCS/560*350*470mm	

