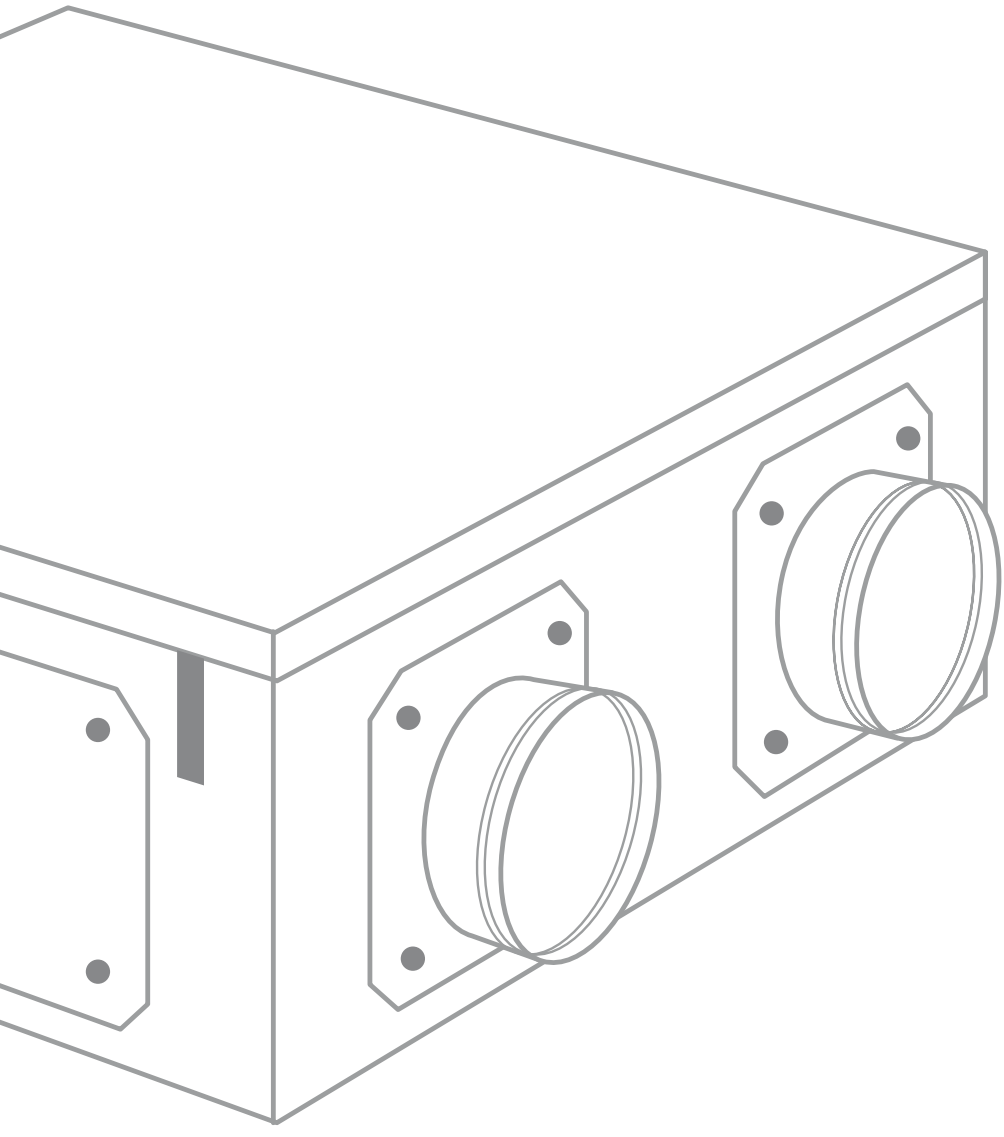
aspira



UVR-HE Series

INSTALLATION, USE AND MAINTENANCE MANUAL

THANK YOU FOR PURCHASING OUR APPLIANCE. BEFORE USING IT, READ THE USER MANUAL CAREFULLY AND STORE IT PROPERLY FOR FUTURE REFERENCE

The products illustrated in this manual may differ from the actual product, depending on the various models. The equipment must not be used by persons (including children) with reduced mental, sensory or physical abilities, ie persons without experience or knowledge, unless they have been trained to use the equipment by a person responsible for their safety. In particular, it is necessary to prevent children from using the equipment.

- Installation must be carried out by specialised personnel.
- When installing, use suitable, accident-prevention clothing, such as: goggles, gloves, etc., as indicated by 686/89/EEC as amended.
- During installation, operate in total safety, clean environment and free from obstructions.
- Comply with the laws in force in the country where the machine is installed, regarding the use and disposal of the packaging and of the products used for machine cleaning and maintenance, and observe the recommendations of the manufacturer of these products.
- Before starting the unit, check that the various components and
- the entire system are intact.
- Do not touch moving parts or intervene between them.
- Do not perform cleaning and maintenance unless the power line has been disconnected.
- Maintenance and the replacement of damaged or worn parts must only be carried out by specialised personnel and following the instructions given in this manual.
- Spare parts must correspond to the needs defined by the Manufacturer.
- In case of dismantling the units, follow the anti-pollution regulations provided.
- The installer and user of the unit must take into account and remedy
- ALL other types of risks associated with the system, such as risks deriving from the entry of foreign bodies and risks due to the conveyance of hazardous gases that are flammable or toxic at high temperature.

IT IS FORBIDDEN TO START THE UNIT IF THE FAN OPENINGS ARE NOT DUCTED OR PROTECTED WITH AN ACCIDENT-PREVENTION NET ACCORDING TO UNI 9219 AS AMENDED.

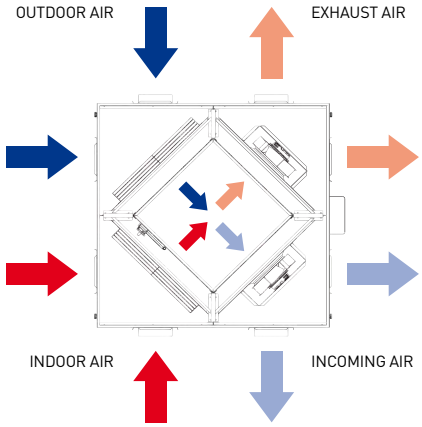
1. INTRODUCTION

- Always make sure there is easy access for component maintenance.
- The product's installation and maintenance must be carried out by qualified technicians. In case of failure or malfunction, always contact authorised service personnel.
- In case of appliance transfer or removal, always contact authorised personnel.
- Do not expose the recovery unit to water jets.
- Do not start the recovery unit without the inspection door.
- Check the installation conditions for any damage.
- The contaminants retained by the filters can have harmful health effects in case of contact with the skin.
- Precautionary measures are necessary when handling dirty filters. The use of protective gloves and face shield are recommended during cleaning.
- Make sure the appliance is earthed before commissioning. This is essential for correct and safe operation.
- This appliance has been thoroughly tested at our plant and warranted for the period indicated on the warranty certificate.
- For optimal use of the equipment you have purchased, please read this instruction manual carefully where you will find fundamental information about the product's features, its correct use and maintenance.

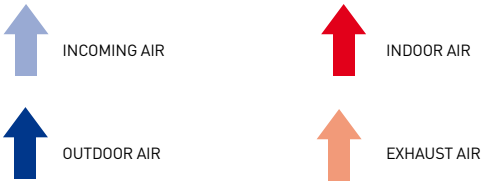
2. OPERATING DIAGRAM

The machine consists of a heat exchanger and 2 fans that circulate two air flows: one from outside to inside the room (fresh air), one from inside to outside the room (exhaust air).
These heat recovery units are suitable for the recovery of heat in public areas such as bars, meeting rooms, small and medium sized premises.

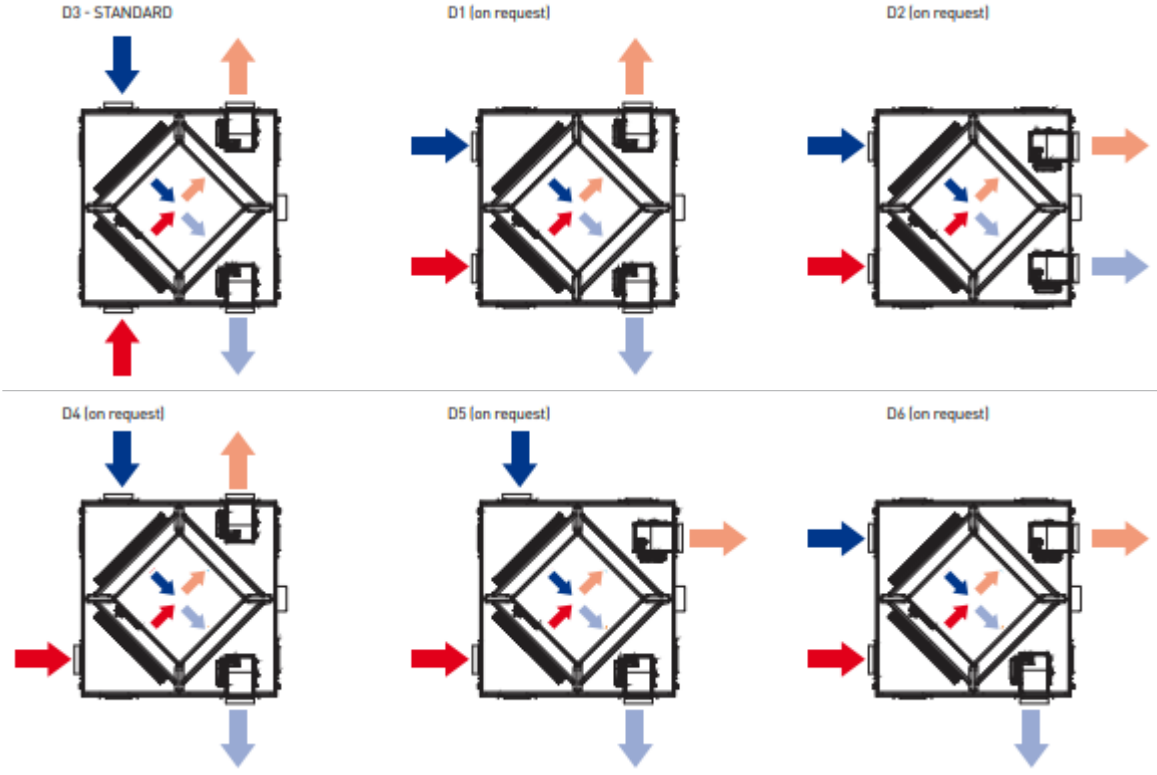
BACKWARD BLADES (configurable on site)



The inlet/outlet connections can be configured as shown in the diagram and directly during on-site installation.



FORWARD BLADES (configurable on request)

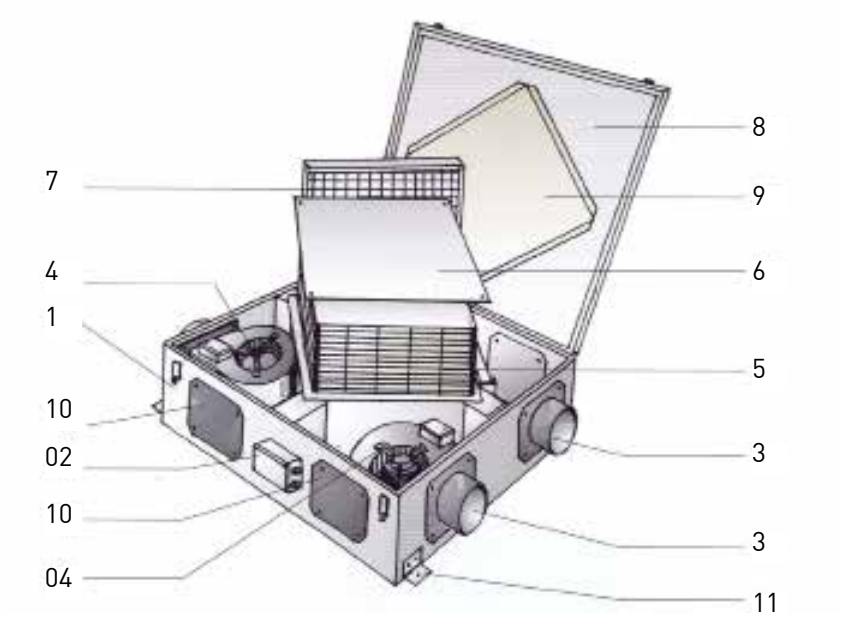


3. OPERATING PRINCIPLE

The outlet and inlet air flows converge inside the recovery unit without mixing, while the heat of the stale room air is transferred to the cold outdoor fresh air.
The dry output of the aluminium exchange pack, under standard conditions (outdoor 0°C, indoor 20°C with 0% of [r.h.], is always equal to or higher than 73%.

4. CONSTRUCTION FEATURES

- External galvanised steel sheet casing;
- Condensate collection basin with condensate discharge;
- Insulation with sound-absorbing mattress placed on the lower panel;
- Air inlet and outlet circular connections;
- Class F7 supply side flat or pleated filters;
- Class M6 supply side flat or pleated filters;
- Single-phase, adjustable fans with backward blades (UVR-HE models up to 1200);
- Adjustable single-phase forward blade fan, directly coupled (models from 1600 up).

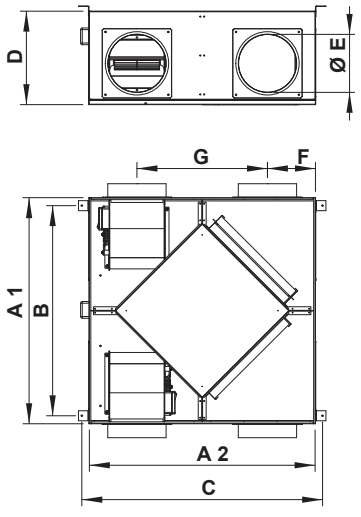


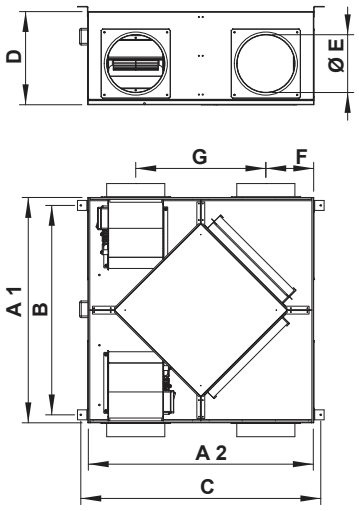
1	Casing
2	Terminal board box
3	Inlet/outlet connections
4	Centrifugal fan
5	Heat exchange pack
6	Exchanger stop panel
7	Filters
8	Casing cover
9	Condensate collection basin
10	Blind connections
11	Fixing brackets

5. DIMENSIONS [MM] AND WEIGHT [KG]

CODE	MODEL	mm								
		A1	A2	B	C	D	ØE	F	G	Kg
AP20071	UVR 500 MF HE	850	850	755	910	380	150	175	500	55.0
AP20073	UVR 700 MF HE	1000	1000	905	1060	380	150	250	500	64.0
AP20075	UVR 1200 MF HE	1000	1000	905	1060	380	180	250	500	80.0
AP20077	UVR 1600 MF HE	1200	1200	1105	1260	525	250	300	600	110.0
AP20079	UVR 2300 MF HE	1200	1200	1105	1260	525	315	300	600	124.0
AP20081	UVR 2800 MF HE	1350	1350	1255	1410	575	315	300	750	161.0
AP20083	UVR 3200 MF HE	1350	1350	1255	1410	675	350	300	750	178.0
AP20085	UVR 3800 MF HE	1350	1350	1255	1410	675	350	325	700	188.0
AP20087	UVR 4500 MF HE	1350	1350	1255	1410	775	350	300	750	215.0
AP20089	UVR 5400 MF HE	1650	1650	1080	1710	775	350	285	1080	302.0
AP20091	UVR 6500 MF HE	1650	1650	1080	1710	775	450	355	940	302.0
AP20093	UVR 7100 MF HE	2150	2150	-	2210	1100	600	425	1300	500.0
AP20095	UVR 8500 MF HE	2150	2150	-	2210	1100	600	425	1300	500.0

Dimensions (mm)





BACKWARD BLADES

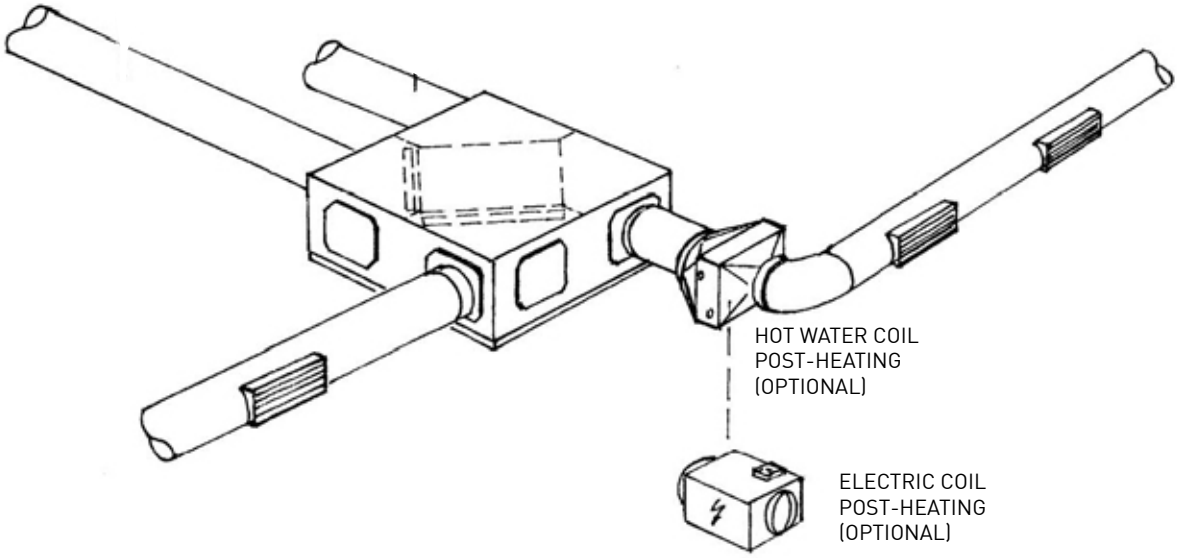
UVR 500 MF HE
UVR 700 MF HE
UVR 1200 MF HE

FORWARD BLADES

UVR 1600 MF HE
UVR 2300 MF HE
UVR 2800 MF HE
UVR 3200 MF HE
UVR 3800 MF HE
UVR 4500 MF HE
UVR 5400 MF HE
UVR 6500 MF HE
UVR 7100 MF HE
UVR 8500 MF HE

6. OPTIONAL ACCESSORIES

The UVR-HE series recovery units can be fitted with optional PRE or POST heating devices, such as water or electric heating coils. These accessories are equipped with male/female nipples for connection to the spiral duct and can be installed on the pressing and/or suction openings of the units (direct installation), or inside the duct circuits



7. INSTALLATION AND COMMISSIONING

WARNINGS AND PRELIMINARY OPERATIONS

- Check the perfect integrity of the various components of the unit.
- Make sure to have the accessories for installation and the documentation.
- Transport the packed section as close as possible to the installation area.
- Do not stack tools or weights on the packed unit.
- Place the unit on a solid structure that does not cause vibrations and is able to withstand the weight of the machine.
- Place the unit in a place where the condensate discharge can easily take place.
- Do not place the unit in rooms where flammable gases, acidic, aggressive and corrosive substances are present that can irreparably damage the various components.
- In order to make installation and routine and extraordinary maintenance possible, provide a minimum free space to connect fittings, channels and accessories.
- Provide false ceilings or walls that allow full inspection of the machine so as not to interfere with the maintenance operations.
- The air ducts must be sized according to the system and the aeraulic features of the unit fans. An incorrect calculation of the ducts causes power loss or the intervention of any devices on the system.
- We recommend using insulated channels to prevent condensation and to reduce the noise level.
- We recommend placing an anti-vibration joint between the ventilation openings and the channels to avoid transmitting any machine vibrations into the environment. However, electrical continuity between the channel and the machine must be guaranteed by an earthing cable.

MACHINE POSITIONING
The units are equipped with support plates.
Position the machine correctly according to the position of the plates.

In order to favour the regular flow of condensation, we recommend installing the machine at a 3 mm angle towards the condensate discharge.

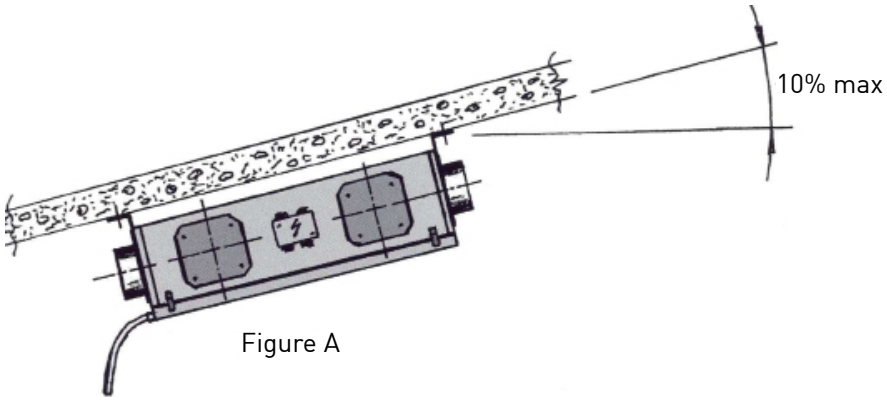
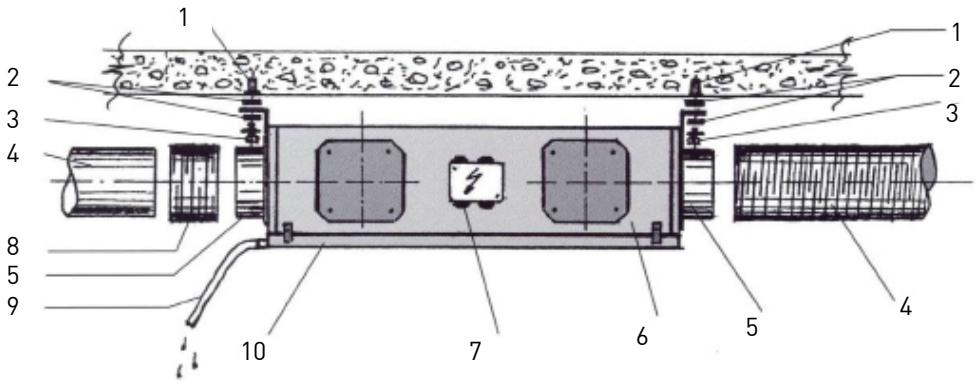


Figure A



1	Plug
2	Rubber shock absorbers
3	Screw with washer
4	Insulated flexible/duct
5	Inlet/outlet connections
6	Recovery unit body
7	Terminal board box
8	Anti-vibration joint for duct
9	Condensate discharge
10	Recovery unit cover

HYDRAULIC CONNECTIONS

The pipe installation and connection operations can compromise the good operation of the system or worse, cause irreversible damage to the machine.
Therefore, these operations must only be carried out by specialised personnel.

CONDENSATE DISCHARGE CONNECTION

- The condensate collection tank is equipped with a drain.
- The path of the condensate discharge pipe must always have a slope towards the outside.
- Make sure that the condensate drain pipe does not strain the discharge connection of the unit

CONNECTION OF ANY WATER POST-HEATING COIL

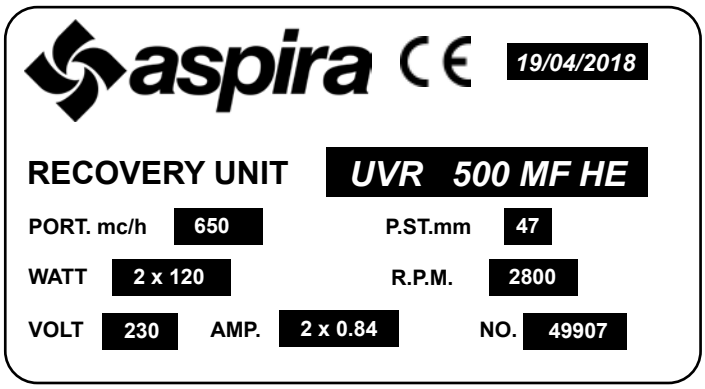
- Any water post-heating coil is equipped with "male" connections with gas threading.
- Tightening operations must be carefully carried out to avoid damaging the copper manifolds of the coil.
- The pipe path must be designed so as not to create obstructions in the removal of the unit's coil.
- The water inlet and outlet must be such as to allow heat exchange in countercurrent: therefore, follow the indications of the WATER INLET and WATER OUTLET plates.
- Provide a vent valve at the top and a drain valve at the bottom.
- Fix the pipes properly outside the unit to avoid bearing their weight on the coil.
- When the connection is made, push the outer rubber gasket well against the panel to avoid air leaks.
- The insulation must be flush with the panel to avoid burns.
- Provide, at regulation level, the shut-off of the pipe side coil with the fan off to prevent overheating inside the control unit with possible damage to some components.
- Provide an antifreeze device.
- Provide shut-off valves to isolate the coil from the rest of the circuit in case of extraordinary maintenance.
- In case of installation in areas with particularly cold climates, drain the system for any long system downtime.

ELECTRICAL CONNECTIONS

- To perform the electrical connections, refer to the RCE-EC control unit instruction manual.
- Before starting any operation, make sure that the main power supply line is disconnected.
- The electrical connections to the control panels must be carried out by specialised personnel according to the diagrams provided.
- Make sure that the voltage and frequency indicated on the plate match those of the electrical connection line.
- The use of adapters, multiple sockets and/or extensions is not allowed for the general power supply of the unit and accessories.
- The installer must provide a power supply cut-out switch for the type of installation as close as possible to the unit, together with all that is necessary to protect the electrical parts.
- Connect the unit to an effective earth socket, using the appropriate screw inserted in the unit itself.
- Connect the unit and all its accessories with cables of suitable section for the power used and in compliance with local regulations. However, their size must be such that a voltage drop in the start-up phase is less than 3% of the nominal one.

PLATE

- MOD.: model
- Port. mc/h: maximum air flow rate [m^3/h]
- P.ST. mm: maximum static pressure [mmH_2O]
- WATT: electric power absorbed by the fans [W]
- VOLT: voltage [V]
- AMP.: electric current of fans [A]
- R.P.M.: number of revs of the fans
- NR°: serial number
- Unit construction date



RCE-EC CONTROL UNIT

- Suitable for wall installation in boxes with 3 type 503 modules.
- Allows to switch the appliance on and off and to set 2 different operating modes:

1. Manual operation
2. Automatic operation

For fan unit configuration and operation, refer to the instruction manual of the RCE-EC control unit included in the package.

9. INSTALLATION AND COMMISSIONING

ALL MAINTENANCE OPERATIONS MUST ALWAYS BE CARRIED OUT WITH THE MACHINE STOPPED AND ELECTRICAL POWER DISCONNECTED.

- Before carrying out any maintenance operation, disconnect current to the machine by turning the current cut-out knob to "0".
- It is mandatory to perform all maintenance operations on the unit, respecting the time intervals specified below.
- Only previously trained and qualified personnel can perform maintenance operations.
- If the unit is to be disassembled, protect your hands with work gloves.
- All maintenance operations must be carried out with the machine resting on a horizontal plane, sufficiently strong to withstand the weight of the machine, NEVER when it is hung on walls or ceilings.

FILTER CLEANING AND MAINTENANCE INSPECTION.

We recommend replacing the filters every 15 or 30 days max, depending on the pollution of the room air. In any case, the filters must ALWAYS be replaced whenever the relative warning light on the control screen of the unit indicates a high level of clogging of the filters.

- To remove the filter, disassemble the inspection panel and pull out the filter.
- To clean, use a vacuum cleaner or wash with a common detergent in warm water, letting it dry well.
- Always remember to reassemble the filter before starting the unit.

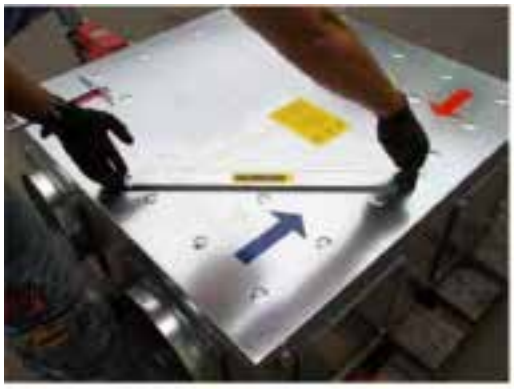
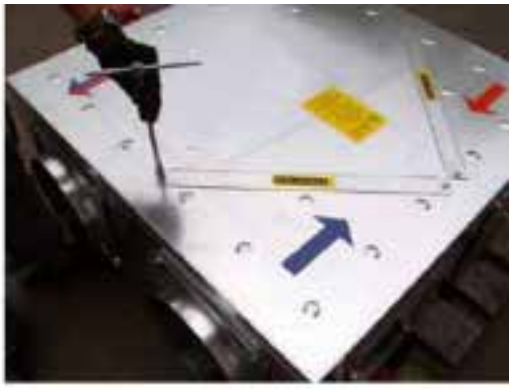



PLATE HEAT EXCHANGER MAINTENANCE

Provided that the filter cleaning/replacement intervals specified above are respected, we recommend cleaning the heat exchanger once a year. Cleaning simply consists in the use of compressed air to remove anything that blocks the air passage channels of the exchanger.

- The recovery unit pack can be removed from the bottom, by removing the condensate collection tank.
- The recovery units do not have moving parts, so mechanical maintenance is not necessary.
- Check that the plate exchanger is free from any type of impurity that could significantly lower its efficiency.
- In the presence of dust or polluting substances, it is necessary to provide adequate filters upstream of the recovery unit.
- The appliances can be cleaned with compressed air (in case of dust deposit), taking care not to damage the plates, or by spraying a detergent solution.
- Strong alkaline solutions or other aggressive substances for aluminium must be avoided.

10. OPERATING ANOMALIES

SYMPTOMS	CAUSES	SOLUTIONS
Difficult start-up	Reduced power supply voltage. Insufficient motor starting torque.	Check the motor plate data. Close the shutters until full speed is reached. If necessary, replace the motor.
Insufficient air flow rate Insufficient pressure	Clogged pipes and/or obstructed intake points. Clogged impeller. Overloaded filter. Insufficient rotation speed. Obstructed exchange pack.	Intake and pipe cleaning. Impeller cleaning. Clean or replace the filter. Check the power supply voltage; if necessary, correct. Exchange pack cleaning.
Performance drop after An acceptable period of operation	Leak in the circuit upstream and/or downstream of the fan. Damaged impeller.	Circuit check and reset of the original conditions. Check the impeller and, if necessary, replace with original spare part.
Fresh air temperature too cold	Outdoor air below -5°C	Insertion of post-heating devices.
Insufficient exchanger output.	Clogged exchanger fins	Exchange pack cleaning.
Formation of frost on the exchanger.	Outdoor air below -5°C	Insertion of pre-heating devices (de-icing).
Air pulsations	Fan that works near zero flow rate conditions. Unstable flow, obstruction or poor connection.	Change of the circuit and/or fan replacement. Cleaning and/or reset of the intake ducts. Intervene in the electronic regulator by increasing the minimum speed (insufficient voltage).
Excessive vibrations	Imbalances of rotating parts	Check the impeller balancing; if necessary, restore or replace it.

Complies with Directive 2009/125/EC and Regulation no. 1253/2014 (Eco Design 2018)

CE

FantiniCosmiIndustrie

FANTINI COSMI SPA Via dell'Osio 6 - 20049 Caleppio di Settala MI, Italia
Tel. +39 02 956821 | Fax +39 02 95307006 | info@fantinicosmi.it
www.fantinicosmi.it

EN79857C