

# What is Demand Controlled Ventilation?



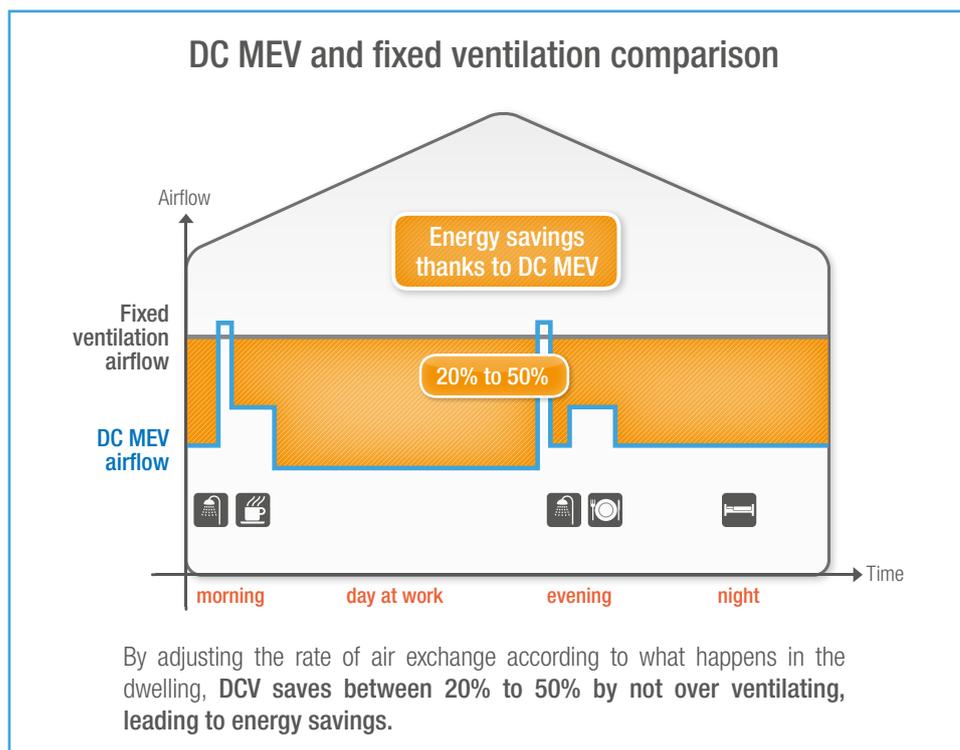
Demand Controlled Ventilation (DCV) is a way of looking at ventilating buildings that is a little different. Instead of there being a fixed rate of air exchange for a building or room on a best guess, Demand Controlled Ventilation (DCV) measures the air quality and adjusts the rate of air exchange minute by minute, room by room, based on actual need.

If you think about it, the quality of air in a building has less to do with its size or its number of bathrooms. Instead, it has more to do with how many people live there, what they do, what time they come home and go to work, take showers and so on.

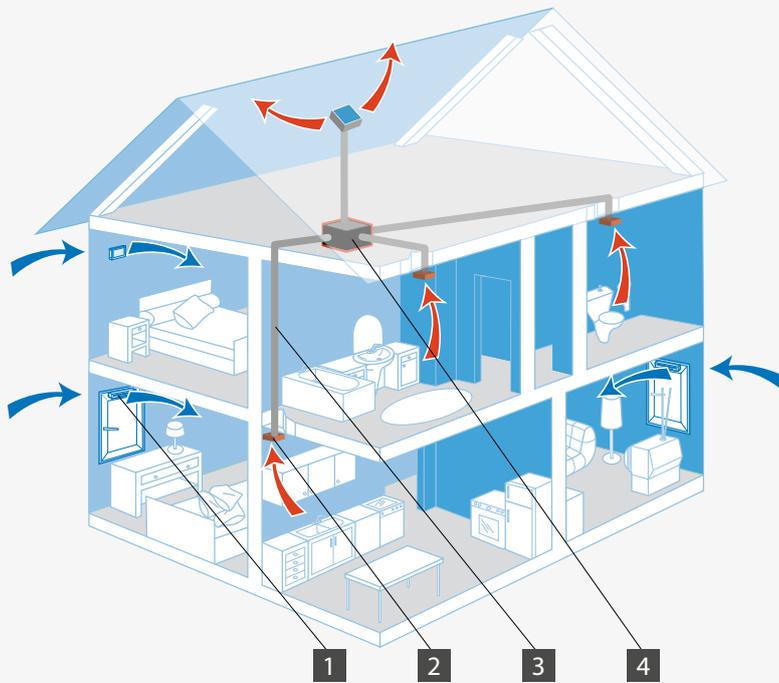
Humidity is a very good indicator for air quality in dwellings. There are the obvious issues like showering and cooking, but even breathing creates moisture and CO<sub>2</sub>. So, by monitoring humidity we can adjust and control the movement and volume of air exchange in a building based on air quality. If humidity is not the best indicator, then we can use things like presence detection or manual boosts.

By following the need of a building rather than a best guess, we also eliminate unnecessary ventilation which in turn saves us energy.

The net result with DCV is a system that is comparable in efficiency to heat recovery, cost effective and simple, but most importantly quietly monitors and manages air quality.



## 4 component parts to a DCV system



### 1 Air inlets

Supply fresh air to rooms like bedrooms and living rooms.

### 2 Extract grilles

Take air away from wet rooms like bathrooms and kitchens.

### 3 Ducts

From the extract grilles to a central point.

### 4 Fan

At this central point that exhausts out of the building.



Humidity Sensor

Both the inlets and the extracts react to IAQ and adjust the rate of airflow; the fan detects these changes by pressure which means there are no cables or controls needed, and adjusts its running speed accordingly. The fan is very quiet (about the same as a pc) and very efficient (about the same as an energy efficient light bulb). It does not require filter changes or regular service and should give years of trouble-free running.

Because DCV only needs ducting from wet rooms, it makes the system ideal for cost effective installation of a whole house ventilation system, it is also ideal therefore for refurbishment and retrofit work.

*Aereco was established by the inventor of the technology nearly thirty years ago and since then we have manufactured over 16 million humidity sensitive components and have been responsible for DCV being installed all over the world in over 3,2 million homes. We have an office in Ireland and offer direct support to our customers and resellers.*

As a technology, it's not new. It was invented nearly 30 years ago, when a former scientist at the CSTB in France (The French equivalent of the BRE or

NSAI) invented a humidity sensitive strip that could accurately and consistently open and shut a vent or grille based on the relative humidity in the room.

## Demand Controlled Ventilation



Humidity Sensitive Extract Unit



Constant Pressure Fan



Humidity Sensitive Air Inlet