



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.

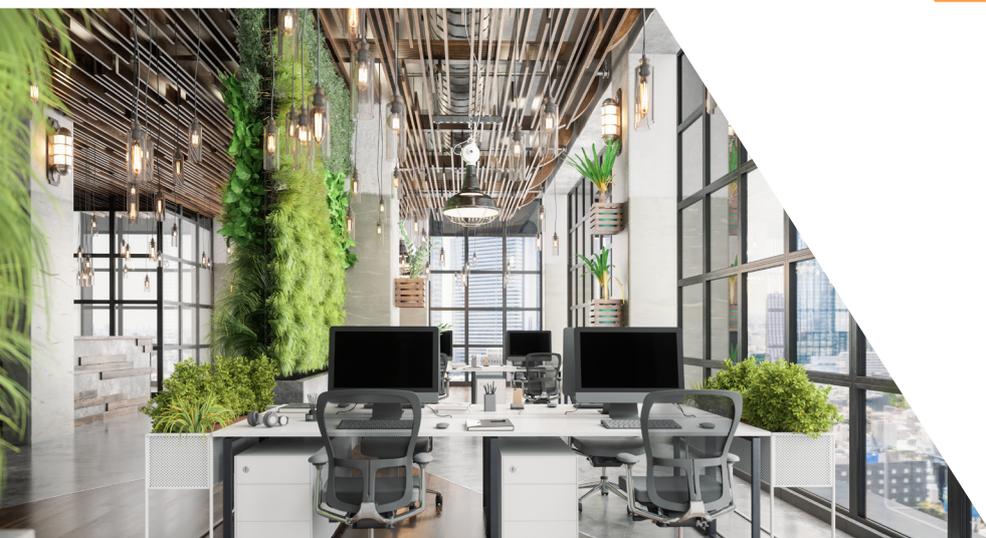
This standard applies to buildings where indoor environmental criteria are determined by human occupancy (e.g., houses, apartments, offices, educational buildings, hospitals, service buildings, etc.). It does not apply to spaces used for industrial or other process-related activities.

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)

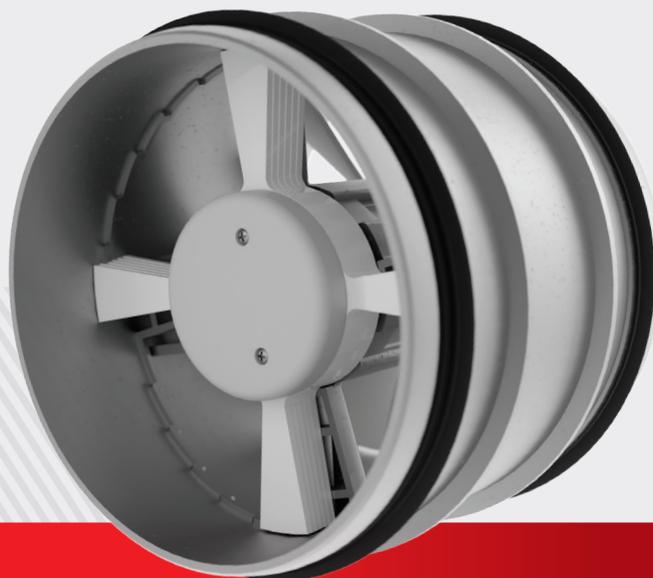
Category	Airflow per person (l/s/person)	Very low-emission building	Low-emission building	Other buildings
I	10 (36 m ³ /h/pers.)	0.5	1	2
II	7 (25 m ³ /h/pers.)	0.35	0.7	1.4
III	4 (14 m ³ /h/pers.)	0.2	0.4	0.8

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:



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.



4 sizes available

- Ø 125 mm
- Ø 160 mm
- Ø 200 mm
- Ø 250 mm

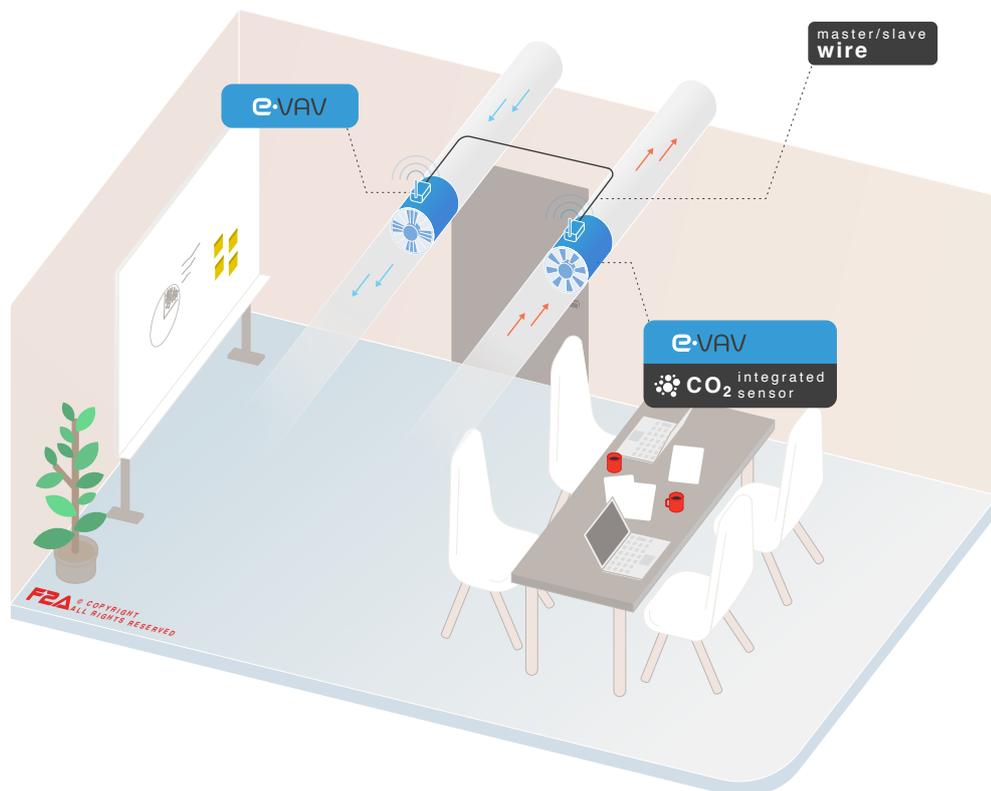
/// Aeraulic specifications

	Ø 125 mm	Ø 160 mm	Ø 200 mm	Ø 250 mm
Airflow min	30 m ³ /h	40 m ³ /h	110 m ³ /h	170 m ³ /h
Airflow max	220 m ³ /h	400 m ³ /h	600 m ³ /h	1 100 m ³ /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

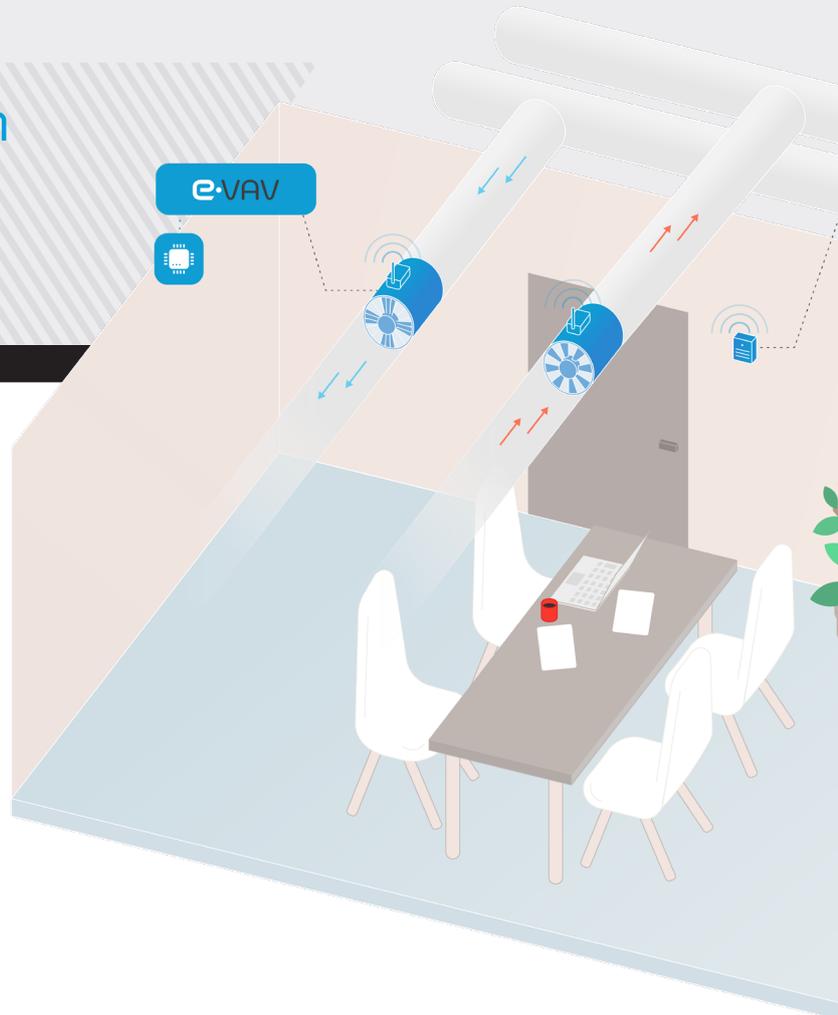
si·mo

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:

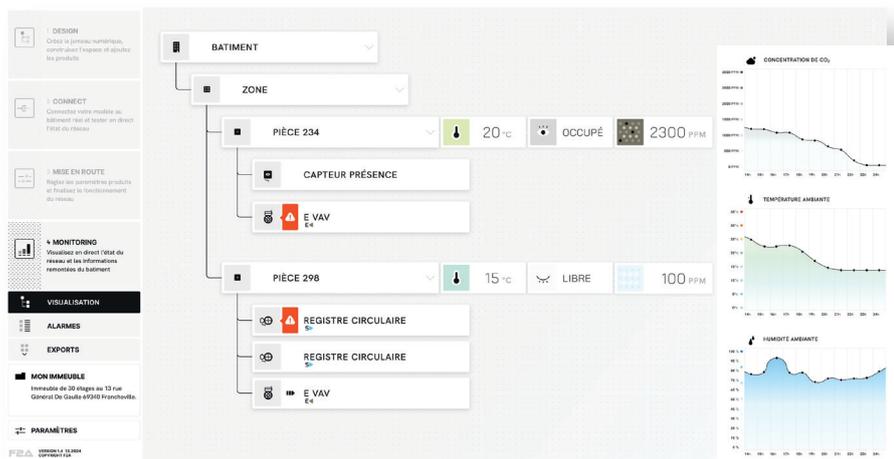
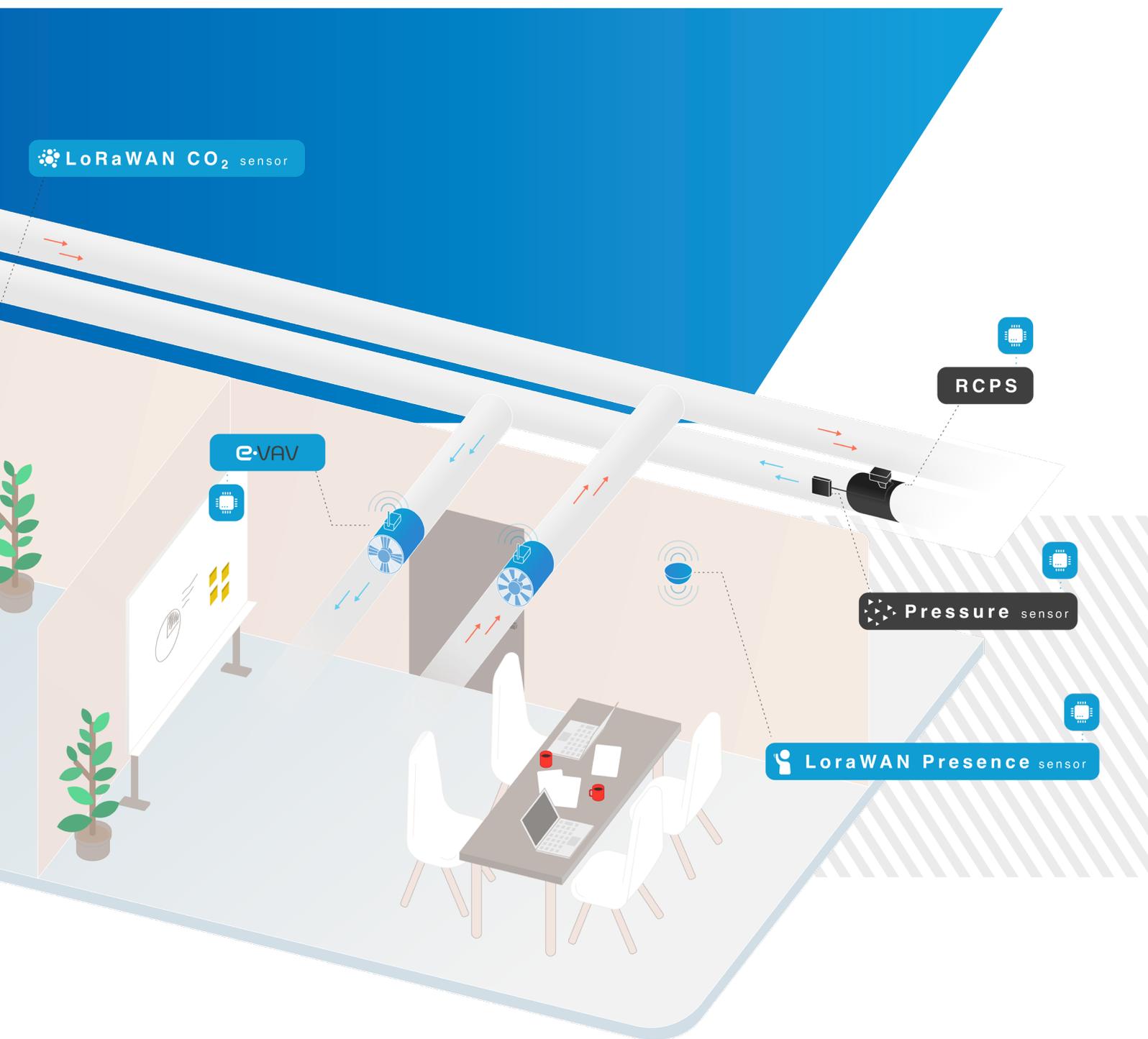
- LoRaWAN CO₂ sensor
- LoRaWAN occupancy sensor



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

LoRaWAN CO₂ sensor



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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