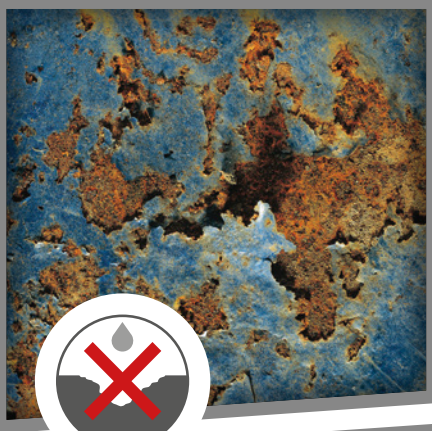
STANDARD AIR
TEMPERATURE

ATEX
FANS

SMOKE
EXTRACTION



ANTICORROSION

HIGH TEMPERATURE
UP TO 300°C

PRODUCT OVERVIEW

DYNAIR®
INDUSTRIAL VENTILATION
La ventilazione professionale made in Italy

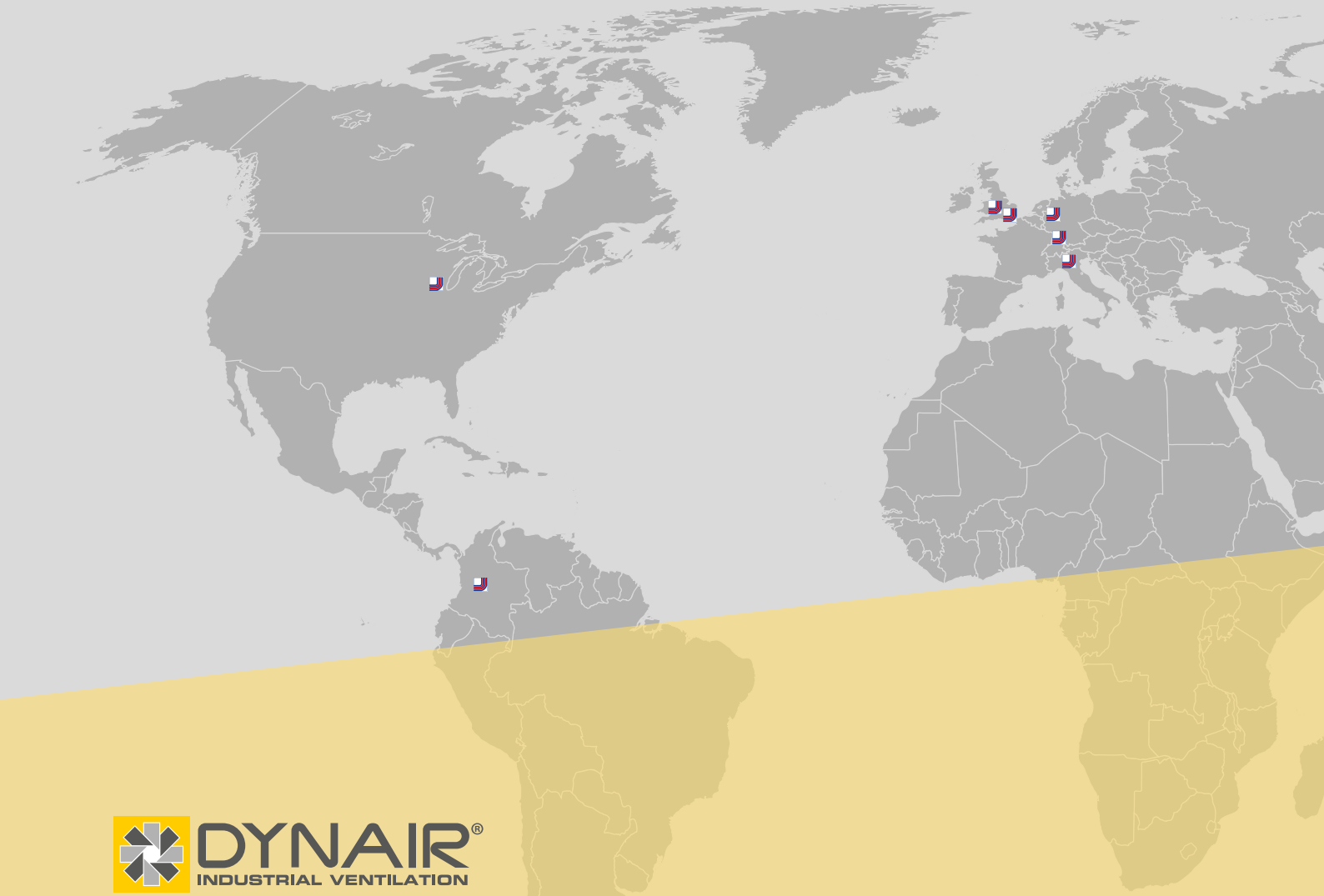
Technology and expertise for
professional ventilation

MAICO GROUP

MANUFACTURING FACILITIES IN THE WORLD

Our mission is to provide better air distribution services every day. We achieve this by offering a wide range of well-designed, functional ventilation products that serve local market needs.

Maico products can be found in many countries and are sourced from local production facilities or manufactured in regional factories. In this way, we can ensure the delivery of the promised goods in the required quality.
We are promoting continuous growth by pushing development and impressing customers with our innovative products.



DYNAIR® INDUSTRIAL VENTILATION

The path followed by DYNAIR® is part of the history of a large German industrial group, which started as early as 1928, the year when Christian Maier set up Maico Elektroapparate. Since then, the group has been able to build up a well-established industrial reality and to acquire the technological and commercial know-how which has allowed it to become one of the top names in the ventilation industry. In the last few years, the group focus to grow on a global level has been speeded up and materialised with important investments in emerging markets: a culturally exciting and highly promising scenario.

DYNAIR®, as a brand-division of Maico Italia S.p.A., is a well-known brand name at global level in the industrial ventilation and plant engineering sector. Technological expertise, high production capacities, strong research and investment policies together with a personalised back-up service focused on customer needs have been , for over 35 years, the qualities **that distinguish our company.**

TAILORED VENTILATION SOLUTIONS

The quality of the air we breathe and the safety of our working and living environments are the inspiration behind the study and production of our fans.

Our business organisation is characterised by strong coordination and cohesion in throughout every one of its stages. Every department operates in a productive system that works as a large, **efficiency-oriented organisation at your service.**

DYNAIR®
INDUSTRIAL VENTILATION

DESIGN

The design process is entrusted to **highly-qualified technicians and designers** who are ready to satisfy your real needs with state-of-the-art products and solutions, designed in compliance with existing regulations.

TECHNICAL & COMMERCIAL SUPPORT

An extensive commercial network and a team of 20 commercial experts and back-office assistants at your service to listen and provide you with pre- and after-sales support.

LOGISTICS

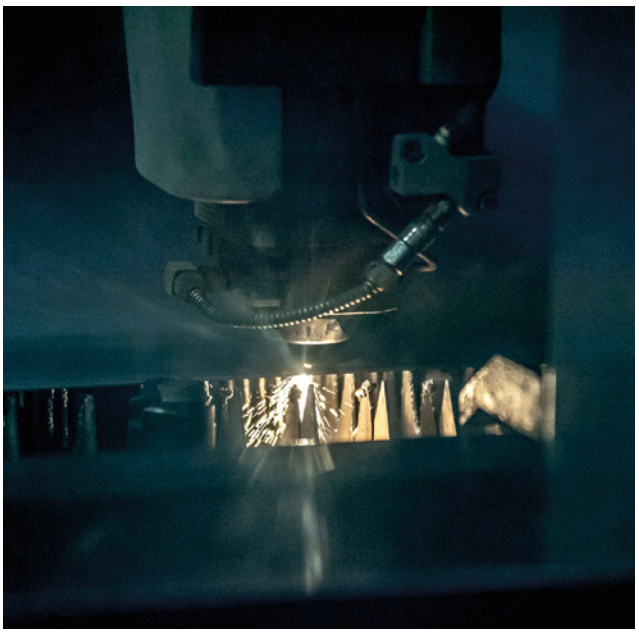
Strategic partnerships with suppliers, extensive warehouses, meticulous quality control of incoming goods and punctual shipping form the perfect cogs of a logistical **process that guarantees efficiency and rapid delivery.**

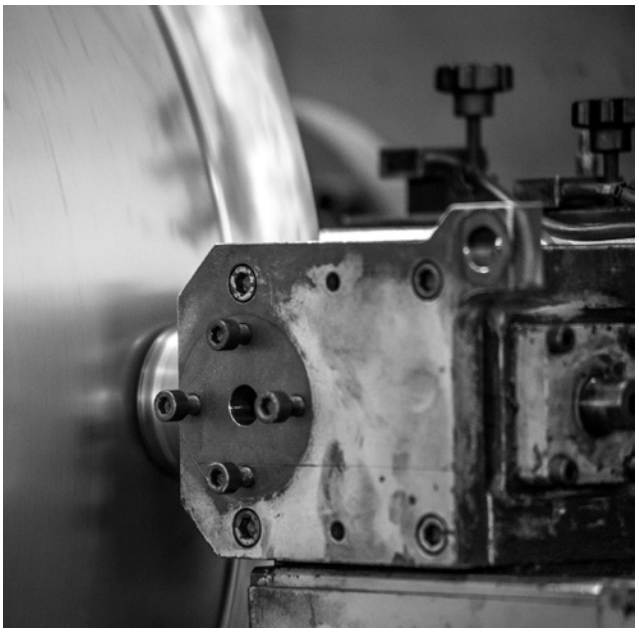
PRODUCTION

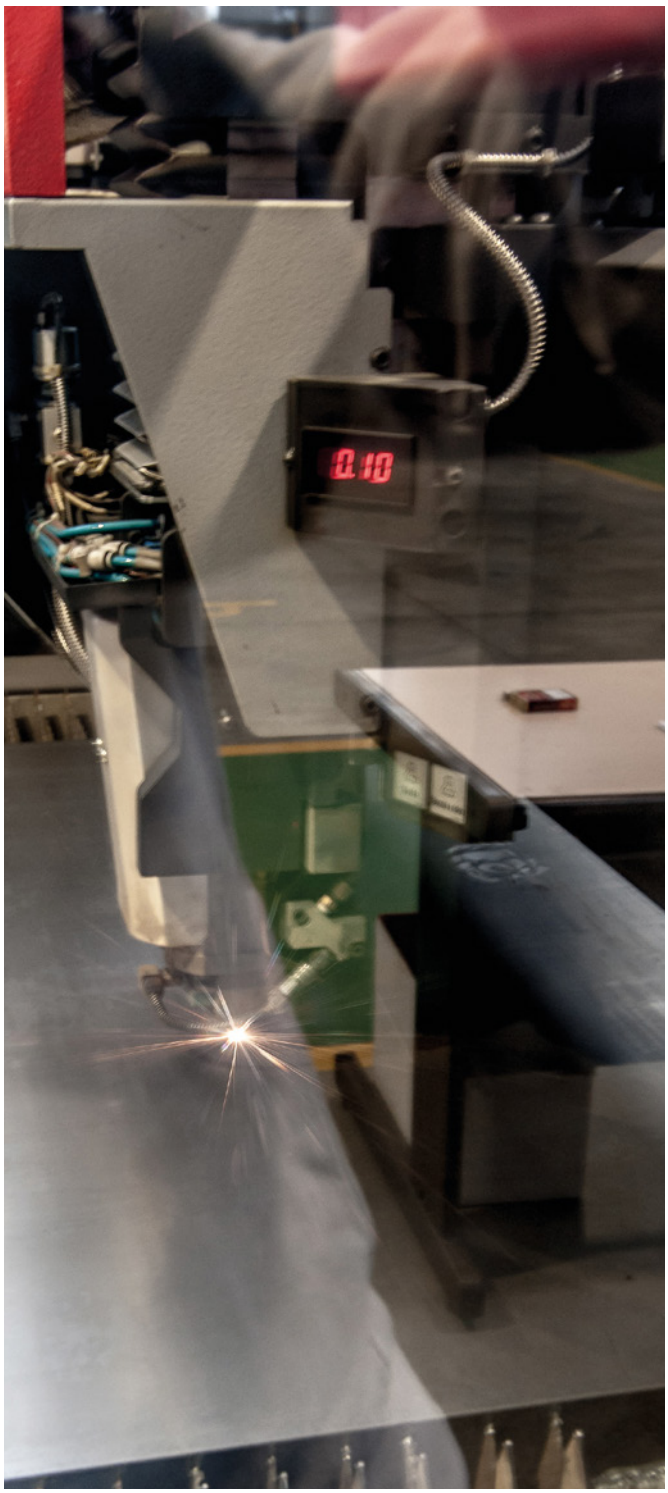
100% made in Italy, our products comply with the strictest international regulations in terms of safety and efficiency. We guarantee the production of **customised ventilation units with quality standards tested in every stage of the process.**

R&D

Continuous technical innovation, research into new functions and tests of conformity with existing regulations: **our research and development department is the beating heart of our business.**







We monitor the whole manufacturing process, step-by-step, from design to delivery.
Punctual pre- and after-sales service has always been our great strength, as well as rigorous yet flexible logistics that enable us to operate as leaders in highly competitive markets.

DYNAIR® overview

DYNAIR® fans are the results of a detailed and constant R&D activity which is vital for the purpose of both promoting continuous technological innovation and guaranteeing the efficiency and compliance with current regulations. The complete range is designed and produced in conformity with the latest norms, especially focusing on Safety.
All our production is 100% Made in Italy.
The application fields of DYNAIR® fans cover a wide range of sectors: from chemistry and jewellery laboratories to galvanic and metal treatment systems, from petrochemical industry to environment purification systems, from corrosive and dangerous fumes to ATEX ventilation. We have a **wide reference list of projects at the international level:**

- Electrical power stations
- Oil rafineries
- Off-shore oil platforms
- Natural gas treatment stations
- High speed railways
- Underground metro stations
- Chemical industries
- Waste and sewage treatment
- Recycling plants
- Smoke evacuation in case of fire
- Underground car parks
- Ship building and maintenance
- Telecommunication
- Public buildings
- Shopping malls

Standards

DYNAIR® is working in accordance with the following standards:

Quality

ISO 9001:2015 Quality management system
ISO 45001:2018 Health and safety management system
Both certifications are monitored by CSQ. Certificates are available on www.dynair.it

CE marking

The CE marking is a mandatory conformity mark within the European Economic Area. The whole Dynair production is CE marked, which means that as a producer, Maico Italia asserts that the fans meet all the essential requirements of the relevant European Directives.

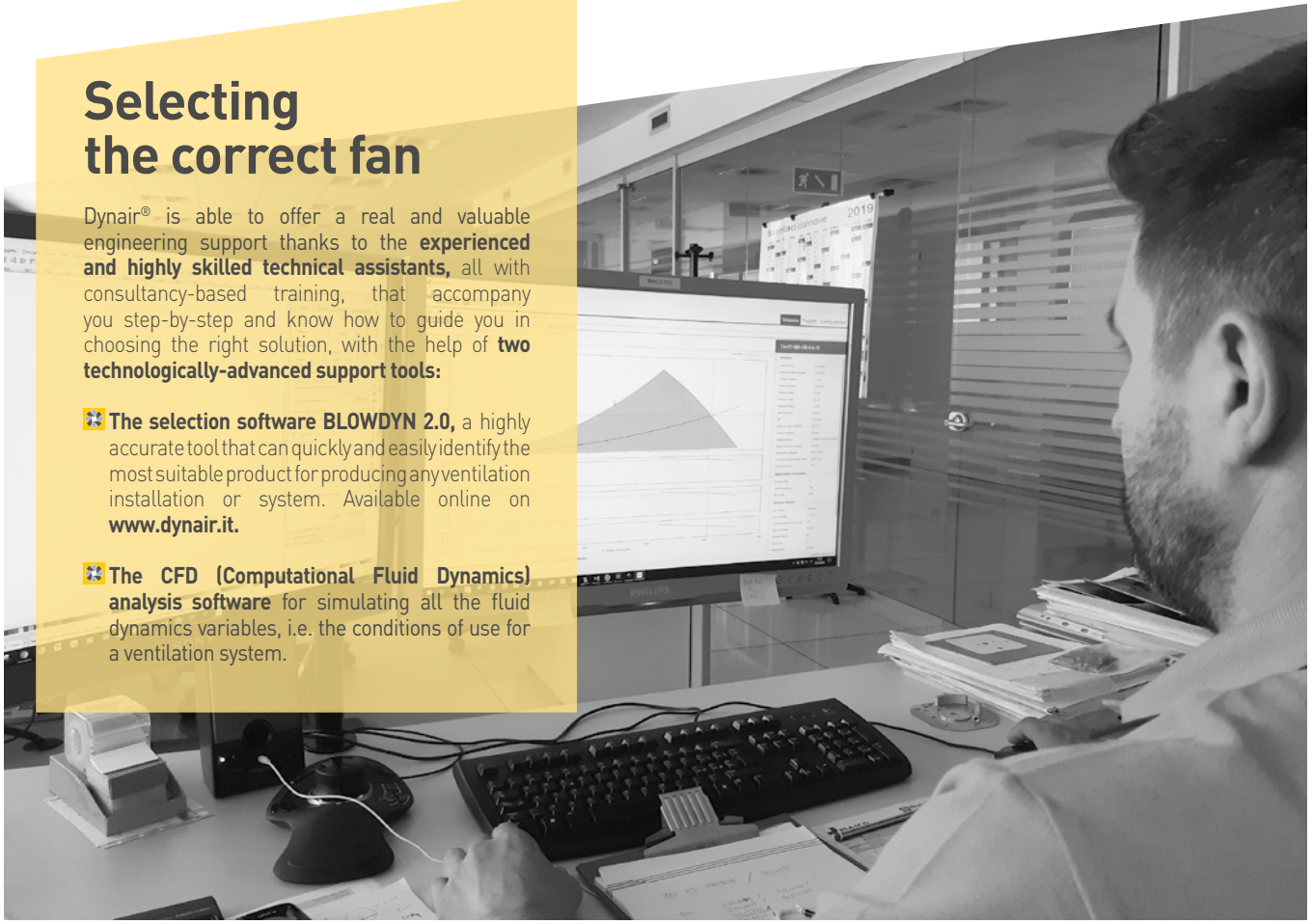
Testing

- ISO 5801: "Industrial fans, performance testing"
- AMCA 210-07: Laboratory methods of testing fans for aerodynamic performance rating"
- EN 12101-3: "Smoke and heat control systems - powered smoke and heat exhaust"
- EN 12101-6: 2005: "Smoke and heat control systems specification for pressure differential systems - "Kits".
- Machinery Directive 2006/42/EC
- Low voltage Directive 2014/35/UE
- EMC Directive 2014/30/UE
- Rohs-2 Directive 2011/65/UE
- ATEX Directive 2014/34/UE
- ErP Directive 2009/125/CE, Regulations 327/2011, 1253/2014, 1254/2014

Selecting the correct fan

Dynair® is able to offer a real and valuable engineering support thanks to the **experienced and highly skilled technical assistants,** all with consultancy-based training, that accompany you step-by-step and know how to guide you in choosing the right solution, with the help of **two technologically-advanced support tools:**

- **The selection software BLOWDYN 2.0,** a highly accurate tool that can quickly and easily identify the most suitable product for producing any ventilation installation or system. Available online on **www.dynair.it.**
- **The CFD (Computational Fluid Dynamics) analysis software** for simulating all the fluid dynamics variables, i.e. the conditions of use for a ventilation system.



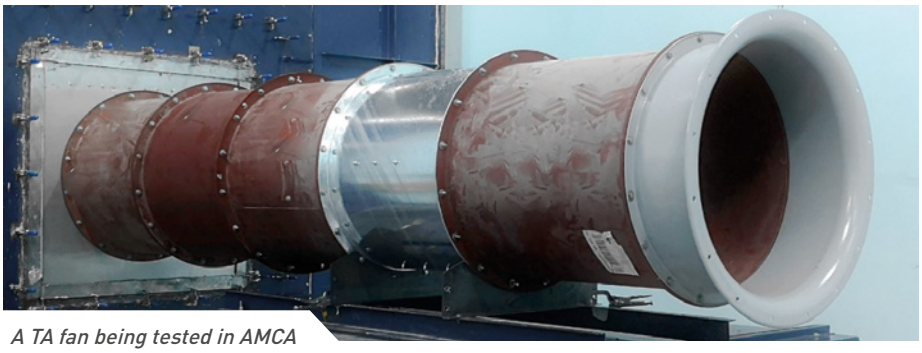
Testing

There are different potential risk elements subsequent to a fire which have a direct influence on the occupants' safety: the release of gas and toxic substances, the diffusion of fire and very high temperatures, the reduction of the oxygen and the increase of carbon monoxide in the air can immediately lead to the lack of visibility, the impossibility to escape and a quick poisoning or suffocation. **As manufacturers of fire-fighting products, evaluating the strength, the stability and the fire-resistance of our fans is of paramount importance.** Fire-fighting fan design and installation is regulated by the **European standard EN 12101-3:2015** which establishes the temperature ranges/operation time certified products must comply with. All our fans for smoke extraction comply with such standard and are tested and certified by the independent notify body Applus+, a worldwide leader in the testing, inspection and certification sector and a primary European reference laboratories with over 25 years' experience working in fire-testing.

MEMBER

Maico Italia is a proud member of the North-American AMCA, the Air Movement and Control Association which mission, at global level, is to advance the knowledge of air systems and uphold industry integrity on behalf of AMCA members worldwide.

Certified Ratings Program (CRP)



A TA fan being tested in AMCA

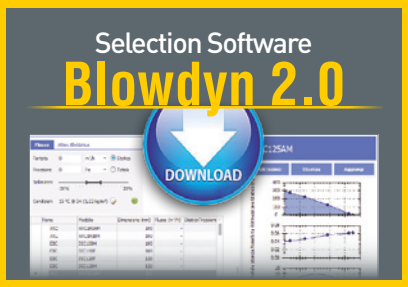
MEMBER

AMCA International's Certified Ratings Program (CRP) assures that a product line has been tested and rated in conformance with AMCA International's test standards and rating requirements. Performance seals are documented and displayed on equipment after a product has been tested and its cataloged ratings have been approved by AMCA International's staff. Each certified product line is subject to continued check tests in AMCA International's laboratories. All certified products are open to challenge testing that any third party or competing manufacturer may initiate.

Direct line

For any commercial and technical assistance from abroad
sales@maico-italia.it

BLOWDYN 2.0 is the fan selection software that allows to select the most suitable product for any ventilation project.



www.dynair.it

INDUSTRIAL BUILDING VENTILATION

Fans for **Standard air temperature**

PRINCIPLE

Workers within factories and warehouses are exposed to substantial amounts of chemicals and pollutants, making air quality a critical safety issue for anyone working in these environments.
Air quality in industrial manufacturing plants has an immense impact on a person's health, and therefore, their ability to work.

SOLUTION

Industrial ventilation provides some fundamental functions:

- Expelling toxic and harmful gases and fumes generated by manufacturing processes
- Removing dust from the work environment
- Removing dampness and moisture generated in production areas
- Maintaining normal oxygen levels
- Controlling high temperatures in the summer period
- Increasing the safety, well-being and productivity of workers

ErP

Industrial fans for Standard air temperature **comply with ErP Directive 2009/125/EC**

Square-frame axial fans

QCL
High-performance compact square-frame axial fans

- Wall or window installation
- **Diameters from 200 to 710 mm**
- **Airflow from 720 to 13,000 m³/h**
- Supporting frame in drawn galvanised steel sheet, with radius inlet cone
- Inlet protection guard, motor side, in painted steel rod
- Airflow from motor to impeller
- Suitable for clean air up to 60°C

QCM
Square-frame axial fans for medium airflow

- Wall or window installation
- **Diameters from 200 to 700 mm**
- **Airflow from 700 to 17,500 m³/h**
- Supporting frame in drawn galvanised steel sheet, with radius inlet cone
- Inlet protection guard, motor side, in painted steel rod
- Airflow from motor to impeller
- Suitable for clean air up to 50°C

QCS
Square-frame axial fans for small airflow

- Wall or window installation
- **Diameters from 200 to 350 mm**
- **Airflow from 520 to 1,950 m³/h**
- Supporting frame in drawn galvanised steel sheet, with radius inlet cone
- Inlet protection guard, motor side, in painted steel rod
- Airflow from motor to impeller
- Suitable for clean air up to 40°C

AC-A/B
Square/ring-frame axial fans

- Suitable for the ventilation in a wide variety of applications, where relevant air deliveries without canalization are requested. Ideal also as OEM.
- Convertible into wall-mounted fan with the addition of suitable wall mounting square frame adaptor
- 2 versions: AC-A with radius inlet nozzle and AC-B with radius inlet and discharge nozzle
- **Diameters from 310 to 1250 mm**
- **Airflow from 3,150 to 65,000 m³/h**
- Impeller with airfoil blades in die-cast aluminium alloy
- Steel rod protection guard
- Air flow from motor to impeller
- Suitable for clean air with a maximum temperature of 50°C

Ducted axial fans

TA-HP
High performance ducted axial fans

- Ducted axial fans with aerofoil impellers and adjustable pitch angle for **maximum efficiency**
- Particularly indicated in those applications that request an absolute conformity to high specifications in terms of pressure and air volume
- Available in a wide range of models with **diameters from 400 mm to 1600 mm** (larger sizes on request) with **performance up to 210,000 m³/h and 1,500 Pa**. Higher pressures can be reached with two fans installed in series.
- **Impeller performance and noise emission comply with Amca Standards 210 and 301, category D Long casing execution in painted sheet steel**
- The high-performance axial impeller with aerofoil blades are totally made in die-cast aluminium
- Wide choice of setting angles that can be set during assembly to precisely achieve the optimum working point required for each individual project
- A wide range of pitch angles can be set during assembly thanks to the design of the hub. This allows to accurately meet the optimum reachable working point of each ventilation project
- Suitable for air temperatures up to +70°C

VA-HP
High performance and increased efficiency duct “vane axial” fans

- Ducted vane axial fans with aerofoil impellers and adjustable pitch angle for maximum efficiency
- Particularly indicated in those applications that request an absolute conformity to high specifications in terms of pressure and air volume
- **Vane axial system with air straightener for increased efficiency**
- Available in a wide range of models with diameters from 400 mm to 1600 mm (larger sizes on request) with performance up to **230,000 m³/h and 2,400 Pa**. Higher pressures can be reached with two fans installed in series
- Impeller performance and noise emission comply with Amca Standards 210 and 301, category D Long casing execution in painted sheet steel
- The high-performance axial impeller with aerofoil blades are totally made in die-cast aluminium
- Wide choice of setting angles that can be set during assembly to precisely achieve the optimum working point required for each individual project
- A wide range of pitch angles can be set during assembly thanks to the design of the hub. This allows to accurately meet the optimum reachable working point of each ventilation project
- Suitable for air temperatures up to +70°C

CCZ
High-efficiency compact ducted axial fans

- Ducted installations requiring large airflow with relatively low pressure drop
- Easy to install and to maintain thanks to their compact size and the total absence of protruding parts
- The motor-impeller groups are perfectly speed controllable and ensure low noise running
- **9 models with impeller diameters from 310 to 560 mm**
- **Airflow from 1,900 to 11,500 m³/h**
- High quality aerofoil profiled impeller in mineral fibres reinforced technopolymer (models 310 to 450) and die cast aluminium alloy (models 500 and 560)
- Suitable for clean air with a maximum temperature of 60°C

CC
Ducted axial fans

- Ducted installations requiring large airflow with relatively low pressure drop (max. 700 Pa)
- **Diameters from 310 to 1,600 mm**
- **Airflow from 2,000 to 142,000 m³/h**
- Short casing in steel sheet, with fixing flanges
- Suitable for clean air up to a maximum temperature of 50°C

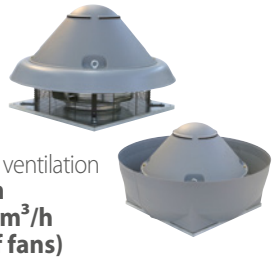
Portable axial fans

CCP
High efficiency portable axial fans

- Portable axial fans for specific localized ventilation (man-cooling, room drying, scenic effects)
- Equipped with knobs for flow direction regulation
- **Diameters from 310 to 560 mm**
- **Airflow from 2,000 to 12,000 m³/h**
- Electric plug on board for a quick connection
- High quality aerofoil profiled impeller in mineral fibres reinforced technopolymer (models 310 to 450) and die cast aluminium alloy (models 500 and 560)

Centrifugal roof fans

FC | FCV
Centrifugal roof fans
HORIZONTAL OR VERTICAL DISCHARGE

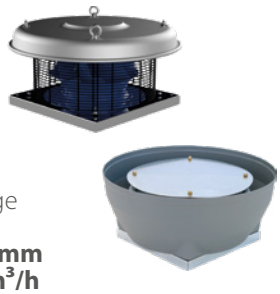


- Roof installation for direct or ducted ventilation
- **Diameters from 250 to 800 mm**
- **Airflow from 1,000 to 20,000 m³/h (18,000 m³/h for vertical roof fans)**
- Base frame in galvanized steel sheet
- Protection guard in drawn steel rod
- Self-cleaning backward blade impeller
- Upper cover in ABS
- Motor separated from airflow
- Suitable for air with a temperature of +100°C

FCP | FCP-V
High performance centrifugal roof fans
HORIZONTAL OR VERTICAL DISCHARGE

- Roof installation for direct or ducted ventilation
- **Diameters from 350 to 900 mm**
- **Airflow from 3,600 to 30,000 m³/h**
- Base frame in galvanized steel sheet
- Protection guard in drawn steel rod
- Self-cleaning backward blade with high aeraulic efficiency and low noise level
- Upper cover in ABS
- Motor separated from airflow
- Suitable for air with a maximum temperature of +80°C

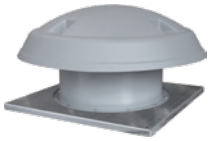
REA | REV
Compact centrifugal roof fans



- Roof installation for direct or ducted ventilation
- Available with vertical discharge (REV models)
- **Diameters from 200 to 400 mm**
- **Airflow from 420 to 5,500 m³/h**
- Base frame in galvanized steel sheet
- Protection guard in drawn steel rod
- Backward curved blade in galvanized steel sheet
- Upper cover in aluminium
- Suitable for air with a maximum temperature of +40°C
- REA: available with EC motors

Axial roof fans

TACC
Compact axial roof fans

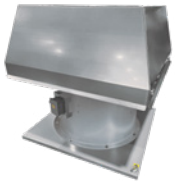


- Roof installation for direct or ducted ventilation
- **Diameters from 400 to 900 mm**
- **Airflow from 4,000 to 45,000 m³/h**
- Fixing base in galvanised steel sheet
- Casing in steel sheet, epoxy coated
- Upper cover in ABS (up to model 630) and multilayer fiberglass for larger models
- Suitable for air with a maximum temperature of +50°C

AL
Forward curved blade centrifugal fans for medium airflow

- Ideal for applications requiring medium air volumes at high pressures
- **Models with impeller diameter 200 to 450 mm**
- **Airflow from 1,500 to 18,500 m³/h**
- Pressures up to 1,200 Pa
- Adjustable orientation in 8 positions
- Suitable for clean air with a temperature of +100°C

TAH-HP
Very high-performance axial roof fans



- Rooftop installations requiring high performance in terms of flow rates and pressures
- Die-cast aluminium impellers with airfoil blades for high efficiency, long life and robustness
- Long casing for ease of installation
- Galvanised sheet metal cover
- Base, protection guard and casing protected against weathering
- **Available in diameters from 400 mm to 1250 mm**
- **Max. flow rates from 4,000 to 90,000 m³/h and max. static pressures from 85 to 550 Pa**
- Suitable for temperatures from -20°C to +70°C

F
Radial blade centrifugal fans in aluminium

- Ideal for applications requiring small air volumes at high pressures
- 4 models
- **Airflow from 400 to 1,200 m³/h**
- **Pressures up to 2,100 Pa**
- Fixed orientation RD 270°
- Volute casing and blade in die cast aluminium
- Suitable for clean air with a maximum temperature of +80°C

Forward curved blade and radial centrifugal fans

DIC
Forward curved blade centrifugal fans

- Ideal for applications requiring small air volumes at high pressures
- **Models with impeller diameter 100 to 180 mm**
- **Airflow from 430 to 2,800 m³/h**
- Pressures up to 1,200 Pa
- Adjustable orientation in 8 positions
- Suitable for clean air with a temperature of +100°C

Backward curved blade centrifugal fans

PR-L
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR

- Suitable for very high capacities and low pressure
- Suitable for multiple applications in commercial and industrial plants of air-conditioning, ventilation, heating and filtering
- **Diameters from 250 to 1,400 mm**
- **Airflow from 2,500 to 140,000 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PN-L
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR

- Suitable for medium capacities and medium to high pressures
- Suitable for multiple applications in industrial plant engineering and air conditioning
- **Diameters from 400 to 630 mm**
- **Airflow from 4,700 to 32,400 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PQ-L
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR

- Suitable for medium-high capacities and medium-high pressures
- Suitable for transporting solids mixed with air, chips and sawdust with a fan that does not pass through material
- **Diameters from 400 to 1,400 mm**
- **Airflow from 2,900 to 79,200 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PS-L
Backward curved blade centrifugal fans
FOR CLEAN OR VERY DUSTY AIR

- Suitable for medium capacities and pressures
- Suitable for transporting sawdust, various shavings, granular materials, excluding of filamentary materials
- **Diameters from 220 to 1,400 mm**
- **Airflow from 800 to 98,400 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PY-L
Backward curved blade centrifugal fans
FOR PNEUMATIC TRANSPORT, POWDERS, DRYING, PRESSURISATION

- Suitable for small and medium capacities and high and very high pressures
- Suitable for industrial applications in foundries, pasta factories, ovens, chemical industry
- **Diameters from 400 to 1,000 mm**
- **Airflow from 500 to 9,000 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PR-F
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR

- Suitable for medium-high capacities and medium-high pressures
- Suitable for multiple applications in industrial plant engineering and in conditioning
- **Diameters from 250 to 1,400 mm**
- **Airflow from 1,000 to 110,000 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PV-L
Backward curved blade centrifugal fans
FOR CLEAN AIR

- Suitable for small and medium capacities with high and very high pressures
- Suitable for conveying clean or slightly dusty air and smoke
- Suitable for applications in the industrial plants of pneumatic transport, suction and filtering in foundries, cement factories, mines, marble, ceramics and glass factories, furnaces, etc.
- **Diameters 350 to 1,000 mm**
- **Airflow from 250 to 33,000 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

In-line centrifugal fans

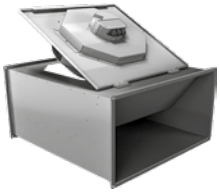
LINE METAL
Round duct centrifugal in-line fans

- In-line installation on ducts
- Diameters from 100 to 315 mm
- Airflow from 237 to 1,440 m3/h
- Pressure from 279 to 742 Pa
- Available with EC motors
- Suitable for temperatures from -10 to +60°C

MINI-BOX
Slim-line acoustic cabinet fans

- Centrifugal in-line fans with round spigot **(diameters from 100 to 315 mm)** for easy connection to round duct system
- **Airflow from 270 to 1,150 m³/h**
- Ceiling mounting bracket included
- Casing in galvanized steel sheet, lined with acoustic insulation (10 mm thick)
- Backward curved impeller
- Suitable for air temperatures from -10 to +60°C

DPK-EC
Rectangular duct centrifugal in-line fans

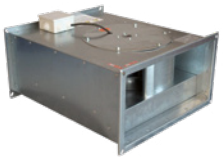


- Centrifugal in-line fans suitable for rectangular ducting installation.
- Suitable for being installed in exhausting plants, where limited dimensions, silent running and easy installation are also required
- **Sizes from 220 to 560 mm**
- **Airflow from 2,100 to 11,800 m³/h**
- Main structure in galvanized steel with flange profiles fitted on the inlet and outlet sides
- Centrifugal impeller made of galvanised steel, with backwards curved blades, located on the motor shaft
- EC motors
- Suitable for air temperatures from -20 to +50°C

SS-BOX
Super-silent acoustic cabinet fans

- Super-silenced in-line centrifugal boxed fans (50 mm soundproof lining)
- Horizontal installation on circular pipes with **diameters from 125 to 450 mm**
- **Airflow from 220 to 4,500 m³/h**
- Main structure in galvanized steel sheet
- Backward bladed impeller (mod.125-160-200-250) and double inlet forward bladed fan (mod.315-355-400-450)
- Suitable for air temperatures from -10 to +40°C

AxB
Rectangular duct centrifugal in-line fans



- In-line centrifugal fans for installation into rectangular section ducted systems.
- **Airflow from 900 to 3,400 m³/h**
- Casing in galvanized steel sheet
- Backward curved impeller for models 4x2, 5x2, 5x3, forward-curved impeller for models 6x3, 6x35, 7x4
- Suitable for air temperatures from -10 to +60°C

Direct drive box fans

S-CUBE P
Backward curved centrifugal box fans

- Backward curved centrifugal box fans for clean or slightly dusty air
- Low noise level, thanks to the backward impeller and to the acoustic construction with double skin and acoustically lined panels
- **8 sizes from 310 to 630 mm in 4 and 6 poles**
- **Airflow from 2,066 to 17,504 m³/h**
- Frame in extruded aluminium profiles and removable double skin panels in galvanized steel sheet
- Acoustic lining of the panels in self-extinguishing techno-polymer
- Available with EC motors

BOX-D
Direct drive double inlet box fans

- Double inlet centrifugal fans, particularly indicated where low noise is required
- Plenum lined with acoustic material in self-extinguishing techno-polymer
- **7 sizes with airflow from 1,040 to 7,800 m³/h**
- Frame in extruded aluminium profile, removable panels in galvanised steel sheet
- Weatherproof upper cover with suitable holes for lifting hooks
- Double inlet fan unit with built-in motor
- Suitable for clean air from -20 to +40°C
- Available with EC motors

DA
Direct drive double inlet fans

- Double intake fans suitable for clean air
- They require a housing structure (plenum) for a proper working condition
- **15 sizes with airflow from 650 to 8,400 m³/h**
- Volute in galvanised steel sheet
- Direct drive double inlet forward curved wheel
- Single-phase or three-phase motor
- Suitable for clean air from -20 to +40°C

Centrifugal box fans and double inlet belt driven fans

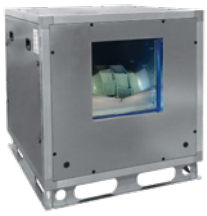
BOX-T
Belt driven double inlet box fans

- Belt driven double inlet box fans, particularly indicated where low noise is required
- Plenum lined with thick acoustic material in self-extinguishing techno-polymer
- **12 sizes from 7/7 to 18/18 and from 500 to 630**
- **Airflow from 2,000 to 30,000 m³/h**
- Frame in extruded aluminium profiles frame and removable panels in galvanised steel sheet
- 20 mm thick soundproofing mat made of self-extinguishing polyurethane foam
- Double inlet centrifugal fan with forwarded curved blades for transmission drive, driven by trapezoidal belts and adjustable pulleys
- EPDM V-belts with MAINTENANCE-FREE innovative bare sidewall technology
- Suitable for clean air from -15 to +50°C

BOX-CA
Active carbon filtering unit

- Ideal solution for air filtering and for smell removal, for commercial environments (bars, restaurants, kitchens, Etc.) and industrial plants where noise and bad smells are a problem
- The air quality is ensured by the series of filtering sections crossed by the airflow
- Low noise granted by the thick acoustic insulation of the double skin panels
- Plenum lined with self-extinguishing techno-polymer material
- Frame in extruded aluminium profiles and removable double skin panels in galvanised steel sheet
- **6 sizes from 300 to 1,200**
- **Airflow from 3,000 to 12,000 m³/h**
- Filter battery composed by wavy polyester pre-filter (class G3), soft pocket filter (class F7) and activated charcoal filter in cartridges

BOX-T BC
Backward-curved belt driven double inlet box fans



- Backward-curved belt driven double inlet box fans particularly suitable in installations where air replacement or filtration must be carried out and for installations that require high performance in terms of flow rates and especially pressures. They can also be combined with the UFA (Air Filtration Unit) series for increased air filtration needs, from M5 to HEPA filtration
- Indicated where low noise is required: 20 mm thick sound-absorbing lining, made of self-extinguishing expanded polyurethane
- **11 sizes from 200 to 630**
- **Airflow from 2,000 to 30,000 m³/h**
- **Pressure from 215 to 1,550 Pa**
- High performance centrifugal fan, double inlet with **backward-curved blade impeller** for transmission drive, coupled to the motor by trapezoidal belts and pulleys
- EPDM V-belts with MAINTENANCE-FREE innovative bare sidewall technology
- Suitable for clean air from -20 to +85°C

DA-T
Round duct forward bladed centrifugal fans

- Motorless double inlet fans for clean air filtration
- They require a containing structure (plenum) for a proper working condition
- **11 sizes from 7/7 to 18/18**
- Volute in galvanised steel sheet
- Double inlet forward curved impeller, with steel shaft supported by ball bearings
- "CUBIK" version with self-supporting frame available
- Suitable for air temperatures up to +80°C

JET FANS for CO removal from car parks

CC-JD LP | CC-JD
Axial impulse fans low-profile shape
JET FANS

- Axial impulse fans designed for the complete removal of polluted air (CO) in underground car parks.
- Cylindrical shape (CC-JD) or octagonal shape (CC-JD LP)
- Extreme compactness and low profile allow an installation in garages with strong height limitations (CC-JD LP)
- **Three sizes with 310, 350 and 400 mm diameter with unidirectional and bidirectional airflow, single and double speed**
- **Thrust 27 to 68N**
- **Silencers in galvanized steel sheet inside lined with high performance acoustic insulation material**
- Deflector on outlet side for optimum air discharge and air cleaning of all layers. Supplied as standard. Two deflectors on bidirectional models
- Protection guard on inlet side (unidirectional models)
- Fixing brackets in galvanized steel sheet for ceiling (or wall) installation. Supplied as standard and pre-assembled
- Housing in electrolytically galvanized steel sheet.
- Hub impeller and airfoil profile blades made in aluminium
- IP54 terminal box
- Ceiling fastening structure on request
- Suitable for air temperature from -20 to +50°C

CC-JC
Centrifugal induction fans
JET FANS

- Specially designed for the complete removal of polluted air (CO) in underground car parks
- Octagonal shape, extreme compactness and low profile allow an installation in garages with strong height limitations
- **Two sizes with 250 and 300 mm diameter**
- **Thrust from 50 to 110N**
- Hub impeller and airfoil profile blades made in steel sheet. Balanced according to ISO 1940
- Housing in electrolytically galvanized steel sheet
- Protection guard on inlet side
- Fixing brackets in galvanized steel sheet for ceiling/wall installation supplied pre-assembled
- Suitable for air temperature from -20 to +50°C

CC-JCS
Compact centrifugal induction fans
JET FANS

- Compact centrifugal induction fans designed for the complete removal of polluted air (CO, cold fumes) in car parks and auto repair shops
- **Thanks to their extremely compact sizes they can be easily installed in garages with important height limitations**
- **Two models with AC or EC motorisation**
- **Thrust up to 14N**
- Housing in electrolytically galvanized steel sheet
- Provided with 2 high-efficient backward centrifugal impellers in plastic material (PA)
- Protection guard on inlet side in drawn steel rod
- Fixing brackets in galvanized steel sheet for ceiling/wall installation supplied preassembled
- IP55 terminal box
- Available with EC motors
- Suitable for air temperature from -20 to +50°C

INDUSTRIAL BUILDING VENTILATION

Atex fans

PRINCIPLE

ATEX is the conventional name for Directive 94/9/EC which came into force on 1 July 2003 ("ATmosphère EX-plosive") and updated by Directive 2014/34/EU.
An explosive atmosphere is defined as a mixture of air and flammable gases, vapours, fumes or dust whose combustion spreads rapidly (explosion) after ignition at atmospheric pressure.
The scope of the ATEX Directive includes all equipment to be installed in potentially explosive environments such as petrochemical plants or for the food production, power plants, carpentries workshops, paint booths, farms and greenhouses.
Depending on the type of substance causing the hazard, explosive atmospheres are classified into:

- G Gas
- D Dust
- H_2 Hydrogen

The user or designer is obliged to carry out on his own responsibility, the classification of hazardous areas as indicated in European Directive 1999/92/EC.

SOLUTION

An assessment of the explosion risk is required in the company/plant for the identification of places where explosive atmospheres may form. It is necessary to provide the means to prevent/to avoid them. With artificial ventilation, we can:

- reduce the size of zones, to the point of making them sometimes of negligible volume
- reduce the residence time of the explosive atmosphere when the emission ceases
- prevent the formation of an explosive atmosphere diluting the flammable substance in air below the lower explosion limit in the immediate vicinity of the SE

The ATEX Directive establishes criteria for the equipment's classification according to the degree of protection assured. The connection between classified zone according to European Directive 1999/92/EC) and class of protection of the equipment to be used complies with the following table:

PROTECTION DEGREE	CATEGORY	USAGE AREA IN PRESENCE OF GAS	CATEGORY	USAGE AREA IN PRESENCE OF DUSTS	HAZARDOUS LEVEL OF THE OPERATIONAL ZONE
Very high	1G	Zona 0	1D	Zone 20	Explosive atmosphere ALWAYS PRESENT
High	2G	Zona 1	2D	Zone 21	Explosive atmosphere PROBABLE
Normal	3G	Zona 2	3D	Zone 22	Explosive atmosphere UNLIKELY

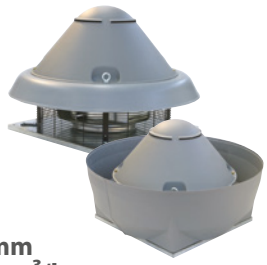
N.B. Equipment of a higher category may also be installed in place of equipment of a lower category.

The Directive identifies the European notified bodies authorised to examine and verify (after carrying out specific tests) of the technical documentation and to issue type certificates on equipment for use in explosive atmospheres; products in ATEX conformity of Maico Italia S.p.A. bear the marks:

QCM ATEX
Plate mounted axial fans

- Wall or window installation
- **Diameters from 200 to 710 mm**
- **Airflow from 1,050 to 17,500 m³/h**
- Supporting frame in drawn steel sheet, with wide radius inlet cone; models 630 and 710 with epoxy-polyester powder-coated frame
- Airflow from motor to impeller
- Inlet protection guard in steel painted rod, manufactured according to norms UNI 12499 and weatherproof
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

FC | FCV ATEX
Single speed centrifugal roof extractors Horizontal or vertical discharge



- Roof installation for direct or ducted applications
- **Diameters from 250 to 800 mm**
- **Airflow from 1,000 to 20,000 m³/h (18,000 m³/h per roof fan)**
- Base frame in galvanized steel sheet
- Protection guard in drawn steel rod protected against the atmospheric agents
- Backward curved wheel in galvanized steel sheet
- Upper cover in ABS
- Motor separated from the conveyed airflow
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

CC ATEX
Ducted axial fans

- Ducted installations for applications requiring large airflows with low pressure drops (max. 700 Pa)
- **Diameters from 310 to 1,600 mm**
- **Airflow from 2,000 to 142,000 m³/h**
- Short casing in steel sheet, with fixing flanges, protected against atmospheric agents by epoxy paint
- Axial impeller with aerofoil profile blades in glass reinforce antistat polyamide and die-cast aluminium hub,
  sparkproof band in alluminium
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

FCP | FCPV ATEX
Single speed high performance centrifugal roof fans Horizontal or vertical discharge

- Roof installation for direct or ducted applications
- **Diameters from 350 to 900 mm**
- **Airflow from 3,600 to 30,000 m³/h**
- Base frame in galvanized steel sheet
- Protection guard in micro-stretched galvanized sheet protected against atmospheric agents
- Impeller with self-cleaning backward blades, with high aeraulic efficiency and low noise, in galvanized sheet
- Outer conveyor in ABS
- Motor separated from airflow
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

DIC ATEX
Forward curved blade centrifugal fans

- Ducted installations for industrial applications for low air volumes at high pressures
- **Diameters from 100 to 180 mm.**
- **Airflow from 300 to 1,500 m³/h with pressures up to 1,200 Pa**
- Volute casing in steel sheet, protected against atmospheric agents by epoxy paint or in stainless steel AISI304 sheet. Easily adjustable to the required discharge angle every 45°, including 180° and 225°
- Single inlet, single gauge, forward curved impeller (sirocco type), in galvanized steel sheet or in stainless steel AISI304.
- Motor separated from airflow
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

AL ATEX
Forward curved blade centrifugal fans

- Ducted installations for industrial applications for medium airflows with high pressures
- **Diameters from 200 to 450 mm**
- **Airflow from 1,500 to 11,200 m³/h with pressures up to 1,900 Pa**
- Volute casing in folded steel sheet, protected against atmospheric agent by epoxy pain, easily adjustable with standard LG 270° orientation
- Single inlet, single width, forward curved impeller (sirocco type), manufactured in galvanized steel sheet from type 200 to 315 and in steel sheet with welded blades epoxy painted from type 355 to 450
- Brass inlet on models gauge execution IIB+H2 and steel sheet with epoxy finish on models IIB
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

DIC INOX ATEX
Forward curved blade centrifugal fans

- Ducted installations for industrial applications for low airflow with high pressures
- **Diameters from 100 to 180 mm**
- **Airflow from 300 to 2,400 m³/h with pressures up to 1,100 Pa**
- **Spiral case made of AISI 304 stainless steel (AISI 316L on request)** easily swivelling with standard LG 270° orientation
- Single inlet impeller with forward curved blades (sirocco), constant thickness, made of AISI 304 stainless steel
- Motor separated from ducted air flow
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

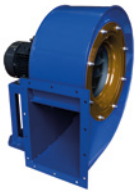
ICA ATEX
Centrifugal fans in plastic material

- Ducted installations for extracting corrosive (non-abrasive) fumes and vapours
- **Airflow from 540 to 7,100 m³/h**
- **Diameters from 120 to 350 mm**
- High performance impeller, in polypropylene, with forward curved blades
- Volute in antistatic polypropylene
- Anti-sparking construction
- Inlet connection and motor support supplied as standard
- Adjustable orientation in 8 positions
- Available in LG0 rotation only
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb

PR-AC ATEX
Centrifugal fans in plastic material

- Ducted installations for extracting corrosive (non-abrasive) or high humidity fumes and vapours
- **Diameters from 200 to 600 mm**
- **Airflow from 1,000 to 17,500 m³/h**
- Made of technopolymers with technical and mechanical characteristics that guarantee a longer life cycle in comparison to different types of metals
- Antistatic and self-extinguishing polypropylene volute
- Single inlet impeller, in Polypropylene, with backward curved blades and aluminium hub (protected from the fluid)
- Motor support in epoxy painted steel sheet
- Available in LG or RD rotation, adjustable orientation in 8 positions (standard orientation 270°)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db

PR-L ATEX
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR



- Suitable for high airflow and low to medium pressures
- Suitable for multiple industrial and air conditioning applications
- **Diameters from 250 to 1,400 mm**
- **Airflow from 2,500 to 140,000 m³/h max**
- Suction nozzle with brass coating and painted sheet steel spiral case
- Connection flanges ISO 6580/EUROVENT 1-2
- Wide radius suction nozzle with brass coating
- Single inlet impeller with backward curved blades with high aeraulic efficiency, made of steel sheet and coated with epoxy paint
- For execution 1 – 9 – 12: mono-block support in cast iron with ball bearings, designed for easy lubrication. Pulleys, belts and motor support. Belt protection guard
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

PN-L ATEX
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR

- Suitable for medium airflow and medium to high pressures
- Suitable for multiple industrial and air conditioning applications
- **Diameters from 400 to 630 mm**
- **Airflow from 4,700 to 32,400 m³/h max**
- Wide radius suction nozzle with brass coating
- Single inlet impeller with backward curved blades with high aeraulic efficiency, made of steel sheet and coated with epoxy paint.
- Connection flanges ISO 6580/EUROVENT 1-2
- For execution 1 – 9 – 12: mono-block support in cast iron with ball bearings, designed for easy lubrication. Pulleys, belts and motor support. Belt protection guard
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

PS-L ATEX
Backward curved blade centrifugal fans
FOR VERY DUSTY AIR

- Suitable for medium airflow and pressures
- Suitable for the extraction of sawdust, various shavings, granular materials, excluding of filamentary materials
- **Diameters from 220 to 1,400 mm**
- **Airflow from 800 to 98,400 m³/h max**
- Wide radius suction nozzle with brass coating
- Volute casing made of steel sheet and protected against atmospheric agents with epoxy paint
- Connection flanges ISO 6580/EUROVENT 1-2
- Single inlet impeller with backward curved blades with high aeraulic efficiency, made of steel sheet and coated with epoxy paint
- For execution 1 – 9 – 12: mono-block support in cast iron with ball bearings, designed for easy lubrication. Pulleys, belts and motor support. Belt protection guard
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

PR-F ATEX
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR

- Suitable for medium-high airflow and medium-high heads
- Suitable for many applications in industrial plant engineering and air conditioning
- **Diameters from 250 to 1,400 mm**
- **Airflow from 1,000 to 110,000 m³/h max**
- Suction nozzle with brass coating and painted sheet steel spiral case
- Single inlet sheet metal impeller with backward curved blades
- Connection flanges ISO 6580/EUROVENT 1-2
- Wide radius intake nozzle
- The series includes directly coupled (4) and transmission versions (1, 9 and 12) mono-block support in cast iron with ball bearings, designed for easy lubrication
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

PY-L ATEX
Backward curved blade centrifugal fans
FOR PNEUMATIC TRANSPORT, DUSTING, DRYING, PRESSURISATION

- Suitable for small and medium airflow and high and very high pressures
- Suitable for industrial plants such as foundries, pasta factories, furnaces, chemical industry, etc
- **Diameters from 400 to 1,000 mm**
- **Airflow from 500 to 9,000 m³/h max**
- Wide radius suction nozzle made of sheet steel and protected against atmospheric agents with epoxy paint
- Single inlet impeller with backward curved blades with high aeraulic efficiency, made of steel sheet and coated with epoxy paint
- Connection flanges ISO 6580/EUROVENT 1-2
- Directly coupled (4) and transmission versions (1, 9 and 12) with mono-block support in cast iron with ball bearings
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

PQ-L ATEX
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR

- Suitable for medium airflow and medium to high pressures
- Suitable for industrial plants for the transport of solid materials mixed with air, chips and sawdust with the fan not being traversed by material
- **Diameters from 400 to 1,400 mm**
- **Airflow from 2,900 to 79,200 m³/h max**
- Wide radius suction nozzle with brass coating
- Connection flanges ISO 6580/EUROVENT 1-2
- Single inlet impeller with backward curved blades with high aeraulic efficiency, made of steel sheet and coated with epoxy paint
- The series includes directly coupled (4) and transmission versions (1, 9 and 12) with mono-block support in cast iron with ball bearings
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

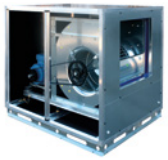
PV-L ATEX
Backward curved blade centrifugal fans
FOR CLEAN AIR

- Suitable for small and medium airflow with high and very high pressures
- Suitable for application in industrial plants for pneumatic, smoke or fine dust conveying.
- Suitable for conveying solid materials mixed with air, chips and sawdust, with the fan not passing through the material
- **Diameters 350 to 1,000 mm**
- **Airflow from 250 to 33,000 m³/h max**
- Wide radius suction nozzle with brass coating
- Single inlet impeller with backward curved blades with high aeraulic efficiency, made of steel sheet and coated with epoxy paint
- Connection flanges ISO 6580/EUROVENT 1-2
- Directly coupled(4) and transmission versions (9 – 12) with one-piece bearing housings made of cast iron
- Suitable for air temperatures from -20 to +40°C (versions on request for higher air temperatures)
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

ERM-EX
Enhanced safety mixed flow fans

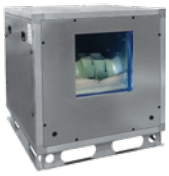
- The only mixed flow in line series in increased safety execution available on the market
- **Diameters from 180 to 250 mm**
- **Airflow from 300 to 900 m³/h**
- Execution II 2G Ex e IIB + H2 T3 Gb increased safety
- Not suitable for regulation
- Housing and impeller are manufactured in sparkproof plastic material resistant to the impacts
- Single-phase electric motor, IP 54, class B, with thermal protection, suitable for working in continuous service
- IP54 terminal box
- Suitable to convey clean air with working temperature from -20°C to +50°C
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Dust Zone 21 II2D Ex h IIIB T 135°C Db
  Hydrogen Zone 1/2 II2G Ex IIB + H2 T4 Gb

BOX-T ATEX
Belt driven double inlet box fans



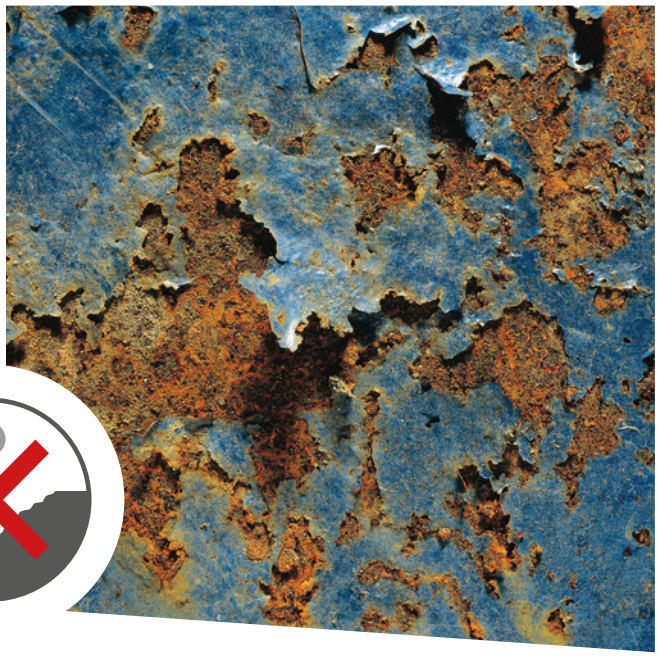
- Belt driven double inlet centrifugal fans
- Suitable for plants where air exchange must be carried out by reducing the noise levels (20 mm thick sound-absorbing lining, made of selfextinguishing expanded polyurethane)
- **12 sizes from 7/7 to 18/18 and from 500 to 630**
- **Airflow from 2,000 to 30,000 m³/h**
- Frame in extruded aluminium profiles and removable panels in galvanized steel sheet
- High performance centrifugal fan, double inlet with forward-curved blade impeller for transmission drive, coupled to the motor by trapezoidal belts and pulleys
- Trapezoidal EPDM belts with innovative technology with bare sides MAINTENANCE-FREE
- Suitable for clean air from -20 to +40°C
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db

BOX-T BC ATEX
Backward-curved belt driven double inlet box fans



- Backward-curved belt driven double inlet box fans particularly suitable in installations where air replacement or filtration must be carried out and for installations that require high performance in terms of flow rates and especially pressures. They can also be combined with the UFA (Air Filtration Unit) series for increased air filtration needs, from M5 to HEPA filtration
- Indicated where low noise is required: 20 mm thick sound-absorbing lining, made of self-extinguishing expanded polyurethane
- **11 sizes from 200 to 630**
- **Airflow from 2,000 to 30,000 m³/h**
- **Pressure from 215 to 1,550 Pa**
- High performance centrifugal fan, double inlet with **backward-curved blade impeller** for transmission drive, coupled to the motor by trapezoidal belts and pulleys
- EPDM V-belts with MAINTENANCE-FREE innovative bare sidewall technology
- Suitable for clean air from -20 to +40°C
- Suitable for installation in areas in which it is necessary to guarantee high security against explosions that could be caused by the presence of:
  Flammable gas Zone 1 II2G Ex h IIB T4 Gb
  Dust Zone 21 II2D Ex h IIIB T 135°C Db

INDUSTRIAL BUILDING VENTILATION



Anticorrosion and antiacid fans

PRINCIPLE

Working with corrosive fluids means high emission of acid gases.

Gas removal is essential to provide safe and comfortable working environments.

Acid gases must be removed promptly, effectively and through suitable devices whose resistance to the aggression of the vapours is ensured.

SOLUTION

Mechanical ventilation through specific units offering adequate safety for effective gas removal.

Fans in plastic materials with non-sparking construction make it possible to work in environments highly prohibitive for metal fans, while guaranteeing the same level of performance.

DIC INOX
Centrifugal fans in stainless steel

- Ducted installations for applications in environments with a high presence of corrosive vapours with a maximum temperature of 80°C
- **Airflow from 400 to 2,400 m³/h**
- **Diameters from 100 to 180 mm**
- Volute in stainless steel AISI304 sheet (AISI 316L on request)
- Single inlet forward bladed impeller (sirocco), in stainless steel AISI304
- Motor separated from ducted air flow
- Available in LG or RD rotation, orientation adjustable in 8 positions (standard orientation 270°)

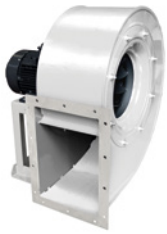
ICA
Antiacid centrifugal fans in plastic material

- Ducted installations
- Particularly designed for conveying smoke, corrosive vapours and smokes, also with high humidity level and with fluid temperature of max 50°C
- **Airflow from 540 to 7,100 m³/h**
- **Diameters from 120 to 350 mm**
- High-performance polypropylene impeller with forward curved blades
- Non-sparking construction
- Available in LG or RD rotation, orientation adjustable in 8 positions (standard orientation 270°)
- Suction nozzle and motor mount fitted as standard

PR-AC
Antiacid centrifugal fans in plastic material

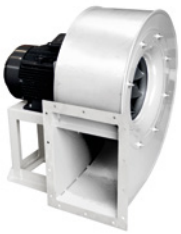
- Ducted installations for extraction of corrosive (non-abrasive) or high humidity fumes and vapours
- **Airflow from 1,000 to 17,500 m³/h**
- **Diameters from 200 to 630 mm**
- Polyethylene (PE) spiral casing, on request in polypropylene (PP) or antistatic and self-extinguishing polypropylene
- Single inlet impeller in polypropylene (PP), with backward-curved blades and aluminium hub protected from the transported fluid
- Motor support in epoxy painted steel sheet, on request in AISI 304 or 316L stainless steel
- Asynchronous three-phase or single-phase IP55 motor, class F, form B3 or B5
- Available in LG or RD rotation, orientation adjustable in 8 positions (standard orientation 270°)

PR-L INOX
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR



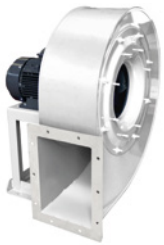
- Suitable for high airflow a nd low to medium pressure
- Mainly used in industrial and air conditioning applications
- **Made of AISI 304/316L stainless steel**
- **Diameters from 250 to 1,400 mm**
- **Airflow from 2,500 to 140,000 m³/h max**
- Suction nozzle and volute casing made of inox stainless steel
- Single inlet impeller with backward curved blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PN-L INOX
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR



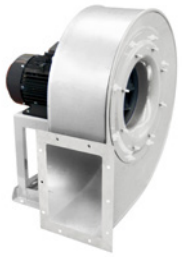
- Suitable for medium airflow a nd medium to high pressure
- Mainly used in industrial and air conditioning applications
- **Made of inox stainless steel AISI 304/316L**
- **Diameters from 400 to 630 mm**
- **Airflow from 4,700 to 32,400 m³/h max**
- Volute casing and suction nozzle made of inox stainless steel AISI 304/316L
- Single inlet impeller with backward curved blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PS-L INOX
Backward curved blade centrifugal fans
FOR VERY DUSTY AIR



- Suitable for medium airflow and pressures
- Main application in industrial plants for the extraction of sawdust, various chips, granular materials except for filamentous materials
- **Made of AISI 304/316L stainless steel**
- **Diameters from 220 to 1,400 mm**
- **Airflow from 800 to 98,400 m³/h max**
- Suction nozzle and spiral case made of painted sheet steel
- Single inlet sheet metal impeller with curved inverted blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PR-F INOX
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR



- Suitable for medium-high airflow and medium-high pressure
- Suitable for multiple applications in industrial plant engineering and in conditioning
- **Made of AISI 304/316L stainless steel**
- **Diameters from 250 to 1,400 mm**
- **Airflow from 1,000 to 110,000 m^3/h max**
- Volute casing and suction nozzle made of inox stainless steel AISI 304/316L
- Single inlet impeller with backward curved blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

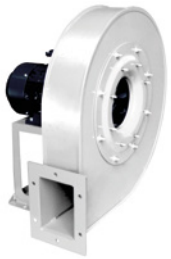
PQ-L INOX
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR

- Suitable for medium-high airflow and medium-high pressure
- Main application in industrial plants for the transport of solid materials mixed with air, chips and sawdust with the fan not being traversed by material
- **Made of AISI 304/316L stainless steel**
- **Diameters from 400 to 1,400 mm**
- **Airflow from 2,900 to 79,200 m^3/h max**
- Volute casing and suction nozzle made of inox stainless steel AISI 304/316L
- Single inlet impeller with backward curved blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PY-L INOX
Backward curved blade centrifugal fans
FOR VERY DUSTY AIR

- Suitable for small and medium airflow and high and very high pressure
- Main application in industrial plants such as foundries, pasta factories, furnaces, chemical industry, etc
- **Made of AISI 304/316L stainless steel**
- **Diameters from 400 to 1,000 mm**
- **Airflow from 500 to 9,000 m3/h max**
- Volute casing and suction nozzle made of inox stainless steel AISI 304/316L
- Single inlet impeller with backward curved blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PV-L INOX
Backward curved blade centrifugal fans
FOR VERY DUSTY AIR



- Suitable for small and medium airflow with high and very high pressure
- Main application in industrial plants for pneumatic, smoke or fine dust conveying
- They are suitable for conveying solid materials mixed with air, chips and sawdust, with the fan not passing through the material
- **Made of AISI 304/316L stainless steel**
- **Diameters from 350 to 1,000 mm**
- **Airflow from 250 to 33,000 m^3/h max**
- Volute casing and suction nozzle made of inox stainless steel AISI 304/316L
- Single inlet impeller with backward curved blades made of inox stainless steel AISI 304/316L
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

CCB
Bifurcated axial fans

- Ducted installation for extraction systems for hot fumes, humid atmospheres and atmospheres saturated with grease or dust, in which the motor must be completely isolated from the conveyed fluid
- **Airflow from 6,000 to 48,500 m^3/h**
- **Diameters from 500 to 1,000 mm**
- Operating temperature: +100°C/+200°C in continuous service
- AISI 304 stainless steel casing, with airtight motor housing
- High performance axial impeller with aerofoil profile blades and hub in die -cast aluminium
- Models with impeller diameter from 500 to 1000 mm
- Air flow from impeller to motor
- Asynchronous motor, directly coupled (version 4), three-phase IP55, Class F

INDUSTRIAL BUILDING VENTILATION

High temperature fans

PRINCIPLE

The microbiological quality of the air in a working place is influenced by environmental and microclimatic factors that can cause the development and proliferation of micro-organisms.

Controlling ventilation is fundamental in order to maintain a good indoor air quality and to ensure a safe working environment.

In professional kitchens and industrial workshops, cooking operations generate irritating and harmful compounds in the atmosphere, which are potentially dangerous for the health of operators.

SOLUTION

To ensure healthy and safe air it is essential to have an extraction system appropriate to the installation environment.

High Temperature (A.T.) fans are the ideal solution for the removal of microorganisms released during normal activity in a professional kitchen or workshop.
They are also used in tertiary or light industrial environments, such as factories, bakeries, pizzerias, canteens.

A.T. fans are suitable for continuous service for conveying non-abrasive or dusty air with a maximum temperature of up to 200°C; their construction and centrifugal impellers guarantee high efficiency.

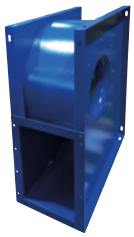
FC AT
Single or double speed centrifugal roof fans for air temperature up to 200°C

- Roof installation for direct or ducted applications
- **Airflow from 3,500 to 20,000 m³/h**
- **Diameters from 350 to 800 mm**
- Suitable for hot fumes with a maximum temperature of 200°C in continuous service
- Ideal for restaurants and pizzerias
- The motor is outside the air flow, this allows the fan to exhaust clean with a temperature range of 100°C up to 200°C in continuous
- Three-phase asynchronous motor (400V/50Hz)
- Upper cover in aluminium

DIC AT
Forward curved blade centrifugal fans for air temperature up to + 150°C

- Ducted installation for transporting hot air and fumes with minimum temperatures from + 100°C to max. +150°C in continuous operation
- **Airflow from 300 to 2,500 m³/h**
- **Diameters from 100 to 180 mm**
- Orientation adjustable in 8 positions
- Three-phase asynchronous motor (400V/50Hz)
- Available in stainless steel version

PR-QP AT
Backward curved blade centrifugal fans for clean air or slightly dusty air with T from -20°C to 200°C



- Ducted installation
- **Airflow from 1,690 to 11,600 m³/h**
- **Diameters from 350 to 630 mm**
- Quadrangular structure: 4 orientations (0°-90°-180°-270°) achievable with the same fan 2 speeds adjustable via star/delta switch
- Operating temperature: -20°C/+200°C in continuous service
- Volute casing with quadrangular frame, manufactured in galvanized steel sheet and protected against atmospheric agents with epoxy finish
- Single inlet, backward curved wheel with high efficiency, manufactured in galvanized steel sheet and die-cast aluminium hub
- LG Rotation
- Asynchronous motor, directly coupled (version 5), three-phase or single-phase IP55, Class F

CCB
Bifurcated axial fans

- Ducted installation for extraction systems for hot fumes, humid atmospheres and atmospheres saturated with grease or dust, in which the motor must be completely isolated from the conveyed fluid
- **Airflow from 6,000 to 48,500 m³/h**
- **Diameters from 500 to 1,000 mm**
- Operating temperature: +100°C/+200°C in continuous service
- AISI 304 stainless steel casing, with airtight motor housing
- High performance axial impeller with aerofoil profile blades and hub in die -cast aluminium
- Models with impeller diameter from 500 to 1000 mm
- Air flow from impeller to motor
- Asynchronous motor, directly coupled (version 4), three-phase IP55, Class F

S-CUBE P KAT
Backward curve centrifugal box fans for industrial kitchens

- Horizontal or vertical installation and outdoors (with rain canopy)
- **Airflow from 2,500 to 19,600 m³/h**
- **Diameters from 310 to 630 mm**
- Operating temperature: -20°C/+180°C in continuous operation
- Motor is separated from the stream by a steel sheet panel which avoids the heating and the direct contact of the motor with dirty particles
- Speed can be regulated through a self-transformer controller
- Aluminium frame with double skin sound absorbing insulated panels removable from the impeller side
- Galvanized steel sheet backward curved impeller
- Three-phase or single-phase asynchronous motor, IP55, class F
- Available with EC motors

PR-L AT
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR

- Suitable for high airflow and low to medium pressure
- Mainly used in industrial and air conditioning applications
- **Diameters from 250 to 1,400 mm**
- **Airflow from 2,500 to 140,000 m³/h max**
- Volute casing and wide radius suction nozzle made of painted steel sheet
- Single inlet impeller with backward curved blades of steel sheet
- Suitable for air temperatures up to 300°C

PS-L AT
Backward curved blade centrifugal fans
FOR CLEAN OR VERY DUSTY AIR

- Suitable for medium capacities and pressures
- Suitable for transporting sawdust, various shavings, granular materials, excluding of filamentary materials
- **Diameters from 220 to 1,400 mm**
- **Airflow from 800 to 98,400 m³/h**
- Aerodynamically shaped inlet cone in steel sheet
- Single inlet backward curved wheel in steel sheet
- Suitable for air temperatures from -10 to +60°C
- Versions on request for higher air temperatures

PN-L AT
Backward curved blade centrifugal fans
FOR CLEAN OR SLIGHTLY DUSTY AIR T MAX 300°C

- Suitable for medium airflow and medium to high pressure
- Mainly used in industrial and air conditioning applications
- **Diameters from 400 to 630 mm**
- **Airflow from 4,700 to 32,400 m³/h max**
- Volute casing and wide radius suction nozzle made of painted steel sheet
- Single inlet impeller with backward curved blades made of steel sheet
- Suitable for air temperatures up to 300°C

PR-F AT
Backward curved blade centrifugal fans
FOR CLEAN OR DUSTY AIR MAX T 300°C

- Suitable for medium-high airflow and medium-high pressure
- Mainly used in industrial and air conditioning applications
- **Diameters from 250 to 1,400 mm**
- **Airflow from 1,000 to 110,000 m³/h max**
- Volute casing and wide radius suction nozzle made of painted steel sheet
- Single inlet impeller with backward curved made of painted steel sheet
- Suitable for air temperatures up to 300°C

PQ-L AT

Backward curved blade centrifugal fans

FOR CLEAN OR DUSTY AIR MAX T 300°C

- Suitable for medium-high airflow and medium-high pressure
- Main application in industrial plants for the transport of solid materials mixed with air, chips and sawdust with the fan not being traversed by material
- **Diameters from 400 to 1,400 mm**
- **Airflow from 2,900 to 79,200 m³/h max**
- Volute casing and wide radius suction nozzle made of painted steel sheet
- Single inlet impeller with backward curved made of painted steel sheet
- Suitable for air temperatures up to 300°C

PY-L AT

Backward curved blade centrifugal fans

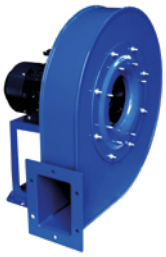
FOR VERY DUSTY AIR T MAX 300°C

- Suitable for small and medium airflow and high and very high pressure
- Main application in industrial plants such as foundries, pasta factories, furnaces, chemical industry, etc.
- **Diameters from 400 to 1,000 mm**
- **Airflow from 500 to 9,000 m³/h max**
- Volute casing and wide radius suction nozzle made of painted steel sheet
- Single inlet impeller with backward curved made of painted steel sheet
- Suitable for air temperatures up to 300°C

PV-L AT

Backward curved blade centrifugal fans

FOR VERY DUSTY AIR MAX T 300°C



- Suitable for small and medium airflow with high and very high pressure
- Main application in industrial plants for pneumatic, smoke or fine dust conveying
- Suitable for conveying solid materials mixed with air, chips and sawdust, with the fan not passing through the material
- **Diameters 350 to 1,000 mm**
- **Airflow from 250 to 33,000 m³/h max**
- Volute casing and wide radius suction nozzle made of painted steel sheet
- Single inlet impeller with backward curved made of painted steel sheet
- Suitable for air temperatures up to 300°C

SMOKE EXTRACT FANS AND FIRE-FIGHTING SYSTEMS

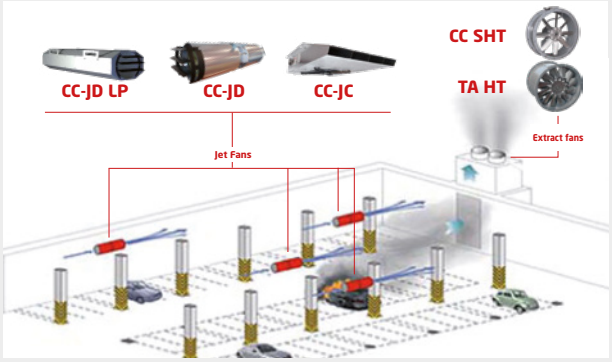
Car Park ventilation

PRINCIPLE

The ventilation of enclosed or underground car parks fulfils two key requirements: remove the pollutants emitted by cars and, in the event of a fire, control the hot fumes and gases produced by the fire, protecting the escape routes and easing access for the emergency teams.

SOLUTION

In recent years, the jet or induction fans **technology has been established** as the new standard for normal ventilation and smoke extraction in case of fire in enclosed car parks. In fact, this technology represents **the most innovative and cost-effective alternative** to traditional ducted mechanical extraction systems.
Carefully managing the project in all its development stages, which requires the fundamental use of fluid dynamics calculation programs, **also ensures that the system is working correctly**.



The system is based on the **distribution along the entire surface of the parking of a series of axial or centrifugal induction accelerators (Jet Fans)** which act in a similar way to a ducting system: installed in the ceiling, **they move air from the upper layers downwards and push it towards the extraction zones,** creating a true continuous air flow.
The fans are able to clean the air from the lower and upper layers thoroughly, preventing the creation of stagnation areas.
The ventilation system is completed with **natural or mechanical air** supply elements (car park access ramp, natural ventilation channels, side openings or inlet fans and supply air) and **extraction elements** (extraction fans). **Jet Fans can be paired with CO** (carbon monoxide) sensors and gas monitoring systems.

SOLUTION

Compared to a ducted ventilation system, jet fans ensure multiple benefits in terms of economy and efficiency associate with its design installation, operation and use:

DESIGN

- Space optimisation due to the compact dimensions and the flexibility of installation both in new buildings as well as in renovation and/or retrofitting
- Saving of design time as there's no need to plan a complex ducting system
- Measurable system effectiveness thanks to CFD modelling (fluid dynamic analysis)
- Increased support and pre-sales service from the manufacturer
- Preliminary economic evaluation of the project within 24 to 48 hours
- Final costs in line with expected costs

INSTALLATION

- Elimination of expensive and complex ducting and grille systems
- Easy installation of fans able to grant a considerable savings in terms of man-hours
- Reduced footprint of fans facilitating installation of other systems (sprinklers, lighting)
- Ease of routine and extraordinary maintenance

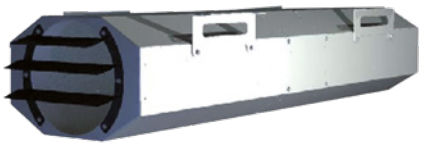
OPERATION

- Important operating economies deriving from the system's peculiarity:
- Possibility of partial ventilation or only if necessary: CO (carbon monoxide) detectors and smoke sensors ensure that fans are activated only in areas where pollution levels have been exceeded or in areas where a fire has started
- Reduced overall power required: thanks to careful design that ensures optimal dimensioning of the ventilation system; in particular, the inlet and extraction fans can be smaller in size as the jet or induction fans generate a negligible pressure drop compared to ducted systems

USE

- Improved quality of breathable air: the system creates a dynamic flow capable of mixing the various air layers and eliminating stagnation zones
- Optimised safety in the event of fire: rapid and effective extraction of toxic fumes provides better protection of escape routes and facilitate access for intervention teams, promotes the safety of people and minimises the effects of the fire on the building structures

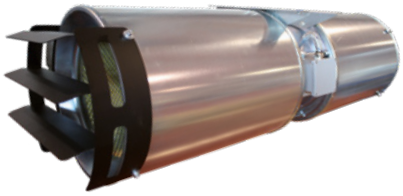
JET FANS – CC-JD LP HT
Axial impulse fans - low profile shape



- Suitable for polluted air removal (CO extraction) and smoke extraction in case of fire
- **Octagonal shape and reduced overall dimensions, especially in height**
- Three sizes with **diameters of 310, 350 and 400 mm**, with unidirectional and bidirectional airflow, single and double speed
- Thrust 27 to 68N
- Silencers in galvanized steel sheet inside lined with high performance acoustic insulation material
- Deflector on outlet side for optimum air discharge and air cleaning of all layers, supplied as standard
- Protection guard on inlet side
- Fixing brackets in galvanized steel sheet for ceiling (or wall) installation.
- Housing in electrolytically galvanized steel sheet.
- Hub impeller and airfoil profile blades made in aluminium
- High-temperature-resistant IP54 terminal box supplied as standard and F300-certified
- Fixing structure F400-certified

Applus
F300/120
F400

JET FANS – CC-JD HT
Axial impulse fans



- Suitable for polluted air removal (CO extraction) and smoke extraction in case of fire
- Three sizes: 310-, **350- and 400-mm diameter,** with unidirectional and bidirectional airflow, single and double speed
- Thrust from 27 to 68N
- Silencers in galvanized steel sheet inside lined with high performance acoustic insulation material
- Deflector on outlet side for optimum air discharge and cleaning of all layers, supplied as standard
- Intake-side protective guard
- Fixing brackets in galvanized steel sheet for ceiling (or wall) installation, supplied as standard
- **Circular silencers**
- Housing in electrolytically galvanized steel sheet
- Hub impeller and airfoil profile blades made in aluminium
- High-temperature resistant IP54 terminal box supplied as standard and F300 certified
- Reversible versions in 350- and 400-mm sizes
- F400-certified fastening structure

Applus
F300/120
F400

JET FANS – CC-JC HT
Centrifugal induction fans - car park ventilation

- Suitable for polluted air removal (CO extraction) and smoke extraction in case of fire
- **Extremely small overall dimensions** and ideal for garages with severe height restrictions
- Two sizes with **diameters of 250 and 300 mm**
- Thrust 50 to 110N
- Hub impeller and airfoil profile blades made in steel sheet, balanced according to ISO 1940
- Housing in electrolytically galvanized steel sheet
- Protection guard on inlet side
- Fixing brackets in galvanized steel sheet for ceiling/wall installation supplied pre-assembled
- Service switch mounted, suitable for high temperature

Applus
F300/120
F400

Ancillary monitoring systems for car park ventilation

CE 408
CE 424

CE 700

CONTROL PANELS CO AND GAS SENSORS

CE 408 – Panel for small systems from 4 to 8 CO sensors
- Equipped with 4 inputs and 5 relays expandable up to 8 inputs and 9 relays
- IP 40

CE 424 - Panel for medium size systems from 4 to 24 CO sensors
- Equipped with 4 inputs and 5 relays expandable up to 24 inputs and 25 relays
- IP 40

CE 700 - Panel for large systems up to 200 sensors
- Equipped with 16 inputs expandable up to 184 for a total of 200 CO sensors
- Wall or rack versions
- IP 40

INDUSTRIAL GAS DETECTORS
(SINGLE OR DOUBLE GAS):
- Replaceable catalytic, electrochemical, pellistor cartridge
- Suitable for CO, petrol vapours and other gases according to the reference Norm
- IP65

SMOKE EXTRACT FANS AND FIRE-FIGHTING SYSTEMS

Smoke extract fans

PRINCIPLE

There are different potential risk elements subsequent to a fire:

- The release of gas and toxic substances produced by the combustion which creates lachrymation and impossibility to escape
- The diffusion of fi re (the stay of ashes in the air) which leads to a reduced or an impossible visibility
- The diffusion of very high temperature
- The reduction of the oxygen needed by the fi re and the increase of carbon monoxide in the air which lead to lose consciousness and to a death by lack of oxygen (according to statistics, more than 2/3 of fire victims die because of suffocation or poisoning by fire fumes)

SOLUTION

The function and advantages of mechanical ventilation in case of fire can be summarized as follows:

- The mechanical ventilation removes fumes and puts in depression the premise, thus preventing the diffusion of smoke into other rooms. This creates better conditions for the escape of the occupants and simplify the job of the fi remen.
- In case of closed premises, it is possible to easily exceed 1000° C, causing the combustion of any material just for heat radiation: a condition that would make useless any external extinguish operation. To keep the temperature relatively low (300°- 400° C) by extracting hot air, means to avoid the collapse of the support structures. In addition, the higher oxygen rate will cause a better combustion and thus, for most materials, a lower production of toxic smoke.
- The mechanical ventilation allows the location of the exhaust outlets in places away from the one involved, being the CC-HT series easy to be connected to a duct system.
- The mechanical ventilation allows the extraction of cold fumes, which, remaining at lower level, are extremely dangerous for the occupants and very difficult to be removed by static systems.
- The mechanical ventilation allows the ventilation of the premises also in normal activity situations (clean air), thanks to the possibility of fitting double speed motors: at low speed for normal ventilation (so with lower noise level) and at high speed for emergency conditions. Obviously it is necessary to install the fan with a dedicated power line that automatically operates in case of fire.

Applus
F400

TAH HT
Very high-performance axial roof fans

- Rooftop installations requiring high performance in terms of flow rates and pressures
- Die-cast aluminium impellers with airfoil blades for high efficiency, long life and robustness
- Long casing for ease of installation
- Galvanised sheet metal cover
- Base, protection guard and casing protected against weathering
- **Available in diameters from 400 mm to 1250 mm**
- **Max. flow rates from 4,000 to 90,000 m³/h and max. static pressures from 85 to 550 Pa**
- The series is suitable for operation at temperatures from -20 °C to + 70 °C and is CE certified in class F400 according to EN12101-3:2015

Applus
F300/120 F400

TA HT
High-efficiency and high-performance ducted axial fans

- **Particularly indicated in those applications that request an absolute conformity** to high specifications in terms of pressure and air volume
- 13 sizes, from diameter **400 to 1,600 mm**
- Air flow range up **to 210,000 m³/h and 1,500 Pa**
- High performance axial impeller with aerofoil blades, totally made in **die-cast aluminium**
- Long casing in **steel sheet** epoxy painted, with fixing flanges manufactured according to UNI ISO 6580-EUROVENT standard
- Reversible models on request
- The series is suitable for operation at temperatures from -20 °C to + 70 °C and is CE certified in classes F300/120 and F400 according to EN12101-3:2015

Applus
F300/120 F400

VA HT
High performance and increased efficiency duct "vane axial" fans

- Ducted vane axial fans with aerofoil impellers and adjustable pitch angle for maximum efficiency
- Particularly indicated in those applications that request an absolute conformity to high specifications in terms of pressure and air volume
- **Vane axial system with air straightener for increased efficiency**
- Available in a wide range of models with diameters from 400 mm to 1600 mm (larger sizes on request) with performance up to **230,000 m³/h and 2,400 Pa.** Higher pressures can be reached with two fans installed in series
- Impeller performance and noise emission comply with Amca Standards 210 and 301, category D Long casing execution in painted sheet steel
- The high-performance axial impeller with aerofoil blades are totally made in die-cast aluminium
- Wide choice of setting angles that can be set during assembly to precisely achieve the optimum working point required for each individual project
- A wide range of pitch angles can be set during assembly thanks to the design of the hub. This allows to accurately meet the optimum reachable working point of each ventilation project
- The series is suitable for air temperatures from -20°C to +70°C and is F300/120 and F400 certified by APPLUS according to EN12101-3:2015
- According to the Norm EN12101-3:2015

Applus
F300/120 F400

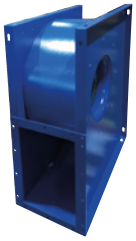
CC SHT
High efficiency duct axial fans F300/120 - F400

- Designed for high temperature smoke extraction
- Specifically dimensioned in a standard range suitable for the performance ratings which are normally requested by the building ventilation fire smoke exhaust rules
- 11 dimensions, **310 to 1,000 mm** diameter
- Air flow range from **2,000 to 40,000 m³/h**
- High efficiency axial impeller in **die-cast aluminium with aerofoil profile blades**, balanced according ISO 1940
- Short casing **in steel sheet**, with fixing flanges manufactured according to UNI ISO 6580-EUROVENT standard. Protected against atmospheric agents by epoxy paint
- Suitable for running at the temperature of +60°C and is CE certified F300, F400 (except 2 poles versions, certified F300/120) according to EN 12101-3:2015 and guaranteed to operate at 300°C for 2 hours by the independent notified body Applus

Applus
F400

FC HT
Centrifugal roof fans F400

- For direct or duct application
- Upper cover in ABS, with appropriate slots for motor cooling (collapsing controlled cowl in case of fire)
- 8 sizes, from **400 to 800 mm** diameter
- Air flow ranges from **4,400 to 18,000 m³/h** and static pressures from 200 to 700 Pa
- Backward curved wheel in **galvanized steel sheet**, with high efficiency and low noise level, statically and dynamically balanced according to ISO 1940
- Base frame in **galvanized steel sheet**
- Suitable for high temperature smoke extraction, running at the temperature of +80°C, the series is CE certified to F400 by the independent notified body APPLUS according to EN12101-3:2015



Applus
F400

PR-QP HT
Backward curved centrifugal fans F400

- Quadrangular construction, which allows to obtain four orientations (0°-90°-180°- 270°) with the same fan
- Reduced dimensions thanks to the absence of the motor support
- Volute casing with quadrangular frame, manufactured in **galvanized steel sheet** protected against atmospheric agents
- 6 sizes, **350 to 630 mm** diameter
- Air flow ranges from **1,690 to 11,600 m³/h** and static pressures from 167,5 to 1,166 Pa
- Inlet/outlet made according to UNI EN ISO 13351
- Single inlet, backward curved wheel with high efficiency, **manufactured in galvanized steel sheet and steel hub**
- Suitable for high temperature smoke extraction: indicated for running at the temperature of +100°C in S1 service and CE certified to F400 by the independent notified body Applus according to EN 12101-3:2015.

Applus
F400

TC HT
Centrifugal roof fans vertical discharge F400 for direct or duct application

- Vertical exhaust conveyor which guarantees optimized safety in case of fire: fast and effective toxic fume extraction, leading to safer escape routes, easier access for the emergency teams, promoting people safety and minimizing the effects of fire on the building structures
- Base frame in galvanized steel sheet protected against atmospheric agents with epoxy finish
- 9 sizes, from **350 to 800 mm** diameter
- Air flow ranges from **3,200 to 21,000 m³/h** and static pressures from 340 to 800 Pa
- Backward curved impeller in **galvanized steel sheet**, with high efficiency and low noise level, designed to resist at high temperature and to ensure the proper cooling of the motor in case of emergency functioning
- Upper cover and vertical exhaust conveyor made in **galvanized steel sheet** protected against atmospheric agents with epoxy finish grey RAL 7001, superficially embossed and corrugated to rise the mechanical resistance to the strain
- Suitable for high temperature smoke extraction: indicated for running at the temperature of +150°C in S1 service and CE certified F400 according to EN12101-3:2015. CE certified to F400 by the independent notified body APPLUS according to EN12101-3:2015

Applus
F400

BOX-T HT
Belt driven double inlet box fans F400

- Designed for plants requiring fire smoke exhaust, they have to be installed out of the fire risk area.
- High performance centrifugal fan, double suction with forward curved impeller for transmission drive, coupled to the motor by means of V-belts and pulleys
- Double-intake centrifugal fans with direct drive and soundproofed (plenum lined with sound-absorbing, self-extinguishing technopolymer material)
- 12 sizes **7/7 to 18/18 and 500 to 630**
- Airflow from **2,000 to 30,000 m³/h**
- Transmission protection casing in galvanized sheet metal, with removable cover
- 20 mm thick sound absorbing mat made of self-extinguishing polyurethane foam
- EPDM V-belts with innovative maintenance-free bare sided technology
- The series is suitable for running at the temperature range from -20°C to +115°C in S1 service and is CE certified in Class F400 according to EN12101-3:2015 by the independent notify body Applus.

SMOKE EXTRACT FANS AND FIRE-FIGHTING SYSTEMS

Fire protection
of escape routes

PRINCIPLE

A firefighting lobby is a space inside buildings which is enclosed in fire resisting construction. It aims to prevent the fumes and combustion gases from invading the contiguous ambient, facilitating the evacuation of the occupants through the appropriate escape routes.
Such compartment is delimited by structures with predetermined REI fire resistance and in any case not less than 60', adequately sealed without cracks. It must also have an **overpressure of at least 0.3 mbar (30 Pa), even in emergency conditions**.

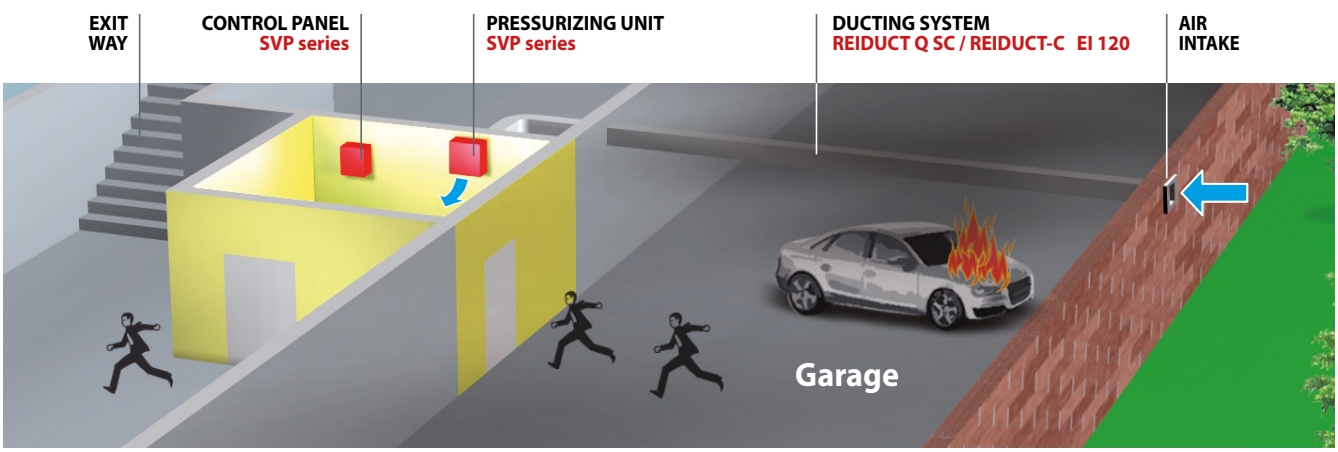
ISTITUTO GIORDANO Qualità al Plurale

Find out more about
www.sistemifiltrifumo.it

EC brushless motor with very low power consumption

SOLUTION

The SVP **pressurization system is a passive fire protection device** which aim is to keep in overpressure, in case of fire, the fire-fighting lobby in which it is installed and therefore to limit the effects of fire and to guarantee people's safety. The device is designed and built according to the **EN12101- 6** standard.
EI120 air ducts can be used to transport clean air from outside to the SVP system pressuriser:
- REIDUCT-Q SC square section
- REIDUCT-C circular cross-section



SYSTEMS FOR THE PRESSURIZATION
OF FIRE FIGHTING LOBBIES

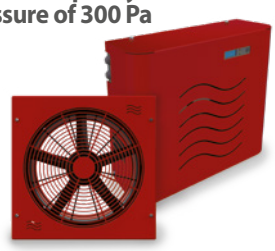
Certificate ISTITUTO GIORDANO Qualità al Plurale

SVP1

- Control panel including electronic board, a pair of 12Vx28A/h buffer batteries, a 230V-24V AC/DC power supply
- **Pressurization unit with maximum capacity of 2,700 m³/h and maximum pressure of 270 Pa**
- Remote differential pressure sensor
- Remote control board I.o.T on request
- Power supply: 230 V - 50 Hz
- Max. current consumption: 2 A
- Prepared for use only in case of Emergency
- Certificate 299375

SVP2

- Control panel including electronic board, a pair of 12Vx28A/h buffer batteries, a AC/DC 230V-24V power supply unit and a differential pressure switch
- **Pressurization unit with maximum capacity of 2,200 m³/h and maximum pressure of 300 Pa**
- Remote control board I.o.T on request
- Power supply: 230 V - 50 Hz
- Max. current consumption: 2.65 A
- Motorisation: EC brushless
- Suitable for 24h operation
- Certificate 314038



SVP+

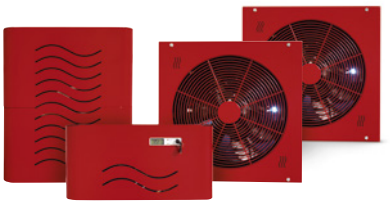
- Control panel including electronic board, a pair of 12Vx28A/h buffer batteries, a power supply unit AC/DC 230V-24V and a differential pressure switch
- **Pressurization unit with maximum capacity of 3,300 m³/h and maximum pressure of 400 Pa**
- Power supply: 230 V - 50 Hz
- Remote control board
- I.o.T on request
- Max. absorbed current: 1.7 A
- Motorisation: EC brushless
- Suitable for 24h operation
- Certificate 314038

SVP4

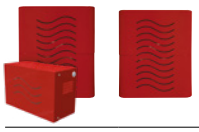
- Control panel with microprocessor settable and verifiable with function test via key command
- **Pressurization unit with maximum capacity of 4,400 m³/ h and maximum pressure of 650 Pa**
- Auxiliary battery module (2 x 12Vx75Ah) not included, supplied as an accessory (mandatory if SVP4 is not connected to an emergency power supply system for fire safety systems)
- Power supply 230V - 50Hz
- Remote control board
- I.o.T on request
- Max. current consumption: 3.9 A
- Brushless EC motorisation
- Suitable for 24h operation
- Certificate 364138

SVP5

- Control panel with microprocessor settable and verifiable with function test via key command
- **Pressurization unit with maximum capacity of 6,500 m³/ h and maximum pressure of 400 Pa**
- Auxiliary battery module (2 x 12Vx75Ah) not included, supplied as an accessory (mandatory if SVP5 is not connected to an emergency power supply system for fire safety systems)
- Power supply 230V - 50Hz
- Remote control board I.o.T on request
- Current consumption max.: 3.9 A
- Brushless EC motorisation
- Suitable for 24h operation
- Certificate 377812



SYSTEM ACCESSORIES SVP



Auxiliary Batteries

Fixing base 60x60 cm for the ceiling installation of the pressurizing unit

Shutter BD EAJ 300x300

Smoke sensor

Watertighr emergency button,

IPD - Differential pressure sensor

Base for sensor,

Optical and acoustical alarm panel IP65

PCB for control panel

DYNAIR INDUSTRIAL VENTILATION

AERAULIC DUCTS EI120

REIDUCT-QSC Square section

Applus

- Square section air ducts in **double-walled** metal with finish in embossed aluminum
- Certified for a fire resistance according to UNI EN 1366-1: 2014
- **Classification: EI 120 (veho o->i) S 500 multi**
- Smoke integrity and thermal insulation for 120 minutes with fire exposure from outside
- Horizontal or vertical installation
- Smoke tightness with a leakage of less than 10 m^3/h per m^2
- Air tightness Class C (2,000 Pa) according to EN 1507-2008
- Maximum feasible dimensions: base 1,250 mm, height 1,000 mm

REIDUCT-C Circular section

Applus

- Circular section air ducts in **double-walled** metal with finish in embossed aluminium
- Internal wall with conical joint made of stainless steel AISI 316
- The insulating cavity consists of a concentric double layer made of two rock wool cups of density 90kg/m^3
- Matte-finish **AISI 304** stainless steel outer wall with cylindrical joint and clamping band
- **Classification: EI 120 (ve/ho o->i) S**
- Smoke integrity and thermal insulation for 120 minutes with fire exposure from outside
- Horizontal and vertical installation
- Internal diameters: 200, 250 and 300 mm
- Working lengths: 194, 444 and 944 mm
- Pipe thickness: 50 mm

SUPPORT AND ASSISTANCE

CHOOSING MAICO ITALIA IS TO HAVE THE GUARANTEE OF CONCRETE, ACCURATE AND HIGHLY PROFESSIONAL SUPPORT

- Discover **SVP Selector**, Maico Italia **dedicated selection software** to simply, fastly and reliably select the most suitable SVP model for the plant project

- Dedicated web site from which access to SVP Selector **www.sistemifiltrifumo.it**

- BIM models available on request

BIM

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Maico Italia S.r.l. headquarters in Lonato del Garda (Brescia), Italy

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