



si·mo e·VAV

The simple monitoring solution
for comfort and IAQ



Indoor Air Quality management
Airflows management
and monitoring

Wireless communication
(Smart Building)



Fresh air for the building, comfort, energy savings and air indoor quality

85%

On average, people spend 85% of their day in an enclosed space

5 to 8 times

Indoor air is more polluted than outdoor air

19 billions

Annual costs (in euros) due to poor indoor air quality

Indoor Air Quality (IAQ) is a major public health issue, especially in commercial buildings where people spend 85% of their time.

Indoor air pollution can impact both health and productivity. In France, poor IAQ costs approximately 19 billion euros per year.

It is therefore essential to ensure fresh air renewal for the health and comfort of occupants. Ventilation must be both adequately powered and adjustable based on actual needs.

Sources : OMS & OQAI 2024

Regulatory environment

The EN 15251 standard specifies the required airflow based on room type and occupancy.

It defines criteria for the indoor environment and the evaluation of building energy performance, covering indoor air quality, thermal comfort, lighting, and acoustics.

This standard applies to buildings where indoor environmental criteria are determined by human occupancy (e.g., houses, apartments, offices, educational buildings, hospitals, service buildings, etc.). It does not apply to spaces used for industrial or other process-related activities.

Category	Description
I	A high expected level, recommended for spaces occupied by highly sensitive and vulnerable individuals with specific requirements, such as people with disabilities, patients, very young children, and the elderly
II	A normal expected level, recommended for new buildings and renovations
III	A moderate and acceptable expected level, suitable for existing buildings.

Airflow requirements for pollutants emitted by the building (l/s/m²)

Category	Airflow per person (l/s/person)	Very low-emission building	Low-emission building	Other buildings
I	10 (36 m³/h/pers.)	0.5	1	2
II	7 (25 m³/h/pers.)	0.35	0.7	1.4
III	4 (14 m³/h/pers.)	0.2	0.4	0.8

The EN 16798-3 standard defines indoor air quality requirements for non-residential buildings. Considering the standard CO₂ concentration at 400 ppm, the standard classifies indoor air into four categories based on CO₂ concentration:

HIGH QUALITY < 800 ppm	IDA 1
GOOD QUALITY From 800 to 1 000 ppm	IDA 2
AVERAGE QUALITY From 1 000 to 1 400 ppm	IDA 3
POOR QUALITY > 1 400 ppm	IDA 4



e·VAV

Self powered VAV damper,
with integrated CO₂ sensor



Perfect for renovations!

Modular and easy to install in new constructions!

The simplest air quality control solution!

- No electrical wiring – no energy consumption
- Easy to install – no electrician required
- Modular solution: no upstream/downstream distance required

IAQ ★★★★★
Compliant with regulations and labels

Comfort ★★★★★
Acoustic comfort

Implementation ★★★★★
Quick implementation

Costs € €
saving on wiring

Gamme

e·VAV

Self powered and connected VAV damper.
Without sensor

e·VAV S

Self powered and connected VAV damper.
With HR, T° sensors

e·VAV QAI

Self powered and connected VAV damper.
With HR, T° and CO₂ sensor

Pack e·VAV QAI

Bundle of one eVAV QAI for the extraction,
one eVAV in slave mode for the supply and a
master/slave cable of 5 m.



Ø 125 mm



Ø 160 mm



Ø 200 mm



Ø 250 mm

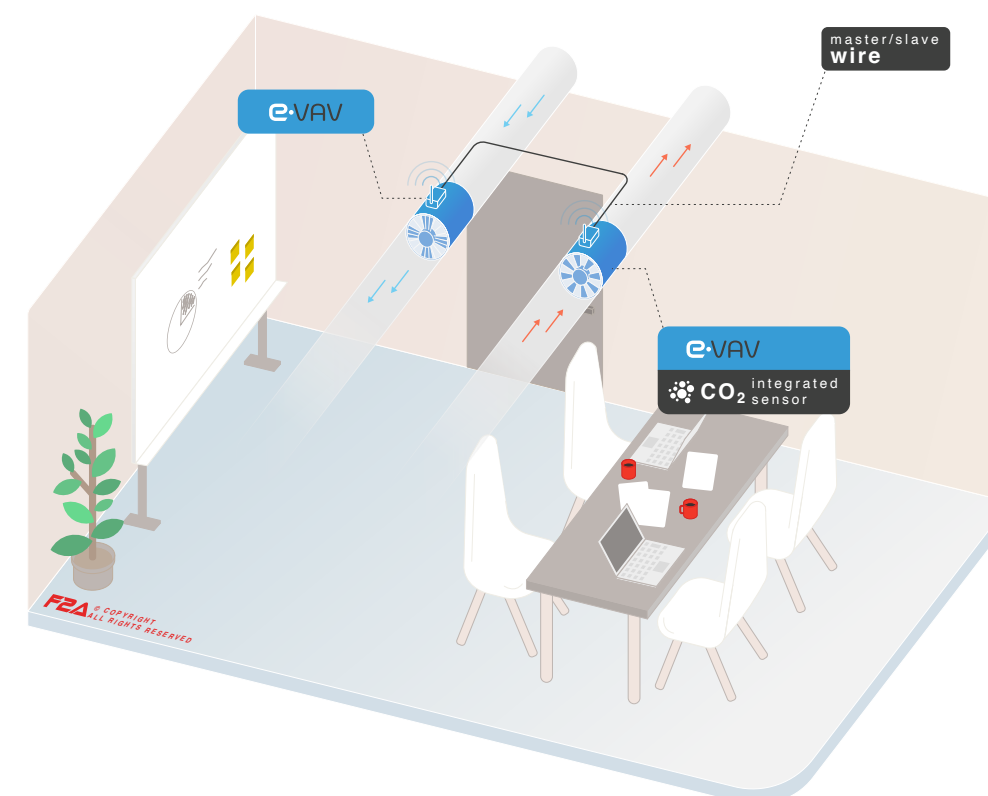
Aeraulic specifications

	Ø 125 mm	Ø 160 mm	Ø 200 mm	Ø 250 mm
Airflow min	30 m³/h	40 m³/h	110 m³/h	170 m³/h
Airflow max	220 m³/h	400 m³/h	600 m³/h	1 100 m³/h
Pressure range min-max	10 Pa - 250 Pa			

Wired master-slave controlled with integrated CO₂ sensor

Room-by-room air quality control with:

A damper with an integrated CO₂ sensor for exhaust, a secondary damper to balance supply airflow, and a master-slave cable for communication.



Accessories and on-site configuration tools:



Wired ambient CO₂ sensor
and occupancy detector



Wireless LoRaWAN room
CO₂ sensor and occupancy
detector



On-site configuration tool

si·mo

The simple monitoring solution
for comfort and IAQ

VAV system control becomes accessible
and simple without the need for a BMS
connection. Implementation and operation
are streamlined.

Available features :

- Flow rate summation
- VMC airflow integration
- Scheduling tables
- Free cooling
- Smart assistant tool for commissioning
and airflow balancing



SI-MO wireless controller, easy to install
and delivered ready to use



Air quality monitoring (T°, CO₂, RH) with
high-performance sensors:

- LoRaWAN CO₂ sensor
- LoRaWAN occupancy sensor



Airflow regulation with innovative and
wireless products

- Self powered VAV damper : eVAV
- Self powered VAV damper with integrated
CO₂ sensor : eVAV QAI
- VAV dampers equipped with a LoRaWAN
module : RCVS LoRa



si·mo your industrial
dedicated LoRaWAN VAV
controller!

- A LoRaWAN network with no
recurring fees
- Real control on indoor air
quality
- Remote data access
- Easy to use commissioning
assistant

CONTACT :

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A PROJECT, A QUESTION ?

F2A sites are based in France, our projects all over the world.

Our switchboard is open from Monday to Friday from 8 am to 5:30 pm.

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