



The Smart Choice For Outdoor Cooling

Thank you for purchasing this Misting System from Smart Mist USA. Please read this user manual carefully and completely before starting. **For more complete installation instructions and to order extra parts, please visit our website at www.smartmistusa.com**

Misting Machine User Manual

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**You Must Register Your System On
Our Website To Activate Your
Warranty**

If you live in an area with hard water (calcium), you will need to treat the water with a phosphate filter. Hard water deposits will clog your nozzles and pump valves. Issues caused by hard water are not covered by the warranty.

We offer a heavy duty phosphate filtration system on our website. In addition, we offer an upgraded sediment filter for those who have potentially dirty water sources such as well water. You can purchase either, or both in a dual cannister configuration. See pictures below and visit our website to learn more and purchase.





















Single cannister for phosphate or sediment filter



Dual cannister for sediment and phosphate filter

Safety Instructions: Please read thoroughly before operating

	<p> The operator has to read and understand these instructions carefully before any installation and operation. Please follow the installation procedure, working procedure, safety precautions, and maintenance guidelines.</p>
	<p> Please use clean water. Do not use well water, river water or any other dirty water sources. These water sources will cause blockage of the nozzles. As well, the pump life will be shortened and or running problems will occur.</p>
	<p> Please check whether any wiring is exposed, whether any nuts and bolts are loose, and whether any pipes are wrongly connected.</p>
	<p> This product has a self-priming function, but there should not be air inside of the pump. Please see operation guide to purge air from the system.</p>
	<p> Spare parts, including water filter, pipe, nozzles, fittings, and so on, must be original parts. Otherwise, it's possible to have water leakages, oil leakages and other problems.</p>
	<p> Do not use any volatile or flammable solvents to clean parts or the pump cover.</p>
	<p> After running for some time, please check the pressure gage on the machine (usually check each month), and make sure the pressure is between 40bar and 70bar.</p>
	<p> The water filter should be cleaned frequently to prevent dirt from entering the machine and nozzles , thereby reducing the product life.</p>
	<p> The nozzle quantity and size should be in the stated range. Otherwise, the pressure will not be enough to supply proper misting. You must use at least 50% of the max quantity</p>
	<p> Please check the voltage before turning on the power, this product voltage should be 120V unless otherwisw stated.</p>
	<p> The machine must be put in the shade, without direct sunshine, and in a dry location.</p>
	<p> If the motor has any problems , please don't force it to run. Unplug the unit and repair the unit as necessary</p>
	<p> It's strictly forbidden to open the pump, machine inner pipes, wire, machine valve and other related parts when the machine is running.</p>

Product Specifications

Detail specification:

Model	Pump		Machine required voltage	Motor			Performance		
	Pump	Pressure		Motor voltage	Power	Rpm	Noise with pressure	Maintains time	Remote control
SM-100	3 pistons	70Bar /1000 PSI	110~240V/50-60Hz	110V~240V AC	180W	1400/50Hz 1680/60Hz	56db	1000-1500h	By Phone App / Remote key(optional)
SM-150				110V~240V AC	180W	1400/50Hz 1680/60Hz	56db		
SM-200				110V~240V AC	750W	1400/50Hz 1680/60Hz	58db		
SM-300				110V~240V DC without brush	750W	1600/50~60Hz	60db		

Nozzles related quantity and size requirements:

Too few nozzles will make the pump run hot, while too many nozzles will cause the system to operate with too little pressure. For best performance, use at least 50% of the max quantity.

Model	Family Voltage	Hertz	Machine Voltage	Flow rate L/min	Nozzle working quantity		
					0.1mm size	0.15mm size	0.20mm size
SM-300	220 AC	50	110/220V DC	3	38~90	30~75	18~50
SM-100	220 AC	50	220 AC	1	12~30	8~25	6~15
SM-150	220 AC	50	220 AC	1.5	18~45	12~35	8~22
SM-200	220 AC	50	220 AC	2	24~60	20~50	12~30
SM-100	110/220 AC	60	110/220 AC	1.2	12~35	8~28	7~18
SM-150	110/220 AC	60	110/220 AC	1.8	20~50	12~40	10~27
SM-200	110/220 AC	60	110/220 AC	2.4	28~65	22~60	15~36

Product packing list

	Detail Configuration	Qty
Main machine	New 3 pistons pump Touch system App operation system 300 hours oil change reminder system	1
Inlet pipe system	High quality water filter (SS304 filter)	1
	Polyether pipe with faucet connector	1.5m
	Polyether pipe with machine connector	1.5m
	Water filter connector (already assembled)	2
Outlet pressure pipe system 1/4" system for SM-100, SM-150, SM-200 SM-300 uses 3/8" tube from machine to the first nozzle.	PA12 pipe (double quality of PA6 &11)	Depends on model
	Premium quality nozzles with filter and valve	
	New quick fitting	
	End quick fitting	
	L type connector	
	Tee fitting	
	Stainless Steel pipe	
	SS material pipe hanger	
	Machine & pipe connector	1
Other full set parts	Big pipe cutter	1
	Heavy Duty packaging	1
	User manual	1
	Syringe	1

Inspection

□ Once purchased

- Make sure there is no damage to the package;
- Make sure the product model & color is correct;
- Make sure the parts are the same according to the packing list.

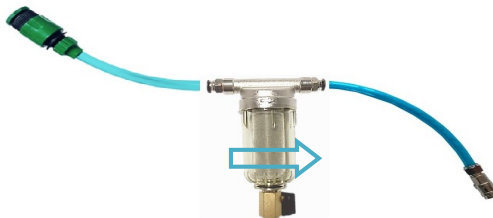
Pump Placement: Find a location away from the patio up to 50' away. You must protect the pump from sun and rain. Do a quick Bluetooth check to make sure you are in range. (See page 9). Test that you can turn on the pump with your phone. Just do a momentary test. (1-2 sec.).Do not run pump without water turned on. Once you have established your location, proceed with the following:

Operation manual:

See website for detailed installation guide. Also read Knowledge Center

Step 1: Install the inlet water system (water filter must be vertically installed with hanger).

Connect to faucet

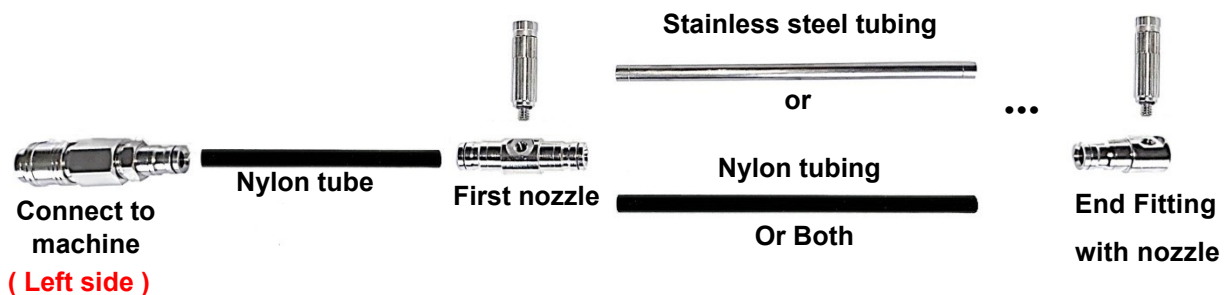


Connect to machine
(**Right Side**)

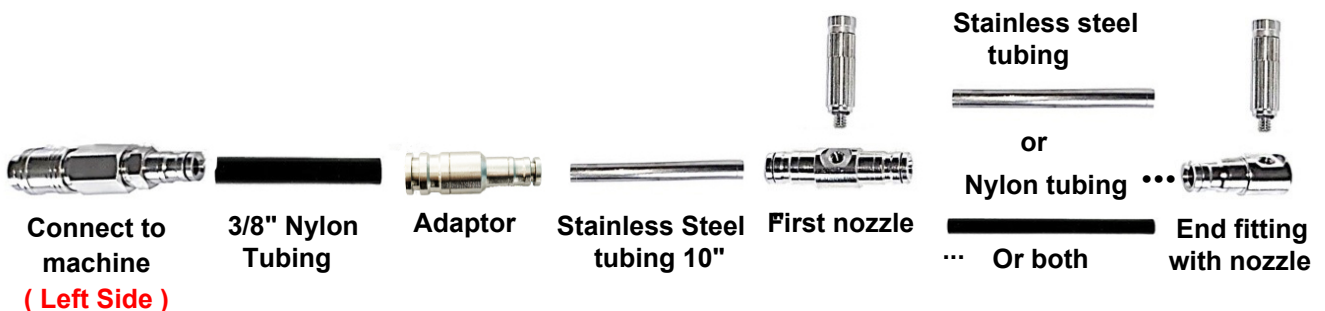
Step 2: Install the outlet high pressure pipe system.

Install the outlet high pressure system according to your design. All of the pipe must be straight to the fitting to avoid leakage. A combination of nylon and stainless steel pipe can be used to complete your system. **DO NOT CUT STAINLESS STEEL PIPE.** The groove near each end of the tube must remain or the connection will fail.

For SM-100, SM-150, SM-200



For SM-300

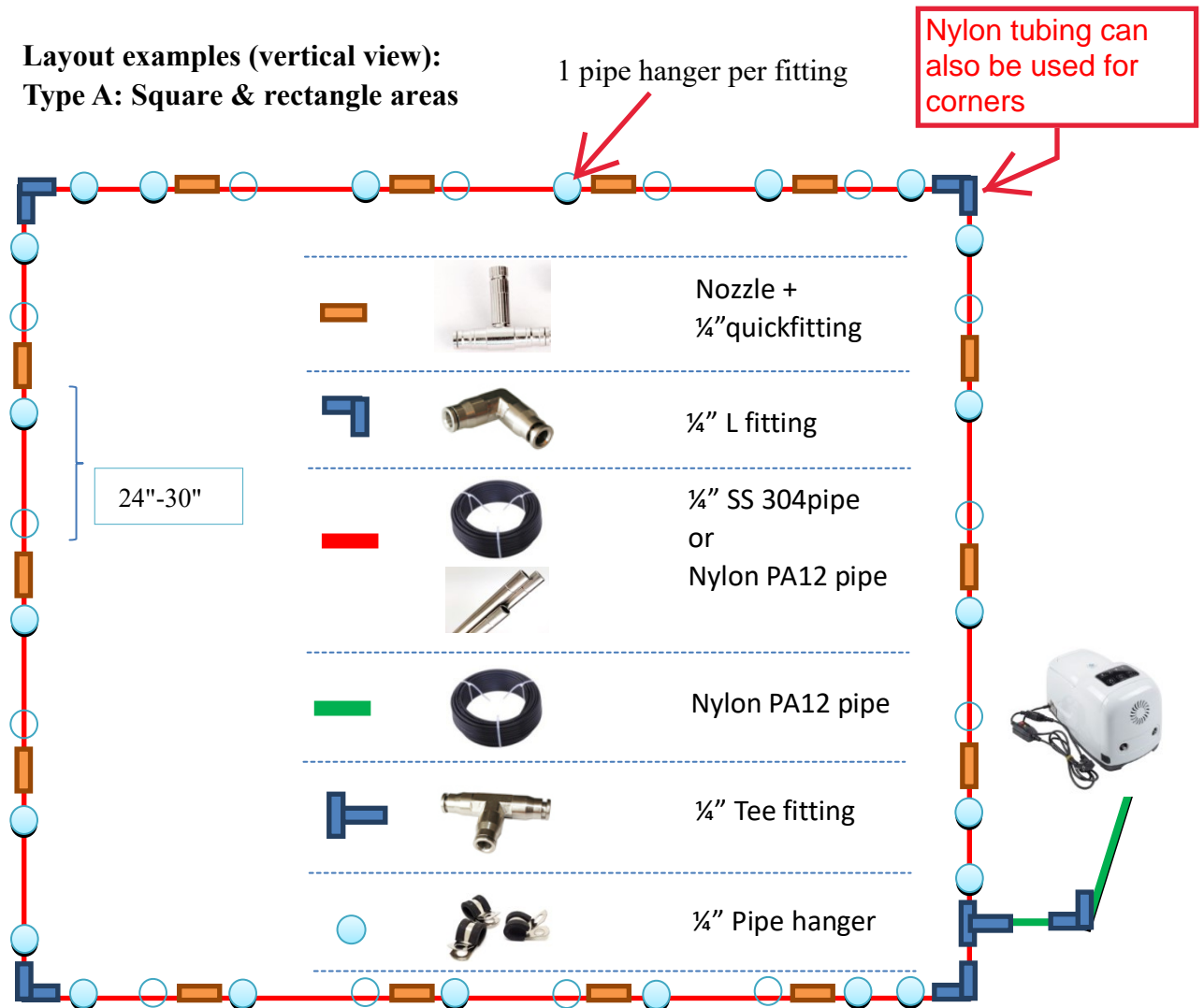


Warning:

- 1) The connecting pipe from the pump to the first nozzle **must be Nylon Pipe** to avoid any shaking. From then on stainless steel, nylon, or a combination can be used
- 2) L fittings and Tee fittings are included, but more may be needed according to your design. Sketch out your design and order parts as needed
- 3) The Nozzle quantity should be less than the Max quantity suggested and more than 50% of the max quantity suggested. See the Nozzle Chart on the website
- 4) **2CM of the pipe** must be pushed into the fitting. The fitting has 2 lockers, both of the lockers must lock onto the pipe, otherwise it will leak after after some time of spraying.. Please note following:



**Layout examples (vertical view):
Type A: Square & rectangle areas**



1. Use Nylon tubing to connect the pump to the first fitting
2. Pipe hangers (included) and screws should be used to attach the pipe to the wall or structure. You must purchase the type of screws needed for your installation. For example wood screws or sheet metal screws. Please use stainless steel screws to prevent rust stains.
3. SS304 and Nylon PA12 pipe can be mixed for easier installation;
4. Nozzle spray direction: usually 20°-45°. By mounting your tubing on the lower edge of the face of your beam, you can swivel the nozzles nearly 180°. Find the direction that works best for you. See Fig.1 below.

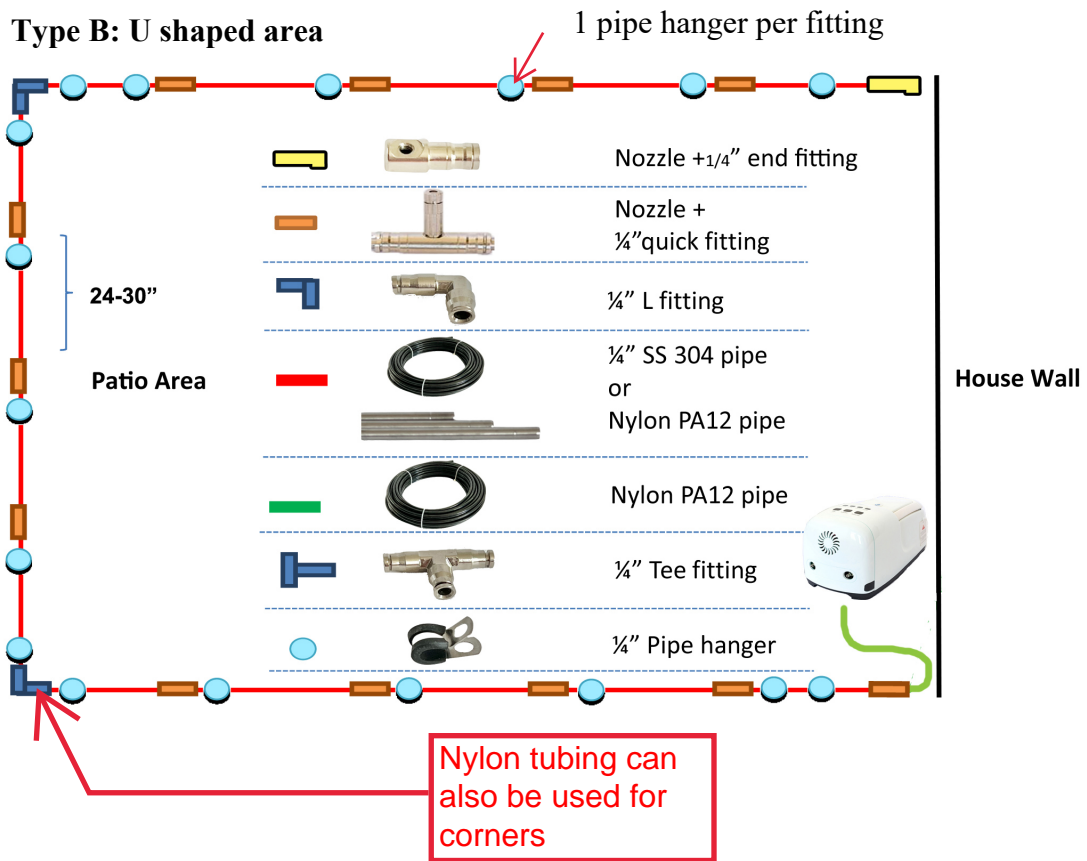
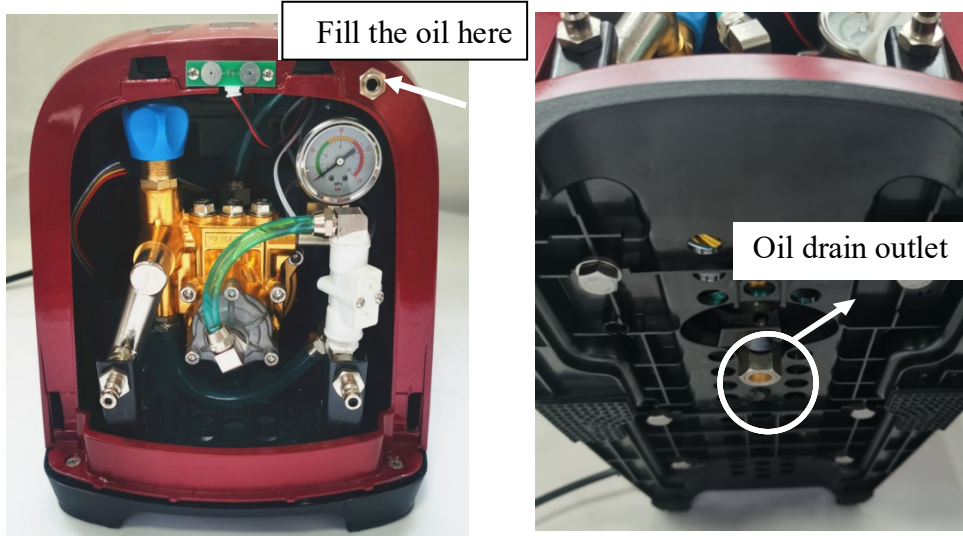


FIG. 1

Step 3: Fill 80ml pump oil using included syringe. Tilt the pump back slightly. Dispense four 20ml amounts into the fill hole in the upper right corner (see photo below). **Go slowly and be patient!**
(Tip: remove syringe plunger and put a small amount of oil on the rubber, then, replace plunger into syringe)



Step 4: Push the air out of system: Connect the inlet pipe to the faucet & machine (Right side). Open the faucet **approx..1/3-1/2 of the way**, Push the air out of the pump for 10~15 seconds then turn off the water.

Step 5: Flush the tubing system: Connect the outlet fitting. Unscrew the last Nozzle in the system. Turn the water back on **1/3-1/2 of the way** for a couple of minutes. You should see water coming from the last nozzle hole. Turn the water off and screw in the last nozzle. Next turn the water back on **1/3 to 1/2 of the way** .



Step 6: Run the machine to finish the installation.



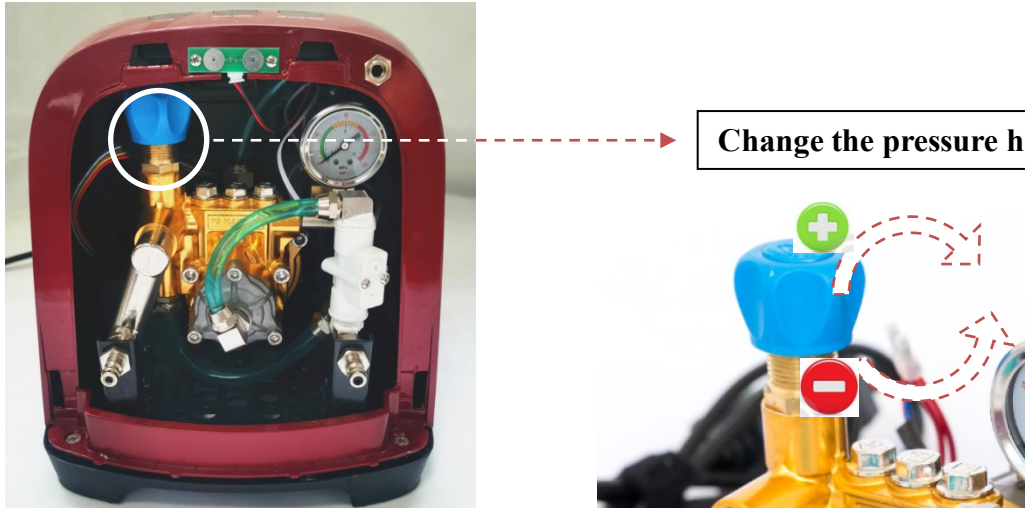
1st: Connect the plug,

2nd: Wait 5 seconds for the software to start 3rd Power on the machine

NOTE: If the black pipe is shaking heavily, there is air in the pump, Repeat step 4

Step 7: Optional operation:

A. Set the pressure: The factory has already set the machine's best working pressure (5~6Mpa). But if the nozzle quantity has increased or the user has special demands, the user can adjust the pressure as follows:



Please adjust the pressure regulating valve, and set the machine working pressure between 4Mpa to 7Mpa (The best working pressure is at 5Mpa to 6Mpa)

- 1) **Counterclockwise will reduce** the pressure
- 2) **Clockwise will increase** the pressure (you'll need to turn off, and then turn on the machine again to check the new pressure, it will not show the exact new pressure if the pump is not running from 0 bar again).

Warning:

- 1) **If the machine stops automatically** and it is very hot outside, please reduce the pressure to less than 6MPa. Most likely, the motor is overworking and the over-heat protection has cut the motor's electricity.
- 2) **If the manometer is jumping up and down** (about 1 second per time), it's because the motor power is not enough to carry the pressure, this only happens in 60HZ voltage countries.

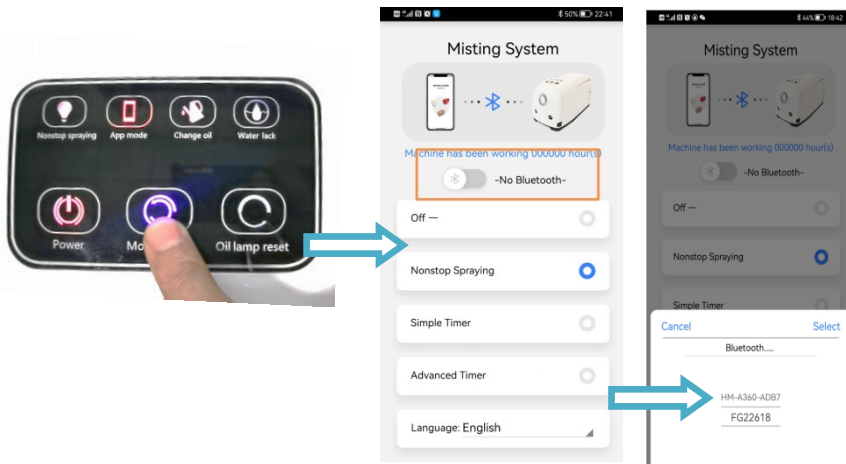
B. App Use: How to download the APP mobile software?

1. **Search: "Fog Machine" or " Misting System"** from Google Play (Android) or IOS Store (Iphones, Ipad, Imac and so on);

Or:

2. Scan the QR code here on the side of the machine





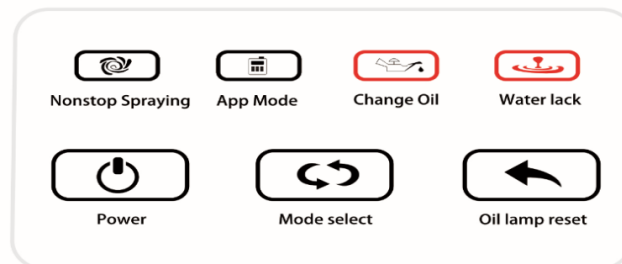
Turn on the machine and change to **APP** mode

- ① On your phone, in settings, turn on Bluetooth. (Do not connect to the machine here, it must connect to the machine through the APP software);
- ② Open the APP, press the Bluetooth photo as shown above, choose (FGXXXXXX) and press ok.

Attention:

- 1) Do not connect the machine from the Phone bluetooth, the connection will fail.
- 2) If the bluetooth is not displayed, or the connection fails, your machine may be too far away. It is also possible that the machine has timed out. Restart the machine by pressing the red button on the power cord. Occasionally you may need to close out the App and re-start.
- 3) One machine only can connect with one phone. If customer needs to connect to another phone, the previous phone connection must be disconnected first.
- 4) For timer setting manual, please check "User manual" inside of App.

Step 8: Other touch key settings:



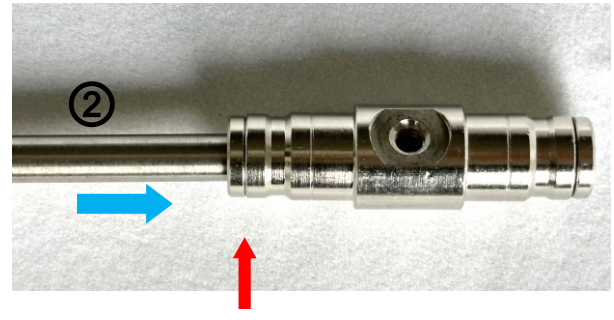
- 1. Power:** Lit/blinking when machine is not working. Other lamps are on when machine is working;
- 2. Mode select:** Choose machine working mode between "Nonstop Spraying" & "App Mode" 2 modes;
- 3. Oil lamp reset:** After every 300 hours, the "change oil" lamp will automatically come on, please change the oil and then touch this key for 5 seconds, the lamp will turn off;
- 4. Nonstop Spraying:** Means machine will spray without stopping for 24 hours;
- 5. App Mode:** Only when you choose this mode, the machine will follow your current mobile APP setting;
- 6. Change oil:** This lamp will automatically come on after running 300 hours. It reminds you to change the pump oil, the lamp will turn off after you touch the "oil lamp reset" for 5 seconds.
- 7. Water Lack:** Means water is off or restricted and machine will not operate.

How to take the pipe out from the fitting?

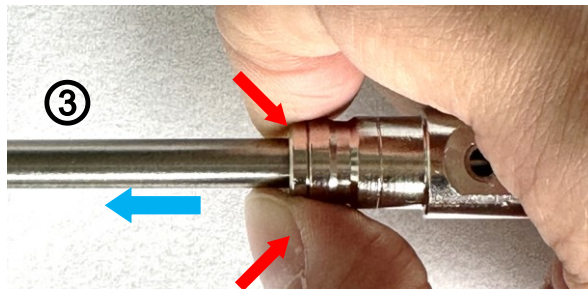
If you need to disconnect the pipe from the fitting, follow this procedure.



Original shape. Note space between collar and fitting



Push the pipe into the fitting to where there is no space between the collar and the fitting



With one hand, hold the collar tight to the fitting. With the other hand, pull the pipe out. You can also use a small open end or crescent wrench to hold the collar up tight.

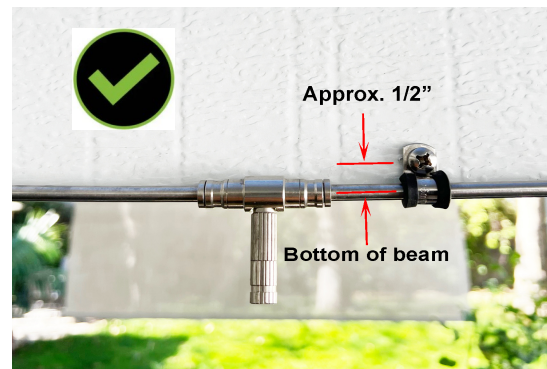


The pipe can be easily pulled out

Note:

Removing nylon tubing from the fitting can be difficult. This is because the high pressure expands the tubing. The teeth inside on the fitting will therefore "bite" deep into the tubing. You may have to hold the tubing in a vice or with vice grips. The use of a small open end or crescent wrench to push collar up tight may be helpful.

How to install the pipe?



1. The Nylon tube can be used and bent as needed
2. The SS304 pipe must be securely attached on the wall, structure etc. If mounting on a beam, the best location is at the bottom edge of the face on the inside or outside. This will allow you to swivel the nozzles nearly 90° in either direction. See example above.

Maintenance

Winterizing your system :

At the end of each season and before any possible freezing, please perform the following procedure:

1. Unplug the machine
2. Unscrew the last nozzle in your system
3. Disconnect the high pressure fitting from the pump (left side) and insert the drain fitting into this fitting. You should now see water draining from the fitting.
4. Disconnect other hoses from machine and **bring the machine in for the winter**
5. Open the valve on the filter to drain the filter bulb

Drain Fitting



In order to have the best performance from this product and longest life, the user must follow the following daily maintenance procedures:

Maintenance plan every week (Depending on local water quality)

- Check the water whether it is clean or not (every day);
- Check for blocked nozzles & water filter (every week);
- Check pipe seals for leakage (every week);
- If possible, after running the first 20 hours, change the pump oil (new machine).

Running after each 300 hours (first formal maintenance)

- Clean and wash the water filter;
- Take out the High pressure pipe connection, open the faucet valve, and let the faucet water wash the inside of the pump;
- Check the pump working pressure;
- Change bad nozzles;
- Change bad quick fittings & PA pipe;
- Clean the machine ABS cover with non-corrosive safety solvent to protect the cover painting;
- Change the pump oil;

Running after each 1500 hours

- Change the water filter and replace if it is not able to be cleaned again;
- Check the pressure valve;
- Check whether the electrical terminals are tight;
- Check whether the main bolts, nuts connectors are tight;
- Change the water seal & O-ring;

Running after each 2000 hours

- Change the oil seal;
- Check the bearings inside of the pump and change it if they are worn.

Warranty:

For warranty and return procedures, please visit our website at www.smartmistusa.com

Troubleshooting

Problem	Remedy
Machine can't start	1.Check whether the electricity protector has cut the power off, Please press the red button on the electricity protector for reset;
Machine pressure is 0Bar	The power transformer (black box) inside is bad, or the high pressure solenoid valve seal is broken, it will cause the water to be running inside the pump. The user can see if the water is running inside of the solenoid valve blue pipe.
Can't self prime or the pump pressure is lower than 40Bar (4Mpa)	<ol style="list-style-type: none"> 1.Some air is inside of the pump, take off the outlet pipe and let the machine run for few seconds, or use the faucet to push the air out of the pump 2.The water filter or the inlet pipe fitting is blocked; 3.The water and inlet pipe height difference is over 0.5 meter; 4.The seal of the pump has a problem and needs to be changed
Misting system not producing mist	<ol style="list-style-type: none"> 1.The pressure is too low, need to adjust the pressure valve or reduce the nozzles quantity; 2. Some connectors are leaking (Solution: check for leaks, change the parts or repair); 3.The water filter is blocked and needs to be cleaned; 4. The seal of the pump is bad and needs to be changed; 5.The spring of one-way valve has failed and needs to be replaced
Some of the nozzles can't spray the mist	The nozzle is blocked and needs to be cleaned or changed to a new one
The APP is not working correctly	<ol style="list-style-type: none"> 1.Please close the APP completely and open it again ; 2.Please check whether the mobile phone or the mobile system is too old. Update the phone 's OS. 3. The system has timed out. Restart the system by pressing the red button on the power cord. Close and re-open the App
The noise is loud and the machine is shaking when working or vibrating heavily	<ol style="list-style-type: none"> 1.Disconnect the outlet pipe and push the air out of the pump; 2.The pump has a problem and needs repair;



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