

HYDRAWAVE **Ultrasonic cleaner**

USER MANUAL



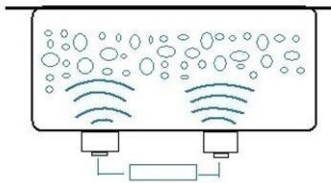
Features

- Stainless steel housing, tank and lid
- Ceramic heaters for better heating effect
- Stamp tank without welding gap for better waterproof.
- Cooling fan
- Side handles for easy handling

Introduction

This user manual is for use with the Hydrawave. Following the operating instructions will help ensure that the machine doesn't get damaged, and it is used safely. All cleaning tanks should be handled with care to ensure maximum performance. Please take the time to read the operating instructions before use and retain them for future reference.

How The Hydrawave Ultrasonic Cleaner Works



Ultrasonic cleaning is based on "acoustic cavitation" which is a physical effect generated in the liquid. Cavitations form when ultrasonic waves travel through liquid. When a sound wave travels through fluid it stretches and compresses the liquid to transmit the sound. Microscopic bubbles are formed and when they implode this causes the cavitation which creates an intense scrubbing action on the surface of the item being cleaned. The bubbles are small enough to penetrate microscopic crevices, cleaning them thoroughly and consistently.

Ultrasonic cleaning is extremely effective at removing dirt and grime. It can be used to clean a wide variety of instruments returning them to almost "like new" condition without damage to delicate parts.

Application Ranges

The Hydrawave can be used to clean most objects:

DOMESTIC	
Jewelry	Necklaces, rings, bracelets, earrings (Gold, Silver and Platinum)
Watches and glasses	Waterproof wristwatches, watch chains, glasses, sunglasses
Toiletry items	Electric toothbrush heads, electric shaver heads, razor blades, combs, toothbrushes, dentures
Discs	CDs, DVDs, CD-R discs, laserdisc
Office equipment	Printed heads, fountain pen nibs, wax or rubber stamps, Calligraphic pens/ nibs
Metal items	Metal cutlery (knives/forks), old coins, metal badges, valves, machine nozzles, small metal parts
COMMERCIAL/INDUSTRIAL	
Airbrushes / Spray guns / Inkjet printer cartridges	
Automotive/ Aviation components/ Engine cylinder heads	
Motorcycle radiators	
Dental & surgical instruments (ultrasonic cleaning does not sterilize, it must be followed by sterilization in an autoclave)	
Tattooing equipment (ultrasonic cleaning does not sterilize, it must be followed by sterilization in an autoclave)	
Diving respirators	
Lenses & other optical components	
Laboratory glassware & apparatus	

There are some exceptions including some plastics, precious stones and electronic components. It would be advisable to check with the manufacturer of the object.

Preparation

1. Carefully unpack the cleaner and remove all traces of packing materials from it. Visually inspect the cleaner for any parts that may have become loose or damaged during transit.

Contents:

- a: Main machine b: Soundproof lid c: Power lead
d: Outlet filter e: Mesh basket (Optional)

2. Place the cleaner on a flat, clean surface where the cooling fans will receive adequate ventilation and ensure all controls are set to off. Also ensure the drain tap is in the closed position.
3. Ensure the power lead is securely plugged into the cleaner and that no part of the lead is likely to come into contact with any moisture.
4. Carefully fill at least 1/2 of the tank with a solvent solution. For demanding cleaning, we recommend a small amount of washing up liquid, this will help increase the cleaning performance. The cleaner is now ready for use.

Operational Advice



PLEASE READ THE FOLLOWING VERY CAREFULLY AS FAILURE TO COMPLY MAY INVALIDATE YOUR GUARANTEE

1. DO NOT run the cleaner continuously for more than one hour at a time, as doing so can damage the internal components.
2. DO NOT operate the unit without fluid in the tank. Always ensure the fluid is no higher than the max mark and there is a minimum depth of 7cm.
3. DO NOT drop any item into the tank as this may cause damage to the transducer. Always place the items gently into the tank and use the basket whenever possible.
4. The more items that you place in your cleaning bath the less efficient it will clean.
5. It is not advised to overlap items. Always allow plenty of clear space between the items.
6. Do keep the lid on during use. This will prevent splashes and reduce evaporation

of the fluid.

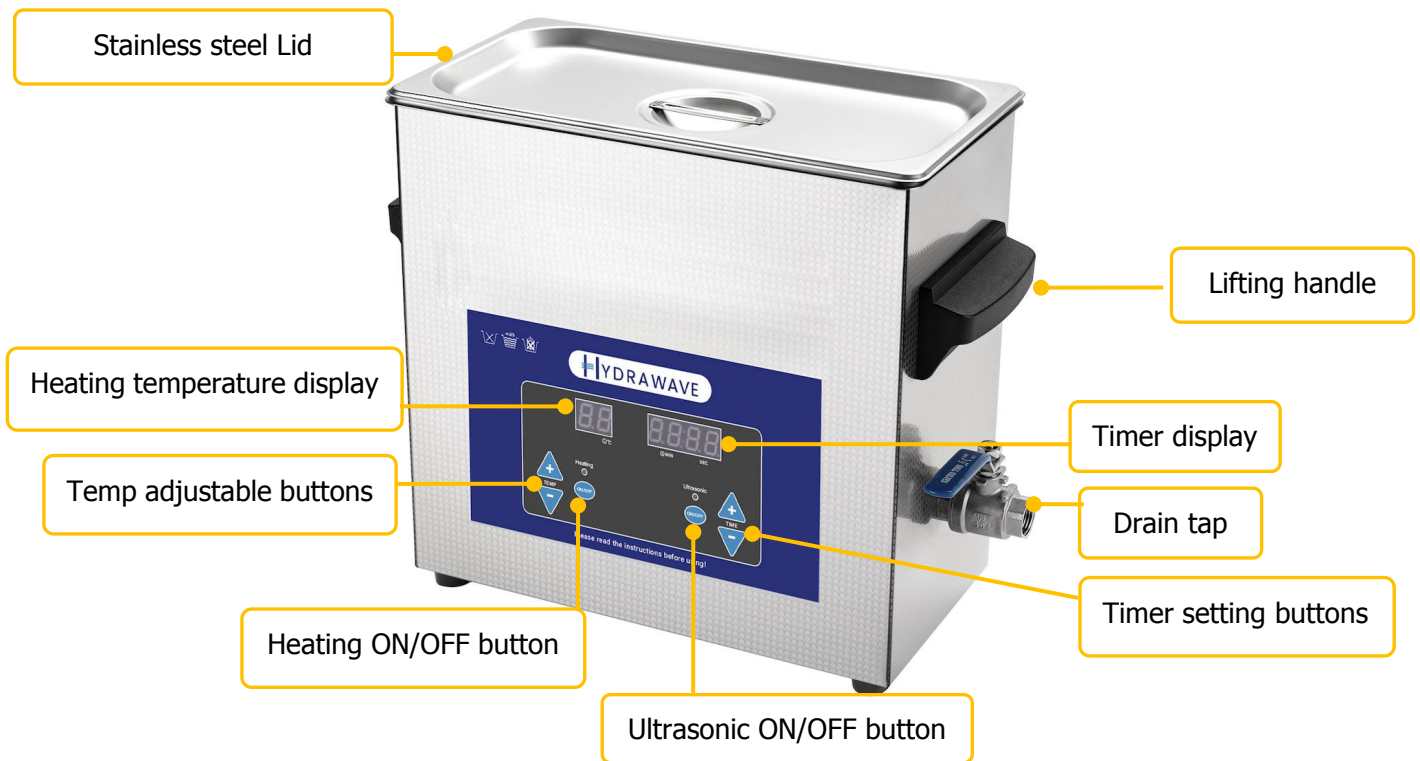
7. Never immerse the machine or power cord in water or other liquid.
8. DO NOT touch the power plug with wet hands, especially when inserting or removing the plug.
9. DO NOT touch the unit if the machine has fallen into water during operation. Remove the power plug from the socket first.
10. DO NOT disassemble the machine, except by professionals.
11. UNPLUG the power source while filling or emptying the tank.
12. DO NOT spray water or liquid over the device and the control panel
13. DO NOT operate the cleaner without proper grounding.
14. DO NOT place the device on a soft surface, where the vents could be blocked.
15. Always turn the heater off after using as leaving it on can cause the fluid to evaporate and damage the internal components.
16. Upon completion of the cleaning cycle, turn the heater button off and isolate the machine from the electrical supply.
17. Take care when adding or removing items from the cleaning tank as the fluid is likely to be hot and displaced fluid can damage the internal components. Any displaced fluid must be dried up immediately.
18. In the event of failure/emergency, disconnect the mains supply by removing the plug from the mains socket.

 **Attention**

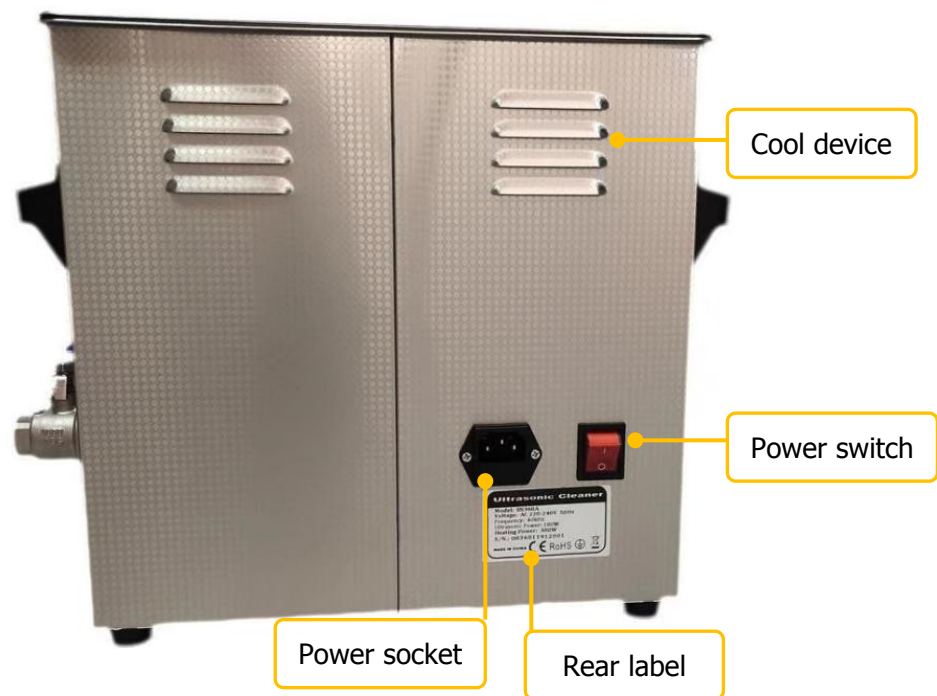
While the machine is working normally, ultrasonic and tank syntonny gives a well-proportioned sound, and no shudder on the surface of the water, yet there is spray made by the tiny bubbles. If there are discontinuous surges, please add or release a little of washing solution in the tank, stopping the surges is better for the objects cleaning.

On the condition of making sure the cleaning object is cleaned, please run the machine discontinuously as far as possible (not more than 30min), for long-time running will cause temperature increment of the case.

DIGITAL DISPLAY ULTRASONIC CLEANER STRUCTURE





Back of the machine





Product Operation

1. START UP ULTRASONIC FUNCTION:

- 1) Fill stainless steel tank with water
- 2) Plug the cleaner into a grounded outlet. When connected, the temperature defaults to be 25°C. And the timer defaults to 3 minutes.
- 3) Press the   key for shortly at a time means time increase/reduce 1minut at a time, press and hold means time will increase/reduce by 10minutes continuously. During working, you will hear the "sizzling" voice, that means the cleaner running properly.

2. START UP HEATING FUNCTION:

- 1) Set temperature (if have): press   key shortly at a time means time increase/reduce 1°C at a time, press and hold there means temperature will increase/reduce by 10°C continuously. When actual temperature is higher than the setting time, the operation is invalid. The indicator light will be off when the temperature reaches the setting temperature. The LED panel displays the actual temperature when ultrasonic is working. When the liquid tank reaches the set temperature, the heater will turn off, and the heater will turn on automatically when it's 5°C below the set temperature.
- 2) After cleaning, Empty the tank and clean both the outside and inside of the cleaner with clean and dry cloth for next use.

Note: Do not pour water out until it's cool.

Cleaning Options

GENERAL CLEANING—use only tap water. Use warm temperature about 50°C.

ENHANCED CLEANING—add few drops of standard washing up liquid, liquid soap, or detergent into water, other non-acidic cleaning agents can also be used.

EXTENSIVE CLEANING—removing tarnish, carbon & rust from non-plated metals, it is recommended to use specialist cleaning solution in associated using ultrasonic cleaner.

WARNING: Strong acid or alkaline cleaning solution will cause corrosion, rust and even puncture of tank or machine body. To overcome this problem, dilute to mild PH solution or request for tank made of specific grade of stainless steel.

Specifications

Model	Tank Size	Overall Size	Capacity	Power	Frequency	Heating power	Time Setting	Heating
	(L × W × H)mm	(L × W × H)mm	L	W	kHz	W	Min	°C
BS120D	150×140×100	190×170×220	2	60	40	100	1-99	0-80
BS230D	240×140×100	270×170×240	3	120		100	1-99	0-80
BS240D	300×155×100	312×162×240	4	120		100	1-99	0-80
BS340D	300×155×100	312×162×240	4	180		100	1-99	0-80
BS360D	300×155×150	330×180×310	6	180		300	1-99	0-80
BS410D	300×240×150	330×270×310	10	240		500	1-99	0-80
BS613D	330×300×150	360×330×310	15	360		500	1-99	0-80
BS820D	500×300×150	550×330×310	22	480		500	1-99	0-80
BS1027D	500×300×200	550×330×360	30	600		500	1-99	0-80

