

SİSMİST

evaporative cooling and humidification systems

GUIDE



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SAMPLE OF THE MYSTING SYSTEM

SİSLEME SİSTEMİ UYGULAMA ÖRNEĞİ



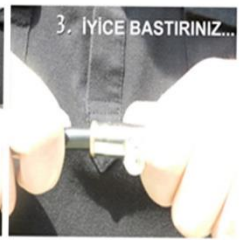
paketten çıkan nozulları ve nozul taşıyıcıları kontrol ediniz



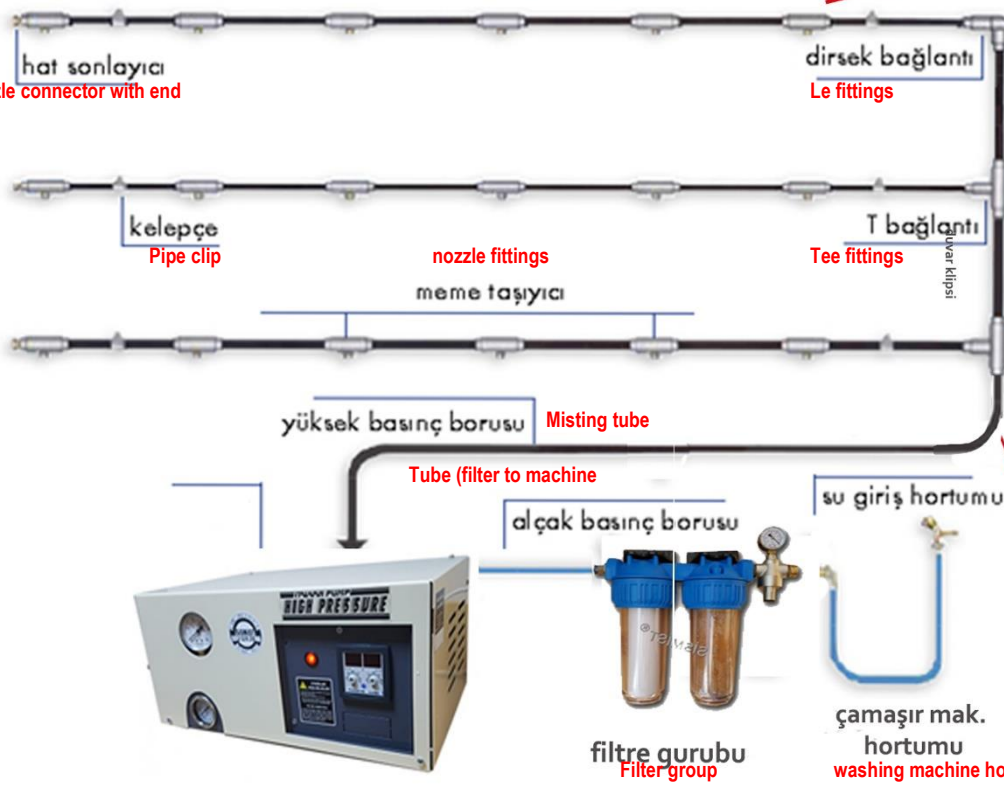
nozulları çevirerek taşıyıcılara takınız



iyice bastırınız. bastırırken contalarını hasarlamayınız



boru esnektir. dönüşlerde bu esnekliği kullanabilirsiniz



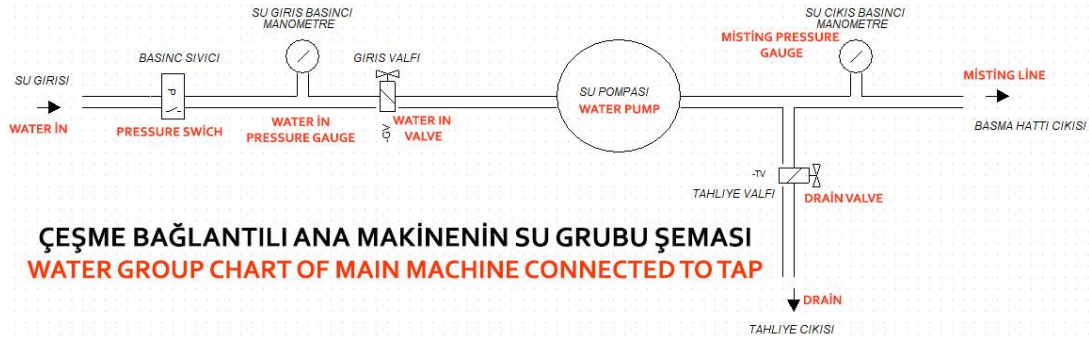
PAKET İÇERİĞİNDEKİ ÜRÜNLER

PRODUCTS IN THE PACKET

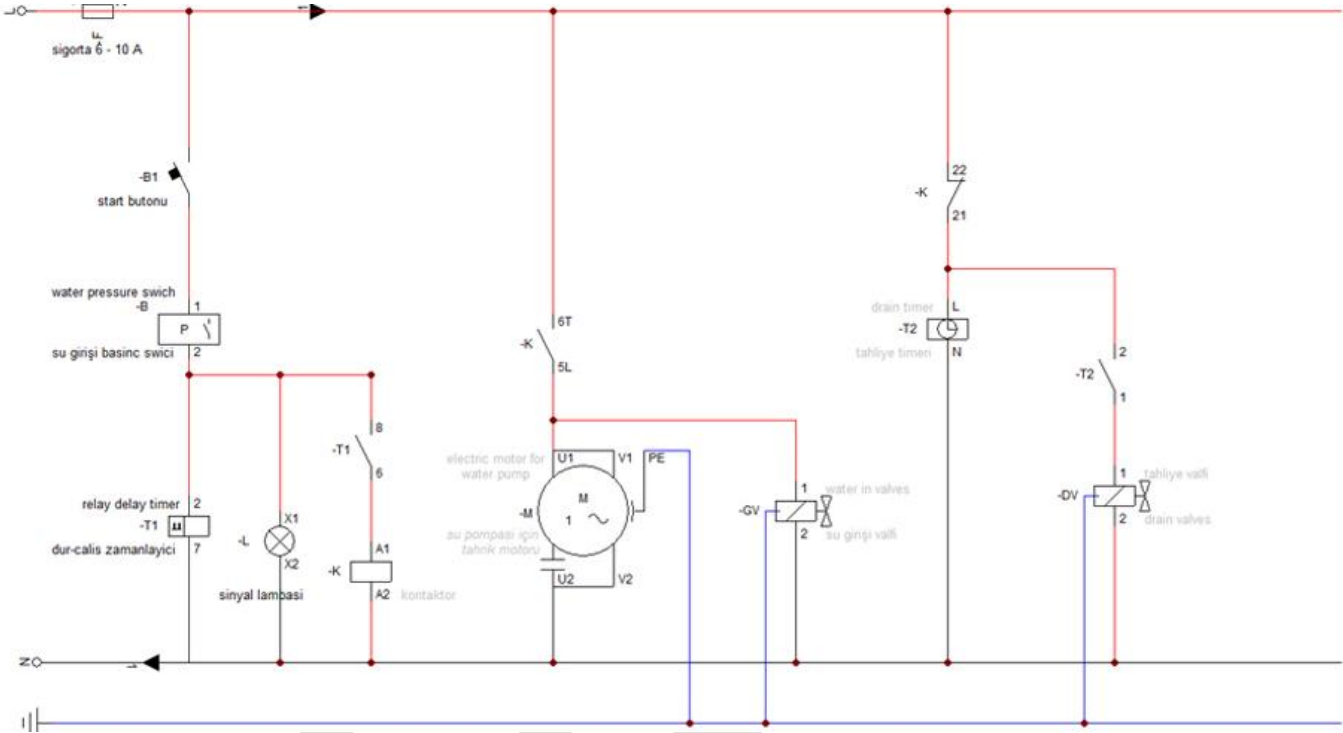
fanlı sistem siparişlerinde
if order with fans



Washing machine hose



Main machine electric chart:



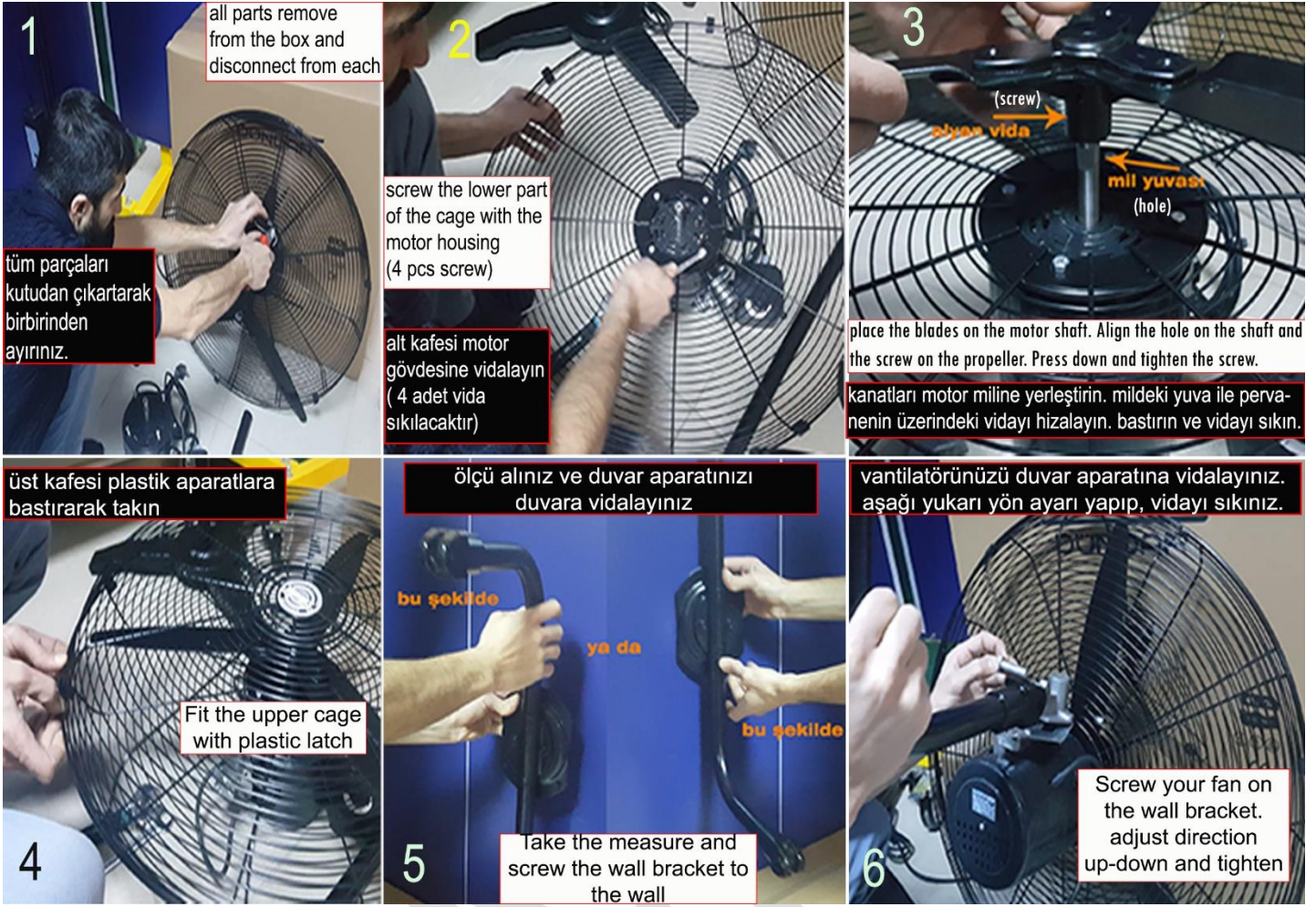
Main machine features:

Back rear panel inputs:	Front panel features:	General features:
Electrical input 220 V 0,55-1,1kW	Water in pressure gauge (1-10 bar)	H x W x D= 55x33x24 cm – weight: 24 kg
Water input 8-12mm quick conn.	Misting pressure gauge (1-150 bar)	Two colour oven drying, sound proof vibration buffer
Misting line 3/8" quick connect	Relay delay timer (1sec – 99 hour)	Temp.- humid.= +1 - +40 °C / max %95 rH
Drain 8 mm quick connect	On-off button with light + signal lamp (if there is no water, pump will not work)	Flow = 2 – 4 – 7 – 8 – 11 - 15lt / DK Max – working pressure= 120 BAR – 70 bar

System general features :

Fittings faatures	Metal + galvanized coating, 3/8" quick - connect, max working pressure 70 bar,						
Metal Nozzles	3/16" therad - orifice: 0,2mm (0,10 - 0,15 – 0,30 – 0,40 – 0,50...0,80 can be change) – ceramic bit clearable, wiht filter - antidrip- min 30- max 100bar – galvanized coating						
Misting tube	Black PE polietilen or PA poliamide tube – inner diameter 4,5x outhter diam: 9,6mm = 3/8"– max 70 bar						
Low pressure tubes	Blue or transparent colour PE polietilen tube – inner diameter 6 x outhter diam: 8 – max 10 bar						
Fist connecting hose	3/4" theread – max 10 bar – 1,5 meter						
Filter (2 different type)	double filter: water in 3/4" thread – regulator – silifoz cartridge – mechanic cartridge – out 8 mm quick conn. Simple filter: water in 3/4" thread – mechanic cartridge – out 8 mm quick conn -- max: 10 bar / +1 - +30 °C						
Fan	MODEL	Voltage (V)	Power (W)	circuit (r.p.m.)	Flow (m3/h)	Sound (db(A))	Weight
							wall type (kg) Flour type (kg)
	SV 50 (20")	230 V ~ 50 Hz.	100	1430	10500	73	12,5 19
	SV 65 (26")	230 V ~ 50 Hz.	170	1350	11200	76	14,5 22
	SV 75 (30")	230 V ~ 50 Hz.	210	1300	17400	86	16,5 25

VENTILATOR INSTALLATION



Remove all the parts from the box and detach them.(Picture 1) Screw the lower part of the cage into the motor housing (4 pcs screw)(Picture 2). Place the blades on the motor shaft and the allen screw on the propeller. Press down and tighten the screw.(Picture 3).Attach the upper cage to the plastic apparatus.(Picture 4) Take measurements and screw the wall bracket to the wall or a metal floor.(Picture 5) Screw your fan on the wall bracket. Adjust the up-down direction and tighten the screw.(Picture 6) Attach the speed regulation button on the wall. Plug in and run. Read 4th line on page 5 for other considerations when installing the ventilator.

DESCRIPTION OF THE INSTALLATION STEP BY STEP

1- Filter Group Installation

Basic considerations when locating and connecting before installation:

- The transparent section in the filter group is sensitive to impacts, it is breakable. Installation of the filter group in a safe area must be ensured.
- For outdoor installations, an area should be created in such a way that it will not be affected by extreme hot or cold weather conditions.
- The filter should be mounted at an easily accessible point. Occasional cleaning or cartridge replacement is required.
- There must be a valve or a tap between the filter and the water mains connection, and should be easily accessible if it is needed to close in necessary cases.
- There should be a maximum 1-1.5meter distance between the tap and the filter. The washing machine hose coming out of the package should be sufficient for this distance.
- High pressure in the mains water may cause the filter to break or crack. The indicator on the filter should be mounted in a traceable manner. If there is no manometer on the filter, the water pressure from the water inlet pressure gauge on the misting machine should be monitored. If the pressure is between 7 and 10 bar, it is critically high. If it is above 10 bar pressure regulator must be used.
- The connection pipes between 'the filter and the tap' and 'the filter and the machine' must be kept away from cutting edges and heat sources, they shouldn't be broken or bent. Installation should be considered in such a way that the water will flow easily.

Mounting of the filter

- Screw the black wall bracket coming out of the filter box onto the filter. During this process max. Use maximum 25 mm wood screw during this process, longer screws may damage the internal structure of the filter. The screw slots on the wall bracket must be aligned. Only screw holes must be screwed.
 - For your filter, which is located according to the criteria mentioned in the first section, take measurements for the holes in the wall.
 - Lean the filter and the wall bracket fitted on the filter. Mark the holes with a pen. Drill the points you marked. Use a dowel suitable for your drill bit. Pin the dowels into the holes with a hammer.
 - Wall-mount your filter on the wall with the appropriate screw for your dowels.
 - connect one end of the washing machine hose to the gear part of the filter and the other end to the tap and tighten to avoid water leakage
 - Install the hose between the filter and the machine(taken out of the box) into the other side of the filter by pressing.
 - Keep the filter cartridge remover in a safe place near your filter.
- *Thus, the installation of your filter is completed.

2- Mounting of misting machine

Basic considerations when locating and connecting before installation:

- The position of the machine must be at least 1 meter away from the filter and preferably on a flat and stable base. Do not place the machine on a slope. No weight should be placed on the machine. It should not be used as a step.
- The ideal height for the machine's performance is that it is at a maximum height of 1 meter above the ground. You can also put the machine on the floor.
- The electronic components in the misting machine are sensitive to impacts and breakable. Therefore, the main machine should be installed in a safe area. In outdoor installations, an area should be created so that it is not affected by weather conditions.
- The covers of the machine must be opened in order to press the buttons of the machine, make the settings of the fogging machine, to clean it from time to time or to change the oil. For this reason, your machine should be installed at an easily accessible point.
- When connecting the device, make sure that the mains voltage corresponds to the amount indicated on the data plate on the back side of the device. Only connect the device to a low-voltage, grounded current outlet with a minimum capacity of 220V 10A. In case of incompatibility between the plug of the appliance and the plug, replace the plug with another plug suitable for a qualified personnel.
- The motor pump and other electrical components in the device may become hot. For this reason, the air vents on the device must not be closed. the device must be placed where air enters. After placing the appliance on the work surface, there must be a minimum of 10 cm space between the surfaces of the device and the side and rear walls and at least one free space should be available for fresh air.
- Probable water leak can damage the device. The device should be checked daily for leaks and service should be contacted for any water leakage detection.
- When not in use, close the water valve of the machine and disconnect the plug from the electrical outlet.
- The device may be damaged if the water inside is frozen. Do not install the appliance in environments where the heat may fall below the freezing point.
- Arrange the power cord to prevent damage from cutting edges or heat sources (eg electric oven).
- The drain pipe should be kept away from the cutting edges and heat sources, and should not be broken or bent.
- Do not open the covers of the appliance while the water is open and when it is plugged into the electrical outlet.
- Do not allow the use of device by persons with low physical-psychological-perceptive capacity (including children) with inadequate experience and knowledge, unless there is a careful training and supervision of those responsible for them. Follow the babies to make sure they don't play with the device.

Installation of the main machine

- Remove the machine's top cover. Replace the blind plug on the oil tank of the device with the dipstick. The necessary information is also available in the machine. And refit the machine cover
- Attach the hose coming out of the filter into place on the side of the main machine where it says "water inlet". Pay particular attention not to bend the hose.
- Insert the drain hose into the place where written "drain" position on the machine. Extend the other end of the drain hose to the drain line. Pay particular attention not to bend the hose.
- Insert the black colored pipe into the "misting line". Extend the first nozzle or TE to the point where you will install and cut the pipe from that point.
- Complete your installation step by step, push-and-install method as illustrated in the fogging system application example.(page3)

3- Points to be considered when creating misting line

- The misting distance at high pressure is 1.5 - 2 meters. There should be a space of 2 meters in front of the nozzles.
- Plan the placement of nozzles according to misting distance to avoid any moisture during misting..
- The spraying line will give the ideal result when planned at least 2.5-3 meters above the ground.

After a few weeks or several months after the system is installed, nozzles can make very small droplets at the time of stopping. This situation is due to lime in the water or deformation of nozzles. Please place nozzles in the corridor and empty areas. So that this can not adversely affect you. And you can use the system for much longer without any problems.

- It is best to turn the nozzles to the ground at an angle of 45 °. You can always change this angle.

*When installing spray line pipes, you should be careful not to make ups and downs in the up-down direction.

- The spraying line should be above the misting machine. The most extreme part of the line is at the top point and it is preferable to come with a slope towards the misting machine. Folding of the pipe from hard turns should be avoided.
- The spray line should not be extended unnecessarily. The shorter the pipe distance, the better it is.
- You can attach spray line to wall, metal floor, wood floor, aluminum or plastic floor with pipe clips and screws from the package. If you are going through a steel wire or a thin floor, you can use a cable tie.
- When cutting the pipe, you can use a cutting tool such as a pipe scissor or a knife. Take care to cut the pipe straight. In skewed cuts, there may be leaks in press-install pieces. Beware of accidents that may occur during cutting.
- When the system is first started, a nozzle at the end of the line can be removed from the nozzle connector so that the dirt escaping during installation can be drained from here. After the water has been drained for a while, the nozzle is replaced and the system is started again.

4- Fan installation considerations

- Your ventilator should be installed by qualified people who can work at in high places.
- Fasten your fan so that it does not touch the top and also to a suitable point that doesn't touch anywhere when turning.
- Install your fan at a height where people don't touch when they pass by. If your wall height is not very suitable, try to install your fan at points where the people movement is less.
- Do not place your fans so close to each other. They may bump swing mode or they may make a lot of sound.
- It is inconvenient for ventilator motor to contact water directly. Therefore, it should not be used in areas that are affected by rainy weather conditions. Do not be immersed in water during cleaning, should be unplugged and wiped with a dry cloth.
- The wall where you install your fan should be steady. Use strong wall screws and dowels for wall. In installation on columns or beams, it can also be mounted on metal floors with strong metal screws. Do not install on sloping floors or to the ceiling.
- If the fan is running, no operation should be carried out, such as installation and removal procedure or repairing.
- Arrange the power cord so that it is not damaged by cutting edges or heat sources (eg electric ovens).
- When not in use, unplug the plug from the electrical outlet.
- Do not allow the use of the device by persons with low physical-psychological-perceptive capacity (including children) with inadequate experience and knowledge, unless there is a careful training and supervision of those responsible for them. Follow them to make sure they don't play with the device.

5- running the system

- Check that the water inlet and outlet connections of the machine are done and that your misting line is complete.
- open the valve. and plug the power sockets of misting machine for 220V.
- Press the on-off button on the front of the machine. If there is electricity, the button lamp will light.
- If there is water at sufficient pressure, the "water on" signal lamp will light. The timer will start to count digitally. It will first count up the waiting time and then count up the misting time.
- you can choose misting time and stop time separately. The system should work with a spray-stop period for a good cooling.
- During the misting (spray) period, the engine of the machine will start, the water will be sent to the lines in a pressure manner and the misting will start.
- in systems with ventilators, the ventilators must be operated first, then the system should be operated as the ventilators work independently from the machine.
- It is normal to detect some water leaks in the first attempt after the installation of the system. Thus, make the first attempt when the venue is available. If you detect water leakage, please do not worry. During the application, the parts which are mounted by press-install method can be opened when fixing it to a floor. Switch off the system, press again from the leakage points and restart the system.



Setting the timer: in the red dial S: seconds M: minutes H: hour.

Determine which time zone to select from the red dial,

the right side is the waiting time and the left side is the working time

There are 2 digits on the time dial. First digit is tens digit, the second digit is units digit. Enter any time options with the up and down arrow keys.

for example - 32 M - 08 s - if entered ; will wait 32 minutes and will work 8 seconds . it works forever with this loop. After each setting you have to off the power and turn it back on again.

The importance of adjusting the run-wait time with the timer: When the system is running, when you set the misting time to 15 seconds, it can give a feeling of wetness after 12 seconds. On some hot days, there is no wetness even it injects 30 seconds. In other words, after a period of spraying, the atomized water particles that inject, depending on the temperature and humidity, cannot penetrate into the air and give a feeling of wetness. To prevent this, it is important to make the inject-stop setting correct. While operating at higher temperatures for longer periods, you may need to reduce the operating time as the temperature decreases. These periods vary depending on humidity. Therefore you can change the correct setting for yourself every day.

Adjusting the humidity controller: (only in humidification systems)



a) setting the lower value: press and hold the down upper key The value will blink when you wait for about 3 seconds. and then set the lower value with the up-down arrow keys. for example 80.

b) setting the upper value: press and hold the down arrow key The value will blink when you wait for about 3 seconds. and then set the upper value with the up-down arrow keys. for example 82.

If the humidity value falls below 80% rH, the machine will start. and stop when it reaches 82% rH.

Note: If the system you purchased is a humidification system, there will also be a humidity controller on the misting machine. When the humidity level exceeds the level you set with this device, the power or the timer will be cut and the timer will not count. The other lights on the misting machine will remain on. When the humidity level falls below the lower level you set, the timer will start counting again and the misting will be restarted.

Causes and solutions of system errors:

• If the lamp doesn't light on the button or in other parts even if the machine is plugged in

- The main fuse may be flown. Please check.
- The electric socket may be defective. Check by plugging in another device.
- The machine have a fuse inside. This fuse maybe blown. Remove the 3 screws of the front panel. Raise the automat fuse. Any cable inside the front panel may have been out. Check it. In this case, immediately unplug the power plug and contact the technical service.

• If the machine's lamps are on, the first countdown starts. then a sound is coming from the machine like "knock-knock", the lamps are off and back again and the first countdown starts again.

*This problem is usually due to insufficient city water network. The first thing to look at is the inlet pressure gauge on the machine. this situation can be observed: even inlet pressure is above 2 bars, the pressure decreases to zero when the machine sounds 'knock-knock' in counting.

- The water pressure from the tap is insufficient. This can be occurred on the terraces of multi-storey buildings. You may need to use a booster for the pre-pressure. Please contact technical service.
 - The valve or the faucet is not fully open. "Open the valve or the faucet to the full"
 - The pipe between the filter and the machine may be folded. " please fix that "
- The pipe between the filter and the machine is longer than 1.5 meters. (please arrange your installation according to this information)

• The machine is working normally, the engine sound is coming but nozzles do not misting.

This problem is caused by no pressure or blockages. The first thing to look at is the misting pressure from the top of the device.

If there is no pressure above 40 bar, these options should be checked:

- The misting time can be too short. (Increase misting time)
- Check the misting lines, there may be leaks on the lines. (If there are any leaks, turn off the system. Push the leaked places well into places and recover them from the leakage and try to work again)
- Drain valve may be failed or the dirt may be escaped or may be stucked anywhere . Check whether water is discharged from the drain pipe while the machine is running. If the discharge is not interrupted at the misting time (please call service)

- d) The pressure regulator's setting has shifted. Open the top cover of the machine. find the valve of pressure regulator at the outlet of the pump. Turn the valve one or two turns in the direction of tightening. Continue this process so that the pressure does not exceed 70 bars.. If it exceeds 70 bar, turn it in the disassembly direction and complete the setting.
If there is pressure above 40 bar but not misting;
- a) There is a mounting error. "Check your system again"
 - b) The misting line pipe may be clogged or bent. "please check"
 - c) All nozzles can be clogged at the same time (please check)
 - machine works normally, system doing misting, but while passing to stop period, nozzles do wetting or dripping
 - a) The machine cannot drain (check that the drain pipe is not blocked, not folded, the drain line is open.)
 - b) The machine should drain for a while as soon as it stops. If it is not draining at all, a connection cable may have been dislodged, the drain timer may have failed or its setting has been broken - the drain valve may be defective (please contact technical service)
 - c) Machine drain time is 6 sec.in standard. If it is doing shorter than this; drain timer may be defective or its setting has been broken (please contact technical service)
 - d) If the drain is normal but wetting continues, the pipeline may be too long. The pipeline should be installed straight. In the montage time, the pipeline can be made up and down much assembly. It may be necessary to install an additional drain valve. (please contact to service)
 - e) Drain is normal, but if water drip continues, the nozzles may be clogged (apply descaling).
 - f) The water inlet valve may have failed, or the dirt has entered from inside. When the water inlet valve fails, the city water pressure passes through the valve even at stop time, and creating a pressure in the misting line. This may cause dripping in the stop period. (call service)

System maintenance, clearance and warnings

- It is recommended that the oil of the pressure pump of the device be changed in each 500 hours of operation. The condition of the oil level and color properties can be controlled from the window on the side of the pump by opening the top cover of the machine. Contact the technical service for oil change.
- Device surface, filter group, pipes and misting tips, fan cage and impeller can be cleaned with various detergents. Unplug the electrical equipment during cleaning. Never immerse the high pressure unit, fans and electrical components in water.
- Lime in the water will cause blockages that prevent the device from working well in time. It is recommended to apply descaler treatment after every 10 uses. The descaling process can be carried out with commercially available solvents.
- The nozzles can be cleaned with a descaling agent by simply unscrewing them from the pipe fitting.
- You can clean or replace the filter's internal cartridges. Follow the removal and installation steps below.
- When the filter is disassembled, descaler can be used for all the system. For this;
- In general, our filters are 2 sections. there is siliphose in the first transparent chamber and in the 2nd chamber there is a mechanical filter. You can use vinegar, carbonate or chemical descaler. **please put them in the second chamber which means the mechanical filter.** It should not be placed in the first chamber where it has siliphose. Siliphose is a substance that prevents lime from sticking to misting lines.
- Close the tap, loosen the yellow screw on the filter and see the water outlet. The gauge pressure will be "0" .
- Remove the blue cap on the transparent section –which is between the filter switch and the main machine- by unscrewing.
- Disconnect the transparent container from the filter assembly. If the white-colored filter is dirty, wash with soap and water. Place the white-colour felt filter back into the transparent hopper. put 1 cup of harmless-to-health descaler in to the transparent hopper.
- tighten the yellow screw that you removed. Tighten the blue cap with the filter that holds the transparent hopper.
- Turn on the tap and make sure there is no water leakage. Wear safety goggles and gloves during all operations.
- Press the start button of the misting machine and activate the system. In this way, the descaler you poured into the hopper will contact the whole system and remove the lime from the nozzles. thus the nozzles will also be cleaned.

You should do this in the absence of people around. Do not inhale spray lime solvent. Protect your eyes and your skin. If needed, wear safety goggles and mask when performing this procedure. Apply natural lime solvents such as lemon vinegar for your health.

Basic warnings for security

Danger! Although it is an electric current device, it shouldn't be hold by hand, except for electric shocks. Therefore adhere to safety warnings:

- Never touch electrical equipments with wet or moist hands and feet.
- Do not touch the plug with wet hands.
- Make sure that the electrical outlet in use is always easily accessible for unplugging, if necessary,

