

# Quantum Microbubble Fryer User's Guide



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## **Caution**

**\* Please follow the instructions given below to prevent unexpected danger or damage by using the product safely and correctly.**

**\* Precautions related to safety are classified as follows according to the magnitude of expected danger and damage if used incorrectly, and the degree of urgency of the danger.**

 **Violation of warning instructions is likely to cause serious injury or death.**

 **Violation of caution instructions is likely to cause minor injury or product damage.**

## Warning

### **1. No manipulation of children's access**

- \* Keep away from children to prevent operation. Risk of fire or burns.

### **2 Prevention of electrical accidents**

- \* If you feel a slight leakage current in your body, turn off the circuit breaker and contact the customer service center.
- \* There is a risk of electric shock or fire if the operation is continued.
- \* Make sure it is grounded.

### **3. How to deal with abnormal overheating and smoke**

- \* In the event of a fire or signs of abnormalities such as smoke or oil burning during use, stop using the product immediately and switch it off, or lower the appropriate breaker on the switchboard.
- \* There can be bigger problems such as fire, casualties, etc.

### **4. Shut down when going out and leaving work.**

- \* When not in use, turn off the power switch and turn off the switchboard breaker.
- \* It may cause a fire due to external requirements such as abnormal overvoltage.

### **5. Observe at all times during cooking.**

- \* Never fall asleep or leave your seat while cooking.
- \* There is a risk of product damage or fire due to overheating.

### **6. Actions to be taken in case of abnormal overheating or smoke**

- \* In the event of a fire or signs of abnormality, such as smoke or oil burning, stop using immediately and switch off the product, or lower the appropriate breaker on the switchboard.
- \* Bigger problems such as fire and casualties may occur.

### **7. Disassembly, repair, and modification prohibited**

- \* Never disassemble repair or modify.
- \* Risk of electric shock, injury, or fire due to abnormal operation.

### **8. Prohibit non – professional product installation**

- \* When installing the product, a qualified person should install it.
- \* Any electrical connection may cause a fire or product failure; we are not responsible for this.
- \* Install electrical circuit breakers per product for 50A.

## Warning

### **9. Do not stack objects under the appliance**

- \* Do not load oil cans, boxes, etc. under the machine.
- \* Moisture objects can cause mechanical failure.

### **10. Do not put ice or water in hot oil**

- \* When ice or water is put into the oil tank, there is a risk of burns due to oil splashing or boiling.

### **11. Prohibition of access to a flammable substance**

- \* Do not place flammable substances next to the product.
- \* There is a risk of fire or explosion due to hot oil.

### **12. Normal installation of the product**

- \* Install the product in a firm and level place.
- \* Install in a place where there are no high-heat generation devices around the product.

### **13. Move separately when discharging waste oil ( when using oil tank)**

- \* If drain oil once, it may cause strain on the human body when carrying it, so make sure to drain it twice.
- \* Be sure to drain the oil after the oil has cooled down.

### **14. Be careful of burns when draining waste oil**

- \* Make sure to stop the operation before discharging the oil. It may cause a fire.
- \* Slowly rotate the oil drain handle when pouring. If turn the oil handle in a hurry, there is a risk of burns due to oil spattering.

### **15. Do not leave the oil in the tank for a long time**

- \* If fill it with oil for a long time, the quality decreases due to oxidation, so can't cook it to the taste you want.

### **16. Observations before draining waste oil**

- \* When draining oil, check whether there is a waste oil tank on the side of the product before draining the oil.

## Warning

### **17. Beware of body burns**

- \* Do not shake the basket when cooking or oil the dishes with hands or parts of your body touching the fried oil.
- \* Handle with care after cooking. There is a risk of burns.

### **18. Thorough product maintenance**

- \* Check for aging and abnormalities with regular inspections.
- \* Do not pour or spray water on the product when cleaning the product. ( Excluding inside oil tank)
- \* Can have a significant impact on fire and product damage.

### **19. Installation in a well-ventilated place**

- \* Install the product in a well-ventilated place.
- \* Install an exhaust system so that steam and odor generated during cooking can be discharged to the exhaust hood.

### **20. Use of other uses is dangerous**

- \* Do not use it for purposes other than cooking (washing, heating, etc.)
- \* There's risk of fire.

### **21. Do not run an empty tank**

- \* Make sure that the oil tank is filled with water or oil before starting the operation.
- \* If operated without water or oil, internal overheating may cause ignition, product deterioration, or fire.
- \* When cooking for a long time, the oil in the tank may decrease and catch fire, so always replenish up to the marked line.

### **22. Do not use thinner or benzene when cleaning**

- \* Do not use thinner benzene, or wax when cleaning the product.
- \* It can cause damage to the appearance of the product, such as discoloration and peeling.

### **23. Do not install in places where water can splash**

- \* If water enters the power cord and control unit, there is a risk of malfunction and short circuit.

### **24. Do not reuse oil in semi-finished fryer**

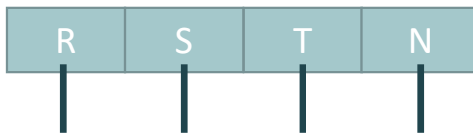
- \* The oil used in the breastfeeding fryer contains a large amount of water and moisture, so there is a risk of explosion when reused in a general product fryer.

## ■ Installation method

1. To use the product cleanly and for a long time without failure, install it in a well-ventilated and low-humidity place.
2. Please select a place where there is no risk of fire.
3. Install in a non-combustible area around the installation site, leaving some space (20cm) on the side and back.
4. Be sure to install an exhaust hood.
5. Install on a flat and hard floor.
6. Install a heat sink on the back wall when installing.
7. Make sure to consult a qualified contractor when installing.  
(Observe the electrical standards-install a power cable (10mm<sup>2</sup>) and an earth leakage breaker of 50A or more for safety)
8. Pay attention to leaks when connecting water pipes.
9. Do not arbitrarily change electricity and water supply – if unavoidable, contact customer service.

## ■ Installation method

1. Wire thickness should be more than 5 SQ of twisted pair.  
(Make sure that the crimp terminal or contact surface of the connection part is well tightened.)
2. In the case of 3-phase, connect to the terminal with 4 lines eat of R S T N. (380V)



3. In the case of single phase, connect R S T and use it with T and N.(220V)



4. Use a switch with a capacity of 30A or more.

## ■ How to clean the product

### Caution

- \* When cleaning, make sure to turn off the electric circuit breaker and clean after the temperature fryer has completely cooled down.
- \* When cleaning, be careful not to allow water to enter the control panel.
- \* Daily cleaning can prevent the oxidation of oil and remove odors.
- \* Clean the oil temperature sensor, water temperature sensor, and water measurement sensor installed in the inner container when cleaning.  
(Prevent sensor measurement errors)
- \* Wash the oil and water windows about once a month and tighten them well so that the glass does not break when assembling.



## □ How to clean the product

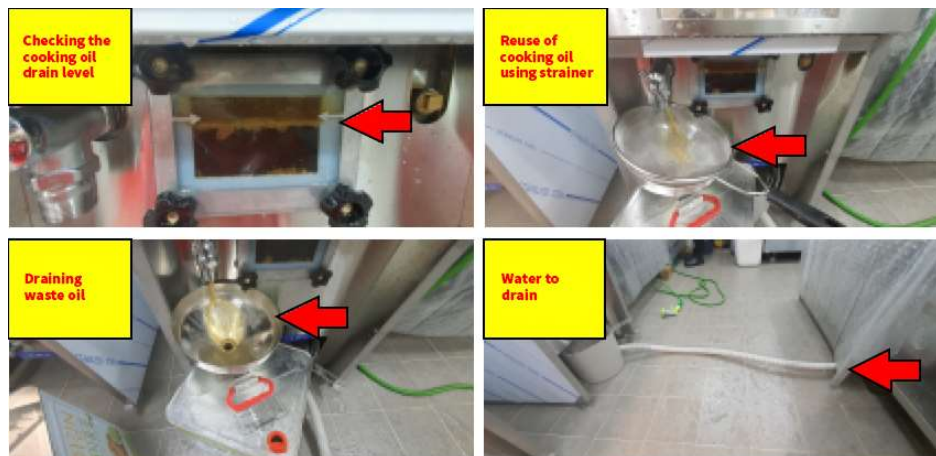
1. Turn off the frying pan and clean up the surrounding until the temperature drops by 130°C.
2. When the temperature of the fryer reaches 130°C, spray it with direct water (cooled, hot water) until it reaches 100°C or less.



## □ How to clean the product

3. When the temperature is below 100°C (70°C is better), drain the water and adjust the cooking oil drainage.

- \* Use a filter when draining.
- \* Drain directly into the drain.



## ▣ How to clean the product

4. Keep cooking oil in storage.

- \* Use an empty cooking oil container.
- \* Cooking oil is reused.

5. After the cooking oil is drained, clean it with direct water.





## How to use

**\* Before using the fryer for the first time, must check that the product is properly installed without any problems.**

- 1) Is the fryer installed in a horizontal and safe position?
- 2) Electrical-Is the rated voltage and rated capacity connected?
- 3) Water-water pipe connection properly connected without leakage?

## How to use

1. Fill with water up to the water line marked on the front gutter.
2. Fill with the appropriate amount of cooking oil.
  - \* If the amount of oil is too small, food ingredients may burn or fire may occur.
3. When the power (ON/OFF) button on the control panel is pressed, the lamp on the display window turns on.
4. When pressing the “ Setting ” button on the control panel, the “ Setting temperature ” display window blinks.
  - \* After selecting the desired cooking temperature, press the “ Enter ” button.
  - \* The set temperature display window blinks and then stops, and the setting is completed.
5. Press the “ COOK ” button to start heating the heater.
  - \* Heaters 1 and 2 are operated sequentially and cooling fans are operated at the same time.
6. When the set temperature is reached, press the “ Time ” button and select a cooking time.
  - \* Select a cooking time and press the “ Enter ” button to counter the cooking time, an alarm will sound 10 seconds before the end time and the alarm will end at the end time.

## Functional Description



| KEY Function     | How it works  | Display                      |
|------------------|---|------------------------------|
| 1. Power(ON/OFF) | Power ON/OFF function of the control panel<br>*Cooling fan operation  | Power LED<br>FAN LED         |
| 2. COOK          | ON/OFF operation of heating heater according to temperature   | Cook LED<br>HEAT 1<br>HEAT 2 |
| 3. WARM          | If selected when not cooking for a certain period, the temperature of the oil is maintained at 120°C  | LED                          |
| 4. NUMBER KEY    | 10 numeric keys from 1 to 0 when setting Temperature or cooking time  | DISPLAY                      |
| 5. MENU          | Select and store the appropriate cooking temperature from M1 to M6 for use<br>Ex) Press the M1 button, press the set temperature, and press the input button to save the temperature  | LED                          |
| 6. TIME          | Use as a cooking timer function<br>Ex) Press the " TIME " button, press the set time, and then press the input button to display the timer operation times as an addition or subtraction until the end time.<br>*10 seconds before the end, the melody operation ends and then stop | DISPLAY                      |


## Inspection Method

### ► ERROR DISPLAY

1. E1: When the oil temperature sensor is disconnected or shorted
2. E2: When the water temperature sensor is disconnected or shorted
3. E3: When the oil temperature is over 200°C
4. E4: When the water temperature is above 60°C
5. E5: When the water level is lowered to an appropriate level

| Machine Failure Symptoms        | Causes of Machine Failure  | Action Point   |
|---------------------------------|--|--|
| The circuit breaker goes down   | Insufficient and defective electrical capacity<br>Bad connection wiring contact<br>Heater insulation breakdown | Check the circuit breaker.<br>Check connection wiring tightness.<br>Need to request an inspection. |
| Fryer temperature does not rise | Abnormalities in the heater<br>Insufficient wiring capacity<br>PCB abnormality                                 | Heater check abnormal<br>Wiring replacement<br>PCB abnormality                                     |
| Low water alarm                 | Shortage of water  | Replace or clean the sensor  |
| E1                              | Oil sensor disconnection or short circuit  | Sensor replacement   |
| E2                              | Water temperature sensor disconnection or short circuit  | Sensor replacement   |
| E3                              | Oil temperature is over 200°C  | Control check and<br>oil temperature sensor check  |
| E4                              | Water temperature is over 60°C   | Control check and<br>water temperature sensor check  |
| E5                              | Warning due to low water level   | Check low water level sensor   |

## Product Specifications

| MODEL                     | JIN – 1000  | JIN-2000  | JIN-3000  |
|---------------------------|---|---|---|
|                           |  |  |  |
| Product size (W * D * H)  | 450 * 530 * 1020  | 520 * 670 * 1020  | 680 * 670 * 1020  |
| Amount of oil / water     | 22L / 17L   | 34L / 30L   | 45L / 36L   |
| Tank size (mm)            | Diameter 350  | 400 * 400   | 570 * 400   |
| Power                     | 220V 60 Hz  | 220V 60 Hz  | 220V / 380V   |
| Power Consumption         | 2.8 KW  | 5.5 KW  | 10 KW   |
| Temperature control range | 0 ~ 190 °C  | 0 ~ 190 °C  | 0 ~ 190 °C  |
| Characteristics           | Cylinder round style<br>Easy to clean   | Cooling oil and water<br>at the same time   | Detachable<br>Oil/water cooling fan   |