AIRMASTER



RC SOLUTION FOR AM 950 C AND AM 1000

ROOM CONDITIONING SOLUTION

Ventilation, heating and cooling in one

Ventilation Heating Cooling

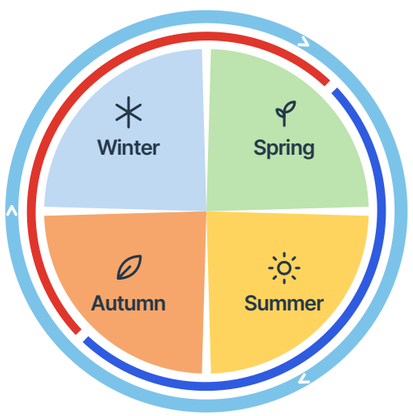
A water-based heating-cooling module that provides a good indoor climate every day of the year.

A good indoor climate every day of the year

Fresh air and a comfortable temperature are essential to how we feel throughout the day. A good indoor climate provides better concentration, more energy and greater well-being. When the air becomes stuffy or the temperature fluctuates, concentration and comfort quickly suffer. This applies in schools, nurseries and kindergartens as well as in offices and meeting rooms.

Needs change with the seasons. In winter, the room must be heated, and on warm days the temperature quickly rises in a room full of people and sunshine. Spring and autumn can bring both on the same day.

A good indoor climate requires ventilation, heating and cooling to work together. With an RC solution for AM 950 C or AM 1000, the three functions are combined in one unit, and you control both the air quality and the temperature in each room. That way, the indoor climate is good every day of the year.



Ventilation
Fresh air in the room all year round.

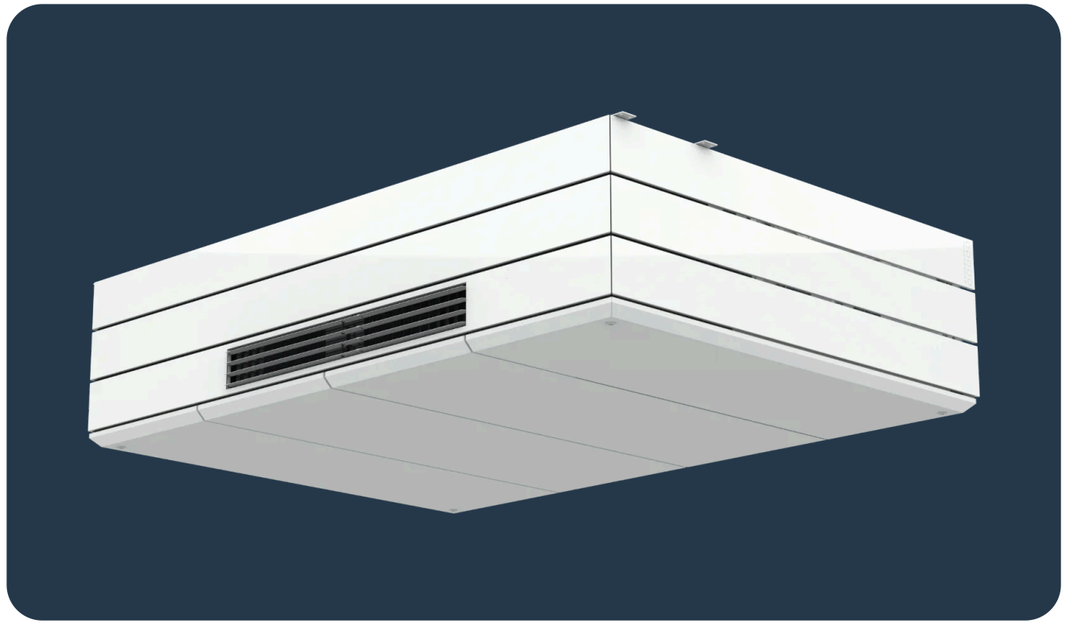
Heating
Cold days and cold mornings from autumn to spring.

Cooling
Warm days and sunny rooms from spring to autumn.

Spring and autumn can require both on the same day.



AM 950 C RC with the RC surface integrated into the unit



AM 1000 with the RC solution mounted on the front, making the unit slightly deeper*

* The panels are adapted to the extra depth.

Supply and distribution

A central supply of your choice delivers hot or cold water via a 2-pipe system to a number of units with RC modules. There will typically be a heating demand in the rooms in winter and a cooling demand in summer. The size of the supply limits how many units can be connected. The pipes are routed to the water connections on the side or top of the unit.

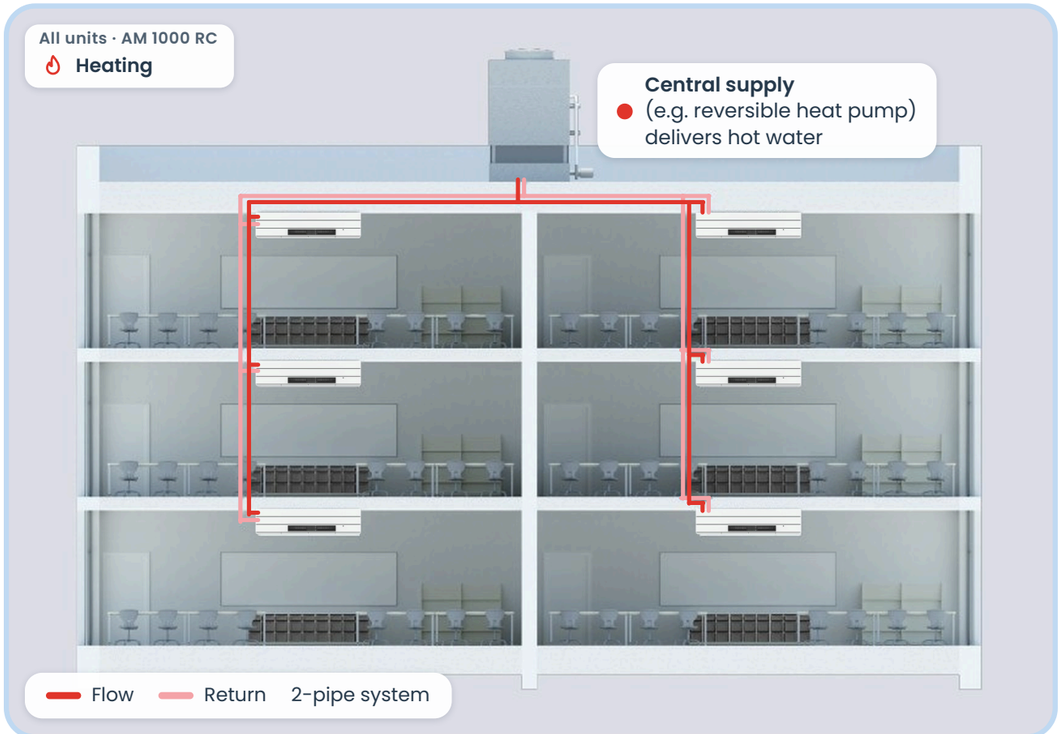
Supply of your choice, e.g.:

Heat pump · Chiller · District heating

Change-over means the same piping and the same unit. Only the water temperature changes with the season.

Heating in winter

Hot water to all rooms
Individual room temperature control



Cooling in summer

Cold water to all rooms
Individual room temperature control



Control in each room

The room temperature can be set individually in all rooms on the Airlinq® Orbit control panel or in Airlinq® Online. Airlinq® Online provides an overview of all units from a PC, smartphone or tablet.

Inspiration

On larger projects, it can be an advantage to divide the supply by facade, because the rooms can have different heating and cooling needs.

The RC solution

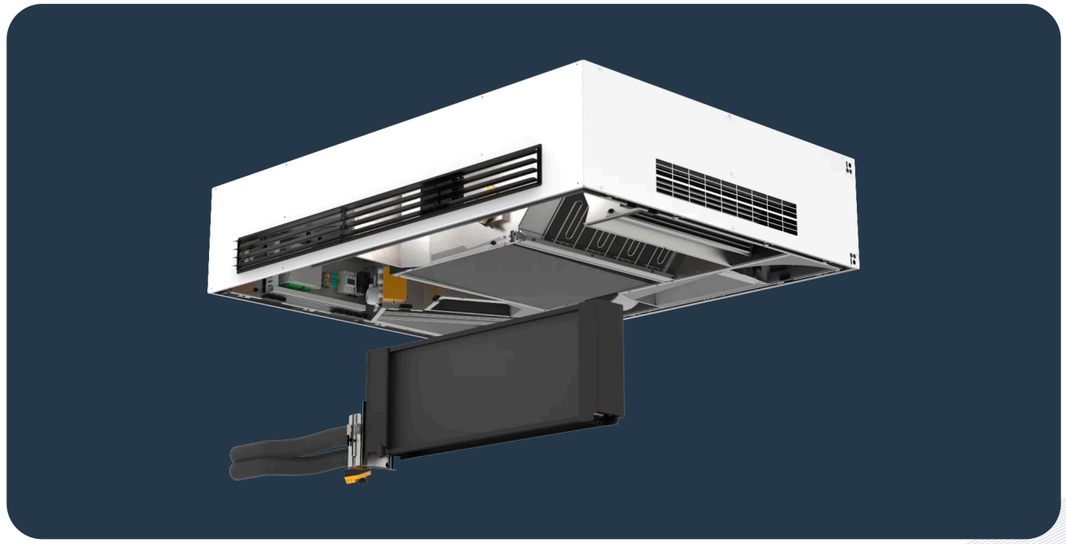
On AM 1000, the RC solution is mounted on the inlet side of the unit. On AM 950 C, the heating-cooling surface is integrated into the unit. The fresh air first passes through the unit's passive heat exchanger and then through the RC solution's heating-cooling surface, where the inlet air is heated or cooled before it is blown into the room.

The solution consists of

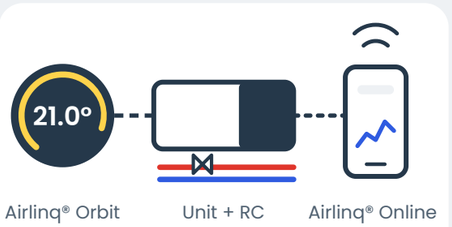
Heating-cooling surface
Heats or cools the fresh inlet air.

Control valve
Modulating valve that controls the water flow to the surface.

Condensate tray
Float switch and condensate pump that remove condensate during cooling.

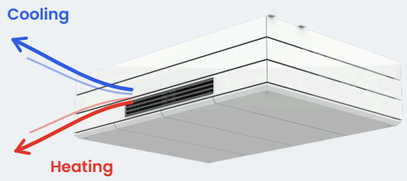


AM 950 C RC with the RC surface shown lowered



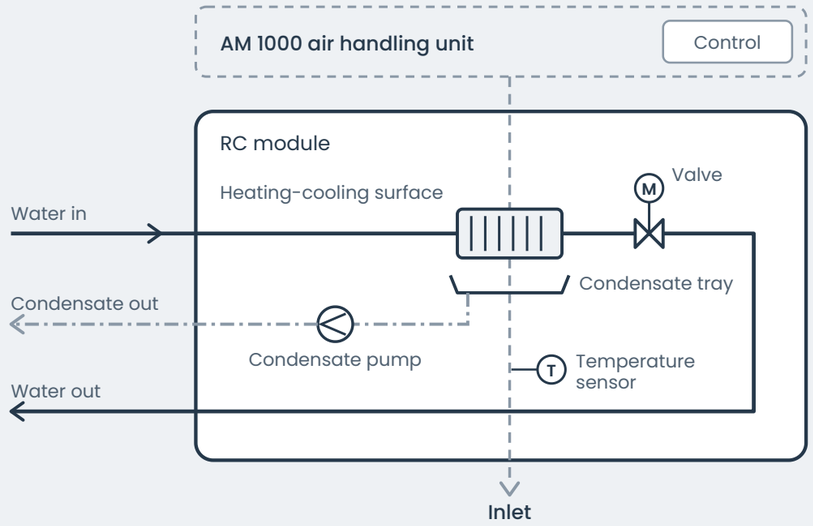
Individual room temperature control

With the RC solution, the inlet air temperature is controlled according to the desired room temperature. If the room is set to e.g. 21 °C, the unit automatically heats or cools until the temperature is reached. This differs from Airmaster's standard control, where the inlet air temperature is fixed.



Thermal Airflow

During heating, the air is directed downward to reduce temperature stratification. During cooling, the air is directed up along the ceiling to reduce draft.



Principle of AM 1000 RC

Benefits of the RC solution

The RC solution is a change-over surface, also known as a combi surface, in a 2-pipe system. For schools, nurseries, kindergartens, offices and meeting rooms where the indoor climate must be at its best.

Ventilation, heating and cooling in one solution

One decentralized unit in each room. No more separate ventilation, heating and cooling solutions. Ventilation, heating and cooling are controlled together.

One surface means fewer pipes and components

Heating and cooling take place in the same surface, so each unit only needs to be connected to one flow and one return. This results in lower capital costs and a simpler installation.

Shared supply and individual room temperature control

All rooms are supplied from one central supply, but each room is controlled separately to the temperature its users prefer.

Free choice of supply

Heat pump, chiller, district heating or a combination. You choose the type and make yourself.

Compact with low pressure loss

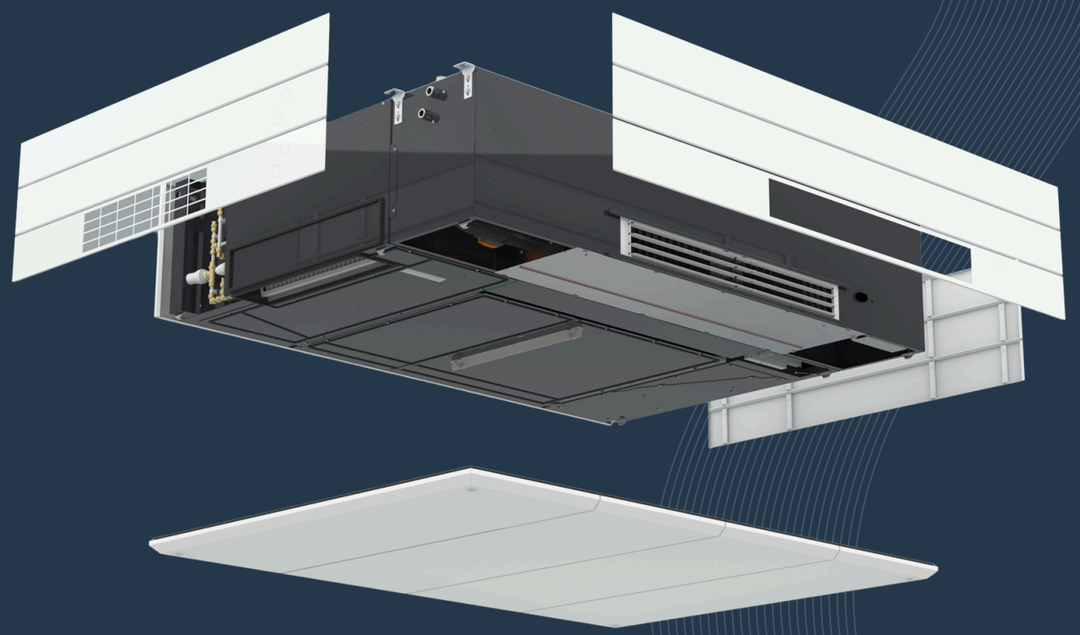
Takes up less space than a separate heating surface and cooling coil, and the air passes through only one surface.

No refrigeration technician required

The module is water-based, so no refrigeration technician is needed for installation and service.

Advice for project design

- **One operating mode at a time per circuit**
  Solution: Divide the supply, e.g. by facade.
- **The changeover must be controlled**
  Solution: Typically controlled according to the outdoor temperature.
- **Changeover takes time**
  Solution: Avoid frequent changeovers on spring and autumn days.
- **Condensation during cooling**
  Solution: The RC module has a condensate tray with a pump, and cold pipes are insulated.
- **The surface must suit both needs**
  Solution: Choose temperature sets that give the same water flow and pressure loss for both heating and cooling.

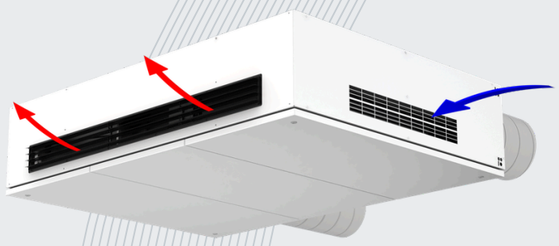


Adapted to the room

The RC solution can be adapted to the room. The unit can be built into the ceiling so that it takes up as little space as possible in the room. And with several variants, the extract can be placed where it best suits the layout of the room.

All variants can be combined with the different options for intake and exhaust. In the datasheet for each unit, you can see the unit's dimensions and connection options, among other things, including the dimensions of the connections for intake and exhaust as well as inlet and extract. Datasheets and dimension drawings can be downloaded from www.airmaster-as.com under the Downloads tab.

AM 950 C RC

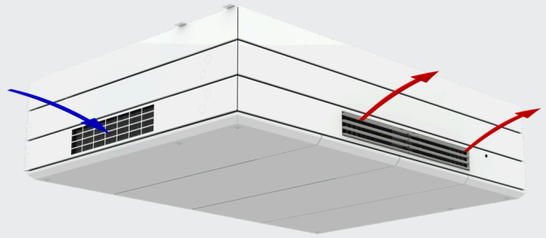


BB

Inlet bottom
Extract bottom

Inlet Extract **B:** Bottom **T:** Top **DE:** Ducted extract

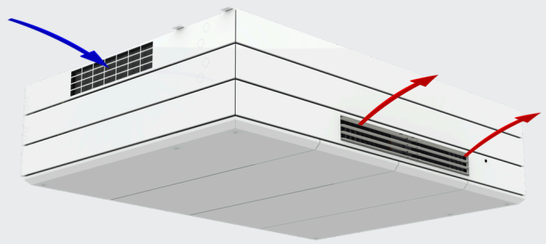
AM 1000 RC



BB

Inlet bottom
Extract bottom

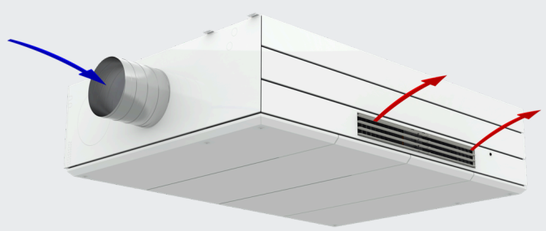
For installation close to the ceiling.



BT

Inlet bottom
Extract top

For suspended installation in rooms with high ceilings.



BDE

Inlet bottom
Ducted extract

When the extract air is led to the unit through a duct from another room.

Technical data

AM 950 C RC

Data to follow

Technical data will be published later

AM 950 C RC is undergoing final verification, and the full technical data will be published in connection with the launch. Updated data and the datasheet will be available at www.airmaster-as.com.

Max. airflow[1]	Filter class	30 dB(A)	33 dB(A)	35 dB(A)	Boost
	ePM10 50%	m³/h	m³/h	m³/h	m³/h
	ePM1 55%	m³/h	m³/h	m³/h	m³/h
	ePM1 80%	m³/h	m³/h	m³/h	m³/h

Extract filter	ePM10 50%
Dimensions (W × D × H)	2167 × 1613 × 505 mm
Weight, complete unit	kg
Duct connection (intake/exhaust)	Ø315 mm

RC heating-cooling surface

Water connection (side or top)	–
Material, pipes / fins	Copper / aluminum

[1]



Heating and cooling capacities

DATA TO FOLLOW

Mode	Water temperature, flow/return	Airflow	Capacity
Heating	45 / 40 °C	m³/h	kW
Heating	45 / 40 °C	m³/h	kW
Conditions, heating: Air after heat recovery 16 °C, 10% RH · Filters ePM10 50% + ePM10 50% · Water with 30% glycol			
Cooling	7 / 12 °C	m³/h	kW
Cooling	7 / 12 °C	m³/h	kW
Conditions, cooling: Outdoor 35 °C, 40% RH · Total cooling capacity · Filters ePM10 50% + ePM10 50% · Water with 30% glycol			

Examples at selected conditions. Capacities at other temperature sets, airflows and outdoor conditions are given in the datasheet, which can be downloaded from **www.airmaster-as.com**. You can also scan the QR code.

Technical data

AM 1000 RC

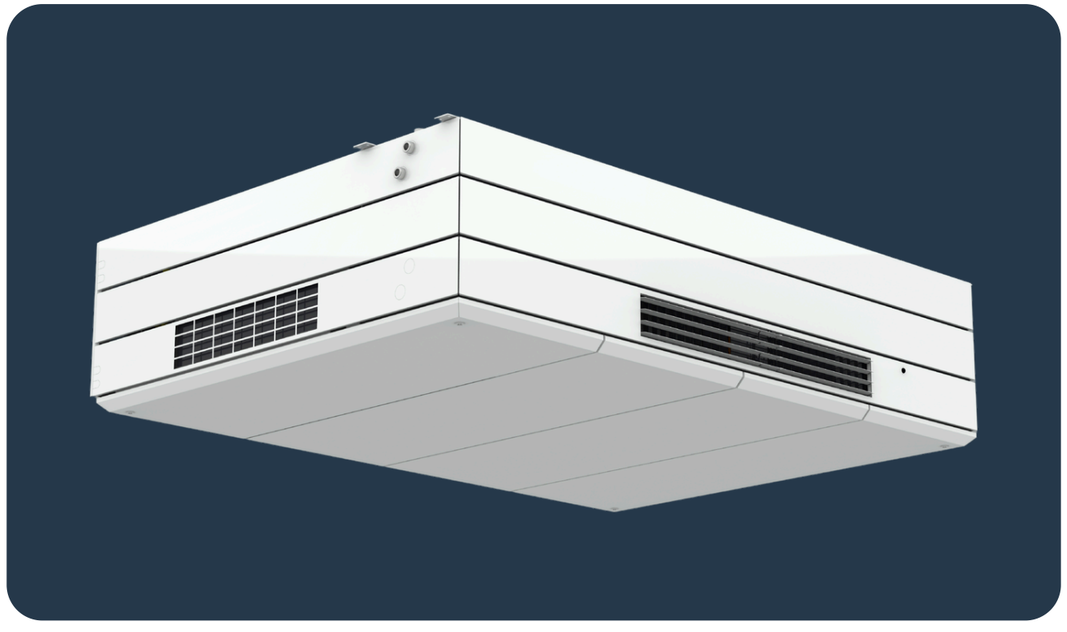
Max. airflow[1]	Filter class	30 dB(A)	33 dB(A)	35 dB(A)	Boost
	ePM10 50%	905 m³/h	1020 m³/h	1035 m³/h	1035 m³/h
	ePM1 55%	880 m³/h	1010 m³/h	1030 m³/h	1030 m³/h
	ePM1 80%	840 m³/h	960 m³/h	1025 m³/h	1025 m³/h

Extract filter	ePM10 50%
Dimensions (W × D × H)	2324 × 1658 × 560 mm
Weight, complete unit	392 kg
Duct connection (intake/exhaust)	Ø315 mm

RC heating-cooling surface

Water connection (side or top)	R1" / DN25
Material, pipes / fins	Copper / aluminum

[1] All measurements were performed in a normal operating mode in a standard installation in a test room sized 8.0 × 10.0 × 2.5 m with a room attenuation of 8 dB(A) and a reverberation time T = 0.6 s.



Heating and cooling capacities

At 905 m³/h (30 dB(A)) and max. 1035 m³/h

Mode	Water temperature, flow/return	Airflow	Capacity
Heating	45 / 40 °C	905 m³/h	**6.28 kW**
Heating	45 / 40 °C	1035 m³/h	**6.98 kW**
Conditions, heating: Air after heat recovery 16 °C, 10% RH · Filters ePM10 50% + ePM10 50% · Water with 30% glycol			
Cooling	7 / 12 °C	905 m³/h	**8.06 kW**
Cooling	7 / 12 °C	1035 m³/h	**8.89 kW**
Conditions, cooling: Outdoor 35 °C, 40% RH · Total cooling capacity (of which sensible: 5.21 kW at 905 m³/h and 5.79 kW at 1035 m³/h) · Filters ePM10 50% + ePM10 50% · Water with 30% glycol			

Capacities at other temperature sets, airflows and outdoor conditions are given in the datasheet, which can be downloaded from **www.airmaster-as.com**. You can also scan the QR code.

Great *Air* for Great *People*

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