

MINI ONE II - MANUAL

MINI ONE ORIGINAL INSTRUCTIONS

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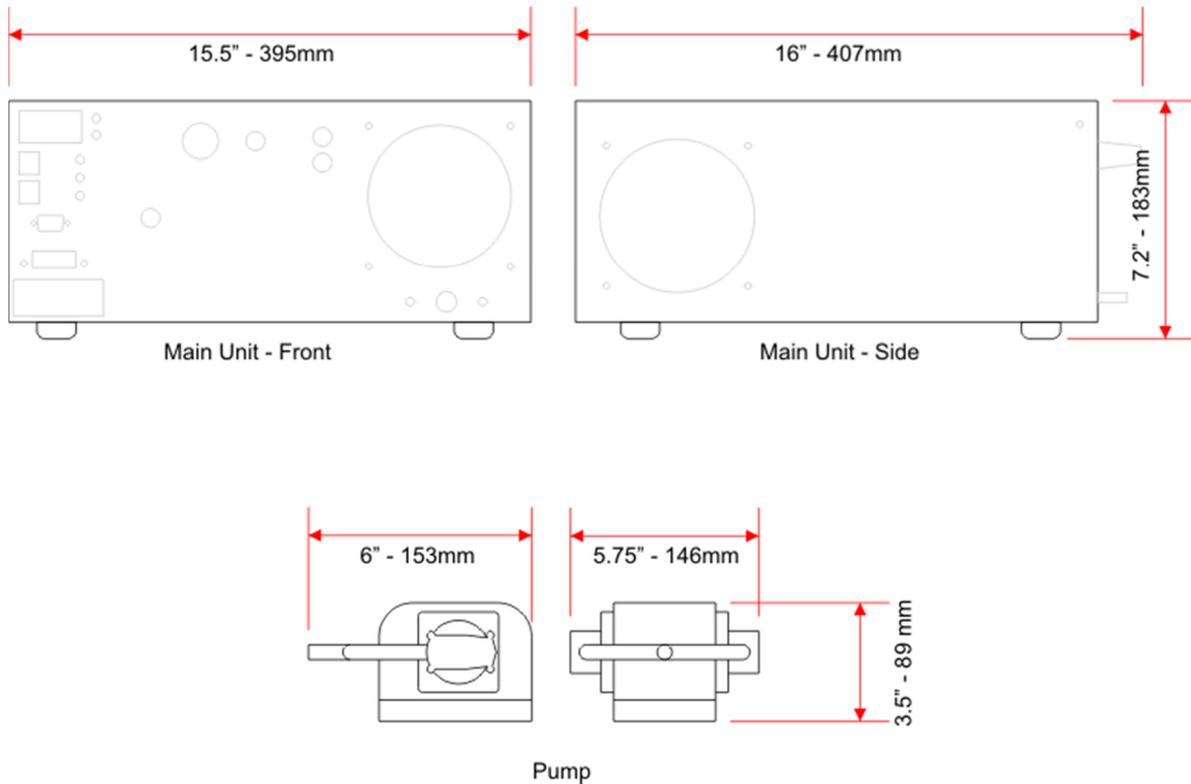
INSTALLATION

Please read carefully all the information in this manual to ensure proper operation of the Mini One humidity generator.



A	Main power jack with fuse.	G	WiFi antenna
B	Air pump jack	H	Air to case fitting
C	Master/slave connector	I	Water fill and overflow fittings
D	On board SD card data logger	J	Air Pump fitting
E	RHT sensor jack	K	Drain fittings
F	Alarm connectors		

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PACKING LIST

Standard package consists of:

Mini One unit (1 pc)		Air pump with silicone hose (1 pc)	
22 mm silicone hose for air distribution (2m)		air connector (1 pc)	
RH/T sensor (1 pc)		Funnel for water filling (1 pc)	
Power cord (1 pc)		WiFi Antenna	



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Optional parts (Must be ordered separately)

- Alarm cables with LED
- Exhaust pipe with termination
- T connectors for multiple case installation
- Additional Air connectors for multiple case installation
- Additional Silicone hose.
- External reservoir
- Double air pump for larger showcases
- SD Card for data logger
- External reservoir
- Extension cord for WiFi antenna

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INSTALLATION RECOMMENDATION.

An improper installation can severely compromise the operation of the unit. A level operating surface, adequate ventilation, and good access are imperative.

Power Supply:

Supply a reliable 110/230/V, 50/60 Hz AC power supply with ground, capable of supplying approximately 250 Watts. We recommend a dedicated power supply with surge protection for all units.

WARNING: POWER OUTLET MUST BE PROPERLY GROUNDED.

Floor plate and Unit Placement:

Provide a flat level surface so that the front of the unit is easily accessed and maintained. The access panel or door should allow easy removal of the machine in case of emergency. If possible, allow at least 6 inches / 15 cm space around the units, with a minimum of 1 inch/ 2.5 cm space on the back and sides. No space needs to be provided above the units, but be sure to allow adequate space for installation and emergency removal. Note that adequate room should be provided at the front of the unit for hoses and wires and exhaust ducting (4 inch/ 10 cm).

Some accommodation may be required for filling the reservoir. The pump unit and the main unit may be placed side by side, or separated up to ten feet / three meters from each other. Should you wish to stack the units, be sure to place the pump unit ABOVE the main unit. Should you need to separate the pump from the main unit by more than the amount allowed by the supplied power supply cord and hose, be sure to use at least a 16-gauge wire to carry power, and do not separate the units by more than ten feet without consulting the manufacturer.

Access:

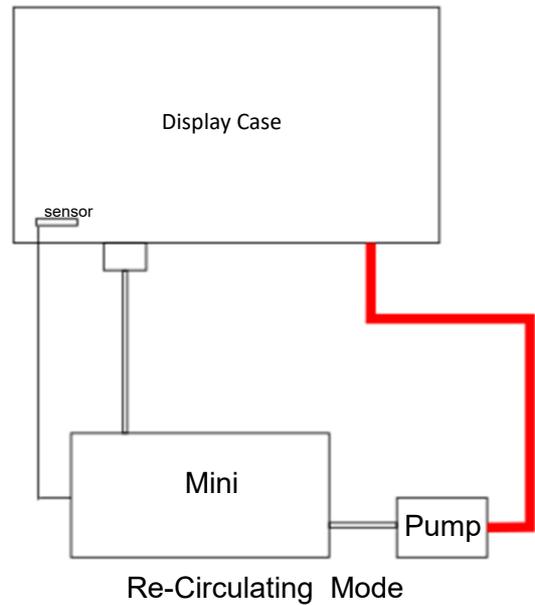
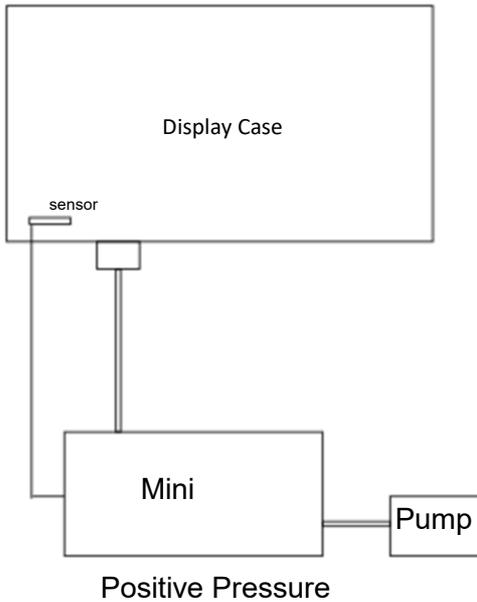
Provide a door or panel that allows easy access, installation, and removal of the unit. The front plate of the unit should be completely visible when the access is open.

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CONNECTION OF AIR HOSES TO THE CASE.

The Mini One can be connected to the controlled display case in two modes:

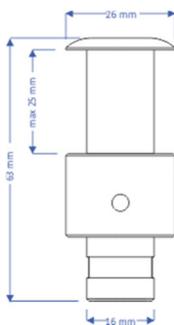
- positive pressure mode or
- re-circulating mode.



POSITIVE PRESSURE MODE

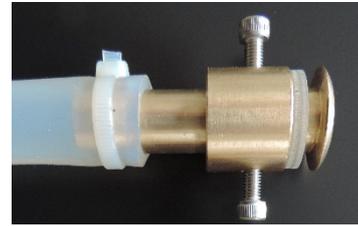
In this mode, the Mini One is connected to the display case by one air hose. Typically, the Mini One is supplied with a silicone hose with an inner diameter of 5/8" - 16 mm. Connect to the hose using the fittings installed by the case manufacturer or with Preservatech's supplied air connectors (brass). For factory installed fittings we suggest a welded piece of metal pipe, 16 mm outer diameter and 30-40 mm long. For installing our brass fittings, a hole of 16 to 20 mm in diameter must be drilled in the case wall with a maximum wall thickness 1" - 26mm.

THE AIR FROM THE MINI ONE SHOULD ENTER DIRECTLY INTO THE VITRINE FOR OPTIMAL PERFORMANCE. AIR DIRECTED INTO THE SUB FLOOR MAY LIMIT THE PERFORMANCE OF THE MINI ONE, ESPECIALLY IN LARGE OR LEAKY ENCLOSURES.



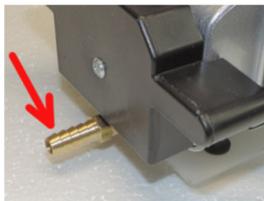
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Fittings on the display case and machine fitting labeled: AIR TO CASE must be connected using supplied silicone hose (16 mm inner diameter).



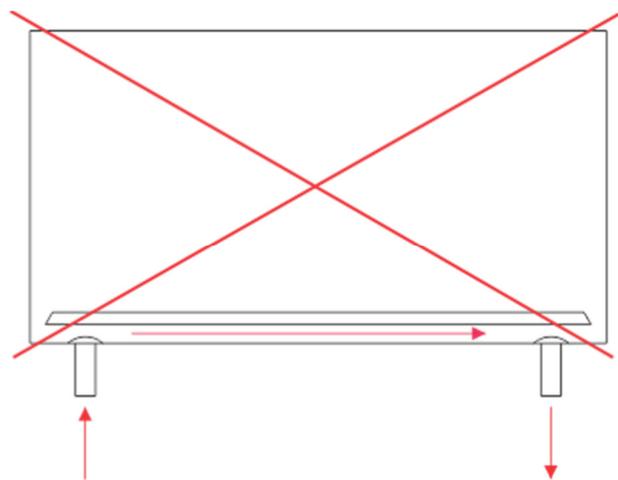
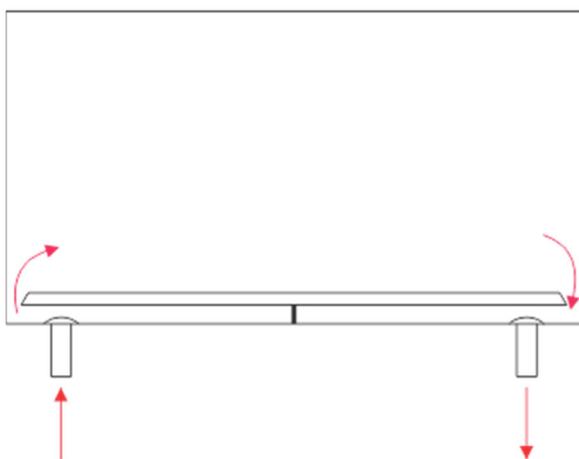
RECIRCULATING MODE

In the re-circulating mode, in addition to connecting the main air hose same as in the positive pressure mode, a return hose must also be installed. The silicone return air hose is not supplied but can be purchased separately. It must be connected to the case preferably by fittings installed by the case manufacturer or by using Preservatech's supplied air connectors (must be ordered separately). For factory installed fittings, we recommend a welded piece of metal pipe, with an 8 mm outside diameter and 30-40 mm length. For installing our brass fittings, a hole of 16 to 20 mm must be drilled in the case wall with a maximum wall thickness being 1" - 26mm.



Return fitting on the display case wall and air pump fitting must be connected using silicone hose 8mm inside diameter (must be ordered separately).

THE AIR FROM THE MINI ONE SHOULD ENTER DIRECTLY INTO THE VITRINE FOR OPTIMAL PERFORMANCE. AIR DIRECTED INTO THE SUB FLOOR MAY LIMIT THE PERFORMANCE OF THE MINI ONE, ESPECIALLY IN LARGE OR LEAKY ENCLOSURES. WHEN INSTALLING A RETURN HOSE, BE SURE TO SEPARATE THE AIR ENTRY AND AIR RETURN PORTS AS FAR AS POSSIBLE. AVOID THE "SHORT CIRCUITING" OF AIR FLOW, ESPECIALLY WHEN PORTS ARE LOCATED UNDER A FLOOR PLATE.



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AIR PUMP CONNECTION



The air pump is supplied with 78"/2m long silicone hose. **The length of this hose should not be adjusted, otherwise the machine may not work properly**, especially with a low humidity setting. The other end of the hose should be connected to the machine fitting labeled "AIR PUMP".

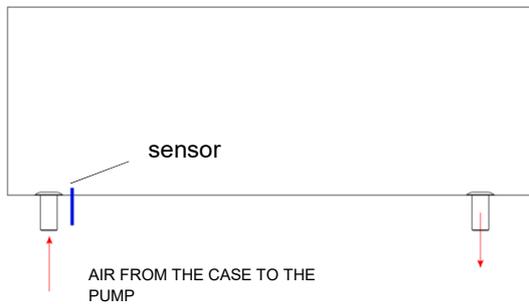
Pump power cable must be connected to the appropriate outlet on the front of the machine, next to the main power socket.



SENSOR CONNECTION



Sensor supplied with the Mini One is built inside a brass housing 9/32" / 7mm in diameter and has a 1.8 m long cable.



In most applications, locate the sensor near (but not directly in) the air input from the Mini One.

Where enclosure volumes are large, or where showcase leakage is suspected, the sensor may be located close to the artefacts on display. Note that this may result in more variance with the target settings (until showcase equilibrates to the new rh conditions).

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VENTILATION

If the unit is not enclosed, be sure that there is adequate air available for cooling. For the most effective operation, do not allow ambient temperatures around the unit to get above 75 F / 24 C. Warm temperatures may reduce the ability of the unit to provide a low humidity.

Should the unit be mounted in an enclosure (e.g. beneath the showcase), provide at least TWO ventilation holes. A flexible exhaust hose must be attached to the four inch / ten centimetre mounting on the front of the unit, and directed out of the enclosure through one of the ventilation holes.

Adequate fresh air for cooling must be provided, through a hole (or holes) totalling at least 16 square inches / 100 sq. cm. All ventilation holes' must be unimpeded (do not cover with any cloth, mesh, or perforated metal).

Avoid re-circulating exhaust air by separating the outputs as far from each other as possible. For example, provide an upper hole for connection to the exhaust hose and a lower hole for fresh air intake. Be aware of walls or obstructions which might trap and re-circulate exhaust air into the fresh air intake.



NOTE: Although all Mini One machines are ready to connect 4" (100 mm) exhaust hose and hose termination, they are not included in the standard shipment and must be ordered separately.

WiFi ANTENNA



The WiFi Antenna needs to be installed only if monitoring service is in use. If the machine is located inside a metal enclosure. It is highly possible that the WiFi connection will be poor or non-existent. In this situation, the antenna needs to be installed outside of the metal enclosure. Wifi antenna extension cords can be supplied by Preservatech. (Antenna is included in a standard order; extension cord is an additional option)



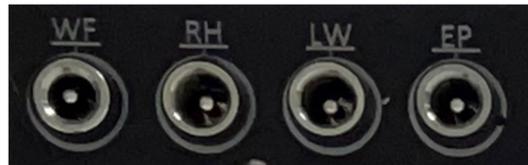
EXTERNAL CONNECTIONS

The Mini One is equipped with external connectors:

WF – The “Water flooding” connector can be connected to the in line water sensor. See below about connecting in line water sensor.

RH - The "OUT OF RANGE" alarm is a 12 VDC connector to power up an LED or other 12VDC device. This alarm is activated when the RH at the sensor is lower or higher then SET VALUE ± “Rh error offset” parameter (see Programming)

LW - The “LOW WATER” alarm is a 12 VDC connector to power up an LED or other 12VDC device. This alarm is activated when water level inside machine falls below the lowest acceptable level. Water must be added to the machine when this alarm is activated.



ER - The "EXTERNAL RESERVOIR" jack is used for connecting an external water reservoir. External reservoirs are available as a special order. Contact the manufacturer for details.

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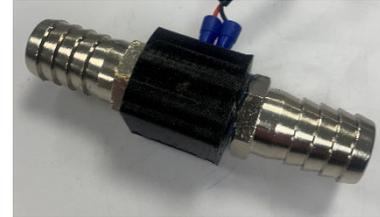
NOTE: Although all Mini One machines are equipped with external connectors, cables and LED's are not included in the standard shipment. They must be ordered separately.

Please contact info@preservatech.com if you require assistance. Photographs can be very useful when diagnosing installation problems.

INLINE WATER SENSOR

For additional security, inline water sensor can be installed. Under very rare circumstances, when the machine is set to high humidity and outside temperature is relatively low then its possible that small amounts of water can condense inside the airline.

Although water in the hose is very unlikely, installing the Inline Water Sensor makes it absolutely sure that liquid water does not get into the supply hoses. The Inline Water Sensor should be installed on the hose at its lowest point. If water is detected, the machine will stop and restart once the hoses are dry.



OVERFLOW PORT

As the unit removes moisture from the air, the extra water vapor will be deposited in the treatment tank reservoir. Humidity that is removed from the vitrine when the Mini One is in dehumidifying mode may drip from the unit at the overflow port.

You may connect the overflow port to the drain, collect condensate in a container, or simply allow it to evaporate from a shallow tray.

In most cases, a tray will allow all condensate to evaporate away with no need for draining the condensate pan.

You may extend the overflow port with a very short hose (less than 2 inches / 5 cm) to place the end in a more convenient location. The hose outlet should remain at the same level (or lower) as the overflow port.

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OPERATION MANUAL

FILLING INTERNAL RESERVOIR

A minimal amount of water must be maintained at all times in the microclimate generator's treatment tank for optimum performance. During normal operation, water is transferred from the reservoir, to the treatment tank. The "low water" alarm will indicate that water is needed in the reservoir. The reservoir may be filled at any time. Note that the unit will continue to operate with an empty reservoir until the water in the treatment tank is exhausted.



You will need a funnel with hose (supplied), a cloth to deal with spills and overflow, and about two liters of distilled or de ionized water (do not use tap water).

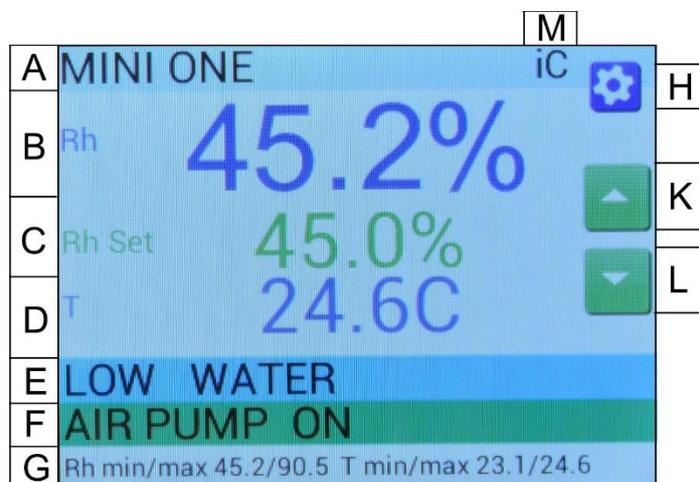


Turn the unit on. Attach the hose with funnel to the WATER FILL port and slowly add water.

You will hear the internal pump transfer the water to the treatment chamber, and you will see the water level change on the display indicator. Stop when water reaches the "FULL" indicator. (do not overfill) Excess water will flow back through OVERFLOW located below WATER FILL connector. It is not necessary to keep the reservoir "topped up". With some experience, you will learn to fill only as needed. This may vary from season to season with ambient humidities.

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TOUCH SCREEN DISPLAY



Touch screen is divided into a few areas with different purposes. Below is an explanation of all the display areas.

Display will turn off after 10 minutes of being idle. Lightly tap the display to turn it back on.

A	Humidity generator model: "Mini One" or "Mini One H"
B	Relative humidity measured by machine's sensor (inside the display case) Under normal conditions, the digits are blue, when measured RH is out of range, digits become red and start blinking. OUT OF RANGE STATUS IS DETERMINED BY PARAMETER "RH error offset" (see "Programming Chapter")
C	Target RH. Can be adjusted by arrows on the right (K and L)
D	Temperature measured by the machine's sensor (inside the display case)
E	Water level inside the machine. Under normal condition, black letters LOW WATER (Full and Medium). If water level drops below minimum, letters become RED and start BLINKING. Level sensors inside the internal water tank have malfunctioned. LEVEL SW ERROR See "Error messages" Level sensors inside the cooling unit have malfunctioned. INT LV SW ERR See "Error messages" Water Pump status: Pump+ water is pumped into cooling unit, Pump- water is Pump- pumped back to the water reservoir.
F	Air Pump Status
G	Shows minimum and maximum values for RH and T in last 24 hours.
H	Button for programming mode. See chapter: Programming.
K & L	Arrows to change target RH value. Use K to raise target RH, L to lower target RH.
M	Shows status of WiFi connection. i = Wi-Fi initialized w= Connected to WiFi network (doesn't exist in older models) C = Connected to server "iwc" – properly connected.

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PROGRAMMING

0.0.29.0 After pushing “Programming Button” (H) display will change to programming mode. 

Back

Internal T 9.1 

Air pump control 1 

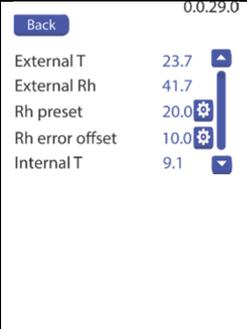
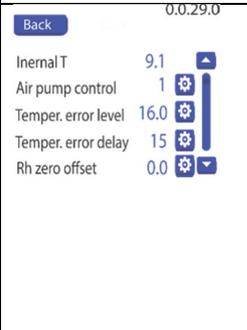
Temper. error level 16.0 

Temper. error delay 15 

Rh zero offset 0.0 

Display will show list of parameters and some of them can be changed by the user. Use the slider on the right side of the display to go to the next parameter.

Parameters which can be changed have a small button on the right side of the value. After pressing it, display allows to change this parameter. 

 <p>0.0.29.0</p> <p>Back</p> <p>External T 23.7 </p> <p>External Rh 41.7 </p> <p>Rh preset 20.0 </p> <p>Rh error offset 10.0 </p> <p>Internal T 9.1 </p>	External T	Temperature measured by sensor. Read only.
	External RH	Relative humidity measured by sensor. Read only.
	Rh preset	Target value of RH.
	Rh error offset.	Controls RH alarm. RH alarm is activated when measured RH is larger then the “rh preset” + “Rh error offset” or is lower then the “rh preset” - “Rh error offset”. Factory default=10
	Internal T	Temperature inside the treatment box. Read only. (Used by controller)
 <p>0.0.29.0</p> <p>Back</p> <p>Internal T 9.1 </p> <p>Air pump control 1 </p> <p>Temper. error level 16.0 </p> <p>Temper. error delay 15 </p> <p>Rh zero offset 0.0 </p>	Air pump control.	Default value:1. Periodically the machine will turn off the air pump which is part of normal operations. This setting must be set to 1 in order for the pump to shut off in case of a malfunction. If this parameter is changed to 0, the air pump will be always ON. Under normal circumstances, it should always be set to 1.
	Air pump delay	Time in minutes after Air pump is shut down. Working in conjunction with “Air pump control” parameter. PARAMETER EXISTS IN MACHINES MANUFACTURED AFTER JUNE 2020
	Temper. error level	Parameter to control machine. Do not change without consulting with Preservatech staff.
	Temper. Error delay	Parameter to control machine. Do not change without consulting with Preservatech staff.
	Rh zero offset	Allows to offset measured RH value. Client can use it if value on the machine display is different then on third party measuring device. Eg. If difference between measurements is 2%, setting this parameter to 2 will change display by 2.
	PID (P,I,D)	Controls PID parameters. Do not change without consulting with Preservatech staff.
	Ext. SD Logging interval	Time span between logging data. In minutes for on board SD card reader.

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<p>0.0.29.0</p> <p>Back</p> <p>Rh zero offset 0.0</p> <p>PID-P 50.0</p> <p>PID-I 2.0</p> <p>PID-D 0.0</p> <p>Logging time interval 5</p>	<p>WiFi logging interval</p>	<p>Time span between sending data to the server through WiFi.</p> <p>PARAMETER EXIST IN MACHINES MANUFACTURED AFTER JUNE 2020</p>
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<p>0.0.29.0</p> <p>Back</p> <p>Logging time interval 5</p> <p>Date and time 1</p> <p>Wifi Enable 1</p> <p>Wifi config mode 0</p> <p>Communic. address None</p>	<p>Date and time</p>	<p>Setting proper time and date.</p>
<p>Wifi Enable 1</p>	<p>Wifi Enable</p>	<p>Enable WiFi service. 1=ON, 0=OFF</p>
<p>Wifi config mode 0</p>	<p>Wifi config mode</p>	<p>Configures Wi-Fi network. See chapter Network Configuration.</p>
<p>Communic. address None</p>	<p>Communication address</p>	<p>Factory default:0 . It can be changed to allow communication between machines in master-slave mode. See chapter Master-Slave Configuration for more detailed information.</p>
<p>0.0.29.0</p> <p>Back</p> <p>Communic. address None</p> <p>TR Slave Mode Off</p> <p>TR Slave address 1 None</p> <p>TR Slave address 2 None</p> <p>TR Slave address 3 None</p>	<p>TR Slave Mode</p>	<p>For setting a machine as a Slave. See chapter Master-Slave Configuration for more detailed explanation.</p>
<p>TR Slave address 1 None</p>	<p>TR Slave address (1 to 5)</p>	<p>If a machine is set as a master, this parameter must correspond with the slave machine(s). Must be different then master machine communication address. See chapter Master-Slave Configuration for a more in depth explanation.</p>
<p>0.0.29.0</p> <p>Back</p> <p>TR Slave address 3 None</p> <p>TR Slave address 4 None</p> <p>TR Slave address 5 None</p> <p>Language English</p> <p>Config 0</p>	<p>Language</p>	<p>Choice between English, Russian and Chinese.</p>
<p>Language English</p>	<p>Disp. Off time</p>	<p>Time in minutes after display is temporary blackened. Touching it turn display on again. If set to 0 then display is always ON</p> <p>PARAMETER EXIST IN MACHINES MANUFACTURED AFTER JUNE 2020</p>
<p>Config 0</p>	<p>Config</p>	<p>For Preservatech staff usage only. Access secured with password.</p>

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CYCLE MODE

Cycle mode is an option to change humidity between two setting points over a specified time.

To change cycling parameters, enter "Cycle mode" on setup page.

IN FACTORY DEFAULT THIS OPTION IS NOT AVAILABLE. PLEASE CONTACT PRESERVATECH FOR INSTRUCTION HOW TO TURN ON THIS FUNCTION.

There are 6 parameters:

RH preset 1 – First target in %

RH preset 2 – Second target in %

Duration 1 – time in minutes machine stays on First target

Duration 1-2 – time in minutes to go from First to Second target

Duration 2- time in minutes machine stays on Second target

Duration 2-1 - time in minutes to go from Second to First target

Please note that Duration 1-2 and 2-1 cannot be shorter than ability of the machine to raise or lower RH. Generally, those parameters are for SLOWING down rate of RH change.

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NETWORK CONFIGURATION

To use the rhmonitoring.com service, machine must be set to work with the local Wi-Fi network. For instruction how to use monitoring service, download manual from <http://preservatech.com/downloads>

Two parameters must be known before setting up: Wi-Fi SSID (name of local WIFI network) and access password for this network. Setting can be done with any Wi-Fi enabled smartphone.

<p>Wifi config mode</p> <p>Back</p> <p>Hub_11291479 Wifi SSID: "PRESERVATECH_EUROPE" Wifi Pass: "12345678" Server 1 IP: 0.0.0.0 Server 2 Name: "pws.iq.direct" Server 3 Name: ""</p>	<ol style="list-style-type: none"> To enter Wi-Fi configuration mode, in normal display mode push configuration button.  Using slider, find "Wifi config mode" and push configuration button located on the right.  After entering this mode, display shows among others Hub id, WiFi SSID (network name) and WiFi Pass. For proper operation SSID and Pass must be set to access local WiFi network. Using your smartphone choose connection with Hubxxxxx . (Machine must be in Wifi config mode) Within a few seconds after login a new page with the machine data will pop up.  Enter proper SSID (Name of local WiFi network) and a password.  Save data by pressing "Save to Hub" button.  Display should show actual parameters with the new data. Shut down the machine and after 30 sec. turn it on again. Assuming rhmonitoring.com account is ordered and setup, machine will be visible in the monitoring service.
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FireWall

If firewall is blocking the connection to the server use:

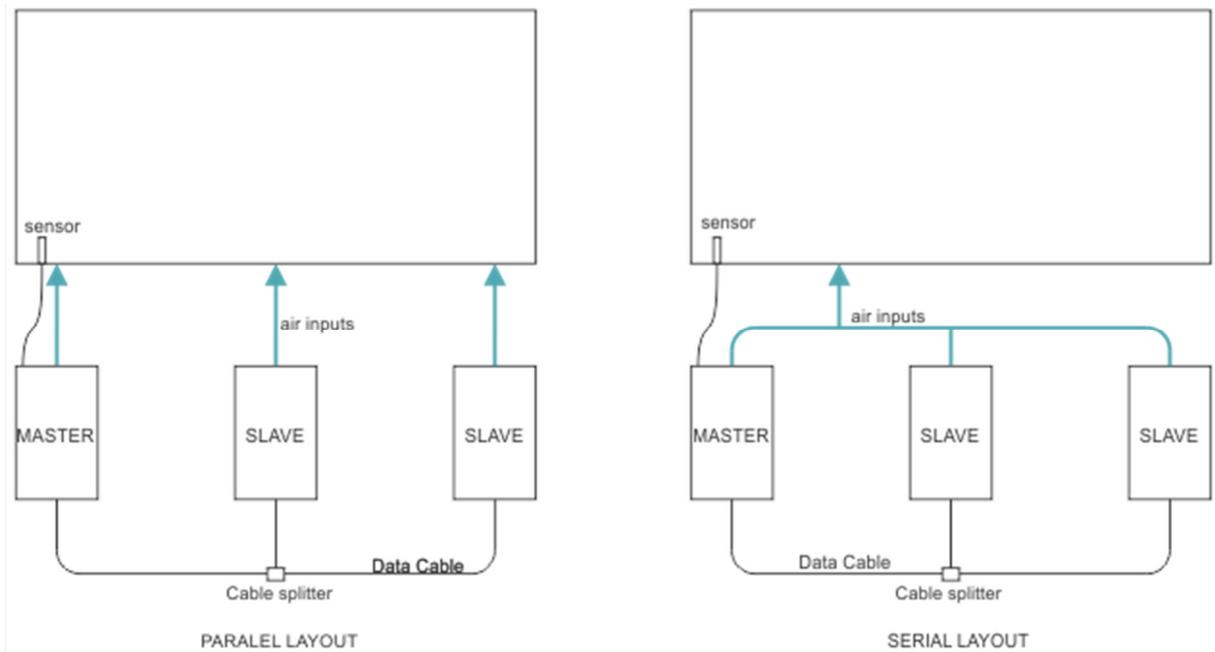
Protocol: TCP, Port (outbound): 5630, Server: pws.iq.direct

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MASTER – SLAVE CONFIGURATION

If the case is large or leaky where one machine will not be sufficient enough you can connect multiple machines in the Master/Slave mode.

Any standard machine can be set as master or slave with one master controlling up to 5 slaves. All slave machines mimic the operation of the Master machine. The master/slave group setup is comparable to using a larger machine with each machine connected directly to the case. The master/slave group can be connected directly into the case with each machine running its own air input or in a parallel sequence where the machines are connected together using tee connectors with one pair of hoses leading into the case. **We do not recommend using 1 master and multiple slaves for multiple show cases** because output of single machines can be slightly different between machines.



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SETTING MACHINE TO USE AS MASTER/SLAVE SET

Any machine can be set as a Master or Slave. To set a machine to work as a Master/Slave , a few parameters in the controller software must be changed.

Machines can be connected to the controlled case in parallel.

All machines are connected to the display case the same way as single machines.

All machines need to be connected using a standard Ethernet cable. If more then one slave is in use, cable splitters should be used. Connector is located on the front wall of the machine and is marked as "NETWORK".



ONLY THE MASTER UNIT NEEDS A SENSOR CONNECTED.

SLAVE MACHINE

The Slave unit will receive all readings from the Master unit and mimic the Master unit operation. Controller on the Slave unit will not work and display will show TrSlave on top of the display.

MASTER MACHINE

Any standard machine can be set as Master. The only parameters to be set, are "TR Slave addresses". In this mode, all machines are controlled by master unit.

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MASTER/SLAVE CONFIGURATION SAMPLE

Below is a sample of setting up one master and two slaves machines.

MASTER		SLAVE	
<p>0.0.29.0</p> <p>Back</p> <p>Communic. address 1  </p> <p>TR Slave Mode Off  </p> <p>TR Slave address 1 2 </p> <p>TR Slave address 2 3 </p> <p>TR Slave address 3 None  </p>		<p>0.0.29.0</p> <p>Back</p> <p>Communic. address 2  </p> <p>TR Slave Mode ON  </p> <p>TR Slave address 1 None </p> <p>TR Slave address 2 None </p> <p>TR Slave address 3 None  </p> <p style="text-align: center;">Slave 1</p>	
Communication address	1	Communication address	2
TR Slave Mode	Off	TR Slave Mode	ON
TR Slave address 1	2	<p>0.0.29.0</p> <p>Back</p> <p>Communic. address 3  </p> <p>TR Slave Mode ON  </p> <p>TR Slave address 1 None </p> <p>TR Slave address 2 None </p> <p>TR Slave address 3 None  </p> <p style="text-align: center;">Slave 2</p>	
TR Slave address 2	3		
TR Slave address 3,4,5	None		
		Communication address	3
		TR Slave Mode	ON
		<p>Display of the slave machines will change. TrSlave </p> <p>To go back to stand alone mode, press configuration button and change "TR Slave Mode to "OFF".</p> <p style="text-align: right;">LOW WATER</p>	

If more than 2 slaves are set, the master machine TR Slave address 3, 4, 5 must be set. The slave machines must be set accordingly to correspond with the master unit.

MINI ONE II - MANUAL

USING DATA LOGGER



The Mini One is equipped with a built-in data logger which logs RH levels measured by the machine inside the controlled display case.

Time intervals can be changed between 1 and 60 minutes in 1 minute increments, please see "Programming" chapter.

Data written on the SD card, can be read in our free software or in any other software able to read CSV files (e.g.. Excel)

IMPORTANT: SD Card used in our data loggers must be formatted as **FAT32** file systems. Other file systems are not compatible with data loggers.

For the proper operation of the data logger, Date and Time as well as time interval, must be set accordingly.

Please see "Programming" chapter for instructions how to set Time and Date.

DRAINING MACHINE

Before moving/shipping previously used machine, all water contained in the machine must be drained. Machines has two drains and both must be open to fully drain machine.

If machine is moved around only within building and its possible not to tilt more then 20° then removing water is not necessary.

Please carefully follow instruction:

- Open (remove plug) in both drains and allow water to flow out.
- Tilt machine by lifting back of the unit by 5 cm
- Allow water completely drain out of machine.
- Without turning ON machine, connect air pump directly to power (using machine power cable) and left overnight.
- After that machine should be completely dry. Input plugs back into drain connectors



MINI ONE II - MANUAL

USING EXTERNAL WATER SOURCE

In a dry environment when high water usage is expected, it is possible to connect the Mini One to an external water source. There are 3 possible options

- A. Connecting a Mini One to the client's water reservoir.** Machine "Water Fill" fitting is connected to a 12v external water pump. Pump is inserted inside client's water reservoir. Pump is controlled by the "EP" connector, located on the front panel in the right bottom corner.

TO AVOID A SYPHONING EFFECT, RESERVOIR MUST BE LOCATED BELOW MINI ONE UNIT.

- B. Connecting Mini One to a Preservatech external water reservoir.** The Mini One external water reservoir has the same dimensions as the Mini One and holds up to 10 liters of water. The Mini One's "Water Fill" fitting is connected to the fitting located on the front panel of the reservoir and "EP" connector with corresponding reservoir connector.

THERE IS NO RESTRICTION FOR THE LOCATION OF THE RESERVOIR. IT CAN BE LOCATED ABOVE, BELOW OR BESIDE THE MINI ONE.

MINI ONE II - MANUAL

TROUBLESHOOTING

ERROR MESSAGES

DISPLAY	
ERR on rh display	No connection to the RH/T sensor. Turn OFF machine and make sure sensor plug is properly inserted. UNDER NO CIRCUMSTANCES DO NOT PLUG IN OR REMOVE SENSOR PLUG WHEN MACHINE IS WORKING. THIS CAN DAMAGE MACHINE CONTROLLER.
Level sw. error	Water reservoir level sensors error. Inside the water tank, there are 3 level sensors. This error message shows that one of them is stacked or not working. Replacing the sensor unit is easy and can be done by local maintenance technician. Contact Preservatech for replacement unit and detailed instruction.
Int Level sw. error	Cooling Tank level sensors error. Inside the cooling unit, there are 2 level sensors. This error message shows that one of them is stacked or not working. Replacing sensor unit is easy and can be done by local maintenance technician. Contact Preservatech for replacement unit and detailed instruction.
FLOODING	If the inline water sensor is installed and liquid water is sensed inside the airline, machine shuts down and FLOODING alert shows up on display and email is sent (if rhmonitoring is in use) This is very rare situation, happen under unusual humidity and temperature circumstances when water is condensed inside the air line.

MINI ONE II - MANUAL

GENERAL PROBLEMS

<p>Machine is not starting at all – No power</p>	<p>Check if receptacle powered up machine has power.</p> <p>If receptacle is OK then check machine fuse located at machine power inlet just under the main switch. Blown fuse can be replaced with new one 4A.</p>
<p>Air pump is not working</p>	<p>If display shown Air Pump OFF- machine is temporary shutting down air pump in some situations. This is normal and pump will start working within few minutes</p> <p>If display shown Air Pump ON and pump is still not working, please:</p> <ul style="list-style-type: none"> ❖ Check if pump plug is properly inserted into receptacle on the machine front. ❖ If still not working, please connect air pump directly to the power using typical computer cable. <ul style="list-style-type: none"> • If pump is not working, contact Preservatech for replacement • If pump is working when connected directly to the power and is not working when connected to the machine output, contact Preservatech for repair service.
<p>Machine is not able to keep humidity at target.</p>	<p>If this is a new installation, please make sure display case is properly sealed.</p> <p>If its an old installation where machine was working well before:</p> <ul style="list-style-type: none"> ❖ If humidity is below target: <ul style="list-style-type: none"> ▪ If main display shown: “Mini One” in top line then probably machines controller is broken. Contact Preservatech. ▪ If main display shows: “Mini One H” then probably heater is not working. Contact Preservatech for instruction. ❖ If humidity is too high for prolonged time then make a “bag test” – put output hose and RHT sensor into the plastic bag, set humidity to 30% and wait an hour. If the humidity does not drop please contact Preservatech.

MINI ONE II - MANUAL

SHIPPING AND STORAGE

The Mini One should be stored in a clean area with temperature between 5°C – 30°C and relative humidity below 80%. All cables, hoses and attachments must be disconnected, and machine should be placed within a clear plastic bag once properly dried.

If shipping is necessary, original packing is the best solution. Otherwise, machine must be shipped in a box properly cushioned with bubble wrap, styrofoam chips or other packing material preventing physical damage to the machine case.

MINI ONE II - MANUAL

LIMITED MICROCLIMATE GENERATOR WARRANTY

This quality product is warranted to be free from manufacturer's defects in material and workmanship, provided that the unit is used under the normal operating conditions intended by the manufacturer, and in accordance with the Requirements for Proper Operation as outlined in this Installation and Operating Manual. This warranty is available only to the client to whom the unit was originally sold by authorized distributor of Preservatech Inc or Preservatech Europe sp z o.o., and is non-transferable.

TERMS OF WARRANTY

During the first two years, any electrical parts of this product found to be defective, including any sealed system units, will be repaired or replaced, at warrantor's option, at no charge to the ORIGINAL purchaser. To obtain service, contact Preservatech at the address below, who will provide you with instructions. Service must be performed by a qualified service technician, or with the express permission of Preservatech. If service is performed on the units by anyone other than an authorized service depot or agent, all obligations of Preservatech under this warranty shall be at an end.

EXCLUSIONS

Save as herein provided by Preservatech, there are no other warranties, conditions, representations or guarantees, express or implied, made or intended by Preservatech or its authorized distributors and all other warranties, conditions, representations or guarantees, including any warranties, conditions, representations or guarantees under any Sale of Goods Act or like legislation or statute is hereby expressly excluded. Save as herein provided, Preservatech shall not be responsible for any damages to persons or property, including the unit itself, howsoever caused or any consequential damages arising from the malfunction of the unit and by the purchase of the unit, the purchaser does hereby agree to indemnify and save harmless

Preservatech from any claim for damages to persons or property caused by the unit.

GENERAL PROVISIONS

No warranty or insurance herein contained or set out shall apply when damage or repair is caused by any of the following:

- 1) Damage in transit or when moving the appliance.
- 2) Improper power supply such as low voltage, power surges, defective wiring or inadequate fuses.
- 4) Accident, alteration, abuse or misuse of the appliance such as an inadequate supply of cooling air, or abnormal operating conditions.
- 5) Use of a unit that has been optimized for a particular application in another application that has not been approved by Preservatech
- 6) Fire, water damage, theft, war, riot, hostility, acts of God such as hurricanes, floods etc,
- 7) Service calls resulting in customer education.

WARRANTY SERVICE

Proof of purchase date will be required for warranty claims; so, please retain bills of sale. In the event warranty service is required, present a facsimile of the cover of this document to our AUTHORIZED SERVICE DEPOT. Please contact our head office for service instructions.

info@preservatech.com

CE DECLARATION OF CONFORMITY

Product: Mini One Humidity Generator

Description: Constant humidity generator designed for controlling relative humidity inside a museum display cases.

Manufacturer: Preservatech Europe sp z o.o.
Rowna 1, 85-846 Bydgoszcz

Country of origin: Poland

The above-mentioned product complies with following regulation:

EU Low Voltage Directive 2006/95/EC

EU Electromagnetic Compatibility Directive 2004/108/EC

Harmonised Standards: EN 60335-2-98:2003 + A2:2008, EN 61000-6-3:2007 + A1: 2011, EN 61000-6-1: 2007

Signed DEC 11, 2015 in Bydgoszcz



Jan Maternicki
president