

HEALTHY HOMES – HOUSE VENTILATION

FACT SHEET

House ventilation

With energy costs increasing, more and more houses are being insulated to conserve heat.

Draught proofing, double glazing, high levels of insulation and intermittent thermostatically controlled heating systems are sensible ways of conserving heat and energy. However, the air quality in such sealed dwellings can rapidly fall to an unacceptable level, leading to health hazards through contaminants in the air.

There are two main types of whole house ventilation systems which can be installed to improve the air quality in the home:

- Heat Recovery Ventilation Systems
- Positive Pressure Ventilation

Heat recovery ventilation

Heat Recovery ventilation units provide a warmer, drier, more comfortable home with uncontrolled condensation eliminated. This controls the house dust mite whose microscopic droppings can cause asthma, rhinitis, bronchial and other allergic problems.

Heat Recovery ventilation is energy efficient in that the fresh air, being brought into the property, picks up the heat recovered from the stale air before it is exhausted.

Manufacturers claim that 65-70% of the heat normally lost via trickle vents is recovered. There is no mixing of air flows.

Diagrams are for illustrative purposes only, as similar systems are now produced by a number of manufacturers.

Heat recovery ventilation can reduce the Relative Humidity to below 70% which inhibits the ideal living and breeding conditions of the house dust mite

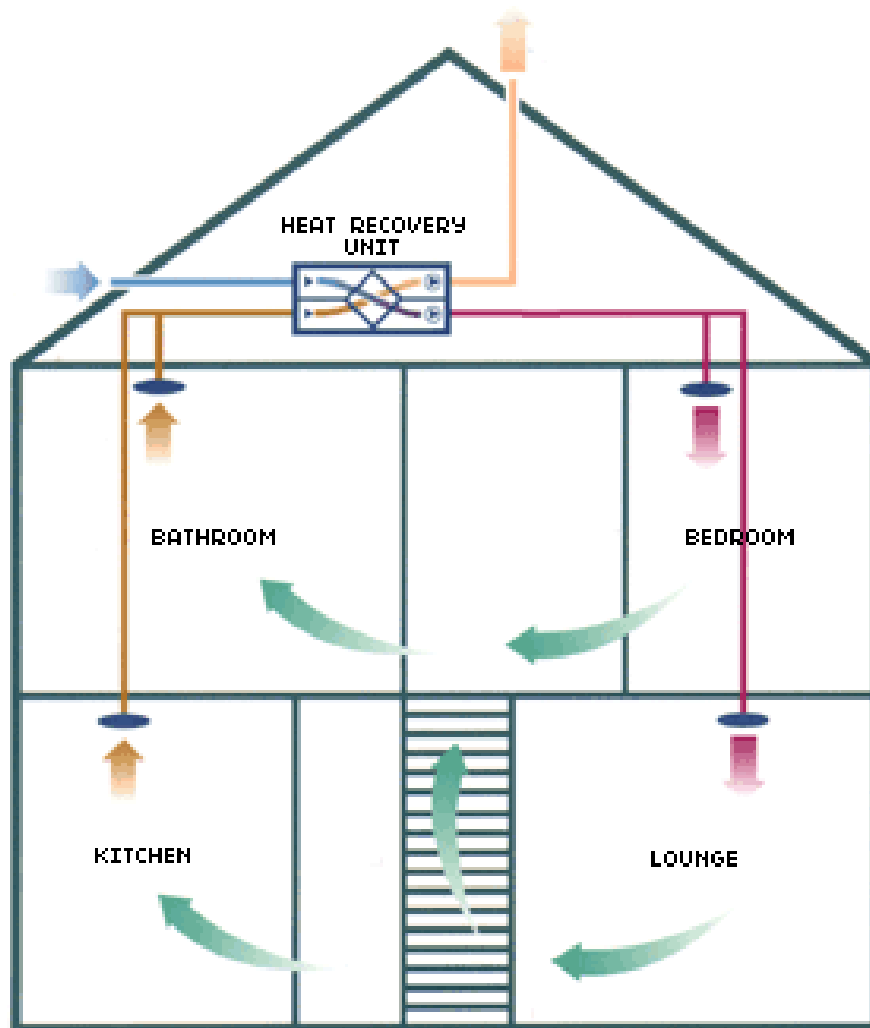


Diagram of the VillaVent Heat Recovery Ventilation system

Positive pressure ventilation

Positive Pressure Ventilation introduces outside drier air into the dwelling where it is mixed with the internal air, lowering the total moisture content, and gently removing the moist air, either through natural leakage or via specified devices that open and close automatically depending on temperature, moisture content or both.

Moist and polluted air, if allowed to remain leads to condensation. This results in the problems of streaming windows, peeling wallpaper, damp clothing and bedding and eventually unsightly mould growth leading to permanent damage of the building fabric.

There may be no need for additional background ventilation where windows are ill-fitting, and not draught-stripped, and / or where there are open chimney flues.

But where there is draught-stripping, or tight fitting windows, provision for background ventilation may be necessary via trickle vents in replacement windows, insertion of high-level airbricks or by installing a suitable house ventilation system for which assistance may be available.

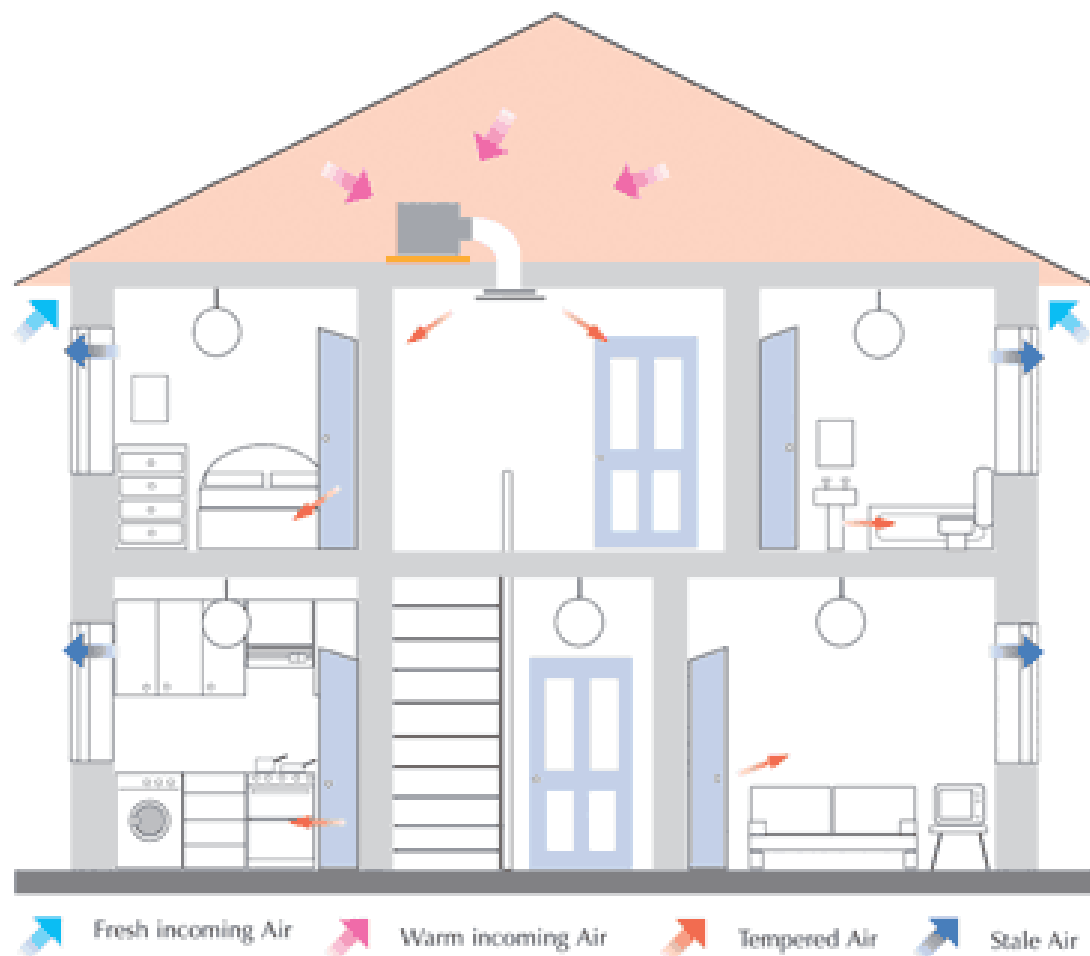


Diagram: The Vent-axia LoWatt Pozidry ventilation system

Maintaining ventilation

If moisture levels are controlled through adequate ventilation, dust mite populations can be significantly reduced by raising indoor temperatures. To achieve this, there should be adequate structural thermal insulation, and appropriate means of heating the house.

Extract ventilation - Can be installed to remove moisture laden air during cooking, bathing or showering.

Clothes drying facilities – Clothes should not be dried in the home unless in a dryer ventilated to the external air.

Background ventilation - There should be sufficient ventilation to deal with moisture generated by normal domestic activities without the need to open windows. Opening windows can result in heat loss, noise, and may be a security risk.

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