Instruction manual

VWR® ULTRASONIC CLEANING BATH

EU cat. no 142-0182 142-0183 142-0184 142-0185 142-0186
142-0187 142-0188 142-0189 142-0190 142-0191
142-0192 142-0193

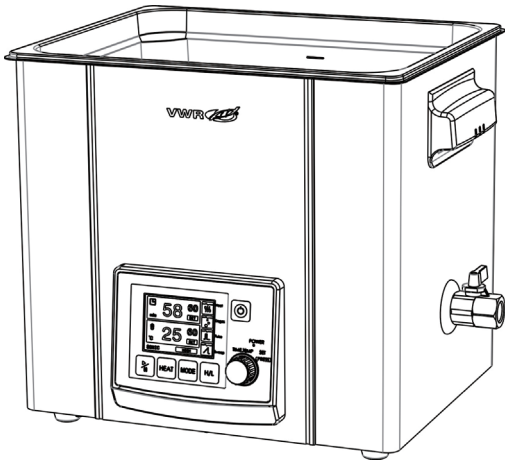

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Table of Contents

Warning **3**

Safety information **5**

Package Contents **8**

Unpacking **9**

Intended Use **9**

Specifications **10**

Instructions for use **11**

1.Overview 11

2.Description of Buttons and Switches 12

3.Operational keys 12

4.Getting Started 13

5.Operation 18

6.Selection and regulation of the washing solution 22

Troubleshooting **23**

General maintenance **24**

Accessories and spares **25**

Technical Service **26**

Warranty **26**

Disposal **27**

Warning

Before using your ultrasonic cleaning bath, please read thoroughly and understand these warnings. Failure to follow them may result in serious personal injury or property damage.

1. To avoid electrical shock ⚠

- Only use the cleaner where there is a good grounding connection.
- Unplug from power source before filling or emptying the tank.
- Don't disassemble your cleaner to avoid risk of electric shock.
- Don't immerse the cleaner in water.

2. To avoid personal injury and property damage ⚠

- Don't use alcohol, gasoline or other flammable solvents to avoid explosion or fire.
- Cleaning trough or detergent may be hot, don't touch with hand. Never put hands or fingers inside the bath while running.
- Don't let the temperature of the cleaning liquid to go over 80°C.

3. Avoid damaging the facility ⚠

- Don't operate the cleaner dry.
- Don't use strong acid or alkali or other corrosive solution to avoid damaging the cleaning trough.
- Only water soluble detergent should be used.
- The cleaner should not be started while there is no cleaning liquid in the trough.
- The water surface should not be lower than "MIN.LEVEL" to prevent damages to heating device.
- Don't directly place the work piece on the bottom of the trough, they should be suspended or placed on a support rack so as to avoid damaging energy converter.
- The cleaning liquid should be changed regularly; otherwise dirt deposits will form at the bottom of the trough and may affect

the cleaning results. Moreover, many types of detergent lose potency in time; therefore detergent should be added periodically.

- After removing some washing objects from the tank, the liquid level may drop below the MIN line, it is necessary to add cleaning solution. Correct operation: Turn off the heating firstly, then remove the washed material from the tank. Be sure to pay attention to the liquid level in the tank every time the heating is turned on.
- When the ultrasonic cleaner is working and heating is turned on simultaneously, attention should be paid to adding the solution every 2-3 hours. (When the cleaning tank is not covered, due to the evaporation of hot gas, the liquid level will drop by about 3mm per hour.)

Safety Information

1. Warning signs used in this manual.

Danger of damage to the cleaner (cleaning machine)

Danger of electric shock

Danger of fire

Danger of burns due to overheat.

Disassembling the product by yourself may result in injuries.

AC power must be switched off.

Acid or alkaline liquids may cause injuries to personnel and damages to the instrument

Indication of temperature change

Indication of electric grounding

2. Pre-use safety instructions

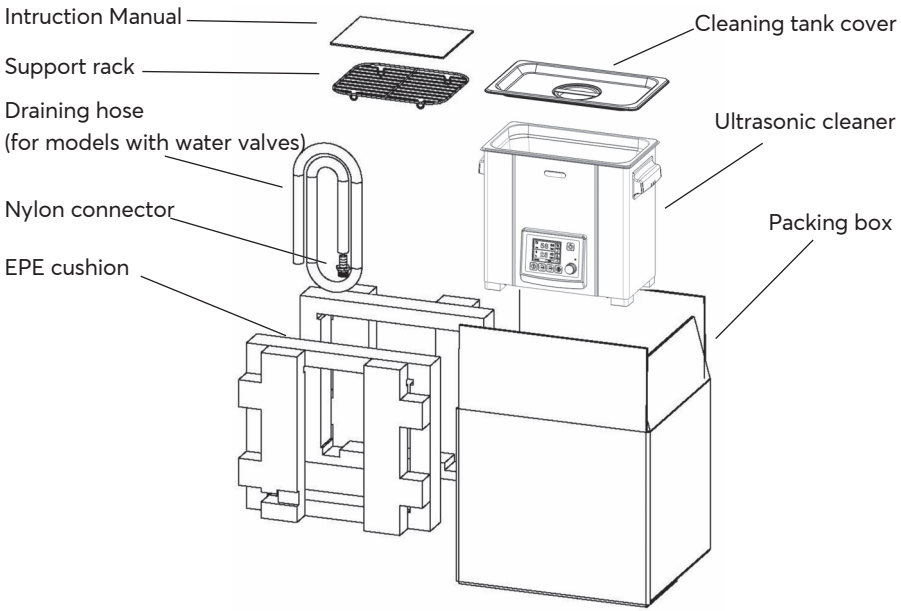
Intended use	For general laboratory use. Not for *in-vitro* diagnostic.
Operators	This product can be used ONLY by specially assigned operators according to the operating instructions.
Ventilation spacing	This product must be placed at a minimum distance of 20cm from nearby objects in order to allow sufficient space for cooling and prevent fires caused by overheating.
Power supply	The power socket must be reliably grounded and labeled according to the type of the cleaner (cleaning machine) with proper AC voltage and power.

Maintenance	While maintaining the equipment, be sure to plug out the power supply. The equipment can be disassembled ONLY by professionals or authorized personnel.
Cleaning liquid	It is strictly forbidden to directly put inflammable or explosive liquids into the cleaning tank as the cleaning liquids.
High temperatures	After heating of the cleaning liquid or long-time operation of the machine, the temperatures of the liquid, cleaning basket, workpiece, and housing of the cleaning tank will rise. Caution should be used against high temperatures.
Water overflow	The equipment does not have an overall waterproofing structure, so any overflowing or inflowing liquid may cause failures, fires, and injuries.
Hot liquids	It is strictly forbidden to pour liquids hotter than 60 ℃ directly into the cleaning tank, as local high temperatures will damage the ultrasonic vibration element and lower the efficiency.
Noise reduction	Ultrasonic vibration makes noise. The tank cover can reduce the noise caused by ultrasonic cleaning.
Ultrasonic vibration	Ultrasonic vibration is transferred by adjacent objects, including the cleaning tank, exterior basket net, and workpiece. Therefore, vibration and heat transmission can be felt on the surfaces of these objects during ultrasonic cleaning.

No heavy objects	The total weight of objects cleaned at one time should not exceed 50% of the weight of liquid in the tank. Overweight objects will damage the cleaning tank.
Liquid draining	Available in 142-0187 / 142-0189 / 142-0191 /142-0193 Before draining the tank, please check the heating button and make sure heating is stopped. Draining the tank during heating will result in overheat and fire accidents.
Alarming	Any alarming sound indicates a failure. Please note the indicator position, switch off the power, and contact your local VWR representative or technical service.
Switching off power	After using the equipment, please switch off the power supply. To prevent poor contact in the power socket, a power socket with a switch is recommended.

Package Contents

Description	Quantity	Remarks
Ultrasonic Cleaning Bath	1	
Support rack	1	
Drainage hose	1	Applicable for models with a drainage valve
Drainage nylon connector	1	Applicable for models with a drainage valve
Cover	1	
Instruction Manual	1	
Short user's manual	1	
Adaptor plug EU-UK/EU-CH	2	Appropriate version of plug should be used in the respective countries



(Fig. 1)

Unpacking

Unboxing check

Packaging	Keep the packaging of the instrument for post-sale service purposes, or dispose of the packaging according to local environmental regulations, or mail the packaging to the manufacturer or dealer (at the customer's own cost).
Transportation	Before unpacking, check if the exterior of the package and the equipment have been damaged during transportation. In the presence of obvious damages, do not start the machine but contact your supplier and forwarder instead.

Intended use

Ultrasonic cleaning is currently the most efficient method of physical cleaning.

Ultrasonic cleaning is a physical phenomenon characterized by the cavitation of high-frequency sound waves in liquids. By exciting the piezoelectric transducer, high-frequency electric energy converts into high-frequency micro-amplitude kinetic energy which is transmitted via liquid wave motion and results in vibration on the surfaces of hard objects within the range of the vibration energy. This high-frequency vibration field is called an ultrasonic wave.

Ultrasonic waves can detach extraneous stuff from the surfaces of hard objects, a mechanism that makes ultrasonic cleaning possible. Ultrasonic cleaning applies to objects of various shapes and surface curvatures. Being pollution-free, efficient, and non-invasive to cleaned objects, it is widely used in the fields of LCDs, electronics, machinery, automobiles, and space flight as well as by universities, institutions, and laboratories.

Product Specifications

Parameters / ECN	Operating frequency (KHz)	RF power (W)	Heating power	Temperature control point (°C)	Internal dimensions of cleaning tank (cm)	Volume (L)	Timing (min)	Drain valve
142-0182	37	90	○	○	24×14×10	3	1～99	○
142-0183			115	20～80				
142-0184	37	144	○	○	30×15×15	6	1～99	○
142-0185			196	20～80				
142-0186	37	180	○	○	30×24×15	10	1～99	●
142-0187			300	20～80				
142-0188	37	240	○	○	33×30×15	15	1～99	●
142-0189			400	20～80				
142-0190	37	320	○	○	50×30×15	22.5	1～99	●
142-0191			600	20～80				
142-0192	37	384	○	○	50×30×20	30	1～99	●
142-0193			820	20～80				

○ Not available

Note:

IP=20

Cleaning liquid: The cleaning liquid which has to be used depends on the material of the items to be cleaned and the type of soiling. Cleaning agent could be VWR® Labwash® Classic Universal 88289.360 or VWR® Labwash® Premium 88287.290, 88287.360, 88288.290, 88288.360 Please contact the supplier of the cleaning agent.

The temperature readout accuracy is ±3°C

Frequency : 37kHz ±1.5

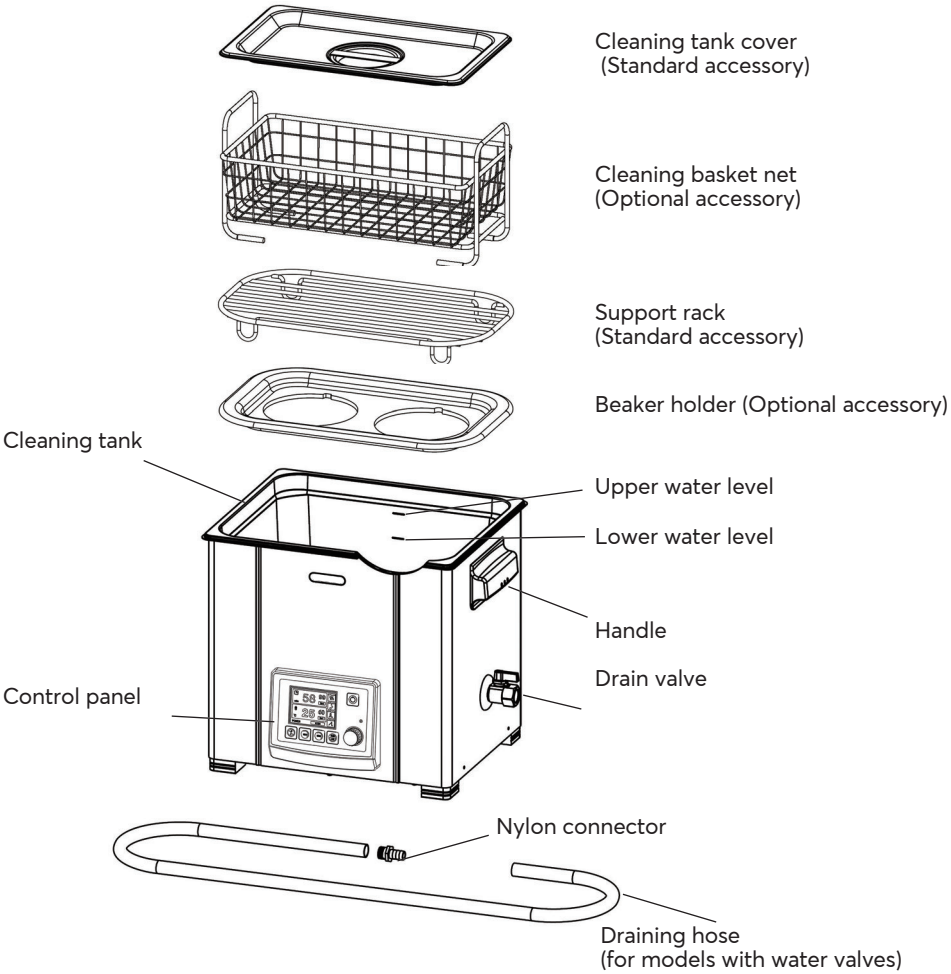
Operating temperature range: 5~40°C; Relative humidity range : RH0~90% .

Operated under altitude up to 2000m and as indoor use.

Storage/Shipping temperature range: -25~55°C; Relative humidity range :RH0~90%.

Instructions for use

1.Overview



2.Description of Buttons and Switches

1) Control panel for ultrasonic bath 3L~30L with heating function (Fig. 2)
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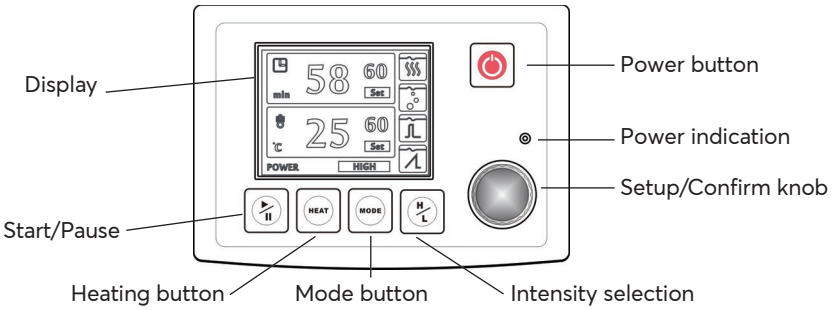
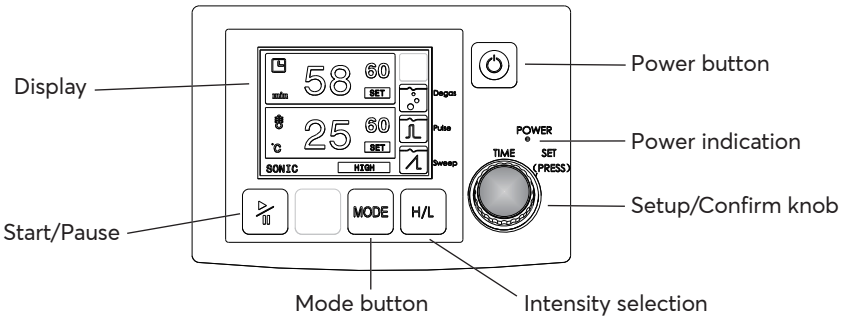


(Fig. 2)

2) Control panel for ultrasonic bath 3L~30L w/o heating function(Fig. 3)
ECN: 142-0182 142-0184 142-0186 142-0188 142-0190 142-0192



(Fig. 3)

3.Operational keys

Power button: OFF by default, and the indicator light is constantly on. Press the button once to turn on the power. The indicator light will be on. Press the button again to turn off the power.

Start/Pause button: Stopped by default. Press the button to start ultrasonic cleaning and countdown. Press the button during countdown to pause ultrasonic; timing and countdown will be paused simultaneously. Press this button during pause to restart ultrasonic and resume countdown. After countdown

is finished, ultrasonic will be stopped and machine will stay in the stopped state.

Heating button: Press the button once to start heating, which will automatically activate the ultrasonic stirring, ensuring uniform heating of the water tank.

MODE button: Pressing the button once will cause the functional icons on the display screen to flash, toggling between three mode icons displayed on the screen: Degassing/Pulse/Sweep. Press the Setup/Confirm knob to confirm the desired mode.

H/L button: Pressing this button allows you to adjust the strength of the ultrasonic power, with the corresponding display on the screen.

Timer/Temperature Setting: Pressing the knob will cause the "Time" value on the display screen to flash, indicating that you have entered the time setting mode. Rotating the knob allows you to change the time value. Pressing the knob will stop the flashing of the numbers and save the time setting.

Continuing to press the knob will cause the "Temperature" value on the display screen to flash, indicating that you have entered the temperature setting mode. Rotating the knob allows you to change the heating temperature value. Pressing the knob will stop the flashing of the numbers and save the temperature setting.

The above settings for temperature can be adjusted in real-time. When the device is running, changing the time setting will automatically pause the ultrasonic operation, and the instrument will execute the changed time value.

4. Getting Started

1. Adding detergents

Close drainage valve	Before injecting water into the 10L~30L cleaning tank of cleaner (cleaning machine), check if the drainage valve is closed.

Control water level

Before operating the equipment, it is necessary to fill the cleaning tank with a cleaning solution. The cleaning tank is marked with "Upper Water Level" and "Lower Water Level". It is recommended to maintain the water level within this range: for 3L tanks, the water level should not be lower than 5cm; for 6L to 22.5L tanks, the water level should not be lower than 8cm; for 30L tanks, the water level should not be lower than 11cm. Failing to do so may damage the heating elements when the heating function is activated.

Appropriate amount of detergents

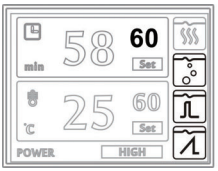
Adding an appropriate amount of detergent can improve descaling efficiency. Please refer to the instructions for the intended use of the detergent before adding an appropriate amount.

Adding inflammable and explosive liquids is strictly forbidden.

During ultrasonic operation, the liquid will be partly gasified; inflammable and explosive liquids may result in explosion and combustion.

It is strictly forbidden to directly inject acid or alkaline liquids into the cleaning tank as cleaning liquids, as they may damage the seals of ultrasonic cleaning tank and valves.

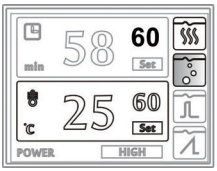
2. Liquid degassing



The newly added liquids contain lots of bubbles which will decrease the ultrasonic efficiency. After replacing the cleaning liquids, the degassing operation can remove the bubbles in the liquids. Commonly, the

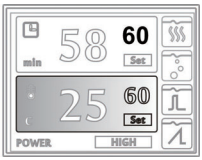
degassing process requires several minutes, and the degassing time is related to the volume of cleaning tank, where about 5-10 minutes are appropriate.

3. Heating the cleaning solution

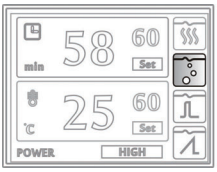


Heating the cleaning solution can enhance the ultrasonic cleaning capability. When the heating function is activated, it is recommended to use the tank cover to accelerate heating and reduce evaporation of the liquid after heating. During the cleaning process, a portion of the ultrasonic power will be converted into heat energy, resulting in an increase in the temperature of the liquid in the cleaning tank over time, potentially exceeding the preset heating temperature.

When the temperature in the tank exceeds 60°C, its decontamination capability will decrease with the increase of such temperature, so the too high temperature may not be favorable for the decontamination effect.



1) Temperature setting: The temperature can be selected from 20°C to 80°C.



2) Automatic stirring: After the heating is activated, if the ultrasonic function is not running, the equipment will automatically start the stirring function. It uses gapped ultrasonic stirring to achieve relatively even temperature distribution in the tank. The stirring cycle of the program is 10 seconds per cycle. When the cleaning machine operates with both ultrasonic and heating functions activated, it is advisable to add solution every

2 to 3 hours. (In case of heating without the cover of the cleaning tank, it will result in about a 3mm dropdown of liquid level every 1 hour due to the evaporation of hot gas.)

3) Safe sleep: After the heating temperature of cleaning liquids reaches setting values, it will come into the automatic thermal insulation status. If the subsequent operations are not given after 4 hours of persistent thermal insulation, it will be deemed that the operations of this device are forgotten by human. Therefore, in order to ensure the device safety, the program will automatically stop the heating.

4. Requirements of liquids in the cleaning tank

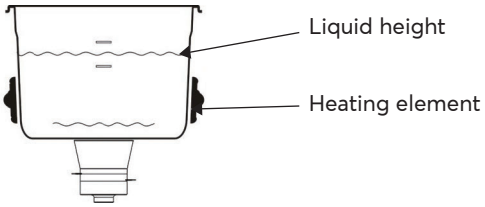
The ultrasonic cleaning uses liquids (commonly water) as the medium to transmit sound waves. The ordinary tap water by adding appropriate decontamination solutions will continue the cleaning liquids.

- The inflammable and explosive liquids are strictly prohibited to be placed in the cleaning tank and used as cleaning liquids. Under the ultrasonic action, the inflammable and explosive liquids are very easy to make the temperature increase rapidly and result in the explosive accidents.
- The corrosive acid and alkaline liquids are strictly prohibited to contact the tank body, so as to avoid the corrosion and damages of the cleaning tank.
- After the start of ultrasonic cleaner, the human skins shall not be directly exposed to the wall of cleaning tank or the solutions in the cleaning tank, so as to avoid the damages to human bare skins.
- The temperature of cleaning solutions shall not exceed 70℃, as too high temperature inside the tank will decrease the ultrasonic cleaning effect, and also reduce the service life of the device and its components.

The cleaning solution shall be replaced regularly, otherwise the dirt removed by cleaning would aggregate into particles and deposit in

the bottom of cleaning tank, which will compromise the ultrasonic cleaning effects. In addition, many solutions will lose the cleaning effects after a certain time, so it's necessary to supplement the solutions in a timely manner.

5. During ultrasonic operation, the sensor may generate heat due to the ultrasonic vibrations, causing a slight increase of 3-5°C in the displayed temperature value. After the ultrasonic stops or pauses for approximately 1 minute, the temperature display value will return to normal.
6. In the absence of heating, the water temperature in the tank may rise to around 40-50°C due to the heat generated by the transducer during continuous operation of the ultrasonic instrument for 1-2 hours. When precise real-time temperature control inside the tank is required, please consider the above factors. When the set temperature is around 45°C, the temperature rise of the ultrasonic transducer may make temperature control difficult. The current series of instruments do not have refrigeration and temperature control capability.
7. When starting the heating or during the heating process, the liquid level in the tank should be checked to ensure that it is not below the "MIN" line marked on the side of the tank. Otherwise, it may damage the heating elements attached to the sides of the tank, as shown in the figure at the right.



8. After the cleaning process is completed, any residue or dirt remaining in the tank must be removed. If necessary, the tank may be rinsed it with clean water.

5. Operation

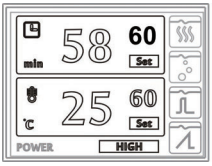
1. Start ultrasonic and set operating parameters:

Press the power button, and the indicator light will stay on. The display screen will light up, showing the temperature and timer settings from the last shutdown.

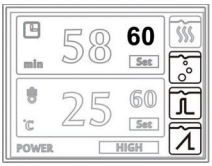
1) Set the cleaning time
To change the timer setting, adjust the knob to select the desired time based on the numerical display on the screen. Adjusting the timer setting will stop the ultrasonic operation, and when restarted, it will start counting down from the newly set time.

2) Adjust the heating temperature: The ongoing heating and ultrasonic operation are not affected by this adjustment.

3) Determine the appropriate ultrasonic cleaning time. The required cleaning time will vary according to different cleaning items. Most objects only require several minutes' cleaning, and some may require longer cleaning time, where the specific time can be determined through tests.

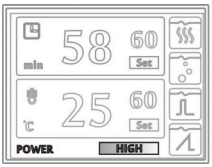


When pressing the ultrasonic power button, it is important to avoid starting the machine without any water (cleaning solution) in the tank. Pressing the button repeatedly enters the pause mode, stopping the timer and ultrasonic cleaning, while the ongoing heating remains unchanged.

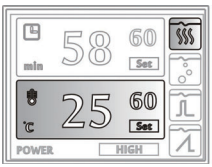


The working mode selection can be changed by pressing this button, which toggles between three mode icons displayed on the screen: Degassing/Pulse/Sweep. Press the Setup/Confirm knob to confirm the desired mode.

1) Normal mode operates with a fixed ultrasonic frequency.
2) Sweep mode operates with a variable frequency centered around the resonant frequency, providing efficient and low-blind-zone cleaning performance.
3) Degassing mode removes tiny bubbles in the water to improve cleaning efficiency.
4) Pulse mode operates ultrasonic in an intermittent mode, creating a pulsating cleaning pattern in the tank.



The selection of ultrasonic power strength can be toggled by pressing this button. The icons displayed in the box indicate HIGH/LOW, representing strong and weak power modes, respectively.



The heating function key is used to increase cleaning efficiency with the appropriate liquid temperature. Each time the heating is activated, the instrument performs a detection program (slow flashing of red/blue alternating), and then enters the heating mode (fast flashing of red/blue alternating).

1) After the heating is started, the icon displays a fast flashing of red/blue alternating (twice per second), indicating that it is in the heating process.
2) The icon displays a slow flashing of red/blue alternating (once per second), indicating that the heating has stopped and the instrument is in the insulation mode.
2. Placing the objects to be cleaned.
Do not directly place the objects to be cleaned at the bottom of the cleaning tank. They should be suspended or placed on a specialized rack to prevent damage to the transducer.

3. Cleaning methods

1) Direct cleaning method (Fig. 7)

The bracket, water and washing liquids are placed in the cleaning tank, and the objects to be washed are placed on the bracket; or, the objects to be washed can be suspended and immersed into the cleaning solution.

The flammable solutions such as alcohol, acetone, gasoline and corrosive solutions such as strong acids and strong alkalis shall be strictly prohibited to be placed in the cleaning tank.

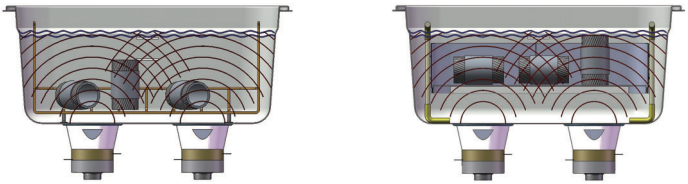
2) Indirect cleaning methods （Fig. 8）.

The water is drained into the cleaning tank, the required chemical cleaning agents are poured into beakers or other suitable containers and the cleaning objects are immersed into the chemical agents, and then the container with chemical cleaning agents and cleaning objects is immersed into the cleaning tank, wherein the container can be placed on the cleaning bracket or in the beaker holder.

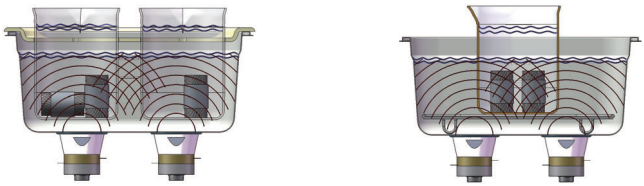
⚠ **Note: Please do not let such containers touch the bottom of the cleaning tank.**

The direct and indirect cleaning methods have their respective advantages and disadvantages. If you don't know how to select the cleaning methods, please select them after carrying out the cleaning effects tests. The advantage of direct cleaning is high cleaning efficiency and convenient operations. The advantages of indirect cleaning are that the dirt removed from the inside of beakers can be observed clearly and it is convenient to filter or discard them and two or more cleaning agents can be used at the same time.

- When heating and activating the ultrasonic function of the cleaning machine, it is important to note that the solution needs to be replenished every 2 to 3 hours. Without a cover, the liquid can evaporate at a rate of approximately 3mm per hour.
- It is important to avoid the liquid level in the tank falling below the "Minimum Water Level" mark indicated by the manufacturer, as a low liquid level can reduce the lifespan of the heating elements.
- According to the volume of the objects being cleaned, adjust the liquid level as needed when placing and removing the objects.
- The cleaning objects shall be taken out from the cleaning tank after closing the heating function, so as to avoid burns.



Direct cleaning method using support rack (Fig. 7)



Indirect cleaning method using beakers (Fig. 8)

4. Handling of parts after cleaning

After the cleaning is completed, if necessary, rinse the workpiece with clean water to remove any residual chemical cleaning agents on its surface. You can use compressed air, a hot air blower, or an oven to dry the washed items. Metal parts cleaned by ultrasonic cleaning can be coated with rust preventive oil after cleaning.

6.Selection and regulation of the washing solution

1. Selection of the cleaning solution

- To maximize the ultrasonic cleaning effect, please use the most suitable cleaning solution for the cleaning objects and their dirt.
- If inappropriate cleaning solution used, the cleaning objects may be adversely affected.
- The pH value of the cleaning solution should be between pH 6~pH 9.
- Types and characteristics of the cleaning fluids listed below. Please follow it for your cleaning work.

2. Types and characteristics of the cleaning solution

Type	Characteristic	Remarks
Water(5~60°C)	· Degreasing force: None · Low cost · Harmless to human body	Remove the water-soluble solder etc
Non-combustible organic solvents	· Degreasing force: Strong · No flammability · Waste disposal is required	Remove the oily flux and the processed oil
Weak alkaline cleaning solution	· Degreasing force: Moderate · No flammability · Waste disposal is required	Remove the oily flux and the processed oil
Neutral cleaning solution	· Degreasing force : Weak · No flammability · Little adverse effect on the cleaning material · Waste disposal is required	Remove processed oil
Weak acid cleaning solution	· Degreasing force: Moderate · No flammability · Waste disposal is required	Cleaning utensils etc

Troubleshooting

The ultrasonic cleaning baths have an error detection system, it will indicate abnormal status with a buzzer prompt.

When a buzzer sound appears, the display screen will have the following prompt. Please refer to the corresponding table for the specific alarm message.

Content	Handling
1. AC power supply overvoltage.	Check power supply
2. AC power supply undervoltage.	Check power supply
3. The heating SCR is damaged.	Contact VWR service
4. The tank sensor is damaged.	Contact VWR service
5. The heater sensor is damaged.	Contact VWR service
6. The bottom thermal sensor is damaged.	Contact VWR service
7. Ultrasonic SCR damage.	Contact VWR service
8. The sink is damaged and leaking.	Contact VWR service
9. Lost zero-crossing signal failure.	Contact VWR service
10. Lack of water in the tank.	Confirm if there is sufficient cleaning solution

General maintenance

1. Repair & care

Please remove the plug of AC power supply before the maintenance.

The maintenance must be carried out only after the cooling of the whole device, in order to avoid burns.

It's unnecessary to open the base plate to carry out the maintenance of this device by yourself.

2. Lifespan of cleaning tank and ultrasonic transducer

The parts of cleaning tank and ultrasonic transducer will suffer from fatigue damages, and cracks and discoloration will appear at the surfaces due to its long-time working, which belong to normal wears. Therefore, in order to reduce possible improper damages, we recommend that the residual hard dirt, metal powders and particles should be removed in a timely manner after using cleaning tank and ultrasonic transducer. Please do not use corrosive cleaning liquids, so as to reduce the chemical corrosion on the cleaning tank. After using, the residual harmful chemical reagents shall be removed in a timely manner. The regular cleaning mode shall be selected, so as to avoid the wears of cleaning tank caused by the invalid operating under the prolonged ultrasonic working status.

3. Repairs

The repair by dismantling the base plate must be carried out upon the authorization of professionals.

There is electrical high voltage in the device, so the repair with electricity will endanger personal safety.

Please disconnect the cable of power plug before opening the base plate of the electric appliance.

The manufacturer shall be not responsible for any damage caused by the repair without the manufacturer's authorization.

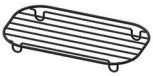
The electrical technology of the products is subject to the manufacturer's intellectual property rights, so the electrical schematic diagrams will not be provided.

In case of any machine failure, please contact your local VWR representative or technical service.

User replaceable accessories and spare parts

Cover（Included in products）

Capacity	2L	3L	6L	10L	15L	22.5L	30L
ECN	142-0194	142-0195	142-0196	142-0197	142-0198	142-0199	



Support Rack（Included in products）

Capacity	2L	3L	6L	10L	15L	22.5L	30L
ECN	142-0207	142-0208	142-0209	142-0210	142-0211	142-0212	

Basket（Optional accessory）

Capacity	2L	3L	6L	10L	15L	22.5L	30L
ECN	142-0200	142-0201	142-0202	142-0203	142-0204	142-0205	142-0206

Soft Drainpipe（Included in products）

Capacity	10L	15L	22.5L	30L
ECN	142-0219			

Beaker Positioning Cover（Optional accessory）

Applicable to 250ml beaker							
Capacity	2L	3L	6L	10L	15L	22.5L	30L
ECN	142-0213	142-0215	142-0217				
Applicable to 600ml beaker							
Capacity	2L	3L	6L	10L	15L	22.5L	30L
ECN	142-0214	142-0216	142-0218				

Technical service

Web Resources

Visit the VWR website at www.vwr.com for:

- Complete technical service contact information
- Access to the VWR Online Catalogue, and information about accessories and related products
- Additional product information and special offers

Contact us For information or technical assistance contact your local VWR representative or visit. www.vwr.com.

Warranty

VWR warrants that this product will be free from defects in material and workmanship for a period of two (2) years from date of delivery. If a defect is present, VWR will, at its option and cost, repair, replace, or refund the purchase price of this product to the customer, provided it is returned during the warranty period. This warranty does not apply if the product has been damaged by accident, abuse, misuse, or misapplication, or from ordinary wear and tear. If the required maintenance and inspection services are not performed according to the manuals and any local regulations, such warranty turns invalid, except to the extent, the defect of the product is not due to such non-performance.

Items being returned must be insured by the customer against possible damage or loss. This warranty shall be limited to the aforementioned remedies. IT IS EXPRESSLY AGREED THAT THIS WARRANTY WILL BE IN LIEU OF ALL WARRANTIES OF FITNESS AND IN LIEU OF THE WARRANTY OF MERCHANTABILITY.

Compliance with local laws and regulations

The customer is responsible for applying for and obtaining the necessary regulatory approvals or other authorisations necessary to run or use the Product in its local environment. VWR will not be held liable for any related omission or for not obtaining the required approval or authorisation, unless any refusal is due to a defect of the product.

Equipment disposal

This equipment is marked with the crossed out wheeled bin symbol to indicate that this equipment must not be disposed of with unsorted waste.
Instead it's your responsibility to correctly dispose of your equipment at lifecycle -end by handling it over to an authorized facility for separate collection and recycling. It's also your responsibility to decontaminate the equipment in case of biological, chemical and/or radiological contamination, so as to protect from health hazards the persons involved in the disposal and recycling of the equipment.
For more information about where you can drop off your waste of equipment, please contact your local dealer from whom you originally purchased this equipment.

By doing so, you will help to conserve natural and environmental resources and you will ensure that your equipment is recycled in a manner that protects human health.

Thank you

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