

UC-1000SG Series Industrial Ultrasonic Cleaner

User Manual

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I. Product pictures overview

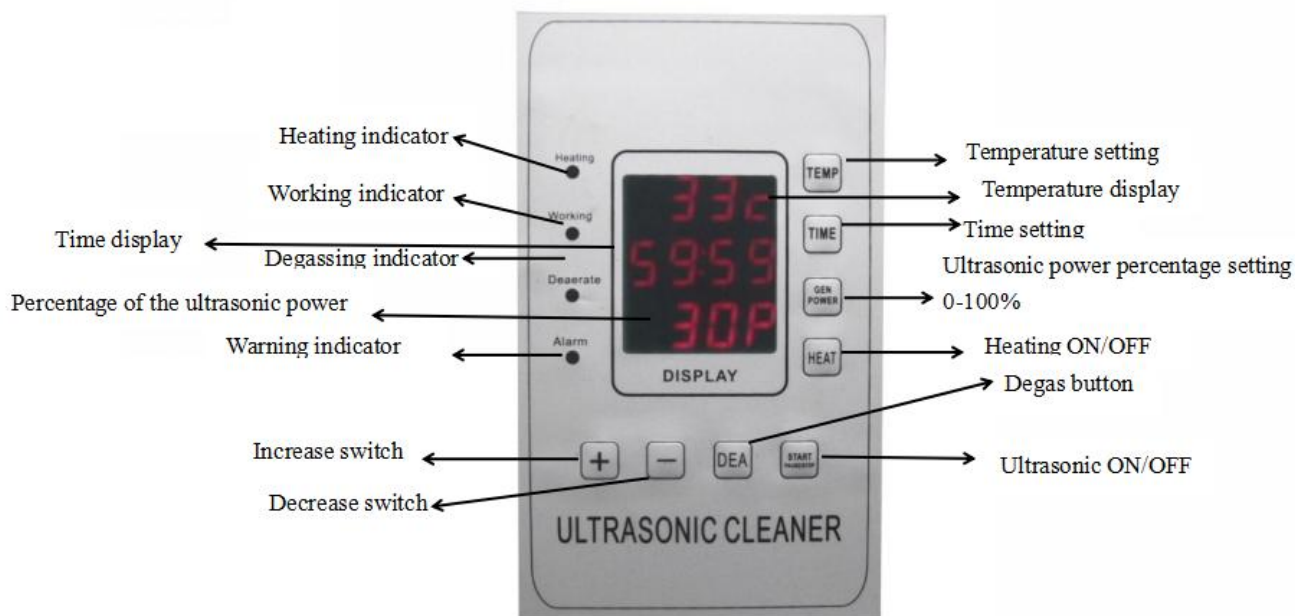


II. Specifications

Specification(Can be customized tank size)

Model	Capacity (Liter)	Ultrasonic Frequency (KHz)	Ultrasonic Power(W)	Heating Power (W)	Transducers Qty (PCS)	Inner tank dimesnion (MM)
JYD-1012SG	45	25/28/40	600	1500	12	500*300*300
JYD-1018SG	61	25/28/40	900	2000	18	500*350*350
JYD-1024SG	88	25/28/40	1200	3000	24	550*400*400
JYD-1030SG	108	25/28/40	1500	3000	30	600*450*400
JYD-1036SG	147	25/28/40	1800	6000	36	650*500*450
JYD-1042SG	163	25/28/40	2000	6000	42	650*500*500
JYD-1048SG	175	25/28/40	2400	6000	48	700*500*500
JYD-1060SG	240	25/28/40	3000	9000	60	800*600*500
JYD-1072SG	300	25/28/40	3600	9000	72	1000*600*500

III. Operation Panel Instruction



Function Description:

1. **Ultrasonic ON/OFF button** The ultrasonic start/stop button, when this button is pressed, the ultrasonic generator starts to work and the working light on, pressing this button again, the ultrasonic stops working and the working light goes out.
2. **Degas button** Ultrasonic degassing button, press this button, the ultrasonic generator begins to enter the degassing working state, the Degas light on; press this button again, the degassing stops working, and the Degas light goes out. When degassing starts, power regulation is ineffective.
3. **UP button** Press this button, if in TEMP SET mode, set the heating temperature increase; if in TIME mode, the ultrasonic working time increases; if in GEN POWER mode, the ultrasonic power percentage increases. Press this key for three seconds to enter the setting of the number of communication generators. The address of the local control generator is A1-A6. For example, when set to A5, the controller can control the operation of 5 generators at the same time.
4. **DOWN button** Press this button, if in TEMP SET mode, set the heating temperature to decrease; if in TIME mode, the ultrasonic working time decreases; if in GEN POWER mode, the ultrasonic power percentage decreases.
5. **HEAT ON/OFF button** Wash tank heating start/stop button, press this button, the heating light is flashing, and the cleaning tank starts heating (When the water temperature in the cleaning tank is higher than or equal to the set temperature, the heating light is on steady, the cleaning tank is not heating); press this button again, the Heating lamp is off and the heating stops working.
6. **GEN POWER button** Press this button, the ultrasonic power percentage display light flashes, it enters the power percentage setting mode, and then press this key to log out this mode. The percentage of power is

0-100%.

7. **TIME button** When this button is pressed, the time display light flashes and enters the time setting mode. Press this button for 3 seconds to enter the time-H setting (the default setting is the min setting), and then press this button to log out this mode. H mode time range 9H59MIN; MIN mode time range is 59MIN59S.

8. **TEMP SET button** Press this button, the temperature display light flashes, it enters the temperature setting mode, the flashing temperature value is the set temperature, press this button again, log out this mode, the temperature display light is on steady, during this time the digital tube displays the current actual temperature. In addition, when a communication failure alarm occurs, pressing this key will cancel the alarm. Set the temperature range 0-100 degrees.

9. **ALARM light**, When the communication between the control board and the ultrasonic generator fails, or the cleaner start heating/ultrasonic on without water in the tank, the alarm light flashes, and the buzzer sounds an alarm at the same time. The percentage of ultrasonic power display indicate an alarm fault code.

The fault code is as follows:

	Fault code	Fault reason
1	AL-1	Lack of water alarm
2	E-10	Address 1 Generator Communication Failure
3	E-20	Address2Generator Communication Failure
4	E-30	Address 3 Generator Communication Failure
5	E-40	Address 4Generator Communication Failure
6	E-50	Address5 Generator Communication Failure
7	E-60	Address 6 Generator Communication Failure



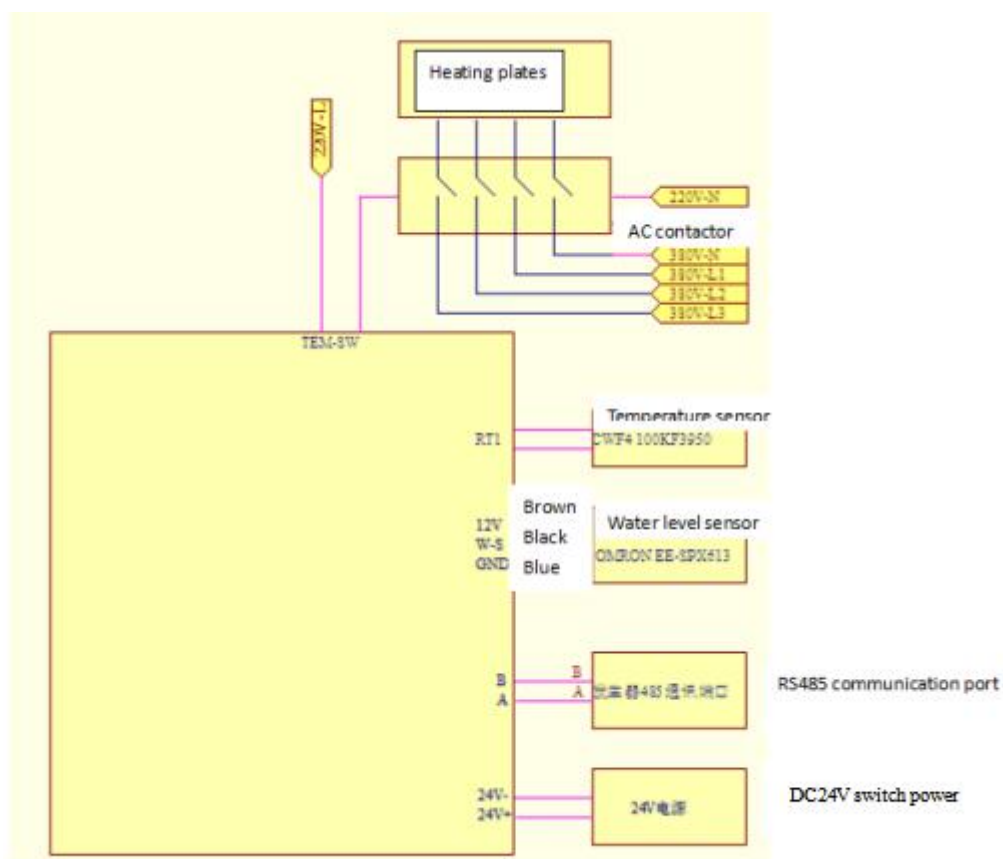
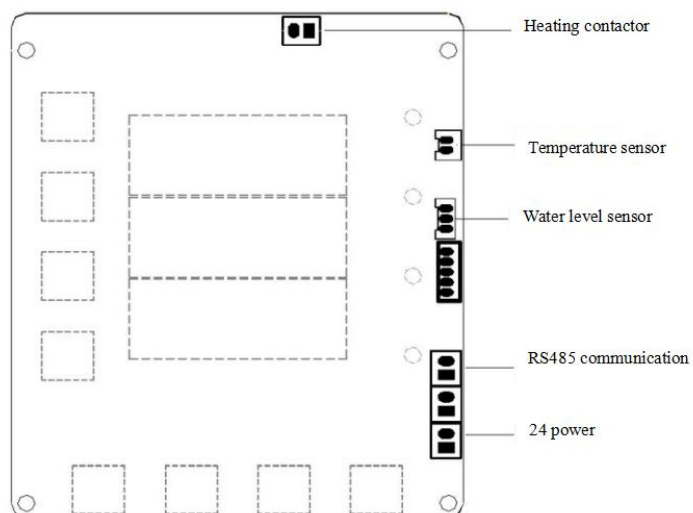
IV. Operation Steps

1. After setting the heating temperature, ultrasonic working time, power percentage, start the ON/OFF button to start the ultrasonic work. At the same time, press the HEAT ON/OFF button to turn on the cleaning tank heating.

2. When there are too many bubbles in the cleaning tank, press the DEA button to activate the degassing function of the ultrasonic wave.



V. Wiring diagram



VI. Precautions

1. Using this ultrasonic cleaner in an environment with moisture, corrosive gases or dust may lead to failures of transducers, ultrasonic lines or other components, which can affect normal usage of the cleaner.

2. Failures such as degraded insulation, electric leakage, short circuit, and dropping and cracking of ceramic chips will occur if piezoelectric ceramic chips with a high Q value and electric heating elements are exposed to moisture, water vapour, electrically conductive dust, oil contamination and fierce collision. The impacts of moisture, water vapour, corrosive gases, electrically conductive dust, large supply voltage fluctuation on the ultrasonic circuit boards will lead to such failures as component sparks, component pin corrosion, as well as breakdown and burning of power amplifier elements.

Therefore, observe the following precautions when using this ultrasonic cleaner:

1. Do not start the heater or ultrasonic source if the tank has no cleaning solution; otherwise, heating plates and transducers may be damaged.
2. Avoid collision with a hard object or fierce vibration. Do not place the items directly onto the bottom of the tank.
3. Make sure that the cleaning solution does not spill over the tank when using the ultrasonic cleaner. Do not flush the panel and enclosure with water; otherwise, water may leak into the vibrators or circuit board, which may result in a failure or safety risk during production.
4. Do not use this ultrasonic cleaner in a humid, inflammable and explosive environment without good ventilation.
5. Stop the ultrasonic cleaner if the voltage fluctuation of the power supply is beyond the acceptable range.
6. If an electric leakage or a short circuit occurs on the transducers due to moisture or contamination, or the transducers crack or drop off due to collisions, return these transducers to factory for maintenance.
7. If the ultrasonic cleaning effect becomes poor, the ultrasonic circuit board may be faulty. In this case, repair the circuit board before use.
8. It is recommended that the ultrasonic generator be used at an ambient temperature below 30°C.
9. Different cleaning media have different temperatures at which cavitation is active. Selecting a suitable cavitation temperature based on process requirements can improve the cleaning effect.

VII. Maintenance

1. Clear dirt and other deposits by wiping the surfaces of cleaner body and tank on a regular basis to keep them clean and protect them against moisture.
2. Clean the floor around the ultrasonic cleaner regularly to ensure smooth drainage and to avoid trapped water.
3. Check grounding of the cleaner body and the insulation resistance of transducers (normally not less than 5 megaohms) on a regular basis. When the insulation resistance value is too low, you need to consider avoiding the effect of unfavourable environmental factors and taking drying measures.

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4. Keep good ventilation for the environment to prevent water vapour and dust from entering the ultrasonic generator.
 5. The operation and maintenance of this ultrasonic cleaner shall be performed by designated persons. Persons unfamiliar with this ultrasonic cleaner are not allowed to operate the cleaner.



VIII. Troubleshooting

1. No ultrasonic waves:

- (1) Check whether the voltage of the power supply meets the requirement.
- (2) Check whether cables and connectors are not reliably connected.
- (3) Check whether the fuse is burnt.
- (4) Check whether the power tube is damaged.

2. Weak ultrasonic waves:

- (1) Check whether the transducers are wetted (with water in the vibration plate).
- (2) Check whether the generator power tube works normally.
- (3) Check whether the voltage is too low.
- (4) Check whether the process temperature and detergent are suitable.

3. Electric leakage:

- (1) Check whether the power cords are wetted and whether the voltage fluctuates dramatically and frequently.
- (2) Check whether the ultrasonic cleaner is wetted or corroded.
- (3) Check whether cable conduits for each part are damaged, disconnected or has dropped off.
- (4) Check whether the heating plate is burnt or punctured.
- (5) Check whether grounding is reliable.
- (5) Check whether the cables are re-connected correctly after maintenance.

4. If a fault cannot be resolved, return the ultrasonic cleaner to our company or call us to provide the online maintenance service.