INSTALLATION, USE AND MAINTENANCE MANUAL

KHRW-H

VENTILATION-DEHUMIDIFICATION/INTEGRATION UNIT WITH HYDRONIC COIL

INDEX

1 GENERALITY

1.1.1 INTRODUTION

This manual has been conceived with the aim of making the installation and management of your system as simple as possible.

By reading and applying the suggestions in this manual, you will be able to get the best performance from the product you have purchased.

We would like to thank you for the choice you made with the purchase of our product.

Read this booklet carefully before carrying out any operation on the unit.

When carrying out any work on the unit, you must not install the unit unless you have carefully read and understood this manual in all its parts. In particular, all the precautions listed in the manual must be taken.

The documentation supplied with the unit must be delivered to the plant manager so that he can keep it carefully (at least 10 years) for any future assistance, maintenance and repairs.

The installation of the unit must take into an account both the purely technical requirements for proper functioning, and any local legislation in force and specific prescriptions.

Make sure that upon delivery of the unit, there are no obvious signs of damage caused by transportation. In this case indicate it on the delivery note.

This manual reflects the state of the art at the time the machine was marketed and cannot be considered inadequate as it is subsequently updated on the basis of new experiences. The Manufacturer reserves the right to update the production and the manuals, without the obligation to update the previous ones, except in exceptional cases.

Contact the Manufacturer's Sales Department to receive further information or updates to the technical documentation and for any improvement proposals to this manual. All reports received will be rigorously examined.

1.1.2 BASIC SAFETY RULES 

We remind you that the use of products that use electricity and water implies the observance of some fundamental safety rules:

- The use of the appliance by disabled and unassisted persons is prohibited;
- It is forbidden to touch the appliance with bare feet and with wet or humid peers of the body;
- Any cleaning operation is prohibited before disconnecting the appliance from the power supply by setting the main system switch to off;
- It is forbidden to modify the safety or adjustment devices without the authorization and indications of the manufacturer of the appliance;
- It is forbidden to pull, disconnect or twist the electric cables coming out of the appliance, even if it is disconnected from the mains electricity supply;
- It is forbidden to introduce objects and substances through the air intake and delivery grilles;
- It is forbidden to open the access doors to the internal parts of the appliance without first setting the system main switch to off;
- It is forbidden to disperse and leave the packaging material within the reach of children as it can be a potential source of danger;
- Respect the safety distances between the machine and other equipment or structures to ensure sufficient access space to the unit for maintenance and assistance operations as indicated in this booklet;
- The unit must be powered with electrical cables with a section suitable for the power of the unit. The voltage and frequency values must correspond to those indicated for the respective machines; all the machines must be earthed as per the regulations in force in the various countries;
- Do not release R134A into the atmosphere: R134A is a fluorinated greenhouse gas, referred to in the Kyoto protocol, with a global warming potential (GWP) = 1975.

1.1.3 SYMBOLOGY

The symbols shown in the following booklet allow you to quickly provide information necessary for the correct use of the unit.

Safety symbols

	**ATTENTION** Only authorized personnel	Warns that the operations indicated are important for the safe operation of the machines.
	**DANGER** Risk of electric shock	Warns you that failure to comply with the prescriptions creates a risk of electric shock.
	**DANGER**	Warns that failure to comply with the prescriptions entails a risk of harm to exposed persons.
	**WARNING**	Warns that failure to comply with the prescriptions entails a risk of damage to the unit or to the system.
	**DANGER**	It warns that there is the presence of moving parts and involves a risk of damage to exposed people.

1.1.4 WARNINGS

	The unit must be installed by qualified and authorized personnel according to the regulations in force in the various countries. If the installation is not carried out it could become a dangerous situation.
	Avoid installing the unit in very humid rooms or with large heat sources.
	On the electrical side, to prevent any risk of electrocution, it is essential to disconnect the main switch before carrying out electrical connections and all maintenance operations.
	In the event of water leaks inside the unit, set the main system switch to "Off", close the taps of the water and contact the technical service.
	It is recommended to use a dedicated power supply circuit; Never use a common power supply with other appliances.
	It is recommended to install an earth leakage breaker; Failure to install this device may cause shock electric.
	For connection, use a cable that is long enough to cover the entire distance, without any connection; do not use extension cords and do not apply other loads to the power supply but use a dedicated power circuit.
	After connecting the electrical cables, make sure that the cables are routed so as not to exert excessive force on the covers or covers electrical panels; any incomplete connection of the covers can cause overheating of the terminals.
	Make sure that the earth connection is made; do not ground the appliance on distribution pipes. Momentary surges of high intensity could damage the unit.

!	Installations performed outside the warnings in this manual or use outside the operating limits will void the guarantee instantly.
!	Make sure that the first start-up is carried out by personnel authorized by the company (see first start-up request form)

1.1.5 COMPLIANCE

The CE marking (present on each machine) certifies compliance with the following Community standards:

- Low Voltage Directive 2014/35 / EC
- Electromagnetic Compatibility Directive 2014/30 / EC
- Ecodesign 2009/125 / EC
- RoHS2 2011/65 / EU
- WEEE 2012/19 / EC

1.1.6 PRODUCT CODE

PRODUCT CODE	NOMINAL AIR FLOW RATE (m3/h)
KHRWHRX300	Total 300; External 150
KHRWHRX500	Total 500; External 250
KHRWHRX600	Total 600; External 150

1.1.7 IDENTIFICATION !

-The unit is identifiable through the plate placed on the lower front panel of the same.

- On the packaging there will be an additional identification plate with the model of the unit and the shipping references.

-The plate on the packaging has no validity for the traceability of the product in the years following the sale.

The removal, deterioration and illegibility of the plate placed on the unit involves major problems in identifying the machine, in the availability of spare parts and therefore in any future maintenance.

1.1.8 CONSTRUCTION FEATURES

SECTION FROM RECOVERY:

Exchanger in polypropylene in counter-current to high efficiency > 90%. Operation summer and winter.

VENTILATION:

Fans plug-fan Brushless with motor electronic and command modulating.

Very high efficiency and bass levels from noise Compliant at the legislation Erp2015.

SECTION FROM TREATMENT AIR:

Unit and equipped with from battery to water with geometry optimized for there dehumidification or integration of the cooling and warm up. The operation happens to various temperatures from operation of 'water from Power supply.

FILTRATION:

Filters Epm1 80% on air from renewal and on air from extraction spoiled to Mountain of the recovery from heat.

Filters Coarse with low lost from load easily removable on air from recirculation.

STRUCTURE:

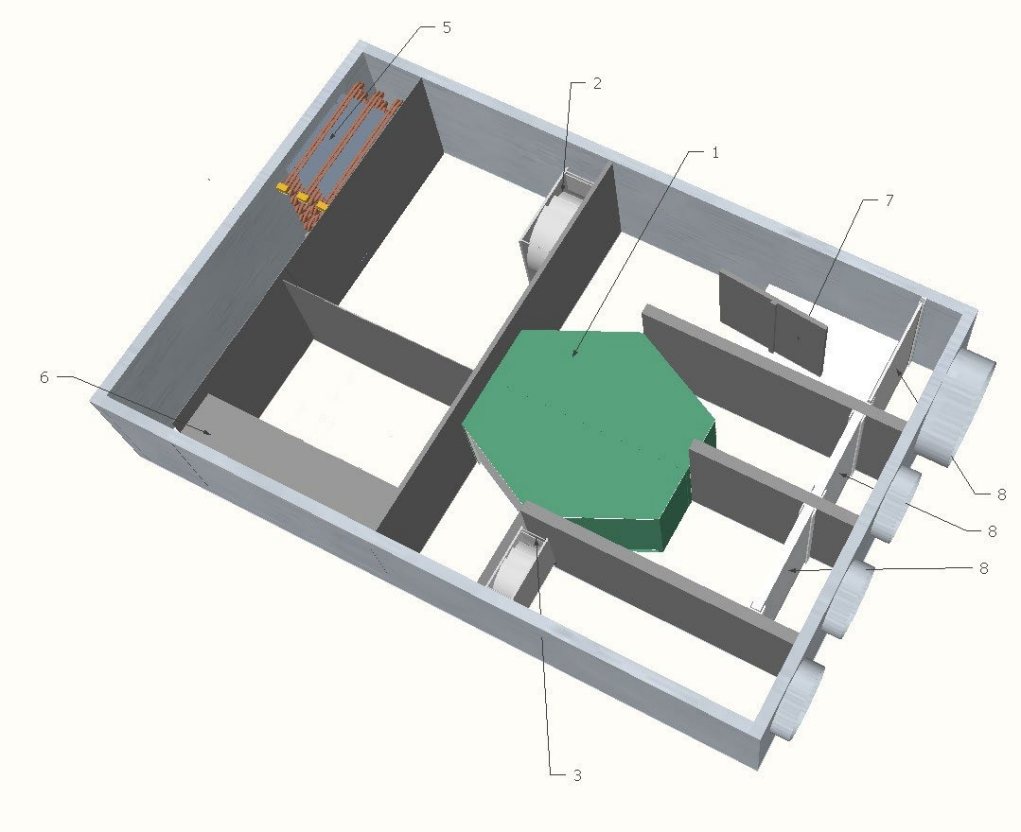
Paneling realized in double panel sandwich, with finish painted externally and galvanized annex indoor of unit.structure perimeter self-supporting in sheet metal galvanized.

There insulation of the panels and realized with insulating to high performance from thickness 20mm And insulating in polyethylene adhesive thickness 6mm.

ADJUSTMENT:

Electrical panel on board with microprocessor and dedicated regulation. Management of fans, regulation of ambient temperature and desired set point. Management of recirculation, antifreeze function, and on/off control of the water valve. Simplified touch control panel.

1.1.9 MAIN COMPONENTS OF THE UNIT



1. Heat recovery	5. Finned coils
2. Supply fan	6. Electrical panel
3. Exhaust fan	7. Recirculation air damper
	8. Air filters

1.1.10 PACKAGING AND TRANSPORT

The units are supplied for transport fixed on a wooden pallet and placed in cardboard boxes. To facilitate movement, the units are equipped with a wooden bench and hooks on the base that allow them to be lifted and positioned on the installation site. The unit can be stored in a room protected from atmospheric agents with temperatures not below 0 ° C, up to a maximum of 40 ° C.

1.1.11 RECEIPT, CONTROL AND HANDLING

The unit is shipped fully pre-charged with refrigerant gas in the circuits and with brine in the compressors. Under no circumstances can water be present in the hydraulic circuits, since after testing the unit is carefully emptied. Upon arrival, the customer is required to inspect the unit also in internal areas to verify that it has not been damaged during transport; the unit left the factory in perfect condition. Otherwise, it is necessary to immediately retaliate against the carrier by reporting the extent of the damage in detail on the bill, producing photographic evidence of the apparent damage and notifying any apparent damage to the shipper by registered letter with return receipt. The manufacturer assumes no responsibility for damage due to transport even if he has carried out the shipment himself. It is necessary to be very careful in handling the units during unloading and positioning on site, in order to avoid damage to the casing and to the more delicate internal components such as compressors, exchangers, etc. In any case, keep the unit in a horizontal position without tilting it. All the information about the necessary precautions to prevent damage to the unit and the indication of the weight of the same, are shown on the packaging. The materials that make up the packaging can be of various kinds such as wood, cardboard or polyethylene (plastic). It is good practice to send them for disposal or recycling through specialized companies to reduce their environmental impact

1.1.12 DISASSEMBLY AND DISPOSAL

Do not disassemble or dispose of the product yourself. Disassembly, demolition, disposal of the product must be carried out by authorized personnel in compliance with local regulations.

2 INSTALLATION

2.1.1 INSTALLATION CONDITIONS

The unit must be installed according to national and local standards that regulate the use of electrical devices and according to the following indications:

- install the unit inside residential buildings with ambient temperatures 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 place not subject to frost (the condensation water must be drained not frozen, at a certain inclination, using a siphon);
- do not install the unit in areas with a high relative humidity rate (such as a bathroom or toilet) to avoid condensation on the external surface;
- choose an installation site where there is sufficient space around the unit for the connections of the air ducts and to be able to carry out maintenance operations;
- the consistency of the ceiling / wall / floor where the unit will be installed must be adequate for the weight of the unit and not cause vibrations.

The environment chosen for the installation must contain:

- connections of the air ducts;

-230V single-phase electrical connection;

-connection for condensate drain;

- hydraulic connection.

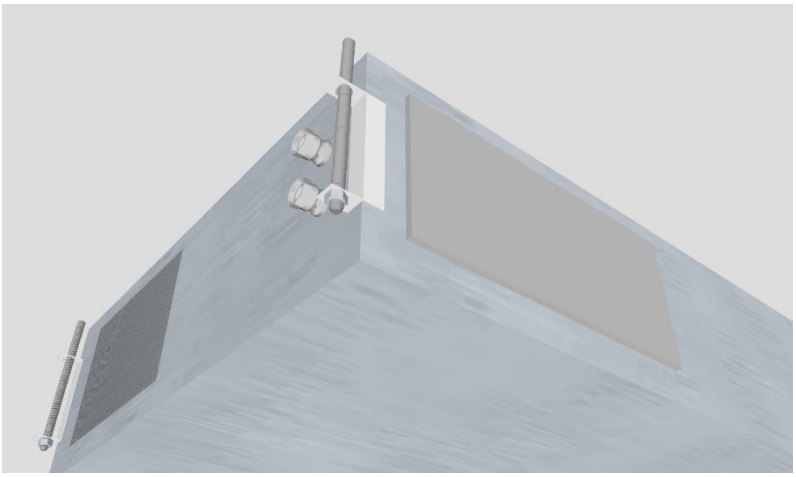
2.1.2 UNIT POSITION

Ceiling mount

To mount the unit on the ceiling, you need:

- Place 4 threaded bars inside the brackets provided on the 4 corners of the unit;
- Fix the unit to the ceiling, using the brackets, using suitable anchoring systems (dowels, chains…) and check the leveling with the help of a level.
- Ensure sufficient space for carrying out maintenance activities: the opening of the unit cover must be guaranteed (from below).

Do not mount the unit with the sides in direct contact with the walls to avoid possible contact noises, insert rubber or neoprene strips in this case.



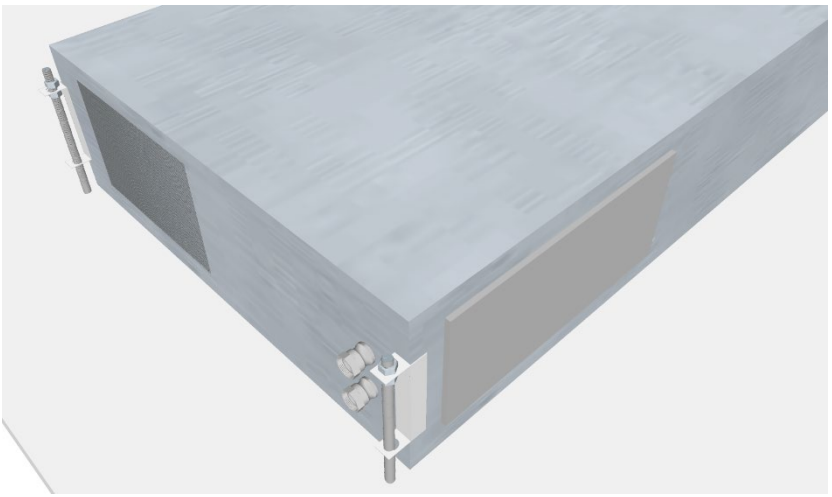
Ceiling mount

Floor mounting

To mount the unit on the floor, you need:

- Place 4 threaded bars inside the brackets provided on the 4 corners of the unit;
- Fix the unit to the floor using the brackets, using suitable anchoring systems (dowels, chains…) and check the leveling with the help of a level.
- Ensure sufficient space for carrying out maintenance activities: the opening of the unit cover must be guaranteed (from below).

Do not mount the unit with the sides in direct contact with the walls to avoid possible contact noises, insert, rubber or neoprene strips in this case.



Floor mounting

2.1.3 CONDENSATE DRAIN CONNECTION

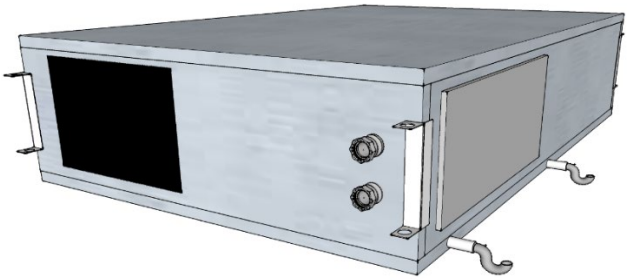
Due to the heat recovery system (the expelled hot air is cooled by the intake air inside the heat exchanger), and the dehumidification coils, the humidity contained in the internal air condenses inside the 'unit.

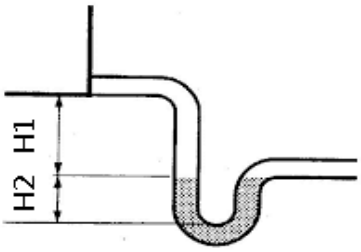
For the correct functioning of the heat recovery unit, it is therefore necessary to connect two condensate drains to the plumbing system (drain) of the house. Furthermore, to allow the correct flow of condensate water and avoid air sucking in, the condensate drains must be equipped with special siphons to be supplied and installed by the installer;

To install the condensate drain, comply with the following standards:

- slope of at least 2% to the exhaust pipe;
- provide for the possibility of disconnecting the drain hose for any maintenance (in particular in the case of ceiling installation);
- make sure that the discharge end of the pipe is at least below the water level of the siphon;
- make sure that the siphon complies with the following rules and is always full of water:

  H1> 40mm H2> 40mm





Condensate drain connection

3 AREAULIC CONNECTIONS

3.1.1 AREAULIC ORIENTATIONS

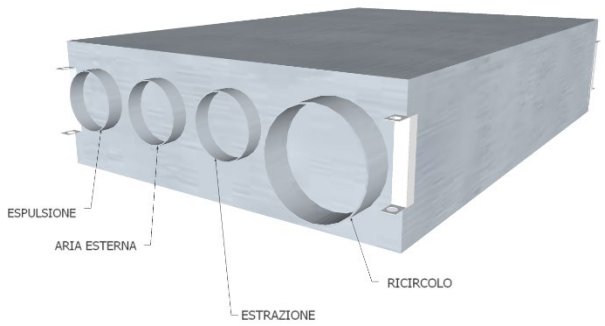
The unit is equipped with 4 rear circular male connections of different diameters and a front rectangular mouth according to the size;
For the correct connection of the air ducts, refer to the following diagram and the stickers placed on the unit.

Unit aeraulic connection diameters table

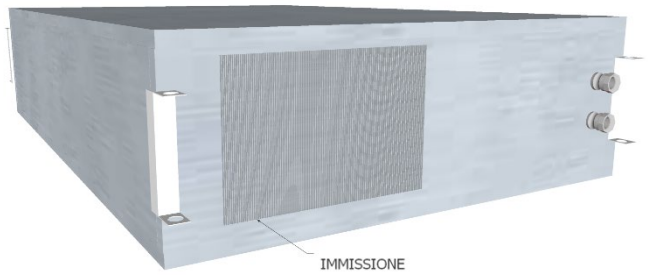
Product code	KHRWHRX300	KHRWHRX500	KHRWHRX600
Ø Recirculation mm	160	200	200
Ø Stale air mm Ø External air mm Ø Expulsion mm	125	160	125
Inlet section mm	350x180	490x255	550x180

We recommend installing at least 500mm of flexible piping to avoid dragging of vibrations and annoying noises due to installation.
According to the system in which the unit is to be installed, it will be possible to appropriately orient the four aeraulic connections.
Here are the possible configurations:

CONFIGURATIONS VERSION



Rear connections



Front connections

4.1.1 GENERALITY

- The units are equipped with hydronic coils with water-air exchange;
- The connections on the units, even in the different applications and versions, are always common to all the units;
- Make sure to respect the flows indicated on the labels: inlet (water entering the unit), outlet (water leaving the unit);
- Make sure that the weight of the pipes does not weigh on the predisposed connections;
- Provide shut-off valves on the delivery and return pipes to the system;
- All chilled water pipes must be insulated to minimize unwanted heat exchanges and the formation of condensation;
- Before filling the pipes, make sure that they do not contain foreign materials: such as sand, stones, rust flakes, drops of welding, slag, etc. Otherwise, wash the hydraulic circuit by bypassing the unit;
- Absolutely avoid pump cavitation and the consequent presence of air in the hydraulic circuit.

Physico-chemical characteristics of water

Incompatible chemical-physical characteristics could compromise the integrity of the hydraulic parts of the unit.

Check the characteristics of the water;

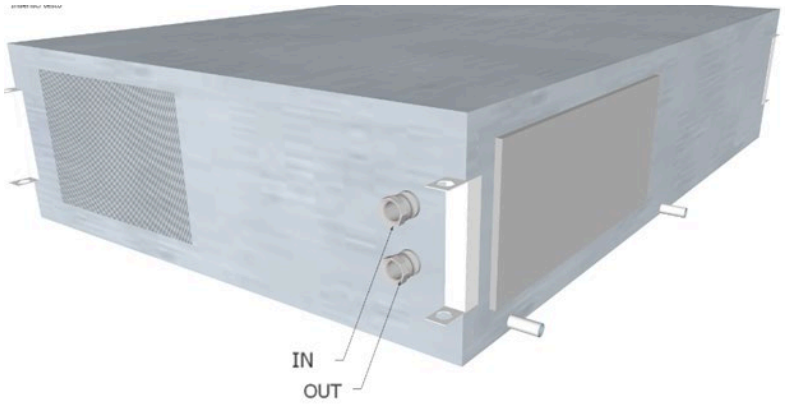
DESCRIPTION	Limit value
Hardness	<10 ° F
PH value	7.5 / 9
Oxygen	<2 mg / l
Conductivity	<500 uS / cm
Iron	<2 mg / l
Manganese	<1 mg / l
Nitrate	<70 mg / l
Sulphate	<70 mg / l
Chlorine compounds	<300 mg / l
Free radical carbon dioxide	<10 mg / l
Ammonium	<20 mg / l

4.1.1 POSITIONING AND CONNECTION PROCEDURES

The hydraulic connections are positioned on the side of the unit;

The connections are with female thread;

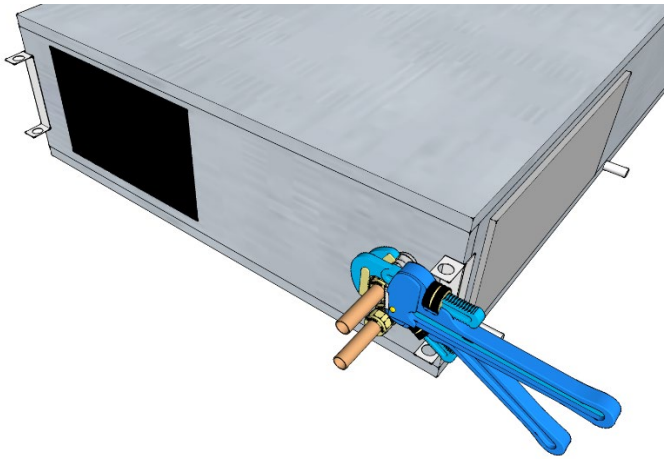
Respect IN as the water inlet to the unit and OUT as the water outlet from the unit



Connect the pipes with a female threaded fitting, and tighten it with dedicated tools;

Be careful not to rotate or twist the pipes coming from inside the unit;

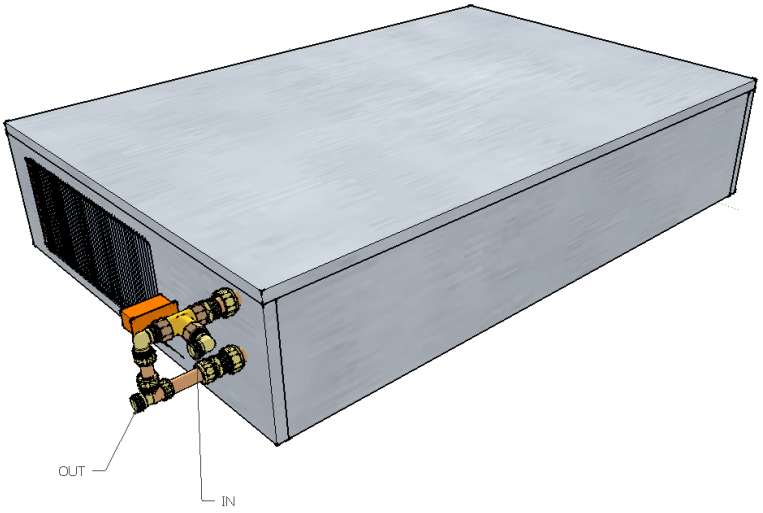
Rotating the pipes during connection could damage the connections inside the unit and cause water leaks during operation;



4.1.2 2-3 WAY VALVE CONNECTION

The connections of the optional 2/3-way valves are to be made as indicated;

Be careful to respect the indications on the valve:



5 ELECTRICAL CONNECTIONS

5.1.1 GENERALITY

-Before starting any operation to make the electrical connection make sure that the unit is not electrically powered.

-Make the necessary electrical connections by consulting only the wiring diagram attached to this manual.

-Install a suitable breaking and differential protection device for the exclusive service of the unit.

-It is essential that the unit is connected to an earth socket.

-Check that the electrical components chosen for the installation (main switch, circuit breakers, cable section and terminals) are suitable for the electrical power of the installed unit and that they take into an account the starting currents of the compressor as well as the maximum load that can be reached. The relative data are indicated on the attached wiring diagram and on the unit identification plate.

-It is forbidden to enter the unit with electric cables unless specified in this booklet.

-Use cables and electrical conductors with adequate sections and in compliance with the regulations in force in the various countries.

-Absolutely avoid running electrical cables in direct contact with pipes or components inside the unit.

-After the first few moments of operation, check the tightening of the screws of the power supply terminals.

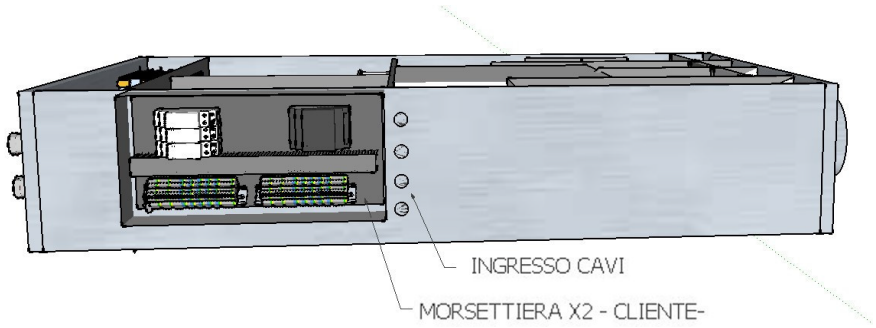
Power line size table:

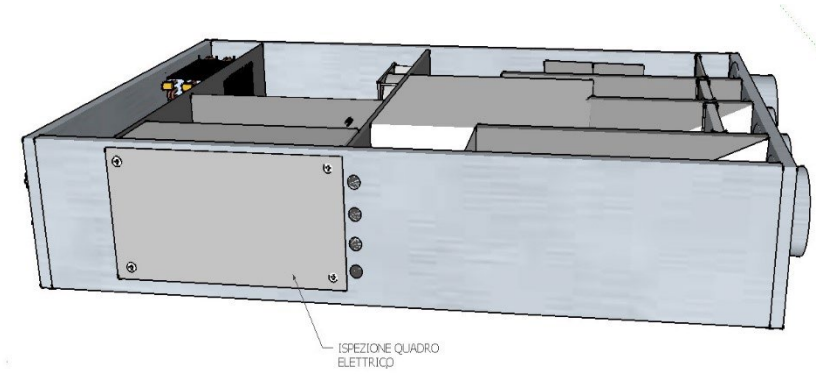
Codice		**KHRWHRX300**	**HRWHRX500**	**KHRWHRX600**
Power supply	V/Ph/Hz	230/1/50		
Max absorbed current	TO	0,9	1,6	1,8

5.1.2 POSITIONING AND CONNECTION PROCEDURES

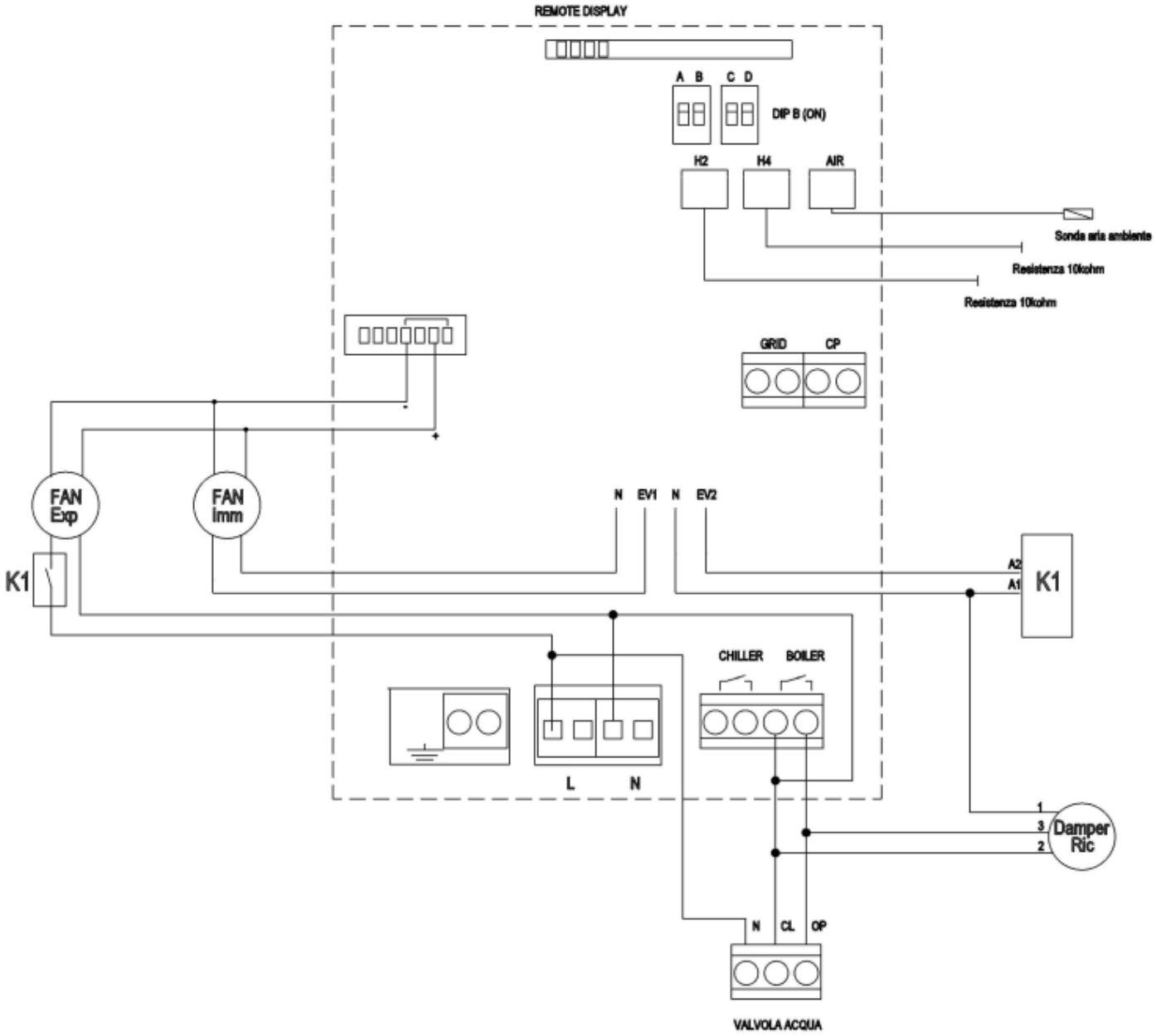
The electrical cable entry is located on the side of the unit;

Four dn20mm passages are arranged.





5.1.3 UNIT WIRING DIAGRAMS



CONNECTIONS BY THE CUSTOMER		
GRID	Humidistat / Air quality regulator	Contact closed / function active
CHILLER	Chiller / Generator activation	Clean Contact (hot / cold request activation)
N - CL - CP	Water valve / post battery	Live contact (220v)
REMOTE DISPLAY	Remote control (4 wires)	
REMOTE ON OFF (ON DISPLAY)	Remote ON OFF contact present on remote display	Contact closed / unit OFF

5.1.4 ELECTRICAL CONNECTIONS

KHR-C remote panel connection

The control board features capacitive touch remote controls for managing all unit functions, designed for wall installation or external box 502.

There are two families of remote controls:

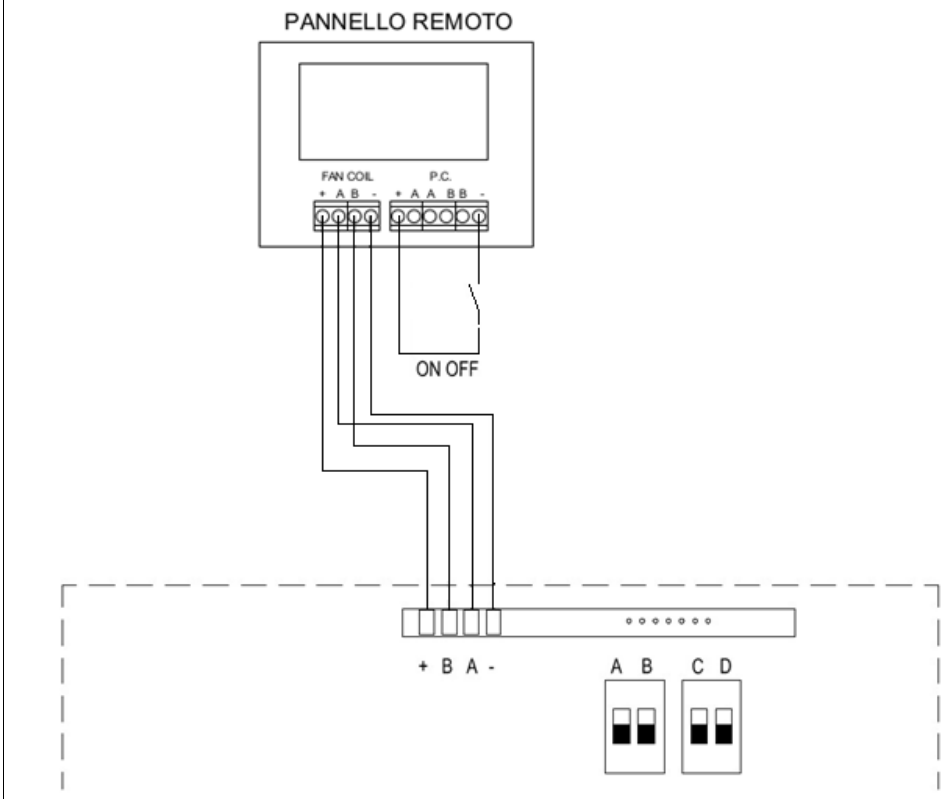
• **KHRCY211, KHRCY212** – Serial control with RS485 Modbus RTU connection capability;

• **KHRCY201, KHRCY202** – Serial control with Wi-Fi network connection capability and management of the unit through a dedicated app.

The controls are available in both White and Black colors.

The connection of the control to the unit is made **via shielded/braided cable, 0.75/1mm, with 4 conductors.**

The KHR-C Modbus control allows connection to an RS485 Modbus RTU serial network through the other available terminals, as shown below.



KHR-C remote panel

Auxiliary Links

The card allows the operation of the EC Brushless fan through a remote control described above;

Some auxiliary functions have been implemented in the board such as the connection of the regulators and the management of a battery / post valve.

DISPLAY CONNECTION TO CONTROL MULTIPLE UNITS

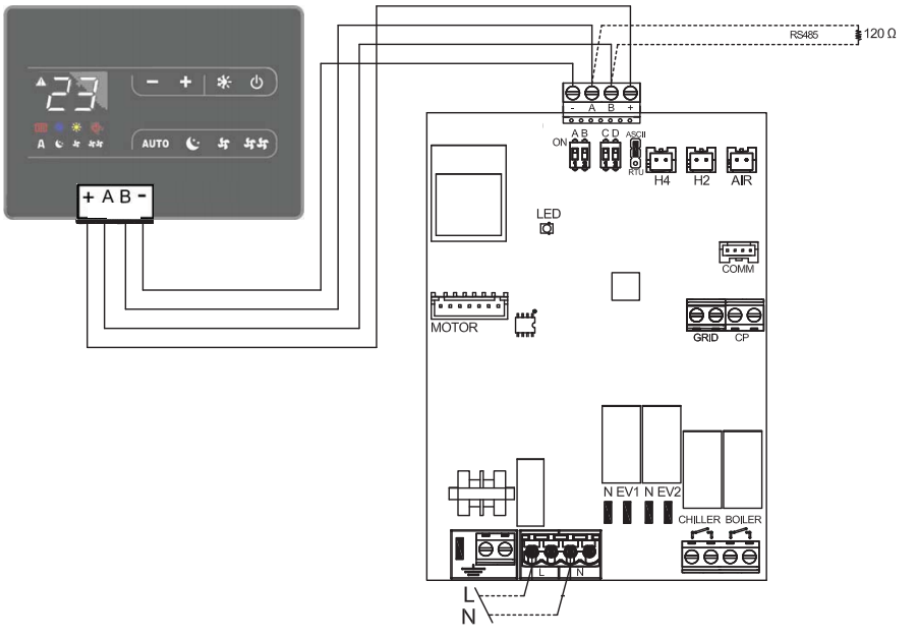
The KHR-C panel allows for the control of multiple units; it is possible to connect up to 30 units that will be managed by a single remote panel. The units must be connected in series, with input and output connections on the individual unit boards. The network is an RS485 network; use a shielded 2-wire cable with a maximum length of 150 meters.

-Create a layout to minimize the length of the branches;

-Terminate the line with the included 120 Ω resistor;

-Do not make "star" connections;

-The connection with the RS485 cable is polarized.



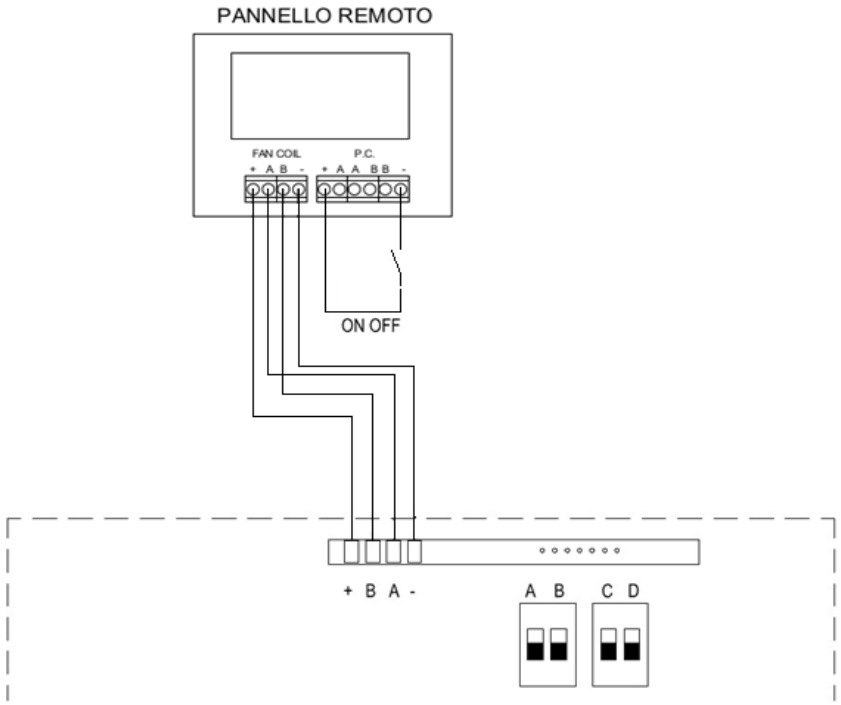
REMOTE ON OFF CONNECTION

The KHR-C remote panel provides an ON OFF command with which the unit can be connected through a clean contact to a device for turning the unit on / off remotely such as a switch or a timer

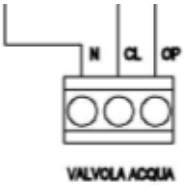
The logic provides:

Contact closed: Unit OFF

Contact open: Unit ON



REAR VALVE / BATTERY CONNECTION

The unit provides for the control of a valve / battery to be installed externally to the unit, through the 230v control provided on the board; • N - COMMON • CL - FIXED VOLTAGE FOR 3-POINT VALVE CONTROL • CP - ON OFF COMMAND 2-POINT VALVE	 Water valve / rear coil connection

REAR GENERATOR / BATTERY CONNECTION

The unit provides for the control of a generator or a post battery, through the clean contact on the terminal board; Closed contact with active request;	 Connection Generator / Battery of post

5.1.5 OPERATION

The unit is fully controlled manually by the user through the wall-mounted touch control KHR-C.

There is an option to connect humidity sensors and air quality regulators.

3V switch

The keys present in the main screen are shown below:	Meaning of the keys in the main display:			
		Allows the unit to be turned on / off from the keyboard		Button for changing the temperature set
		Keys for selecting the fan speed: Quiet / nominal / maximum		Button for summer / winter selection
		Button for nominal speed and sensor operation		ALARM signal
	Main screen keys display			

5.1.6 TURNING THE UNIT ON AND OFF

-The unit can be enabled and disabled using the On / Off button on the display.

Unit ON / OFF

5.1.7 FANS SPEED MODIFICATION AND BOOSTER FUNCTION

-On the display there are keys for selecting the desired speed of the unit;

Each time the speed is selected, the actual fan speed variation occurs after 1 second.

-There are three selectable speeds:

Night (minimum speed) - nominal (medium speed) - maximum (maximum speed)

Fan speed management

5.1.8 NOMINAL SPEED FUNCTION

- By pressing the auto key, the unit will operate at the rated speed keeping the sensor input control active; If the humidity regulator or air quality regulator requests it, the unit will increase the speed, at the sensor speed; The input is a digital input to which a clean contact can be connected.	 AUTO function

5.1.9 CHANGE OF SEASON

-The season change on version I must be done from the keyboard; Press and hold the season change button for at least 3 seconds to change the status of the season; The operation must be carried out to activate the correct logics: In winter the antifreeze function and in summer the bypass function; Logic symbols: SUN - WINTER SNOWFLAKE - SUMMER	 Season Change

5.1.10 KEY LOCK

Pressing the + and - keys simultaneously for 3 seconds activates the local lock of all the keys, confirmation is given by the display of the message bL. All adjustments are disabled for the user and bL appears when any key is pressed. By repeating the sequence, the keys are unlocked.	bL Key lock

5.1.11 PANEL BRIGHTNESS ADJUSTMENT

With the panel off, keep the + key pressed for 5 seconds until the message 01 appears. With the - key, bring the value to 00 and wait 20 seconds to verify the correct setting.	0/0 Brightness adjustment

6 MAINTENANCE

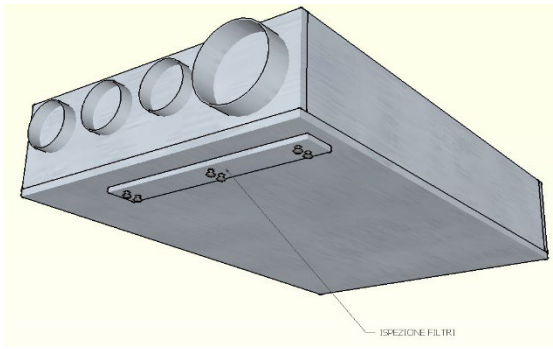
To always ensure correct and optimal operation of the unit, all maintenance interventions must be carried out periodically.

6.1.1 CLEANING OR REPLACING FILTERS

To replace the filters or to clean them, proceed as follows:

- disconnect the unit from the power supply;
- open the filter covers using the dedicated knobs;
- remove the dirty filters;
- insert the new filters carefully;
- close the lid with the dedicated knobs;

If the conditions of the filters allow it, they can be cleaned using a vacuum cleaner or a low-pressure compressor.



View for filter extraction

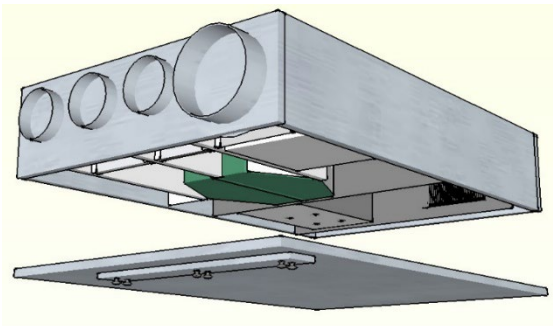
6.1.2 CLEANING THE HEAT EXCHANGER

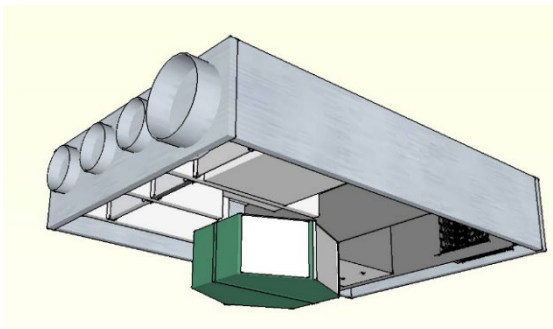
Recommends that you check the condition of the heat exchanger each time you clean / change the filters and clean it if deemed appropriate. This operation must only be carried out by qualified personnel (installer).

To clean the heat exchanger, proceed as follows:

- disconnect the unit from power supply
- in case of ceiling installation, disconnect the condensate drain pipe;
- open the unit cover by releasing the fastening hooks and removing the screws;
- remove the heat exchanger with the help of the special green strap / strap;
- proceed with cleaning very gently using a vacuum cleaner or a low-pressure compressor (to prevent dirt from entering the heat exchanger, clean in the opposite direction to that of the air flow);
- insert the exchanger back into its seat;
- close the cover and lock it in place by locking the fastening hooks and inserting the screws;

Attention! Never touch the fins of the exchanger, handle the exchanger keeping it only on the closed sides.





View for exchanger extraction

6.1.3 GENERAL CLEANING OF THE UNIT

It is advisable to occasionally check and, if necessary, clean the fans, the condensate drain and the internal walls of the unit. These operations must only be carried out by qualified personnel (installer).

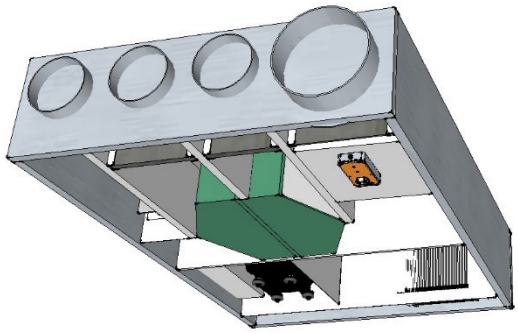
To carry out the above operations, proceed as follows:

disconnect the unit from power supply

- in case of ceiling installation, disconnect the condensate drain pipe;
- open the unit cover by releasing the fixing hooks on it;
- check and if necessary clean the fans, the condensate drain and the walls;
- close the cover and lock it with the fixing hooks on the unit;
- connect the power cord and turn the unit on from the switch on the side panel.

For cleaning, you can use a vacuum cleaner, a rag dampened slightly with water, a soft bristle brush or a low-pressure compressor.

Attention! There are small metal clips on the blades for balancing the blades, DO NOT remove them.



Unit views for general cleaning

7 ALARMS

7.1.1 GENERALITY

In case of problems or breakdowns, take note of any error code appearing on the display of the electronic control unit or of the remote control, take note of the model and serial number of the unit you own (present on the identification plate attached to the side of the unit) and contact the installer.

7.1.2 PROBLEMS WITHOUT ERROR INDICATION ON THE DISPLAY

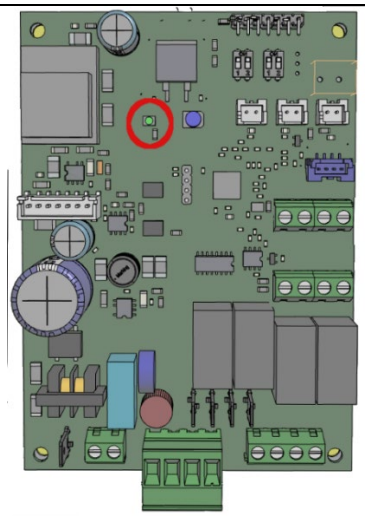
PROBLEM	CAUSES	REMEDIES
Display off	No power (light switch off)	Check the connection to the mains Check and if necessary replace the fuse on the (black) power connector on the side of the unit.
Little or no air flow The premises remain humid	Clogged filters	Replace the filters
	Clogged exchanger	Clean the exchanger
	Ice cream exchanger	Take the exchanger to a warm place and wait for it to defrost, do not heat with direct heat sources.
	Dirty fan	Clean the fan
	Clogged fan ducts	Clean the ventilation ducts
	Outside temperature below 0 ° C	The unit may be in anti-freeze mode, wait until the outside temperature rises or provide for the installation of an electric pre-heating heater.
High noise	Noise coming from the unit	Check for cracks and / or air leaks from the unit panels Check the siphon connection Check if the motors turn correctly (bearings)
	Noise coming from the ducts	Check for cracks in the intake / inlet / exhaust pipes
Vibrations Elevate	Panels that vibrate	Check the integrity of the unit's aluminum panels and profiles Check that the unit cover and the panel covering the electronic board are properly closed Check that there are no walls that can transmit vibrations to the wall / floor / false ceilings
	Unbalanced fan blades	Check the integrity of the blades Clean the fans Check that the small metal clips for balancing the blades are still present on the fans
Loss of condensation	Condensate drain blocked	Clean the condensate drain
	Condensate does not flow from the drain duct into the drip tray	Make sure the unit is perfectly level Check that the condensate drain connections are clogged

7.1.3 ALARM SIGNAL

Below is a list of all the alarms managed by the application.

The presence of an alarm has two display modes:

- an error code present on the KHR-C command;
- a led on the electronic board that shows a flashing sequence with the type of alarm present.



1 LED ALARM SIGNALS UNIT BOARD

2 KHR-C PANEL ALARM SIGNAL

7.1.4 TABLE OF ALARMS SIGNALED BY DISPLAY

Below is the table of the unit operating anomalies signaled, in the electronic versions I by the remote display or by the flashing of the LED on the board.

CODE	DESCRIPTION	IT CAUSES	REMEDY	CARD BLINKS
E1	AIR recovery probe alarm	Broken or missing reading of the probe	Check the connection of the probe or replace it	1 flash - off 3 seconds
	Fan alarm	Faulty fan connector or no feedback signal	Check the connection of the fan connector to the board Replace the fan control cable	2 flashes - off 3 seconds
	Alarm H2 expulsion probe	Broken or missing reading of the probe	Check the connection of the probe or replace it	3 flashes - off 3 seconds
	Alarm External air probe H4	Broken or missing reading of the probe	Check the connection of the probe or replace it	5 flashes - off 3 seconds
	Connection alarm with remote display	Error connecting the remote display	Check the electrical connections Check that A and B are not reversed Check the correct insertion of the display connection board on the main board	Led Off
	Communication alarm with remote display	No communication between display and board for at least 300 seconds.	Check the filter status and keep the on off key pressed to reset the signal; Check that A and B are not reversed Check the correct insertion of the display connection board on the main board	6 flashes - off 3 seconds

8 NOTES AND INFORMATION MAINTENANCE

NOTE

10/2024

IT - AVVERTENZE PER IL CORRETTO SMALTIMENTO DEL PRODOTTO

Questo prodotto rientra nel campo di applicazione della Direttiva 2012/19/UE riguardante la gestione dei rifiuti di apparecchiature elettriche ed elettroniche (RAEE). L'apparecchio non deve essere eliminato con gli scarti domestici in quanto composto da diversi materiali che possono essere riciclati presso le strutture adeguate. Informarsi attraverso l'autorità comunale per quanto riguarda l'ubicazione delle piattaforme ecologiche atte a ricevere il prodotto per lo smaltimento ed il suo successivo corretto riciclaggio. Si ricorda, inoltre, che a fronte di acquisto di apparecchio equivalente, il distributore è tenuto al ritiro gratuito del prodotto da smaltire. Il prodotto non è potenzialmente pericoloso per la salute umana e l'ambiente, ma se abbandonato nell'ambiente impatta negativamente sull'ecosistema. Leggere attentamente le istruzioni prima di utilizzare l'apparecchio per la prima volta. Si raccomanda di non usare assolutamente il prodotto per un uso diverso da quello a cui è stato destinato, essendoci pericolo di shock elettrico se usato impropriamente. Il simbolo del bidone barrato, presente sull'etichetta posta sull'apparecchio, indica la rispondenza di tale prodotto alla normativa relativa ai rifiuti di apparecchiature elettriche ed elettroniche. L'abbandono nell'ambiente dell'apparecchiatura o lo smaltimento abusivo della stessa sono puniti dalla legge.

EN - IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT

This product falls into the scope of the Directive 2012/19/EU concerning the management of Waste Electrical and Electronic Equipment (WEEE). This product shall not be dispose in to the domestic waste as it is made of different materials that have to be recycled at the appropriate facilities. Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling. Furthermore, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge. The product is not potentially dangerous for human health and the environment, but if abandoned in the environment can have negative impact on the environment. Read carefully the instructions before using the product for the first time. It is recommended that you do not use the product for any purpose rather than those for which it was intended, there being a danger of electric shock if used improperly. The crossed-out wheeled dustbin symbol, on the label on the product, indicates the compliance of this product with the regulations regarding Waste Electrical and Electronic Equipment. Abandonment in the environment or illegal disposal of the product is punishable by law.

CE

Produced by Sinergia s.r.l.
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