

OPERATING MANUAL

ULTRASONIC CLEANER

Model : UCP-02/10/20

UCS-05/10/20



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1. Caution

Thank you very much for purchasing our ultrasonic cleaner.

Please read and fully understand the following instruction in order to prevent accidents from happening and clean the works cleanly before operating ultrasonic cleaner.

And mis-operation of ultrasonic cleaner could result in serious personal injury or cleaner.

⦿ Explanation about warning indication

This manual marks following warning indication for you to do not hurt and for property to do not damage.

 **DANGER**

Ignore this expression and user makes contents that danger of death or serious injury can happen in case of use wrong.

 **WARNING**

Ignore this expression and user makes contents that danger of death or serious injury can happen in case of use wrong.

 **ATTENTION**

Ignore this expression and makes possibility that user is injured in case of use wrong and damage can happen.






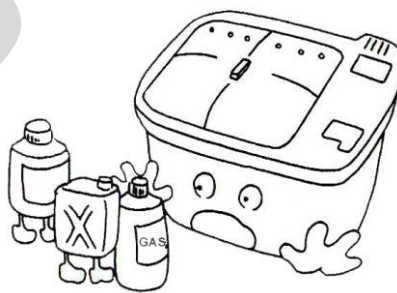






This symbol is marked to prohibit.

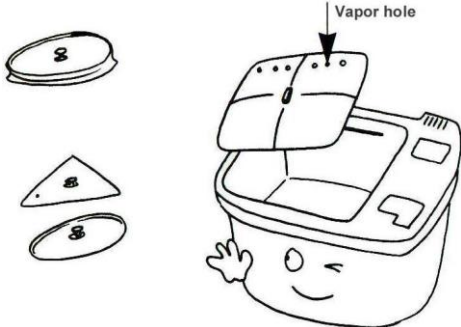

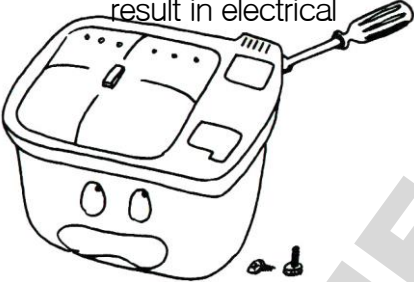

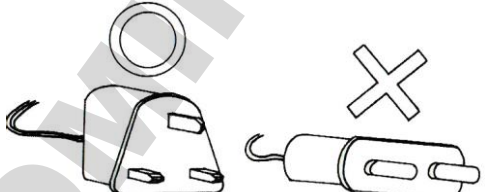
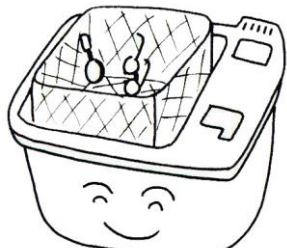


This symbol is an indication that you have to run.

[Caution]

<p>⚠ Attention</p> <p>Make sure you check the proper voltage on sticker before plugging in. Otherwise, it may result in damage to the product.</p> 	<p>⚠ Danger</p> <p> Do not pour solvent in the bath. Otherwise, it may cause the damage to the cleaner.</p> 
<p>⚠ Warning</p> <p>Do not operate the cleaner with wet hands.</p> 	<p>⚠ Danger</p> <p> Do not pour the flammable solution in the tank. (fire danger)</p> 
<p>⚠ Warning</p> <p> Make sure of pouring solution up to the indicating level. Otherwise, it may cause the overheat of heater.</p> 	<p>⚠ Warning</p> <p> Do not operate the cleaner without solution. Otherwise, it may cause the overheat of heater and transducer disorder.</p> 

[Caution] - Continue

<p>⚠ Attention</p> <p>Do not use the unventilated cover except for cover or having vapor holes.</p>  <p>The diagram shows three circular covers of different sizes and a triangular cover. To the right, a larger illustration of the ultrasonic cleaner has its lid open. An arrow points to a small hole on the lid labeled "Vapor hole". The cleaner has a smiling face on its front.</p>	<p>⚠ Attention</p> <p>Keep the controller part clean and dry and do not place the things on the cover.</p>  <p>The diagram shows the ultrasonic cleaner with a controller unit placed on top of its lid. The cleaner has a sad face on its front, indicating that placing items on the cover is incorrect.</p>
<p>⚠ Danger</p> <p>Do not attempt to take the cleaner apart to repair it while power is being supplied. Otherwise, it may result in electrical shock.</p>  <p>The diagram shows the ultrasonic cleaner with a screwdriver inserted into the lid. A screw is shown falling away. The cleaner has a sad face on its front.</p>	<p>⚠ Danger</p> <p>Do not put your hands in the bath in operating, particular never clean your dusty hands. (ultrasonic shock)</p>  <p>The diagram shows a hand reaching into the ultrasonic cleaner's bath. A starburst symbol indicates a shock. The cleaner has a sad face on its front.</p>
<p>⚠ Attention</p> <p>Make sure of using the plug connected to the ground.</p>  <p>The diagram shows two power plugs. The one on the left is a three-pronged grounded plug, and the one on the right is a two-pronged ungrounded plug. A large 'X' is drawn over the ungrounded plug.</p>	<p>⚠ Attention</p> <p>Do not clean with placing the works directly on the bath bottom. (Use a basket or a tray)</p>  <p>The diagram shows the ultrasonic cleaner with a mesh basket inside the bath. The cleaner has a smiling face on its front.</p>

2. Specification

A. UCP Series

-. Dimension

Name	UCP Ultrasonic Cleaner		
Model	UCP-10	UCP-20	UCP-02
Capacity	10 Liter	20 Liter	2 Liter
Tank Size (WxDxH)	295x240x160	500x290x160	142x132x104
Overall Size (WxDxH)	490x368x297	721x451x297	290x240x200
Temp. Range	Amb. ~ 70 °C		-
Time Range	1 ~ 99 min, 4 hour		1~99 min
Transducer	BLT Type		
Ultrasonic Freq.	40 KHz		
Input Power	AC230V, 50/60Hz or AC120V, 60Hz		
Body Material	ABS		
Ultrasonic	300W	500W	100W
Heater Power	190W	320W	-
Weight	11 Kg	17 Kg	2 Kg

-. Image of front and rear of the product (Except UCP-02)



B. UCS Series

-. Dimension

Name	UCS Series Portable Ultrasonic Cleaner		
Model	UCS-05	UCS-10	UCS-20
Capacity	5.7 Liter	10 Liter	20 Liter
Transducer	BLT TYPE		
Ultrasonic	200W	300W	500W
Heater	150W	190W	320W
Ultrasonic	40 KHz		
Input Power	AC230V, 50/60Hz or AC120V, 60Hz		
Temp.	Amb. ~ 70 °C		
Time Range	1 ~ 99 min, 4 hour		
Body	SUS-304		
Control	Microcontroller Control Method		
Tank	295x160x160	295x240x160	500x290x160
Overall	325x230x320	325x330x320	530x330x297
Weight	9 Kg	11 Kg	15 Kg

-. Image of front and rear of the product



3. Operation (except for UCP-02)

A. Function Key

[DISPLAY]

- ① FND-TEMP : Display of Temperature.
- ② FND-TIME : Display of Operation Time(Displays the remaining time in minutes)
- ③ Display of Operation Mode : Normal, Pulse, Sweep
- ④ Display of Ultrasonic Power : Low, Middle, High
- ⑤ Display whether to use Heater : Press Heater Key, ON→OFF /OFF→ON is repeatedly. If water temperature is lower than set temperature, it shows that turn on the heater. Actual operation of Heater is displayed as DOT LED on FND-TEMP window.
- ⑥ Display whether to operate DeGAS.
- ⑦ Display whether to generate ULTRASONIC.

[KEY]

- ① SET KEY : Operated as NORMAL → TEMP → TIME → OP MODE → POWER → NORMAL. Selected FND or LED is blink.
- ② In selected Mode, Down Key
- ③ In selected Mode, Up Key
- ④ HEATER Operation Selection Key. In state ON, when water temperature is lower than set temperature, Heater is ON automatically. In contrast, the higher the Heater is OFF.
- ⑤ DeGAS Key : DeGAS ON/OFF Key. Operates only if the sonic off.
- ⑥ POWER Key : POWER ON/OFF Key.
- ⑦ SONIC Key : Ultrasonic output ON/OFF Key. Operates only if the DeGAS off.

B. Starting Method

- i. If you have basket, put in the sump.
- ii. Put cleaning stuff into sump.
- iii. Put liquid into sump until going to indication line.
- iv. POWER ON. LED and FND test and then wait to be ready to operate.
- v. Press SET KEY once and set temperature of liquid. (TEMP SET MODE).
 1. If press SET KEY first time, FND-TEMP is blink. UP/DOWN Key to set the desired temperature can be used.
 2. Heater lamp is automatically ON/OFF, compared with the current temperature and the set temperature.
- vi. In TEMP SET MODE, press SET KEY once more and then FND-TIME is blink. In same way, set cleaning time by pressing UP/DOWN KEY. (TIME SET MODE).
- vii. In TIME SET MODE, press SET KEY once more and the selected MODE LED is blink, changing into Operation Selection Mode. UP/DOWN Key to select the proper mode can be used. (OPERATION SELECTION MODE).
- viii. In OPERATION SELECTION MODE, press SET KEY once more again and then goes into POWER SELECTION Mode. The selected POWER LED is blink. UP/DOWN Key to select the power can be used. (OUTPUT POWER SELECTION MODE)
- ix. In OUTPUT POWER SELECTION MODE, if press SET KEY. Every setting is finished and changed into NORMAL Operation MODE. All of the selected are stored. Even though POWER is OFF, it is maintained.
- x. Press SONIC ON/OFF, SONIC LED lights up and begins to ultrasonic cleaning.
- xi. Cleaning time is displayed in minutes in subtraction mode while ultrasonic cleaning. Namely, remaining time is displayed by MIN.
- xii. If you want to stop cleaning before settled time, press SONIC KEY.
- xiii. The ultrasonic cleaning time is set to 00, four hours of continuous use is possible.

4. Cleaning Method

A. Direct Cleaning

- i. It is to clean the works directly by putting the works in bath. It is easy and good detergency.
- ii. Pour Cleaning solution up to the indication line(When works are put)
- iii. Put the works in the perforated Basket or Pallet, and put it in the bath. And then Ultrasonic ON.
- iv. Put the works in the bath hung on wire or string. And then Sonic ON.
- v. After cleaning, you need to rinse the works away with water to keep clean. Because the residue is remained in the bath.
- vi. High concentrations of acid, alkaline cleaning solution may corrode the internal surface of the tank.

B. Indirect Cleaning

- i. It is to clean the works put in the beaker in the bath. The inspection of cleaning result, filtering and disposal are simple.
- ii. Pour water up to the indication line.(When the beaker are put)
- iii. Pour the solution to a beaker or several one containing the works.
- iv. Put the beaker containing the works in the bath and clean it.
- v. When putting the beaker in the bath, take care that not to enter water into the beaker by ultrasonic wave.

C. Effective Cleaning

- i. Pour cleaning solution up to indication line. (When the works are put) Or otherwise, it causes overheat of heater.
- ii. Put the works in the basket or pallet in the bath. Using the basket or pallet is easy to put or take out.
- iii. Temp. of solution in the bath is proper at 40°C. (except for UCP-02)
- iv. Do not use the highly Volatile Solution.(ex, Solvent, Thinner etc.)
- v. Strong acid, strong alkali solution should be avoided because it may cause corrosion.
- vi. After cleaning, rinse well in water, allowed to dry out.
- vii. After using the Ultrasonic Cleaner, discharge the solution through the drain, rinse with clean water and wipe clean with a towel or tissue.

5. Trouble Shooting

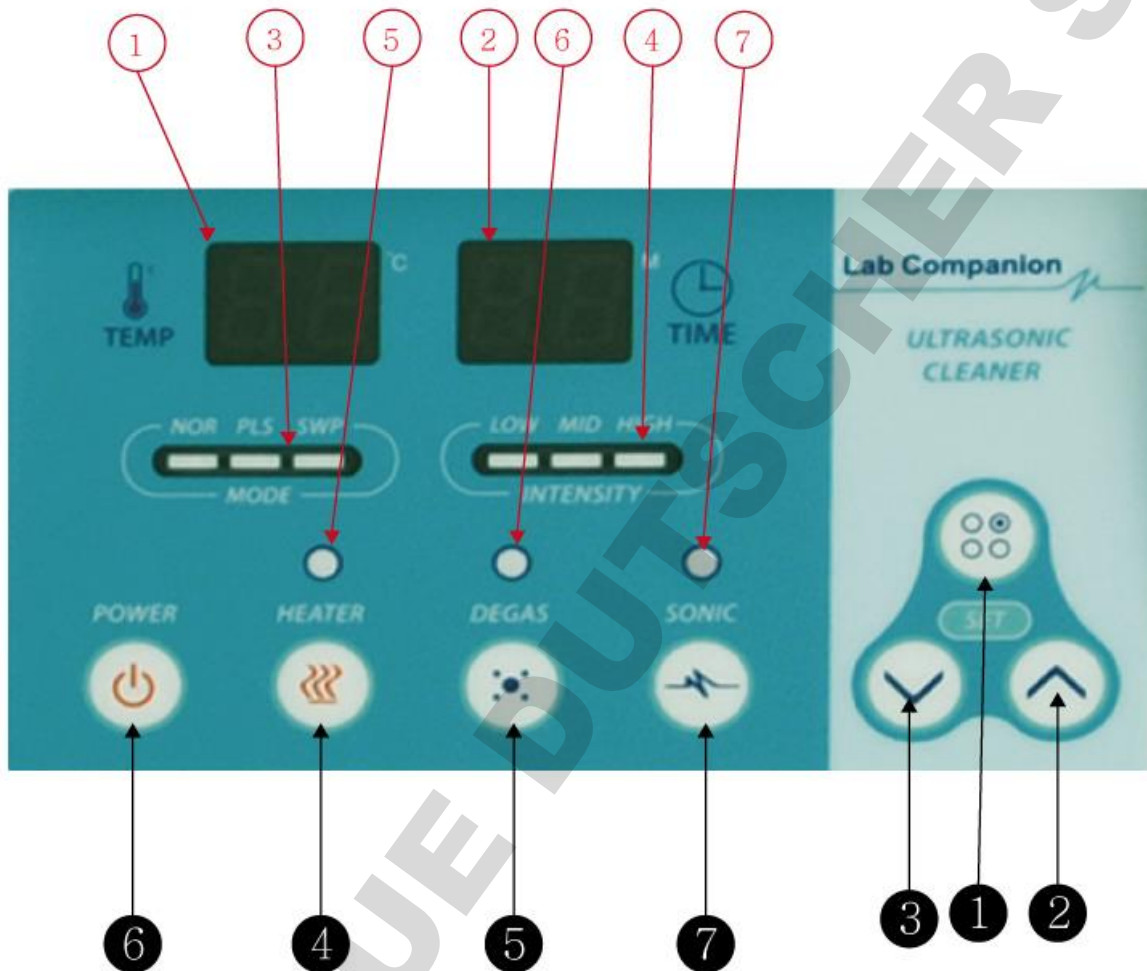
Troubles	Causes	Solutions
Cleaner is not powered.	<ol style="list-style-type: none"> 1. Bad connection Power Plug 2. Power inlet Fuse is bad 3. Fuse unit in generator is bad. 	<ol style="list-style-type: none"> 1. Check the power inlet 2. Replace Fuse 3. Request A/S
Key doesn't operate	<ol style="list-style-type: none"> 1. Key pad defective 	<ol style="list-style-type: none"> 1. Check the key 2. Request A/S
The temp. of solution doesn't rise	<ol style="list-style-type: none"> 1. Heater is not set properly 2. Heater disconnected 	<ol style="list-style-type: none"> 1. Check the Heater Set 2. Request A/S
Time function doesn't operate	<ol style="list-style-type: none"> 1. PROGRAM abnormal 	<ol style="list-style-type: none"> 1. Check Time Set 2. Request A/S
Cleaning power is weakened	<ol style="list-style-type: none"> 1. Solution is old, pollution level is high. 2. Solution is insufficient 3. Residue on bath bottom is solidified 4. The works are too much put in the bath 	<ol style="list-style-type: none"> 1. Replace Solution 2. Add Solution 3. Clean the Bath 4. Adjust the amount of the works until cleaning power is normal
Temperature display as the ER.	<ol style="list-style-type: none"> 1. Temp. sensor is damaged 	<ol style="list-style-type: none"> 1. Replace temp. sensor 2. Request A/S

6. Warranty

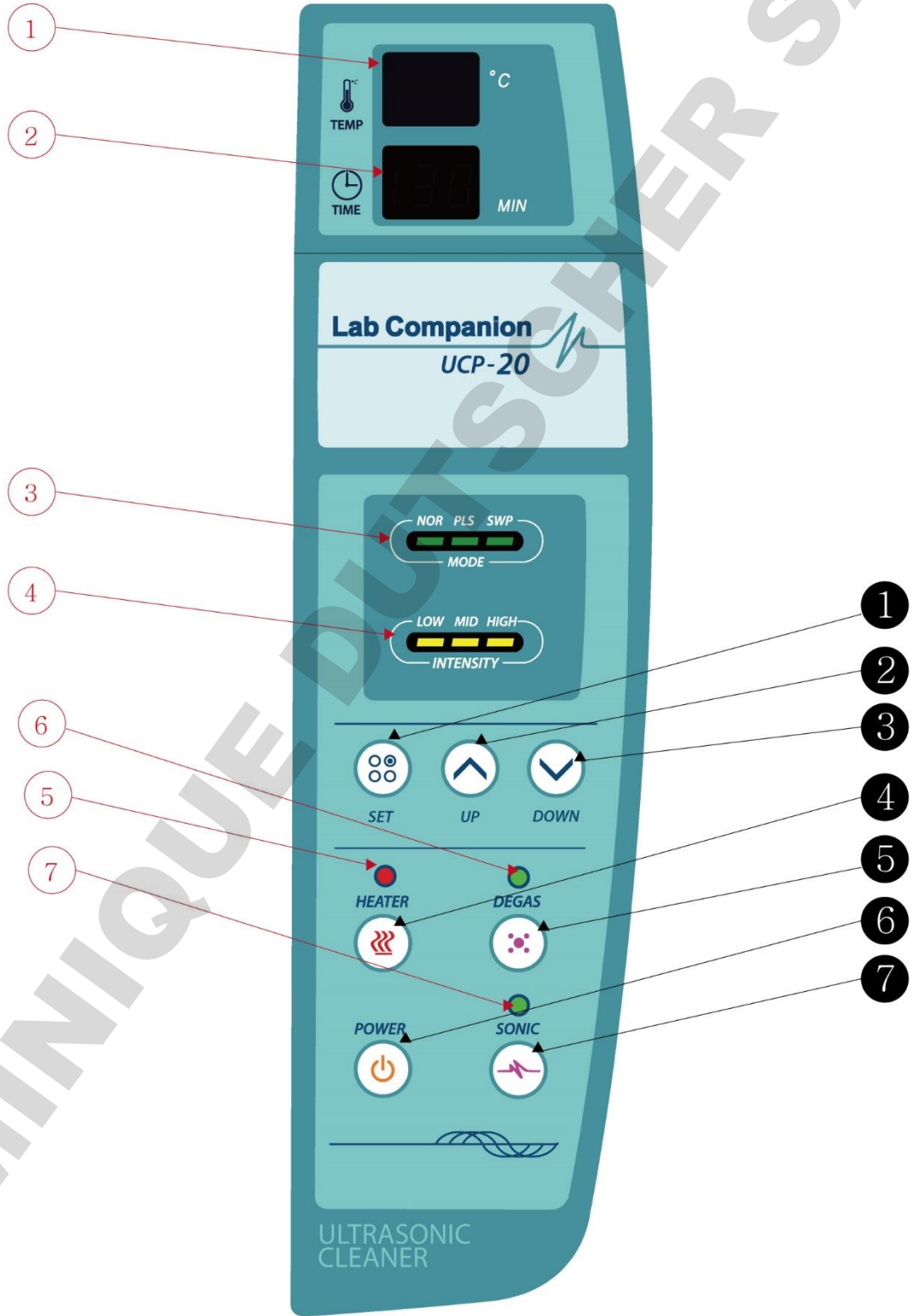
- A. The warranty period is 1 year from the date the product was purchased.
- B. During this period, damage caused by defects is repaired freely.
- C. Damage resulted from mis-operation is responsible for the end-user.

7. Membrane

A. UCS Series



B. UCP Series



Technical assistance

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