



Kieback&Peter

EN:AIR – DEMAND-DRIVEN

CONTROL FOR HVAC SYSTEMS

**Reduces energy costs and CO₂ emissions while
increasing comfort and hygiene**

THE PERFECT ANSWER TO INCREASING DEMANDS ON BUILDINGS

Today, building operators are faced with bigger challenges than ever: steadily increasing requirements for energy and cost efficiency, demanding climate targets, and ensuring good room air quality to optimize user comfort. All these issues are addressed with en:air, the demand-driven smart measurement and control technology from Kieback&Peter for central air conditioning and ventilation systems.



Save costs, increase comfort

In extreme summer or winter weather conditions, air conditioning and ventilation systems must ensure a pleasant indoor climate at full capacity. To provide the required volume of air, the fans operate with a very high energy input. For average everyday operation, however, this is not necessary. By adopting en:air and its dynamic management, the required air volume can be adapted to the room according to demand. As a result, your system efficiency is increased and your CO₂ emissions and energy costs are reduced.

en:air – Your solution for smart ventilation control



Reduces energy consumption by an average of 30%



Optimum indoor climate with no air stratification or drafts



Compliance with legal hygiene requirements through permanent CO₂ control

EN:AIR OPTIMIZES CONVENTIONALLY CONTROLLED HVAC-SYSTEMS

The efficiency of ventilation and air conditioning systems depends largely on the air flow in the room. In conventionally controlled systems, there is usually an upward flow that prevents complete mixing of the supply air with the room air. The result is drafts, temperature stratification, and cold and heat islands. This leads to outside air being unnecessarily heated or cooled and perfectly good room air being exhausted.

For example, in a university lecture hall, why supply 100 percent conditioned outside air for 500 people when only 250 are present? Halving the volume flow already reduces the power consumption of the fans to an eighth!

This is where en:air comes into play, a smart ventilation control system for indoor spaces that operates according to demand and with energy efficiency.

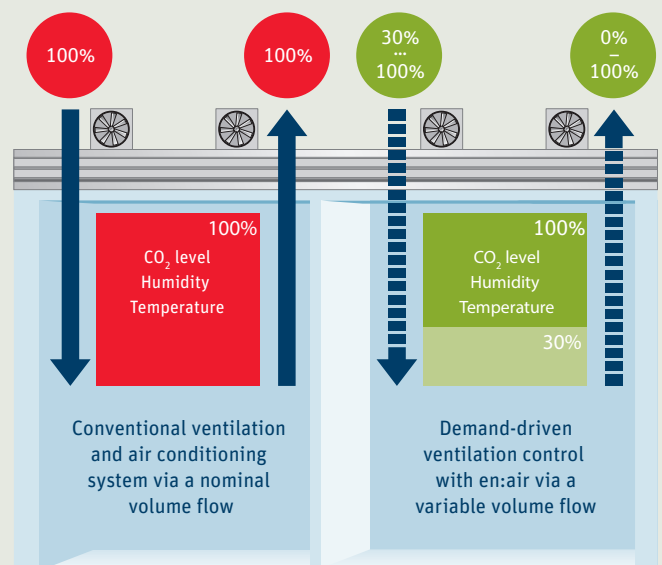
en:air prevents good-quality room air from being exhausted to the outside and replaced by fresh air that must then be heated or cooled in an energy-intensive process.

Perfect ventilation management ensures a comfortable indoor climate

Through fans or volume flow controllers, en:air regulates the volume flow for supply and exhaust air based on the CO₂ level, humidity and temperature – according to demand and separately from each other, while maintaining a balanced air volume in the room.

The result: The electrical and thermal energy requirements are significantly reduced. At the same time, a comfortable room climate is introduced with uniform temperature control and no air stratification.

Comparison of conventional vs. demand-driven ventilation with en:air



Our services at a glance

- Analysis of your existing air handling systems and determination of your individual savings potential based on existing system and building data
- Planning, installation and commissioning
- Remote maintenance on request and technical operation management

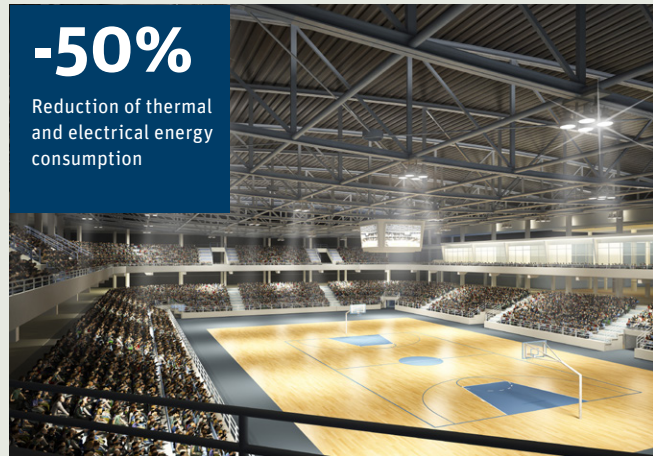
LONG-TERM

PROJECT EXPERIENCE

Benefit from our many years of expertise in demand-driven ventilation, implemented worldwide in new and existing buildings to meet a wide range of project requirements. The Kieback&Peter consulting team can reliably estimate the savings potential of implementing en:air in your HVAC system. Prepare to benefit from cost reductions that often exceed the average value of 30 percent.

Your advantages with en:air at a glance

- Reduction of energy costs by an average of 30 percent through demand-driven supply and exhaust air
- Reduction of CO₂ emissions: lower impact on the environment
- Comfortable indoor climate thanks to optimum mixing of supply and room air for a uniform temperature distribution
- Suitable for all ventilation systems with a fresh air component and almost all building types: sports halls, exhibition halls, event halls, universities, museums, swimming pools, cinemas, etc.



Case study: sports hall

The operator wished to optimize the energy consumption of a ventilation system that had already been in operation for 40 years. Thanks to the energy-efficient en:air solution from Kieback&Peter, thermal and electrical energy consumption was reduced by around 50 percent – while concurrently increasing user comfort and significantly reducing CO₂ emissions.

Kieback&Peter

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