

HIGH EFFICIENCY HEAT RECOVERY

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### 1.1.1 INTRODUCTION

This manual was 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 obtain the best performance from the product purchased. We would like to thank you for the choice you made with the purchase of our product.

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

You must not install the unit, nor carry out any work on it, if you have not first carefully read and understood this manual in all its parts. In particular, all precautions listed in the manual must be adopted.

The documentation accompanying the unit must be delivered to the system 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 account both the purely technical requirements for good operation and any local legislation in force and specific provisions.

Make sure that when the unit is delivered, there are no obvious signs of damage caused by transport. 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 because it was subsequently updated based on new experiences. The Manufacturer reserves the right to update production and manuals, without the obligation to update the previous ones, except in exceptional cases.

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



### 1.1.2 FUNDAMENTAL SAFETY RULES






We remind you that the use of products that use electricity and water requires compliance with some fundamental safety rules:

- The use of the appliance by disabled and unaided people is prohibited
- It is forbidden to touch the appliance with bare feet or with wet or damp parts of the body
- Any cleaning operation is prohibited before having disconnected the appliance from the electrical power supply by positioning the main switch of the system is off
- It is forbidden to modify the safety or regulation devices without the authorization and indications of the appliance manufacturer
- It is forbidden to pull, detach or twist the electrical cables protruding from the appliance, even if it is disconnected from the power supply. electric.
- 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 having positioned the main switch of the system 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 of a section suitable for the power of the unit. The voltage and frequency values must correspond to those indicated for the respective machines; all machines must be earthed as per regulations in force in various countries.








### 1.1.3 SYMBOLS

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

#### Safety related symbols

	<b>ATTENTION</b> Only authorized personnel	Warns that the operations indicated are important for the safe operation of the machines
	<b>DANGER</b> Risk of electric shock	Warns that failure to comply with the instructions poses a risk of electric shock.
	<b>DANGER</b>	Warns that failure to comply with the requirements entails a risk of harm to exposed people.
	<b>WARNING</b>	Warns that failure to comply with the instructions entails a risk of damage to the unit or system.
	<b>DANGER</b>	It warns that there are moving parts and poses a risk of harm to exposed people

### 1.1.4 WARNINGS

	The installation of the unit must be carried out 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 any maintenance operations.
	In the event of water leaks inside the unit, set the main switch of the system to "Off", close the taps of the water and contact the technical service
	It is recommended to use a dedicated power circuit; Never use a shared power supply with other appliances.
	It is recommended to install a ground leakage breaker; Failure to install this device may cause shock electric.
	To connect, use a cable of sufficient length 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 forces on the covers or electrical panels; any incomplete connection of the covers may cause the terminals to overheat.



Make sure the earth connection is made; do not earth the appliance on distribution pipes.  
High intensity momentary surges could damage the unit



Installations carried out outside the warnings in this manual or use outside the operating limits will instantly void the warranty.

### 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 IDENTIFICATION



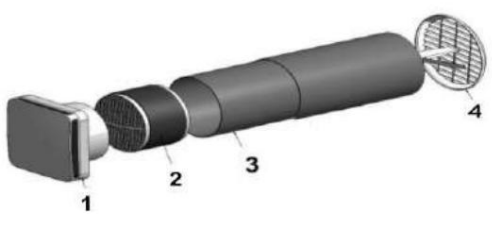

- The unit is identifiable by the plate located on the lower front panel of the unit.
- On the packaging there will be an additional identification plate with the model of the unit and the shipping references.
- The plate on the packaging has no value for the traceability of the product in the years following the sale.

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

### 1.1.7 STATE OF SUPPLY

The supply includes:

VERSIONS - S - MASTER AND SLAVE				ONLY VERSIONS - S - MASTER	
1- FAN UNIT	2- RECOVERY	3-TELESCOPIC PIPE	4-EXTERNAL GRILLE FEEDER CONTROL UNIT		

VERSIONS - E-MASTER AND SLAVE				ONLY - E - MASTER VERSIONS
				
1- FAN UNIT	2- RECOVERY	3-TELESCOPIC TUBE	4-EXTERNAL GRILLE	REMOTE CONTROL

ACCESSORIES :

				
	UNIT INSULATION KIT	CORNER EXIT KIT	WALL FIXING TEMPLATE	AESTHETIC EXTERNAL GRILLE
				
REPLACEMENT FILTER	SPARE REGENERATOR	AESTHETIC COVERS		

1.1.8 PACKAGING AND TRANSPORT

The units are supplied for transport inserted in cardboard boxes to be handled with caution. The unit can be stored in a room protected from atmospheric agents with temperatures not lower than 0°C, up to a maximum of 40°C.

1.1.9 DISASSEMBLY AND DISPOSAL



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



## 2 INSTALLATION

### 2.1.1 INSTALLATION CONDITIONS



The unit must be installed according to national and local regulations regulating the use of electrical devices and according to the following indications:

- install the unit inside residential buildings with an ambient temperature between 0°C and 45°C;
- avoid areas near sources of heat, steam, flammable and/or explosive gases and particularly dusty areas;
- the consistency of the wall where the unit will be installed must be adequate and not cause vibrations.

In the environment chosen for installation there must be:

- core drilling for connection of the air duct;
- electrical connection compliant with current regulations

The unit is an integral part of a balanced ventilation system, pay attention to the coupling of the unit and natural draft boiler (e.g. open fireplace) which can cause a depression in the environment, due to which a backflow of the exhaust gases into the environment.

### 2.1.2 UNIT POSITIONING AND ASSEMBLY



To mount the unit you will need:

- Make a hole for the entire thickness of the wall of minimum diameter:
  - 162mm (HRC05S VERSION)
  - 110mm (HRC02S VERSION)with an inclination of 1° towards the external environment.
- The hole can be positioned at any height. It is recommended above a height of 1.8m distant from side walls and ceilings at least 100mm.

Ensure sufficient space for carrying out maintenance activities: the opening of the unit cover (from below) must be guaranteed.

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

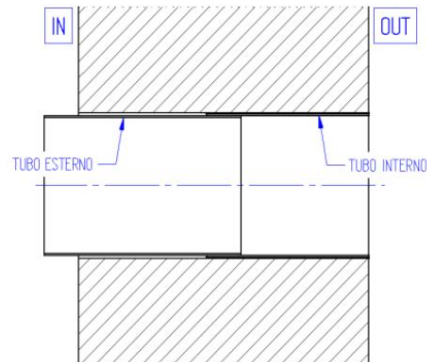


Fig.1A Recommended positioning



If you use two units on the same wall, maintain a minimum distance of 1.2m between one core drilling and the other.

If you use two adjacent walls at a corner instead, When drilling, maintain a minimum distance of 1.2m from the corner shared by the two walls.

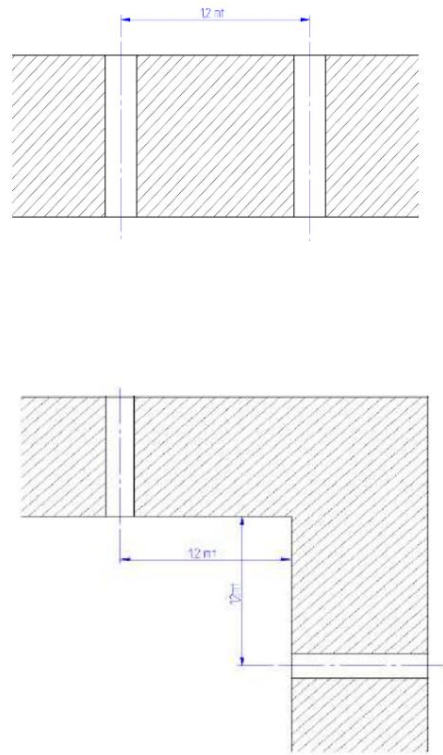


Fig.1B Positioning two units

Extract the exchanger from the telescopic tube using the appropriate handle. (figure 2).



Fig.2 Exchanger extraction

Sprinkle the hole made with cement mortar or polyurethane foam.

Insert the telescopic tube inside the hole made and bring the part of the tube with the larger diameter flush with the external wall.

Move the part of the tube with the smaller diameter bringing it flush with the internal wall. (fig. 3)

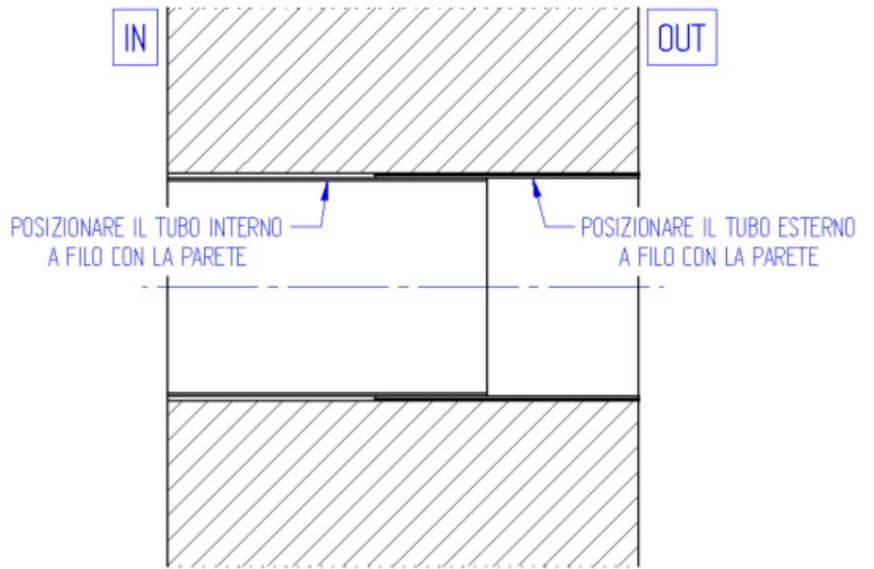


Fig.3 Positioning of the telescopic tube

Wait for the cement mortar or polyurethane foam to set.

Insert the grid inside-out by compressing the springs on the larger diameter tube towards the final part of the coring towards the outside.

Release and check the attachment of the grille.

Insert the exchanger from the inside towards the end of the pipe with the smaller diameter.

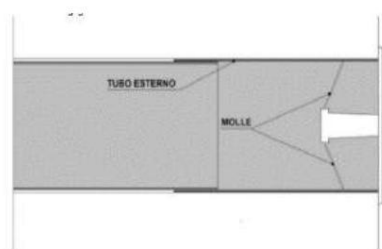


Fig.4 Positioning of the external grill

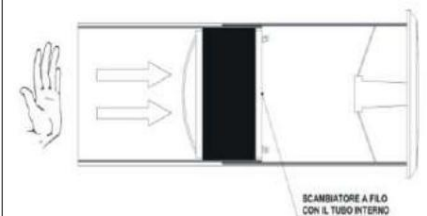


Fig.5 Insertion of exchanger

Unhook the cover from the motor holder by pressing on the side holes **(1)** using a small screwdriver (fig.6).

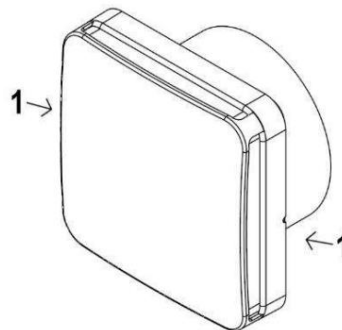


Fig.6 Releasing the front cover

Fracture the shutter foreseen for the passage of connections **(2)**, in the case of external connections which are not concealed, fracture the foreseen areas **(3)** both on the motor support and on the cover (fig.7).

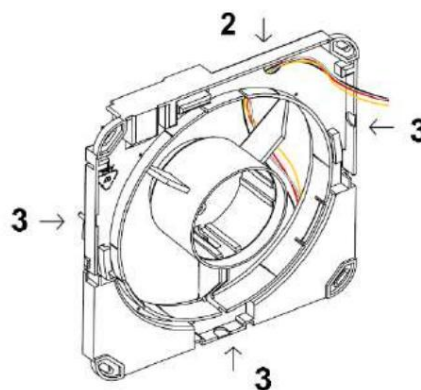


Fig.7 Inserting cables

Fix the motor holder in correspondence with the drain hole using screws and plugs (fig.8).

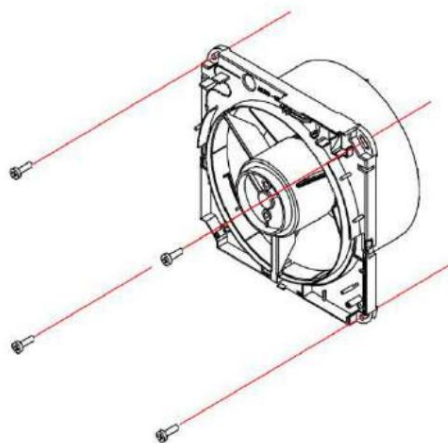


Fig.8 Motor holder fixing

## 3 ELECTRICAL CONNECTIONS



### 3.1.1 GENERAL INFORMATION

- Before starting any operation to make the electrical connection, make sure that the unit is not electrically powered
- Carry out the necessary electrical connections by consulting exclusively the electrical diagram attached to this manual.
- Install a suitable interruption and differential protection device exclusively for the unit.
- 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 which take into account the compressor's inrush currents as well as the maximum load that can be reached. The data relevant are indicated on the attached wiring diagram and on the unit's identification plate
- It is forbidden to enter the unit with electrical cables unless specified in this document.
- Use cables and electrical conductors of adequate cross-section and compliant 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 tightness of the power terminal screws

### 3.1.2 CONNECTION OF POWER SUPPLY AND CONTROL UNIT - S VERSION

Connect the power supply to the electrical power supply by connecting it to the AC IN side.

-Blue wire (N)

-Brown thread (L)

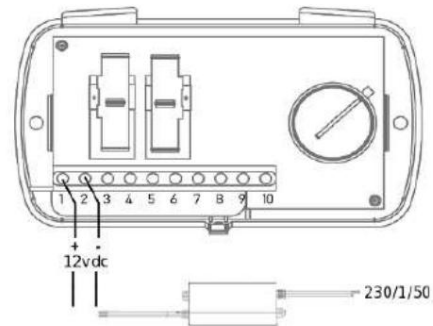
Connect the two wires of the 12Vdc power supply output on the DC OUT side from the power supply to the control unit.

Respect the polarity

-Red wire (+)

-Black wire (-)

The control unit can be positioned on a 503 box or on the wall and has a fixing screw underneath for access to the internal parts.



Power connection and power supply

### 3.1.3 UNIT WIRING DIAGRAM -S VERSION-

Connect up to 4 motors to the control unit.

The connection occurs through two dedicated outputs on which to connect two motors in parallel.

The first release:

3-4- First and second motor power supply

5-6- First and second motor control signals

7-8 Third and fourth motor power supply

9-10 Third and fourth engine control signals

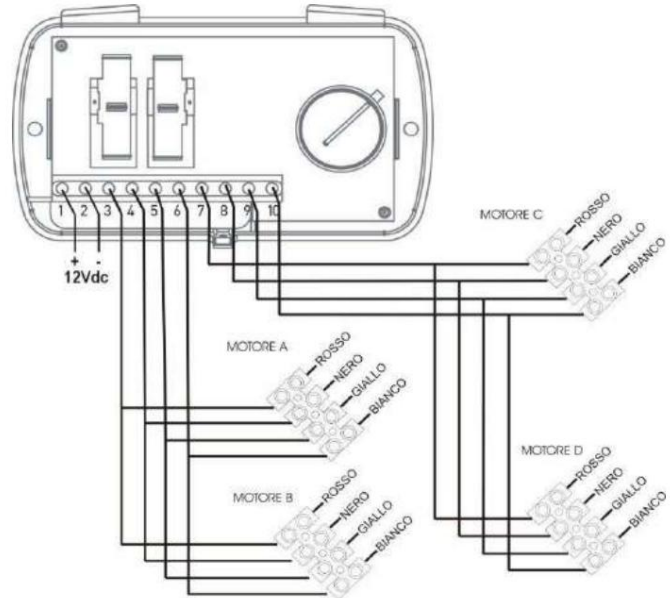
If there are two motors they can be connected

both in parallel on the first output, and differentiated on the first and second output.

If connected to the different outputs, the motors will work with alternating direction of rotation in order to create simultaneous introduction and extraction of air.

If connected in parallel, the motors will operate with a direction of rotation in parallel so as to double the instantaneous flow rate of the various operating cycles.

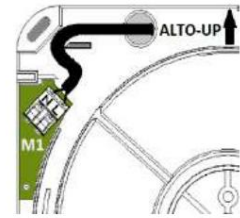
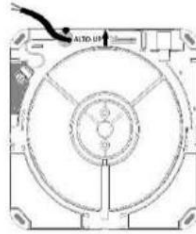
Even for the third motor it will be possible to connect it to the preferred output depending on the positioning of the unit.



CONNECTIONS BY THE CUSTOMER		
1 – 2	Powered by 12VDC power supply	Respect the polarities
3 – 4 – 5 – 6	Connection of motors with direct logic in automatic operation	Maximum two engines
7 – 8 – 9 – 10	Connection of motors with reverse logic in automatic operation	Voltage contact (12V DC)

### 3.1.4 POWER CONNECTION - E VERSION

The HRC version E unit includes a power supply direct 230/1/50; on the top part of the unit we find an electronic board with two terminals for the L and N connection.



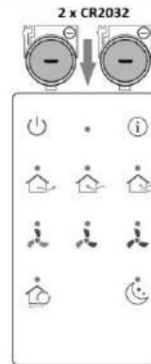
Power connection

### 3.1.5 WIRELESS REMOTE CONTROL

The control unit provides a wireless connection to the HRC unit.

There is therefore no need to connect wires and electrical cables.

The control unit is powered by two CR3032 batteries supplied.



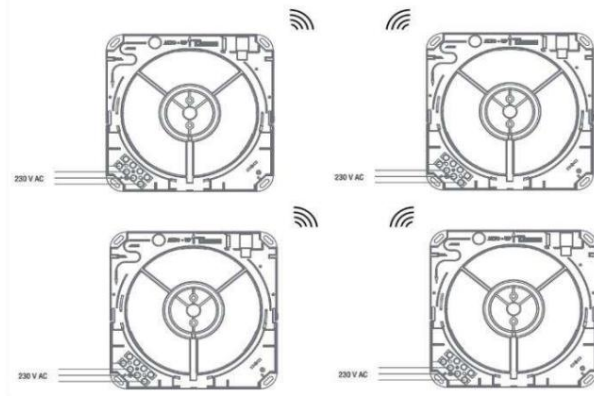
Wireless remote control

### 3.1.6 UNIT WIRING DIAGRAM - VERSION E.

Connect the 230/1/50 power supply to each installed appliance.

Communication between devices occurs via wireless communication.

There will be a master device with the remote control supplied and several slave units (up to 16) which will operate controlled via the network generated by the master unit.



#### CONNECTIONS BY THE CUSTOMER

L - N	Mains power supply 230/1/50	
-------	-----------------------------	--



4.1.1 GENERAL INFORMATION

The configuration must be carried out during the first commissioning by the installer or by qualified personnel.

An incorrect configuration could compromise the correct functioning of the system.

Carefully follow the configuration procedure described below.

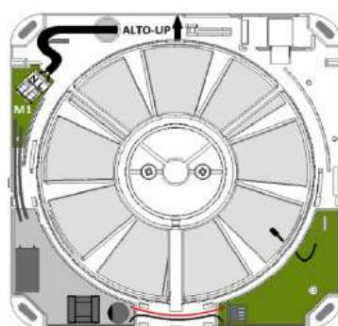
4.1.2 MASTER UNIT

Power up all units in the system.

The units will be powered and in standby mode.

The Master unit is already configured at the factory with its own remote control;

Do not reverse the remote controls of two master units, but use its own remote control for each unit;



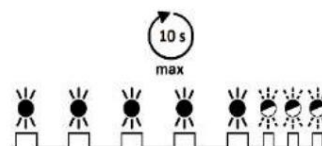
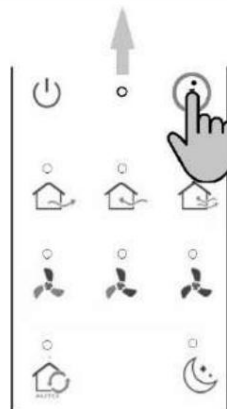
Master unit configuration

## 4.1.3 SLAVE UNIT CONFIGURATION

**NB - The configuration of the slaves can only be carried out with the Master unit powered and functioning;**

**1 Press and hold the info button for at least 5 seconds.**

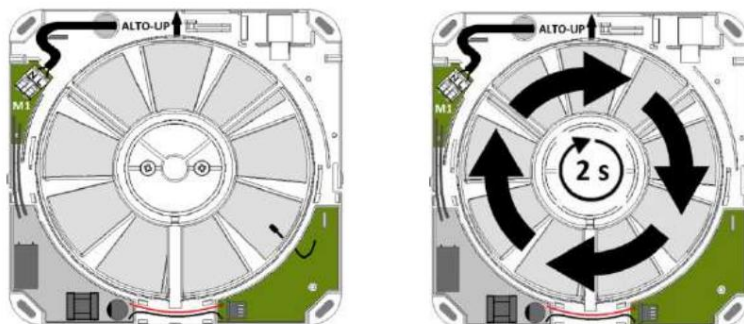
The central indicator LED will flash quickly as indicated in the adjacent figure, signaling entry into the configuration.



Access Slave configuration procedure

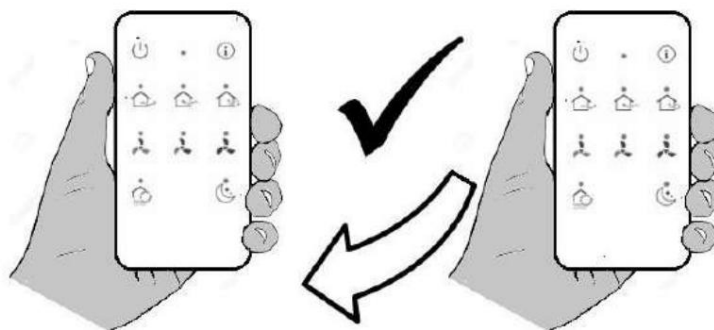
**2 Move the remote control closer to the first slave you want to configure.**

The slave unit will respond with a short rotation of the fan.



**Max 5 cm.ÿ**

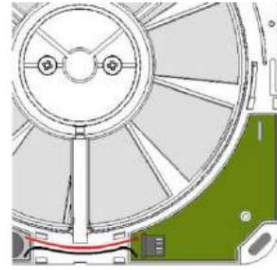
**30 s**  
**Max**



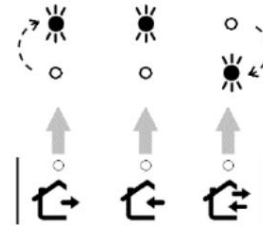
Slave unit configuration



**3** Once paired, the slave will light up by flashing alternately the extraction only LED (left LED) and the IN introduction only LEDs (central) alternating with the IN/OUT LED of the automatic cycle (right)



**Max 5 cm.ÿ**



Slave operating mode selection

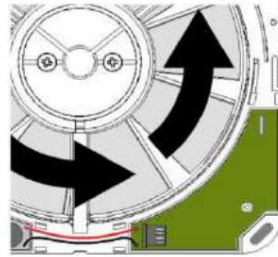
It will now be possible to select the operating mode of the unit with respect to the master unit in supply/extraction cycle operation.

-If you want the unit in recovery operation to rotate opposite to the master press the OUT extraction button as in column A until the fan starts rotate.

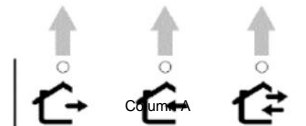
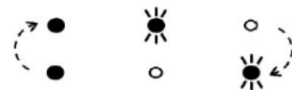
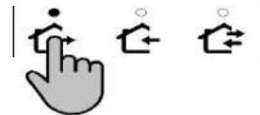
At this point the LEDs will flash alternately as indicated in column A.

However, if you want the slave unit to rotate parallel to the master, press the IN Input key as in column B, until the fan begins to rotate.

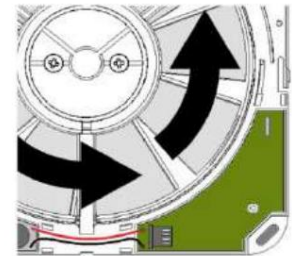
At this point the LEDs will flash as indicated in the column B.



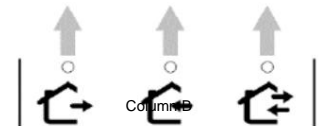
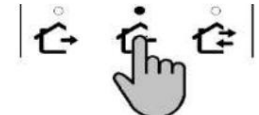
**Max 5 cm.ÿ**



Selection of opposite operation to the master

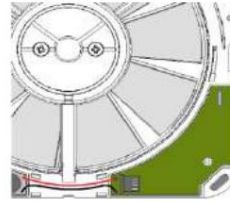


**Max 5 cm.ÿ**

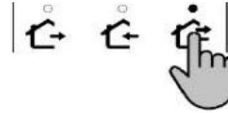


Selection of operation parallel to the master

**4** Confirm your choice by holding down the cycle IN/OUT button and wait for the fan to temporarily stop, which will then start working again.

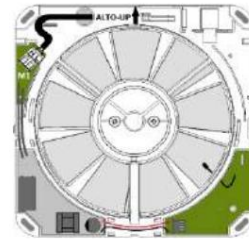


**Max 5 cm.ÿ**

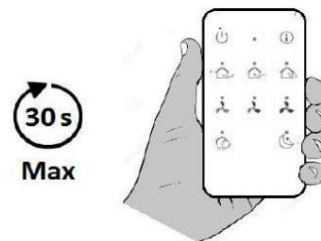


Confirm Slave configuration

**5** Move the remote control closer to the second slave and repeat the configuration in succession for all the slaves



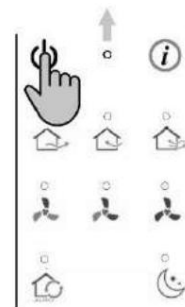
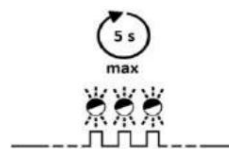
**Max 5 cm.ÿ**



Procedure for all slaves

**6** Exit the slave configuration procedure by pressing the ON OFF button.

The info LED will not flash faster signaling exiting slave configuration mode.



Slave configuration procedure exit

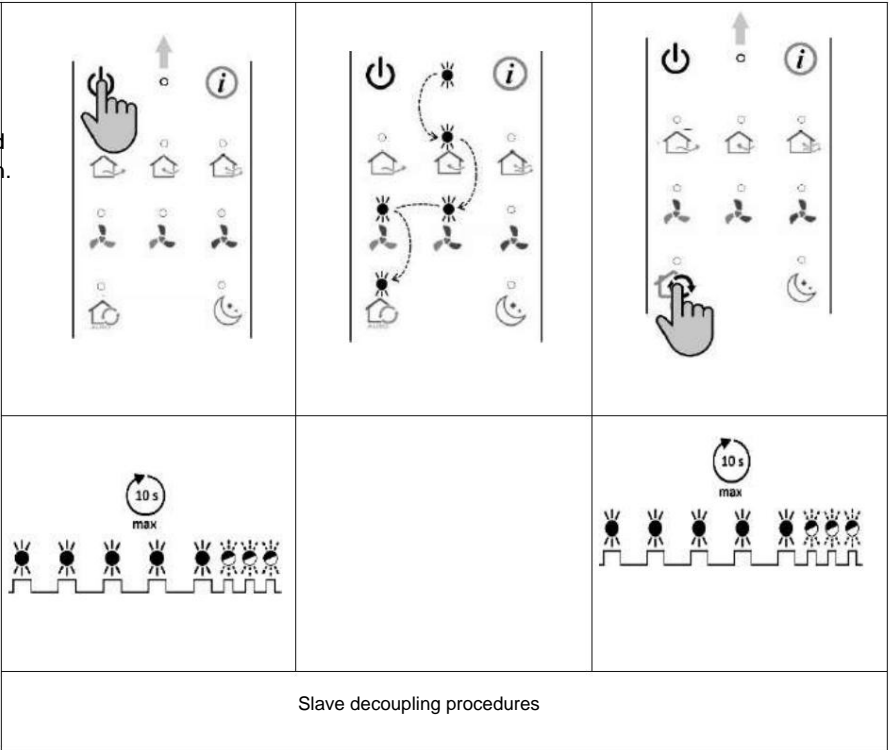
#### 4.1.4 REST PROCEDURE / DECOUPLING OF THE SLAVES

1 Press the ON OFF button for a long time and wait for the central LED to start flashing quickly.

The central signaling LED will flash quickly as indicated in the adjacent figure, signaling entry into the configuration.

2 After a few seconds the remote control will show a sequence of LEDs as indicated in the central figure. The LEDs indicate the activated decoupling mode.

3 Long press the AUTO key to decouple all slaves from the system.



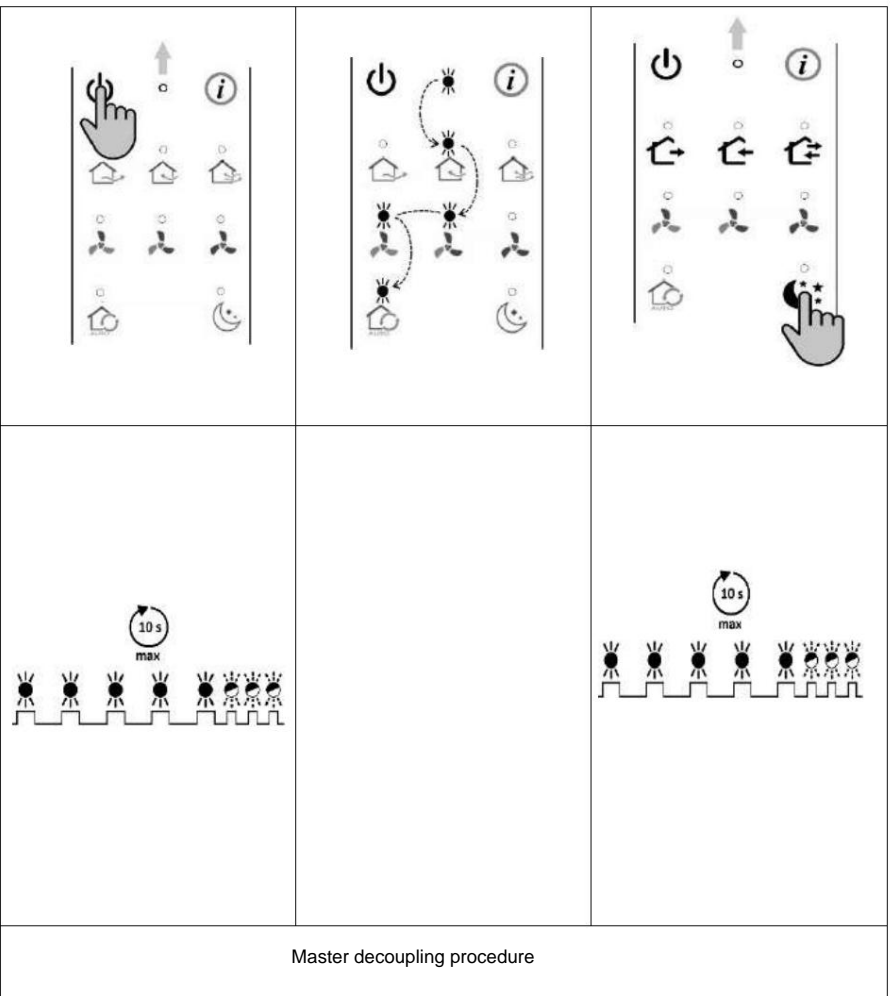
#### 4.1.5 REST PROCEDURE / DECOUPLING THE MASTER FROM THE REMOTE CONTROL

1 Press the ON OFF button with a long press and wait for the central LED to start flashing quickly.

The central indicator LED will flash quickly as indicated in the adjacent figure, signaling entry into the configuration.

2 After a few seconds the remote control will show a sequence of LEDs as indicated in the central figure. The LEDs indicate the activated decoupling mode.

3 Long press the SLEEP button to decouple all slaves from the system.



5.1.1 GENERAL INFORMATION



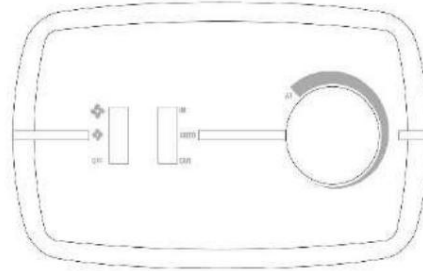
To ensure the "exhaust" of the humidity that is naturally created inside the home, the unit must operate continuously at least at reduced speed (speed 1). If you turn off the ventilation unit, condensation may occur inside the unit and inside the building with possible moisture damage.

5.1.2 OPERATION OF CONTROL UNIT - S VERSION

The control unit consists of two three-position switching selectors and an adjustment knob.

It is designed for fixing with screws adapted to the 503 flush-mounting box;

However, it is possible to fix it to any type of flat wall using suitable fixings.



Command unit

The fan speed selector gives the possibility to choose the maximum speed, the minimum speed and the system shutdown. Changing the speed allows you to modify the air flow rate exchanged with the outside in any operating mode.



On selection button and ventilation speed

The right switch button has three operating modes:

-Auto: the unit alternates the flow between extraction and introduction air;

-In: air intake only;

-Out: air extraction only.



Operating mode selection button

The adjustment knob allows you to change the air intake/ extraction cycle time from a minimum of 35 sec to a maximum of 200 sec. depending on the temperature difference between the outside and the inside.

If the temperature difference between inside and outside is high, to guarantee thermal efficiency, the cycle time must be as short as possible. If, however, the temperature difference is close to zero, the cycle must last as long as possible.

For example, if in winter the external temperature is  $-5^{\circ}\text{C}$  and therefore the temperature difference between inside and outside is high, rotate the knob to the position with the strongest DT line. Contrary to a spring day, where the temperature difference is minimal or close to zero, turn the knob to the position with the thinnest DT line; Below are four reference values.

POSITION	1	2	3	4
CYCLE TIME	35s	70s	130s	220s
DELTATES	$20^{\circ}$	$10^{\circ}$	$5^{\text{th}}$	$0^{\circ}/2^{\circ}$



Position Knob 1

Knob 2 Position Knob 3

Position Knob 4 Position

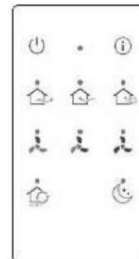
### 5.1.3 CONTROL UNIT OPERATION - VERSION E -

The control unit is made up of ten buttons which contain all the functions of the product within them.

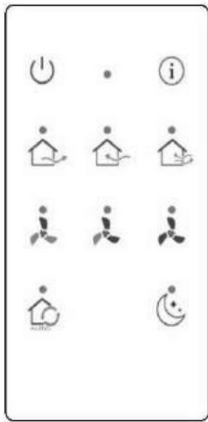
The central LED between the on off buttons and the info button,

allows you to view when a function key is pressed, the command is sent to the ventilation unit.

Above some buttons, there are LED indicators which, by requesting information from the ventilation unit, will indicate the operating status.












Remote Control Version E



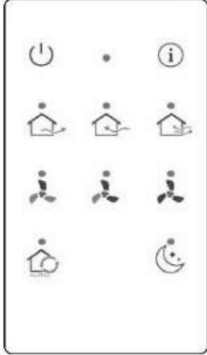
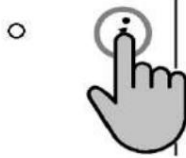
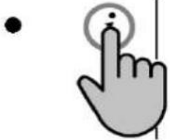


**Meaning of the keys:**

Here are the key icons and their meanings on the remote control:

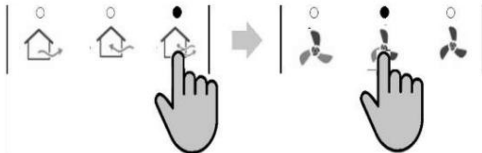
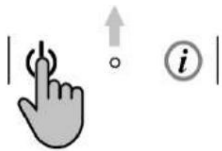
	ON OFF button		Key for: -Reactivation of the remote control  -Information request
	Extraction key		Enter key
			Cycle key
	Min. speed		Average speed
			Max. speed
	Operation Car speed with sensors: -Temperature -Humidity -Light		Operation Speed Nocturnal

Main mask key display



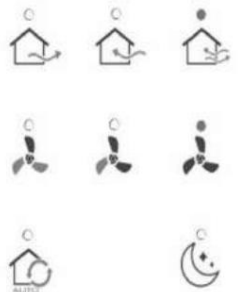
### 5.1.4 UNLOCK / REACTIVATE THE REMOTE CONTROL

<p><b>1</b> After three minutes of non-use, the remote control enters lock / sleep mode to save energy.</p> <p><b>2</b> Press the Info button for at least 2 seconds reactivate and unlock the remote control.</p> <p><b>3</b> The remote control is ready for commands.</p>			
			<p><b>READY</b></p>
<p>Unlocking remote control from standby</p>			

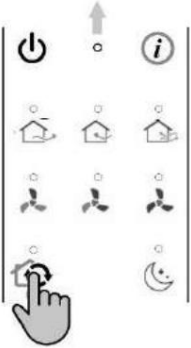
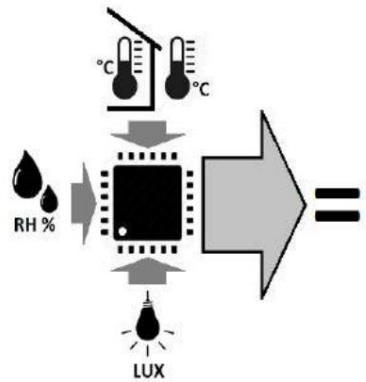
### 5.1.5 ON OFF UNIT / CHOICE OF MODE AND SPEED

<p><b>1</b> To activate the unit / system from OFF;</p> <p><b>2</b> First select the desired mode from extraction, input and cycle;</p> <p><b>3</b> Now select the fan speed between min – med – max</p> <p>EXAMPLE :</p> <p>In the adjacent figure, the automatic cycle mode and the average speed have been selected.</p> <p>As regards the extraction only or insertion only function, the unit returns to cycle mode on its own after 30 minutes.</p> <p>-To turn off the system press the ON-OFF button.</p>		
	<p>Unit activation</p>	<p>Shutting down the system</p>

## 5.1.6 SYSTEM STATUS REQUEST



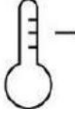
<p>1 With the remote control active it is possible to query the system to understand the status and active functions.</p> <p>Press the info button and wait for the remote control light up the LEDs relating to the states:</p> <p>The remote control will show after a few seconds and for a few seconds:</p> <ul style="list-style-type: none"> <li>-Mode set</li> <li>-Set speed</li> <li>-Sensor and night functions if active</li> </ul> <p>EXAMPLE :</p> <p>In the adjacent figure the remote control responded automatic cycle and maximum speed.</p>			
<p>System status request from remote control</p>			

## 5.1.7 AUTOMATIC OPERATION


<p>1 By pressing the Auto button, the unit enters the mode automatic.</p> <p>In this mode, the "Master" ventilation unit detects the environmental parameters (temperature, humidity and brightness) and carries out the procedures and processes indicated below to guarantee the best environmental comfort.</p> <p>Each individual slave instead regulates ventilation based on its own light and humidity sensors.</p>		
<p>Automatic mode operation</p>		



### 5.1.8 EXTRA CYCLE OPERATION AND MODULATING REGENERATIVE RECOVERY

<p>The master in auto mode has the purpose of controlling the input and extraction time to optimize the regenerative recovery cycle of the system.</p> <p>At the first activation of the "Auto" mode, after 10 minutes and subsequently every 12 hours, the "Master" ventilation unit performs the "Extra-cycle" procedure to detect the temperature difference between the room and the outside in order to determine the duration of the most suitable "Automatic cycle" which will also be adopted by any "Slave" ventilation units present in the system.</p>		
<p>The "Extra-cycle" procedure lasts 5 minutes, during which communication with the radio control is inhibited; in this phase, any commands given with the remote control will be reflected by three flashes of the LEDs.</p> <p>The duration of the recovery cycle is determined in Auto by the outcome of the "Extra-cycle" procedure and can vary between 30 and 200 seconds, which will be divided equally between the extraction and input phases.</p>		
<p>Extracycle operation and modulating regenerative recovery</p>		

### 5.1.9 DEHUMIDIFICATION

<p>A humidity sensor allows each individual ventilation unit to detect environmental humidity, and if necessary, to independently activate high-speed air extraction cycles to reduce humidity and improve environmental comfort. Depending on the environmental humidity conditions, the procedure can last between 2÷12 minutes (during which communication with the radio control is inhibited) and can be repeated hourly. The dehumidification cycle is suspended in "Night mode".</p> <p><b>Note:</b> This feature is normally disabled; to enable it, see the "Parameter setting" section.</p>	
<p>Dehumidification function</p>	

### 5.1.10 BRIGHTNESS SENSOR

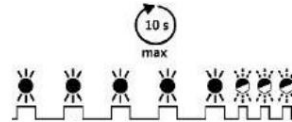
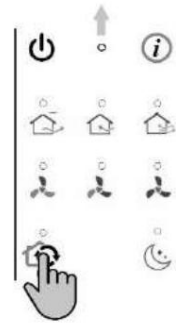
<p>A brightness sensor allows each individual ventilation unit to independently adopt the minimum speed (extra-low) during the night. If necessary, the brightness sensors can be excluded; in this case the night speed can only be activated manually using the appropriate button on the radio control.</p> <p><b>Note:</b> This feature is normally disabled; to enable it, see the "Parameter setting" section.</p>	
<p>Brightness sensor function</p>	

**1** Press and hold the AUTO button until the central LED flashes quickly.

The central signaling LED will flash quickly as indicated in the adjacent figure, signaling entry into the parameter configuration.

Now it will be possible to set:

- the humidity level for the dehumidify function
- activating or deactivating the light function

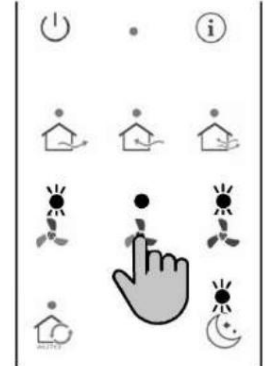
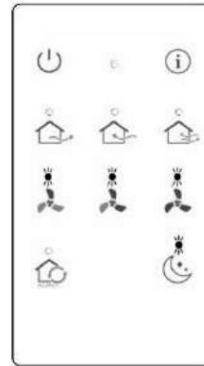


Access parameter configuration procedure

**2** The remote control will show fixed LEDs to indicate:

Through the three fan speeds the desired humidity setting threshold is between:

Low – Medium and High



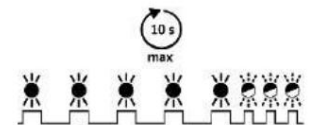
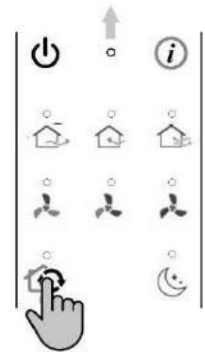
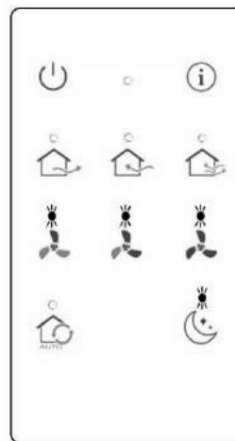
Humidity threshold selection

**3** -Select whether to activate or deactivate the function light sensor.

Night LED On = Function active

Night LED Off = Function deactivated

Press and hold the AUTO button until the central LED flashes quickly to exit parameter configuration if there are no selections.



Activation of light sensor and output of parameter configuration

## 6 MAINTENANCE

To always guarantee the correct and optimal functioning of the unit, it is necessary to periodically carry out all maintenance operations.



**WARNING:** Removing the cover of the ventilation unit, in the -E- version, gives access to live parts.

### 6.1.1 CLEANING OR REPLACING FILTERS

Remove power from the fan unit.

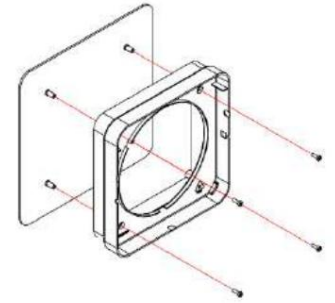
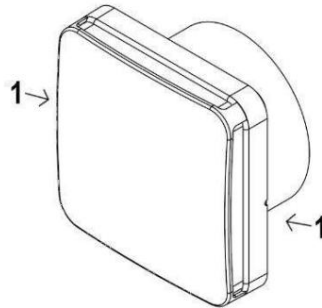
Unhook the cover from the motor holder by pressing on the side holes (1) using a small screwdriver as indicated in the figure on the side.

Unscrew the four cover screws.

Remove the filter and clean it with a vacuum cleaner or blow it with compressed air.

You can immerse the filter in water and wash it periodically.

Allow the filter to dry completely before reinstalling it inside the unit.



Filter extraction view

### 6.1.2 CLEANING THE HEAT EXCHANGER

It is advisable to occasionally check the condition of the heat exchanger.

The operation must be carried out by qualified personnel and proceed as indicated:

- disconnect power to the unit
- open the unit cover by unlocking the hooks fastening;
- disassemble the motor holder using the screws used for the fixing.
- Extract the exchanger inwards very carefully.
- proceed with cleaning very delicately using a vacuum cleaner or compressor;
- insert the exchanger back into place;
- reinstall the motor holder using the screws used e
- secure the unit cover



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 power to the unit
- open the unit cover by unlocking the hooks fastening;
- disassemble the motor holder using the screws used for the fixing.
- Extract the exchanger inwards very carefully.
- proceed to clean the unit very delicately using a vacuum cleaner or compressor;
- check the cleanliness of the external grill as well
- insert the exchanger back into place;
- reinstall the motor holder using the screws used e
- secure the unit cover

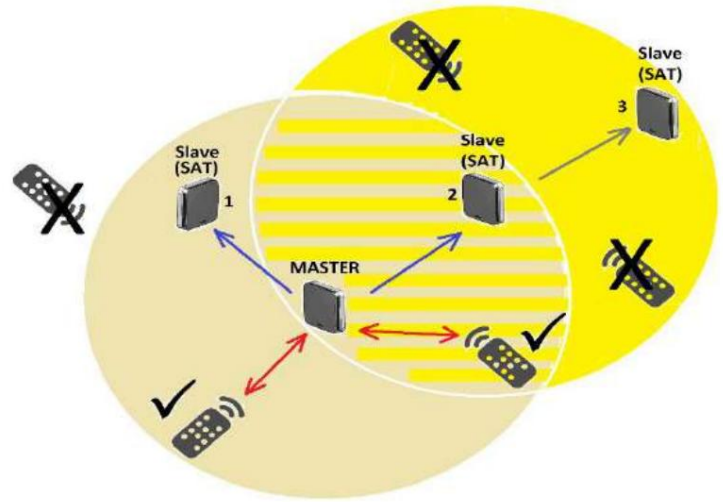


Views unit for general cleaning

## 6.1.4 OPERATION AND INFORMATION ON WIRELESS COMMUNICATION

The radio control interacts exclusively with the MASTER ventilation unit, which in turn sends commands to the Slave Units.

Slave units that are out of range of the MASTER unit's radio coverage receive commands from the closest Slave unit; in the following example, Slave unit no. 3 receives the commands propagated by Slave unit 2.



Wireless communication

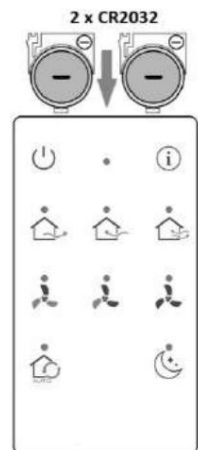
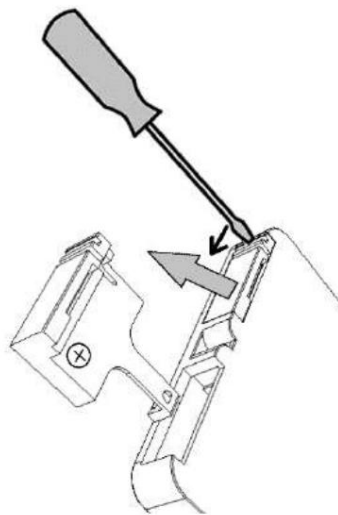
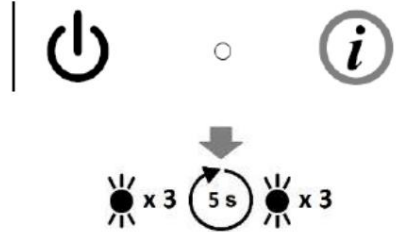
## 6.1.5 REMOTE CONTROL BATTERY REPLACEMENT AND SIGNALING

The radio control requires two CR2032 batteries;

The radio control will signal the need to replace the batteries through the flashes indicated alongside;

Replace both batteries in the remote control with two new batteries.

It is mandatory to dispose of batteries in special dedicated containers;



Replacement of radio control batteries



## 7.1.1 GENERAL INFORMATION

In case of problems or faults, contact the installer or the authorized assistance centre.

## 7.1.2 PROBLEMS RELATED TO THE OPERATION OF THE UNIT

PROBLEM	CAUSE	REMEDIES
The fan does not turn on	<ul style="list-style-type: none"> <li>-The power is not turned on</li> <li>-The unit control unit does not work</li> <li>-Incorrect electrical connections</li> <li>-Fans with thermal protection</li> </ul>	<ul style="list-style-type: none"> <li>-Check the power supply on the fan</li> <li>-Check the control unit and its relative power supply</li> <li>-Check the operation of the power supply</li> <li>-Check that the fan impellers are not obstructed</li> </ul>
The fan stops unexpectedly	<ul style="list-style-type: none"> <li>-Blocked fan blades</li> <li>-Incorrect motor voltage from the control unit</li> <li>-Incorrect electrical connections</li> <li>-Fans with thermal protection</li> </ul>	<ul style="list-style-type: none"> <li>-Check the power supply on the fan</li> <li>-Check the control unit and its relative power supply</li> <li>-Check the operation of the power supply</li> <li>-Check that the fan impellers are not obstructed</li> </ul>
Insufficient air flow	<ul style="list-style-type: none"> <li>-Filter, exchanger or grills clogged</li> <li>-Foreign body inside the pipe</li> <li>-Problems with the fan blades</li> </ul>	<ul style="list-style-type: none"> <li>-Clean the filters</li> <li>-Increase rotation speed</li> <li>-Clean pipes, exchanger</li> <li>-Check the fan impellers</li> </ul>
Insufficient exchanger performance	<ul style="list-style-type: none"> <li>-Corked exchanger</li> <li>-Cycle time set incorrectly</li> </ul>	<ul style="list-style-type: none"> <li>-Clean the surfaces of the exchanger</li> <li>-Set the cycle time according to the previous indications</li> </ul>
Excessive vibrations and noise	<ul style="list-style-type: none"> <li>-Incorrect installation of the unit</li> <li>-Incorrect installation of pipes</li> <li>-Imbalance of the fan impeller</li> </ul>	<ul style="list-style-type: none"> <li>-Check the unit's brackets and fixings</li> <li>-Check pipe brackets and fixings</li> <li>-Check the condition of the fan impellers</li> </ul>
Water leaks from the unit	<ul style="list-style-type: none"> <li>-Installation of unit with incorrect inclination</li> </ul>	<ul style="list-style-type: none"> <li>-Check correct installation of the fan unit</li> </ul>

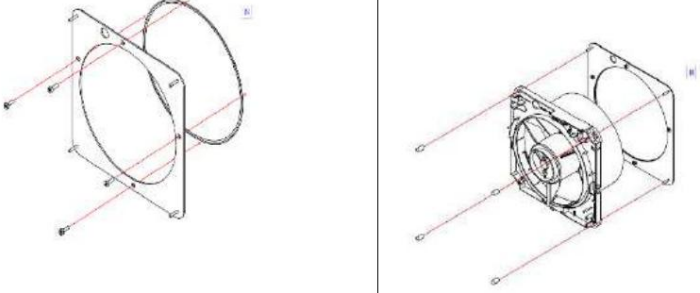
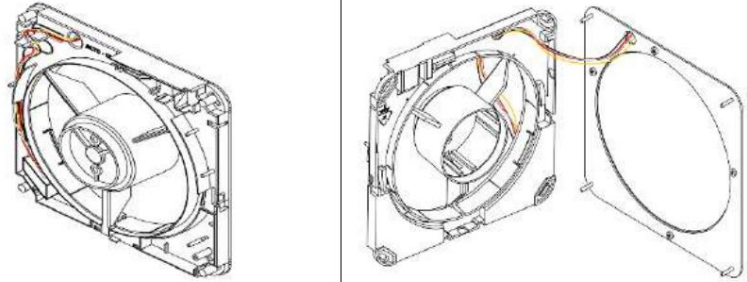
## 7.1.3 PROBLEMS RELATED TO THE OPERATION OF THE CONTROL UNIT OR POWER SUPPLY

PROBLEM	CAUSE	REMEDIES
The fan does not turn on	<ul style="list-style-type: none"> <li>-Control unit faulty</li> <li>-Faulty power supply</li> </ul>	<ul style="list-style-type: none"> <li>-Check or replace the control unit</li> </ul>
The fan does not change speed	<ul style="list-style-type: none"> <li>-Control unit faulty</li> </ul>	<ul style="list-style-type: none"> <li>-Check or replace the control unit</li> </ul>
The fan does not change operating mode	<ul style="list-style-type: none"> <li>-Control unit faulty</li> </ul>	<ul style="list-style-type: none"> <li>-Check or replace the control unit</li> </ul>
The fan runs at unexpected times	<ul style="list-style-type: none"> <li>-Control unit faulty</li> </ul>	<ul style="list-style-type: none"> <li>-Check or replace the control unit</li> </ul>
The remote control does not work	<ul style="list-style-type: none"> <li>-Low batteries or faulty remote control</li> </ul>	<ul style="list-style-type: none"> <li>-Check or replace the batteries</li> </ul>

The unit can be accompanied by some installation accessories.

Carefully read the instructions below for the installation of each individual accessory.

### 8.1.1 DFM WALL FIXING TEMPLATE

<p>The wall fixing template allows you to remove the unit from the wall without the need to remove the wall fixing screws.</p> <p>The template is installed on the wall using screws and plugs; the motor support plate is then fixed on the template and will be fitted with the supplied threaded handwheels.</p> <p>To inspect the exchanger and the internal parts of the tube, it will not be necessary to remove the wall screws or remove , but only the template locking handwheels.</p>		
<p>DFM – Installation of wall fixing template</p>		
<p>To inspect the exchanger and the internal parts of the tube, it will not be necessary to remove the wall screws or remove , but only the template locking handwheels.</p> <p>Carry out the following operations with the appliance unpowered.</p> <p>Then proceed by removing the cover with filter.</p> <p>Release the four fixing clamps from their seats.</p> <p>Unscrew the four locking handwheels of the template.</p> <p>Paying attention to the wires , remove the plate motor holder which will remain raised by the wires and allow cleaning operations of the exchanger and the tube.</p> <p>Reassemble the motor support plate, arrange the wires and terminals; refit the cover with filter.</p>		
<p>DFM – Exchanger and tube inspection with DFM</p>		

### 8.1.2 GEM – AESTHETIC EXTERNAL GRILLE

The GEM aesthetic external grille is a finishing grille external alternative to the external grill already supplied with the product.

The grill is constructed in two pieces.

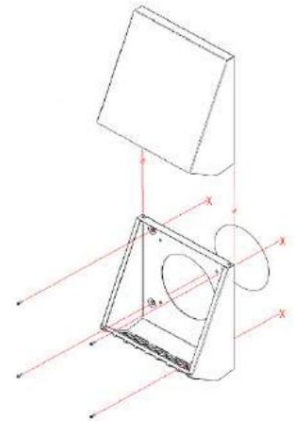
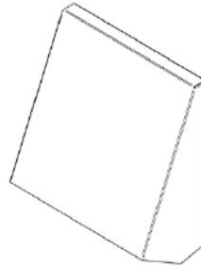
One piece consists of a flat plate for convenient attachment of the grill to the wall.

Fix the flat part of the aesthetic grille with the supplied anchors.

Install the supplied circular plastic grille into the standard product through the hole in the aesthetic grille plate.

Overlay the aesthetic finishing part of the external aesthetic grille.

Make sure the grill hole is centered with respect to the pipe to avoid load losses and air obstructions.



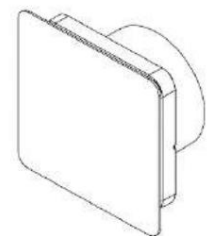
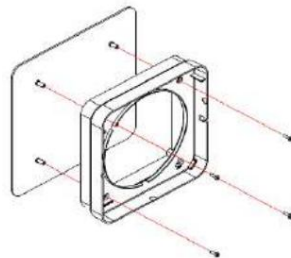
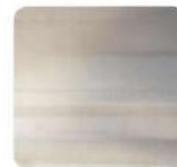
GEM aesthetic external grille

### 8.1.3 CVR – AESTHETIC COVERS

The unit includes the use of a series of aesthetic covers available when ordering.

Replacing the standard cover of the product occurs through a few simple operations:

- Remove the motor cover as done above indicated for cleaning and removing the filter.
- Unscrew the four rear screws that hold the cover standard plastic finish.
- Position the chosen aesthetic cover and screw the four back on screws supplied with the new cover.



CVR – Aesthetic covers

### 8.1.4 KUA – INSTALLATION OF CORNER EXIT KIT

The kit includes the possibility of installing the product

with the exhaust not directed on the wall, but with an angular flow direction.

For example, if you have shoulders between the window and the external wall, it is possible to mask the grille using the corner kit and exiting close to the window.



KUA – Corner outlet kit

### 8.1.5 KIS – INSULATION KIT

The kit provides the possibility of insulating the outside of the product, avoiding thermal transmittance towards the surfaces external to the product.

The insulation consists of a double shell of coated insulation material.

With the insulation kit the diameter of the hole for installing the product becomes:

HRC05S - 200mm

HRC02S - 160mm









KUA – Insulation kit



# 9 SYSTEM CONFIGURATION TABLE

During installation it is advisable to fill in the system summary table in order to keep track of the settings made, in order to facilitate any maintenance interventions.

	UNIT	PLACE/ENVIRONMENT	PARAMETER SETTINGS				
			  Direction of rotation in the Cycle Alternate	 HR% MIN	 HR% MED	 HR% MAX	 LUX
-	<b>MASTERS</b>		<b>X</b>				
1	SLAVE						
2	SLAVES						
3	SLAVES						
4	SLAVES						
5	SLAVES						
6	SLAVES						
7	SLAVES						
8	SLAVES						
9	SLAVES						
10	SLAVES						
11	SLAVES						
12	SLAVES						
13	SLAVES						
14	SLAVES						
15	SLAVES						
16	SLAVES						

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Technical Assistance Center

The data contained in this manual may be changed by the manufacturer without prior notice.