

"Heatrec 1003"

Single Room Heat Recovery Unit

3 Speed Centrifugal Fan with EC Motors
for Wall Installation in any Domestic Room



Installation, Operating and Maintenance Instructions



IPX4  **CE**



"HEATREC1003" - SINGLE ROOM HEAT RECOVERY UNIT INSTALLATION, OPERATING & MAINTENANCE INSTRUCTIONS

Safety Notice

It is important to read this Instruction Manual carefully before installing or using the product. Following these instructions will ensure that your heat recovery unit is installed, commissioned and used properly and continues to operate effectively. Vectaire will not be held responsible and will not accept liability for any damage caused to persons or property through failure to follow the guidance provided in this manual. It should always be available with the product for easy reference.

General Information

The Vectaire Heatrec1003 single room heat recovery unit can be used in any room which has an outside wall open to fresh air. It is particularly useful in the bathroom, kitchen or utility room where high levels of moisture are generated, and is designed to run continuously at its lower speed. It can also be used in the lounge or dining room to provide a fresh air supply to reduce dampness, condensation and potential mould growth.

The system will operate continuously to create a stable, comfortable, healthy environment avoiding the use of excessive energy and recovering up to 75% heat already generated.

The Heatrec 1003 is available with 3 tube/heat exchanger lengths - 400mm, 500mm and 600mm lengths. It is important that you have the correct length for the wall where it is being installed.

The system is designed to run continuously and should NOT be switched off except for maintenance or filter replacement. It is important to follow the advice in this user manual and correctly install and maintain the system to ensure a healthy and comfortable indoor environment.

Installation

IT IS IMPORTANT THESE INSTRUCTIONS ARE READ FULLY BEFORE INSTALLATION

- This product should not be used for any purpose other than that for which it was designed and as shown in this leaflet.
- All packaging should be removed and the unit checked for damage in transit. If there is any damage, please contact your supplier.
- Packing material should not be left within the reach of children or unskilled people and any hazardous parts must be disposed of responsibly (polystyrene, plastic, polypropylene, etc.).
- **In order to comply with Construction (Design & Management) Regulations, sufficient access for safe maintenance, or removal following installation, MUST be provided for this product.**
- The unit must **NOT** be installed:
 - where there is excessive oil or grease
 - where there are hazardous gases, liquids or vapours that are flammable or corrosive
 - in ambient temperatures above 40°C
 - where it could be exposed to outside elements - rain, sun, snow etc
- The product must be connected to the electricity supply via a double or triple pole isolating switch located in the proximity —of the fan.
- The product should only be connected to the mains electricity supply or electrical outlet if:
 - your electrical voltage and frequency correspond to those shown on the rating label.
 - the capacity of your electricity supply is sufficiently powerful to operate the product at its maximum power.

Installation of the appliance **MUST** be carried out by a qualified and suitably competent person and should be carried out in clean, dry conditions where dust and humidity are at minimal levels. The unit is not suitable for installation on the exterior of the dwelling.

Handling

- Care should be taken when transporting the unit. Dropping or knocking will damage the inner workings of the unit.
- The unit should always be stored in a clean, dry environment.
- Remove all packaging before installation.

Pre-inspection

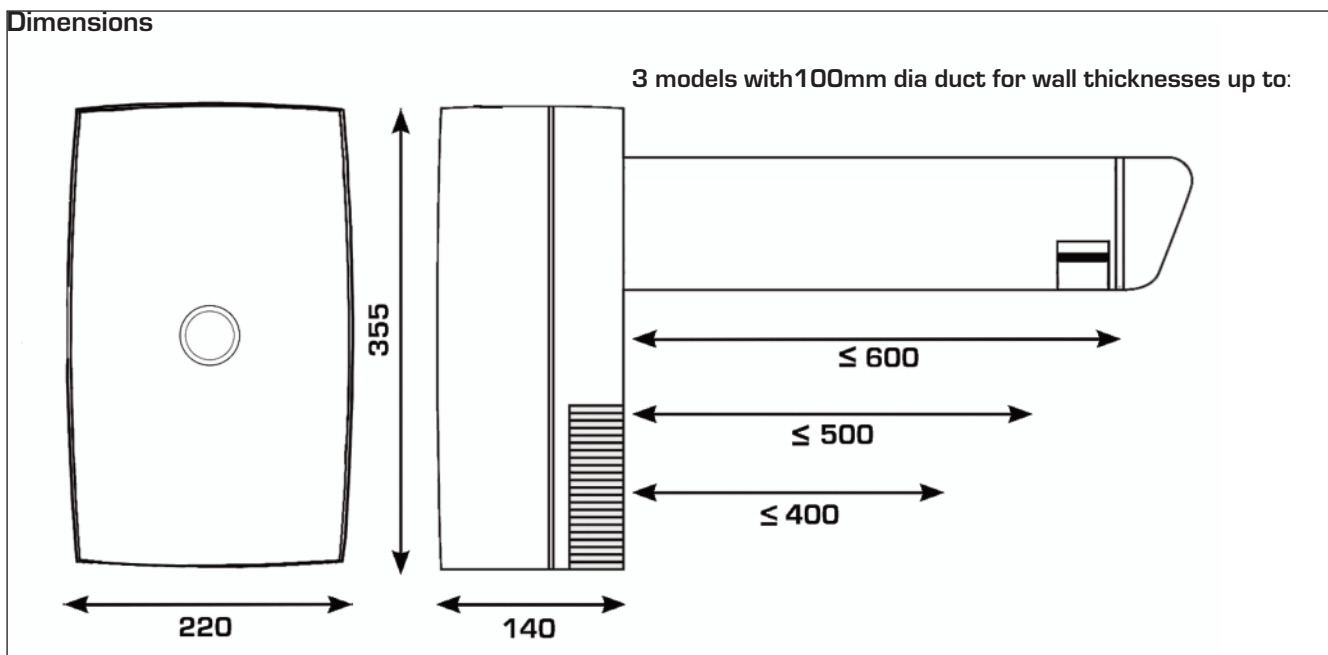
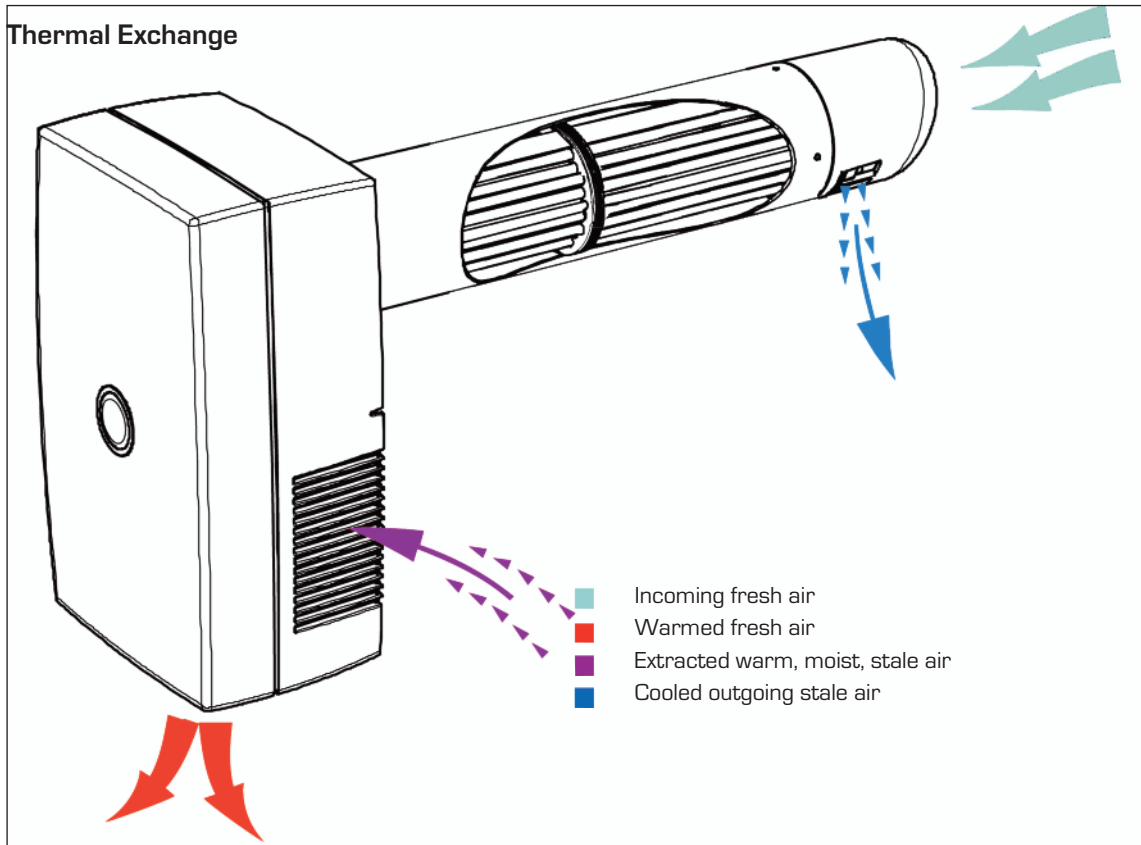
- Inspect the unit and electrical supply cord for any damage (damage must be repaired by a suitably qualified and competent person).
- Check all parts are supplied as shown on page 4.

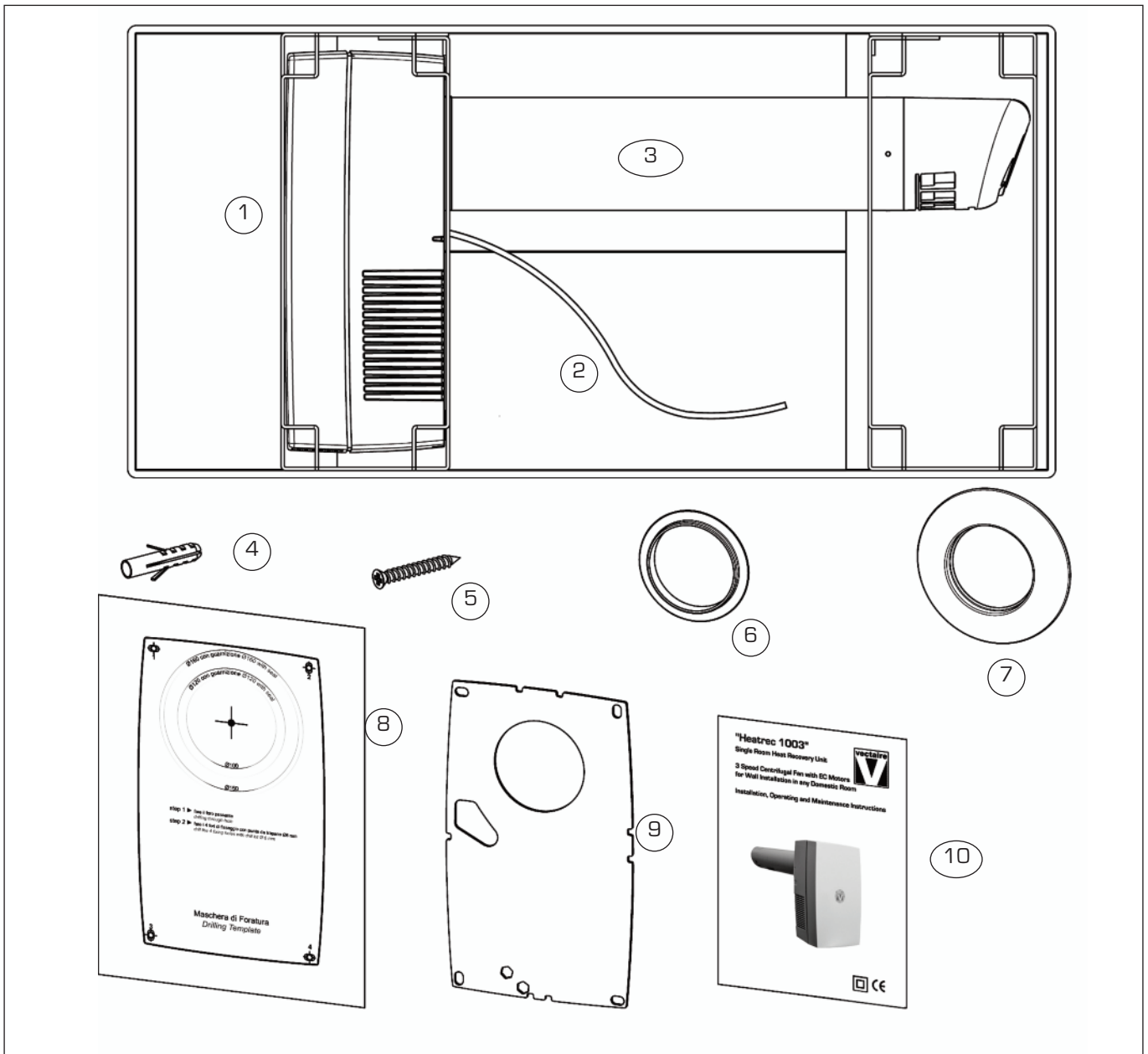


Product Description

The Vectaire Heatrec1003 is a wall mounted heat recovery unit suitable for single rooms and uses only a single aperture through the wall. The heat is recovered by means of a tubular heat exchanger, inside which the air intake and extract flows are contained. The two air flows are kept separate avoiding cross contamination and ensuring that adequate heat exchange takes place.

The Heatrec 1003 is the ideal solution when room renovation or requalification work is carried out. It meets all requirements as its range offers heat exchangers of different lengths catering for different thicknesses of existing walls. It is designed to be wall mounted from the inside wall of a building, ensuring an easier and quicker installation even in multi-storey buildings.





Box Contents

1. Heatrec 1003
2. Electric Cable - 1.2 m long
3. Wall tube with cowl
4. Wall Plugs
5. Screws
6. Wall Seal
7. External bezel
8. Template
9. Gasket
10. Instruction Leaflet

Installation

1. Check the wall thickness to ensure that the wall tube is of adequate length. The ventilation slots in the side of the cowl must be beyond the wall surface.
2. Make sure the necessary tools are available.
3. Check that the box contains all of the above parts, together with a pull-cord which should be attached to the unit.
4. Choose the angle at which the unit will be installed and check there are no obstructions where the hole will be drilled.



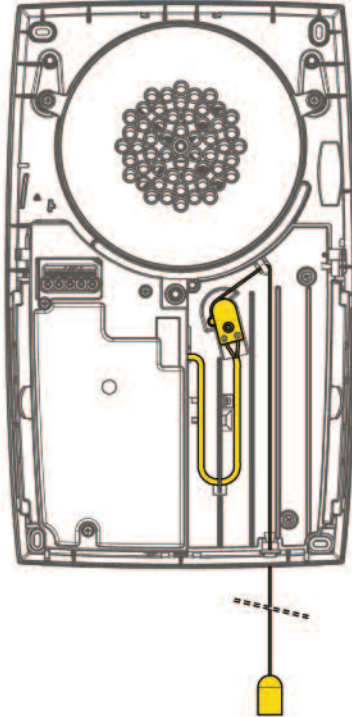
Optional Wall Mounting Positions:

Please note the various positions available for fan mounting. If the pull-cord is used, it will be necessary to adjust the position of the switch and/or cord to allow a downward pulling action.

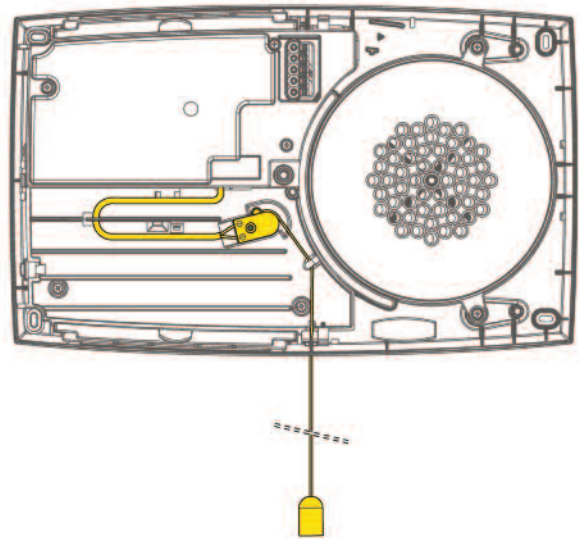
For orientation 270°, the switch has to be relocated to the position shown and the cable re-routed. The switch must be pressed firmly into its location in the backplate moulding so that there is no movement when the cord is pulled.

N.B to provide the correct switching action, the switch needs to be turned over so that the pulling action is from the left of the switch.

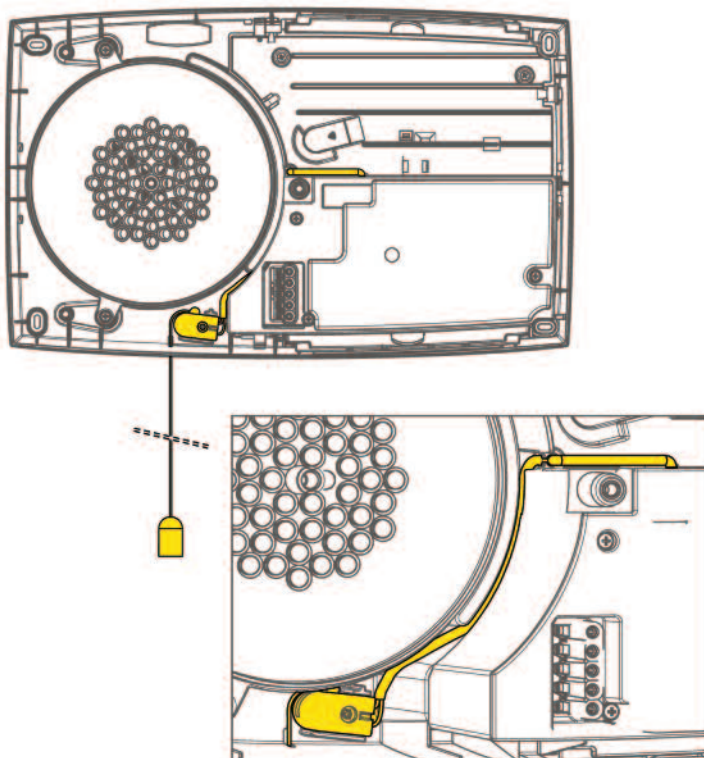
Orientation 0° - Factory Setting



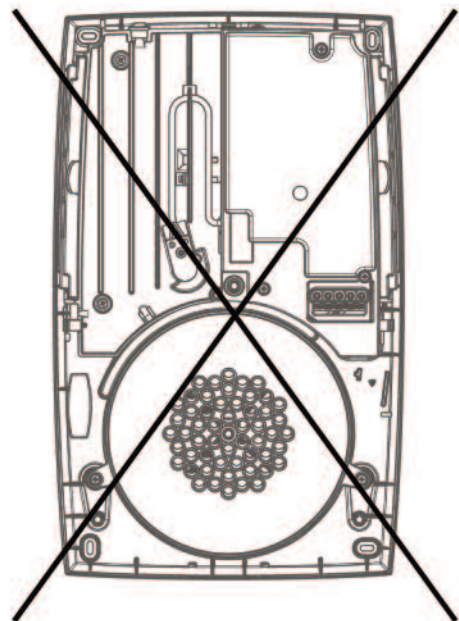
Orientation 90°



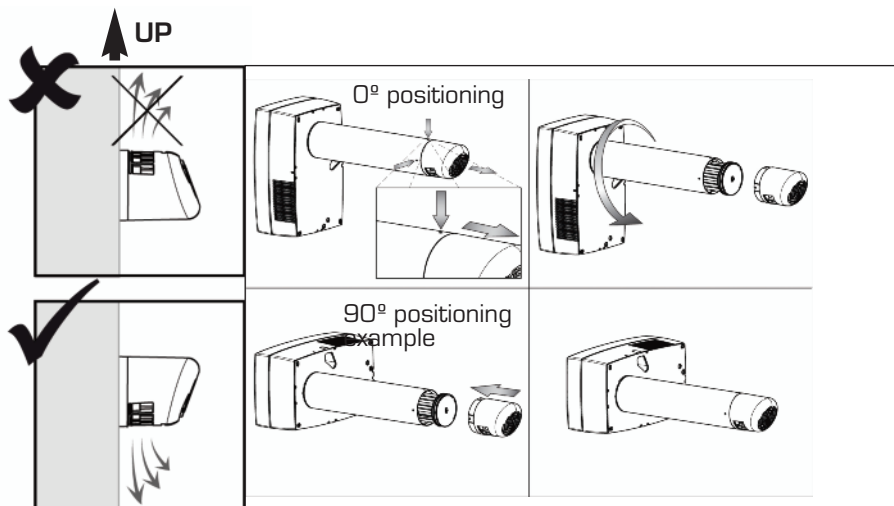
Orientation 270°



Orientation 180°



IMPORTANT

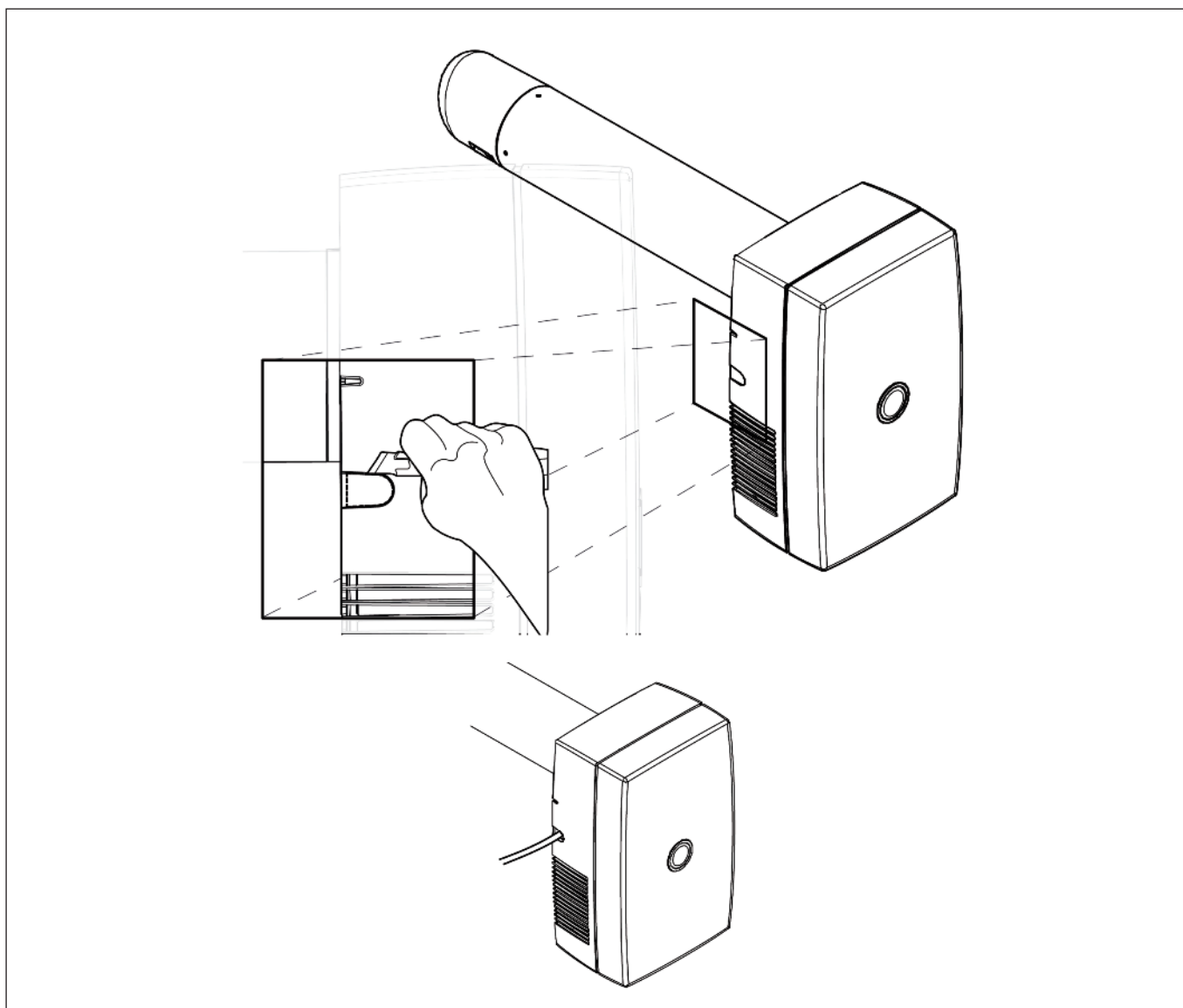


Select the type of connection to the power supply:

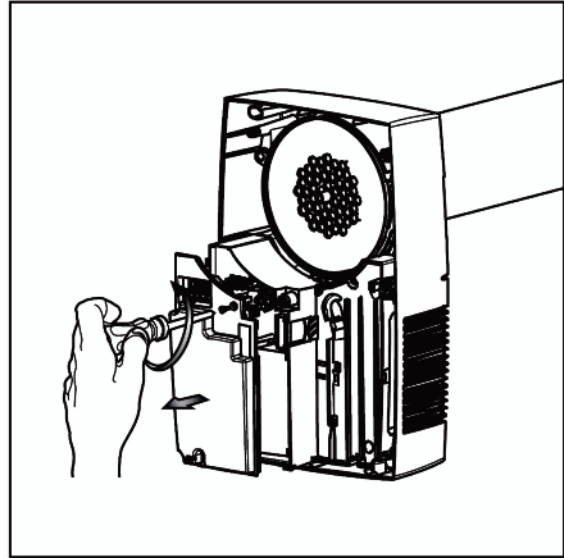
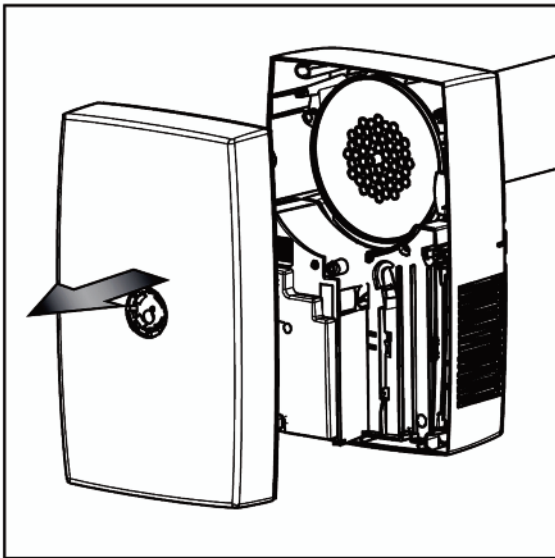
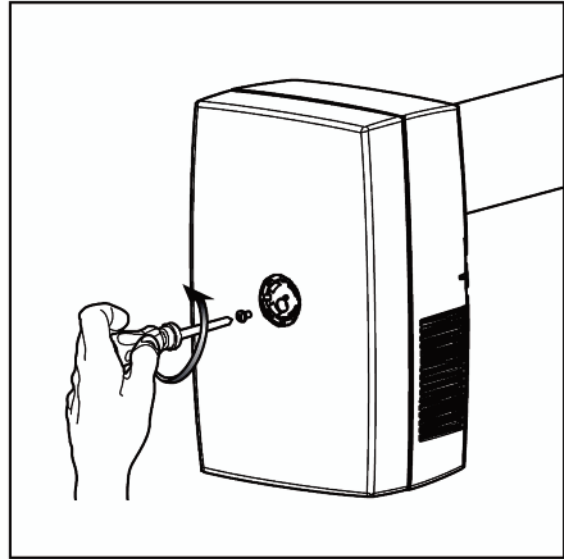
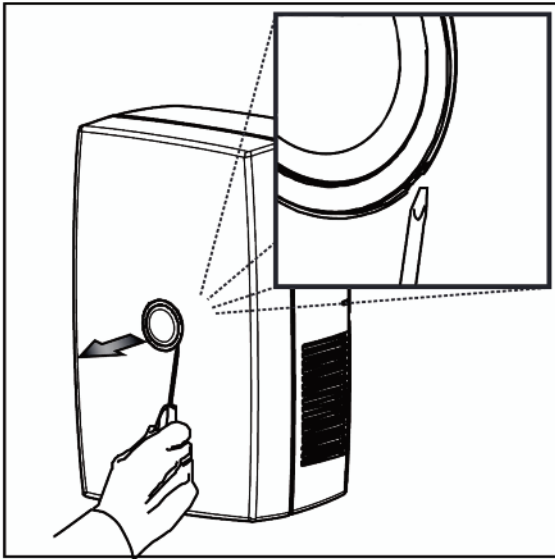
- a. Connection with External Cable (supplied)
- b. Sub-surface connection

a. Connection (with Surface Mounted Cable supplied)

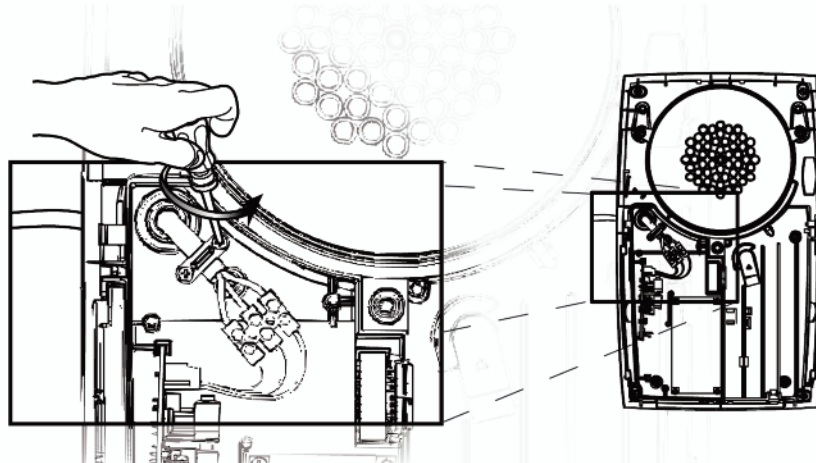
- 1. Cut out the section of casing shown in the diagram below.



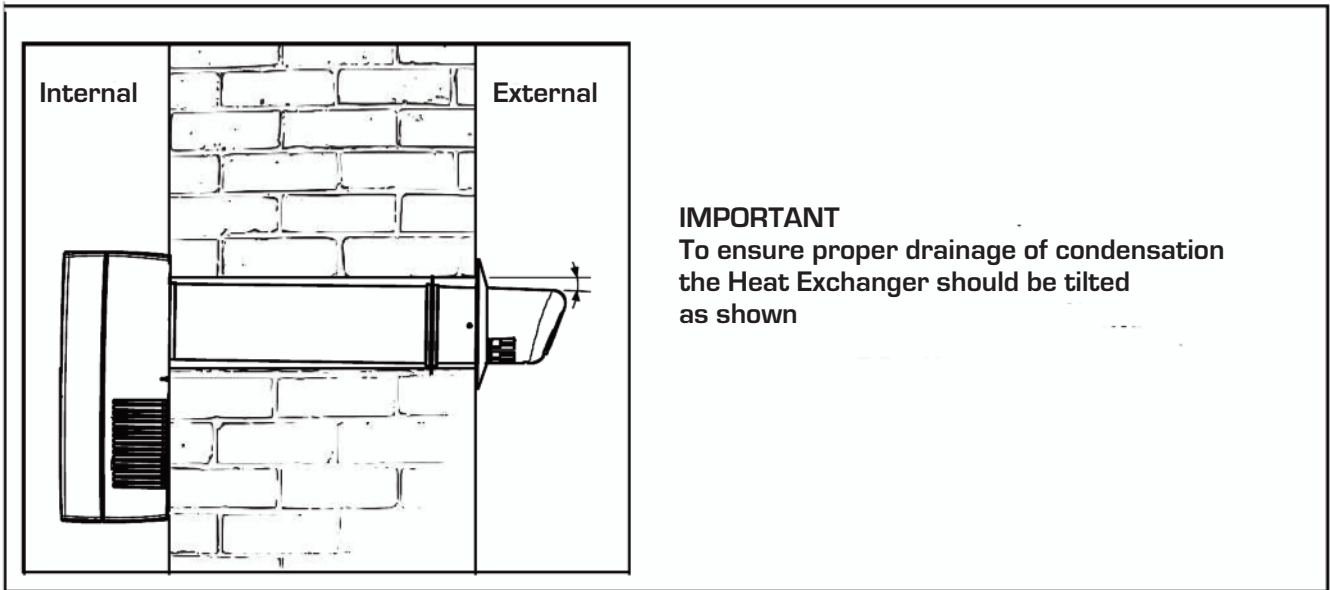
b. Sub-surface connection



Remove the electric cable supplied by removing the cable clamp and terminal screws

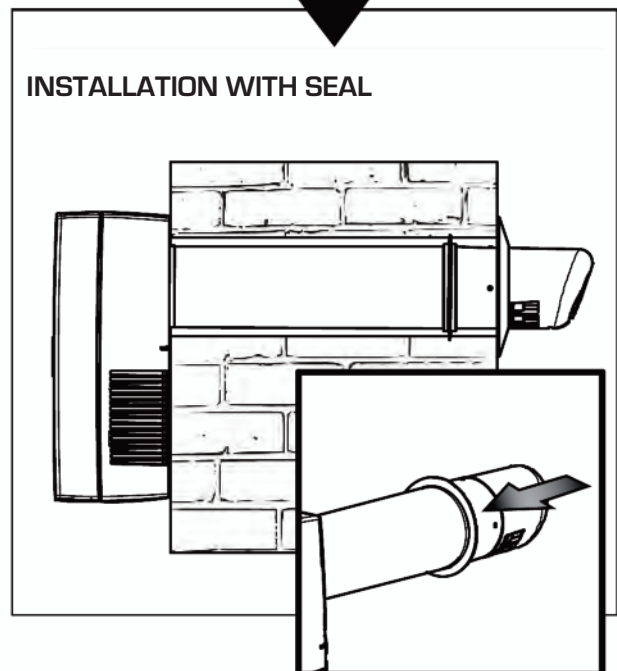
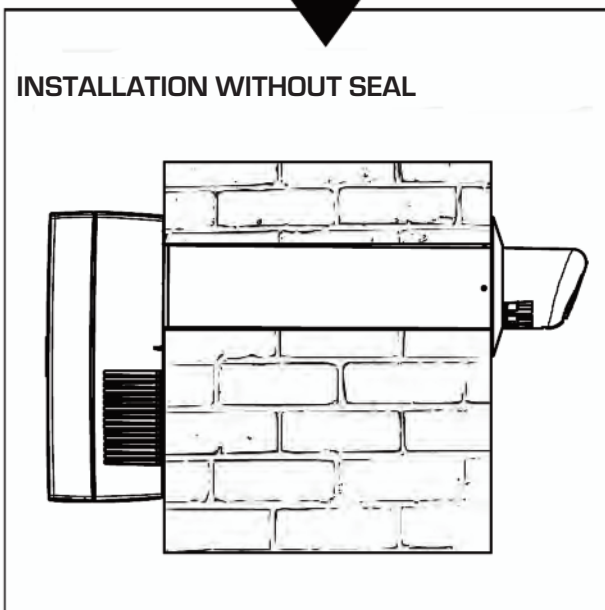
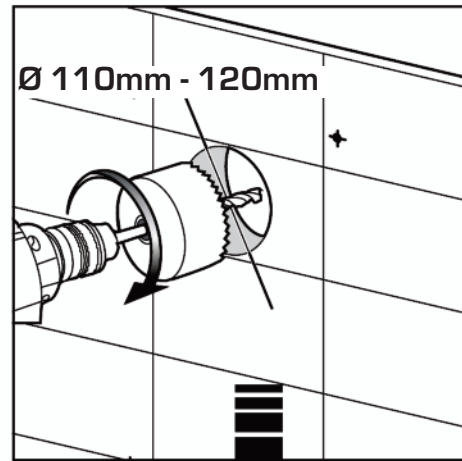
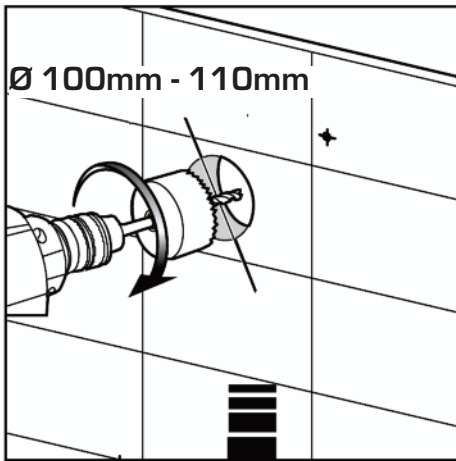


Wall Mounting

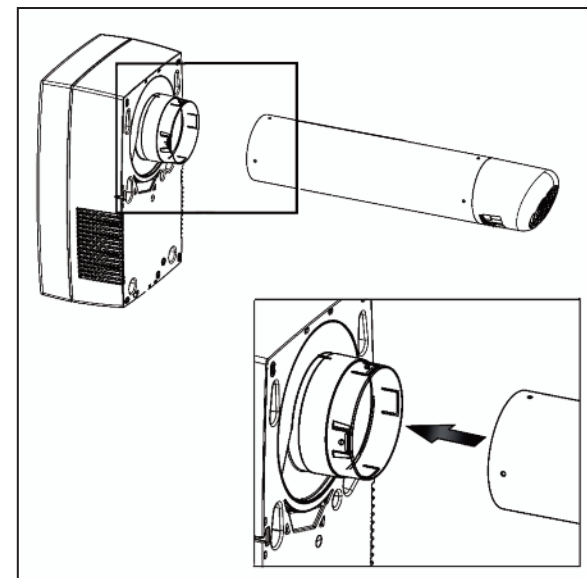
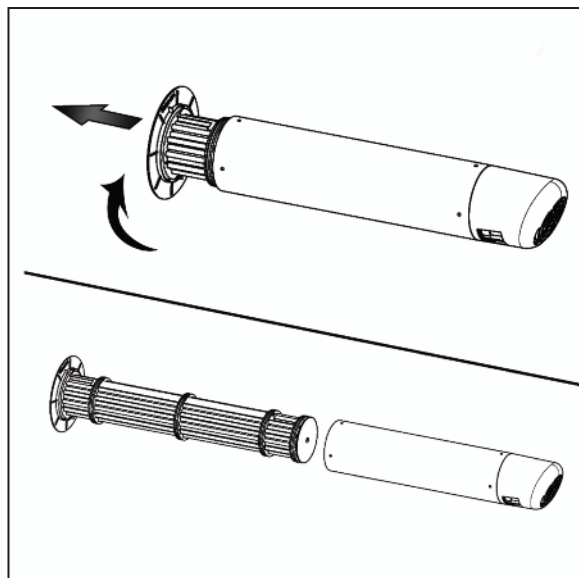
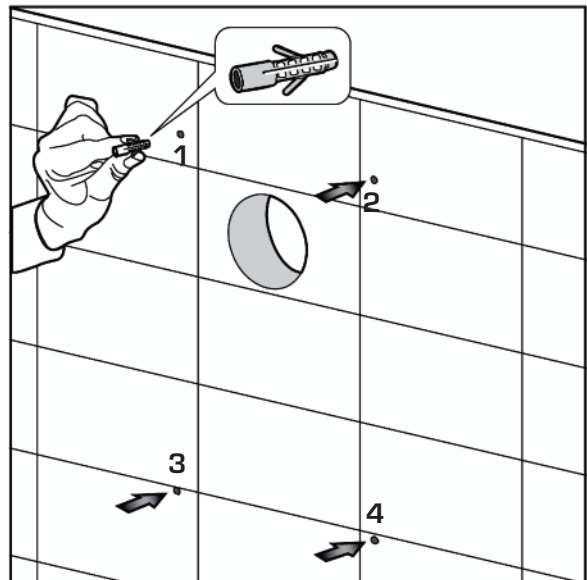
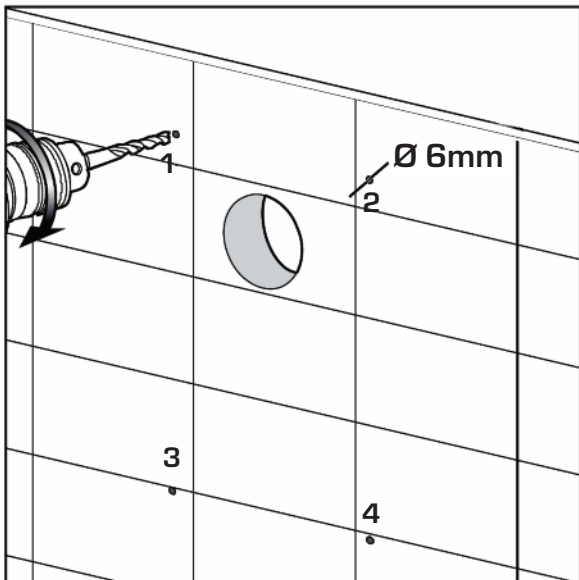
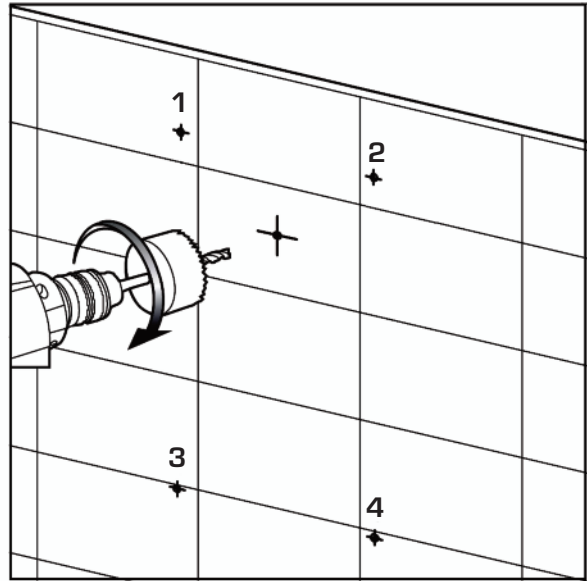
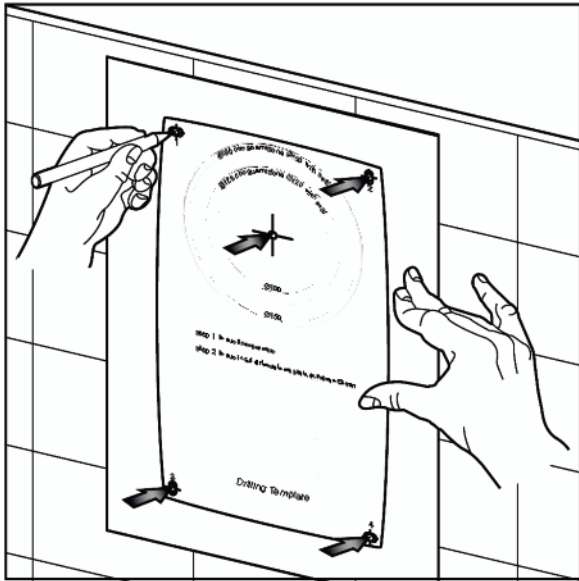


For hole size 100mm - 110mm no seal required

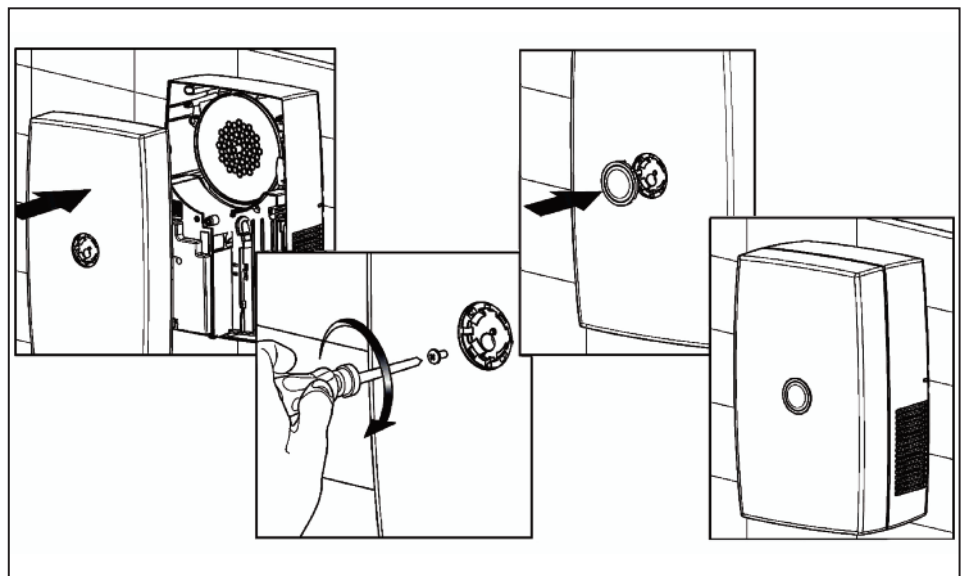
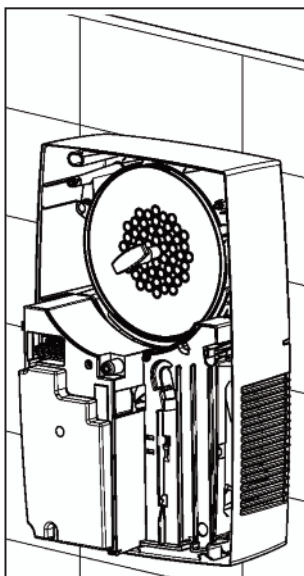
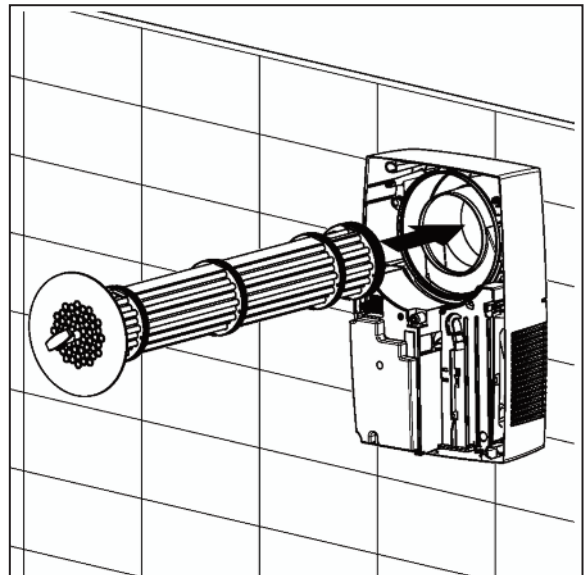
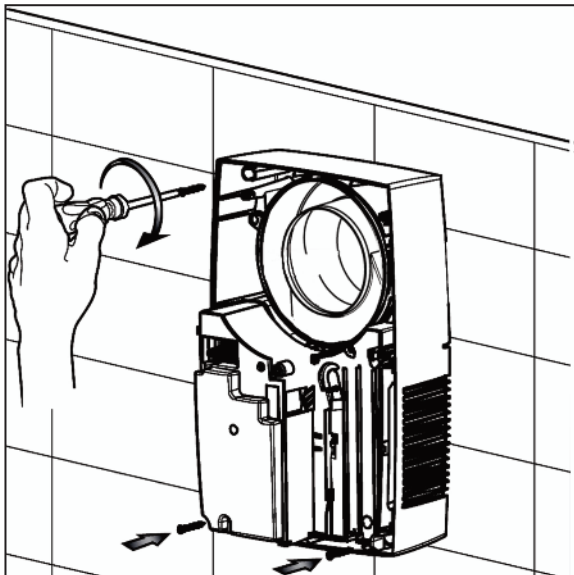
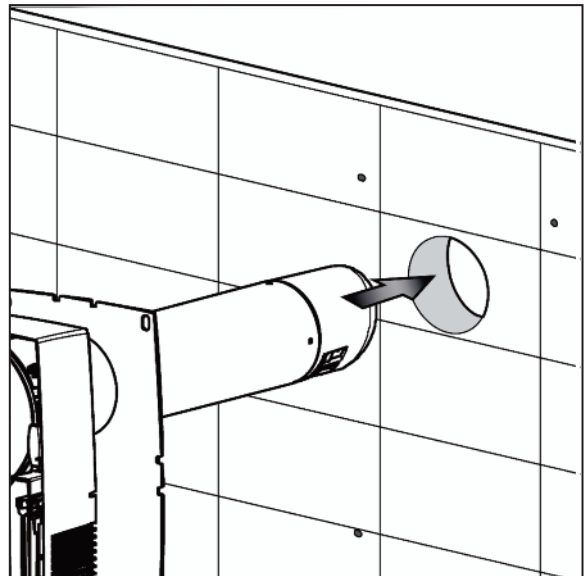
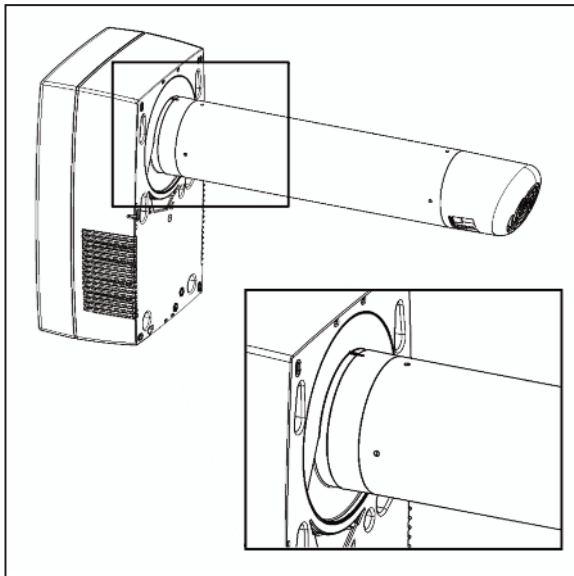
For hole size 110mm - 120 mm, fit seal as shown



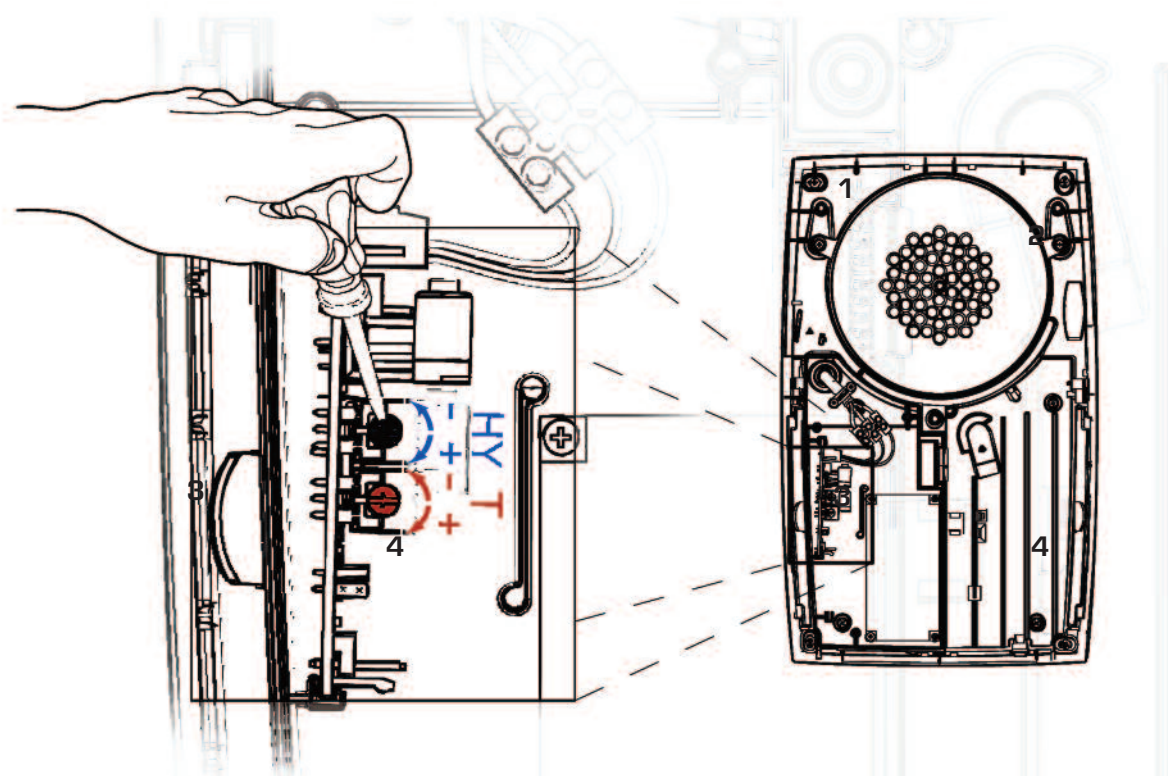
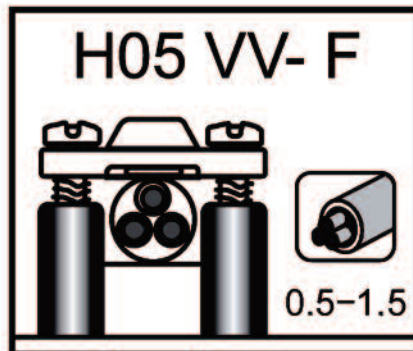
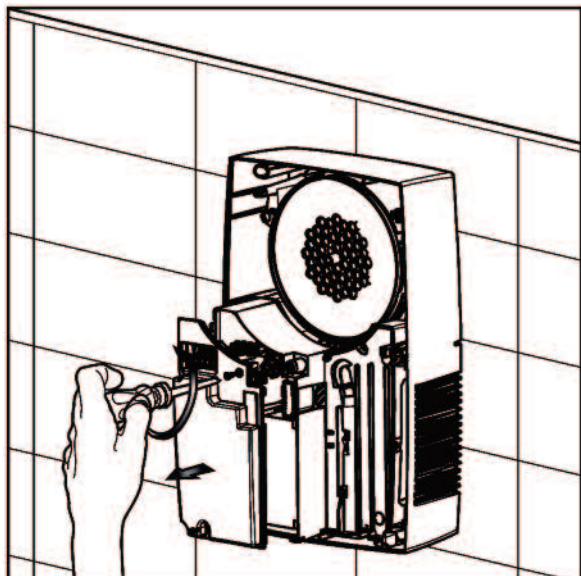
Wall Mounting continued



Wall Mounting continued



Humidistat and Timer Adjustment



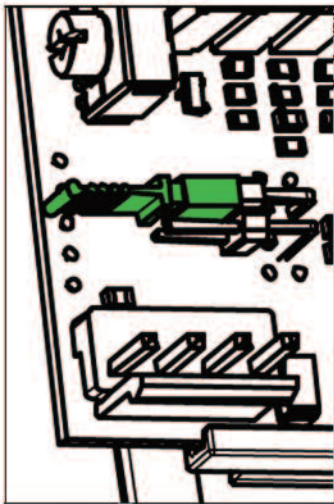
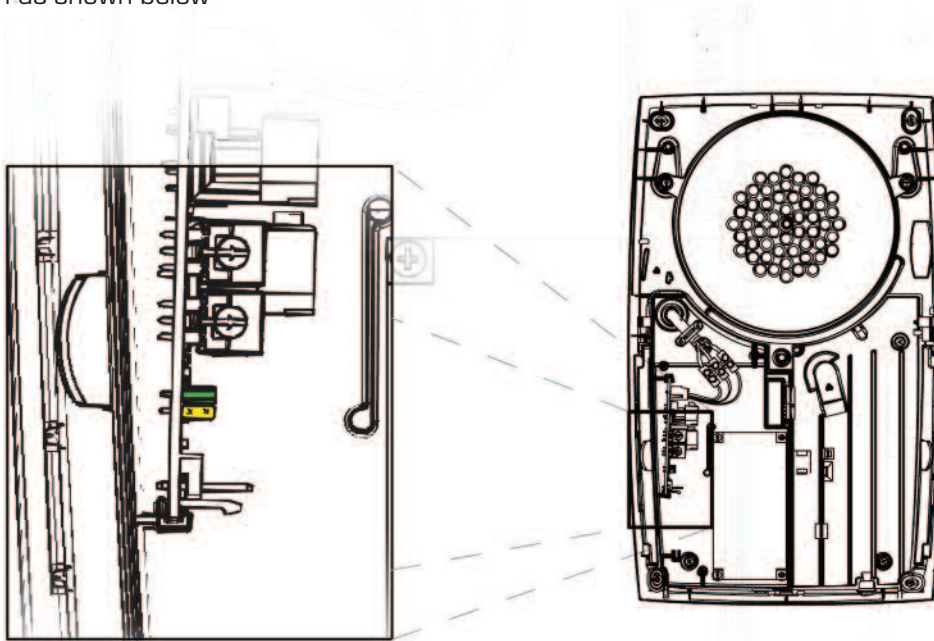
The trimmer - T - in red adjusts the length of time the overrun timer will operate after the boost switch has been turned off. It is adjustable between 0 and 30 minutes.

The trimmer - HY - in blue adjusts the level at which the fan will switch to boost speed when humidity is detected.

Note: the humidity level is pre-set at the factory at the optimum level. Lowering the switching point (turning anti-clockwise) will mean that the fan will run for longer periods of time

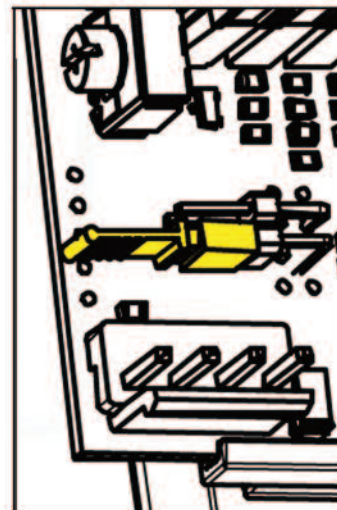
Selecting the running speed

The HR1003 has two trickle speeds and is factory set at Speed 1. To change to the higher speed adjust the jumper as shown below



Speed Setting 1 - Factory Setting

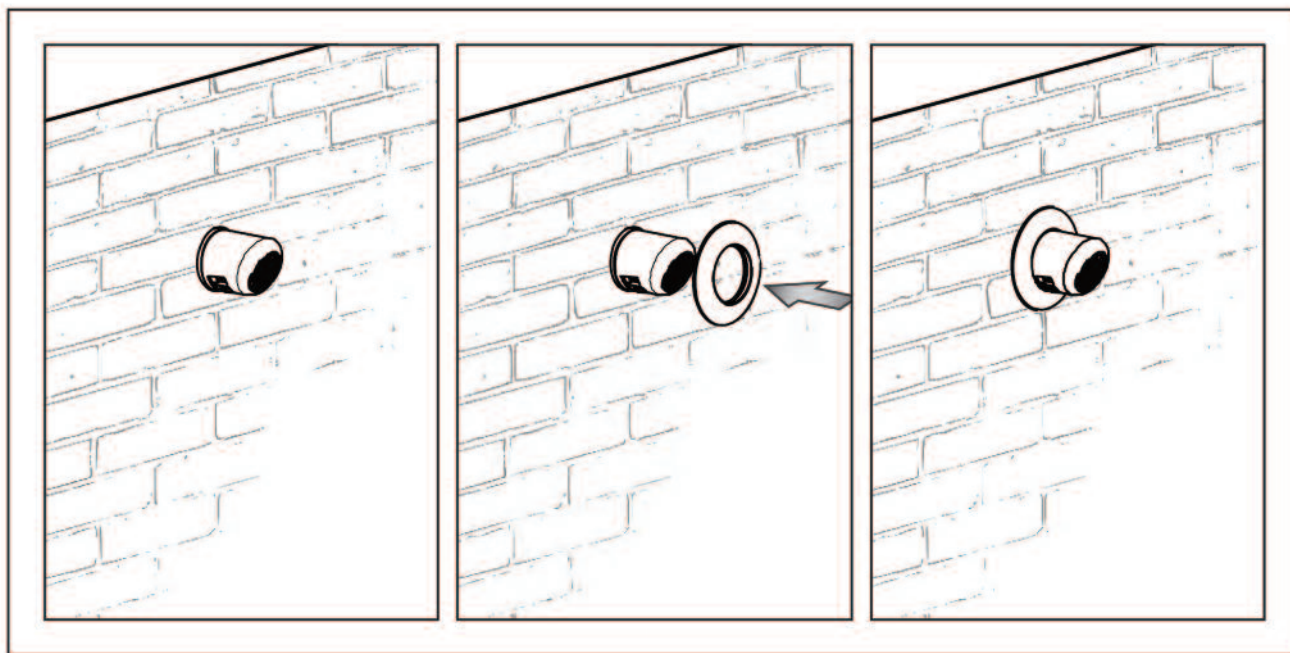
If for comfort and/or room size requirements a lower trickle speed is required, set the jumper as shown.



Speed Setting 2 - Optional

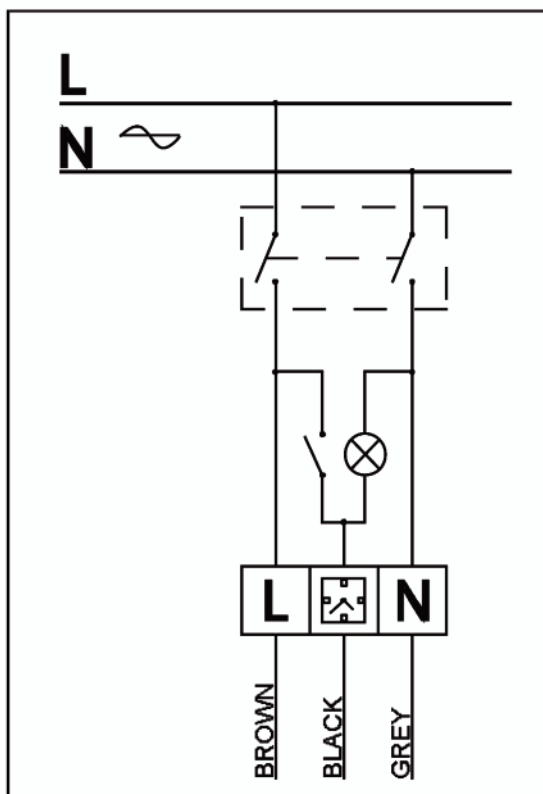
If for comfort and/or room size requirements a higher trickle speed is required, set the jumper as shown.

External Bezel Installation

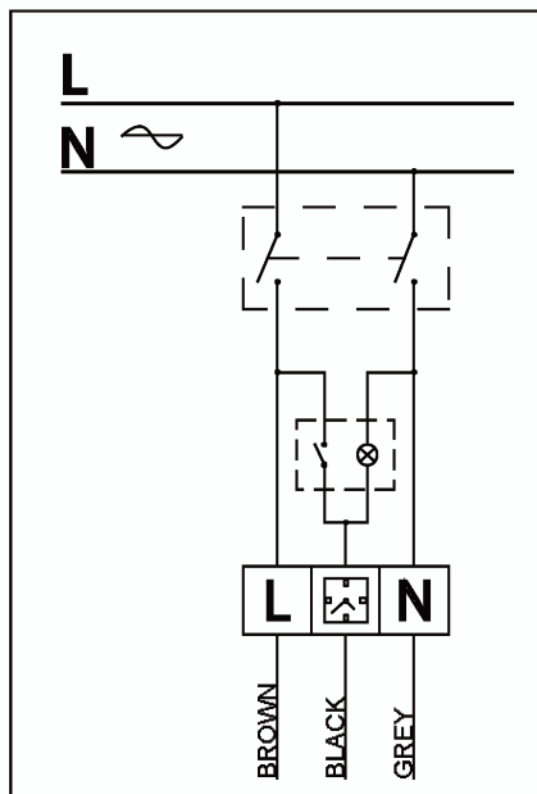


Wiring Diagrams

with external light

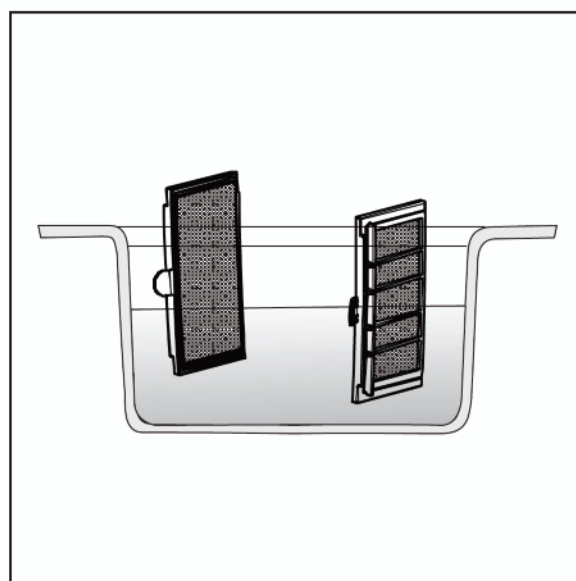
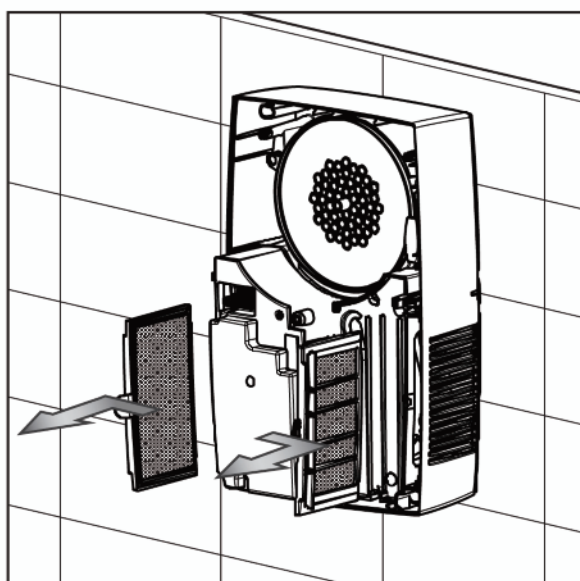
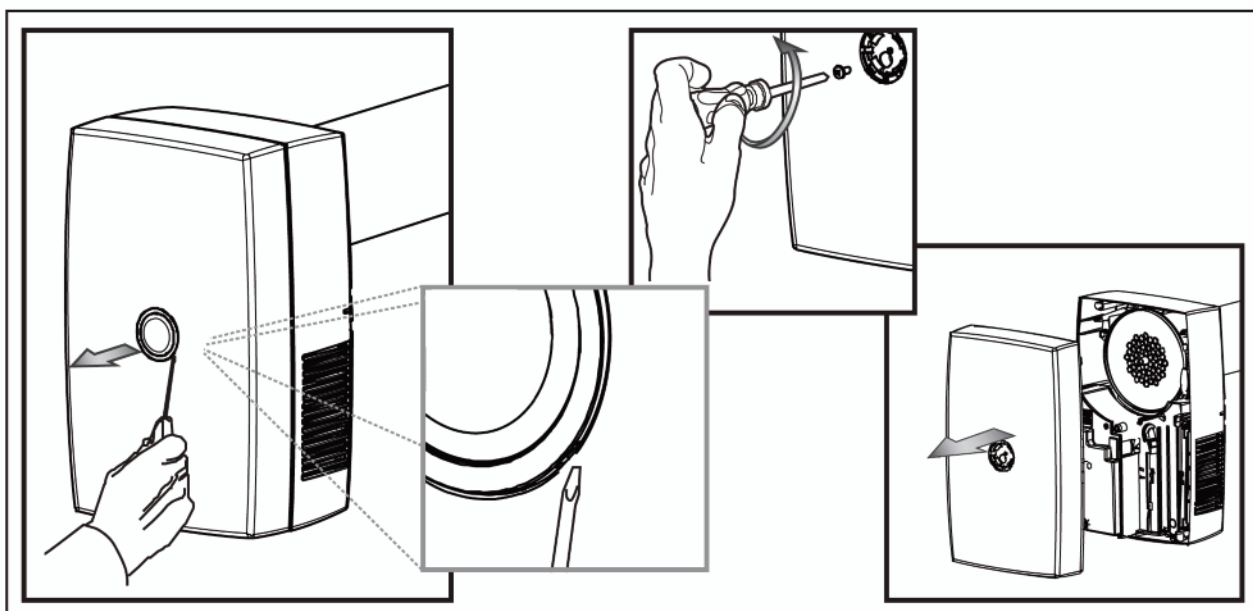
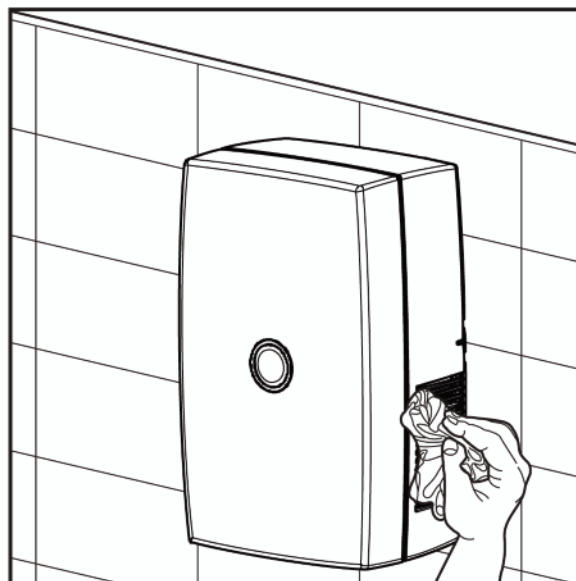


without external light



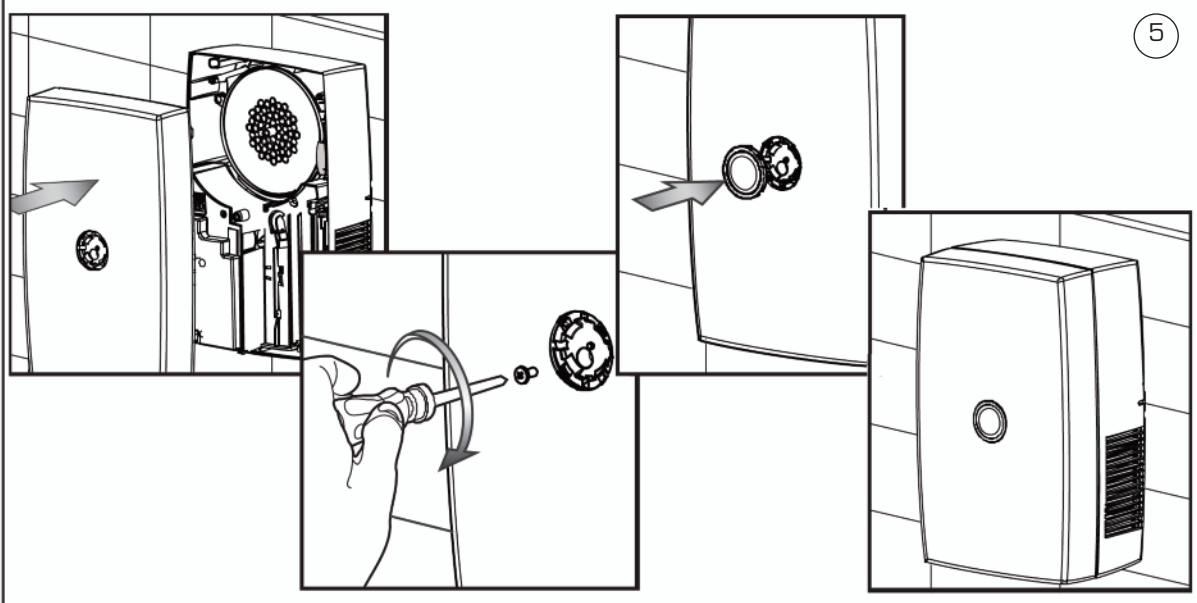
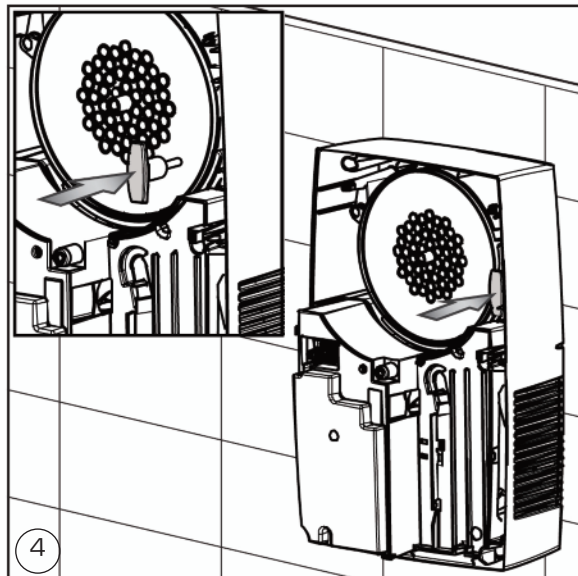
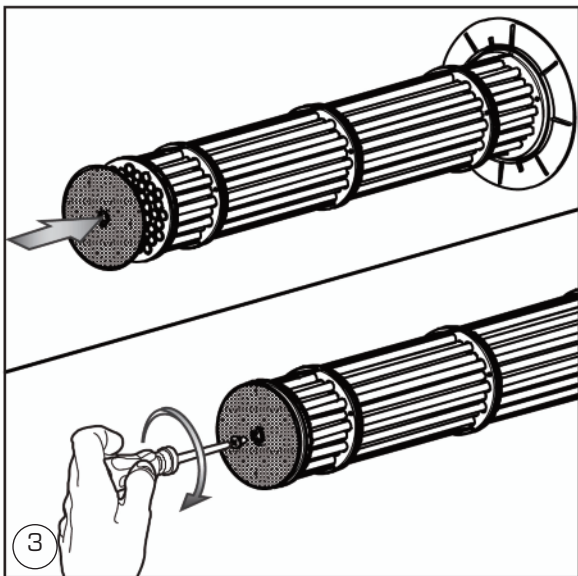
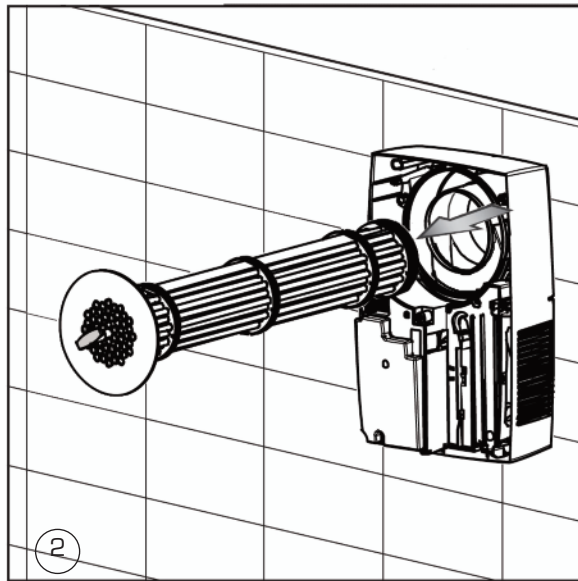
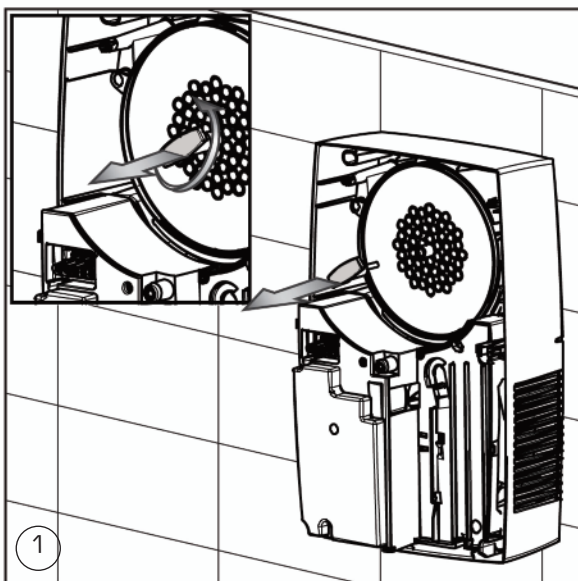
Maintenance and Cleaning

- Filters



Maintenance and Cleaning

- Heat Exchanger





Cleaning the Heat Exchanger

- Isolate the unit from the electrical supply
- Remove the front housing as shown on Page 7. (**Do not** remove the electrical connection cover.)
- Referring to the drawings on Page 15, remove the "T" shaped screw handle stored within the main body of the fan. Screw the handle gently into the centre hole of the heat exchanger plate (Fig 1) and carefully extract the whole exchanger (Fig 2).
- Remove the filter mesh from the external end of the exchange (Fig 3) and clean off any accumulated dust. Replace carefully.
- If there is any accumulation of dust on the black plastic tubes, remove this with a soft brush. Take care not to damage the tubes.
- Re-insert the heat exchanger fully into the housing, remove the extraction handle and return it to its storage position (Fig 4).
- Replace the outer section (Fig 5).
- Reconnect the electrical supply.

Models Available

The Heatrec1003 has been designed for continuous operation at a choice of two trickle speeds. The speed can be boosted to maximum by means of the pull cord or a remote switch, or automatically by the integral humidistat.

HREC1003 - 3 speed, continuous running with a pull cord. Speed can be boosted to maximum by means of the pull cord or a remote switch. Pulling the cord again or switching off will revert the speed of the fan to the trickle speed.

HREC1003T - 3 speed, continuous running fan with timer and pull cord. The timer version will run at low speed until the boost speed is activated by means of the cord or, if the cord is removed, by means of a remote switch, light switch, PIR sensor or humidistat. If the boost speed is activated, the fan will operate at high speed until the boost switch is turned off. After this, the fan will continue at high speed for the length of time set on the timer overrun adjustment, between 0 and 30 minutes. After the overrun time has elapsed, the fan will return to the slower speed.

HREC1003HT - 3 speed, continuous running fan. The fan runs continuously at the pre-selected lower speed, and the boost (speed 2) will start to operate automatically when the relative humidity (adjustable between 40% and 90% +/-5% tolerance) reaches the pre-set level and will continue to operate at this speed until the humidity has been dispersed and the adjustable over-run timer (adjustable from 0 to 30 minutes) has completed its cycle. The boost speed can also be activated by as described for model HREC1003T.

Summer By-Pass Function - The Heatrec1003 is fitted with sensors which monitor the air taken and extracted, ensuring optimal comfort and energy saving in all seasons.

- When the outside temperature is comfortable and the inside ambient temperature is lower than 18°C, the air extract motor will be automatically switched off, whilst the air intake motor will continue to operate, ensuring a quick and efficient change of air inside the room.
- When the outside temperature is higher than 26°C, to continue to ensure room ventilation without affecting comfort by increasing the temperature, the air intake motor will be switched off.

Frost-Stat Function - the unit is fitted with an internal thermostat, which will automatically disable the air intake if there is a risk of the heat exchanger freezing up (when the outside temperature is too low) and also avoiding the intake of very cold air.