

# Ultrasonic Humidifier For Mushroom Growing User Manual



Please read this manual carefully before using this machine

# CATALOGUE

1. product presentation.....	1
2. Safe operation instructions.....	1
3. Product principle.....	3
4. technical parameter.....	3
5. Introduction of the function of the operation panel.....	3
6. Humidifier installation schematic diagram and standard.....	6
7. Precautions.....	7
8. Daily maintenance.....	8
9. Fault diagnosis and processing.....	8
10. the energy exchange film working procedures.....	10
"Three guarantees".....	11
warranty card.....	12

## 1. product presentation

Thank you for choosing the split type humidifier specially designed for mushroom growing. The ultrasonic humidifier adopts integrated ultrasonic atomization core, which has no mechanical drive, quiet and no noise, high atomization efficiency, low failure rate and simple maintenance. The output fog particle diameter of the whole machine is only 1-5um, and the maximum relative humidity can reach 90% ± 5%. The water box of split-type humidification equipment is made of stainless steel box, which is beautiful and practical. and there are three control modes available: switch control, time control and humidity automatic control. In the selection, it can be flexibly selected and matched according to the site environment and personnel arrangement. In addition, the product adopts split design, which can separate water and electricity, and can be used in complex environment and high humidity occasions.

## 2. Safe operation instructions

### (1) Technical description

This description is about the safety operation description of split humidifier, for the operation and maintenance operation of equipment in this instructions; and lists some specific usage, please refer to the corresponding instructions.

This description is limited to:

Install, use, operate and repair the humidifier.



#### **Use the specification**

The marking of potential hazards with safety instructions and warnings may endanger personal life safety and damage or equipment damage.

### (2) Safety



#### **Correct use**

Split humidifier is specially used for direct humidification in the space; the manufacturer / operator shall not be liable for the loss caused by improper use, and the user will unilaterally bear full responsibility. In order to operate this split-type humidifier correctly, this safety operation instruction must be observed.

#### **1. General safety instructions**

The installation, operation, maintenance and repair of the split-type humidifier must be completed by the staff engaged in this work, qualified and familiar with the product.

#### **2, electric shock danger warning!**

Compliance with the local safety rules and regulations;

Abide by the relevant regulations on power supply and electronic equipment;

Improper maintenance of fog making system will endanger human health, follow the maintenance interval, correct maintenance operation;

The equipment can only use pure water or similar softening water, to ensure that the nozzle is not blocked by scale and cause damage;

If it is suspected that the device cannot operate safely, immediately stop the operation of the split humidifier and check accordingly.



**warn!**

Please use the original accessories and parts provided by the supplier of Our company, Ltd. If the parts and their use right of other brands have not obtained the written permission of the supplier of Our company, Ltd., the company shall not undertake the warranty.

**(3) Safety instructions for installation**

1. All installation work must be done by qualified professionals; or under the guidance of professional installation technicians. When installing the split-type humidifier parts, only the installation materials specially provided by the manufacturer shall be used. If the special materials are not suitable for your special occasion, choose a installation method with the same stability. If you have any questions about the installation method and method, please contact your split-type humidifier supplier.

2. All electrical installation work is allowed to be completed by qualified professionals. The control unit can be connected to the power supply after all installation work. Please follow all local regulations on electrical installation.

3, power supply: AC220V, 50 HZ power supply for the system dedicated.

4. First open the unit box, check whether the electrical appliances and wiring terminals are loose or fall off, in order to prevent the line loosening or poor contact caused by the logistics transportation process.

**(4) Operation safety instructions**

The start and operation of the split humidifier shall only be done by those familiar with and qualified for the product. If the split-type humidifier parts are damaged or abnormal, it is not allowed to put the system into operation, it should stop the operation of the system immediately, and prevent accidental operation, and cut off the water source and power supply.



**1. Initial operation**

Only if the system is installed correctly, and the operation is done by someone familiar with and qualified for the product. Run the split-type humidifier as follows:

- (1) Check whether all system components and installation have possible damage, and remove them immediately if necessary;
- (2) Open the space to the ON position;

**2. Stop running**

Stop the operation of the split-type humidifier in the following order:

(1) Press the stop switch.

(2) Disconnect the internal total empty opening of the power distribution cabinet.

**(5) Maintenance of safety instructions**

- 1. Split humidifier is only allowed to be maintained and repaired.
- 2. Electrical maintenance and repair of split humidifier is only allowed to be carried out by professionals.
- 3. Before starting the maintenance of the split humidifier parts, stop the operation of the system correctly and prevent the accidental operation (isolate the water and electricity).
- 4. The humidification system not maintained in time will be harmful to the equipment, so the specified maintenance interval must be unconditionally observed, and the maintenance work must be carried out in accordance with the instructions.

**3. Product principle**

The split humidifier uses electronic overlock oscillation (the oscillation frequency is 1.7 MHz, exceeding the human hearing range, and causes no harm to human body and animals). Through the high frequency resonance of the atomized film, the water is thrown away from the water surface to produce 1-5 μ m water particles, such as natural and elegant water mist floating in the air, to achieve the effect of the air moisture. Appropriate relative humidity plays a decisive role in improving product quality, reducing waste rate, anti-static, eliminating dust, purifying air and improving the environment.

**4. technical parameter**

Item Name	Ultrasonic Humidifier		
Model No.	GRH-FX/14-WPP-N	GRH-FX/28-WPP-N	GRH-FX/42-WPP-N
Fogging Capacity	14L/H	28L/H	42L/H
Number of atomizers	2pcs	4pcs	6pcs
Number of fog exits	1pcs	2pcs	2pcs
Applicable area	0-260M <sup>3</sup>	260-650M <sup>3</sup>	650-1000M <sup>3</sup>
Power supply	AC220V 50HZ		
Control Method	Humidity control, time control		
Security protection	Water shortage protection, leakage protection, overload protection		
Distribution box size	460×170×272MM		
Tank size	360×205×375MM	470×330×440MM	628×330×408MM

**5、 Introduction of the function of the operation panel**

Figure 1-1 shows the running interface, under which the user can select the host control mode and set the parameters, The control mode is divided into humidity, time, manual, linkage four control modes: ① humidity mode, factory Set the upper humidity limit 80% and lower humidity limit 60%. The primary chance control humidity is within this range. The user can Set the upper and lower limits of humidity freely according to the situation.; ② In time mode, the host works according to the set running time And stop time cycle operation; ③ manual mode, the host will always running; ④ linkage mode, The control system provided by the user controls the start, stop and operation of the host, and the host opens when the customer signal is in place Start, when the customer signal is disconnected, the host delay is closed, and the delay

time is the set linkage time. The current operating status and humidity detection value can be seen in the above four modes.

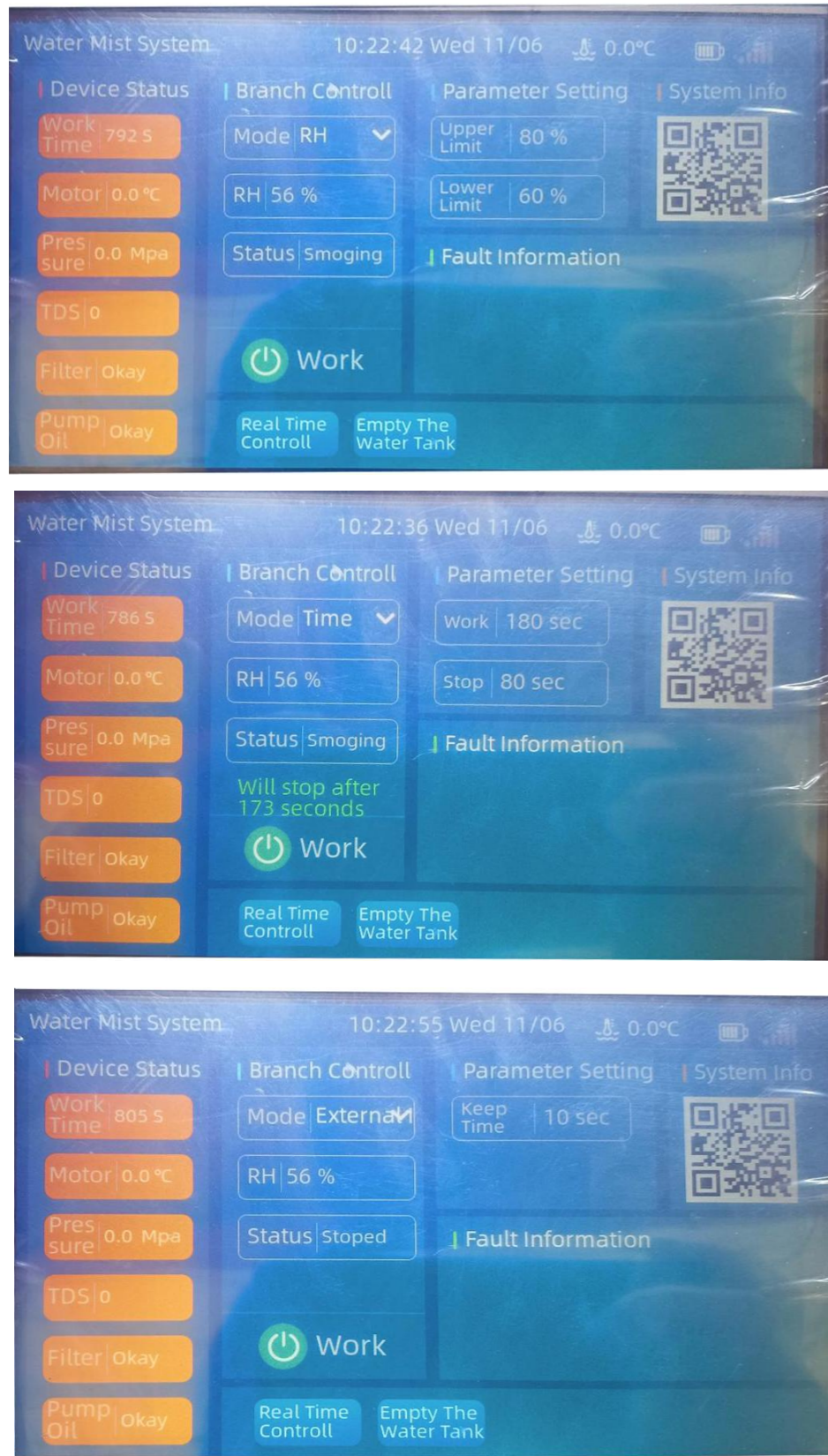


Figure 1-1 Interface of operation and parameter setting

Figure 1-2 shows the system stop interface. When the host running switch is closed, the current state of the host interface will show the system stop, Take the time pattern here.

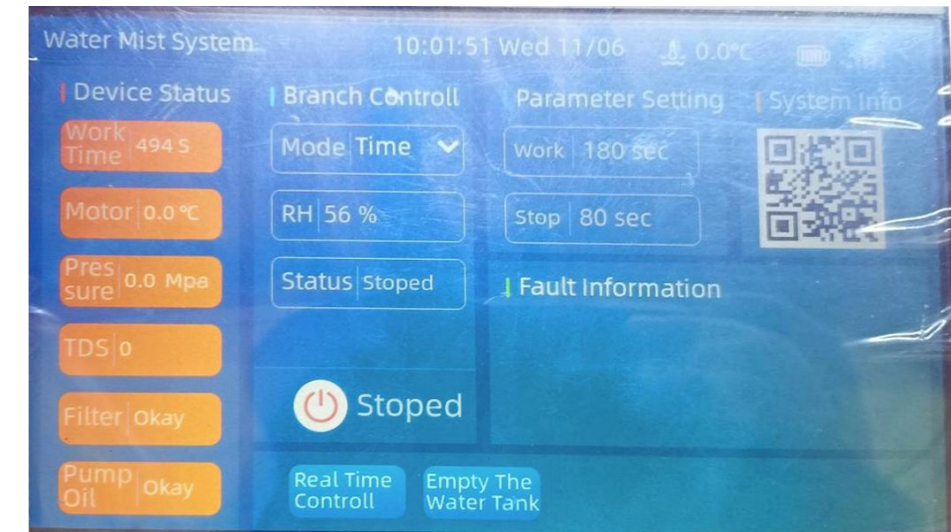


Figure 1-2 System stop interface

Figure 1-3 shows the time control setting interface, which can set which day to work from Monday to Sunday, and the user clicks after the corresponding time period A week can be set. At the same time, you can set which day and which time period to do the work. There are eight time periods that can be set, The startup time and shutdown time can be set in each time period, during which the machine can follow the set control mode Line work. (Note: The startup time should not be greater than the shutdown time. Stop the main time and alert when the current time is not in the running period.)

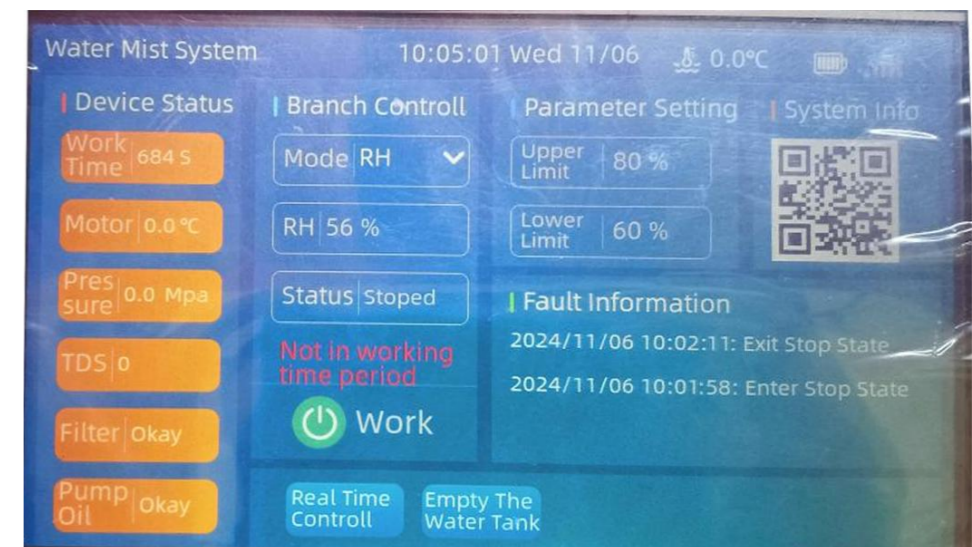




Figure 1-3 Time-control setting interface

Figure 1-4 shows the equipment operation information interface, in which it records the host operation status, including water shortage record, emergency stop press and reset record.



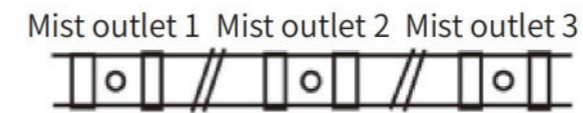
Figure 1-4 shows the device operation information interface

## 6. Humidifier installation schematic diagram and standard

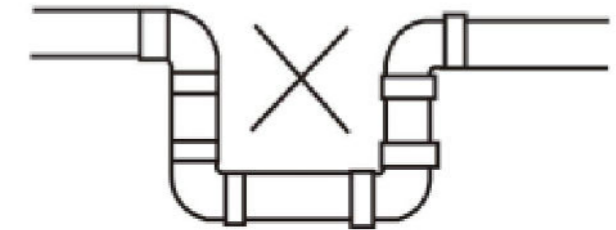
(I) Install it on the external wall or inner wall of the humidifying workshop, arrange the pipeline reasonably, and close the interface to prevent air leakage. In larger humidifying places, a smaller fog outlet can be opened and evenly distributed, as shown in Figure 1. In the pipeline preset, the slope should be mainly used, the end of the pipe is high, the fog outlet end is low, and the trace condensate in the pipe can be returned to the water tank. The pipeline connection mode as shown in Figure 2 is prohibited.

(II) Installation standards:

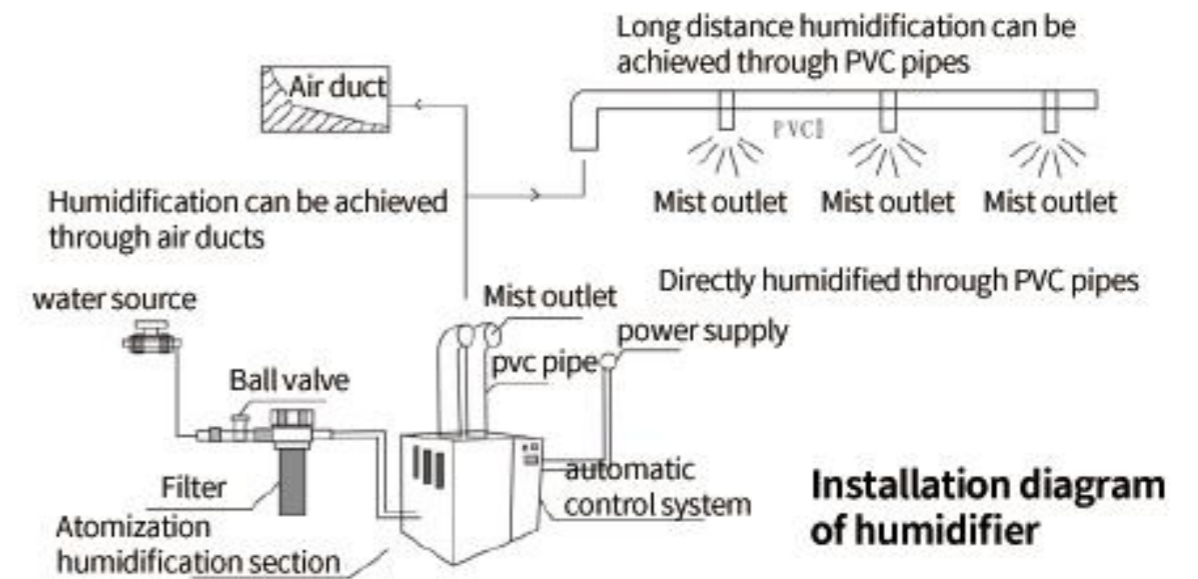
1.1 fog outlet of split-type steam humidifier, the fog tube diameter is 110mm, the length of the fog tube is 10m, the end plug hole is 32mm, the cross hole on both sides of the fog tube, the pore diameter is 32mm, the first 4 meters hole is 25cm, the rear 6 meters hole is 40cm, the pipeline end is 10CM higher than the front end, to ensure the water reflux in the pipeline;



graph 1



graph 2



graph 3

## 7. Precautions

1. Please install the humidifier power distribution cabinet in the indoor environment with a temperature of 1-40°C and a humidity of 20% -80%, otherwise it may cause personal injury or equipment damage.
2. Please install the humidifier power distribution cabinet in the indoor environment without high flying flowers and high dust, otherwise it may cause damage to the equipment.
3. the humidifier must reach the available water level before operation, and the water quality is pure water or the same softening water, to prevent the failure of the atomizer caused by too much scale. It is forbidden to add highly corrosive liquids or other liquids to the humidifier to avoid affecting the service life of the atomization metal shell and atomized sheet.

4. the split humidifier must be installed before normal use, the diameter of the fog outlet is 110mm, the material of the pipe can be ordinary PVC pipe, the height of the pipe should not exceed 3 meters, and the length should not exceed 15 meters. After connecting the fog pipe, the exit of the end is blocked, and then the side of the pipe is punched, so that the water mist comes out through the fog hole. The distance of the hole has no special requirements, and the size of the fog hole can be controlled at 1-3cm.

## 8. Daily maintenance

1. The arrangement of three water-free treatment: the first stage is 5 micron PP cotton filter, the second stage is 5 micron PP cotton filter, and the third stage is 0.1 micron PP cotton filter.

2. Maintenance of third water free treatment: the first and second filter element shall be replaced once every 3-8 days according to the water quality (if the filter element is yellow and black, please replace immediately); the third filter element shall be replaced in time according to the water quality for 1-3 months;

3. The central water softener should always keep the salt in the salt tank, and the quality of the salt is not lower than 7 KG;

4. Please clean up the scale on the surface of the atomizing board and the impurities in the water tank once a week, so as not to affect the atomization effect.

5. Please clean the cooling window around the humidifier once a week. The flying flowers or impurities on the small fan are used to ensure that the appearance of the equipment is clean and the heat dissipation is smooth. Otherwise, the damage caused by the humidifier shall be borne by your company itself.

## 9. Fault diagnosis and processing

Common fault	analysis of causes	terms of settlement
The humidifier does not work	1. Check whether there is a problem with the power supply	1. Whether the normal voltage is 220V
	2. Check whether the socket interface is in bad contact	2. Replace other sockets
	3. Check whether the built-in air switch is tripping or the undervoltage protector is red light protection	3. Close the air switch and stabilize the power supply voltage
The humidifier does not work	4. Whether the AC contactor is damaged	4. Replace the AC contactor
The humidifier indicator light is on but it is not working	1. Whether the humidity control or time control is reached	1. Adjust the control parameters to a reasonable range
	2. The AC contactor is damaged	2. Replace the AC contactor
	3. Temperature and humidity controller is damaged	3. Replace the temperature and humidity controller
	4. Damaged power supply box / transformer	4. Replace or repair the power supply box

The atomization board is not sprayed	1. The water level is too low	1. Adjust the water level to be 1cm above the liquid level switch
	2. Check whether there is too much scale on the atomization board surface	2. Clean the scale of the atomization board surface
	3. Check whether the atomization film is black / damaged	3. Replace a new atomization film
	4. Check whether the fuse on the circuit board is broken	4. Replace the 10A insurance pipe or repair the circuit board
	5. Check whether the atomization board is black or corroded	5. Replace and repair the atomization board
The power box red light flashes	It inks that the system is in a fault state and has stopped output	
	1. Flash 1 down: over temperature in the machine	1. Turn off the power supply and check whether the power supply box has good heat dissipation
	2. Flash 2: input undervoltage fault	2. Check whether the input voltage is stable
	3. Flash 3 down: output overload / short circuit	3. Check whether the atomization board is in bad contact or the atomization board is damaged
	4. Flash-4 down: other hardware faults	4. Replace the power box with damaged accessories or replace the power box
Taiwan power box	A flashing green light indicates an abnormality	2. The output load is too large to reduce the load
The humidifier works but does not fog out	1. The water level is too high	1. Adjust the water level to be 1cm above the liquid level switch
	2. The atomization plate raises the water column, but no fog	2. Improve the water source and clean the atomization board. The water quality of the atomization board should be softened water or similar pure water
	3. Too much scale and impurities on the surface of atomization board	3. Clean up the impurities of the atomization board surface
	4. The atomization film is black / damaged	4. Replace the atomization film
The humidifier works but does not fog out	5. Power supply problem	5. Check whether the power supply voltage of the atomized board is DC48V
	6. Damaged power supply box / transformer	6. Replace a new power supply box / transformer
There is fog but no air in the water tank	1. Fan damage	1. Change the fan
	2. The fan surface is blocked	2. Clean the fan surface

## 10. the energy exchange film working procedures

A. Please replace the clean water in the container regularly. When used for a period of time, scale will be deposited on the surface of the transducer, thus affecting the atomization effect. At this time, clean, wet soft cloth gently scrub the surface of the tablet, remove scale. Do not collide or scratch atomizers and water level sensing switches. (Do not use a home cleaner to clean any part of the atomizer)

B. When the atomizer cannot work, please check whether the power supply is connected and whether there is an appropriate amount of clean water in the container.

C. When the atomizer runs for a long time (about 5000 hours), the spray amount will decrease, and at this time, a new atomizer needs to be replaced (as shown in Figure 5)

a. Cut off the power supply, dry the water flow in the equipment water tank, and then dry the water on the surface of the atomizer.

b. Unscrew the pressure valve with the tool key, remove the old atomized keep the energy chamber chamber dry and clean.

c. Install the new atomized energy sheet up the front and down the back and tighten the pressure opening valve.

The service life of the atomization module is 5000 hours, and the replacement is shown in the figure below:



Special note: the change of water quality has a great impact on the normal work of the atomizer. If the atomizer only emits the water column and the atomization amount is very small, please replace the water in the container.

## "Three guarantees" voucher

According to the relevant national laws and regulations, in order to protect the rights and interests of customers, our company's three guarantees commitment all exceed the scope of the national three guarantees, to provide you with more services:

### 1. Three guarantees of content

1. The three guarantees period of the whole machine is one year;
- 2, the whole machine is damaged by non-human factors, change the old for new within three months, free warranty within one year;
- 3, consumables and electronic components and other vulnerable parts are not in the scope of the three guarantees;
- 4, after the warranty period of the whole machine belongs to the paid maintenance service, the material cost and labor costs;
5. The technology of our products is upgraded once every three months on average. If there is a software update, it can be upgraded for customers.

### 2. Within the validity period of the three guarantees, if the product fails, our company will implement the three guarantees according to the relevant regulations.

### 3. The following circumstances do not implement the "three guarantees", but the implementation of reasonable charge maintenance.

1. Failure caused by the failure of installation, use, maintenance and maintenance in accordance with the operation regulations;
2. Failure caused by self-modification, adjustment and disassembly;
3. Beyond the period of the "three guarantees";
4. Product failure or damage caused by force majeure, such as earthquake or fire;
- 5, after the occurrence of a failure, without the consent of the seller and the maintenance of the disposal.

### 4. "3 packets of proof" buy goods file is when the seller is in consumer buy goods, fill in according to the principle of one goods one card, ask consumer to want to sell unit seal, consumer unit did not seal, proof is invalid.

Company purpose: to start with service, rely on integrity development by strength, create first-class industry!

## warranty card

name		model	
Installation date		installation site	
customer name		Contact address	
contact number		invoice number	
term of service	annum	manufacturing No	

### Warranty terms

1. During the quality guarantee period, if any failure caused by manufacturing quality, the company is responsible for free maintenance service. This warranty does not apply to any damage caused by any unreasonable use. Our company provides paid maintenance service for damage caused by manufacturing quality problems or damage beyond the warranty period. Please read the instructions carefully before use.
2. The warranty terms are based on the invoice. When applying for the warranty, please attach the invoice. This warranty is granted only to the original purchaser, not to anyone who exceeds the authorization. All consequences caused by natural disasters are not covered in this warranty.
3. Our company, Ltd. has the final right to interpret the product warranty terms.