

UHxxYD

ULTRASONIC HUMIDIFIER



USER, INSTALLATION AND MAINTENANCE GUIDE

Read it before installing/using the machine!

Table of Contents

1	Working principle.....	3
2	Features.....	3
3	Parameter	4
4	Characteristics	5
5	Attention matters	6
6	Regular failure and failure elimination.....	7
7	Operation:	7
8	Applications:	9
9	Installation	10
10	Annex list	11
11	Maintenance:	13
12	Warranty:.....	13
13	IMPORTANT NOTICES.....	13
14	Contact Information.....	14

Thanks for using this humidifier of our company. In order to let you experience the product swimmingly, detailed instruction is provided which you can find the product's introduction, usage and other information. Before using this product, please read the manual carefully, so that you can correctly use it. In case of any printing or translation error, we apologize for the inconvenience. As for the content change, we are sorry for no further notice. This manual applies to all UHxxYD series product of our company.

1 Working principle

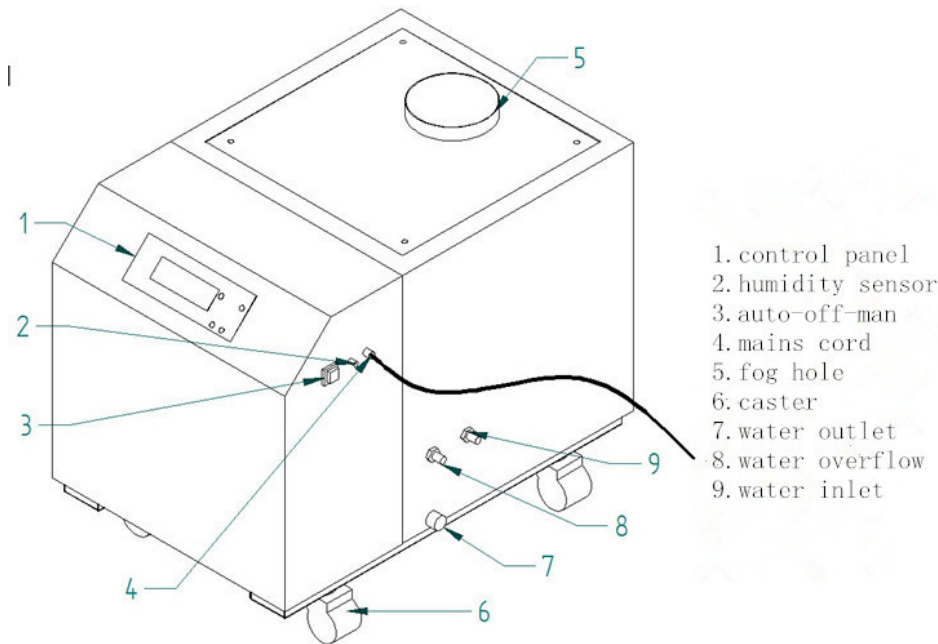
Ultrasonic humidifiers use a piezo-electric transducer to create a high frequency mechanical oscillation in a body of water. The water tries to follow the high frequency oscillation but cannot because of its comparative weight and mass inertia. Thus, a momentary vacuum is created on the negative oscillation, causing the water to cavitate into vapour. The transducer follows this with a positive oscillation that creates high pressure compression waves on the water's surface, releasing tiny vapour molecules of water into the air. This is an extremely fine mist, about one micron in diameter, which is quickly absorbed into the air flow. Since the mist is created by oscillation, not heat, the water temperature need not be raised. Ultrasonic humidifiers, therefore, can create instantaneous humidity, and don't have to wait for a heating element to boil the water. This precise on/off humidity control is the hallmark of ultrasonic humidifiers. In addition, unlike wet pad humidifiers, ultrasonic units can be of comparatively small size, and still produce significant amounts of vapour. When the sensors which pick up ultrasonic humidifier has decreased below a certain level of humidity of the air ultrasonic humidifier comes into operation. When, however, capture a high degree of moisture the cool mist humidifier is turned off. In this way is very simple to maintain a high degree of humidity within a room as the cool mist humidifier works automatically.

2 Features

- Internal adopting integrated type ultrasound machine, no mechanical drive, no noise, producing certain negative ion and low failure rate and easy maintenance, the output fog droplets diameter is only 1-10 μ . The stainless steel body, powder coated, beautiful appearance, standard filling water mouth, switch and outlet water spill, including nozzle to be automatic filling water, automatic control water level;
- External ON/OFF controller (red wires)
- High atomization efficiency (nearly 100%): producing small and even fog, quickly meeting the requirements of the relative humidity, saving water;
- Droplet Size: Steam-size droplets. One micron droplets allow for immediate evaporation like steam. Competitive spray nozzle systems create up to 20 micron droplets, risking wetness on equipment and in ductwork.
- Health: All dissolved liquids are removed from the water feeding into ultrasonic oscillators.
- Energy Cost: Ultrasonic oscillators generate 1 micron size droplets for as little as 1/13 the price of steam. This can save thousands of dollars in annual operating costs. In addition, ultrasonic oscillators turn on and off instantly, while steam units preheat, using more electricity.

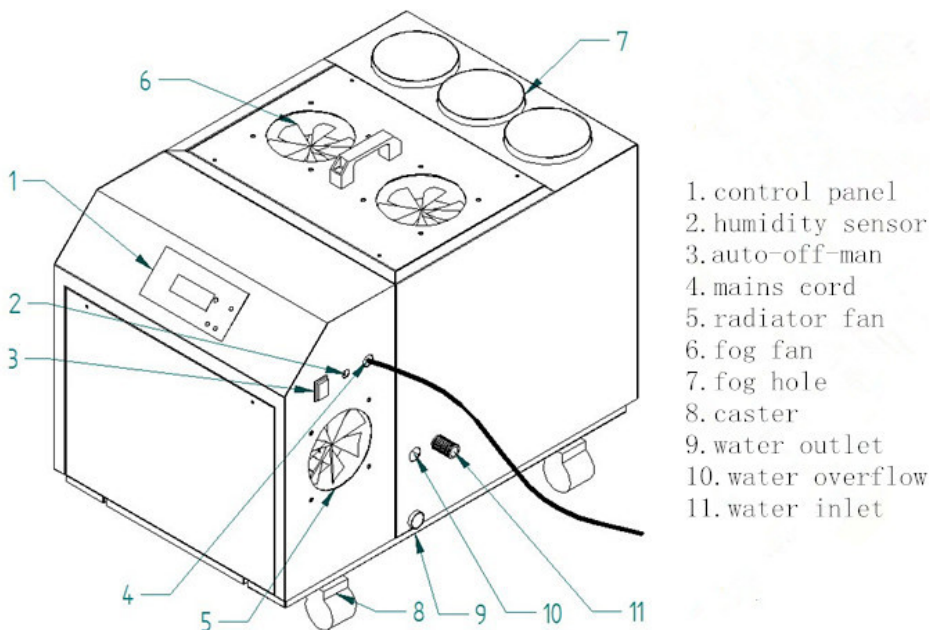
- Maintenance: Since water is purified before entry into the ultrasonic humidifier, there is considerably less maintenance required of an ultrasonic system as opposed to steam.
- RH Accuracy: Ultrasonic oscillators provide instant on/off of mist. As soon as the air strays from the relative humidity set point, an ultrasonic humidifier instantly turns on. Steam canisters have flush cycles that may shut down the humidifier for up to 15 minutes or more. Heating elements inside those systems take time to boil water to create humidity.

3 Parameter



- 1. control panel
- 2. humidity sensor
- 3. auto-off-man
- 4. mains cord
- 5. fog hole
- 6. caster
- 7. water outlet
- 8. water overflow
- 9. water inlet

UH03YD



- 1. control panel
- 2. humidity sensor
- 3. auto-off-man
- 4. mains cord
- 5. radiator fan
- 6. fog fan
- 7. fog hole
- 8. caster
- 9. water outlet
- 10. water overflow
- 11. water inlet

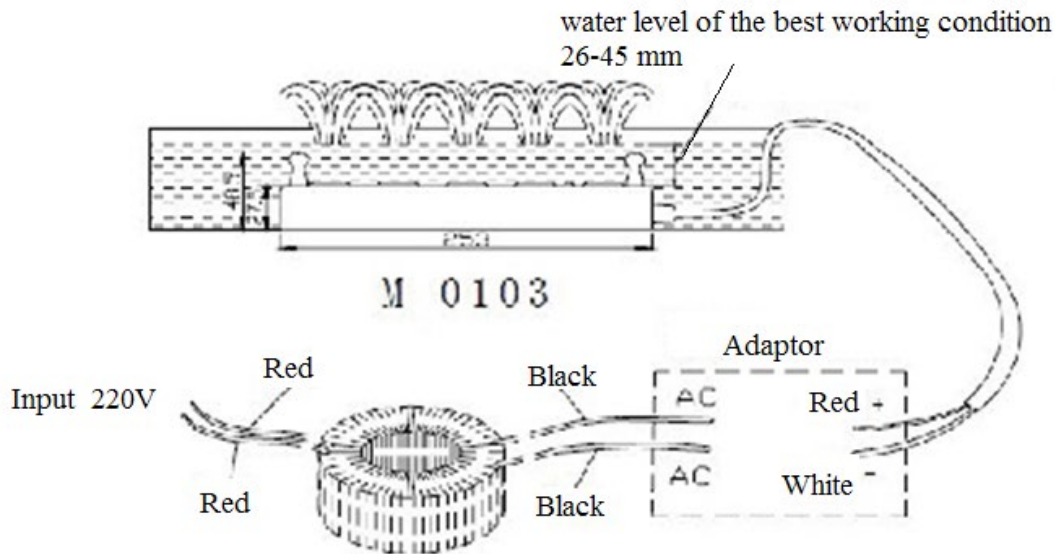
UH15YD

4 Characteristics

Models		UH-03YD	UH-09YD	UH-15YD	UH-21YD
FOG PRODUCTION					
Steam Capacity	[Kg/h]	3	9	15	21
Max pressure	[mm H ₂ O/ bar]	9/0,0009	16/0,0016	16/0,0016	23/0,0023
External Connection	[mm]	110x1	110x2	110x3	160x2
FOG OUTPUT					
Number of distributors	[n]	1	2	3	2
Air Flow	mc/h	180	360	540	720
ELECTRICAL DATA					
Power	[kW]	0,3	0,9	1,5	2,2
Supply	[Vac, Hz]	230, 50			
Phases	[n]	1			
HYDRAULIC DATA					
Input Water Quality		Complies with the microbiological requirements defined for drinking water by the regulations in force in the area of use; the use of partially demineralized water is recommended to reduce the frequency of maintenance; the use of totally demineralized water is not allowed			
Input Water Conductibility	μS*cm	70 ... 1250 (not totally demineralized)			
Input Water Hardness	°Fr	5...50			
Input Water Pressure	[MPa/bar]	0,1...0,4/1...4			
Input Water Connection		M 1/2" GAS			
Drain Water Connection		F 1/2" GAS			
GENERAL DATA					
Dimensions	(WxHxD [mm])	600x330x500	640x420x500	640x550x500	700x600x500
Weight	[kg]	28	36	35	48
IP Protection	---	20	20	20	20
REGULATION					
Control	---	Internal with probe, Manual			

5 Attention matters

- The atomizing air contains very high moisture around the mouth, avoiding these atomizing air backflow inside the equipment, ensure straight pipe goes up 1.5m minimum requirements
- The best water level (as below)



- Working conditions

Surrounding temp. range	1-40°C	Water Pressure	1-4KG/CM2
Surrounding RH level	≤85%RH	Water temp. range	1-30°C
Water quality	Soften Clean water	Surrounding	<ul style="list-style-type: none"> ✓ No high temp. Source ✓ No high intensity magnetic field ✓ No much dust

- Add the water filter

6 Regular failure and failure elimination

Fault	Reason	Ways
Indicator light off	<ul style="list-style-type: none"> ✓ No power; ✓ Fuse blown; ✓ Switch is off; 	<ul style="list-style-type: none"> ✓ Checking power supply; ✓ Changing same fuse; ✓ Turn switch on;
Don't feed water	<ul style="list-style-type: none"> ✓ No water supply; ✓ Magnetic valve is broken; ✓ Master control board is broken; 	<ul style="list-style-type: none"> ✓ Checking the water supply pipe; ✓ Changing magnetic valve; ✓ Changing master control board;
No Mist but the light works	<ul style="list-style-type: none"> ✓ Switch of atomizing is "0" position; ✓ Voltage is low; 	<ul style="list-style-type: none"> ✓ Turn the switch of atomizing on "1" or "2"; ✓ Checking the supply voltage, voltage stabilizer is needed;
Water Spill from tank	<ul style="list-style-type: none"> ✓ Master control board broken or the switch of water level broken; ✓ Sundries block magnetic valve; 	<ul style="list-style-type: none"> ✓ Changing master control board or the switch of high water level; ✓ Clean the magnetic valve;
Mist grows small or no	<ul style="list-style-type: none"> ✓ Much scale in tank; ✓ Atomizer is ageing; ✓ Voltage is low; 	<ul style="list-style-type: none"> ✓ Clean water tank; ✓ Changing or clean atomizer; ✓ Checking the supply voltage, voltage stabilizer is needed; ;

7 Operation :

Operating instructions

1) Auto-off-Man:

- a. Auto : auto control. Use of provided probe and internal controller
- b. Off : unit stops working;
- c. Man : manual control. The two red wires must be shorted to let the humidifier works. **Please be aware that the two wires have 230Vac.**

2) Power: Press "power", to turn on/off humidifier;





3) Set: Press "Set" to set the humidity and cleaning-time;

4) +,-: Press "+/-" to set the humidity value and time;




Control panel


1) Connect power supply, and set the humidity sensor, turn Auto, the LCD screen displays the

ambient humidity: press , the screen displays  and the Run indicator illuminates; press  twice,  disappears and the Run indicator is off. The fan will continue to work for 30 seconds. If you turn the Auto/Man to the middle, the fan stops working immediately.

2) Connect power supply, turn the Auto/Man to Man, the LCD screen no display, press On to start the machine and the Run indicator illuminates; press On twice to stop the machine and the Run indicator is off. If turn the Auto/Man to the middle, the fan stops working immediately.

3) When the ambient humidity is higher than the set humidity, the machine is standby; when the ambient humidity is lower than the set humidity, the machine starts working automatically;

4) Press  to set the humidity, press + - to set the required humidity, no pressing for 5 seconds the data will be saved;

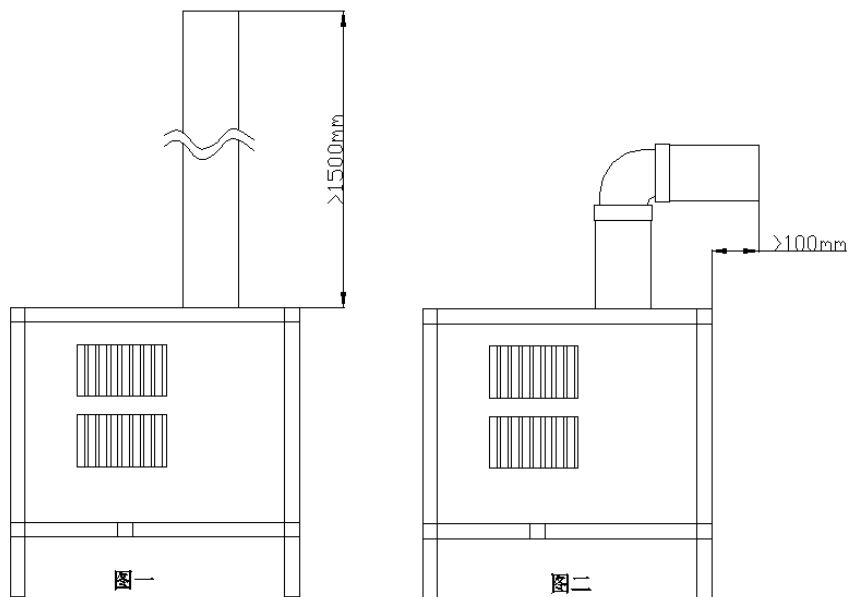
5) Press  twice to enter the cleaning mode, when the clock on the screen flashes, press + ,the machine will stop working after 150 hours to remind that it is time to clean; press – cancels the set. No pressing for 5 seconds the data will be saved;

Water outlet: Must be close while working. It can be open while you clean it machine.

Water inlet: Water pressure range 0~4kg/cm, avoid 100µm granules. Hardness less 5. Watering from the mist outlet is not advisable, the reason is the control board will not acquire the precise water level.

Fuse pipe: Avoiding device overload, and further breakdown. Do not change the large capacity fuse pipe randomness.

Power wire : 220V/50Hz(±2Hz), the ground line must be needed 。 The total fluctuation ≥ 1.2 *Rating power



8 Applications:

Printing;

Tobacco;

Timber;

Data Centres;

Paper;

Respiratory Illness;

Art&Antiques;

Automotive;

Cold Stores;

Textiles;

Hospital;

Office;

Pharmaceuticals;

Abattoirs;

Cleanrooms;

Tea Production;

Crop Storage;

Explosives;

Mushroom Growing;

Food Manufacturing;

Medical Device;

Electronics;

Hatcheries;

HVAC System;

Concert Halls/Organs;

Etc.

9 Installation

Reasonable pipeline, preventing leakage. When is in a larger area, small fog mouths can be drilled in pipe (same as figure 2). The pipe way showed in figure 3 is banned

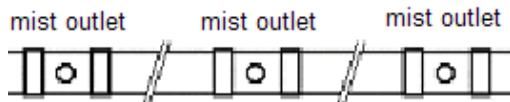


Figure 2

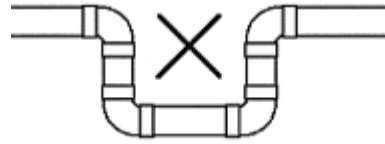
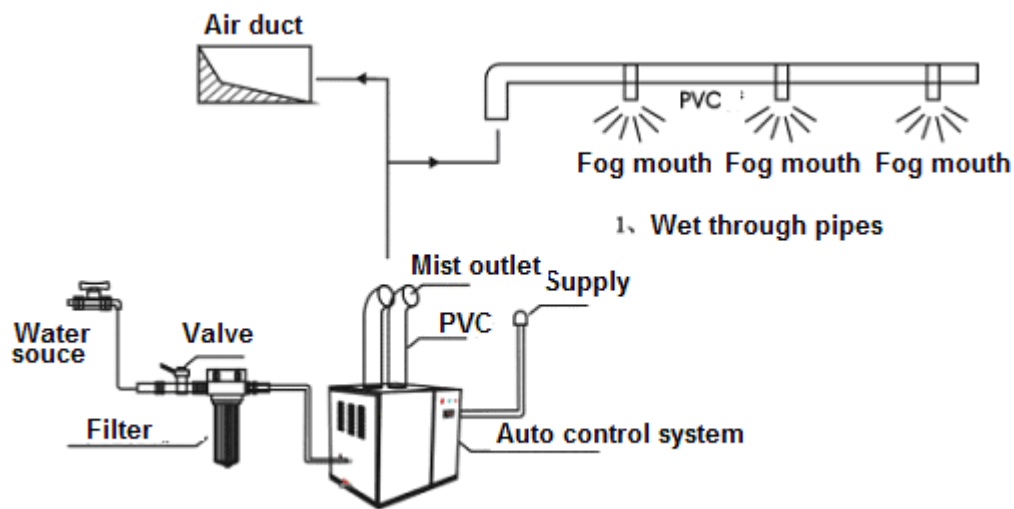
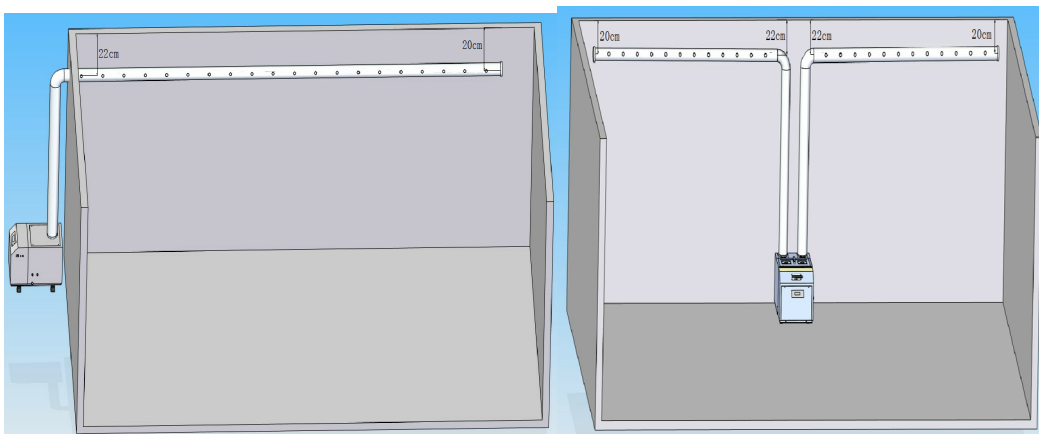


Figure 3

Installation drawing:

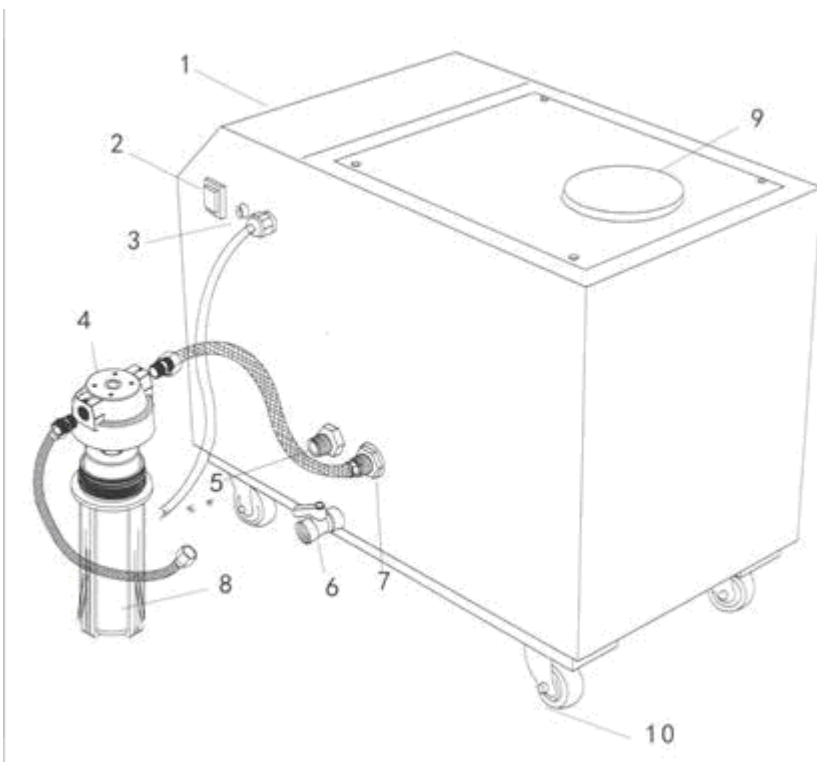


Examples:

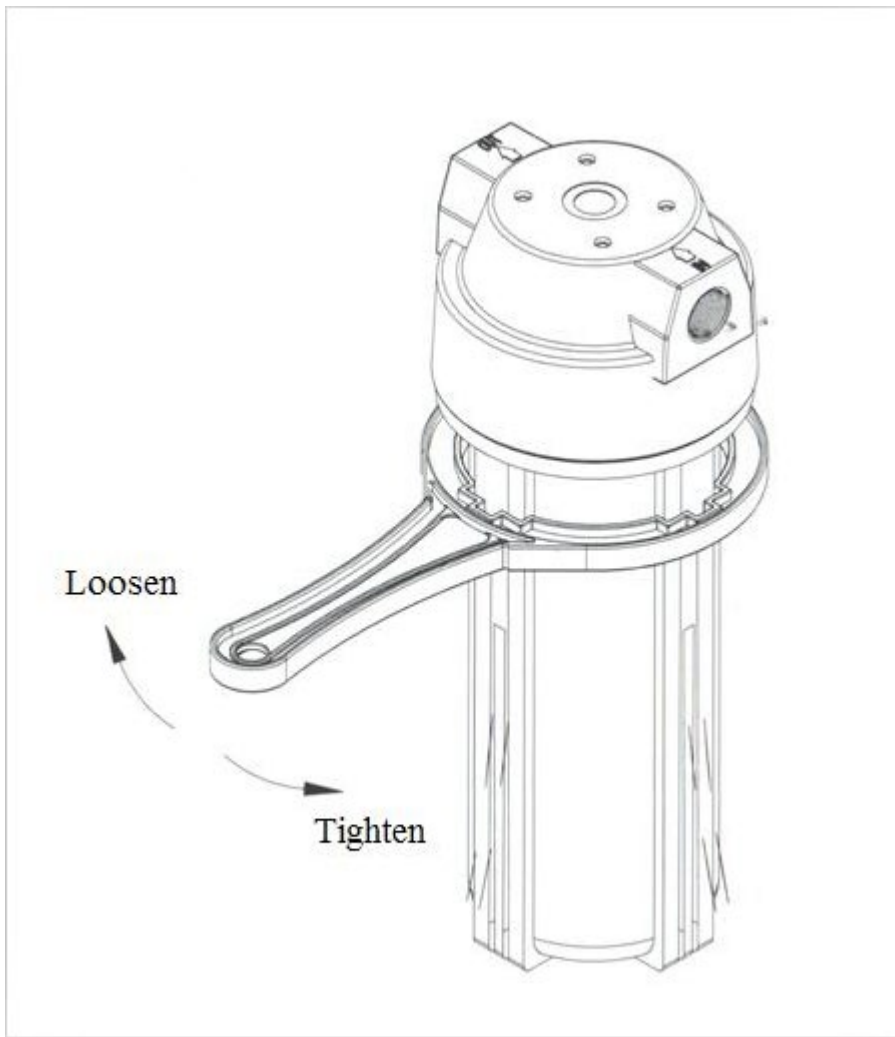
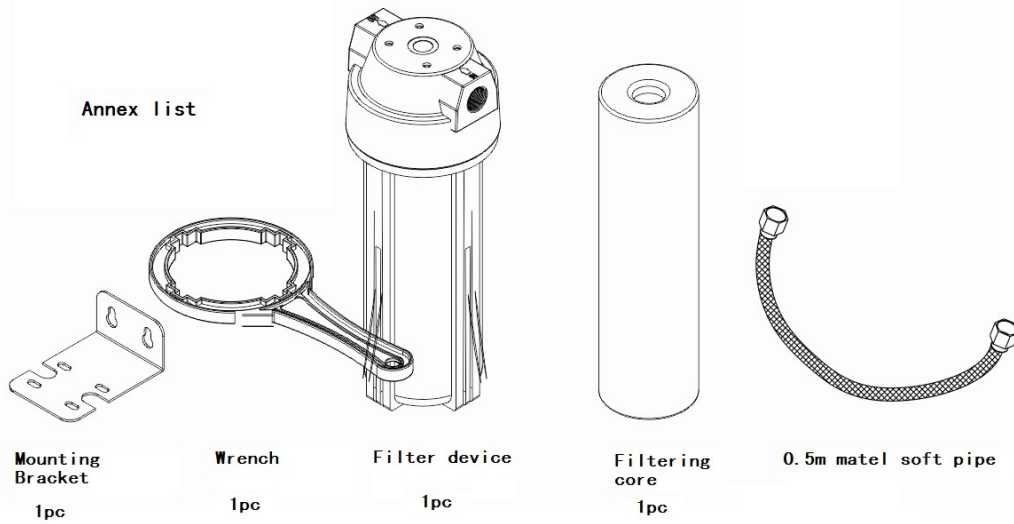




10Annex list



Annex list



11 Maintenance :

To ensure high quality atomized humidifying effects, check status and clean the inner machine regularly, depending on the water quality one time one month, cleaning method as follows:

- A. Open cover, using soft cloth or brush cleaning atomization device (Do not scratch atomization device as well as water level induction switch, the home detergent cannot be used), cleaning the scale, then washing by clean water;
- B. While watering do not pour the water into the circuit board to lead to short circuit.
- C. Close cover

11.2. Ensure machine runs normally long time, water filter should be regularly cleaned, one time one month, cleaning method is as follows:

- A. Open the cover of filter;
- B. Removing dirt from filter;
- C. Close it again.

12 Warranty:

ELSTEAM Srl recognizes on its products the legal guarantees in force at the time of sale of the product. Incorrect use and lack of maintenance entail the automatic forfeiture of any form of guarantee.

13 IMPORTANT NOTICES

IN NO EVENT SHALL OUR COMPANY OR THE SUPPLIER BE LIABLE TO YOU OR ANY OTHER PARTY FOR ANY DIRECT INDIRECT GENERAL SPECIAL INCIDENTAL CONSEQUENTIAL EXEMPLARY OR OTHER DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PRODUCT INCLUDING WITHOUT LIMITATION DAMAGES FOR INJURY LOSS OF PROPERTY BUSINESS PROFITS BUSINESS INTERRUPTION OR FROM ANY BREACH OF WARRANTY EVEN IF OUR COMPANY OR SUPPLIER HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES IN NO CASE SHALL OUR COMPANY OR SUPPLIERS LIABILITY EXCEED THE AMOUNT YOU PAID FOR THE PRODUCT

Specifications designs and dimensions subject to change without prior notice

14 Contact Information

Italy

ELSTEAM Srl

Via E. Fermi 496

21042 Caronno Pertusella

ITALY

Tel: +39.02.9659890

Fax: +39.02.96457007

Web: <http://www.elsteam.com>

Mail: info@elsteam.it