SAUTER EGQ

Energy efficiency and pleasant room conditions
thanks to CO_2 measurement and demand-led ventilation.

SAUTER
Creating Sustainable Environments.

Dual-beam **CO_2 and temperature sensor** for energy savings of up to 60%.

Only an advanced room management system can provide the right conditions for effective working and living.

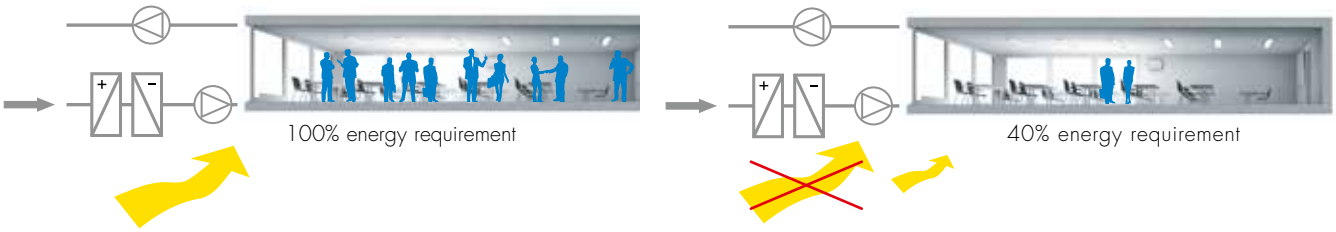
Apart from the temperature and the relative humidity, one of the main indicators of the quality of indoor conditions is the CO_2 content of the air. When the CO_2 level rises, the attention span of the occupants falls. Tiredness, loss of concentration, discontentedness and mistakes are the consequences.

Clear energy savings based on accurate CO_2 measurement (drift compensation).

The dual-beam method employed in the EGQ sensor for CO_2 and temperature practically eliminates any measurement error – which is caused by dust and pollution in the room air – and the effects of the ageing of the measuring system.

The results:

- Up to 60% of energy consumption is saved by a modern room control system (demand-led ventilation).
- Pleasant room conditions regardless of the number of occupants, the length of their stay, their activities and other heat sources in the room.



CO_2 facts and figures

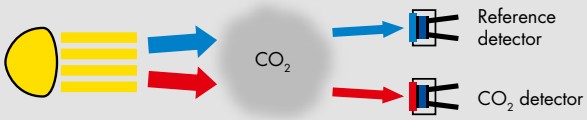
400 ppm	*Fresh, natural outdoor air*	
1000 ppm	*Recommended limit for indoor air according to Dr. Max Pettenkofer*	
>1000 ppm	*Tiredness and loss of concentration become noticeable. More mistakes are made, the ability to learn is impaired and productivity falls.*	*EN13779*
2000 ppm	*Maximum range of a selective CO_2 sensor according to the German Engineering Federation*	
5000 ppm	*Maximum workplace concentration (for CO_2)*	

Temperature and room climate firmly under control.

With an in-built feel-good factor: the dual-beam method used in the new CO_2 and temperature sensors makes it easy to control the CO_2 level in well-frequented rooms. With the single-beam method, rooms have to be aired (at no little cost) for 4-8 hours every two weeks, merely to compensate for the sensor's drift. On SAUTER's EGQ, the measuring signal is calibrated continuously; this is done automatically and at no cost, and is unaffected by ventilation intervals.

SAUTER sensor with dual-beam technology

Gas sensor with dual infra-red system of measurement:

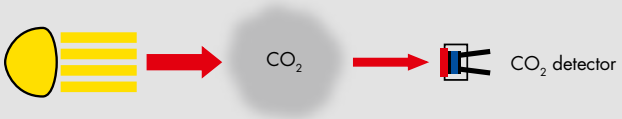


Advantages:

- *Two measuring channels with independent infra-red filters*
- *Reference channel compensates for drift*

Conventional sensor with single-beam technology

Gas sensor with infra-red system of measurement:



Disadvantages:

- *CO_2 detection uses the CO_2 wavelength only*
- *Drift compensation based on assumption*
- *Ageing, contamination and drift*
- *Unreliable compensation*

Ideal for buildings with constantly-changing occupancy levels, such as:

- Schools
- Restaurants
- Hospitals
- Airports
- Railway stations
- Foyers
- Conference centres
- Hotels
- Open-plan offices

Systems

Components

Services

Facility Services

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