Ventilation System Installation Instructions

Before Purchase of the System

Thank you for considering the LowCarbonLiving Ventilation System. Before purchase, it is important to ask a few questions.

First, as each Extractor Fan requires a 100mm vent (or existing air brick), are you able to accommodate these vent holes?

Second, are you able to comply with the PAS2035 ventilation requirements: passive air vents in each habitable room, 1 cm undercuts for internal doors ? The LowCarbonLiving Ventilation System is intended as a useful step towards a lower carbon home; providing the active ventilation that is required in an increasingly air tight dwelling.

Third, before purchase, it is important to work out the correct size and makeup of the system required. **Each Ventilation System is hard coded to work together as a unique system. The Monitor(Air Quality Monitor) will only communicate with the hard coded Remote(s) and BathroomFanController(s). Any changes are not possible without a return to the manufacturer for reprogramming**. This was a design decision for robustness and security. **It is therefore crucial to size the system correctly before ordering**. Thankfully the system size and makeup is easy to work out.

Two extractor fans will suffice for the average property (up to 140m2), although it does no harm to have more.
Additionally, each System must have:
  •   1 Monitor Per System
  •   1 BathroomFanController per Bathroom/Shower Room

Before Installation

Thank you once again for your purchase of the LowCarbonLiving Ventilation System. At this stage, it is assumed that you have purchased the correctly sized system. Before installation, carry out measures to: further improve the air tightness of your property, and, comply with PAS2035 ventilation requirements (1 cm internal door undercuts, passive air vents in habitable rooms).

Decide the position of the equipment. Please refer to the **suggested layouts** for deciding the positioning of equipment. Air flow within the dwelling has to be planned and predicted; and this air flow must go past the Monitor for readings to be accurate. It is preferable to locate the Monitor on the ground floor/lower floor in a two story dwelling, as CO_2 is heavier than air and will tend to fall downwards to the lower floors.

Installation

Verify that you have received the complete LowCarbonLiving Ventilation System that you have ordered. Check the label on the Monitor to confirm that it communicates with the MAC address(es) of your other hard coded equipment.

Create the 100mm vent holes/prepare existing air bricks first. An external hood/vent cover is recommended per vent. Remember to keep pitch leaning outwards slightly to prevent rain ingress. Attach the Extractor Fans to the wall using the supplied plugs and screws.

The Monitor should be hung on a wall ideally just above eye level, away from openings such as doors and windows, and away from combustion sources such as gas cookers or fireplaces. Connect the fan(s) to the Monitor (if applicable), bearing in mind that the fan cables are 40 cm long. Run DC extension cabling as required towards a power socket.

The Remote can be more flexibly positioned. Hung on a wall just above eye level is ideal. Connect required fan(s). Run DC extension cabling towards a power socket as required.

The BathroomFanController can potentially require a bit more input. Hang it so that it is well illuminated by the bathroom lighting, and the PIR sensor can see people when they are in the bathroom/toilet. The PIR sensor is pre-adjusted to work in most average size bathrooms/toilets. However, this can be fine tuned for your needs by turning the distance sensitivity screw. Run DC extension cabling towards a power socket OUTSIDE of the bathroom/toilet to comply with buildings regulations.

Connecting to Power/Switching on

Plug the Monitor in First. Make sure a micro SD Card is inserted BEFORE plugging in if you wish to record the readings. It will take about 5 minutes for the readings to stabilise. Plug the Remote in second.

For the BathroomFanController, immediately exit the field of view of the PIR sensor for the first two minutes after plugging in. This is to allow the PIR sensor to "learn" the room.

Testing the System

Verify that the readings on the Remote mirror the readings on the Monitor. Data is transmitted every 20 seconds, so there may be some lag.

Test that walking into the bathroom and switching on the light triggers full boost of the fan. Wait at least 2 seconds between switching the lights on and off when testing, as this is the sensor sampling time. Adjust position of the controller as necessary. Adjust the sensitivity of the PIR sensor if the bathroom is quite large. The BathroomFanController does not have a built in display. To check that it is communicating correctly with the Monitor, verify that the boost LED turns on when the

bathroom lights are off, when CO2 is above 800ppm. If CO2 isn't already 800ppm, blow gently for 1-2 seconds towards the right side of the Monitor. This should trigger a boost of the bathroom fan.

The BathroomFanController has a built in 5 minute timer, that will switch off full boost even if the lights remain on, if no motion is detected for this entire period. This is a false trigger backup feature necessary for windowless bathrooms that allow sunlight in when the door is opened.

Please also read:

User Manual
Suggested Layouts
Air Tightness Checklist