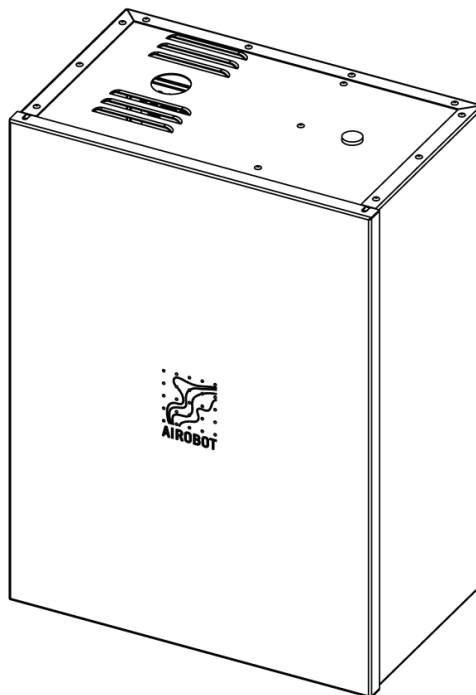




Installation and operating instructions

Airobot central humidifier SN3



Contents

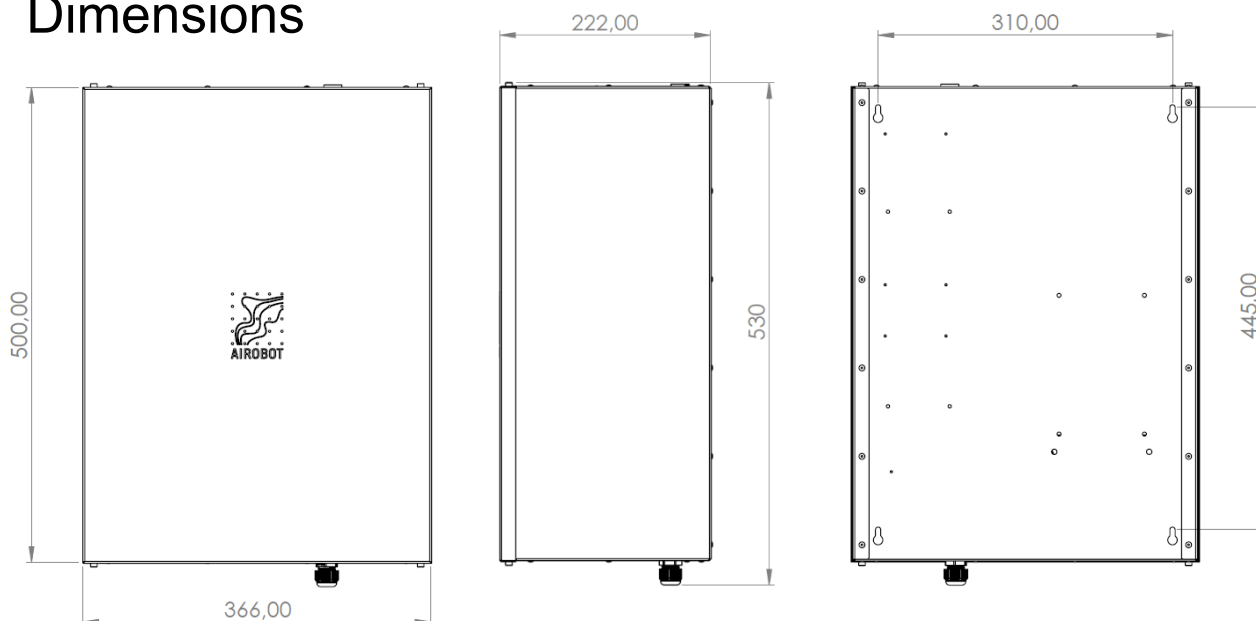
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Specifications

Depth (mm)	222
Width (mm)	366
Height (mm)	530
Weight (kg)	10
Power supply (VAC)	1 phase ~230
Maximum power (A)	16 separate protection automatic
Maximum total power of the device	2.3 kW
Power connection	EU connector
Steam pipe connection (mm)	22
Drain connection (mm)	Ø32, sewer pipe
Nozzle condensate connection (mm)	8
Steam in productivity	Not more than 3 kg/h

Model	Explanation
AIROBOT-SN3-W-C	White enclosure, controlled with Airobot ventilation unit
AIROBOT-SN3-B-C	Black enclosure, controlled with Airobot ventilation unit
AIROBOT-SN3-W-EC	White enclosure, controlled as a standalone
AIROBOT-SN3-B-EC	Black enclosure, controlled as a standalone

Dimensions



Included:

- 1 central humidifier
- 1 plug-in power cord 1.8 meters
- 1 set of mounting screws 4pcs 5x60 mm with dowels for mounting the device to the wall
- 1 installation and maintenance instructions
- 1 steam nozzle
- 1 set of screws for attaching the nozzle to the supply duct 4pcs 4x35 mm
- Steam hose 22 mm 2 meters *
- Condensate hose 8 mm 2 meters*
- 2 pipe clamps for fixing a 26-38 mm steam hose.
- 1 tube clamp for fixing a 10-16 mm condensate hose.
- 1 humidity, temperature sensor 5 meters (only -C model)
- Humidifier control unit SNE1 (-EC model only)
- Pressure switch (-EC model only)

Water requirements

Menu	Unit	Min	Max
Acidity of water	Ph	7	8,5
Specific conductivity at 20°, σR at 20°C	μS/cm	125	1250
Roughness, TH	mg/l, CaCO3	50	400
Iron+Manganese	mg/l, Fe+Mn	0	0,2
Chlorides	ppm, Cl	0	30
Silica	mg/l, SiO2	0	20
Residual chlorine	mg/l, Cl ⁻	0	0,2
Calcium sulphate	mg/l, CaSO4	0	100
Metallic additives	mg/l	0	0
Solvents, diluents, soaps, lubricants	mg/l	0	0

- Trail water should be used (not demineralized or softened)
- Temperature between 1 and 40 °C
- Compression 1-8 bar
- The required amount of water from the water main is 0.6l/min minimum.
- On the sewer side, 4l/min minimum water drainage.
- Water connection type 3/4" external pipe thread.
- Before the device install a water tap.

Do not use water softeners - this can lead to corrosion of the electrodes and can create foam in the device which can cause problems in the operation of the device!

The maximum temperature of the water leaving the drain may not exceed 100 °C. Risk of burns!
Beware, the steam hose and condensate hose are hot! The water tank should not be touched by hand during operation and immediately after operation - the risk of burns!

Principle of operation

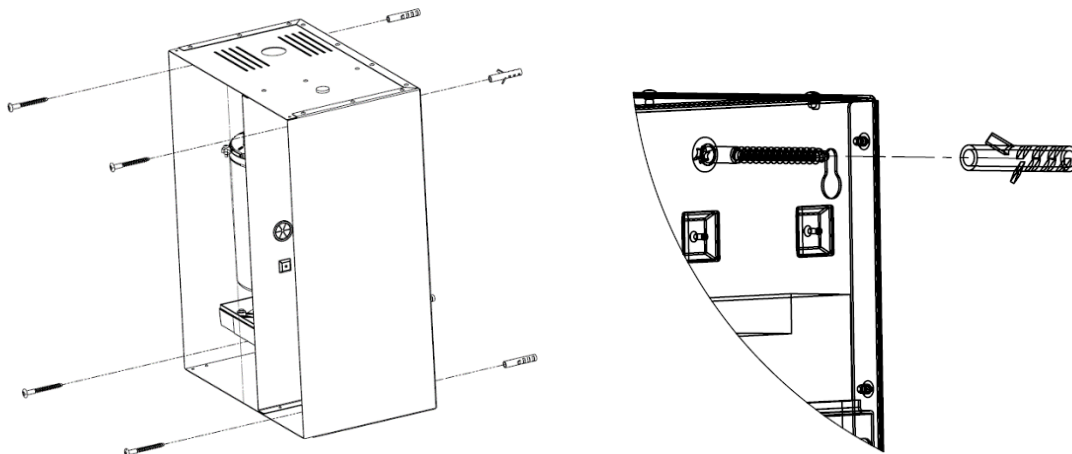
The operation of the electrode humidifier is based on a very simple physical principle. The device creates an electric current by applying voltage to the metal electrodes submerged in water, which heats the water until it boils. Perfectly pure mineral-free water vapor is formed, which, in turn, is fed into the ventilation duct with a steam hose and a nozzle.

Automation regulates the water level in the water tank and controls the production of steam. Scale is formed in the water tank over time, therefore, every about 3000 hours of operation, the water tank must be replaced. The amount of scale formation and the exact life of the steam tank depends on the characteristics of the water used.

Installation

The device must be installed indoors. When installing, observe the following conditions:

- The ambient air temperature must remain from +5 °C to +40 °C and the humidity below 80%.
- The device is not exposed to steam or liquids.
- The device makes noise when working, and this can interfere with living. It is recommended to install the device in the utility room.
- The rear side of the device can heat up to 60 degrees, the wall material of the rear side must withstand the corresponding temperature
- The device must be serviced regularly, so the device must be in an easily accessible place.
- There must be free space in front of the device for a minimum of 500 mm of maintenance.
- The device must be installed vertically on the wall and must be level.
- At the location of the installation of the device, it must be ensured: a plug-in connection to the mains from a separate fuse (16 A), the possibility of water drainage, water connection.
- Do not install other electronic devices under the device that may receive water damage in case of failure.



The device attaches to the wall with four dowels and a screw. After installing the dowels, the screws can be screwed into the wall and lifted to apply the humidifier screws. When the humidifier is raised to the wall, the screws can be tightened. Depending on the material of the wall, the included fasteners may not be suitable.

Connection of water and drainage

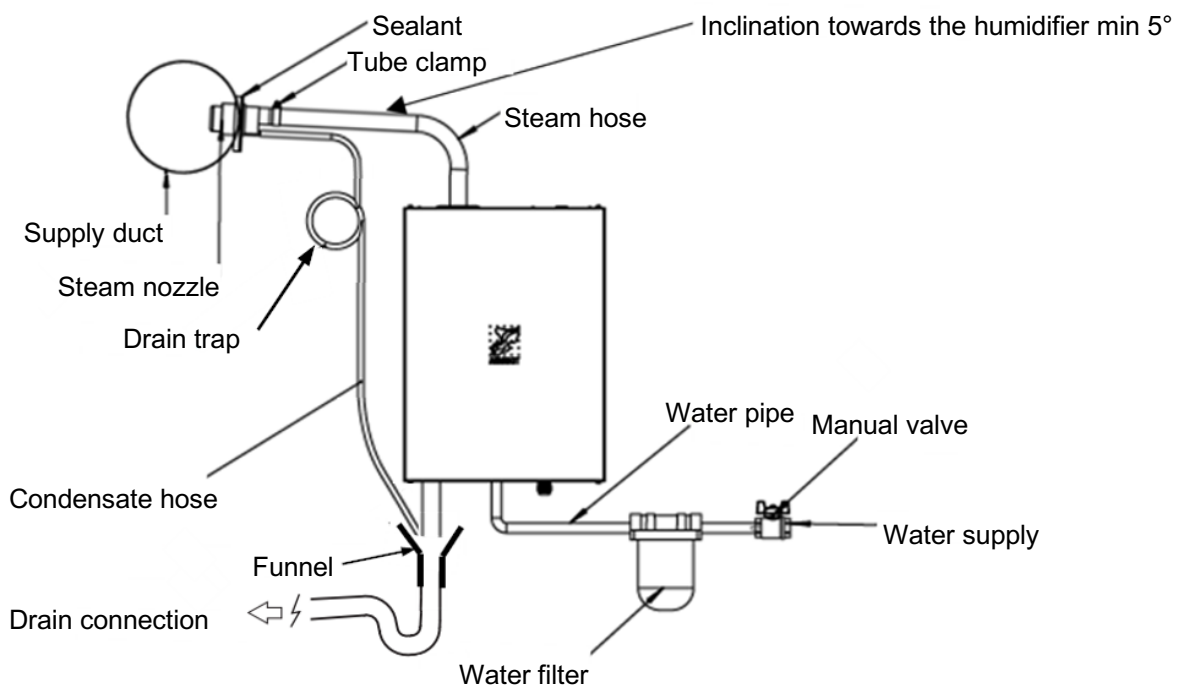
After installing the device on the wall, water and drainage connections must be performed on the device.

A water tap and a cord-type water filter must be installed on the water main in front of the device. The water filter ensures that no solid particles get between the filling valve of the humidifier, which could interfere with the operation of the humidifier filling valve.

NB! Before connecting the water pipe to the humidifier, open the water tap briefly to flush out any solid residues from the pipeline. Small solid particles can impede the operation of the humidifier filling valve.

For drainage, connect to the humidifier a pipe made of non-conductive material that directs the effluent drain to the funnel.

The drain pipe must be resistant to temperatures of at least 100 °C and have an internal diameter of at least Ø40 mm.



Installation of the nozzle and steam hose

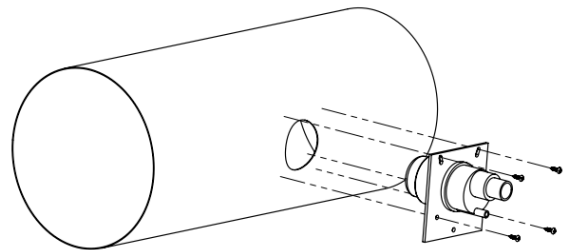
Attention! The steam hose must have an inclination towards the device of the humidifier along its entire length. There must be no hollow in the hose where water does not flow back into the humidifier (see drawings of the correct installation methods.). If a puddle remains in the steam or condensate hose, then water from the steam nozzle will begin to splash into the ventilation ducts, which, in turn,

- The steam nozzle should be installed only on the metal ventilation ducts. The temperature of the nozzle may rise above 100 °C.
- Cut a hole with a diameter of 57 mm in the horizontally located supply duct.
- Install the nozzle on the piping, seal with sealant (temp.tolerance at least 120 °C), fasten with 4 screws.
- Install a steam hose on the nozzle with a pipe clip.
- Measure and cut the steam hose from the nozzle to the humidifier tank (maximum length of the steam hose is 4m).
- Tighten the clamps of the steam hose. If necessary, support the steam hose so that the hose cannot sink into the hollow.
- Attach the condensate hose to the nozzle with a pipe clip.
- Measure and cut the condensate hose from the nozzle to the funnel (see drawings of the correct installation methods).
- Attach the lower end of the condensate hose above the funnel.

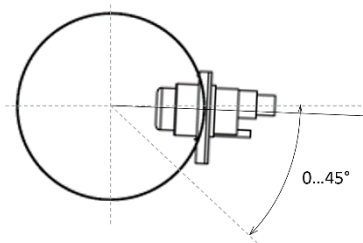
Both the steam and condensate hoses must have a minimum inclination of 5% at each point, i.e. there must be at least 5 cm of drop for every 1 meter!

Make sure that no folds form on the hoses, which would impede the movement of water or steam.

When connecting the nozzle to the ventilation duct, make sure that the connections are correctly fixed and airtight.



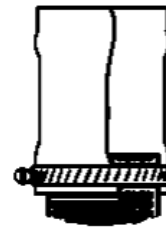
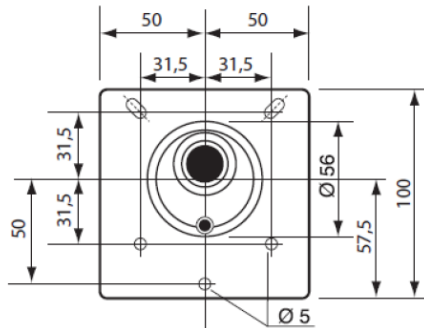
Installation of a steam nozzle in the supply duct after the ventilation unit



Correctly installed steam nozzle. The steam hose and condensate hose are attached with pipe clamps.

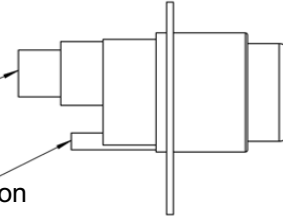
are

Nozzle dimensions and mounting holes:

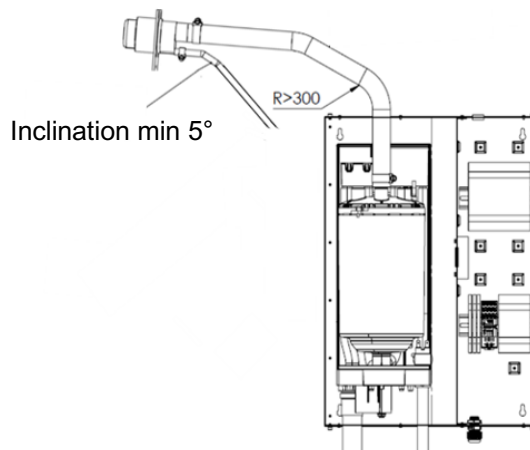
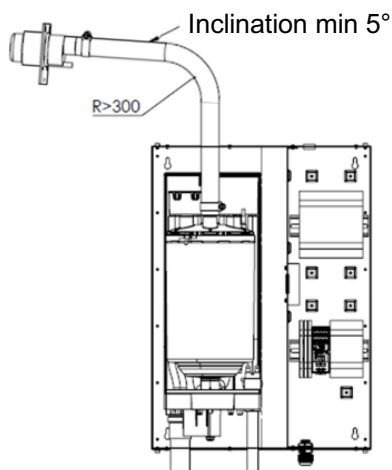


Steam hose connection

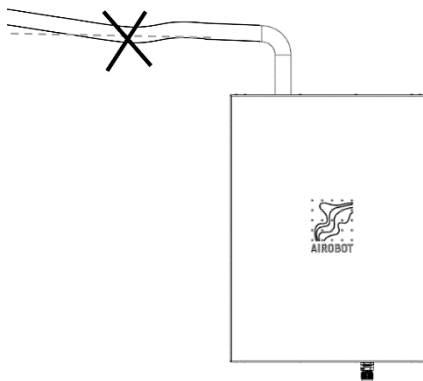
Condensate hose connection



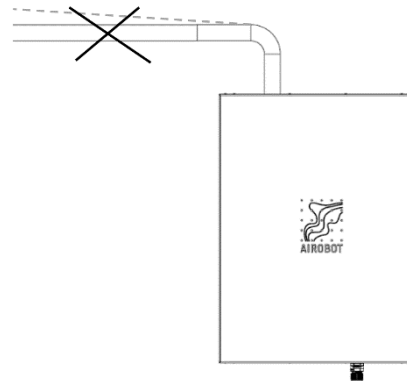
Correct installation methods of the steam hose and condensate hose:



Incorrect installation methods of the steam hose:



There is a hollow in the steam hose
(condensation does not drain)

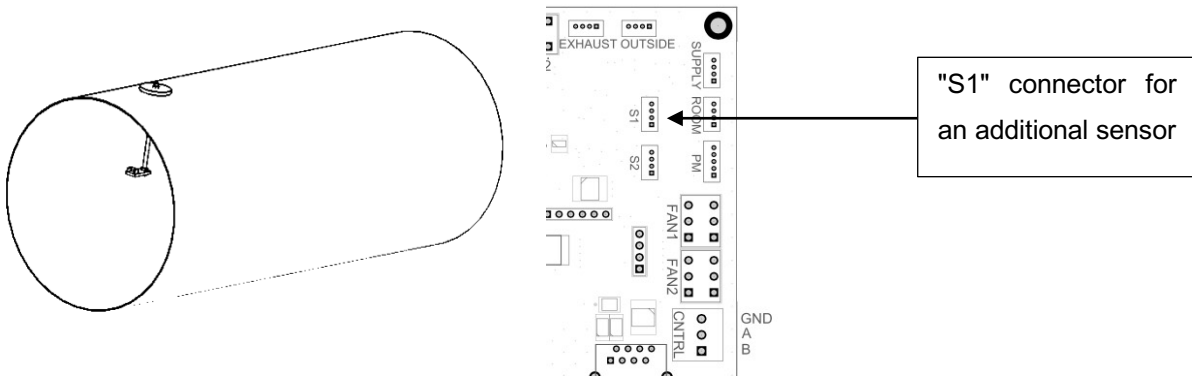


Inclination in the direction of
the humidifier less than 5°
(condensation does not drain)

Control with Airobot ventilation unit (-C model)

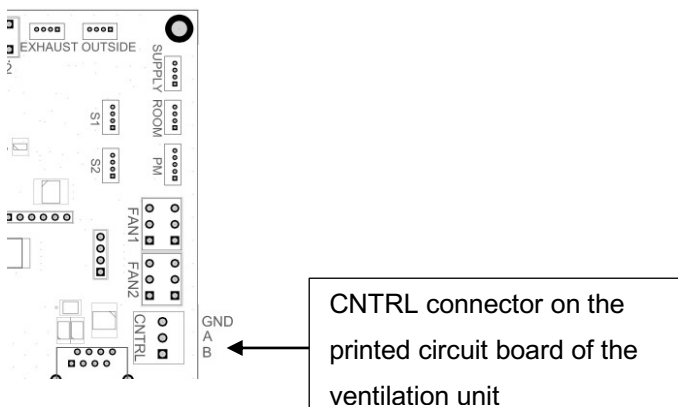
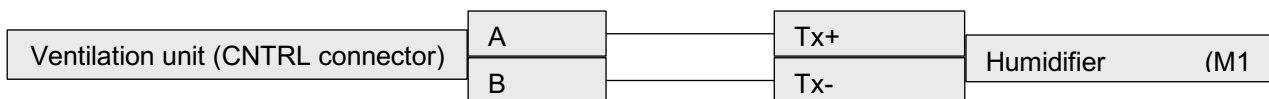
Additional sensor installation

- An additional sensor must be installed on the supply duct after the steam nozzle
- The sensor must be at a minimum distance of 1 meter from the nozzle, 1.2 meters is recommended.
- The length of the included cable is 5 meters.
- To install the sensor, it is necessary to make a hole of $\varnothing 25\text{mm}$ in the duct. Install the rubber penetration with the sensor in the hole made and connect the sensor cable to the ventilation unit.
- Connect the sensor plug to the connector marked "S1" on the board of the ventilation unit.



Cable for connecting the humidifier and ventilation unit

The 2-groove cable required for the exchange of information between the humidifier and the ventilation unit connects to the CNTRL registered connector (the wire grooves connect to terminals A and B). Terminal "A" connects to the "Tx+" terminal of the humidifier controller, and terminal "B" connects to the controller terminal "Tx-" (M1 marked connector in the humidifier)

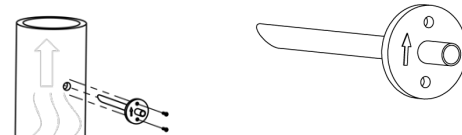


Standalone management (-EC model)

Pressure switch installation

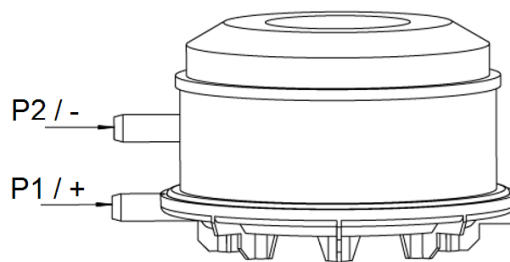
A pressure switch is installed in the supply manifold (included in the kit), which, if the ventilation unit stops or there is too little air, stops the humidifier. The pressure switch ensures the safe operation of the humidifier, in the case of stationary ventilation, the humidifier can do a lot of damage to the building and ducting.

Drill an Ø8mm diameter hole in the supply duct and attach the air duct to the piping with two screws. **The direction of the arrow indicated on the air tube must be the same as that of the air flow.**



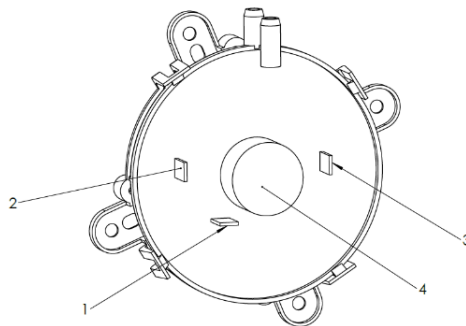
Attach the pressure switch to the wall with screws, the maximum distance from the air duct is 1 meter.

Connect one end of the air hose to the air duct and the other to the P1 tube with the "+" pressure switch.



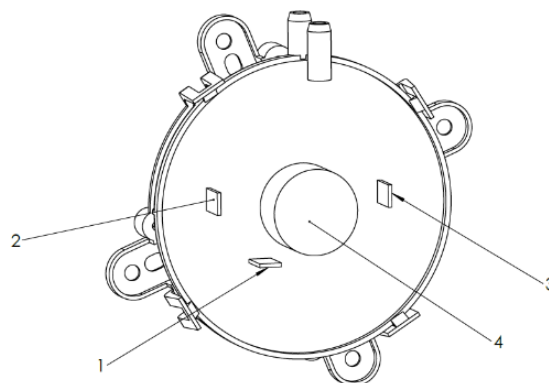
Remove the cap from the tube in Figure P2 (if the cap is attached, some models do not).

The cable that goes from the pressure switch to the humidifier must be connected to terminals 2 and 3 on the pressure switch, and to the M2.4 and M2.5 terminals in the humidifier (at the factory the connection may have already been made earlier). If desired, it is allowed to replace the cable and use a longer one.



The sensitivity of the pressure switch can be adjusted by turning the white ring.

20 Pa is very sensitive and 300 Pa is less sensitive. It is recommended to set the switch pressure sensitivity according to the amount of air the humidifier is desired to work.



NB! VERY IMPORTANT!

If the ventilation unit is stopped, the pressure switch must give a signal to the humidifier to stop.

The sensitivity can be raised higher than, for example, at lower speeds, it is not recommended to activate the humidifier (for example if the ventilation unit switches to eco mode, then the humidifier would stop).

When the pressure switch is applied, a slight click is heard.

Initial launch

WARNING! Before starting the humidifier, make sure that the unit is in good condition, there are no water leaks and all electrical parts are dry. Do not start the unit if the device is damaged or even partially wet.

Before launching, make sure that:

- Drainage, water and electrical connections are carried out correctly.
- The water tap for the humidifier is open.
- The steam hose and condensate hose are correctly installed and under the correct slope (return flow is ensured).
- The nozzle would be hermetically attached to the ventilation ducts.

It is important to know and start - in case of control with Airobot ventilation unit (-C model)

- The humidifier is used during the heating period when the humidity level should fall to a very low level. The humidifier can be used only if the humidity of the exhaust air is less than 40%.
- The user determines the level of the desired humidity (up to 40%) in the mobile application or control unit. The humidifier humidifies the rooms through the supply ducts and increases the humidity level to the best of its ability.
- The Airobot ventilation unit monitors and checks that the humidity at the supply does not get too high (up to 75%). With it, the ventilation ducts are protected from excessive moisture, water damage and the formation of mold.
- Occupancy detection: If the Airobot ventilation unit detects that no one is in the rooms, the device turns off irrigation (only in automatic mode) to save energy.
- For best results in irrigation and lower power consumption, it is recommended to use the humidifier with Airobot moisture-returning ventilation unit.
- To start, the order of operation of the humidifier must be provided through a mobile application or the control unit of the ventilation unit. **With the mobile application:** when connecting the humidifier, the "Humidifier" module will appear in the main view of the mobile application, press on it and be guided by the text displayed on the screen.
- **With the remote control:** Open Menu – Humidify and be guided by the text on the screen.

It is important to know - if management in isolation (-EC model)

- **Very important!** During the initial testing of the humidifier, stop the ventilation device during the tests – the pressure switch must give a signal to the humidifier so that production is now stopped. When the ventilation unit starts up again, the humidifier must continue to operate (if a work order has been given)
- The productivity of the humidifier to choose left / right arrows on a scale from 0 to 5.0 stops the humidifier, 1 is the minimum and 5 is the maximum productivity.

At the initial start-up, the water tank of the device is empty of water. When starting, the water tap opens: observe that the water level in the cylinder begins to rise. When a suitable water level is reached, the humidifier will begin to heat the water: the device will reach its maximum power within a few hours, depending on the water indicators.

After 3 hours (minimum time!), a follow-up inspection of the installation must be carried out. Check that:

- The connections would be dry and would not leak water.
- A steam nozzle in the pipeline would not make a sound (if it makes a sound, then it is installed under the wrong slope)

After 24 hours, make a follow-up inspection again.

Using the control unit (-EC model only)

It is possible to select the working power on a scale from 0 to 5. To select the power, press the left or right arrow in the humidifier control unit. The humidifier adjusts the operating power you adjust the water level in the label.

- Power 0: the humidifier is in standby mode and does not make steam
- Power 1: 20% working power
- Power 2: 40% working power
- Power 3: 60% working power
- Power 4: 80% working power
- Power 5: 100% working power

Wi-Fi

It is possible to connect the humidifier control unit to a Wi-Fi network to receive software updates to the remote control. To connect to a Wi-Fi network, select the Wifi option from the menu and follow the on-screen instructions.

Menu		Description
Info (Info)	Cylinder hours (Cylinder hours)	Cylinder operating hours from the last shift or reminder reset
	Water conductivity (Water conduct)	Water conductivity value $\mu\text{S} / \text{cm}$
	Productivity in kg / h (Flow rate kg/h)	The value of steam productivity in kg / h
	Status (Status)	Displays the status of the instantaneous humidifier
Settings (Settings)	Firmware (Rv) Firmware (Hw)	Firmware and hardware number of the humidifier control unit (HE1)
	MAC (MAC)	MAC network address of the humidifier control unit
	Status (Status)	Connected – Network connected Not connected—no network connection established
	IP (IP)	Network IP address of the humidifier control unit
Settings (Settings)	Language (Language)	Displaying the language of the control unit: English, Estonian.

	Screen display (Display view)	Normal – the screen background is white Black - the background of the screen is black, the text is white
	Reset the cylinder (Reset cylinder)	Sets the cylinder operating hours to 0. Required to do after replacing the bridge
	Empty cylinder (Drain cylinder)	Allows you to manually empty the cylinder, necessary, for example, when changing the cylinder
	Reset alarm	Allows you to reset active interference in order to make the humidifier work again after the alarm has been eliminated. Alternatively, the humidifier can also be pulled out of the stream for a couple of seconds.
Settings for the expert	Foam control (Foam control)	-
	Conductivity (Conductivity)	-
	Dilution cycle (Dilute cycle)	-
	Discharge time (Drain time)	-
Wifi		Allows you to connect the humidifier control to the Wi-Fi network to receive automatic software updates to the remote control

Maintenance

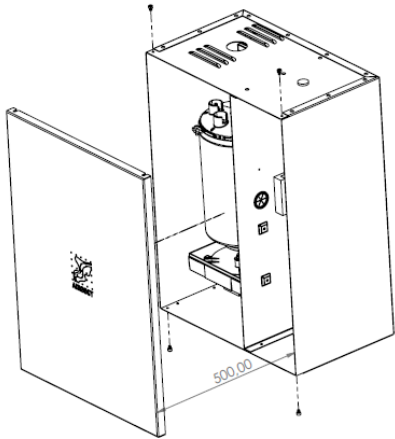
Risk of electric shock! When performing maintenance, the humidifier must be unplugged.

Periodic inspection.

- Every 15 days or every 300 hours of operation:
- Check that there are no water leaks and that there is no sparking between the heaters in the tank.
- Every 3 months, check the tank, if necessary, change it if the productivity has fallen and the tank is filled with scale. The life of the tank depends on the quality of the water.
- Steam nozzle: check that water does not splash into the ventilation ducts.

The water tank needs regular replacement at least every 3000 hours of operation

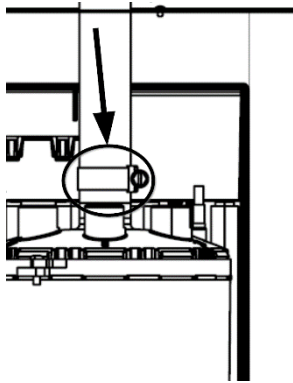
Tank replacement



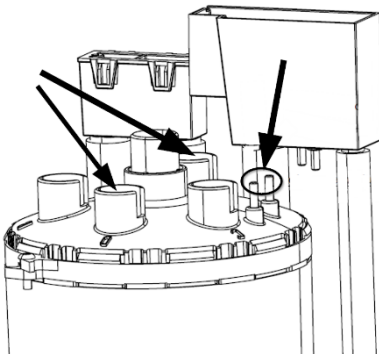
To change the tank, drain the tank from the water giving the appropriate command to the humidifier.

Unplug the humidifier.

Allow the device to cool down. Removing the front panel will speed up the cooling.

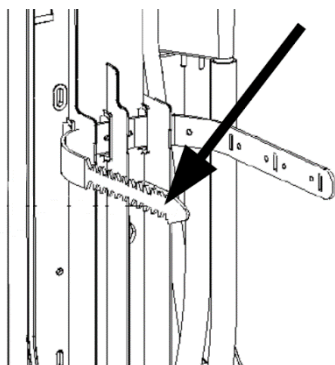


When the device has cooled down, disconnect the steam hose.

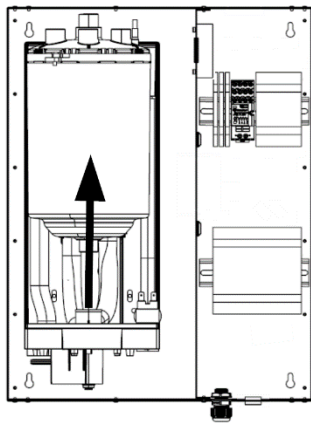


Remove the plugs of the electric kegs- come loose by pulling straight up.

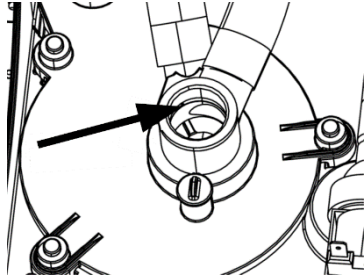
Remove the plugs from the water level sensor.



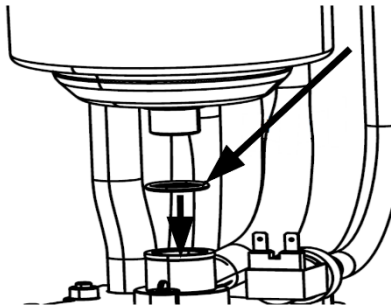
Release the rubber fastener that holds the tank



Lift the tank upwards so that the tank comes out of its nest.

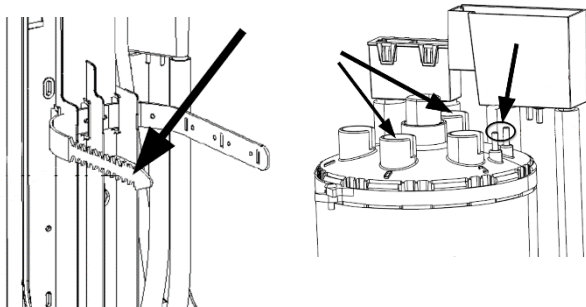


Remove the old gasket from the tank drain pump from inside the groove of the gasket or from the side of the tank, depending on whether the gasket remains attached to the tank or attached to the discharge pump.

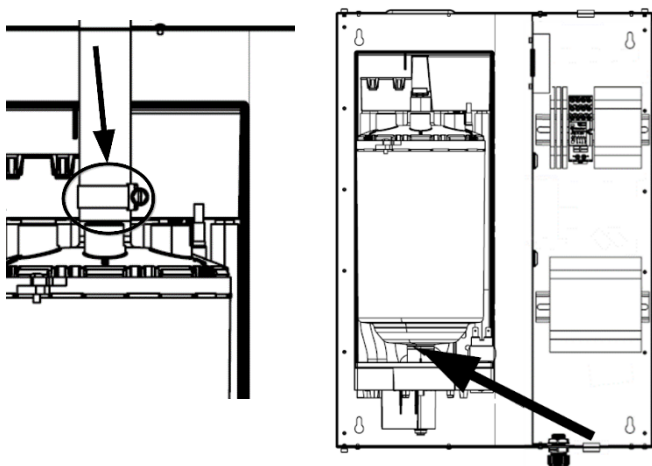


Before installing a new tank, place the gasket on the drain pump inside the groove of the gasket (for easier installation, it is recommended to wet the gasket with water or use silicone oil).

Place the new tank in its slot, pressing it beautifully tight against the gasket.



Attach a piece of rubber that holds the tank. Connect the connectors of the water level sensor and electrical nozzles.



Connect the steam hose to the tank. Turn on the humidifier again and check that there is no leakage between the lower gasket and the tank when filling the tank with water.

Warranty terms

Warranty duration: Airobot humidifier and accessories are covered by the manufacturer's warranty for 2 years from the date of purchase. The warranty period is designed to cover any defects in materials or workmanship that may occur during normal use. To ensure the validity of the warranty, a proof of purchase is required, in its absence, the date of production of the product.

Coverage: During the warranty period, the manufacturer or an authorized service partner, at its sole discretion, will repair or replace any component or part of the product that has been identified as a result of defective materials or other malfunction. The manufacturer's warranty does not cover the following:

- Damage caused by misuse, negligence, accident or improper handling.
- Any changes that are made to the product without the permission of the manufacturer.
- Normal wear and tear, including scratches, dents and cosmetic damage.
- Consumable parts, such as batteries, unless otherwise noted.
- Damage caused by liquids, temperature extremes or environmental factors outside normal operating conditions.
- Software-related issues, including but not limited to data loss or corruption.
- Accessories or components not included with the original product.

Occurrence of defects: In the event of a warranty claim, the owner must contact the dealer or the manufacturer's customer support via the dedicated channels provided on the manufacturer's website. The holder may be required to provide a preliminary proof of purchase, a description of the problem and other relevant information.

Repair or replacement: If the mentioned defect is confirmed by the manufacturer, the product will either be repaired or replaced with a similar model at the discretion of the manufacturer. Repaired or replaced products are subject to the remaining duration of the original warranty period or 6 months, whichever is longer.

Additional information: For more information or questions about this warranty, please visit the manufacturer's website or contact the manufacturer. Keep a copy of this warranty for your documents along with proof of purchase, as it is required for all warranty claims. This warranty is in addition to the rights provided by applicable laws and regulations.

Support and contact

Due to software updates, changes may occur to the user manual, the updated version can always be found on the www.airobothome.com/abi helpdesk page.

We are grateful for any feedback on the use, characteristics, etc. of the device info@airobothome.com.

Manufacturer details

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Customer support and guides

www.airobothome.com/abi



Guide version 04.2024