



AERAULIC & ACOUSTIC SOLUTION



f2a.fr



Why choosing F2A ?

F2A is a French manufacturer specialised in the design and manufacture of high quality air treatment, ventilation and acoustics solutions. Our main mission is to propose efficient products that improve indoor acoustic comfort and air quality in compliance with regulatory requirements.

F2A is structured around three pillars to fulfil this mission:

SERVICES:

- Design support until the building is commissioned
- Specialised teams for each application and market
- Digital tools to help you choose and size your products

INNOVATION:

- Engineering and R&D offices in all our plants
- Digital design tools
- Product testing and qualification systems

QUALITY:

- ISO 9001 and 14001 certifications
- Independent laboratories to assist and certify the quality system
- Lean Manufacturing approach in all production sites

Our solutions and products are for all professionals involved in HVAC engineering:

- Design offices
- Manufacturers and integrators of ventilation systems
- Installers
- Retailers

Our commitment is based on the best possible technical and economic response, combined with the highest level of service quality in our different markets in France and abroad.

We have developed unique expertise, enabling us to propose efficient solutions for the problems and challenges of a range of French and international market segments.

This expertise and our experience (almost 30 years) in product manufacturing mean we can propose reliable, long-lasting products, while maintaining the budget control that is essential in highly competitive environments.

Our unique expertise is reflected in our solutions and products:

Acoustic expertise, attenuating sound pollution generated by ventilation systems

Changes in regulations and standards result in increasingly strict acoustic requirements in buildings, pushing all stakeholders to respect stringent demands in terms of noise levels.

Consulting services based on our aeracoustic expertise enable the production of increasingly detailed studies by specialist design offices and help HVAC engineering installers to meet the expectations of prime contractors.

We strive to propose the optimal acoustic solution, based on the technical and economic information of each project.

We propose a full range of splitters, rectangular and circular silencers, whose performance has been validated by independent laboratories, to meet prime contractor requirements.

Aeracoustic expertise, ductwork air control and air distribution

- Balancing, isolating and securing ventilation and smoke control networks with a wide range of dampers to fulfil multiple criteria (pressure, speed, airtightness, corrosion resistance, etc.)

- Optimised air distribution for guaranteed comfort with customised manufacture of textile ducts to meet the needs of end customers
- Absorption of the movements due to the vibrations and thermal dilatations of ventilation ducts with customised manufacture to suit your requirements (shape, dimensions, fixing systems, environment of use, type of fluids carried, etc.) thanks to our expertise in textile materials and design techniques.

Finally, we make a continuous effort to ensure the development and improvement of our products and new innovations. Good knowledge of the markets and a regulatory watch activity enable us to propose innovations to follow the changes in building use and the needs of end customers:

- The new smart energy self-sufficient autonomous damper, e.VAV, places control of air quality at the heart of smart building design
- The Texi Move textile duct optimises air distribution according to the operating mode of the air treatment system



Services

A good knowledge of the market and close relationships with our customers have enabled F2A to develop a range of services to provide technical assistance and support throughout the project life cycle, along with digital tools to simplify project design.

ACOUSTIC STUDIES:

Our acoustic experts perform dynamic acoustic studies, taking into account all the elements of the ventilation networks and possible accidents, using our own on-line software: Aircoustic, the result of more than 20 years' experience. Aircoustic was developed by acoustic engineers based on specialist publications on acoustics applied to aerualics: ASHRAE – VDI 2081 – Norm NF EN 12354-5.

Our Aircoustic study tool, combined with our database, means we can consider all the elements of ventilation networks and the characteristics of the rooms concerned:

- Acoustic spectra at the point of equipment operation (airflow and pressure)
- Ventilation networks: shapes and lengths
- Acoustic signature (attenuation, regeneration) of each element: dampers, backdraught dampers valves, louvres grilles, valves outlets, etc.
- Characteristics of the rooms to be serviced: geometry, reverberation time, etc.
- Positioning of the blowing and intake units

By integrating these parameters for each branch of the ventilation network, our acoustic experts can determine the acoustic solutions that will guarantee the regulatory sound limits for your project, while optimising the aerualic performance of the network.



Control measures for site commissioning

e-sonie ON-LINE SIZING TOOL

- Freeware, accessible to all: <http://esonie.f2a.fr>
- Quick and easy tool for sizing and selecting rectangular or circular silencers in the early design phase
- Detailed acoustic characteristics of our range of variable airflow dampers
- Interaction with our on-line configuration software, F2Air, for an immediate cost estimate

F2AIR ON-LINE CONFIGURATION TOOL

- The full range available on-line for configuration and cost estimates
- Prices that correspond to your discount rates
- Link with our sizing tool, e.sonie, to combine the technical solution with an economical proposal
- Direct contact with our ERP to simplify order entry and tracking

BIM OBJECT LIBRARY

- Our full range is available in all formats and IFC export
- Objects can be downloaded from www.f2a.fr or www.bimanco.com
- Direct availability of objects in REVIT, ARCHICAD and Sketchup software
- Technological watch and continuous updating of object properties via the collaborative BIM&Co platform

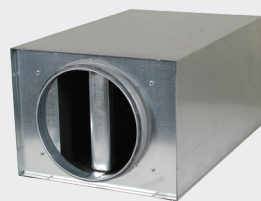


ACOUSTIC

A full range of splitters, rectangular and circular silencers whose performances are approved by independent laboratories according to the ISO 7235 standard.

The advice of HVAC experts and acoustic engineering

Commercial buildings applications



PREMIUM range, silencers with circular connections

Minimum space requirements for maximum performances

Dimensions: Ø 100 to 500 mm

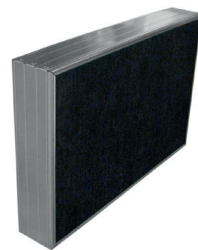
Length: 600 et 1000 mm

Casing: galvanized steel (1 mm)

Connection: male, airtightness class C minimum

Soundproofing: mineral wool with anti-erosion fiberglass layer on the surface

PREMIUM +: version with a central splitter to enhance the attenuation
Dimensions : Ø 100 to 500 mm



SONIE BS+ high performance acoustic splitters

High performances with a lighter construction

Rounded edge frame: galvanized or stainless steel, aluminium

Soundproofing: water-repellant mineral wool panel

Anti-erosion protection: fiberglass silk layer

Fire classification: A2-s1-d0 (M0)



Clean rooms applications



SONIE BL clean rooms acoustic splitters

Anti-erosion fiberglass silk protection to ensure ductwork hygiene

Thickness: 50, 100, 200 and 300 mm

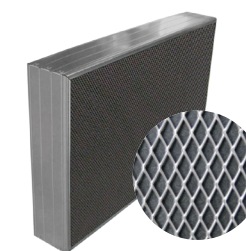
Rounded edge frame (optimized pressure losses): galvanized or stainless steel, aluminium

Soundproofing: water-repellant mineral wool panel

Anti-erosion protection: high sensity fiberglass silk layer

Fire classification: A1

Smoke exhaust applications



SONIE BD+ high performances acoustic splitters 400°/2h

A certification for smoke control systems

Dimensions: custom-made in 5 thickness

Rounded edge frame: galvanized or stainless steel, aluminium

Soundproofing: water-repellant mineral wool panel

Anti-erosion protection: in spread metal sheet

Fire classification: A2-s1-d0 (M0)



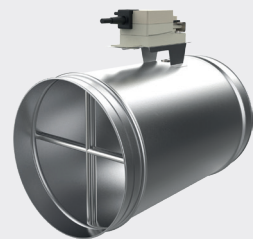
AIR MANAGEMENT

Today, F2A's range of products provide technical solutions for all standard applications. Offices buildings, laboratories, schools, hotels and even the world's largest metros are equipped with F2A systems for air handling

Commercial buildings applications

Constant or variable air volume dampers range, rectangular and circular

F2A technical teams help you for the design of your variable airflow system (selection of products, acoustic studies, optimization of the aeraulic functioning)



Airflow regulator RCVS Pressure regulator RCPS

Dimensions: Ø 100 to 630 mm
Actuator: analog or communicating
Airtightness: class 3C according to EN1751

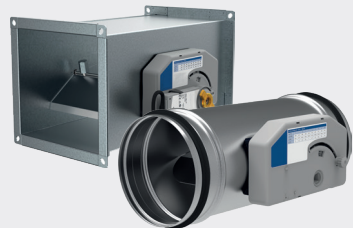
Connection: EPDM gasket
Construction: galvanized steel
Acoustic enclosure: option



Airflow regulator RRVS Pressure regulator RRPS

Dimensions: 200x100 to 1000x1000 mm (pitch 50 mm)
Actuator: analog or communicating
Airtightness: class 3C according to EN1751

Connection: upstream/downstream flanges
Construction: galvanized steel
Acoustic enclosure: option



Constant air volume damper RCC and RRC

Dimensions: Ø 80 to 400 mm
200x100 à 600x600 mm
Airtightness: class C according to EN1751

Connection: EPDM gasket (RCC)
Upstream/downstream flanges (RRC)
Construction: galvanized steel
Acoustic enclosure: option



Motorized circular damper RC

Dimensions: Ø 80 to 400 mm
Airtightness: class C, 3C or 4C according to EN1751
Connection: upstream/downstream flanges

Construction: galvanized steel
Actuator: on/off 0..10V, auxiliary switches, spring return



e-VAV

Connected end energy self-sufficient vav damper

Dimensions: Ø 125 mm, Ø160, Ø200, Ø250
Airtightness: class 3 according to EN1751
Connections: EPDM gasket
Communication: LoRaWAN (wireless)

Indoor air quality control
Energy self-sufficient damper
At the heart of the smart building

Actuator and pressure control accessories



Actuator

Connection of the variable airflow system to the BMS, Building Management System

Analog (0..10V)
Power supply: 24V
Communication: Modbus RTU, BACnet MS/TP or LonWorks



CO₂ sensor

Direct control of the pressure controller airflow possible

Measurement: ambient or in ductwork
Pressure range: 0 to 2000 Pa
Power supply: 24V AC/DC



Pressure controller

Control pressure in air ductwork

Pressure range: 0 to 2500 Pa
Power supply: 24V AC/DC



Temperature controller

Control temperature and/or air quality (CO₂ rate)

Communication: Modbus RTU (RS 485)
Power supply: 24 V AC/DC

Smoke exhaust applications

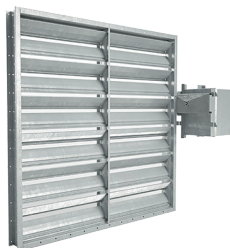


MSD

Tested 40°/2h in independent laboratory

Pressure: 3000 Pa for a 1m length

Upstream/downstream leakage rate: MOD Class 1 according to NF EN 1751 / MSD Class 3 according to NF EN 1751



MSD-F

Certified according to EN 12101-8

Marking: E₆₀₀ 120 (v_{ew} h_{ow} i o) S 500C₁₀₀₀₀ MA single

Upstream/downstream leakage rate: Class 3 according to NF EN 1751



Industrial and clean rooms applications



MRO - MKO / MRS - MKS

A certification for smoke exhaust systems

Volume control damper and shut-off damper

Designed to shut-off and mechanically balance ventilation ductworks in industrial applications.

Operating temperature: -50°C to +300°C

Pressure resistance: up to 10 000 Pa

FLEXIBLE CONNECTIONS

Commercial buildings applications

Quick and easy installation to guarantee the airtightness of the ductwork



Airtight circular sleeve MCE

Dimensions: Ø 100 to 710 mm

Installation: integrated clamping ring

Airtightness: class C according to EN15727, ensured by EPDM gasket at both ends

Materials: fiberglass fabric coated with silicone A2-s1-d0 (M0) or polyester fabric coated with PVC equivalent Euroclass B (not classified or B-s2-d0 (M1))

Operating temperature: from -20°C to +90°C

Pressure resistance: -750 Pa as negative pressure, 2000 Pa as positive pressure



Airtight framed sleeve Elyt+

Dimensions: 240x240 à 2200x2200 mm

Installation: Galvanised steel profiled bars, width 30 mm

Airtightness: class B or C according to EN15727, ensured by a EPDM gasket

Material: polyurethane coated fiber glass fabric (A2-s1-d0) (M0) or PVC-coated polyester (not classified or B-s2-d0 (M1))

Operating temperature: -20°C to +110°C

Pressure resistance: 2000 Pa as positive pressure and negative pressure

Industrial applications

Custom-made manufacturing to fit all requirements



Flexible sleeve ELYFORM

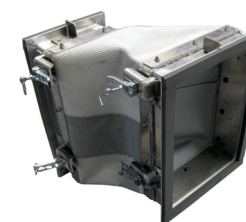
Fabrics: fabrics available for all types of application (Anti-static, anti-abrasive, anti-corrosive, ATEX, food industry)

Connections: depending on the application, all connection types are possible (Smooth edges, 90° edges, hemmed edges with flanges, clamping collars,...)

Airtightness: class A to D according to EN15727

Pressure resistance: up to 0,5 bar

Operating temperature: -50°C to +600°C



Compensator ELYTOP

Fabrics: complexing of different technical fabrics in order to respond to the constraints of temperature and the fluid conveyed

Connections: depending on the application, all connection types are possible (Smooth edges, 90° edges, hemmed edges with flanges, clamping collars,...)

Filling: mineral wool or needle-punched glass cloth of glass E

Pressure resistance: up to 0,5 bar

Operating temperature: -50°C to +600°C

TEXTILE DUCTS

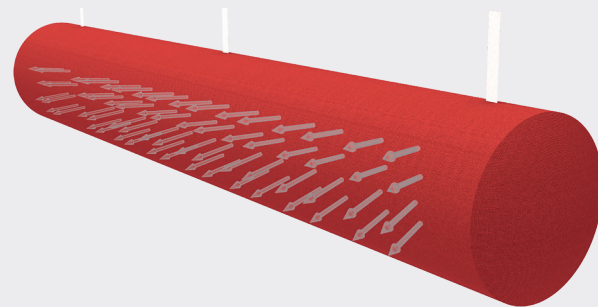
Diffusion through porous Texi Soft duct

Low speed air diffusion

The porous textile duct is designed to diffuse air at a very low speed ($<1\text{m/s}$) through a porous fabric on part or on the whole duct.

Its operating mode is particularly **suitable for cooling and air conditioning in low-ceilinged rooms** with a short air throws.

The very low residual air velocities enable the air distribution of the process and of the people located under the duct, without any feeling of draught and thus with an optimal comfort.



Climatic mode: cooling
Height under duct: $< 4\text{ m}$
Lateral spans: $< 3\text{ m}$
Available fabrics: polyester, not classified and B-s2-d0 (M1).
Special recommendations: porous duct requires upstream filtration. We recommend at least a F7 filtration
Applications: most use for porous duct is in laboratories and clean rooms, mainly for air conditioning.

Diffusion by induction Texi Jet duct

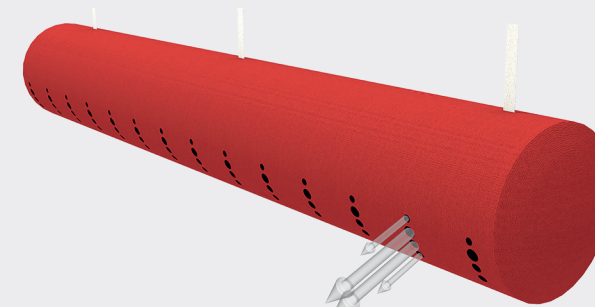
High speed air diffusion

This textile duct working with induction is designed to diffuse air at high speed ($7 < V < 15\text{ m/s}$) through perforations rows determined according to your project.

Its high induction rate (>20) enables to work with high temperature gradients while controlling the residual air velocities and thus to ensure an optimal comfort

The high speed air ejection strongly limits the clogging of the duct

It offers **an excellent air distribution for the process as well as the people, whatever the climatic mode.**



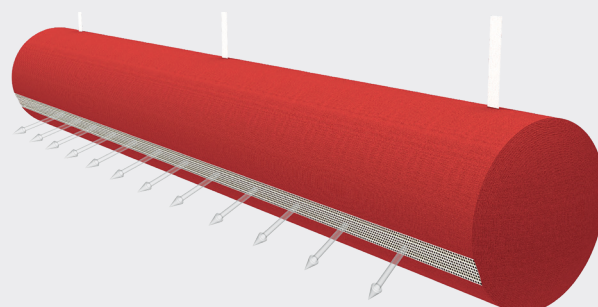
Climatic mode: heating, cooling, reversible
Height under duct: $> 4\text{ m}$
Lateral spans: $> 6\text{ m}$
Available fabrics: all F2A fabrics
Applications: induction duct can be used for most applications

Diffusion through slots Texi Pulse duct

Medium speed air diffusion

This textile duct with slots is designed to diffuse air at a very medium speed through diffusing slots that are sized according to your project.

Its operating mode is particularly **adapted to the treatment of medium height premises ($<4\text{m}$)** and for air throws that do not exceed 7m. The principle of the slotted duct, based on a high induction rate and the use of the Coanda effect, enables an efficient destratification of the air and a homogeneous distribution of the clean air in the room.



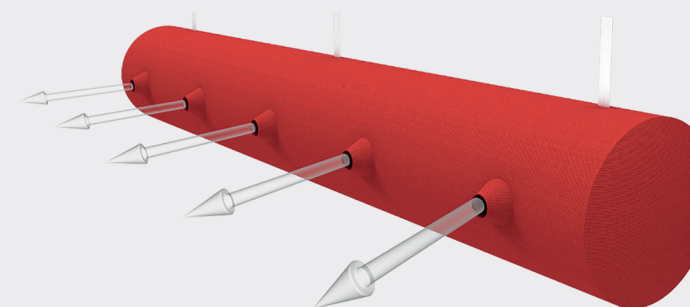
Climatic mode: heating, cooling, reversible
Height under duct: $< 4\text{ m}$
Lateral spans: between 3 m and 7 m
Available fabrics: polyester or PVC, not classified and B-s2-d0 (M1).
Applications: most use for slotted duct is in commercial buildings, and food industry

Diffusion by conical nozzles Texi Buz duct

Very high speed air diffusion

This textile duct is designed to diffuse air at very high speed ($15 < V < 25\text{ m/s}$) through conical nozzles sized according to your project.

This technique offers an air diffusion **efficiency for very high premises ($> 10\text{m}$) and for long air throws**, even with a low air change rate. Based on very high induction rate, it enables an excellent comfort level and a good control of residual speeds.



Climatic mode: heating, cooling, reversible
Height under duct: $> 10\text{ m}$
Lateral spans: $> 10\text{ m}$
Available fabrics: all F2A fabrics
Applications: nozzles duct can be used for most industrial in logistics applications

F2A IS ALSO

Circular silencers

Thickness of acoustic insulation: 50 or 100 mm

Connection: connection with EPDM seal to ensure airtightness

Diameter: 100 to 1250 mm

Versions with central splitter



Confort range



Optimum range



Optimum 100XL

Duct accessories

Clamping accessories



CF



BC



BP



CS

Suspension accessories

Rectangular damper U and PL range



U



PL

Balancing or shut-off dampers for commercial buildings applications

Airtightness: from class 0 to class 4 according to EN 1751

Actuation: linkage or gear wheels

Finition: galvanized, stainless steel or aluminium

Dimensions: 200x100 à 2000x2000

Weather louvres

External wall mounting and dedicated to commercial buildings applications

For air intake or air exhaust

Sand-trap louvre

Anti-bird mesh

Galvanized, stainless steel or aluminium

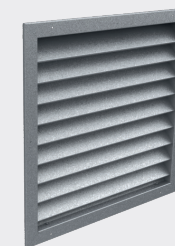
Assembly of louvres for large dimensions



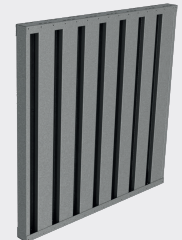
GH



GA



GB



GS



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 ACOUSTIC FACTORY

Allée des Princes
01120 Dagneux - France

F2A TEXTILE FACTORY

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

F2A AIR MANAGEMENT FACTORY

Zone Industrielle n°1
La Fourcadière
61300 Saint Ouen sur Iton - France

