

WHR 60

Mechanical ventilation with heat recovery appliance
Ventilazione meccanica con sistema di recupero di calore



TECHNICAL/INSTALLATION MANUAL
MANUALE TECNICO/INSTALLAZIONE

INTRODUCTION

This manual includes technical descriptions, installation instructions, assembly, maintenance and technical data exclusively directed to qualified personnel involved in the installation and maintenance of the product.

INTENDED USE

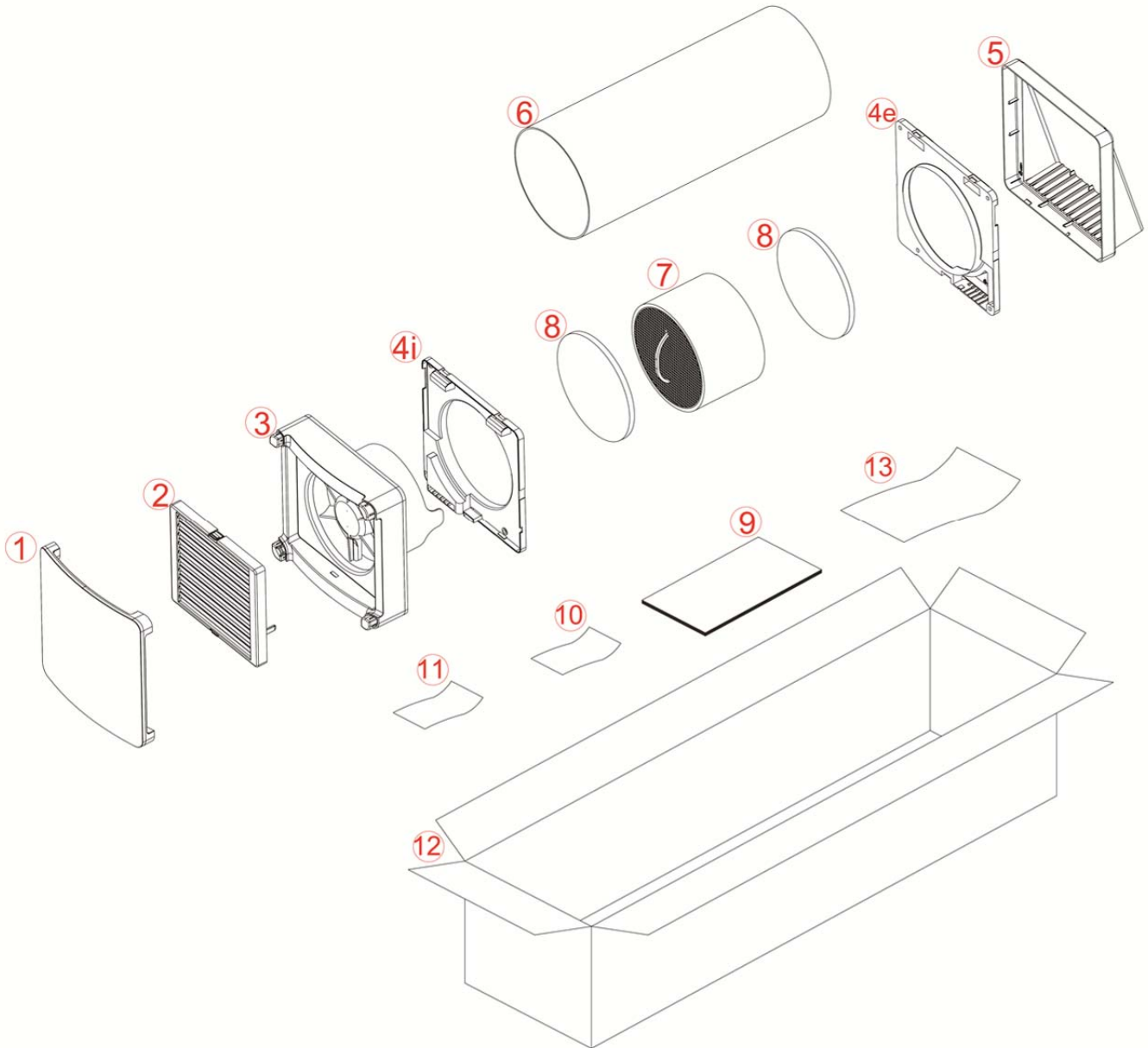
The product is artistically made and installed to allow a constant air exchange inside the room. The recovery system can be generally installed in residential or public places.

The product is supplied with a ceramic heat exchanger that accumulates heat during the extraction of hot air coming from the room while, during the air intake from the outside, the device transfers to the inlet cold air, the thermal energy stored in the heat exchanger.

The product is designed for wall installation. The duct containing the heat exchanger is supplied for walls with a maximum thickness of 400mm; the duct can be shorten to a minimum of 250mm.

The extracted or incoming air must not contain inflammable or explosive mixtures, chemical vapors, dusts, oils and other pathogenic substances in general.

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TECHNICAL PARAMETERS

The Heat Recovery System is categorized as a Class II product.

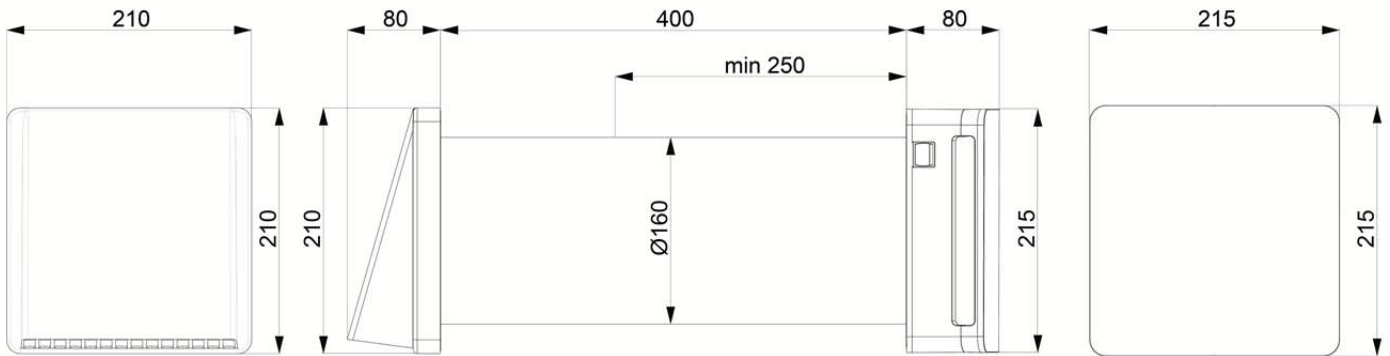
The protection level is IPX4.

The Heat Recovery System is projected for indoors installation. Working temperature is included between -20°C and 50°C with maximum relative humidity of 80%.

The design of the Heat Recovery System is in continuous evolution, therefore, some models may differ from those described in this manual.

DIMENSIONS, MM

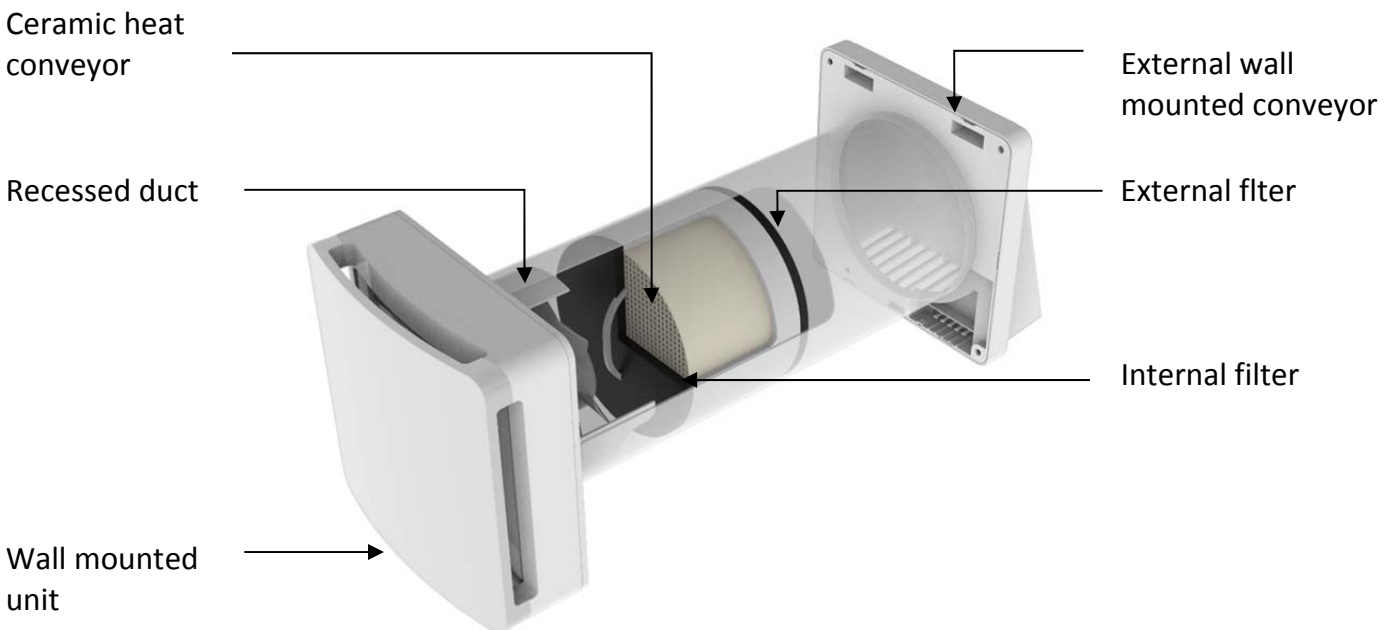
- WHR 60



Speed	1	2	3	4	5
Voltage at 50Hz	220-240Vac	220-240Vac	220-240Vac	X	X
Power Ø150 [W]	4,9	6,9	8,9	X	X
Power Ø100 [W]	3,9	5,9	7,9	X	X
Flow rate Ø150 [m ³ /h]	30	45	60	X	X
Flow rate Ø100 [m ³ /h]	15	22,5	30	X	X
Noise at 3 m Ø150 [dB]	13	20	23	X	X
Noise at 3 m Ø100 [dB]	19	24	29	X	X
Max efficiency	93%	93%	93%	X	X

CONSTRUCTION

The product is composed of a wall mounted unit to be placed inside the room, a recessed duct which contains the ceramic heat exchanger and filters and an external wall mounted conveyor.



INSTALLATION

Installation must only be carried out by properly qualified person.

Make sure that the main electrical supply in the installation room is disconnected before starting the electrical operations of assembly.

The appliance must not be installed near curtains, drapes, etc. as these could compromise the correct working of the product.

Make sure that, once installed, the fan blades are placed not less than 2,30m away from the floor below to the product.

Before assembling or using this product, carefully read all the instructions in this manual and be sure to own all the necessary material for the installation.

Scrupulously follow the instructions in this manual.

1) ASSEMBLY

Once the area of installation is selected, mark the center of the hole to be realized on the wall. Make sure that on internal and external walls there is enough space, for a radius of 15 cm from the center, thus corresponding to the product overall dimensions. Therefore make sure that, within this area, there are not any interferences with other walls or non-removable objects.

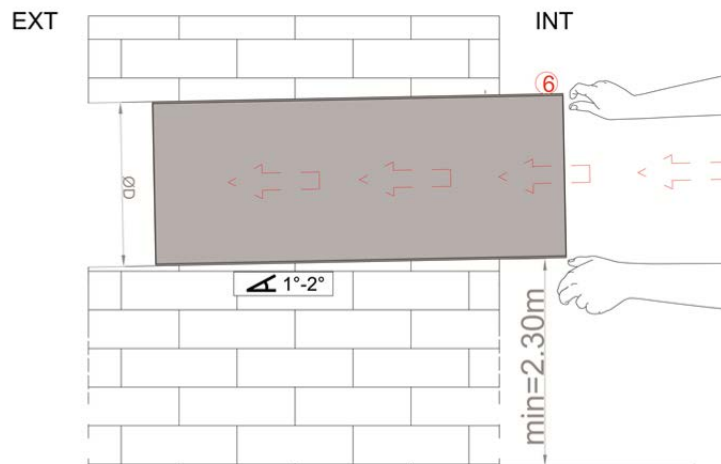
Hole diameter for installation is $\varnothing 160\text{mm}$

The duct must be installed through the hole, with a slight downward slope of $1^\circ - 2^\circ$ towards the outside to allow proper discharge of condensation.

To use the supplied recessed duct, the thickness of the wall must not exceed 400mm.

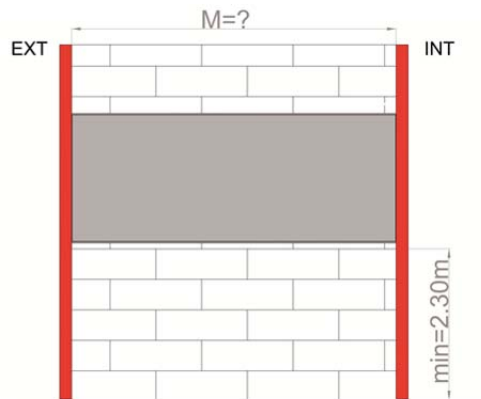
To install the product, the wall thickness cannot be less than 250mm.

Once obtained the hole, put the recessed duct (6) into the wall.



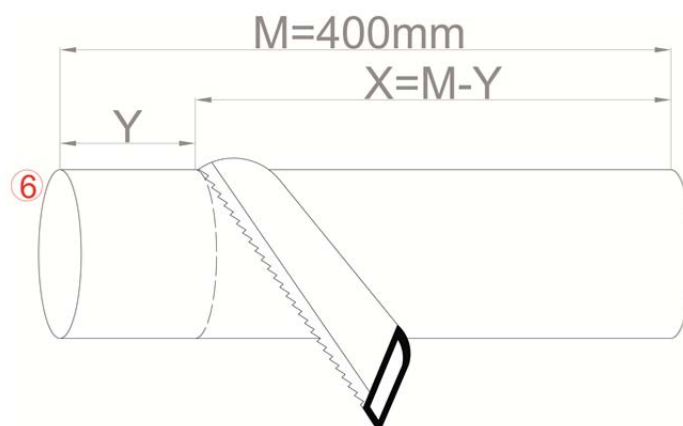
Make sure that the length of the recessed duct (6) is equal to the thickness of the wall.

The duct must end with the internal and external surfaces of the wall.

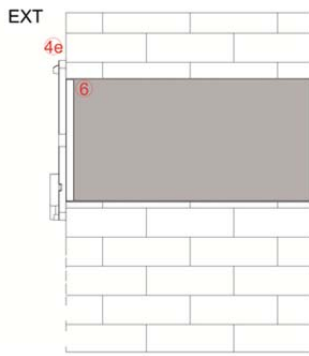


The quote "M" cannot be less than 250mm. In this case the wall is not appropriate to install the product.

Adapt the duct if necessary, to the thickness of the wall with suitable tools, in the best way as shown below:

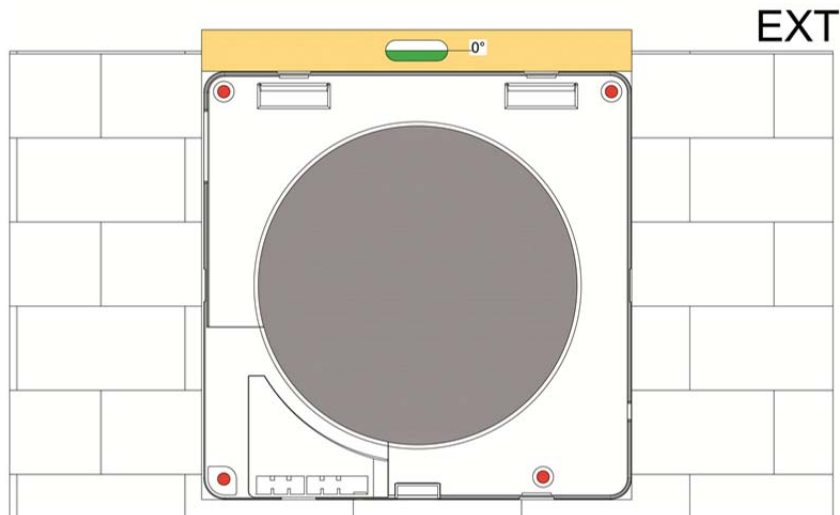


Once adapted the length of the recessed duct (6) to the exact thickness of the wall, put the external wall- mounting part (4e) on the external wall as shown in the picture below:



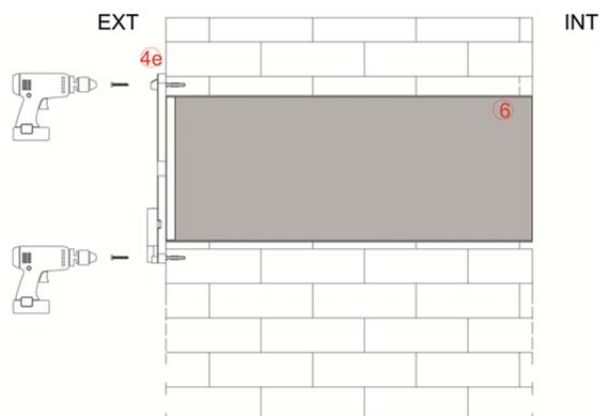
Insert the centering diameter of the wall-mounting part (4e) inside the recessed duct (6).

Once centered in the duct, mark the fixing holes on the external wall using the external wall-mounting part (4e) through a level measure tool to ensure a proper installation as shown in the picture below:

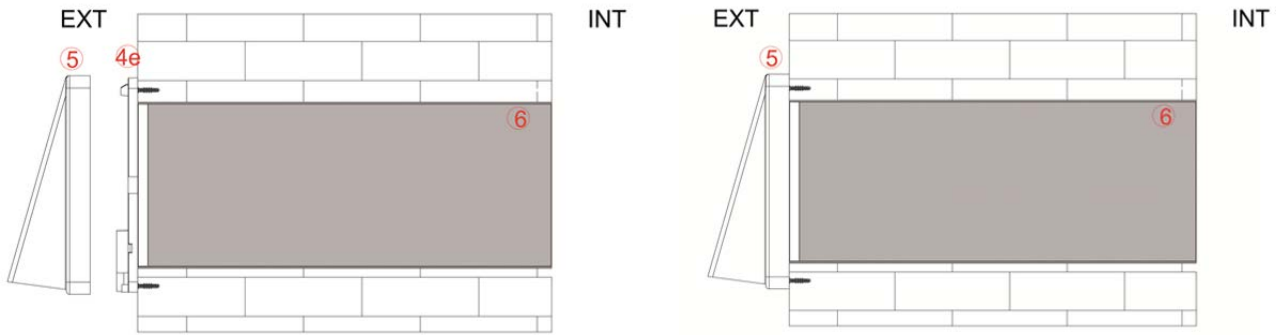


Make the holes and insert the expansion plug for the wall mounting.

Fix the external wall-mounting part (4e) on the external wall.



Fix the external conveyor (5) on the external wall mounting part (4e) till the complete assembly, as shown in the pictures below:

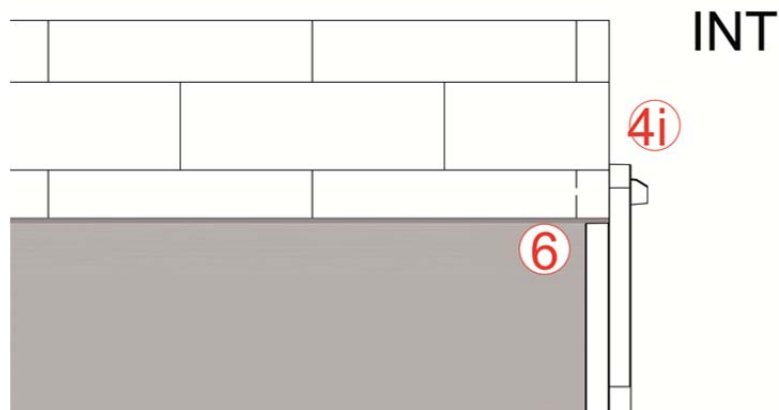


2) ELECTRICAL CONNECTIONS

Installation must only be carried out by qualified person. Make sure that the voltage of the installation room is in compliance with the value declared on the product label.

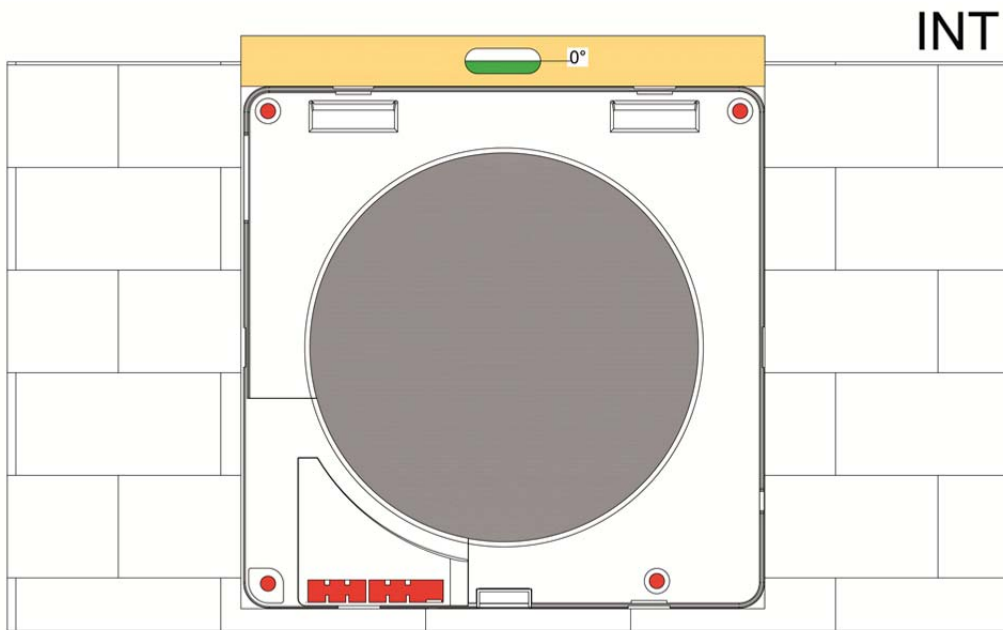
Make sure that the main electrical supply in the installation room is disconnected before electrical assembly operations.

Identify the version of the product and carefully read all the instructions related to electrical connections.

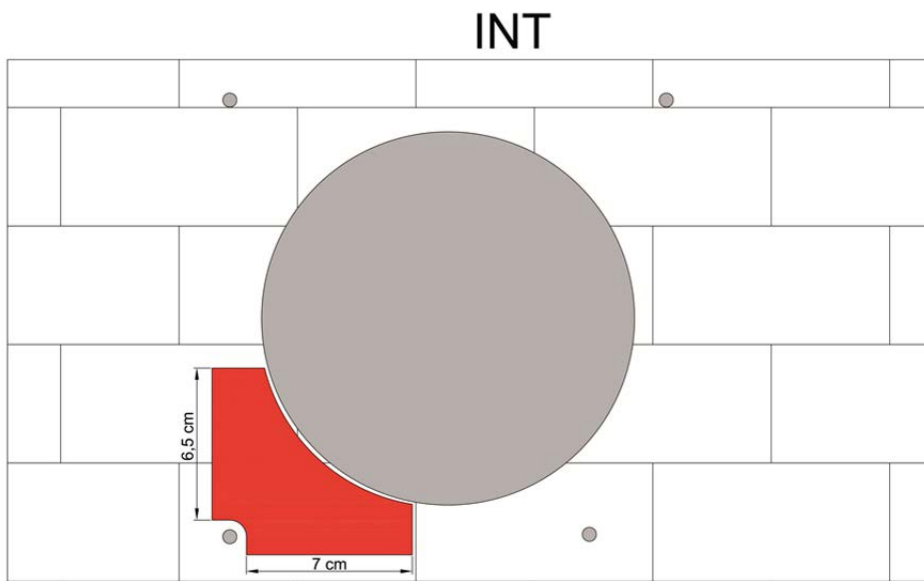


As done by marking the external holes, insert the centering diameter of the internal wall-mounting part (4i) within the recessed duct (6) as shown in the picture above.

By using a measure level tool, mark and make four holes to fix on the wall the internal wall-mounting part (4i).



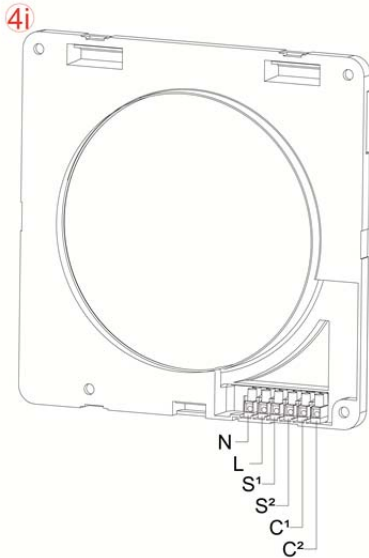
Unlike the external wall mounting part, on the internal wall is necessary to bring the power supply conductors to connect them to the stripped wires supplied with the product. Provide an output for the wires, as the highlighted area shown in the picture.



Once the expansion plugs for the wall mounting are inserted, carefully check all the electrical operation before proceeding with the installation.

POWER SUPPLY CONNECTIONS

Before proceeding with the connection, make sure that the wires (Live and Neutral) are inside the area specifically obtained in the wall.



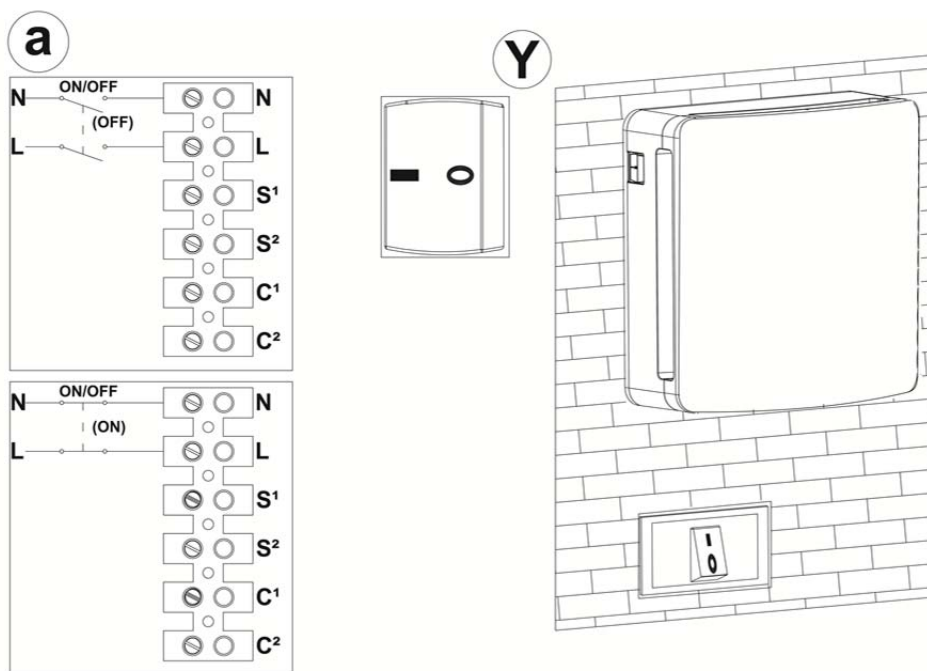
Take the internal wall-mounting part (4i) and the tools necessary to connect the main supply to the stripped wires supplied in the proper compartment.

Connect properly and safely the Live wires to the terminal block identified as “N” and “L”.

Switching ON and OFF can be run by remote. To control the product with recessed switch, it's necessary, during operation, that switches are always set on 1, as shown in the picture (Y). To turn on the product through wall switch, connect a bipolar switch in sequence to “L” and “N”, as shown in the picture (a)

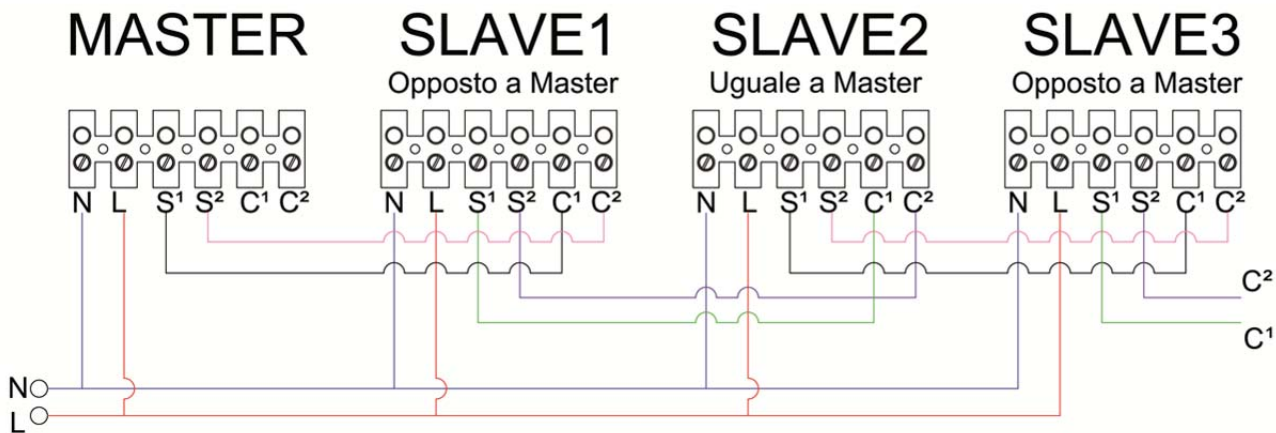
Product can be connected to the network home automation by serializing the main supply to set switching ON and OFF.

Connections must be done as shown below:



COMMUNICATION WITH SLAVE PRODUCTS

If you consider to install one or more products in sequence to the main unit or make the connection in the future, refer to the pictures below to allow the communication between the master unit and the products in sequence.



It is recommended to use different cable colours to avoid to exchange the wiring connections.

Attention – It is necessary to respect the wiring connection between the signals S1-C1 and S2-C2 to avoid damages to the electronic device.

CONFIGURATION OF MASTER- SLAVE

In order to configure as MASTER Unit the selected product, proceed turning on it through the main switch “0/1” and, once energized, if it hasn’t other products turned on and connected to C1 and C2.

Once the red light is turned out, press the button “AUTO”. If the red light gives the signal corresponding to the “AUTO” mode, the product is correctly configured as MASTER.

Once the product is configured as MASTER unit, it is possible to start with the configuration of the SLAVE 1.

DO NOT SEND ANY REMOTE COMMAND TO SLAVE PRODUCTS.

Make sure the MASTER unit starts running before turning on the next unit (SLAVE) through the “0/1” switch in order to give time to MASTER unit to configure the SLAVE products in the desired sequence.

Turn on, through main switch, all the SLAVE units in sequence as explained below only after that the previous unit has actually started running.

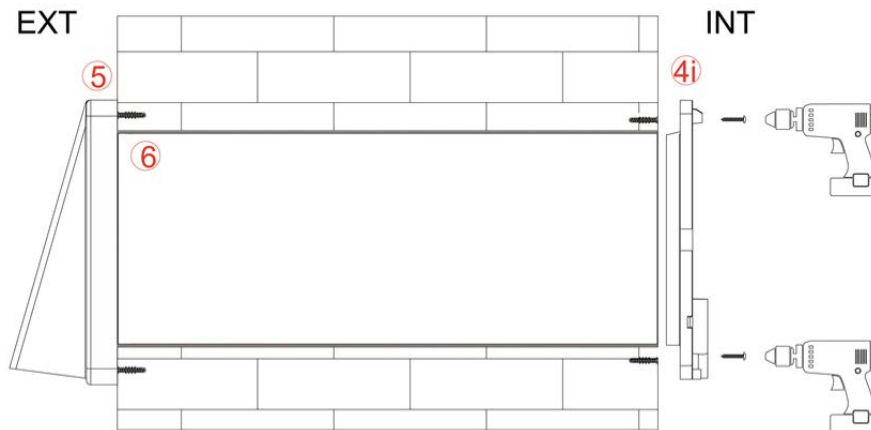
- 1) Master Unit
- 2) Slave 1 which runs in the opposite direction of the Master
- 3) Slave 2 which runs in the same direction of the Master
- 4) Slave 3 which runs in the opposite direction of the Master

ATTENTION

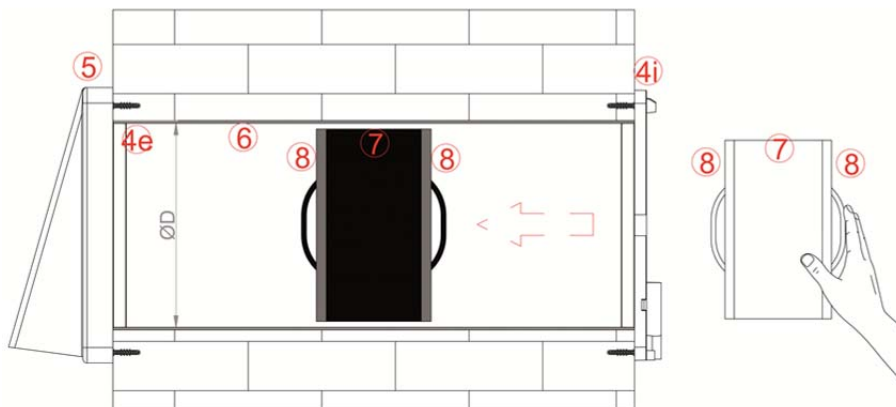
If the product is not correctly configured (MASTER or SLAVE), the RESET function can be used. In this way the product can be brought back to original manufacturing conditions. This procedure is explained in the command/control manual.

3) ASSEMBLY CONCLUSION

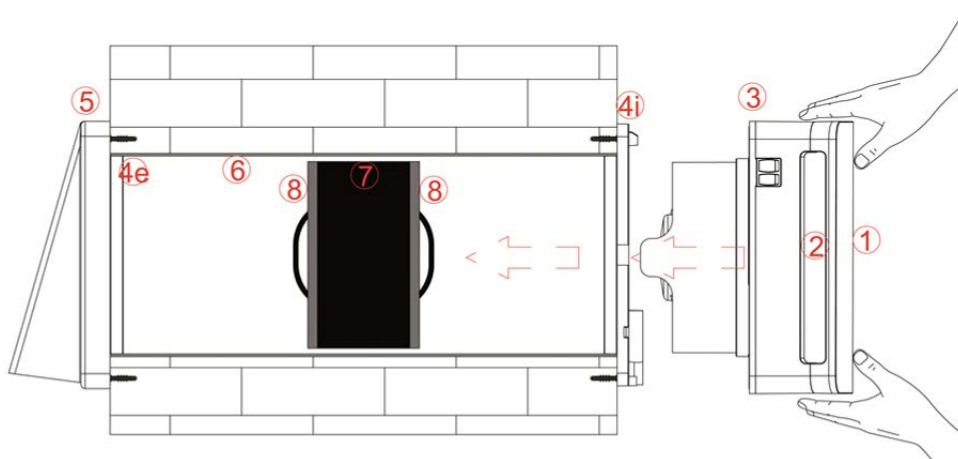
After the connection, carefully arrange the cables in the proper compartment and screw the internal wall-mounting part (4i) with the 4 screws as shown in the picture here below.



Once fixed on the wall, insert the ceramic heat exchanger (7) with related filters (8), placing it in the middle of the recessed tube (6) as shown in the picture here below:

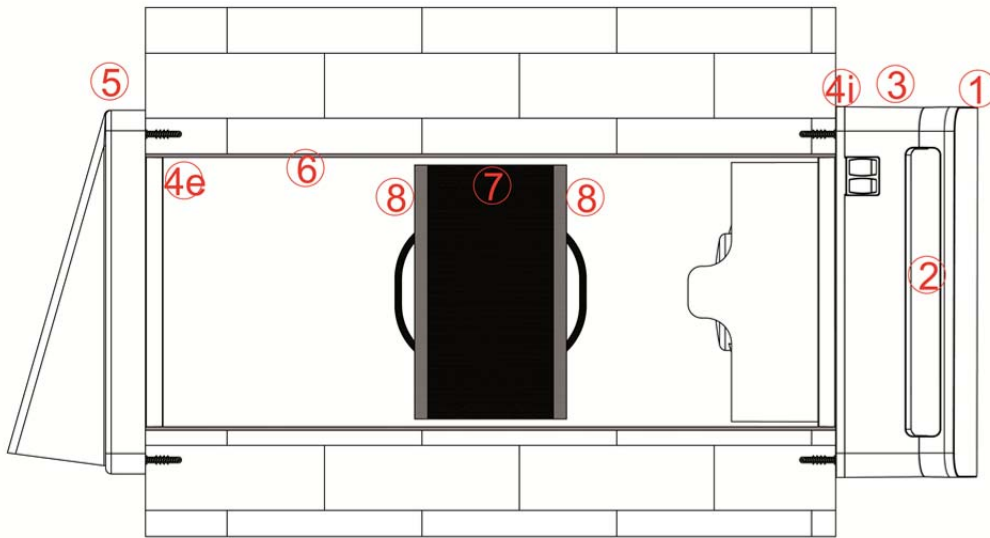


Fix the main unit (3), with its shutter (2) and the cosmetic frontal cover (1) already assembled on it, on the internal wall-mounting part (4i) until complete assembly. Make sure to install the main unit on the wall placing all the switches in the top left.



MAINTENANCE

All maintenance operations must only be done by qualified person.
Before carrying out any cleaning or maintenance disconnect the main supply.



Once installed, the product must have the components placed exactly as shown in the picture here above.

1) MAINTENANCE PERIOD INDICATIONS

We recommend to clean the filters (8) and the ceramic exchanger (7) every 3 months.

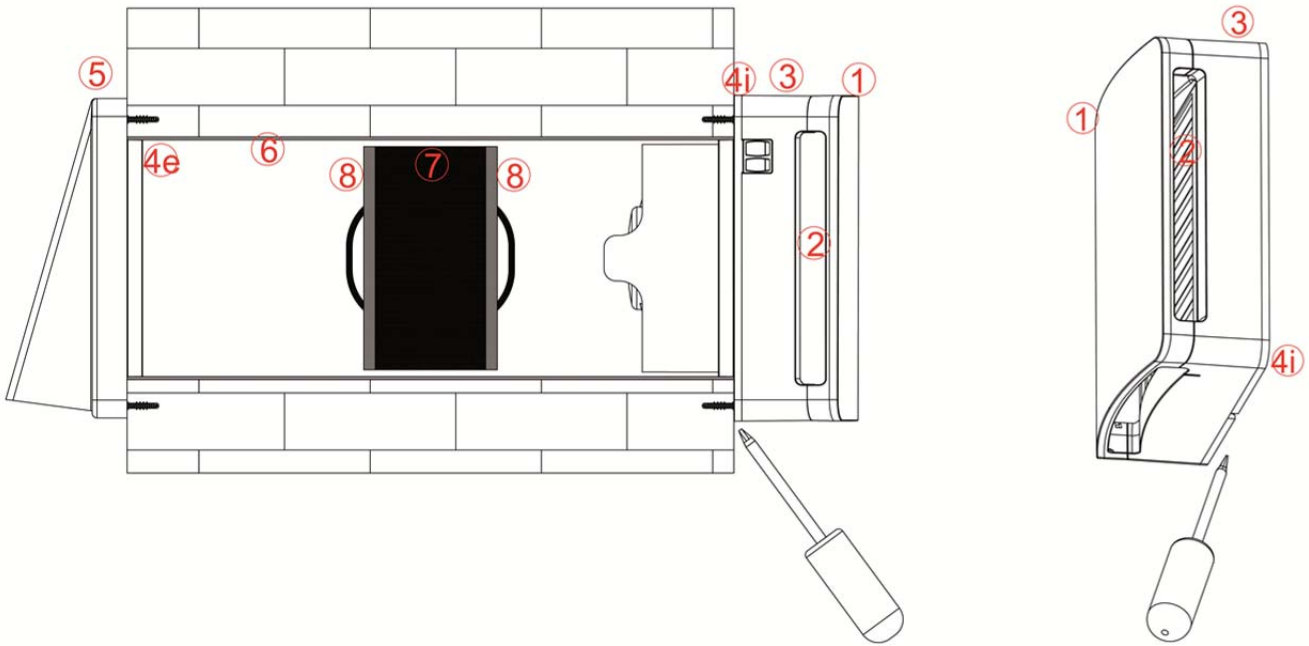
We recommend to change the filters every 2 years. You can get the replacement through the retailer.

Every 2000 hours of operation the product stops running and the indicator light placed in the bottom right will give a steady red light signal.

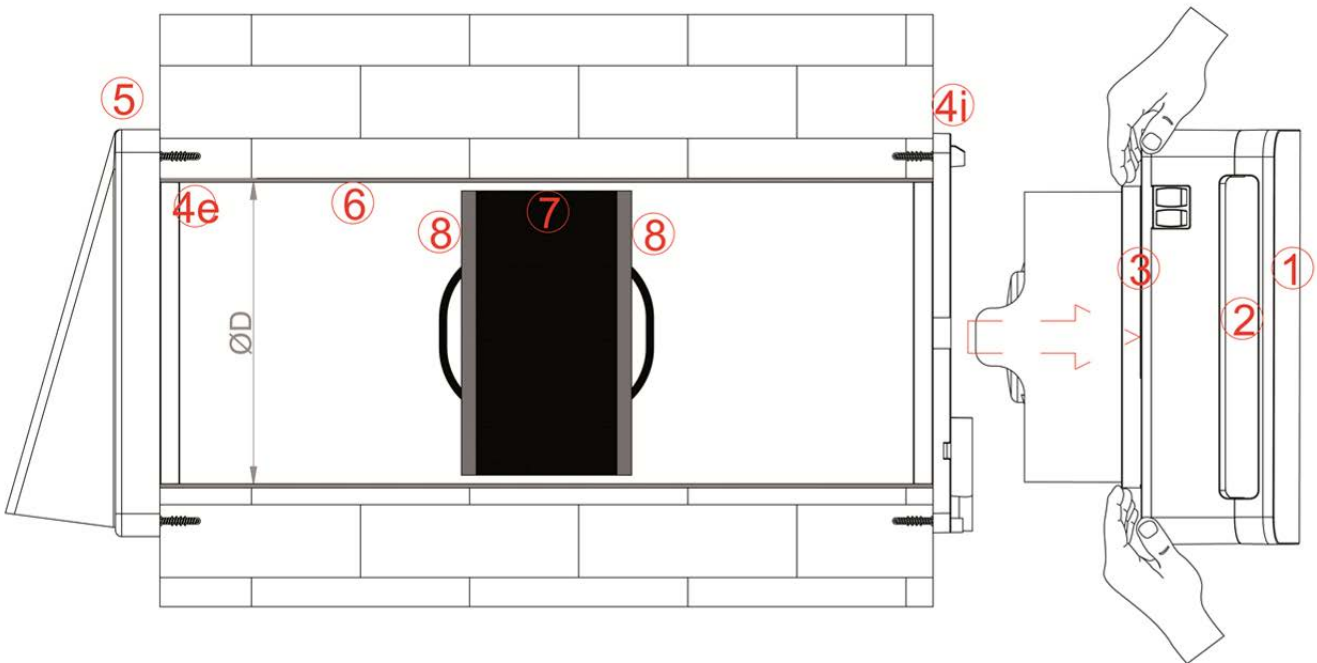
Clean the filters and the ceramic exchanger as specified in the paragraph. Replace the filters when necessary.

2) FILTERS AND EXCHANGER CLEANING OPERATIONS

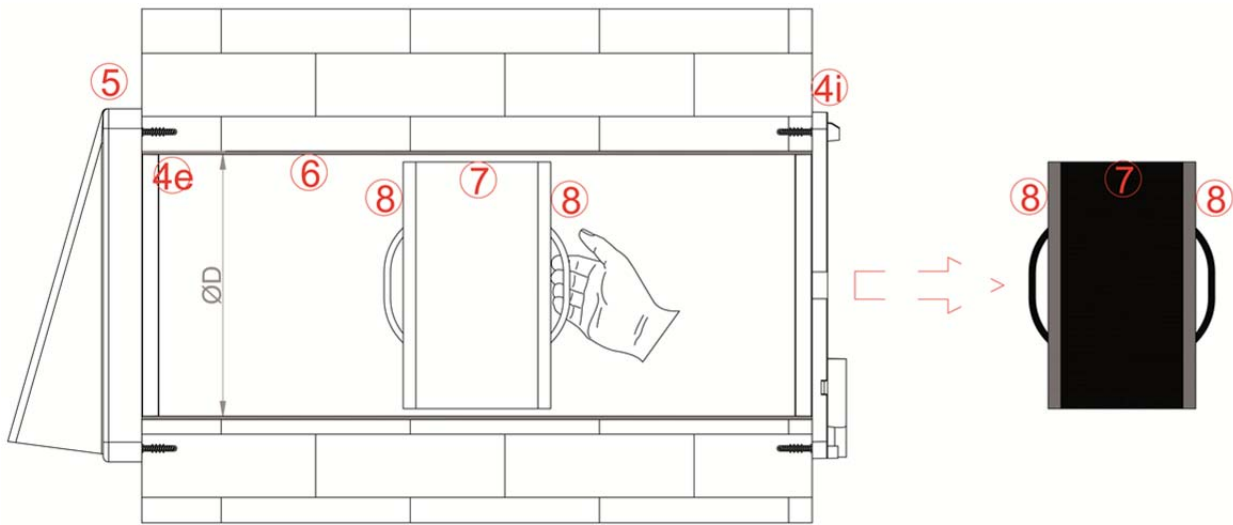
Pull out the main unit (1+2+3) from the wall using a flat screwdriver to drive the hook placed in the lower middle part of the product as shown in the pictures here below.



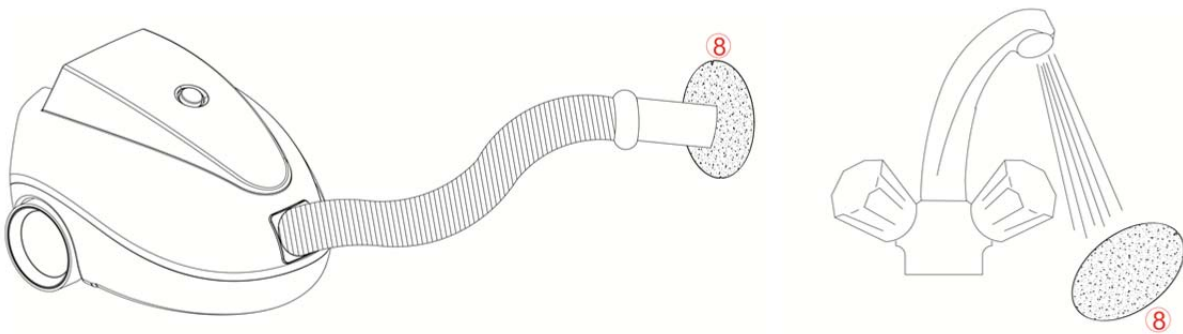
Once the unit is unhooked from the internal wall-mounting part (4i) pull it out with the hands as shown in the picture below:



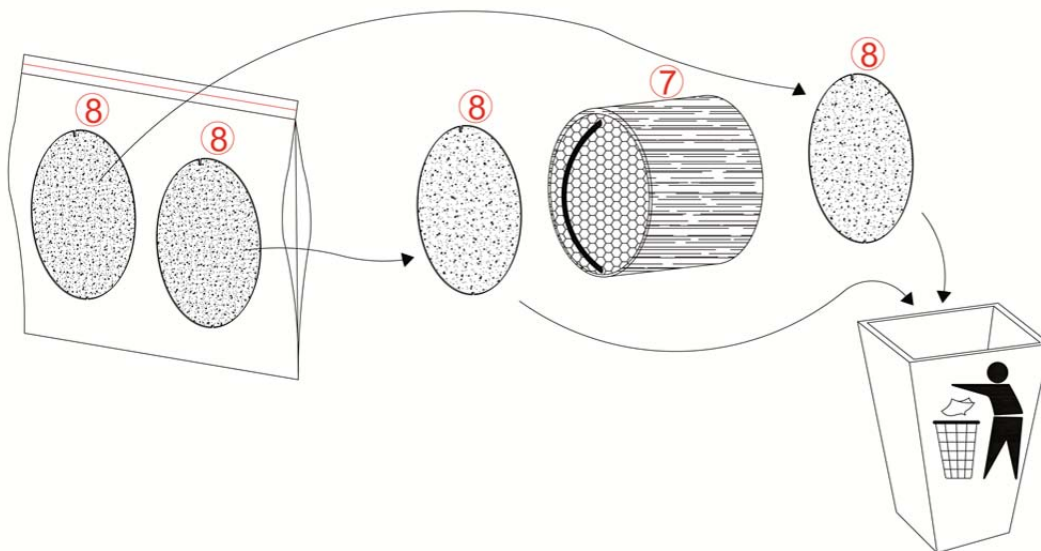
Extract the ceramic heat exchanger together with the filters (8+7+8) by pulling the proper cord towards yourself as shown in the picture below.



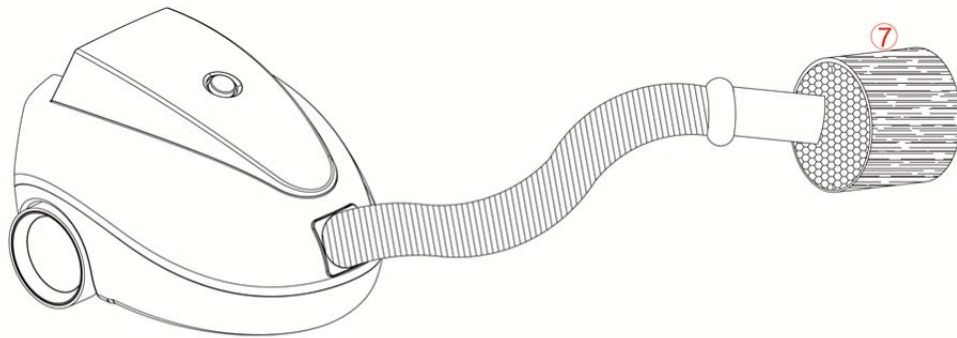
Remove the filters (8) from their location and clean them by using a vacuum cleaner or even washing them. Make sure that the filters are completely dry before being re-mounted on the unit.



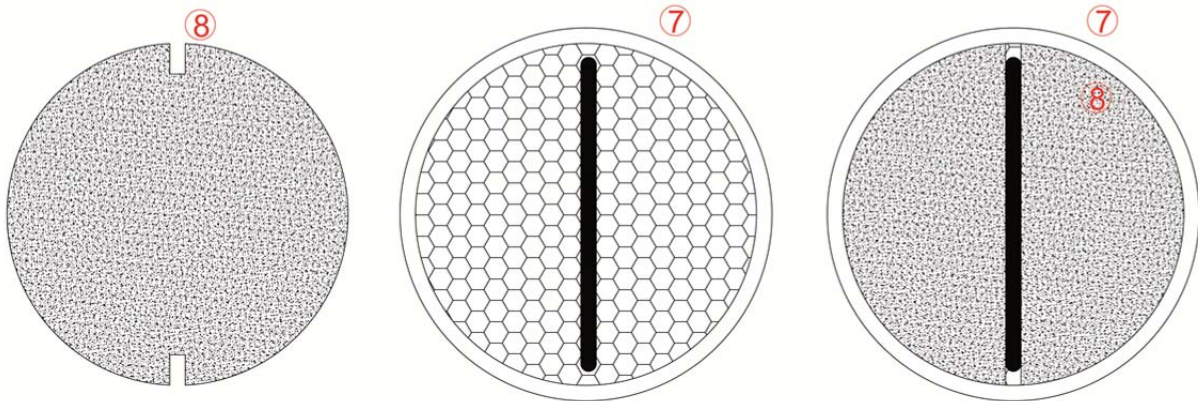
When the filters (8) are worn (roughly: 2 years) need replacement.



During the filters cleaning/replacement operations (8), remove any dirt residues in the ceramic heat exchanger by using a vacuum cleaner. **DO NOT WASH UNDER WATER THE CERAMIC HEAT EXCHANGER.**



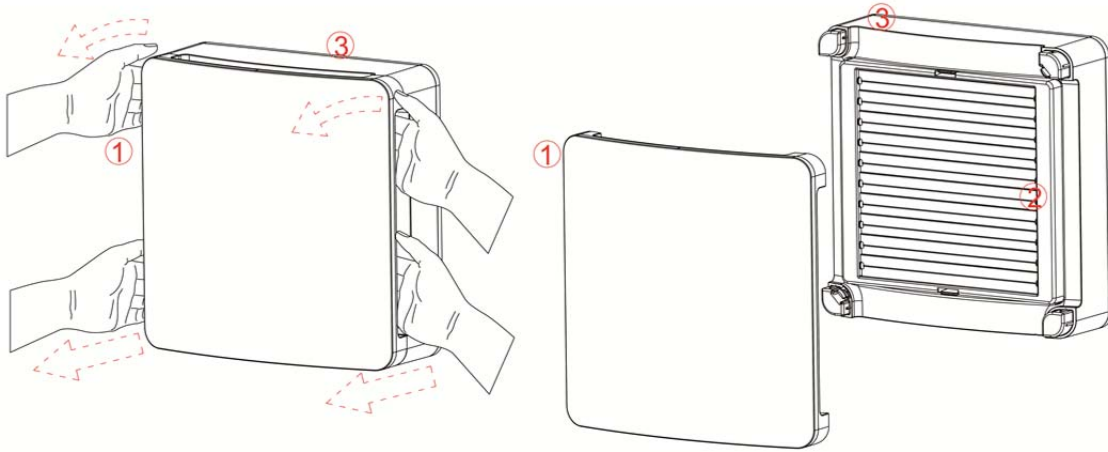
Once the cleaning operation has been completed, make sure to re-assemble the filters (8) in their location on the heat exchanger (7) by inserting the filters split under the rope as shown in the picture below:



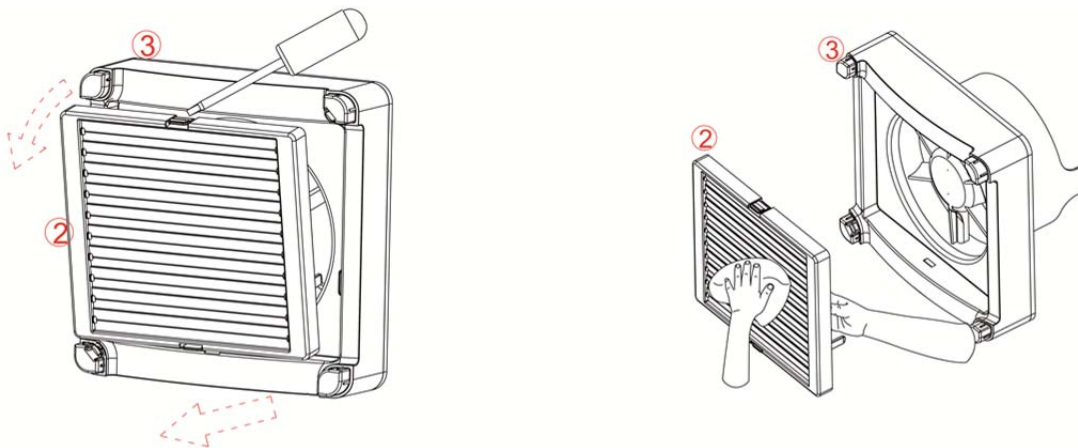
3)IMPELLER AND SHUTTER CLEANING

Once the cleaning operation has been completed make sure to re-mount the filters and the heat exchanger in their location.

Take the main unit group (1+2+3) and remove the cosmetic cover (1) by pulling out the upper hooks firstly and then the lower ones.



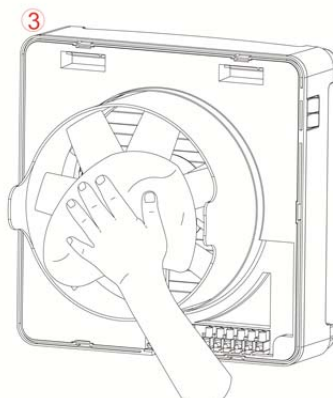
To remove the shutter from the main unit (3) use a flat screwdriver and prize on the hooks.



Clean any dirt and dust residues on the shutter with a dry cloth (2).

Carefully re-mount the particular in its location until the complete assembly.

Clean the fan blades of the main unit with a dry cloth (3)



4) PRODUCT ASSEMBLY AFTER CLEANING

Re-assemble the main unit (3) with the shutter (2) and cosmetic cover (1) on the wall-mounting (4i).

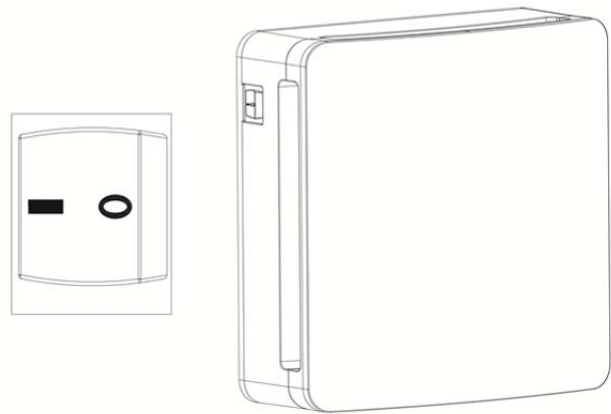
ATTENTION: if different products are cleaned at the same time, re-mount every principal unit in the specific compartment from which they had been removed in order to avoid communication problems between Master unit and Slave unit.

Once the main unit has been re-installed on wall, turn on the product by the main switch. The reset of the cleaning counter must be driven by remote control.

How to reset after filter cleaning operation is explained in the controller instruction manual.

WORKING INSTRUCTIONS

ON/OFF Main Switch (0/1)



In case of one unit, turn on the product through “0/1” switch and then set a function by remote to activate the product accordingly. In case of more units, refer to paragraph “MASTER-SLAVE PRODUCTS CONFIGURATION” and, once this procedure is ended, turn ON the products through 0/1 switch and press a function by remote to activate the device.

ATTENTION:

By running the first time, the product performs the auto calibration of the hygostat.

It is possible that during this step the products runs in “EXTRACTION” to bring the humidity of the environment at the necessary level for the auto calibration.

PROBLEMS

If the product does not turn on, or in case of function problems such as strange noise, disconnect the product by setting on “0”, the “0/1” main switch placed on product side. Contact immediately your retailer and ask for assistance.



RDZ S.p.A.
📍 V.le Trento, 101 (S.S. 13 Km 64.5) 33077 SACILE (PN) - Italy
☎ Tel. +39 0434.787511 📠 Fax + 39 0434.787522
🌐 www.rdz.it ✉ rdzcentrale@rdz.it

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