

ACTIVE HUMIDIFICATION MODULE FOR FLUX

MANUAL



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1 • Foreword

This installer manual has been prepared for the installation and maintenance of the Renson active humidification module for Flux.

1.1 • Purpose of this manual

This manual contains instructions and recommendations for correctly sizing the Renson active humidification module for Flux and then safely assembling, commissioning and maintaining it.

Please read this manual carefully before connecting or servicing the unit.

The purpose of this installer manual is:

- Optimal safety during installation and use.
- Careful maintenance.
- A reference for troubleshooting.

1.2 • Version control

This manual is only available electronically as a PDF file.

RENSON® reserves the right to make technical changes to the products described. The most recent manual is available for download at www.renson.eu.

1.3 • Language version

The Dutch version is the original version. Any other language versions are translations. In the event of inconsistency, the Dutch version is the standard version.

2 • Warranty and liability

2.1 • Warranty

The warranty on Renson products is valid for two years from the date of production. This warranty includes the free provision of replacement parts by Renson.

The warranty does not cover:

- Disassembly and installation costs.
- Defects which, in Renson's opinion, are the result of improper handling, negligence, accidents or force majeure.
- Defects caused by improper handling or repair by third parties without Renson's prior consent.

To return a defective part, the installer must first contact Renson.

2.2 • Liability

The Renson Humidification module is designed for adiabatic humidification of frost-free rooms in high-rise and low-rise buildings. Without consultation with an expert from Renson, any other application may be considered improper use, as a result of which the manufacturer cannot be held liable for any direct and indirect damage.

Renson is not liable for damage caused by:

- Improper use.
- Wear and tear.
- Failure to follow the installation instructions in this manual regarding safety, operation and maintenance.
- The use of parts not supplied by Renson.

2.3 • Safety measures taken

- The Renson humidification module is constructed so that with normal use and without performing specific actions, it is not possible to come into contact with moving or live parts.
- The Renson humidification module meets the legal requirements for electrical appliances.
- The Renson humidification module is equipped with strain relief via a connection to the suspension bracket.
- The unit must be installed in accordance with national wiring regulations.

Applicable guidelines:

- Low Voltage Directive 2014/35/EU
- EMC Directive 2014/30/EU
- RoHS Directive 2011/65/EU

Applicable standards for the components:

- EN ISO 12100:2010
- EN 60335-1:2012/A12:2017
- EN 60335-2-98:2003/A2:2008
- EN 61000-3-2:2014
- EN 61000-3-3:2013
- EN 55014-2:2015

The product bears the CE label.

The following safety measures must be observed:

- Before starting any work, always disconnect the device from the power supply by removing the adapter from the wall socket.
- Use appropriate/suitable tools.
- Only use the device for an application for which it is designed, as stated in the 'Warranty and liability' section and follow the installation instructions as reported below. Any modification to the connections of the device are at the risk and expense of third parties.
- If no fixed wiring is provided and the power cord is damaged, it can only be replaced by a power cord provided by Renson (article code 17798). If this is not done and a different cabling is used, all warranty and/or liability in connection with the malfunctioning of the product is voided.

The Renson humidification module features warning symbols:



This symbol warns against touching and unprotected access.
Risk of electrical voltage or water contact!



Parts under the cover are under live. This symbol warns against danger. Caution is required.
Unplug before removing the cover!



This symbol warns against danger. Caution is required.

3 • Technical information

3.1 • General description

The purpose of the Renson humidification module is to humidify the air in an energy-efficient, quiet and safe way in the home. Humidification takes place in the humidification module itself and increases the humidity in the air supply to the house.

3.2 • Operating principle

The Renson humidification module is installed on the supply air duct after the HRV (ventilation unit). When the moisture content of the outside air becomes too low, the Renson humidification module starts humidifying the supplied air, achieving a maximum efficiency of 80%. The air cools along a line of constant enthalpy on the psychrometric chart. The maximum capacity is 3 litres/hour, depending on air flow rate and air temperature.

3.3 • Safety

The built-in, patented LegioSafe legionella-free water distributor makes the water legionella-safe. The supply water first passes through the LegioSafe before moistening the matrix. As a result, there is no risk to residents. Only fresh water is used, so there is no recirculation of water. The matrix is completely dry with no cooling/humidification demand.

4 • Application

The Renson humidification module can be used with any Flux where the volume of the HRV has to be taken into account in relation to the maximum air volume of the humidification module.

If necessary, two active humidification units can be placed, which are controlled by Flux.

4.1 • Description of the parts

The main parts of the Renson Humidification module are:

The casing

The casing of the Renson humidification module is made of EPP (expanded polypropylene) with a round duct connection of 200 mm inside and 250 mm outside dimensions on both sides. The advantages of this material are its low weight, good watertightness, airtightness and recyclability. It consists of an upper and a lower casing attached to each other with two retaining rings. At the bottom is the compartment containing the water valve and controller board, sealed by an EPP lid fitted with safety symbols.

Internal construction

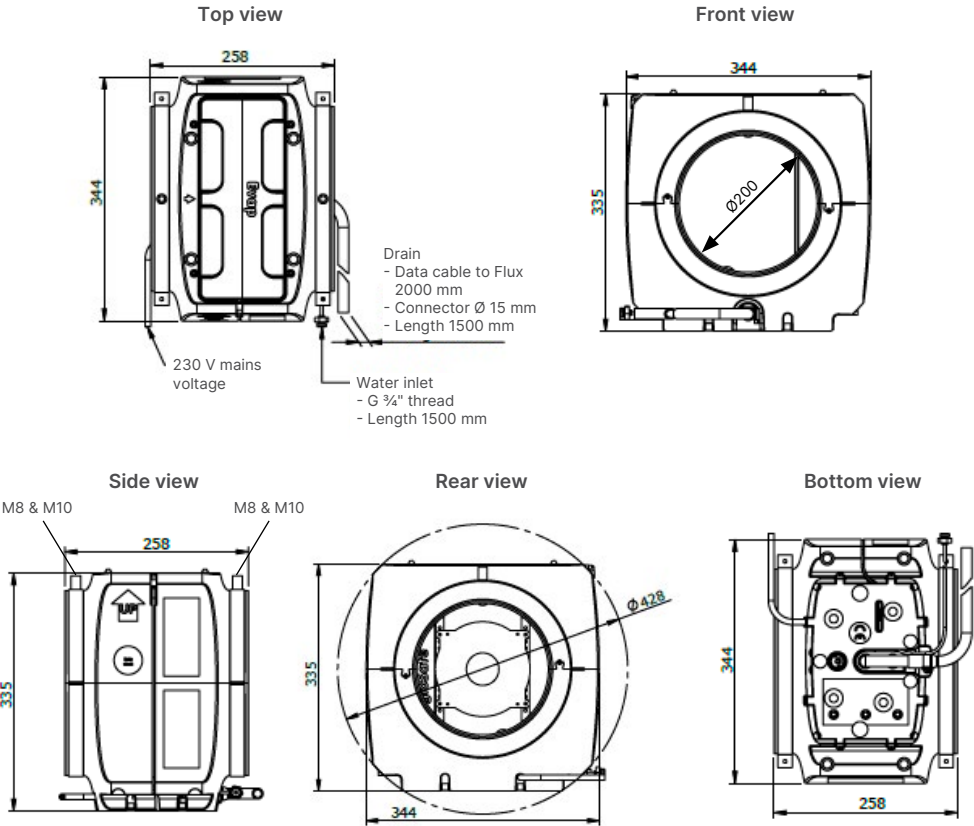
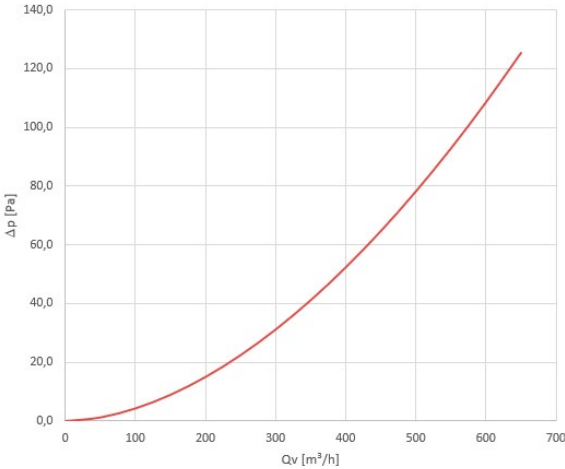
The internal construction is designed to optimise air flow and ensure safe humidification. It consists of a cassette containing the matrix and the controlled water distributor with restrictor. The supplied air passes through the matrix and is moistened by contact with the wet surface. Excess water is drained away. The replacement cassette contains the LegioSafe filter in addition to the humidification matrix.



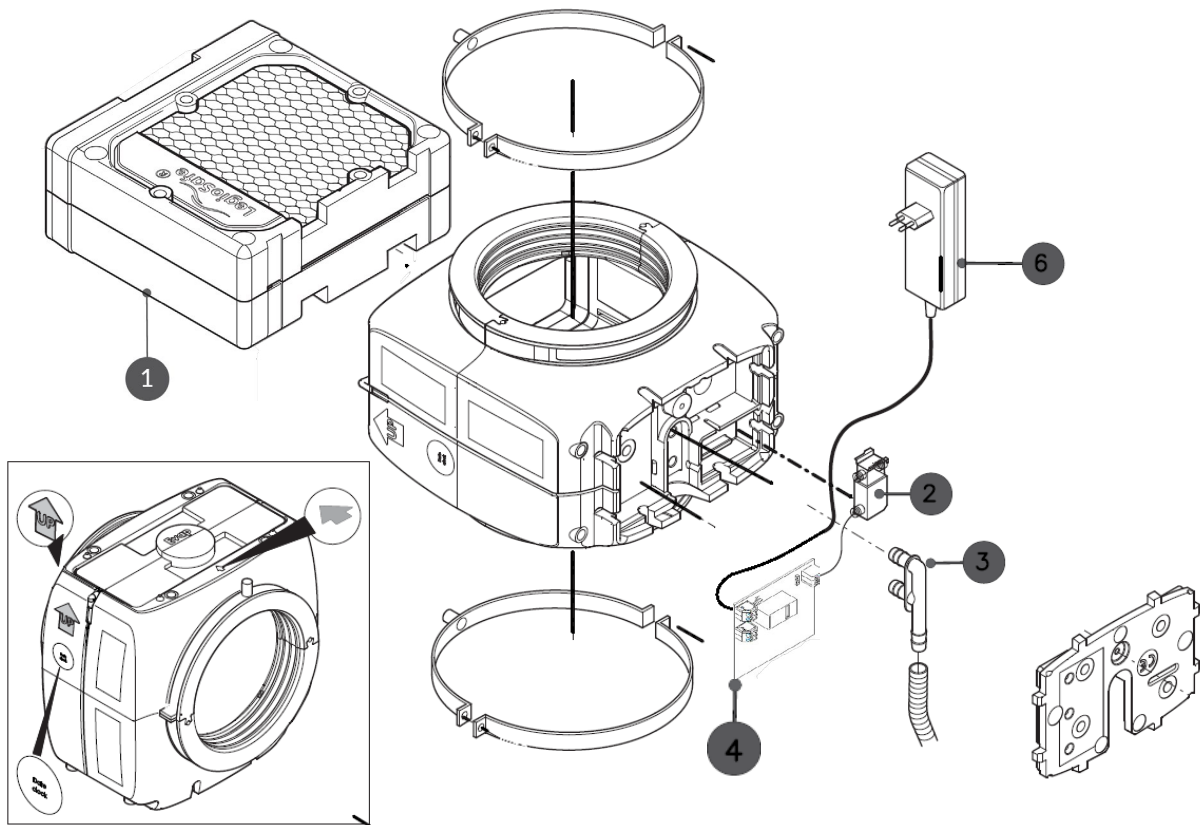
Complete replacement cassette with evaporator matrix and LegioSafe cartridge

5 • Technical specifications

Renson humidification module	
Dimensions LxWxH	315 × 335 × 335 mm
Humidification capacity	0-2 litres per hour * depending on air flow rate and air conditions
Electrical consumption	3 VA –
Maximal water consumption	3 litres per hour
Water inlet connection	¼" internal thread with 4 mm connection
Water drainage connection	16 mm connector spigot 150 cm
Duct connection	D200 internal (plug size) - data cable to Flux: 2 m



Exploded view of HEPHR components



	Description
1.	Cassette
2.	Water valve
3.	Drain
4.	Renson print
6.	Power

Link to list of replacement parts:



6 • Installation manual for Renson humidification module

Before opening, check packaging for visible damage. Damage must be reported in writing within 48 hours of delivery to hvacbelux@renson.be in connection with warranty claims.

The humidification module should be connected to a water drainage point that complies with the European Drinking Water Directive (98/83/EC / 2020/2184) and local regulations for fixed water drainage points.

The Renson humidification module consists of two modules:

1. **Renson active humidification module** – This is the EPP unit that contains the humidification matrix. A 200 mm-diameter pipe should be connected on both sides. At the bottom are the following:

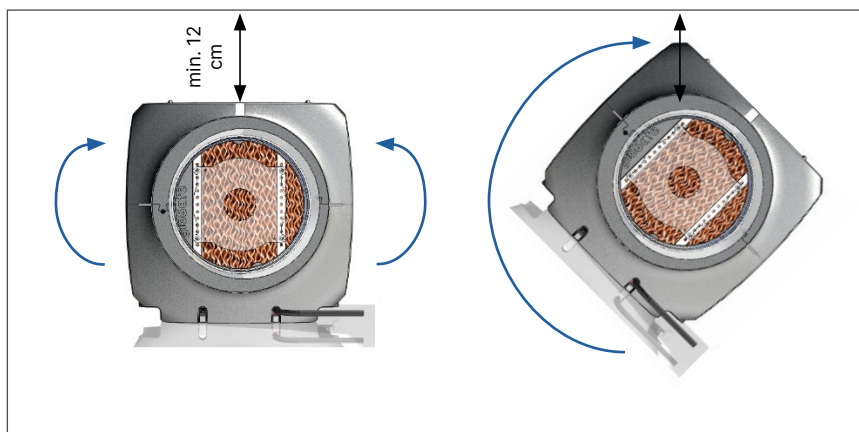
- The connection to the Renson Flux+ unit for switching the water valve
- 230V power adapter 230vac to 24vdc L1.5m
- 150 cm water drain hose with thickness of 16 mm
- 150 cm black water supply connector with thickness of 4 cm with reducer coupling to ¾" external thread

Order of steps

1. Place the Renson active humidification module as close as possible to the Flux+ unit, with a minimum distance of 10 cm.
2. It is important that sufficient space is available during installation, so that parts subject to wear and tear can be replaced. Ideally, there should be enough space (minimum of 30 cm) to push up the cassette (option A). If there is not enough space heightwise, the cassette can also be extended after the humidifier is rotated. Ensure 12 cm for this purpose (option B).



Option A



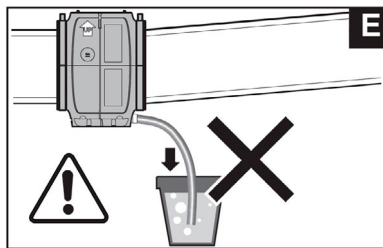
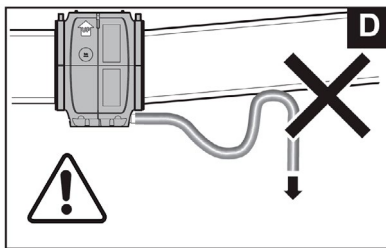
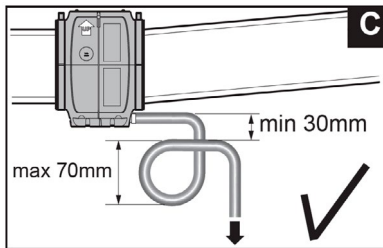
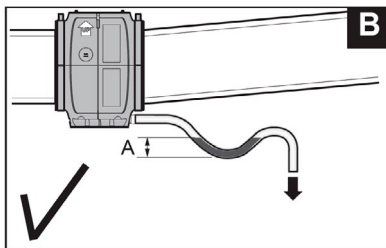
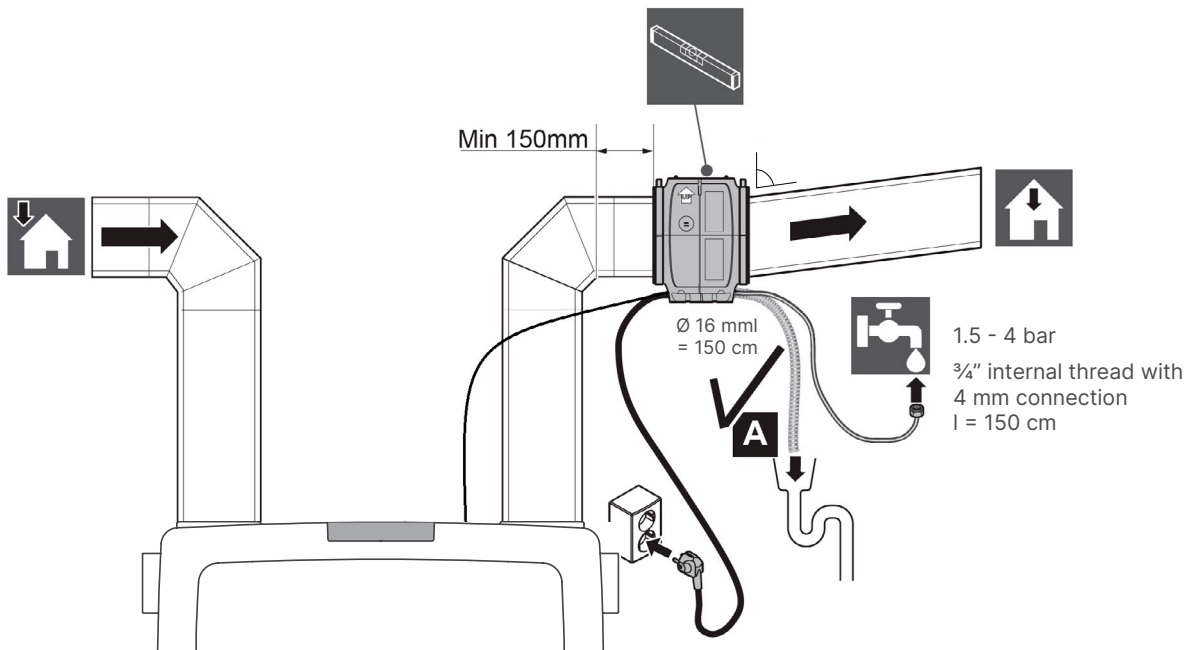
Option B

! IMPORTANT

The unit must hang level!

3. Keep at least 100 mm free at the bottom.

Schematic drawing of humidification module position



4. Mount the humidification module between the ducts using the brackets provided. Use threaded rods M8 or M10.
5. Connect the black 4 mm connector with the 3/4" adapter to the water supply connection of the water supply system via a 3/4" threaded washing machine tap with check valve. Make sure the connector is clear of the air ducts.
6. Make sure the water pressure is between 1.5 bar and a maximum of 4 bar at the drainage point.
7. The humidification module has a 16 mm drain hose with a length of 150 cm. This should be connected to the sewer at a downward slope without pressure. An airtight coupling is recommended.
8. **IMPORTANT:** Water consumption is max. 1 l/min in the event of a pipe break or defective water inlet valve and normal use max. 2 l/h with a drain with a minimum diameter of 25 mm.

! WARNING

The humidification unit has a cover. This allows calibration, if required, without inserting the cassette with evaporator matrix. It ensures that the pressure drop across the evaporator matrix does have an effect.

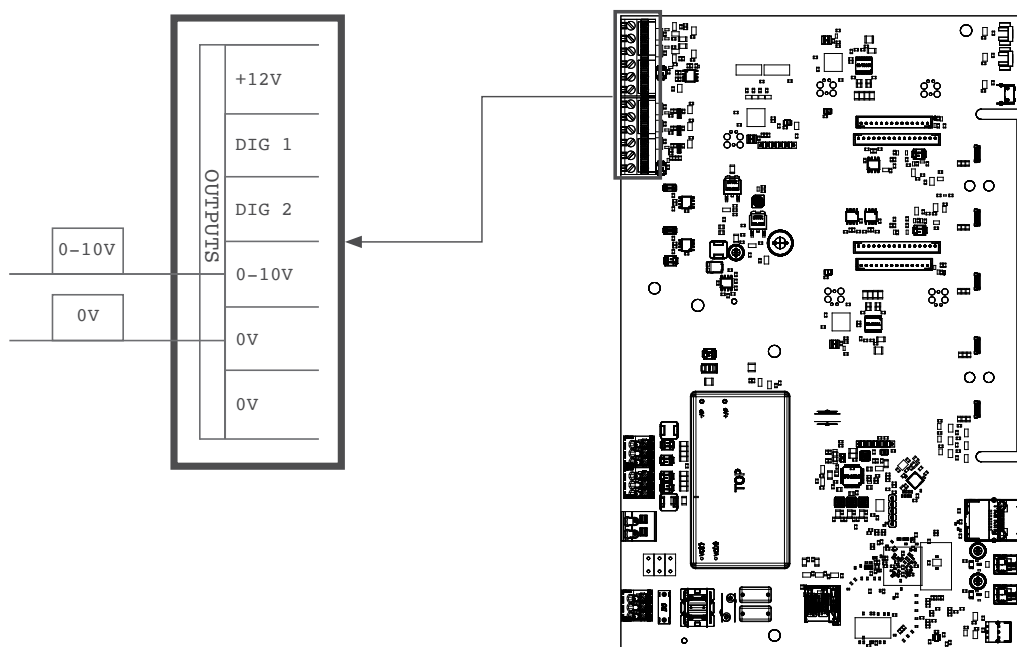
In addition, the use of the cover allows the ventilation system to operate temporarily without a cartridge, for example when a resident does not wish to use the humidification function for a while.

IMPORTANT: Always unplug and turn off the water supply tap. If this is not done, the resident may accidentally activate the humidifier via the app. Since the cassette is not connected, this will lead to water damage.

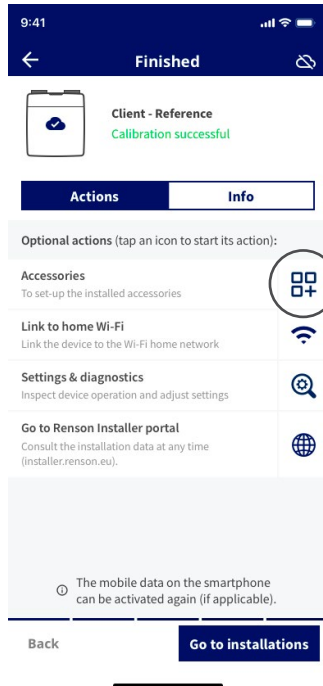
Commissioning protocol

After the above actions have been carried out, the humidification module can be started up. To start up properly, follow this protocol step by step.

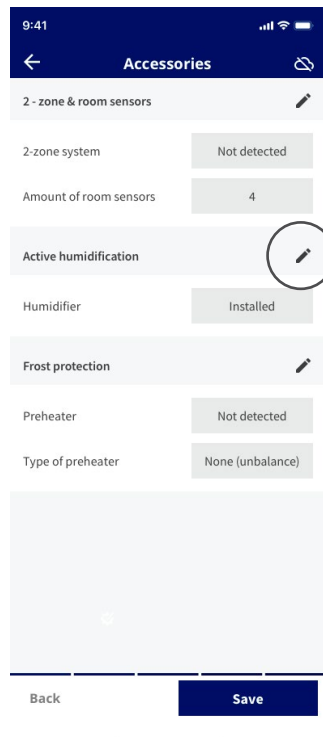
9. Open the water supply tap a half or quarter turn. Check for leaks.
10. Connect the unit to the Flux PCB.



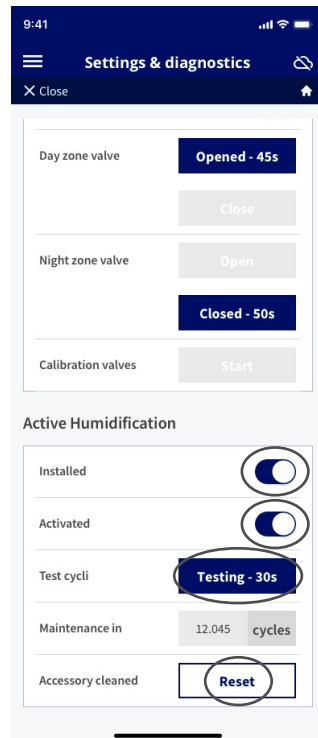
- For the active humidifier to function, it must first be logged into the Flux device via the installation app. To do this, first go through the full calibration process in the app. At the end of this procedure, the following screen appears:



Select the accessory icon to register the Flux active humidifier.



Open the service page to register the active humidifier.



Activate the active humidifier by pressing both the 'Installed' and 'Activate' buttons.
To test the humidifier's operation, press the 'Test' button.
In this menu, you can also reset the maintenance counter.

12. The Flux unit only switches on the humidifier when both conditions below are met:

- The outside temperature is below 12 °C.
- The relative humidity of the exhaust air is below 50%.




If the water valve is controlled by the Flux unit, the yellow LED on the board will light up.

7 • Maintenance instructions

7.1 • Maintenance

The humidification module requires little maintenance. Maintenance such as replacing the Matrix cassette is easy to carry out. If replacement is necessary, this is indicated on the device and room sensors. The status LED strip on the Flux unit or the LED on the room sensor flashes twice briefly, pauses for a moment, then repeats this pattern. Notification is also given through the app.

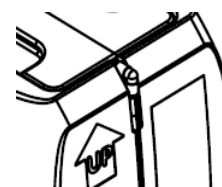
The units are equipped with a removable cassette in which a matrix and the LegioSafe filter are installed. The matrix cannot be cleaned, but it can be replaced. The LegioSafe filter should be replaced after the evaporator matrix is replaced and the RH after the humidification module does not exceed 50%.

	Item code	Name
	37755	Complete replacement cassette, including LegioSafe for active humidifier
	37376	Evaporator matrix
	37748	LegioSafe cartridge

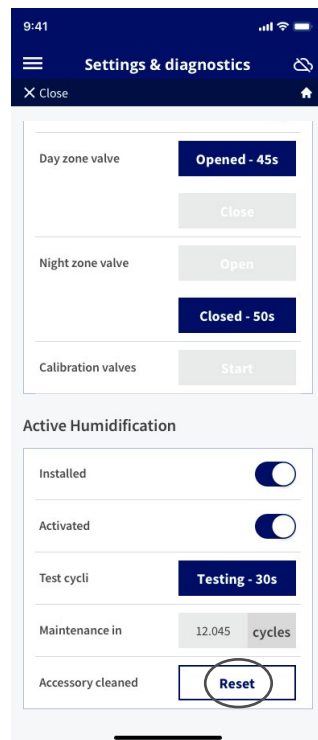
IMPORTANT

Always unplug before starting maintenance!

1. Unplug the power cord.
2. **Shut off the water supply.**
3. Make sure the drain hose is free and can move with the movement required to access the top.
4. Make sure the water supply connector has enough room to move along or disconnect from the tap.
5. If there is not enough space to remove the cassette directly, unscrew the installation screws on the side of the brackets, so that the Renson humidification module can be rotated in the bracket. Use a Phillips 2 or 3 screwdriver.
6. Unscrew the EPP screw at the bottom of the humidification module 2.5 cm.
7. If necessary, turn the Renson humidification module 90° so that the cassette is accessible. Be aware of possible leakage water from the side of the unit!
8. Disconnect the cassette from the water supply by pressing the ring of the elbow fitting (on the side of the casing) and sliding the entire fitting off the black connector. This disconnects the cassette and allows it to be removed.
9. Pull/slide the cassette out of the Renson humidification module.
10. Clean the inside of the Renson humidification module with a soft cloth if necessary.
Do not use cleaning products!
11. Remove the new cassette from its packaging.
12. Press/slide it into the unit.
13. Push the black connector of the new cassette into the elbow fitting.
14. Turn the Renson humidification module again so that it is **level**.
15. Tighten the brackets.
16. Open the water supply tap.



17. Reset the maintenance counter in the app by clicking the reset button on the service page.



Note: The used cassette can be disposed of in its entirety with residual waste.

7.2 • Additional actions for replacing the evaporator matrix and LegioSafe cartridge

- For the evaporator matrix:



Open the cassette.



Replace the evaporator matrix.

- For the LegioSafe filter:



Remove the filter from the holder by twisting and then pulling. It is normal for this to require a lot of strength.

Release the cover by pulling upwards.

Replace the LegioSafe filter.

! IMPORTANT
Make sure the holes for releasing water are facing upwards.

- Put everything back together and close the cassette.



All images shown are for illustration purposes only and represent a snapshot of a practical situation.
The actual product may vary due to modifications to the product.
Renson® reserves the right to make technical modifications to the products discussed here.
The most recent brochures can be downloaded at www.renson.net



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