Air Handling Units

RDZ
You Feel, We Care

HR UA

Vertical mechanical ventilation units with heat recovery for the tertiary sector

INSTALLATION / TECHNICAL MANUAL

SAFETY

GENERAL WARNINGS

This manual provides all the information necessary for the correct operation and maintenance of the unit.

Before using the product, each user and maintenance personnel of the unit must read this manual completely and with the utmost attention and comply with its contents; if the safety rules, warnings and instructions in this manual are not followed, personal injury or damage to the product may occur.

Keep this manual in areas protected from moisture and heat, consider it an integral part of the unit for its entire life, and give it to any other user or subsequent owner of the unit. Do not damage, remove, tear or rewrite the manual or parts of it for any reason whatsoever; in the event that it is lost or partially ruined, and it is therefore no longer possible to read its contents in full, it is recommended to request a new manual from the supplier

This manual reflects the state of the art at the time the unit was placed on the market and cannot be considered inadequate simply because it was subsequently updated to reflect new technology. To request any updates or additions to the user manual, which shall be considered an integral part of the manual, please forward your request to the supplier.

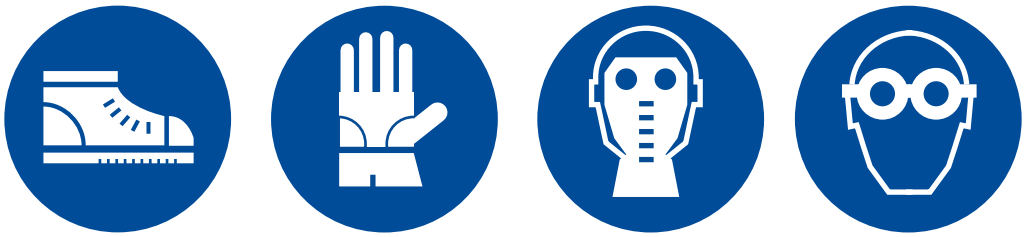
No changes to the product may be made without the manufacturer's consent.
Installation must be carried out in accordance with current local regulations and only by a qualified installer.

The cleaning and maintenance operations indicated in the Maintenance section must be strictly adhered to.

SECURITY MEASURES AND ARRANGEMENTS

In order to avoid accidental contact with live/moving parts, the unit must not be opened without using the appropriate tools.
To avoid contact of the fans with hands and/or other parts of the body, the air ducts must have a minimum length of 900 mm and must always be connected when the unit is connected to the mains; if this is not possible, safety guards must be installed to prevent accidental contact with the fans.
Safety protections must not be removed unless absolutely necessary; in which case suitable measures must be taken immediately to highlight the possible danger. These guards must be reinstalled on the product as soon as the reasons for their temporary removal cease to exist. To avert the danger of possible accidental switch-on, warning signs should be affixed to the switchboards with the words: "Attention! Control excluded, maintenance in progress'.
Before connecting the power supply cable to the terminal blocks, check that the line voltage is suitable for the voltage stated on the nameplate on the unit.

During all cleaning and maintenance work, it is mandatory to switch off the unit and disconnect the power supply (power cable disconnected), and it is mandatory to wear clothing that complies with the essential safety requirements in force (safety shoes, gloves, respiratory protection mask and protective goggles).



CE MARKING AND DECLARATION OF CONFORMITY

The CE marking (on each unit) and the associated declaration of conformity attest to compliance with the following EU standards:

- Machine Directive..... 2006/42/CEE
- Low Voltage Directive..... 2014/30/UE
- Electromagnetic Compatibility Directive..... 2014/35/UE
- European Regulation (ErP 2018) ..... 1253/14/UE e 1254/14/UE
- Harmonised standards reference..... EN 12100, 2010; EN 60204-1, 2006

The analysis of residual risks has been carried out in accordance with Annex I of the Machinery Directive 2006/42/EEC: all useful warnings and information to prevent possible damage to persons and/or property due to residual risks are given in this manual.

SIGNS ON BOARD THE MACHINE

There may be various pictograms on the unit, **which must not be removed.**
The signals are divided into:




• **Warning/information signs:** they indicate the presence of live and rotating parts inside the container to which they are applied. They indicate the obligation to read the instructions/ manual.

• **Prohibition signs:** they warn against repairing or recording during motion.

• **Identification signs:** the rating plate shows the product data and the address of the manufacturer or his authorised representative. If present, the CE mark certifies that the fan complies with EEC regulations.

(Other signs may be added to the product depending on the analysis made of the residual risk).

Do not remove the safety pictograms, information labels and identification plate (including CE marking) on the unit.

RESPONSABILITY

The unit is designed and manufactured for use within balanced ventilation systems with heat recovery; any other application will be considered as misuse and may possibly damage the unit or cause personal injury, for which the manufacturer cannot be held responsible.
The manufacturer shall not be liable for damage resulting from:

- non-compliance with the safety, operating and maintenance instructions in this manual;
- failure to carry out regular and constant maintenance work;
- use of the unit without the appropriate filters;
- use of components not supplied or not recommended by the manufacturer;
- unauthorised repairs or modifications;
- normal wear and tear;
- natural events, fire or static discharge.

DISPOSAL

END OF UTILISATION

In accordance with the provisions of the following European directives 2011/65/EU, 2012/19/EU and 2003/108/EC, regarding reducing the use of hazardous substances in electrical and electronic equipment, in addition to waste disposal.

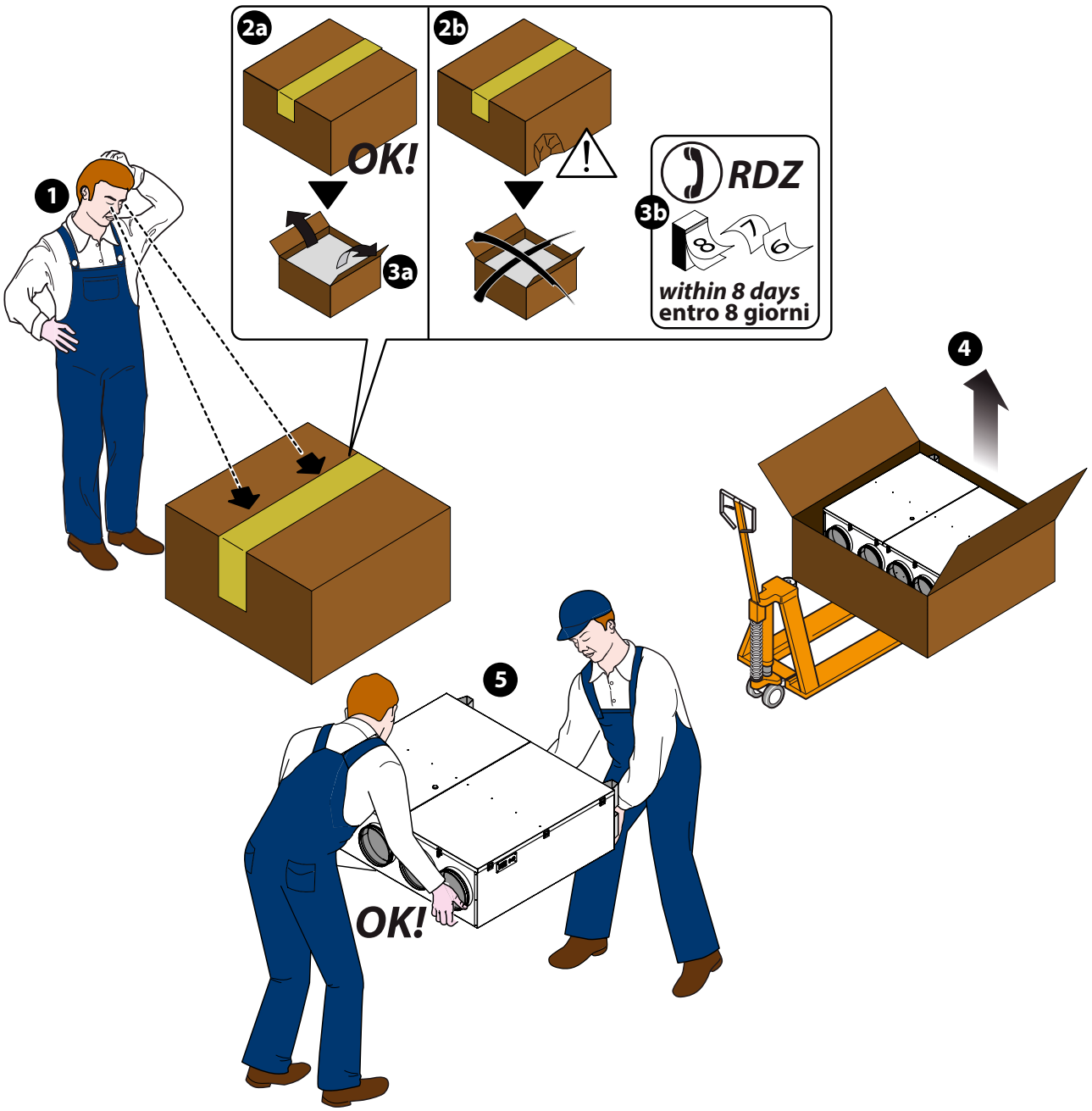
The crossed out wheelie bins symbol on the equipment indicates that, at the end of its useful life, the product must be collected separately from general waste. Therefore, at the end of its useful life, the user must take the equipment to a designated electrical and electronic waste collection point , or return it to the dealer that, against the purchase of an equivalent appliance, it is obliged to collect the product for disposal free of charge. Appropriate differentiated waste collection for subsequent recycling, treatment and environment-friendly disposal of the discarded equipment helps preventing possible negative environmental and health effects and encourages recycling of the component materials of the equipment. Illegal disposal of the product by the user entails the application of sanctions provided by the regulations in force.

INDEX

PRELIMINARY OPERATIONS

RECEIPT OF GOODS AND HANDLING

Each product is carefully checked before being shipped, packed on pallets and secured to the same with straps and protective film, or in self-supporting cardboard boxes adequately secured to the pallet.
Upon receipt, it must be ensured that the product has not been damaged during transport; if not, promptly file a complaint with the carrier. The carrier is liable for any transport damage.
To handle the product, use a vehicle with an adequate load-bearing capacity (e.g. a fork-lift truck).



The unit's packaging must be removed carefully, avoiding possible damage to the machine.
The materials making up the packaging are of different kinds: wood, cardboard, nylon, etc. Store them separately and hand them over for disposal or eventual recycling, to the companies designated for this purpose and thus reduce their environmental impact.

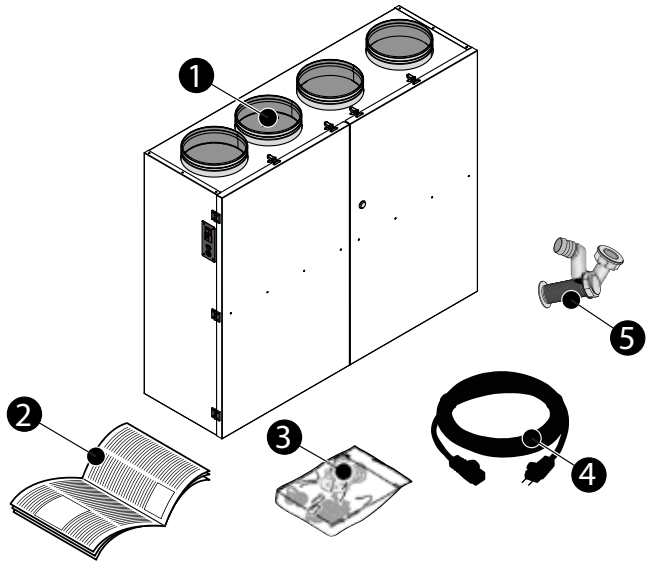
1 GENERAL OVERVIEW

1.1 DESCRIPTION

The HR UA series of mechanical ventilation units with heat recovery are machines designed to treat large volumes of air. Available in a wide range of capacities and configurations, they meet the needs for air exchange in tertiary buildings of different types and sizes.
Each model includes as standard: Easy 3E or Smart EB control panel, counterflow recuperator with efficiency > 90% made of polypropylene, EC centrifugal fans, filter pressure switch (only with Smart EB electronics), F7 filters (ISO ePM1 70%) on the supply air and M5 filters (ISO ePM10 50%) on the return air, bypass for free-cooling.
They are designed for floor installation with air connections facing upwards.

1.2 PACKAGE CONTENTS

Ref.	Description
❶	HR UA
❷	Installation / Technical Manual
❸	Feet for floor installation
❹	Power cable
❺	Condensate drain kit



2 INSTALLATION

2.1 INSTALLATION CONDITIONS

The unit must be installed in accordance with national and local regulations governing the use of electrical devices and in accordance with the following guidelines:

- install the unit inside buildings with an operating temperature between 0 °C and 45 °C;
- avoid areas near sources of heat, steam, flammable and/or explosive gases and particularly dusty areas;
- install the unit in a frost-free location (condensation water must be drained off unfrozen, at a certain angle, using a siphon);
- do not install the unit in an area with high relative humidity (such as a bathroom or toilet) to prevent condensation from forming on the external surface of the unit;
- install the unit in an area where the noise generated by the fans will not cause disturbance;
- choose an installation location where there is sufficient space around the unit for air duct connections and for maintenance work;
- always duct the unit or protect the fan inlets to avoid contact with moving mechanical parts;
- the consistency of the floor where the unit will be installed must be adequate for the weight of the unit and must not cause vibrations.

In the room chosen for installation there must be:

- air duct connections;

• single-phase 230V or three-phase 380V electrical connection (depending on version) in compliance with current regulations;
• connection for condensate drainage.

The unit is an integral part of a balanced ventilation system, with which stale air is extracted from some rooms and the same volume of fresh air is introduced into others. The spaces under the doors ensure good airflow circulation within the building: make sure that these spaces are never obstructed, e.g. by draught excluders or carpets, otherwise the system will not function optimally.

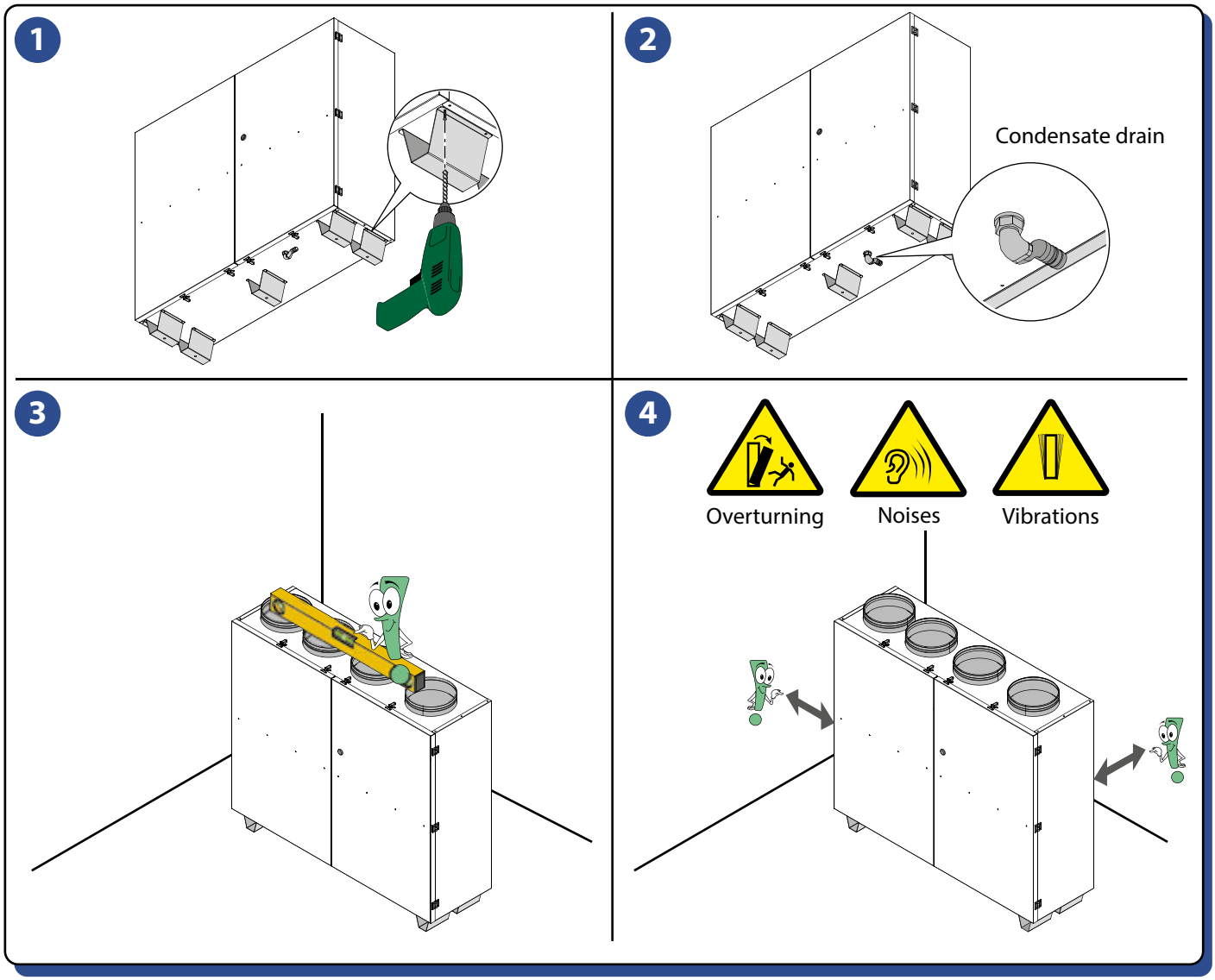
Simultaneous operation of the unit and a natural draught boiler (or e.g. an open fireplace) can cause a vacuum in the room, as a result of which exhaust gas backflow into the room can occur.

2.2 FLOOR INSTALLATION

To install the unit on the floor, it is necessary:

1• If not already installed, position the support feet and secure them to the aluminium frame of the unit with the self-drilling screws provided, using a screwdriver drill.
The feet must be positioned on the bottom of the unit on the underside opposite the air connections.

2• Install the condensation drainage kit, supplied, on the bottom of the unit: remove the black plugs, insert the threaded pipe from the inside, screw the fixing nut on the outside (tighten by hand without using tools). Refer to the paragraph Connecting the condensate drain on page 9 and the table Technical specifications on page 16.



3• Place the unit on the floor and check levelling with the aid of a spirit level: the unit must be installed perfectly flat to ensure proper drainage of condensation water.

4• We recommend fixing the unit to the wall or floor using suitable anchoring systems (dowels, threaded rods, chains...) to

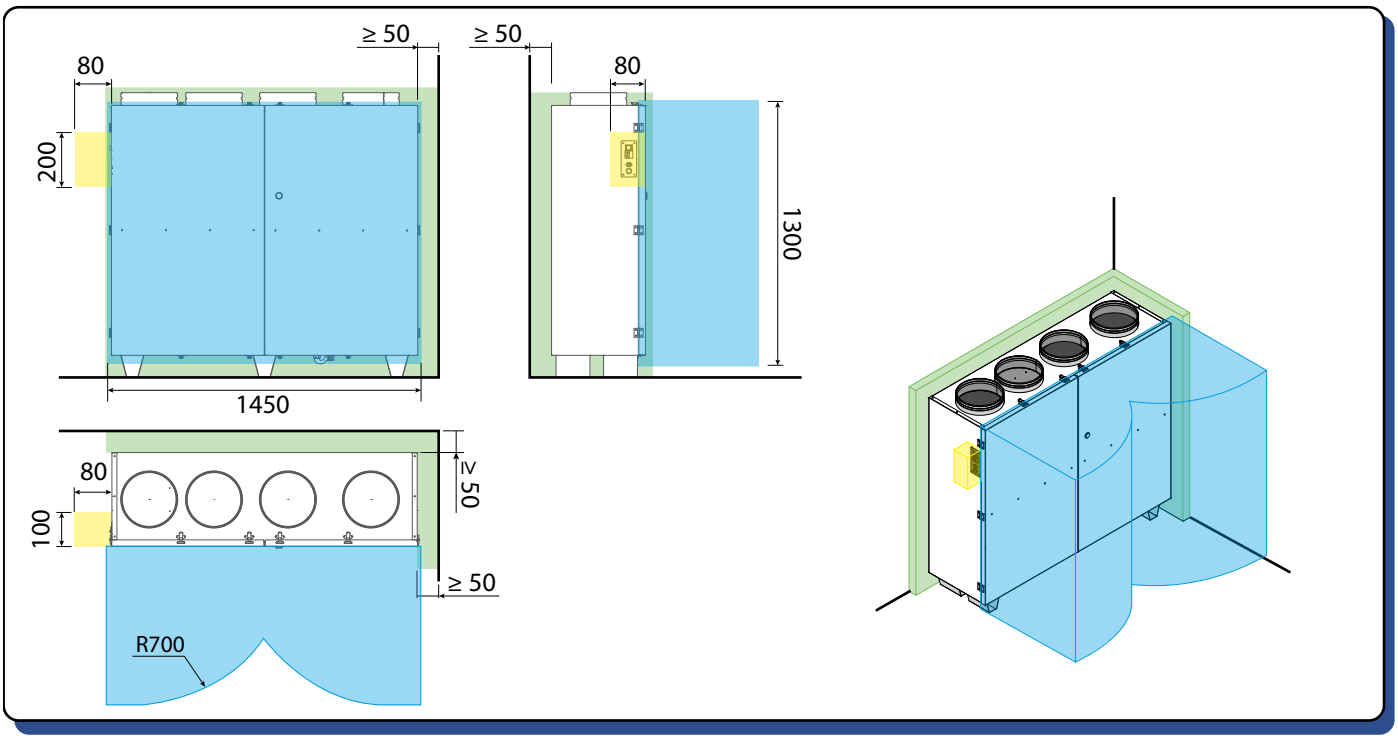
prevent it from tipping over.
Do not mount the unit with the sides in direct contact with walls to avoid possible contact noise; to reduce vibrations transmitted by the unit, it is advisable to use anti-vibration joints/material between the unit and the floor.

Ensure sufficient space for carrying out maintenance activities: the opening of the unit cover and where possible the side inspection panels must always be guaranteed.

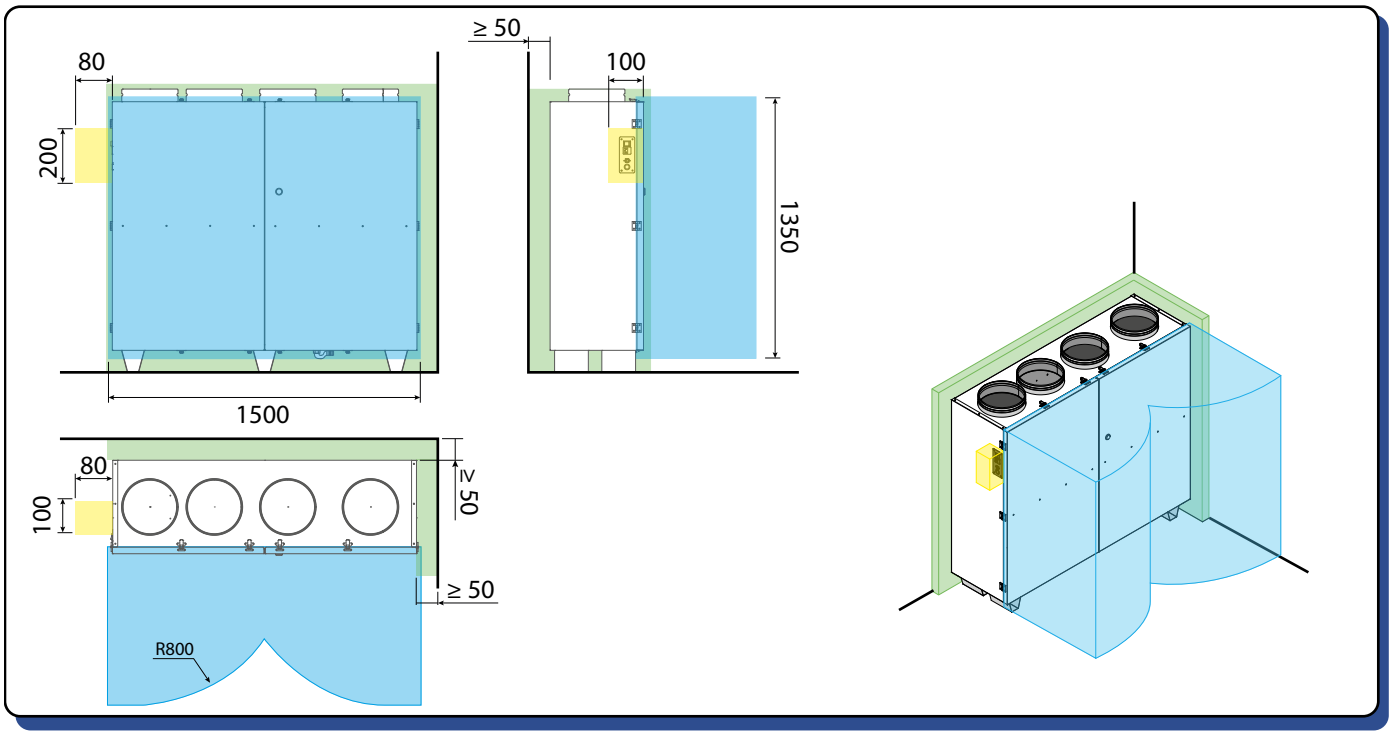
2.3 MINIMUM SPACE ALLOWANCESES

Unit inspection / exchanger and filter maintenance	Unit inspection / switchboard maintenance	Wall clearance

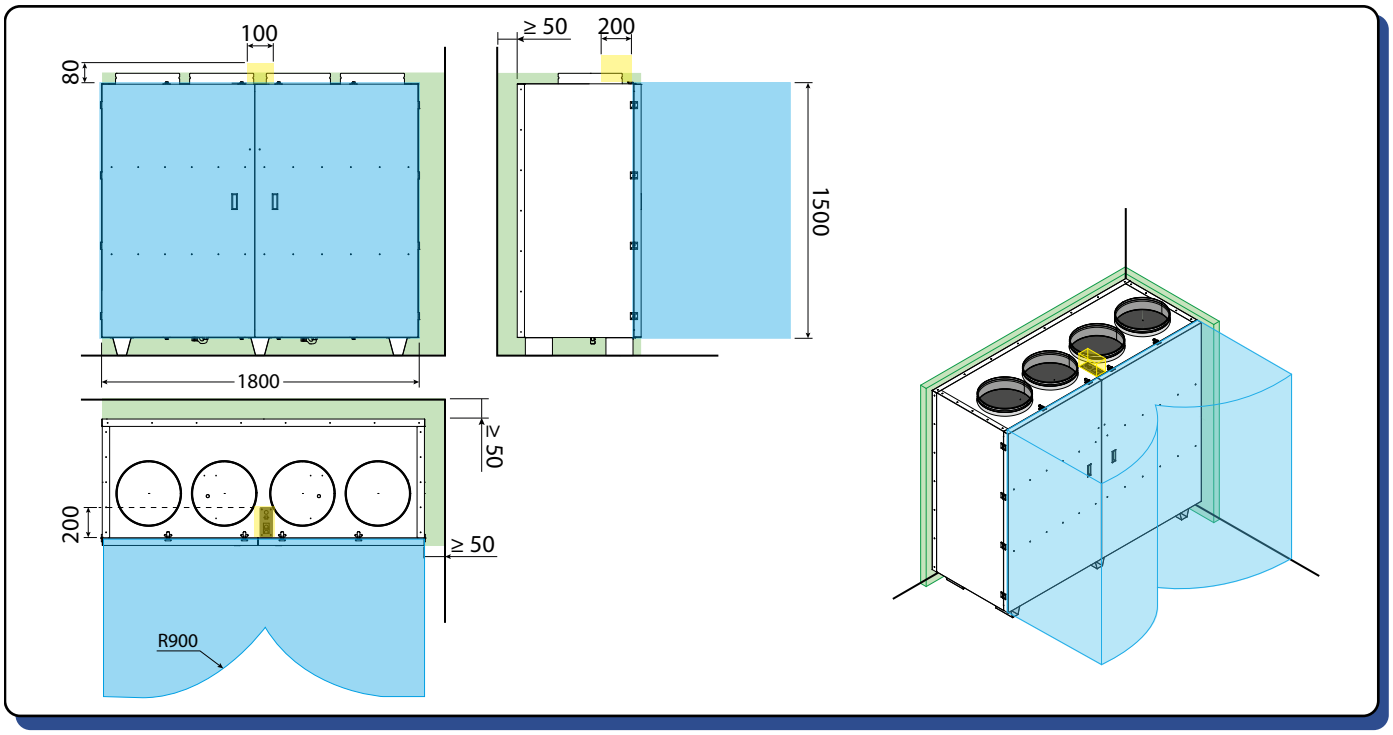
HR UA 800



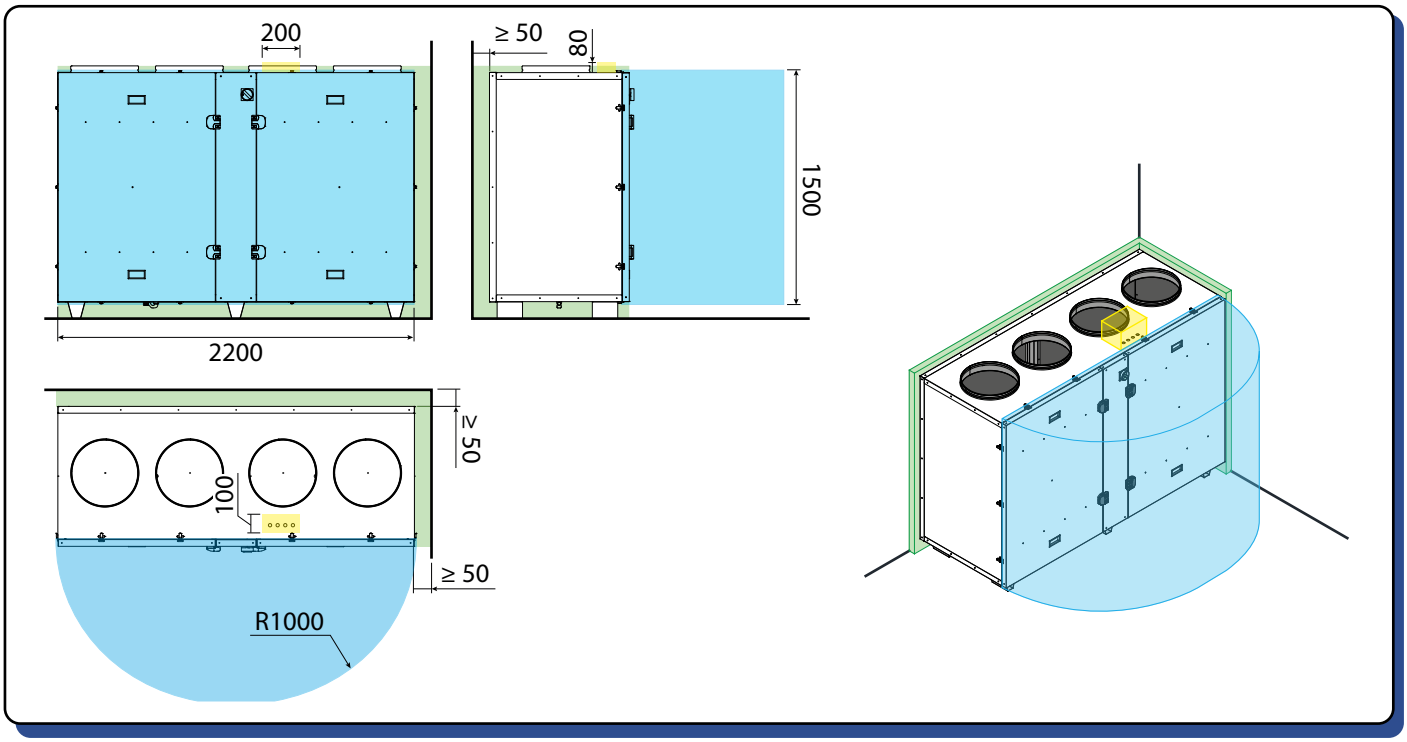
HR UA 1200



HR UA 2200



HR UA 3000



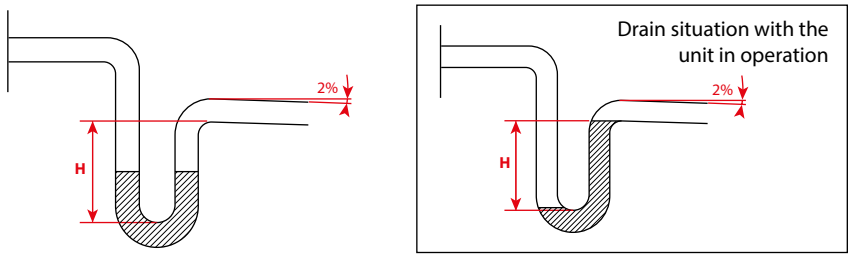
2.4 CONNECTION OF CONDENSATE DRAIN

Due to the heat recovery system (whereby the warm air extracted from the building is cooled by the incoming air inside the heat exchanger), the moisture contained in the ambient air condenses inside the unit, in the exhaust area.
For correct operation of the unit, it is therefore necessary to connect the condensate drain to the hydraulic drainage system. In addition, to allow the condensate water to drain away correctly and to avoid air suction, the condensate drain must always be fitted with a suitable siphon.
The following rules must be observed when installing the condensate drain:

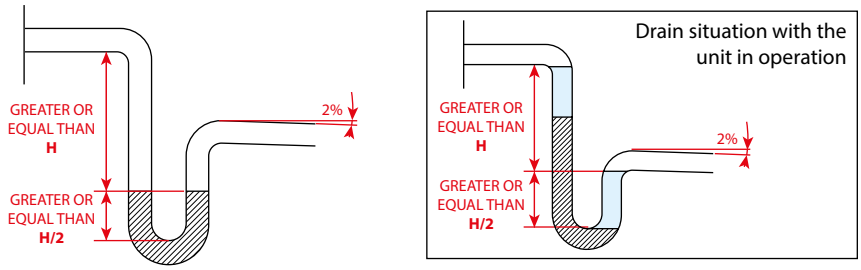
- install a suitable condensate drain siphon as close as possible to the unit: it is necessary to install/make a siphon with a minimum height as indicated in the table below; the minimum height (H) is calculated taking into account the standard working conditions of the unit, while the optimal height considers the total head of the fan (thus allowing correct condensate drainage under all conditions)
- give the discharge pipe a slope of at least 2%;
- provide the possibility of disconnecting the discharge pipe to carry out any maintenance;
- ensure that the discharge end of the pipe is at least below the water level of the siphon;
- ensure that the siphon is always full of water (pour water in until it is full at the first start-up and each time the unit is checked, or after periods of inactivity).

DIMENSIONS OF THE CONDENSATE DRAIN

1 DIMENSIONS WITH CONDENSATE DRAIN UNDER PRESSURE



2 DIMENSIONS WITH CONDENSATE DRAIN UNDER VACUUM



MINIMUM AND OPTIMAL HEIGHTS (H) OF THE DRAIN CONDENSATE SIPHON FOR EACH UNITS

UNIT	HR UA 800	HR UA 1200	HR UA 2200	HR UA 3000
Drain	In pressure	In pressure	In pressure	Under vacuum
Minimum H	0*	0*	0*	80 mm
Optimal H	70 mm	120 mm	120 mm	120 mm

* In this unit the expulsion area is under pressure, so condensate drainage is always guaranteed even without a siphon; however, it is recommended that a siphon be installed to avoid the passage of air in the exhaust piping and the possible backflow of odours when the unit is switched off.

2.5 CONNECTION OF AIR DUCTS

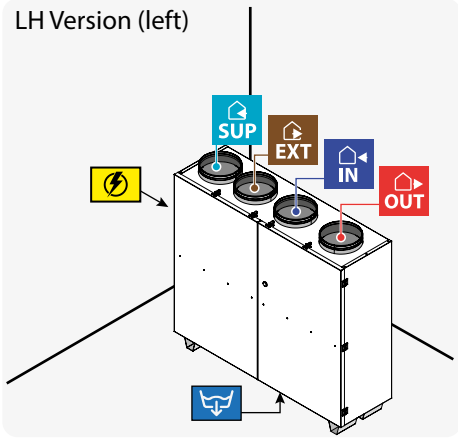
• The unit is equipped with 4 male connections for connecting air ducts (Ø 125 mm to Ø 355 mm depending on size).
• For optimum operation, use ducting with a diameter equal to or greater than that of the connections (or rectangular ducting of equivalent cross-section), with the least possible air resistance. It is recommended to install at least 500 mm of flexible ducting immediately after the unit to avoid vibration drag and annoying noise transmitted to the rigid ducting.
• Avoid placing bends and/or reductions too close to the unit: it is recommended to provide straight sections, before and after the unit, with a minimum length of 2.5 times the diameter of the ducting.
• If the fan outlets are not ducted, protective nets must be installed to prevent accidental contact with the fans.
• For the correct connection of the air ducts, refer to the labels on the panels with the air connections and to the diagrams below (corresponding to the orientations required when ordering).

IN Fresh Air Inlet
OUT Exhaust Air
EXT Stale Air Extration
SUP Supply Air

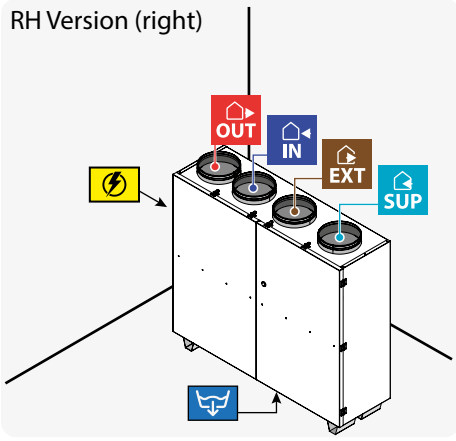
EXT → M5 ePm10 50%
IN → F7 ePm1 70%

HR UA 800
HR UA 1200

LH Version (left)

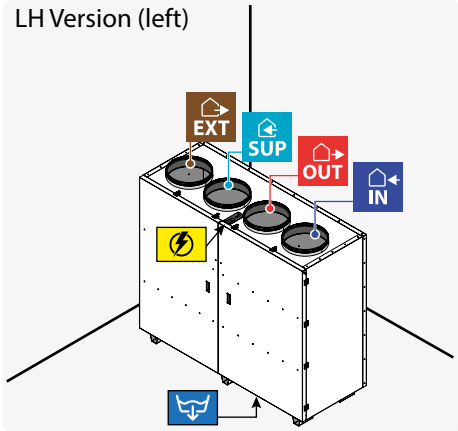


RH Version (right)

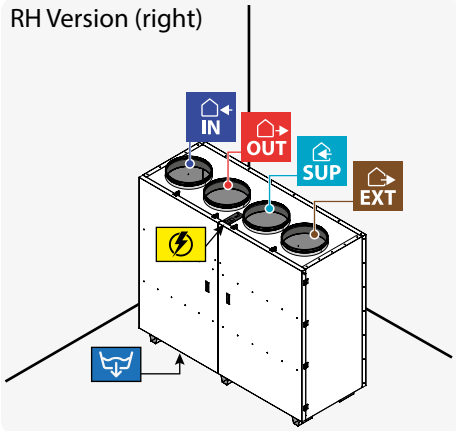


HR UA 2200

LH Version (left)

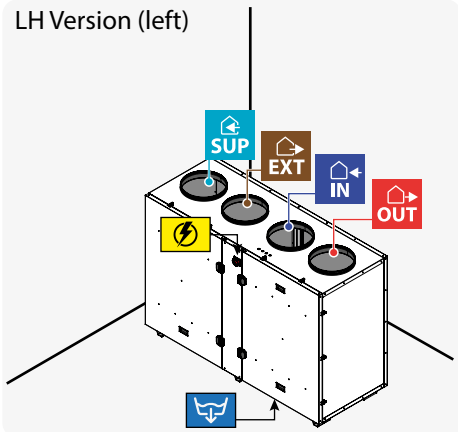


RH Version (right)

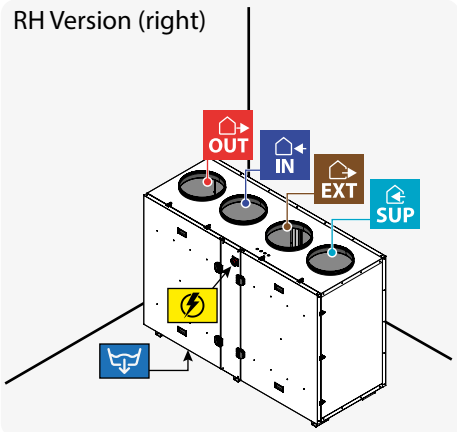


HR UA 3000

LH Version (left)



RH Version (right)



2.6 ELECTRICAL CONNECTIONS

The unit can be equipped with various types of control boards and their remote controls; below are the general indications valid for all controls, while the manuals for each control give detailed instructions.

The unit is provided with an internal electrical box, accessible from the main cover of the unit, in which the control board is located and, in the case of units with three-phase power supply, the main disconnector and terminal block.

For the electrical connection, consult the wiring diagrams at the end of each control manual; all electrical connections must be made by qualified personnel and in the absence of voltage.

Power supply line connection: for units with a 230V single-phase power supply, just insert the power supply cable (2m cable with Schuko plug, supplied) in the special connector located on the side of the unit (near the ignition switch); for units with a 400V three-phase power supply, a general disconnection switch is provided in place of the switch, and it is therefore necessary to connect a four-pole grounded cable to the disconnection switch and to the ground terminal (after passing it through one of the grommets on the side of the unit).
In the case of an outdoor unit, there are only 4 watertight grommets; the connection must be made directly to the control board or to the terminals inside the electrical panel, after having passed the power cable through one of the grommets.

Remote control connection: for all versions simply connect the remote control cable (3m cable supplied, with RJ45 connector) into the appropriate connector on the side of the unit. In the case of outdoor units, the remote control connection must be made inside the electrical box, so open the electrical box, pass the remote control cable through one of the cable glands on the side of the unit, and connect it directly to the RJ45 connector on the board.

• It is essential that the unit is connected to an efficient earth socket and protected by a circuit breaker for the exclusive use of the unit. The manufacturer disclaims all liability for failure to observe these precautions.

• In addition, in order to avoid tripping of the general differential due to possible interference from EC fans, it is recommended to use a type B or B+ earth leakage circuit breaker with a rated tripping differential current of 300 mA for exclusive use of the unit.

• Check that the electrical components chosen for the installation (circuit breaker, earth leakage circuit breaker, cable cross-section and terminals) are suitable for the electrical power of the installed unit and that they take into account the inrush currents as well as the maximum load that can be reached (the data are indicated in the Technical Specifications section and on the unit's nameplate).

• Absolutely avoid running electrical cables in direct contact with pipes or other system components.

Ensure that power is removed from the unit (power cable disconnected) before opening electrical boxes or the unit.

2.7 INSTALLATION OF ANTIFREEZE AND/OR POST-HEATING HEATER (OPTIONAL)

The unit can be equipped with an electric duct heater that can be installed either as frost protection or post-heating.

Due to the variety of types, detailed installation instructions are supplied with the heater itself. However, some indications are given below.
Antifreeze function: in this case the heater, in winter when the outside temperature falls below 0 °C, has the function of heating the air entering the unit in order to avoid the formation of ice on the unit's heat exchanger.
Installation:

- mount the heater on the "Renewal" duct (outside air intake);
- connect the heater to the mains;
- set the control thermostat between 0 and 3 °C (if the heater has 2 stages set one thermostat between -2 and 0 °C and the other between 0 and 3 °C) or connect the control cable to the unit (for units with electronic control);

Post-heating function: in this case, the heater's function in winter is to heat the incoming air to the desired comfort temperature.
Installation:

- mount the heater on the "Supply" duct (supply air to the room);
- connect the heater to the power supply
- set the control thermostat to the desired room temperature, usually 18 - 20 °C (if the heater has 2 stages set one thermostat between 18 and 20 °C and the other between 20 and 22 °C) or connect the control cable to the unit (for units with electronic control).

To ensure that the safety thermostats operate correctly, the heater must always be installed with the inspection cover

facing upwards.

As there are so many different types, each resistor has installation instructions included.

2.8 HOT AND/OR COLD WATER BATTERY INSTALLATION (OPTIONAL)

The unit can be equipped with a hot or cold water duct coil to warm the supply air to the desired comfort temperature. The chilled water coil can also be used to dehumidify the supply air (typically in summer).
Due to the variety of existing types, detailed installation instructions are supplied with the coil itself. Below, however, are some indications.
Installation:

- mount the coil on the "Intake" duct (supply air to the room);
- connect the coil and its valve to the water pipes;
- connect the condensate drain (in the case of a cold water coil);
- in the case of units with electronic control, electrically connect the valve to the control board.

3 STARTING UP AND METHODS OF USE

Commissioning of the unit and any changes to the factory settings should only be carried out by qualified personnel (authorised installer).

The following checks must be carried out before switching on:

- check that there are no foreign bodies inside the unit and that all components are securely in place;
- manually try to turn the fan impellers to ensure that they turn freely without obstructions;
- check that the covers are tightly closed.

Switch on power to the unit, operate the speed regulator/switch (if present), and check that there are no operating anomalies (strange noises, excessive vibrations, etc.).

In order to guarantee the discharge of moisture that is naturally created inside the building, the unit must operate continuously at least at reduced speed (speed 1).

If the ventilation unit were to be switched off, condensation could occur inside the unit and inside the building with possible moisture damage.

For instructions on how to operate the unit, please refer to the relevant control manual (supplied with this).

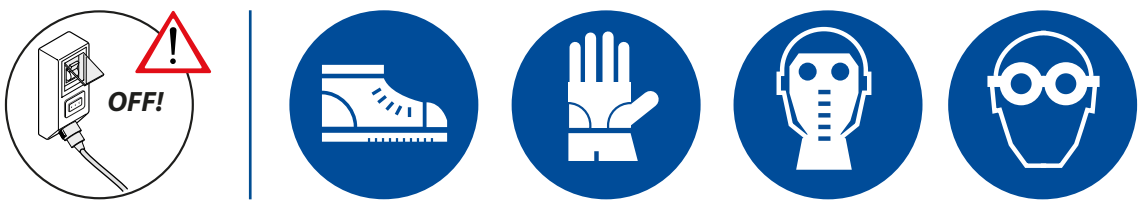
4 MAINTENANCE

To ensure that the unit always operates correctly, the following maintenance work must be carried out periodically:

- CLEANING OR REPLACEMENT OF THE FILTERS (par. 4.1)
- CLEANING THE HEAT EXCHANGER (par. 4.2)
- CHECK AND GENERAL CLEANING OF THE UNIT (par. 4.3)

During all cleaning and maintenance operations, it is mandatory to:

- switch off the unit and disconnect the power supply (power cable disconnected);
- wear clothing that complies with the essential safety requirements in force (safety shoes, gloves, protective mask for the respiratory tract and protective glasses).



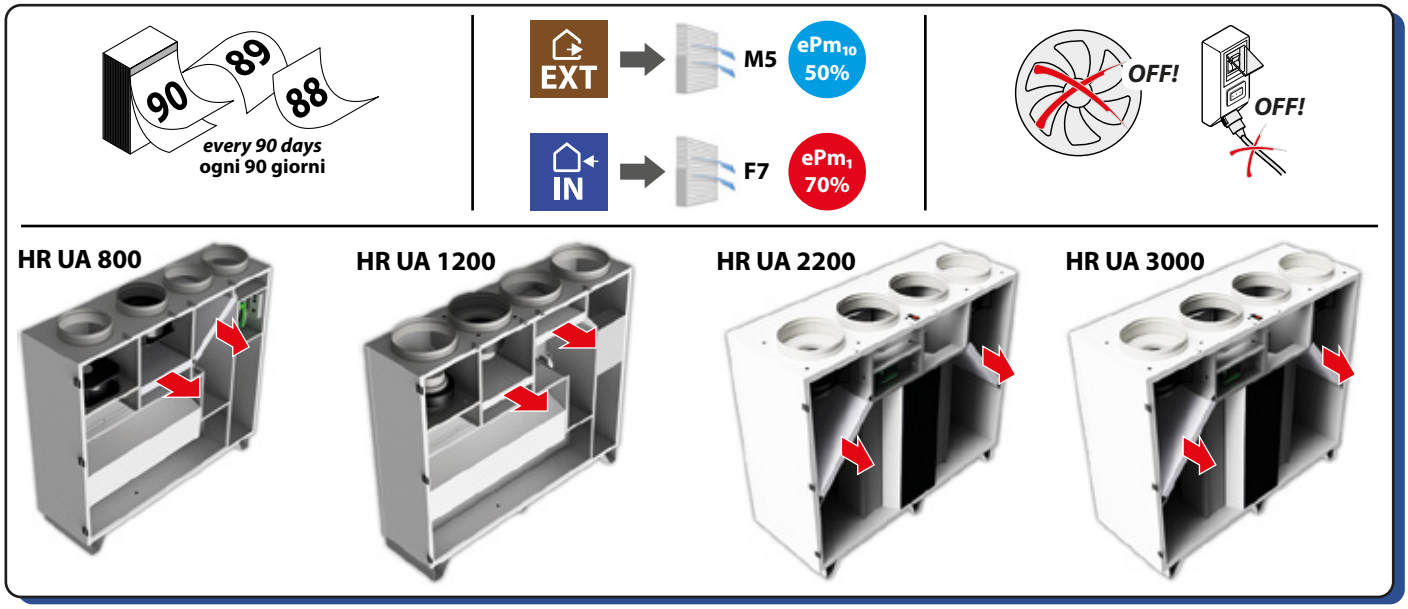
The filters and the exchanger pack are secured in place by safety catches: when the unit is installed on the ceiling, always remember to put them back in place after you have finished cleaning/maintenance work, otherwise there is a risk that the filters and the exchanger will fall out the next time you open the covers.
It is recommended, before completely removing the covers, to always open the unit carefully and make sure that there are no elements that can fall out.

4.1 CLEANING OR REPLACEMENT OF THE FILTERS

For correct operation of the unit and to always have clean supply air, it is recommended to check the condition of the filters every 3 months of operation of the unit.

To replace or clean the filters, proceed as follows:
- switch off the fans and disconnect power to the unit;
- open both front inspection covers of the unit by unscrewing the safety screws (or by turning the quick-release fastener 90° with a wide-head screwdriver) and releasing the quick-release fasteners;
- remove the dirty filters;
- insert new filters, paying attention to the direction of air passage (if there is an arrow on the filters indicating the direction of air passage) and the type of filter: the M5 filter should be positioned on the Recovery side, while the F7 filter should be positioned on the Renewal side;
- close the unit covers (by closing the quick-release fasteners and retightening the safety screws);
- turn the power back on and switch the unit on at the desired speed;
- if the unit is equipped with an electronic control proceed to reset the filter hour counter (see control manual).

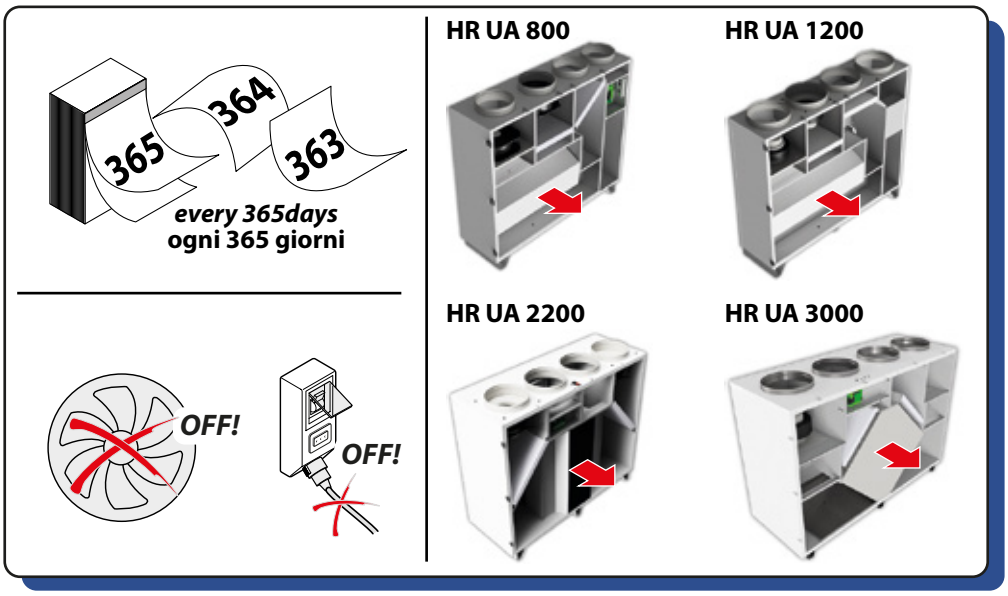
If the condition of the filters allows it is possible to clean them using a hoover or a low pressure compressor; however, filter replacement is always recommended.



4.2 CLEANING THE HEAT EXCHANGER

It is recommended to check the condition of the heat exchanger every time the filters are cleaned/changed and to clean it once a year.
To clean the heat exchanger, proceed as follows:
- switch off the fans and switch off the power supply to the unit;
- open both front inspection covers of the unit by unscrewing the safety screws (or by rotating the quick-release fastener 90° with a wide-head screwdriver) and release the quick-release fasteners;
- remove the condensate drain pan (only if it obstructs access to the exchangers);
- remove (unscrew the relevant fixing screws) the heat exchangers' fasteners;
- remove the heat exchangers with the help of the special green clamps/straps;
- clean very gently using a hoover or low-pressure compressor; if necessary, wash the heat exchanger with mild soap and water;
- put the heat exchangers back in place and check their correct positioning; the exchanger has an identification label on its side or upper side: position the exchanger so that this label is facing upwards.
- reposition the safety catches;
- close the covers of the unit, proceeding in the reverse order of opening (remember to reposition the safety screws);
- restore power and switch the unit on at the desired speed.

Never touch the heat exchanger fins, handle the heat exchanger by holding it on its closed sides only.



4.3 CHECK AND GENERAL CLEANING OF THE UNIT

We recommend checking and, if necessary, cleaning the fans, the condensate drain and the internal walls of the unit at least once a year. These operations should only be carried out by qualified personnel (installer).

To carry out the above operations, proceed as follows:

- switch off the fans and disconnect power to the unit;
- open the unit's front inspection covers (in the case of ceiling installation, disconnect the condensation drainage pipe), unhooking the handles/hinges on one side and rotating the cover on the opposite side (if the covers are a nuisance, they can be completely removed for subsequent operations by unhooking all the hinges/hinges); if necessary, also remove the side inspection panels by rotating the quick-release fasteners by 90°, using a wide-head screwdriver;
- proceed to check and, if necessary, clean the fans, and at the end of the operations, check the tightness of the screws that secure them to the unit;
- proceed to check and, if necessary, clean the condensation drain and the walls;
- close the unit's front inspection covers and side inspection panels, locking them in place by re-engaging the handles/hinges, or by rotating the quick-release fasteners by 90°;
- restore power and switch the unit on at the desired speed.

For cleaning, you can use a hoover, a cloth slightly moistened with water and neutral soap, a soft bristle brush, or a low-pressure compressor.

There may be small metal clips on the fan blades for balancing the blades, take care NOT to remove them.

5 PROBLEMS AND FAILURES

In the event of problems or faults, check in the following table whether it can be remedied with the remedies indicated. For versions with electronic control, check whether an alarm is displayed on the remote control.
If the problem/fault is not resolved, take note of the model and serial number of the unit you own (found on the identification plate on the side of the unit) and contact your installer or supplier.

PROBLEM	CAUSE	REMEDY
Fans stopped Remote control off (electronic versions)	No power supply or wrong voltage	- Check the mains connection. - In units with a single-phase power supply, check and, if necessary, replace the fuse on the (black) power connector on the side of the unit (there is a spare fuse in the drawer). - In electronic versions, check and, if necessary, replace the fuse on the control board.
	Malfunctioning control board or remote control	• Check the connections of the control board and the connection between the board and the remote control.
Low or no air flow rate Performance drop	Clogged filters	• Replace filters.
	Clogged exchanger	• Cleaning the exchanger.
	Frozen exchanger	• Move the heat exchanger to a warm place and wait for it to defrost; **do not heat with direct heat sources.**
	Dirty fan	• Cleaning the fan.
	Damaged impeller	• Check the integrity of the fan.
	Clogged fan ducts	• Clean ventilation ducts.
	Air leakage from ducts	• Check for cracks in intake/outlet ducts.
	Outside temperature below 0 °C	The unit may be in antifreeze mode, wait until the outside temperature rises or consider installing an antifreeze heater.
Air pulsations	Fan working near zero flow conditions, flow instability, obstruction or poor connection	• Checking and cleaning of intake/outlet ducts. • Adjust the speed of the fans.
High noise level	Noise from the unit	• Check for cracks and/or air leaks from unit panels. • Check whether the motors turn correctly. • Adjusting fan speed.
	Noise from the ducts	• Check suction/intake/exhaust ducts for cracks.
High vibrations	Vibrating panels	• Check the integrity of the panels and the fastening of the screws. • Check the correct closing of the unit covers. • Check that there are no panels in contact with the walls.
	Unbalanced fan blades	• Check the integrity of the blades • Clean the fans. • Check that the metal clips on the fan blades have not come loose.
Loss of condensation	Clogged condensate drain	• Clogged condensate drain.
	Condensate does not flow from the drain into the collection tray	• Check that the unit is perfectly level. • Check that the condensate drainage pipes are intact (especially between the unit and the siphon). • Check that the siphon is of the correct height.

6 TECHNICAL SPECIFICATIONS

Structure	Supporting structure made of aluminium profiles, external pre-painted sheet metal panels and internal galvanised sheet metal.
Insulation	Thermal and acoustic insulation with rock wool between 20 and 40 mm thick (depending on size).
Operating conditions	Ambient temperature (inside the building) between 0 °C and 45 °C. Treated air temperature between -15 °C and +40 °C.
Fans	Single-phase EC electric fans (three-phase for the largest size), plug-fans (backward-bladed centrifugal, directly coupled).
Heat exchanger	Polypropylene countercurrent exchanger, very high efficiency (~90%).
Filters according to DIN EN 779	Class M5 low pressure drop for Recovery (room extraction) and Class F7 low pressure drop for Renewal (outside air intake).

UNIT	HR UA 800	HR UA 1200	HR UA 2200	HR 90 3000
Total unit size L x P x H [mm]*	1350 x 420 x 1100	1500 x 420 x 1200	1750 x 690 x 1400	2105 x 825 x 1355
Ø Connections [mm]	250	315	355	400
Weight [kg]	95	110	220	290
Flow rate head output [ErP 2018]	900 m^3/h 55 Pa 80,1%	1100 m^3/h 299 Pa 81,1%	1800 m^3/h 260 Pa 80,4%	2720 m^3/h 347 Pa 80,5%
Power supply voltage [V/phases/Hz]	230 / 1 / 50	230 / 1 / 50	230 / 1 / 50	400 / 3 / 50
Max. current consumption [A]	2,9	4,4	6,6	3,2
Max. power consumption [kW]	0,38	1,0	1,5	2
Sound power Lwa[dB(A)]	59	64	65	68
Qty and Ø condensate drain	1 x 1/2"	1 x 1/2"	1 x 1/2"	1 x 1/2"
Available configurations	Lh / Rh	Lh / Rh	Lh / Rh	Lh / Rh

** L=Width P =Depth H = Height*

CLICK | SCAN

qr.rdz.it/?qr=P674

FAG0CB021BZ.02
05/2024

RDZ
You Feel, We Care

RDZ S.p.A.
V.le Trento, 101 - 33077 SACILE (PN) - Italy
Tel. +39 0434.787511 Fax +39 0434.787522
info@rdz.it www.rdz.it

COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV
ISO 9001