

# Bakery Proofer

## User Manual



# PREFACE

Dear Customer:

Thank you for your purchasing our company products, when you hold this instruction that means we have become honest business partner and sincere friends, in order to give you our best service and do more better, please make sure to follow us this instruction to use our machine, and also please keep very well this instruction to prepare for contingencies.

If you have any questions or any good suggestions, welcome to call our after-sales service hotline. We will do our best for you.

Thank you for your choosing our Products, which are novel design, fine workmanship, high performance and easy to use.

## 1. Model Explanation:

Model	Definition
TT-0143C	16 Trays, 220VAC, Single Phase Fermenting Box
TT-0143D	32 Trays, 220VAC, Single Phase Fermenting Box

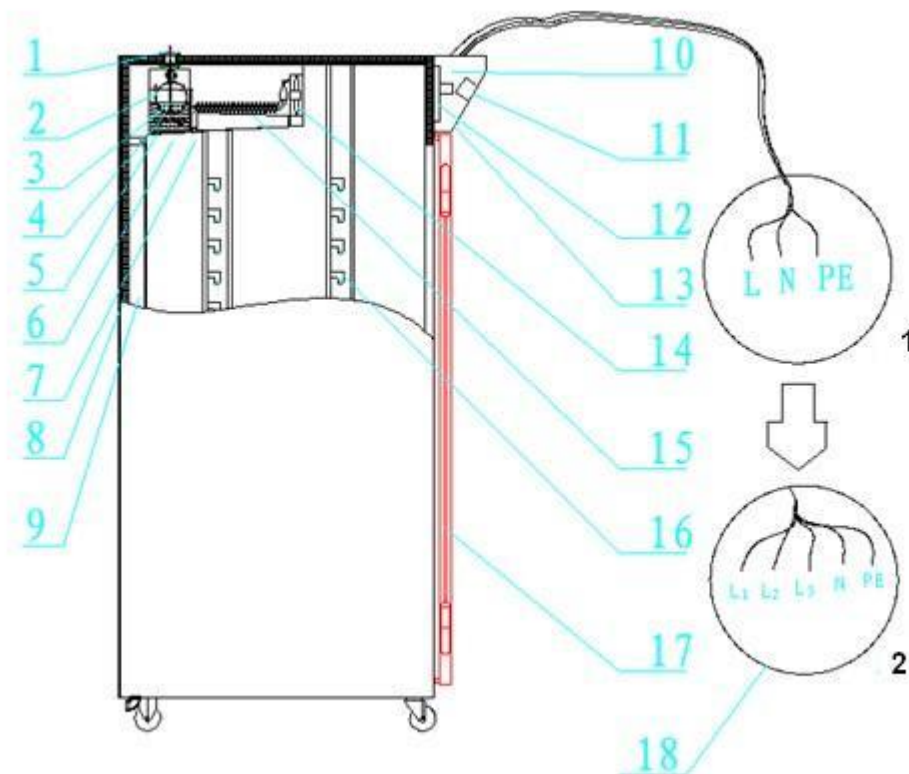
## 2. Product Feature:

1. Stainless steel for inside and outside, Middle with PU thermal insulation material, beautiful appearance and good insulation effect!
2. Touch-pressure-type operation panel, digitization window display temperature and humidity, while using the most reliable system with water fog, there are steam after 5 min. to start the machine, and steam particles is very small, and the expansion ratio of the dough which are fermented is very high, moisturizing effect is good, bread limp, good tasting.
3. Internal temperature and humidity of air continuous loop connection, uniform divergence distribution to ensure that the various parts of the fermentation consistent.
4. Automatic water, dry automatic power-off protection.
5. Special setting summer and winter transfer switch to adapt to the different seasons and geographical.
6. Pioneered humidity tank removable, greatly facilitate the clean water tank for easy maintenance.

## 3. Structure characteristics and working principle ( Showed as Picture 1 )

### ● Name of Each Parts:

- |   |   |
|---|---|
| 1. Water level probe                          | 10. Summer and winter transfer switch                                   |
| 2. Tank mounting bolt                         | 11. Computer controller   |
| 3. Humidity tank                              | 12. Computer controlled panel   |
| 4. Float valve                                | 13. Control box   |
| 5. Humidification electric tube (water pipes) | 14. Circulating fan   |
| 6. Tank baffle                                | 15. Temperature heating tube (dry pipe)                                 |
| 7. Fixing bolts                               | 16. Trolley   |
| 8. Insulation layer                           | 17. Door  |
| 9. Duct                                       | 18. Power cord (Type 1: 220V, single phase; Type 2: 380V, three phases) |



Picture 1: Side View

● **Working Principle:**

This machine uses dry heat pipe to heat and wet heat pipe to humidify, and make gas to form the internal convection by forced circulation.

The control principle is showed as follows:

1. Temperature Control: PID regulator system according to the temperature curve, with the inertia to achieve the desired temperature and avoid excessive overshoot. In addition, by changing operating modes to adapt to the winter and summer seasons, you can also set the internal parameters to adapt to large changes in temperature.

But the traditional way for temperature is that the temperature reaches to set data will be stopped. Due to the temperature lag inertia and according to experimental statistical analysis, 35% of the electricity was consumed in excess temperature, and also the large temperature fluctuations and start to equipment frequently, energy conservation and equipment life will be affected adversely.

2. Humidity Control: Using French imports humidity components which can be

accurately measured the humidity. Microcomputer can be automatic controlled humidifying time according to humidity difference (actual humidity and target humidity). In the same time, you can set the sequencing for humidifying and heating (winter and summer requirements can be set very different). Forced convection can increase the effect of atomization and homogenizer to make sure the humidity can be reached in the desired range.

#### 4. Main Technical Parameters:

Item No.	Capacity	Dimension	Power	Voltage
TT-O143C	16 Trays / Trolley		3.6kw	220V / 1 Phase
TT-O143D	32 Trays / Trolley		3.6kw	220V / 1 Phase

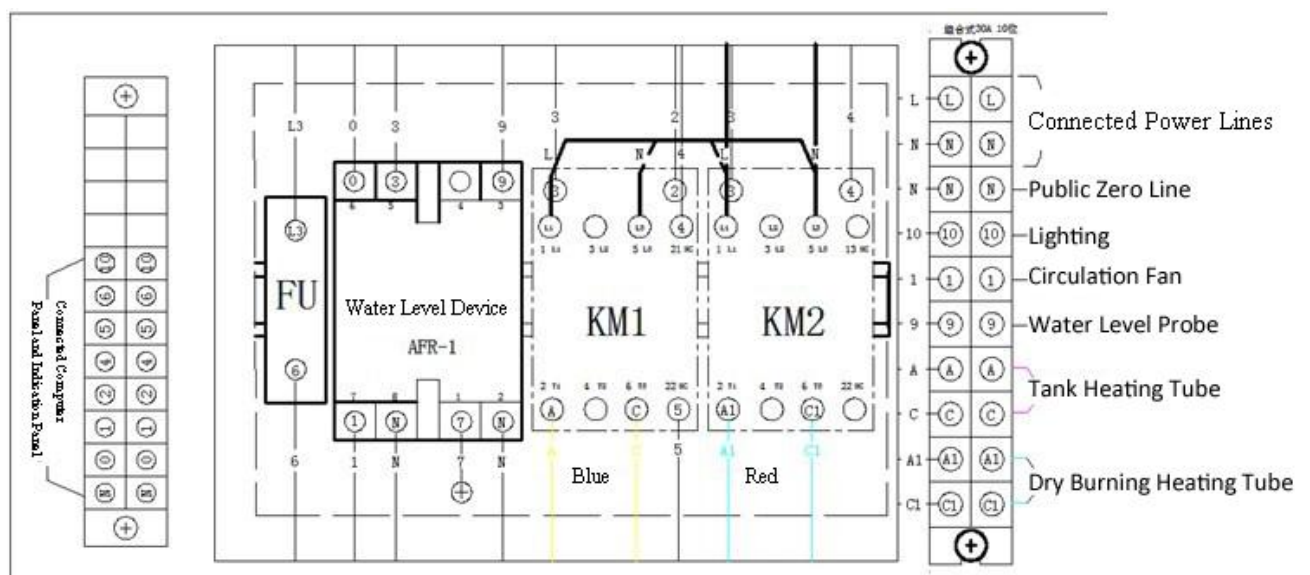
#### 5. Connection Type:

- Connection Method for Power Line (Referenced Picture 1‘18’Power Line)

To make sure what you have bought for voltage.

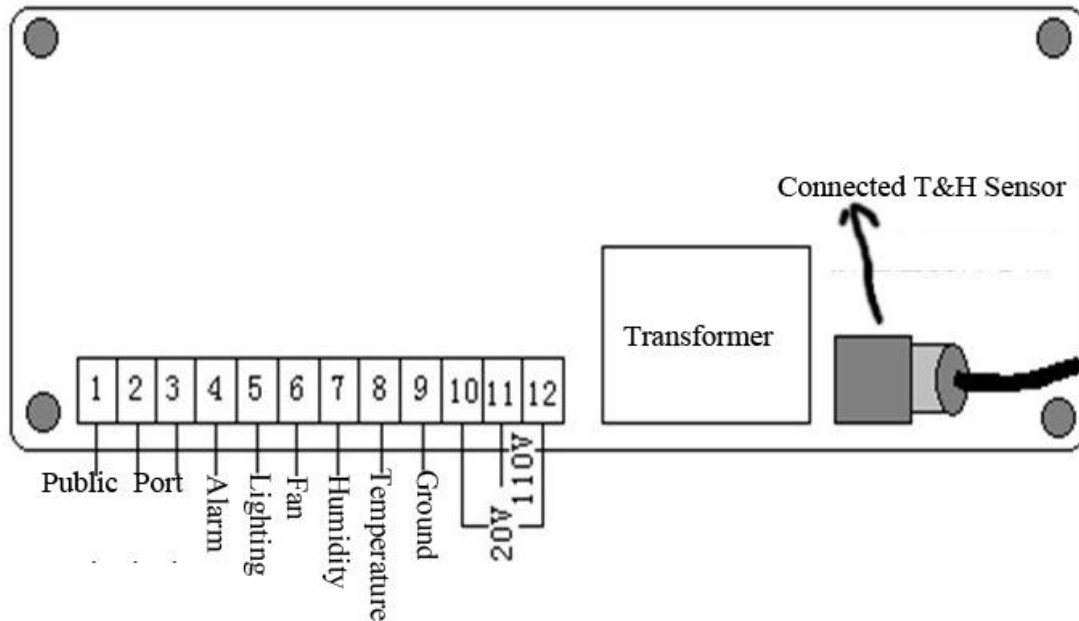
1. 220V / 1N: Please reference picture 1‘18’: L line connects phase line (Fire), N Line connects neutral line (Zero), PE line connects ground line, and the ground must be reliable grounding.
2. 380V / 3N: Please reference picture 1‘18’: L1\L2\L3 connects phase line (Fire), N Line connects neutral line ((Zero), PE line connects ground line, and the ground must be reliable grounding.

- Line board (Picture 1 ‘12’) connection and arrangement in the following picture.



## Line board (Picture 1 '12') connection and arrangement

- Computer board (Picture 1 '11') line connection (in physical connection shall prevail)





## 6. Controller Instructions:

### 1. Panel diagram and introduced

Three windows respectively shows time, temperature and humidity

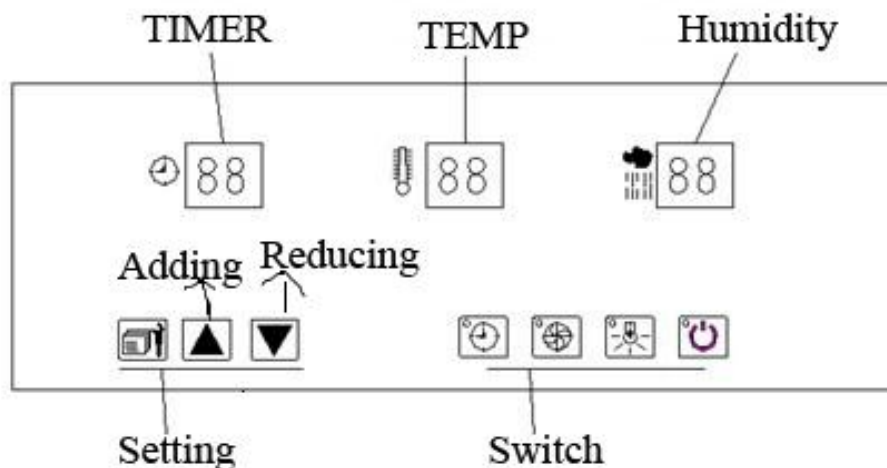
 "Setting"  "Adding"  "Reducing"

 "Timer" to us for timing on or off

 "Draught Fan" used to display the work state, can't be turned on or turned off

 "Lighting" used to turn on or turn off light.

 "Power" used to control the work state.



## 2. Boot Methods:

- When the machine can be connected the power, it will be showed“TRC100”in Digital display window, press the “power button”, three windows will be showed the working time, current temperature and current humidity separately.
- When the machine can be connected the power, the draught fan will be worked, it won’t and mustn’t be turned off during working.
- When temperature exceeds the setting temperature (15°C), it will be buzzer, but you can adjust the temperature window which is showed “AH”

## 3. Major Parameter:

Time Control Range: 0 ~99 min.

Temperature Display Range: 0-50°C

Range of Temperature Control: Room temperature ~50°C

Humidity Display Area: 20~99% RH

## 4. Setting Methods of Normal Parameter: (During Working State)

- **Time Setting:** Pressing“Setting Button”one time, Time window will be worked (others won’t be worked), through to press adding button and reducing button to adjust the time data. Time won’t control any output, just display the timing.
- **Temperature Setting:** Pressing “Setting Button” two times, the temperature window will be worked (others won’t be worked), through to press adding button and reducing button to adjust the temperature date which has been set.
- **Humidity Setting:** Pressing “Setting Button” three times, humidity window will be worked (others won’t be worked), through to press adding button and reducing button to adjust the humidity data which has been set, and press “Setting Button” again can be

set out.

## 7. Operation key points and matters needing attention:

A) Please don't close the water for long time during the proofer working, otherwise the internal heating tube will be burned up, even if this machine has water power function, but it is best not to place undue reliance on.

B) Based on the need to set a reasonable temperature tolerance, reduced the number of times to restart the machine to use limit temperature fluctuations; reasonable set humidity tolerance in order to avoid humidity impact. (the best way is that temperature and humidity settings 1-2 degrees lower than the actual needs of value)

C) The air is humid due to proofer process, so the equipment should be grounded for safety's sake.

D) Keep the door to close in order to keep humid and temperature, and also can avoid energy waste and loss.

E) When the temperature is always high, please put the **summer and winter transfer switch into "Summer"** (See Drawing 1 "10") so that the humidity will be finished at first before heating, the temperature to be worked in a certain proportion to ensure not overshoot for temperature or other phenomena.

F) When the water indicator light and accompanied by buzzing sound, it shows the water shortage in the water tank at this time, may be due to a lack of water sources, or water pipe burst, there may be too much scale and so on.

Drawing 1 "10"



G) Please make sure to read our instructions carefully before use, and fully understand the relationship between the parameters.

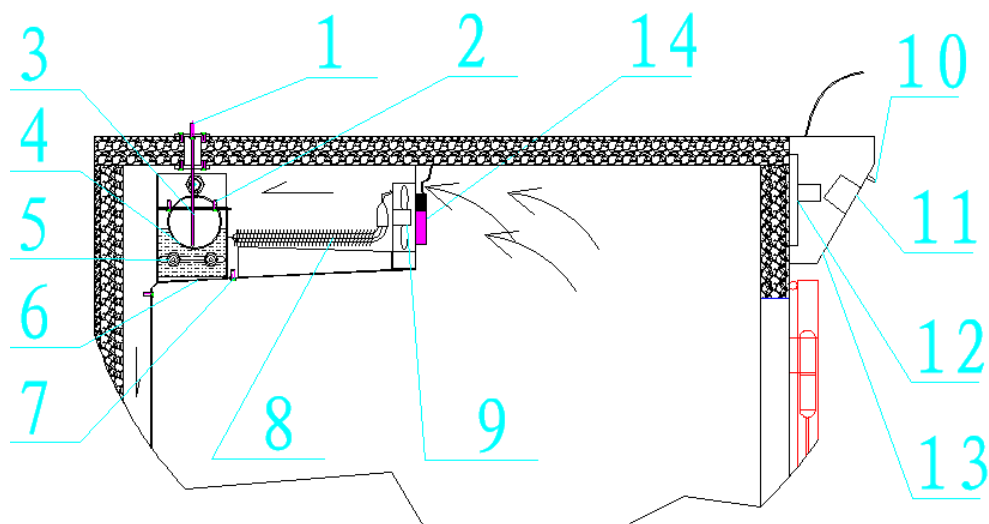
H) General speaking, our proofing temperature is from 35 to 38 Celsius, and a humidity is from 75 to 88%, it should be set before using. The set value is slightly lower than the



demand (generally lower two digital units), according to the workplace environment selection.

l) Temperature and humidity probe must be installed in ventilated place (show as picture 2 '14'), keep the air exchange, otherwise detected signal with the actual inconsistencies or failure.

## 8. Maintenance



Picture 2: Humid and Temperature Evaporator

Name of each parts above picture 2 showed:

- |   |  |
|---|--|
| 1. Water level probe                          | 8. Temperature heating tube (dry pipe) |
| 2. Tank mounting bolts                        | 9. Circulation fan                     |
| 3. Float valve                                | 10. Summer and winter transfer switch  |
| 4. Humidity tank                              | 11. Computer board controller          |
| 5. Humidification electric tube (water pipes) | 12. Computer controlled panel          |
| 6. Tank baffle                                | 13. Controlled box                     |
| 7. Fixing bolts                               | 14. Temperature and humidity probes    |

Much of the water are heated through to long-term, there are a lots of scale inside the tank which will greatly reduce the vapor generation rate, and also it will affect the heating efficiency of the heating tube and shorten its life. The user has to maintain as the following way to use for some time in order to improve the stability and service life of the equipment.

- The water tank in the humid and temperature evaporator has to be cleared after half year, if the water quality is not good from some are, you have to shorten the cleared time.

The operation way (please reference picture 2):

- A. Close the water source and release the copper tube joint (Picture 2'3'showed).
- B. Disassemble the water tank baffle (Picture 2'6'showed)
- C. Screw off inside hexagon bolt and put the entire water in the tank
- D. Disassemble the screw (Picture 2 '2'showed), the water in the tank can be taken it down. To change the heated tube is the same way.

- Please often check whether water protection failure. Namely: Close the water supply, using internal hexagonal wrench to unscrew bolt (Picture 2 '7' showed), and then let off inside water by hand, when the water level in the tank is declining or no water , the water light in the operation panel should be light and alarm. Otherwise to reference table 1: 《The Common Faults and Processing Method》 to check the water level controller whether it's failure or not

- The methods of changing dry burn (temperature) electric heat pipe (Picture 2 '8') : At first, please disassemble the silica gel line in the controlled box, then disassemble fan fixed plate, you can see the W shape electric heat pipe which is showed in picture 2 '8', this pipe is dry burn electric heat pipe. Unload inside two butterfly nut, remove the electric heat pipe clamp, you can take down dry burn electric heat pipe the.

- The methods of changing water (humidity) electric heat pipe (Picture 2 '5'):  
According to the cleaning tank method to remove the water tank, replace the water tank inside water and electricity heat pipe.

**Table 1: 《The Common Faults and Processing Method》**

Fault Description	Fault Cause	Methods
Switch on the power of computer board without electricity	Fuse tube broken	Change fuse tube
	Computer board broken	Change computer board
No humidity	Computer board humidity	Adjustable high humidity setting

	setting is too low	
	AC contactor in connecting water and electric heating tube is broken	Change AC contactor
	Electric water heating tube is broken	Change electricity heat pipe
	Computer board broken	Change computer board
	There are water inside the T&H probe	the water probe position is wrong, adjust the position of the probe after removing the water
Humidity display is very high, but the actual no humidity	There are water inside the T&H probe	the water probe position is wrong, adjust the position of the probe after removing the water
	T&H probe is broken	Change T&H probe
	Computer board broken	Change computer board
Temperature is very high	Summer and winter switch located in winter position	Adjust winter and summer switch to reasonable position
	Contactor which is connected dry electric heating tube is adherent	Change contactor
	Computer board broken	Change computer board
Water shortage indicator and alarm	water shortage	Check the water supply source to ensure water supply
	Water level controller broken	Replace the water level controller
	Water level probe is not inserted in place	Adjust the water level probe

	Water level probe line fall off	Adjust the water level probe
Water tank have water, but water shortage indicator and alarm	Water Level Controller broken	Replace the water level controller
	Water level probe is not inserted in place	adjust the water level probe
	The water level probe line fall off	Adjust water level probe line
Water tank no water, and water shortage no any display and not alarm	Water Level Controller broken	Replace the water level controller
	The water level probe encounter case or iron	Adjust the water level probe
	Scale or water in the tank is not clean	To clean the water tank to ensure the water quality at the source

### 9. Electrical Schematics:

