

Foreword

This instruction manual is instructional to the installation and maintenance of the HomeEvap Cooler.

The aim of this instruction manual is:

- To ensure optimal safety during installation and use
- Careful maintenance
- Reference book for malfunctions

No rights can be obtained from this instruction manual. As products are in continuous development, HomEvap maintains the right to modify this instruction manual without previous announcement.

Warranty and liability

Warranty

We hereby state a warranty will be provided on HomEvap products for 2 years after production date. This warranty includes free delivery of substitute and spare parts.

This warranty does not include:

- Assembly- and disassembly costs
- Defects caused by incorrect use, disaster or negligence, according to HomEvap judgement
- Defects due to handling or repair by a third party without permission of HomEvap
- Consumables such as water filter cartridges, matrix cassette material and manifolds

For return of defect parts, it is required that the assembler contacts HomEvap.

Liability

The HomEvap Cooler is designed for adiabatic cooling for high- and low rise building, residential housing and small offices. Every other application without consultation of a HomEvap expert, can be seen as improper use, relieving the manufacturer of any liability for possible damages.

HomEvap is not liable for any damages caused by:

- Improper use
- Normal wear and tear
- Ignorance of the instruction manual, concerning safety, operation and maintenance.
- Use of part not provided by HomEvap.

Safety measures

The construction of the HomEvap Cooler makes it impossible to be in contact with moving or voltage wearing parts, if used normally and when handled aimlessly.

The HomEvap Cooler conforms with the legal requirements for electrical appliances..

Applied guidelines:

- Electromagnetic Compatibility Directive 89/336/EEC
- Low Voltage Directive 73/23/EG

Standards for which compliance has been issued:

EN50081-1:1992

- Electromagnetic compatibility: Generic emission directive
- Home-, commercial- and light industrial use.

EN50081-2:1994

- Electromagnetic compatibility
- Generic emission directive
- Industrial environment

The following safety measure must be taken into consideration:

- Prior to operation, the power of the appliance must be cut by unplugging the power cord.
- Use appropriate/suitable tools
- Only use appliance for the designed application, as mentioned in the 'Warranty and Liability' paragraph and consider the technical specifications.

Explanation symbols:



DANGER: Voltage on parts under the lid. Careful handling is advised, remove plug from socket before removal of the lid.



Symbol warns for contact and access while unprotected.



DANGER: Careful handling is advised.

Technical specifications

General description

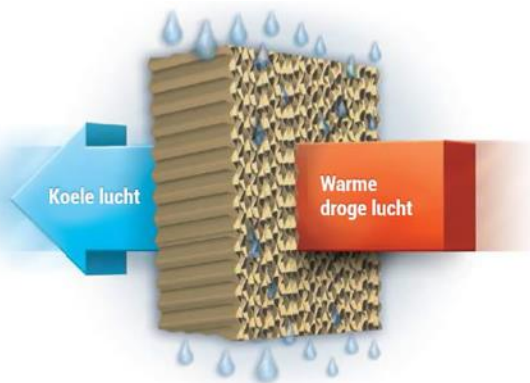
The aim of the HomEvap cooler is energy efficient, quiet and safe air cooling of the residence. Its indirect cooling function is to cool the fresh air-supply without affecting the humidity. When there is sufficient suction of air, the yield will increase as the outside temperature rises, Relatively high residence humidity will negatively impact the appliance operation, as it is cooled through a evaporation principle.

Principle operation

The HomEvap Cooler can easily be placed on the retourvent of the HRV. The warm air from the residence area transports through o a humid matrix. This cools down the air to almost the wet bulb temperature of the air, for instance 29C/30% cools down to 20C/75%. The adiabatic cooler has an efficiency of 80%.

The cooled air is stored in the HRV, which makes the heat-exchanger a cool-exchanger. The warm outdoor air flows through the cool-exchanger and is cooled before blown into the residence area.

BEWARE: the effect on the room temperature is limited to the limited airquantity.



Application

The HomEvap cooler can be applied to all HRV systems, where during the warmth exchange, no humidity

Kerkenbos 1333
6546 BG Nijmegen
Kvknr: 64199851
BTW: NL855563060B01

transfer took place between the airsupply and airreturn. Application on the enthalpy exchanger is possible, this will increase the humidity in the air supply.

Description of parts

The most important parts of the HomEvap Cooler are:

The casing

The casing of the HomEvap Cooler is made of EPP (expanded polypropylene) with a circular 200mm ductconnection on each side. The perks of this material are that it is waterproof, lightweight and recyclable. The casing exists of a upper and lowerhousing, that are fastened by two rings. The bottom has a compartment with the mainboard, closed off by an EPP lid.



Internal construction

The internal construction is developed in a way that optimally and safely cools the air supply. It consists of a cassette and a waterdistributor that humidifies the matrix. The airsupply flows through the matrix and is cooled. Redundant water is drained.



The controls

The HomEvap is controlled by a wireless control panel.

Operation

As soon as the space sensor in the control panel measures a deviant temperature from the setpoint, the cooler is activated. The software is designed to optimise the yield and minimise the water usage, with the lowest energycosts.

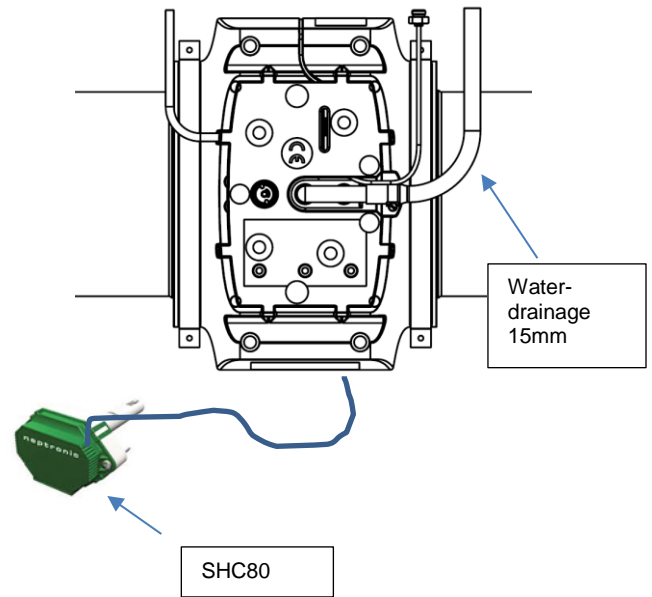
Safety

The control is provided with an anti-static water regulation as extra security on legionella formation.

The included SHC80 sensor measures the relative humidity and temperature in the duct AFTER the cooler. It works as a maximum humidity security by preventing condensation from forming in the ducts, due to a high humidity under normal conditions of the appliance.

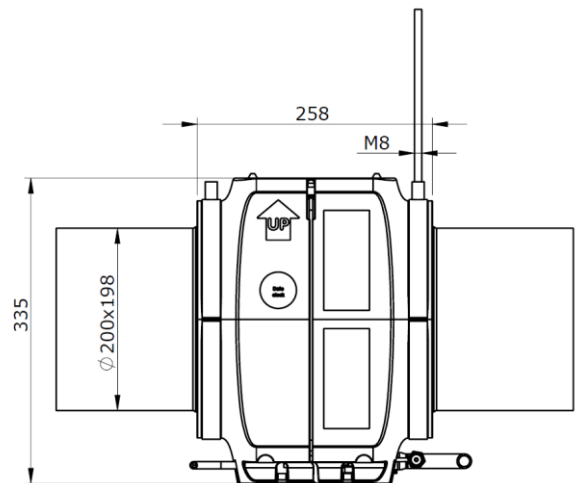
The controls have some built-in securities and indication functions;

- The LEDs of the control print are located on the bottom of the cooler.
- Any essential notifications are also visible on the display.
- The wireless controller has batteries and is uniquely linked to the included module.



Technische specificaties

	HomEvap Cooler
Dimensions LxWxH	258 x 344 x 340 mm
Maximum humidifying-capacity	4 liter
Maximum cooling-capacity	1950 watt
Electricity use	20 VA
Maximum water usage	5 liter per uur
Watersupply duct connector	4 mm
Watersupply connection	15 mm slangtule
Maximum airvolume	650 m3/u
Ductconnection	R150 - R200 mm



Installation instruction manual HomEvap Cooler

Before opening, please check the packaging for any visible damaging. Damages need to be reported in writing within 48 hours after delivery on info@homevap.com for warranty and liability.

The cooler needs to be connected to a conform NEN6526 water drainage point.

The HomEvap Cooler consists of two modules:

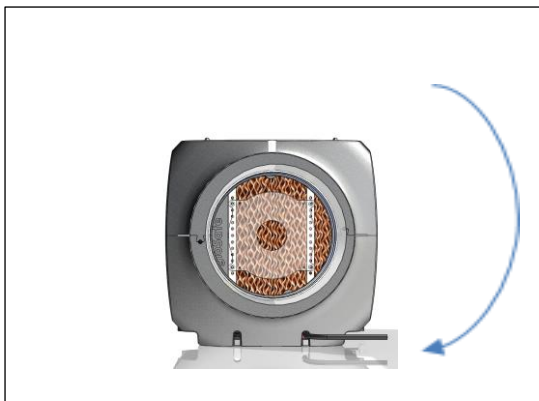
- 1) HomEvap – This is the EPP unit with two full rounds of 200 connectors, it also contains the matrix. On the bottom the power cord, two sensors and the waterhose for the supply and drainage.
- 2) The control panel – This is the controller provided with a digital thermostat/hygrostat.

The following connectors are present:

- 1 combined humidity-temperature sensors, 1m cord, connected to the mainboard
- 1 230V power cord with plug to connect to free power supply.

Order of action

- 1) Determine the location of the Cooler in the airreturnduct as close as possible to the HRV.
- 2) It is important to ensure there is enough space available during installation to turn the humidifier. This will prevent the necessity of deinstallation or herinstallation.



The unit needs be leveled!!

- 3) Keep a minimum of 100 mm of free space below the unit.
- 4) Install the Cooler between the ducts. For this use the brackets with M8 screw-thread connectors.
- 5) Connect the black 4mm hose with the ¾ adapter to the watersupply connection through the washing machine tap ¾ bu threads with valve. Ensure the waterpressure is between 1.5 bar and max 5 bar.
- 6) The unit is delivered with a 15mm drainhose (50 cm). Carefully press the hose on the white link of the drain. Lock the connectin by twisting the ring on the compression link by hand!!



The hose needs to be connected to the drainage, unpressurised and with a slope.

- 7) WATCH OUT. The water usage has a maximum 1 L/min in case of a pipeline break or a defect water supply valve, normal usage of max 2L/h and a valve diameter of 25mm.
- 8) Install the SHC80 sensor as close as possible after the humidifier in the airduct BEFORE the HRV!

WATCH OUT: do not damage or wet the sensor!!

- 9) Open the water-supply tap.
- 10) Plug in the power cord. The servicelight will turno on/off every 5 sec, which means an automatic test is being conducted. The watervalue will open for 90 seconds. The test will take approximately 3 minutes.
- 11) The HomEvap Cooler is is now ready.
- 12) Open the HEDISW control panel packaging and follow the instruction manual.

WATCH OUT: It is normal for the water to drain after 30 minutes. This should not be longer than 1 to 2 L/h, depending on the airsupply and relative humidity.

Maintenance instructions

The cooler does not need much maintence. The maintenance such as replacing the matrix cassette is easy to implement. The HomEvap control panel indicates when it is necessary to replace the matrix cassette by displaying the key symbol.

For any further questions please contact your supplier.

Figuur 1: schematic display of the cooler

