

Systems

Components

Services

Facility Management

70011320003 W11

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**SAUTER**
Creating Sustainable Environments.



SAUTER EGQ

Energy efficiency and pleasant room conditions thanks to CO₂ measurement and demand-led ventilation.

Dual-beam CO₂ 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.

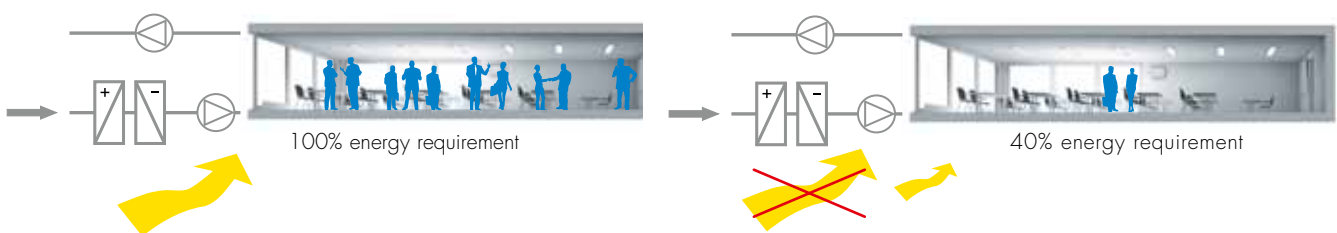
Apart from the temperature and the relative humidity, one of the main indicators of the quality of indoor conditions is the CO₂ content of the air. When the CO₂ level rises, the attention span of the occupants falls. Tiredness, loss of concentration, discontentedness and mistakes are the consequences.

Clear energy savings based on accurate CO₂ measurement (drift compensation).

The dual-beam method employed in the EGQ sensor for CO₂ 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.



CO₂ facts and figures

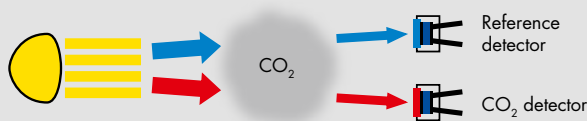
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|-----------|--|-----------|
| 400 ppm | Fresh, natural outdoor air | } EN13779 |
| 1000 ppm | Recommended limit for indoor air according to Dr. Max Pettenkofer | |
| >1000 ppm | Tiredness and loss of concentration become noticeable. More mistakes are made, the ability to learn is impaired and productivity falls. | |
| 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 CO₂ and temperature sensors makes it easy to control the CO₂ 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:

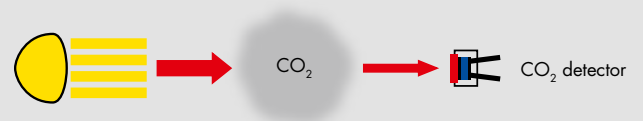


Advantages:

- 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:

- CO₂ detection uses the CO₂ wavelength only
- Drift compensation based on assumption
- Ageing, contamination and drift
- Unreliable compensation

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

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

