CONTACT :

CONTACT :

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.

GENERAL AND COMMERCIAL MANAGEMENT
1214 rue des Chartinières
01120 Dagneux - France
TEL: +33 (0)4 78 06 54 72

F2A TEXTILE FACTORY
70 impasse des Barmettes
Parc d'activité des 2B
01360 Béligneux - France

F2A ACOUSTIC FACTORY
Allée des Princes
01120 Dagneux - France

F2A AIR MANAGEMENT FACTORY
Zone Industrielle n°1
La Fourcadière
61300 Saint Ouen sur Iton - France

1214 rue des Chartinières - 01120 Dagneux - France
+33 4 78 06 54 72 / export@f2a.fr / www.f2a.fr

si·mo e·VAV

The simple monitoring solution
for comfort and IAQ

Indoor Air Quality management
Full airflow 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.

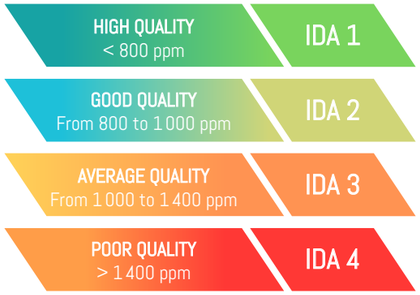
This standard applies to buildings where indoor environmental criteria are determined by human occupancy (e.g., houses, apartments, offices, educational buildings, hospitals, service buildings, etc.). It does not apply to spaces used for industrial or other process-related activities.

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	14
III	4 (14 m3/h/pers.)	0.2	04	0.8

The EN 16798-3 standard defines indoor air quality requirements for non-residential buildings. Considering the standard CO_2 concentration at 400 ppm, the standard classifies indoor air into four categories based on CO_2 concentration:



e·VAV

Self powered VAV damper, with integrated CO_2 sensor

IAQ ★★★★
Compliant with regulations and labels

Comfort ★★★★
Acoustic comfort

Implementation ★★★★
Quick implementation

Costs € €
saving on wiring

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**

Gamme

e·VAV
Self powered and connected VAV damper.
Without sensor

Ø 125 mm

Ø 160 mm

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 CO_2 sensor

Ø 200 mm

Ø 250 mm

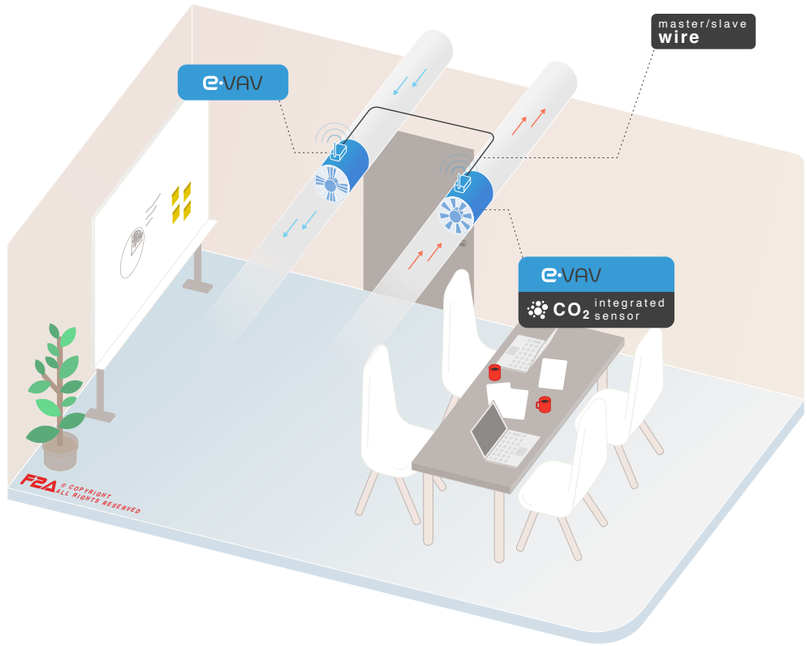
Pack e·VAV QAI
Bundle of one eVAV QAI for the extraction, one eVAV in slave mode for the supply and a master/slave cable of 5 m.

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 CO_2 sensor

Room-by-room air quality control with:
A damper with an integrated CO_2 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 CO_2 sensor and occupancy detector

Wireless LoRaWAN room CO_2 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°, CO_2, RH) with high-performance sensors:

- LoRaWAN CO_2 sensor
- LoRaWAN occupancy sensor

Airflow regulation with innovative and wireless products

- Self powered VAV damper : eVAV
- Self powered VAV damper with integrated CO_2 sensor : eVAV QAI
- VAV dampers equiped 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