



WHISPER AIR

ENJOY THE SILENCE



HEAT RECOVERY UNITS



WHISPER AIR

CLASSROOMS – OFFICES – CONFERENCE ROOMS



NOISE LEVEL
35.0 dBA

EFFICIENCY
90%

ENTHALPY
60%

10+1 arguments for WHISPER AIR

- Continuous supply of fresh air
- Ultra silent operation
- High heat recovery efficiency up to **90%**
- High humidity regeneration up to **60%**
- Energy saving
- Helps people with allergies and breathing difficulties
- Prevention of mold
- Prevention of fatigue and headache that are caused by CO₂
- Perfect solution especially for refurbishment
- Elimination of outside noise due to open windows
- Easy to install



The **WHISPER AIR** heat recovery unit is designed for decentralised ventilation. It provides an ideal solution in both new and existing buildings. Its minimum noise level makes it a perfect choice **for schools, offices and conference rooms.**

- 3 sizes with airflow rates of **400, 700 and 1 000 m³/h**
- High heat recovery efficiency up to **90 %**
- **ENTHALPY** version – High humidity regeneration up to **60%**
- Ultra-quiet operation – **35 dBA**
- Integrated **CO₂ sensor**
- Energy-efficient **EC motors**





WHY INDOOR ENVIRONMENT QUALITY IS IMPORTANT

Did you know that we spend 90 % of our lives indoors? This fact has an immense impact on our health and wellbeing. There are many indoor conditions that adversely affect us, above all: temperature, humidity, CO₂ level and inadequate ventilation. Clean fresh air is vital for our wellbeing at home, school or work. Unfortunately, it is not so easy to ensure sufficient and proper ventilation. Occupied rooms should be aired out ideally every 2 hours. When rooms are ventilated by opening windows, heat loss occurs and the room is contaminated by outside noise and polluted air.

IMPACT OF CO₂ LEVEL

Children spend a lot of their time in classrooms where insufficient ventilation, office workers have the same situation in their workplace. Classrooms or offices are the places where we stay for a long period of time. This leads to high CO₂ levels negatively affecting children's ability to learn or office worker's performance.

NEGATIVE EFFECT OF NON-VENTILATED AREAS:

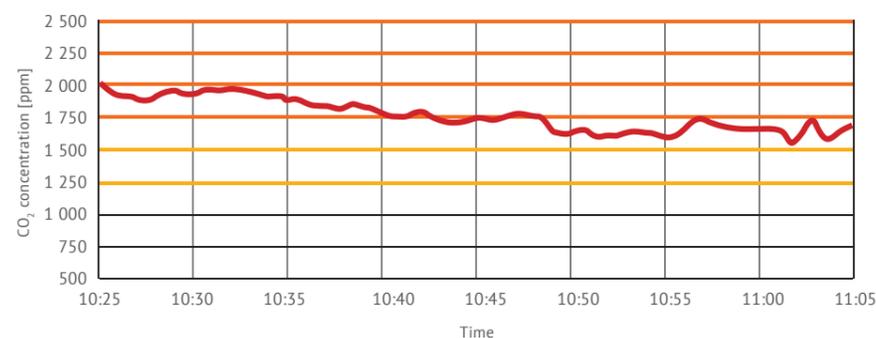
- Fatigue
- Headache
- Poor concentration
- Allergies
- Demotivation and low performance
- Disrupted immune system

Effects of CO₂ on the human body

Approx. 350 ppm	Comparable to outdoor environment
Up to 1 000 ppm	Recommended optimum indoor CO ₂ level
1 200-1 500 ppm	Recommended maximum indoor CO ₂ level
1 000-2 000 ppm	Onset of the symptoms of fatigue and lower concentration
2 000-5 000 ppm	Possible onset of headache
5 000 ppm	Max. safe concentration without health hazards
>5 000 ppm	Nausea and increased pulse rate
>15 000 ppm	Breathing difficulties
>40 000 ppm	Possible loss of consciousness



CO₂ concentrations measured during lessons

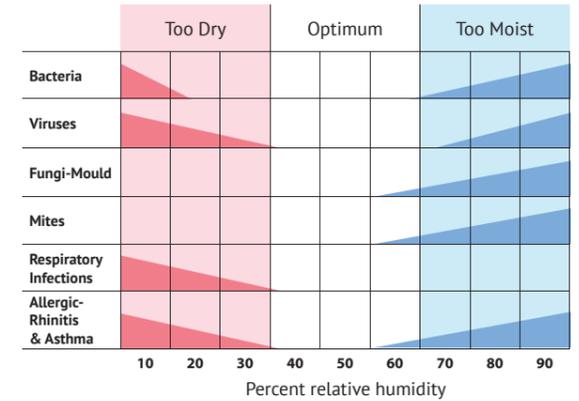


Total air volume: 250 m³
 Pupils in classroom: 30
 Windows: tripled glass
 Indoor temperature: 22.3 °C
 Outdoor temperature: 27 °C, sunny weather
 Windows were closed.
 Ventilation was ensured by opening doors.

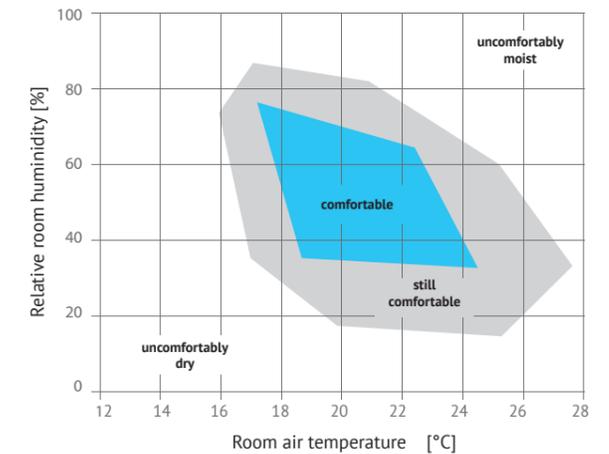
IMPORTANCE OF RELATIVE HUMIDITY

At the same time we must not underestimate the right level of indoor relative humidity. A common problem, especially in winter, is the dry air caused by excessive heating. Although the concentration of carbon dioxide is an important indicator of indoor air quality, relative humidity is also of similar importance. It should be ideally between 30 and 55%.

Both, very low or high relative humidity may cause some physical discomfort, as the relative humidity of the air directly affects temperature perception. Whether low or high level of relative humidity it results in increased incidence of viable bacteria, viruses or dissemination of respiratory infections.



Source: Theodre D. Sterling and Associates Ltd., Vancouver, B.C.



Source: Heinz Gabernig, Energie- und Klimatechnik, Ausgabe 1995



NEGATIVE EFFECT OF IMPROPER RELATIVE HUMIDITY

- Physical discomfort
- Incidence of respiratory infections
- Increase of asthmatic and allergic reactions
- Dryness of nose and throat, eye irritation
- Expansion of mites and grow of fungi



DECENTRALISED VENTILATION = WHISPER AIR

- Ventilation for large single rooms (classrooms, open-office, meeting rooms, etc.)
- Low installation cost – ductless system
- Great solution especially for existing buildings
- Easy service and maintenance access



2VV SELECTION SOFTWARE ChooseGO

Essential product selecting tool for project design...

- Precise and reliable data
- Right product selection from the 2VV wide range
- Final result and one-click into PDF
- Supplementary documents available (technical catalogue, 2D drawings, schemes...)



2VV AirGENIO APP

2VV product fully under your control and right at your hands...

- Product control on your smartphone
- Info about operation status
- Notifications – request for service, filter exchange, error status, etc.



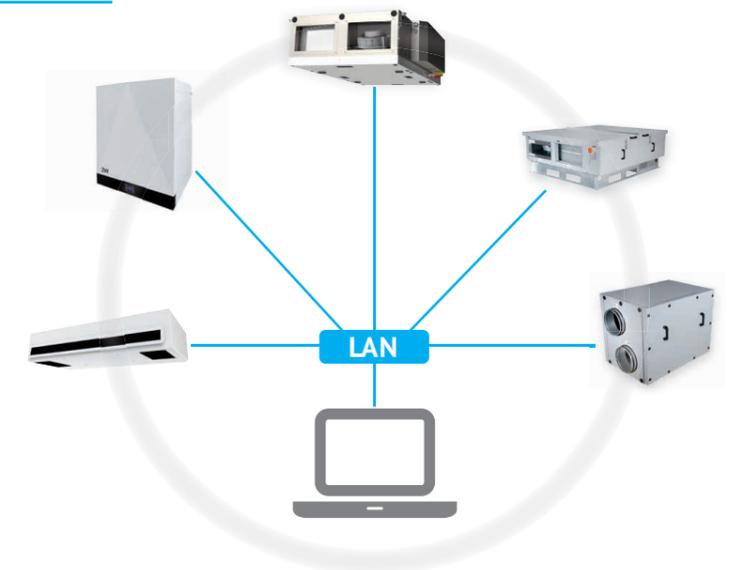
Download the **2VV AirGENIO APP** and have it under your control!

2VV SERVICE SOFTWARE

Commissioning has never been easier...

Do the 2VV device settings and testing comfortably on your computer.

- Easy and quick commissioning
- Error log – error display and identification
- Easy service (device status loading/ reset to backup setting)
- Fast FW update
- OFFLINE version



It is that easy...

- Connect your PC and the 2VV device
- Open the 2VV Service software
- ...and start the setting up process

