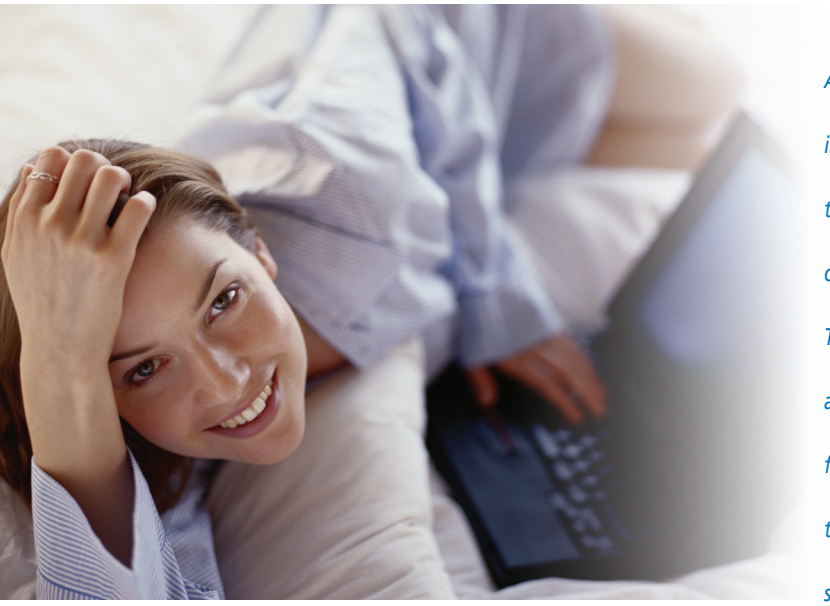
Demand flow ventilation

Gearing the ventilation need to the air quality



As these days the insulation level of houses keeps improving, the importance of adequate ventilation increases as well. This means that the quantity of supplied fresh outdoor air must match the discharged quantity of foul exhaust air. In other words: balanced ventilation

Though heat recovery ventilation systems already keep energy losses at a very low level, demand flow ventilation takes it even one step further. Indoor climate sensors or time control can be used to automatically adjust the ventilation quantity to the current need. Air is only supplied to or exhausted where it is actually required.

WHY DEMAND FLOW VENTILATION?

Demand flow ventilation makes it possible to gear the ventilation flow to the indoor air quality. Indoor climate sensors (CO_2 and/or RH = Relative Humidity) measure the air quality in the habitate and wet rooms and automatically adjust the ventilation flow to the measured values.
The advantages:

- Higher comfort level through automatic control system
- Optimum indoor air quality under all conditions
- Energy saving potential
- Lower noise level due to lower air flow

ECODESIGN

Currently European regulations are being prepared to provide an improved valuation of demand flow ventilation systems. For instance, demand flow ventilation improves the product label in the framework of Ecodesign. The demand flow system also has a positive influence on the energy rating calculations for buildings (EN15241).

SENSOR-CONTROLLED OR TIME-CONTROLLED VENTILATION

Time control unit

Demand flow ventilation can be realised through sensor control or time control. Sensor control means that the air supply is controlled on the basis of CO_2 or the air exhaust on the basis of relative humidity. Time control means that the ventilation flowrate is controlled by a preset timer programme.

ACCESSORIES

Brink Climate Systems can supply the following components for demand flow ventilation:

- CO_2 sensor
- RH sensor
- Time control unit

CO_2 CONTROL SYSTEM

The CO_2 concentration in a space is mainly determined by the presence of people and the ventilation rate. Then the ventilation supply is automatically controlled through one or two CO_2 sensors. That means the ventilation rate is increased at a high CO_2 concentration and, conversely, a CO_2 sensor prevents excessive and unnecessary ventilation.

HUMIDITY CONTROL

The ventilation exhaust can automatically be controlled with the RH (Relative Humidity) sensor installed in the central exhaust duct. When the humidity concentration increases as a result of cooking and/or showering, the ventilation system is automatically switched to high mode. The sensor sensitivity can be adjusted at the Renovent Excellent or Renovent Sky.

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CO_2 SENSOR

- Output: 0-10V
- For use with the Renovent Excellent Plus and the Renovent Sky Plus (2 pieces can be connected)
- Lifetime approx. 15 years
- Operating principle: non-dispersive infrared
- Self calibrating
- Measuring range: 0-2000 ppm
- Rated power: 0.7 W (24 V AC)

CO_2 sensor

RH SENSOR

- Intelligent control system
- For Renovent Excellent and Renovent Sky (all versions) Lifetime approx. 15 years
- 2 m. connecting cable

RH sensor

MORE INFORMATION?

Do you want to know more about demand flow ventilation? Then call Brink Climate Systems B.V. and make an appointment free of engagement.

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