

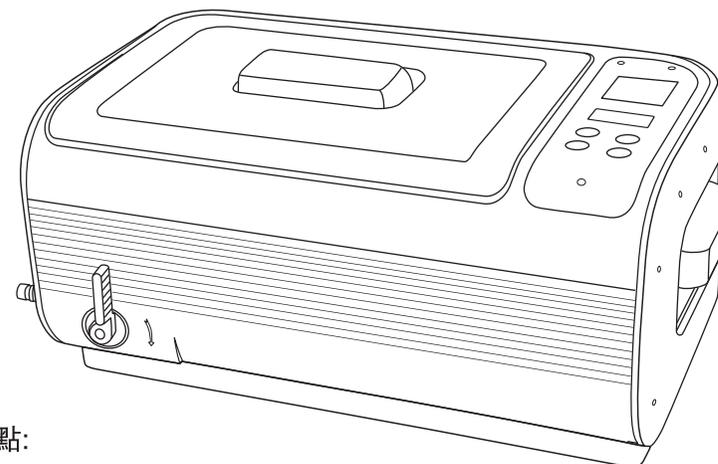
## SPECIFICATIONS

|                                      |  |                               |
|--------------------------------------|--|-------------------------------|
| <b>Description</b>                   | TPC Ultrasonic Cleaner                           |                               |
| <b>Model</b>                         | UC 600   |                               |
| <b>Tank Capacity</b>                 | 6.0 L /<br>1.6 gallon (US)                       | Max. 5.0 L / 1.3 gallon (US)  |
|                                      |  | Min. 3.35 L / 0.9 gallon (US) |
| <b>Tank Size</b>                     | 32.3 x 20.5 x 9.9 cm / 12.7" x 8.1" x 3.9"       |                               |
| <b>Longest Item Fits inside Tank</b> | 34.0 cm / 13.4"                                  |                               |
| <b>Power Supply</b>                  | 260 W ( AC 100~120V 50/60Hz)                     |                               |
|                                      | 300 W (AC 220~240V 50/60Hz)                      |                               |
|                                      | 250 W (AC 100V 50/60Hz)                          |                               |
| <b>Digital Timer Settings</b>        | → 10min → 15min → 20min → 25min → 30min → 5min ↵ |                               |
| <b>Drainage</b>                      | Drainage valve                                   |                               |
| <b>Ultrasonic Frequency</b>          | 35,000 Hz  |                               |
| <b>Tank Material</b>                 | Stainless Steel SUS304                           |                               |
| <b>Housing Material</b>              | ABS  |                               |
| <b>Net Weight</b>                    | 7.5 kg / 16.5 lb                                 |                               |
| <b>Gross Weight</b>                  | 8.6 kg / 19.0 lb                                 |                               |
| <b>Unit Size</b>                     | 51.5 x 30.5 x 24.0 cm / 20.3" x 12.0" x 9.4"     |                               |
| <b>Inner Carton Size</b>             | 57.5 x 37.0 x 32.5 cm / 22.6" x 14.6" x 12.8"    |                               |
| <b>Qty per Master Carton</b>         | 1 pcs /ctn                                       |                               |
| <b>Master Carton Size</b>            | 60.0 x 38.5 x 34.5 cm / 23.6" x 15.2" x 13.6"    |                               |

# TPC Ultrasonic Cleaner

## Dentsonic UC 600

## USER MANUAL



### 特點:

- 1 Large tank capacity** Tank capacity 6.0L / 1.6 gallon; Tank size 32.3x20.5x9.9cm
- 2 Control panel with capacitive sensing technology** Durable, reliable, resistant to water and harsh chemicals
- 3 Drainage valve** Convenient to use
- 4 Two industrial grade ultrasonic transducers** Uniform distribution of ultrasonic waves, strong cleaning, high durability
- 5 Two ceramic heaters** Mounted underneath the bottom of the tank for safe and even heating; durable construction
- 6 3-color LED display** Easy to operate, with 4 key control panel, 6 timer settings, 3 temperature settings
- 7 Independent control circuit for each ultrasonic transducer** 40% higher efficiency, not susceptible to interference, more durable
- 8 Multiple circuit protectors** When overloaded or improperly used, the protectors shut down the power to certain areas to protect the machine
- 9 Moisture-proofed PCB with industrial IC** PCBs are placed vertically for better moisture-proof performance. Better anti-interference
- 10 Two cooling fans** One for cooling of PCB boards, one for cooling of ultrasonic transducers. Improve heat dissipation and beneficial for continuous operations
- 11 Multiple optional accessories** Suspensible plastic basket, stainless steel rack and tray, indirect cleaning tank, beaker and double beaker holder
- 12 Solid and advanced structural design** 4.5 mm thick wall housing made from engineering grade plastic with tongue in groove design for better water-proof and drop-proof performances. 60% quieter than steel housing designs, suitable for indoor uses

# INTRODUCTION

**Use tap water. Special solutions are not necessary in most cases.**

**Principles of ultrasonic cleaning:**

Millions of tiny air bubbles are generated within liquid by high frequency vibration. The air bubbles burst when in contact with object and dislodge the debris to achieve the cleaning effect.

- ⚠ Using tap water is sufficient. Purified water or distilled water has the same cleaning effect as regular tap water for ultrasonic cleaning.
- When cleaning silver or copper items where oxidation has darkened the items, special solutions needs to be added to the water to remove the oxidation.

**Main Features**

- Tank opening 32.5 x 20.5 x 9.9 cm / 12.7"x8.1"x9.9". Longest item that can fit inside the tank is 34.0 cm / 13.4". 6.0 L / 1.6 gallon tank capacity.
- Multiple options for accessories, suitable for various applications.
- 2 industrial grade ultrasonic transducers: 2x(55~60)W=(110~120)W, 2ceramic heaters: 2x(78~87)W=(156~174)W.
- 3-color LED display, 4-key controls, 6 timer settings, 3 temperature settings, simple and straightforward to operate.
- Control panel with capacitive sensing technology, Durable , reliable, resistant to water and harsh chemicals.
- Electrical circuit features:
  - ( 1 ) Three transducers, each has an independent PCB control. The output power is increased by 40% compared to less expensive control method that uses one PCB to control multiple transducers.
  - ( 2 ) Multiple circuit protectors:
    - a. Thermal switch to prevent running dry. If temperature is too high, the switch cuts off power for approximately 6 minuts then reconnect the power.
    - b. Thermal protector to prevent PCB from overheating due to overload.
    - c. Timer to prevent heater from running continuously.
- Industrial grade IC. Moisture-proofed PCB. Cooling fan.
- Drainage valve.

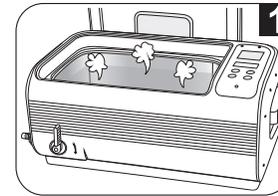
**Read the Manual First**

The manual should be carefully reviewed before starting to use the device. Warnings should be observed carefully. Please follow the manual for operations.

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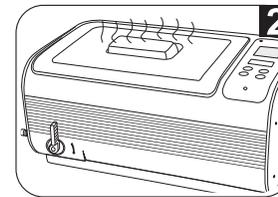
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# CARE AND MAINTENANCE

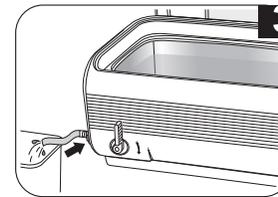


**1 Do not turn on the unit without water in the tank.**  
Even though the unit is designed with multiple protections, if it is turned on for over 30 seconds without water in the tank, it may damage the unit or severely reduce the life of the unit.

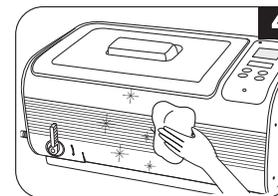
⚠ A thermal switch is attached to the bottom of the cleaning tank. If the unit is turned on accidentally without water in the tank, the ultrasonic energy will not be transferred out through the liquid and instead will be concentrated on the tank, the temperature of the tank will continue to rise. If the heater is turned on at the same time, the temperature of the tank will rise rapidly. This will trigger the thermal switch to cut off power to stop the ultrasonic transducer and the heater from running, hence to prevent damages to the unit and fire hazard. The switch cuts off power for approximately 6-10 minutes then reconnect the power automatically.



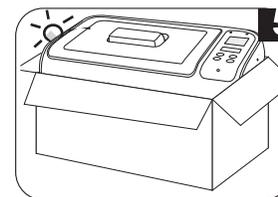
**2 Do not run the unit for extended time or continuously.**  
The unit is designed with overheat protection. If the unit has been running for 45 minutes, it is recommended to stop the unit for about 20 minutes to prolong the life of the unit.



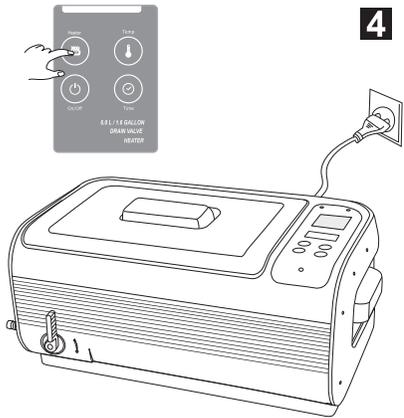
**3 Do not keep water in the cleaning tank for a long time.**  
After cleaning is completed, open the drainage valve to drain the dirty water. Clean and wipe the tank dry.



**4 Do not spray water over the housing.**  
Use a towel to wipe the tank and the housing dry.

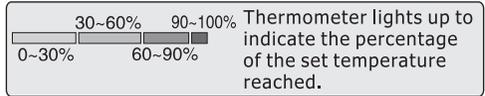


**5 Do not expose the unit under direct sunshine for a long time.**  
Keep the unit in a dry, cool and ventilated area.

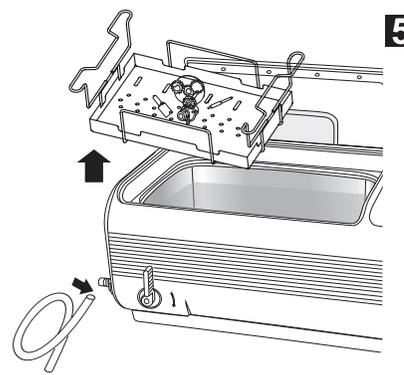


- 4** Select one of the four cleaning methods recommended earlier.
- 1.** When the heater is needed, press TEMP button to select one of the 3 preset temperatures. Press Heater button,  flashes, indicating the heater is turned on. When the water reaches the set temperature,  dims, indicating the heater is turned off.

To ensure safety, the unit is designed with dual protections. The heater will be turned off automatically if it has been running for 50 minutes.



- 2.** When debris "smoke" is no longer visible, cleaning is done. If additional cleaning is needed, reset the timer and repeat the steps above.



- 5** When cleaning is completed, switch off the power, open the lid and retrieve the basket and the items. Alternatively, raise and suspend the basket above water as illustrated in the Optional Accessories section to drain water.
- Connect the hose to the drainage pipe as shown. Open the drainage valve to drain the dirty water. Clean and wipe the tank dry. Close the drainage valve.

## SAFETY PRECAUTIONS

**⚠ Keep it away from children!**

- **⚠ This appliance can be used by children aged from 8 years and above if they have been given supervision or instruction concerning use of the appliance in a safe way and if they understand the hazards involved. Cleaning and user maintenance shall not be made by children unless they are aged from 8 years and above and supervised. Keep the appliance and its cord out of reach of children aged less than 8 years.**
- Please store the ultrasonic cleaner where it is not reachable by children.
- Danger to children! Danger for death through suffocation! Keep the packaging material away from children.
- This appliance shall not be used by children. Keep the appliance and its cord out of reach of children.

**⚠ To prevent life-threatening electrical shock, please observe the following:**

- ⚠ **⚡ Danger of electrical shock!** Do not use while bathing. Never immerse the device or the power cord in water or other liquid.
  - **Danger of electrical shock!** Never touch the power plug with wet hands, especially when inserting or removing the plug.
  - **Danger of electrical shock!** If the unit has fallen into water during operation, do not touch the unit. Remove the power plug from the socket first.
  - **Danger of electrical shock!** Do not spray water or liquid over the device.
  - Never operate the device unattended.
  - Follow the manual to operate the device.
  - Do not use components unapproved by the manufacturer.
  - When removing the power cord from the socket, grab the power plug not the cord.
  - To protect the power cord from damage, do not cause it to get caught by things such as a cupboard door or a chair leg; do not drag across a hot surface.
  - If there is damage to the power plug, cord, housing, or other parts of the device, do not use the device.
  - Do not disassemble the device, except by professionals.
  - If the unit is damaged, non-operational or has fallen into water, take it to a qualified service provider.
  - Remove the power plug from the socket
    - if malfunction occurs
    - before cleaning the device
    - if the device is not going to be used for prolonged period
    - after each use (recommended)
  - The installation of an earth leakage circuit breaker with a rated tripping current of no more than 30 mA provides further protection against an electrical shock. The installation should only be carried out by a trained electrician.

**⚠ To prevent fire hazards, please observe the following:**

- Never block the vents on the device. Keep the vents free from lint, hair and other materials.
- Do not place the device on a soft surface, such as a bed or a couch, where the vents could be blocked.
- Observe the other warnings in the previous section.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.

## SAFETY PRECAUTIONS



### Other observations:

- Do not operate the product without filling the tank with water. Running dry will damage the unit.
- Do not plug in the power cord before adding water to the tank. Do not fill the tank above the Max line to avoid overspill.
- Do not use solution containing abrasive substances or strong corrosive chemical solution not recommended by the manufacturer or the supplier.
- Place the device on a dry and flat surface for operation.
- When the device is subjected to severe electromagnetic interference, it may malfunction, stop operating or lose control functions. If this happens, unplug the power cord then reinsert it to restart the device.

## IMPORTANT SAFETY INSTRUCTIONS



### When using electric appliances, basic precautions should always be followed, including the following :

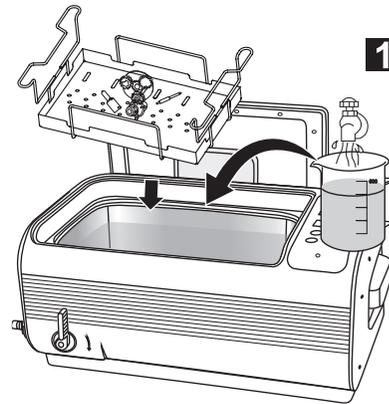
- Read all the instructions before using the appliance.
- To reduce the risk of injury, close supervision is necessary when an appliance is used near children.
- Only use attachments recommended or sold by the manufacturer.
- Do not use outdoors.
- To disconnect, turn all controls to the off (O) position, then remove plug from outlet. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord. Unplug from outlet when not in use and before servicing or cleaning.
- To reduce the risk of electrical shock, do not put the appliance in water or other liquid. Do not place or store appliance where it can fall or be pulled into a tub or sink.
- All servicing of this product, including transducer replacement, is to be conducted by qualified service personnel.
- Do not operate any appliance with a damaged cord or plug, or after the appliance malfunctions or is dropped or damaged in any manner. Return appliance to the nearest authorized service facility for examination, repair, or electrical or mechanical adjustment.



## Items Not Suitable for Ultrasonic Cleaning

|  |   |
|--|---|
| <b>Soft Jewelry:</b><br>Pearls, emerald, ivory, coral, agate, sea turtle shells, etc   | These items are not hard, so scratches may occur during cleaning.   |
| <b>Welded, Plated and Glued Items:</b><br>Welded or plated metal items, glued items    | Ultrasonic cleaning may enlarge the gaps inside the welded joints, plated coating or glued items and may cause separation.  |
| <b>Watches:</b><br>Except diver's watches with depth rating over 50 m (150 ft) .       | Because the strong penetration capability of the ultrasonic waves, water may get into the watches if they are not truly waterproof. Use the watch stand supplied as a precaution if not sure. |
| <b>Others:</b><br>Wood; coated glass, ceramic, camera filters with preexisting cracks. | Ultrasonic cleaning may enlarge the cracks pre-existed in the coating on the glasses, ceramic, and glass. If the items have no pre-existing cracks, then it is okay.                          |

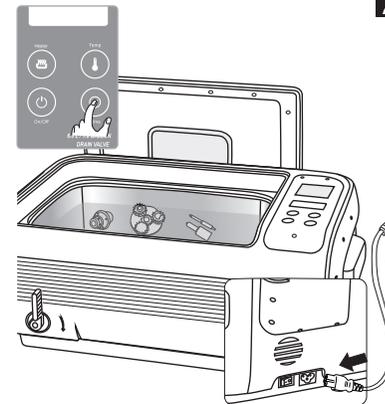
## OPERATION GUIDELINES



- Remove the cover and put it on the cover holder vertically. Put items in the basket then put them in the cleaning tank. Add water to a level between MIN and MAX and above the area to be cleaned.



If the unit is turned on without water, ultrasonic energy will not be absorbed. This model also has high power. Once on for over 15 seconds, it may damage the unit or severely reduce the life of the unit.



- Connect the power cord to an outlet and turn the switch on. LED display shows 10:00. This is the most common timer setting. If the timer needs to be adjusted, press Time button. Select desired time setting by pressing Time button:  
 →10min →15min →20min→ 25min →30min →5min



Prolonged cleaning time may result in:

- Loosening of the screws if used.
- If items are plated and have existing cracks, the cracks may become more pronounced.
- Coating with preexisting damages may experience more peeling.

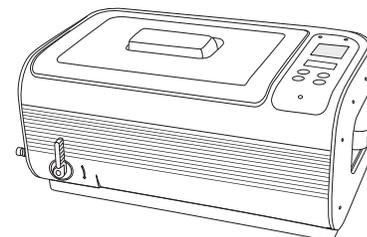


- Press On/Off button to start cleaning.

During cleaning, buzzing sound can be heard from the cleaning tank, indicating that the cleaning is underway. Closing the lid will reduce the noise level.

The digital timer will count down to show the remaining cleaning time. When it displays 00:00, the cleaning is done.

To stop cleaning at any time, press On/Off button.

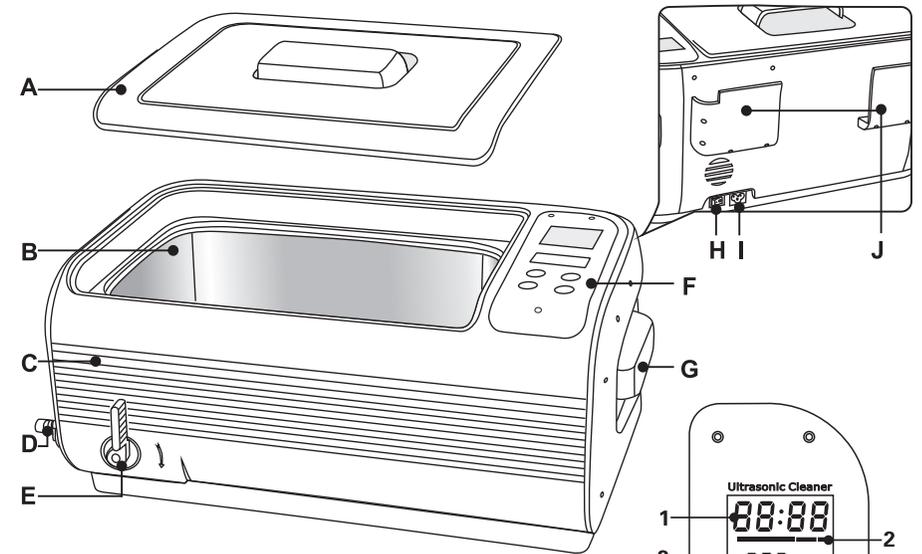


The unit is equipped with overheat protector. If the unit has been running for too long, the red warning light "⚠" will illuminate, indicating the unit is under overheat protection. The unit can not be operated until idling for about 15 to 20 minutes. The "⚠" turns off and the operation can be resumed.

## CONTROL PANEL AND OPERATIONS

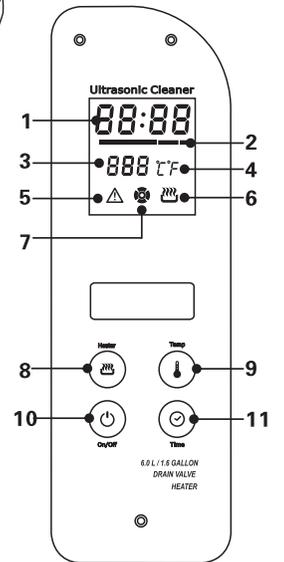
- 10:00— Working Time Display.** It counts down after work is started.
  - Multistage Thermometer.** Solid green light indicates that the water temperature is 0-30% of the set temperature. Solid orange light indicates that the water temperature is 30-60% of the set temperature. Solid red light indicates that the water temperature is 60-90% of the set temperature. Flashing red light indicates that the water temperature is close to the set temperature. All lights indicate that the water temperature is at the set temperature (90-100%).
  - 050—Set Temperature Display.** Press Temp button to select one of the 3 set temperatures.  
→50°C → 55°C → 60°C    →122°F → 131°F → 140°F
  - CF — °C or °F Indicator.**  
 °C — Set temperature in °C.  
 °F — Set temperature in °F.
  - ▲—Overheat protection warning light.** If the unit is working improperly or has been running for too long, the red warning light .. will illuminate, indicating the unit is under overheat protection. The unit can not be operated until idling for about 15 to 20 minutes. The warning light then turns off and the operation can be resumed.
  - Heater Status.** Press Heater button, flashes, indicating the heater is turned on. Press Heater button again, dims, indicating the heater is turned off.
  - Normal Cleaning Status.** — Illuminated, normal cleaning is underway.
  - Heater button.** Pressing Heater key twice, flashes, indicating the heater is turned on. To cancel heating, press Heater key twice again, dims, indicating the heater is turned off.
- To prevent accidentally turning on or off the heater, the Heater key needs to be touched twice within 6 seconds to turn it on or off flashes, indicating the heater is on.
- When the water reaches the set temperature, the heater will turn off automatically.
- Temperature Set Button.** 3 set temperatures (°C/°F) can be selected. Press Temp button to select the temperature in the following sequence:  
→50°C → 55°C → 60°C    →122°F → 131°F → 140°F
  - On/Off Button.** After powering on, the LED displays 10:00 which is the default time (as shown), and the unit is ready with the normal working status. Press On/Off key twice once and the cleaning starts. The cleaning stops when the timer counts down to 00:00. If the unit needs to be stopped before the timer runs out, press On/Off key twice.
- To prevent accidentally turning on or off the unit, the On/Off key needs to be touched twice within 6 seconds to turn it on or off. flashes, indicating the unit is running under Normal Cleaning mode.
- Timer Quick Set Button.** Press Time button, LED display shows 10:00. Each pressing increases the time by 5 minutes.

## PRODUCT STRUCTURE AND ACCESSORIES

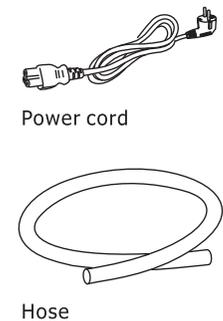


- |                          |                  |
|--------------------------|------------------|
| A. Top cover             | F. Control panel |
| B. Stainless steel tank  | G. Handles       |
| C. Housing               | H. Power switch  |
| D. Drainage pipe fitting | I. Power socket  |
| E. Drainage valve handle | J. Cover holder  |

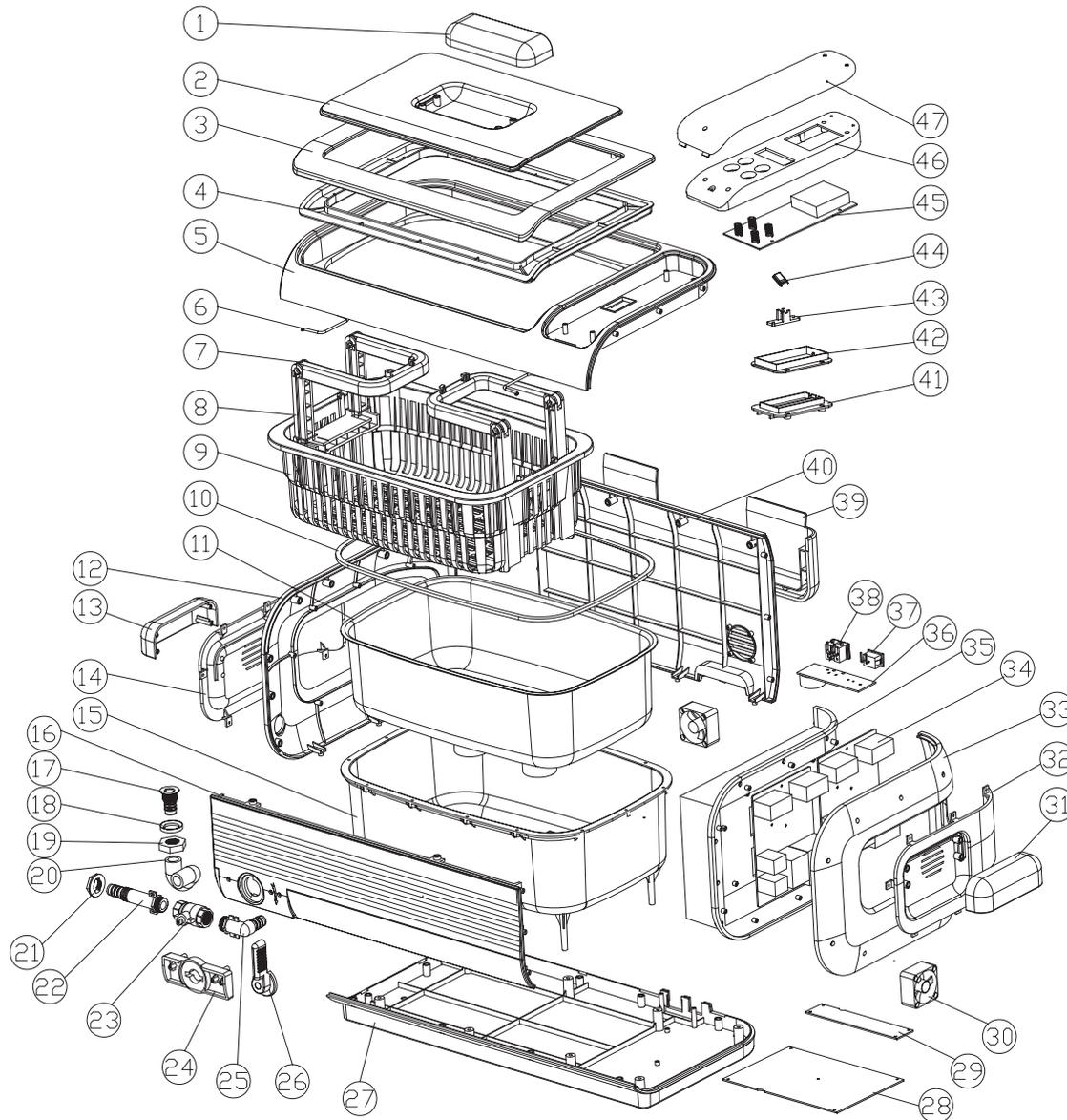
### OPTIONAL ACCESSORIES:



### STANDARD ACCESSORIES:



# PRODUCT EXPLODED VIEW



| No. | Item                     | Material           |
|-----|--------------------------|--------------------|
| ①   | Top handle               | ABS                |
| ②   | Lid-window               | AS                 |
| ③   | Lid-top                  | ABS                |
| ④   | Lid-bottom               | ABS                |
| ⑤   | Top ring                 | ABS                |
| ⑥   | Stainless steel handle   | SUS 304            |
| ⑦   | Basket foldable handle 1 | ABS                |
| ⑧   | Basket foldable handle 2 | ABS                |
| ⑨   | Plastic basket           | ABS                |
| ⑩   | Silicon seal             | Silicone rubber    |
| ⑪   | Stainless steel tank     | SUS 304            |
| ⑫   | Left cover               | ABS                |
| ⑬   | Left handle              | ABS                |
| ⑭   | Left panel               | ABS                |
| ⑮   | Inner tank               | ABS                |
| ⑯   | Front cover              | ABS                |
| ⑰   | Spout                    | SUS 304            |
| ⑱   | Washer                   | AL                 |
| ⑲   | Nut                      | AL                 |
| ⑳   | Hose                     | Silicone rubber    |
| ㉑   | Nut                      | ABS                |
| ㉒   | Spout                    | ABS                |
| ㉓   | Ball valve               | Standard part      |
| ㉔   | Bracket                  | ABS                |
| ㉕   | Elbow                    | ABS                |
| ㉖   | Valve handle             | ABS                |
| ㉗   | Bottom cover             | ABS                |
| ㉘   | Power PCB 1              | 94V0               |
| ㉙   | Power PCB 2              | 94V0               |
| ㉚   | Cooling fan              | Standard part      |
| ㉛   | Right handle             | ABS                |
| ㉜   | Right panel              | ABS                |
| ㉝   | Right cover              | ABS                |
| ㉞   | Transducer PCB           | 94V0               |
| ㉟   | Right panel              | ABS                |
| ㊱   | Power switch             | 94V0               |
| ㊲   | Power switch             | Standard part      |
| ㊳   | Power socket             | Standard part      |
| ㊴   | Cover holder             | ABS                |
| ㊵   | Back cover               | ABS                |
| ㊶   | Heater cover             | PA 66              |
| ㊷   | Heater pocket            | PA 66              |
| ㊸   | Thermocouple holder      | ABS                |
| ㊹   | Thermal cutoff           | A0-3A-F            |
| ㊺   | LED                      | Fire retardant ABS |
| ㊻   | Control panel box        | ABS                |
| ㊼   | Control panel cover      | PMMA               |