Ventilation

Comfort and performance
at maximum energy efficiency

TEKNOWOOL® AIR
ADVANCED AIR TREATMENT SOLUTIONS

technical catalogue

Ventilation

Comfort and performance
at maximum efficiency
energy

TEKNOWOOL® AIR
ADVANCED AIR TREATMENT SOLUTIONS

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INTRODUCTION TO VENTILATION

Ventilation

Comfort and performance at maximum efficiency energy

Ventilation. To improve indoor comfort

INTRODUCTION

Ventilating means renewing the air in environments to eliminate pollutants produced by people and their activities, ensuring environmental comfort and preventing structural deterioration, bringing significant economic benefits to builders and property owners. This is why forced ventilation arises from the need to improve air quality in enclosed environments in general, such as: residences, workplaces, public buildings, etc. where the presence of people in more or less high concentrations can pollute such environments.

Furthermore, the development of building technologies has led to the construction of highly comfortable residential, commercial and industrial structures, using efficient insulation, sealed windows and doors, or in any case almost total thermal and acoustic insulation of the structures. The natural ventilation that was available in the past is now virtually non-existent, and it is therefore necessary to be able to supply and extract the air present inside structures, preventing saturation by bacteria or harmful substances or the creation of stale air.

Furthermore, in various sectors or environments, it is necessary to consider other factors such as the required air changes per hour[1], the configuration of the structure, the type of air to be treated, etc. That is why different products have been designed and manufactured, all aimed at fulfilling the same purpose (forced ventilation/extraction), with differentiated characteristics and functions for specific solutions.

The main sectors for which products are developed are:

- **Residential sector ventilation and CMV**
- **Catering sector ventilation**
- **Commercial sector ventilation**
- **Ventilation in the Industrial sector (Manufacturing, Chemical, Textile, Food sectors, etc.)**

There are also specific sectors that have very significant treatment and importance at an international level:

- **Ventilation in potentially explosive zones (ATEX) regulation: 2014/34/EU**
- **Fire smoke ventilation regulation: UNI EN 12101-3:2015**

RESIDENTIAL VENTILATION AND CMV (CONTROLLED MECHANICAL VENTILATION)

Residential ventilation and CMV (Controlled Mechanical Ventilation) specifically concern residential environments in general, where multiple sources of air pollution cause high saturation levels precisely due to the lack of ventilation/extraction. The main causes of indoor pollution are:

- The presence of humans who, through simple breathing, spread water vapour and carbon dioxide into the air;
- The masonry of structures which, containing radon, significantly contributes to pollution;
- Paints, coatings, and adhesives used for finishes which produce dust and other chemical compounds;
- Dishwashing, cooking food, or the use of bathrooms and showers which continuously produce water vapour and odours.

Mold and unhealthy air are therefore the pitfalls of modern constructions. The simplest solution is to ensure ventilation of the environment, or of individual rooms, in a controlled and programmed manner, unlike what is uselessly done by simply opening windows. This habitual action, in addition to not achieving its purpose, can create further problems due to the entry of pollutants (dust, insects, pollen and of course noise) and cause significant temperature fluctuations with energy waste in heated and air-conditioned rooms, or even cause mold or deterioration of interior coverings due to the accumulation of humidity and condensation when temperatures vary (a problem often encountered in second homes).

Controlled Mechanical Ventilation (CMV) largely solves this problem, ensuring continuous air renewal in rooms with a simple and affordable system, which involves the installation of specific self-regulating external air intake vents, also responsive to excessive outdoor humidity. The kit also includes the installation of small low-

1 The required air changes in a specific location are determined by:
– Calculation of the room volume (length x height x depth = [m^3])
– Multiplying the value by a K coefficient that determines the number of air changes per location (available in the technical handbook section).

energy consumption electric fans in utility rooms (bathrooms, kitchens, storage rooms, etc.) in place of standard extractors connected to rigid or flexible ducts.
This ventilation system has become indispensable in modern passive houses which, in recent years, have been spreading due to their strong energy savings and reduced environmental impact. Indeed, the insulation class used to avoid thermal losses, in addition to construction technologies aimed at reducing consumption generated by traditional systems, requires a very low controlled ventilation of room volumes for air renewal.

VENTILATION IN THE CATERING SECTOR

Professional kitchens have always required adequate ventilation, both to remove fumes, vapors and odors, and to maintain a certain level of comfort for the staff employed in such environments. The size of the cooking surface is a determinant of the amount of pollutant produced during operation; furthermore, there is a propagation of heat surrounding the area which causes (by radiation) significant discomfort to personnel or people nearby. It is therefore important, through proper ventilation and extraction, to establish the minimum capture velocity for vapors, fumes, grease/oil, and odors, containing them within a certain perimeter to prevent their diffusion.
Organizations such as the Environmental Protection Agency (EPA) have established maximum permissible concentration limits for indoor spaces, thus assisting in the proper sizing and calculation of the most suitable ventilation.
Generally, in cooking areas, multiple issues are resolved through proper selection of electric fans and hoods, in order to ensure:

- Comfort ventilation for staff;
- A limitation of radiated heat from cooking equipment;
- Energy savings by limiting the exhaust air;
- Maintaining negative pressure in the cooking area, preventing the spread of pollutants to adjacent areas;
- Fire ignition prevention.

Regarding the energy consumption of professional kitchens, the main items can be summarized as follows:

- Exhaust air containing energy in the form of heat;
- Electric energy of the motor-driven fans;
- Electrical energy of lighting equipment;
- Energy for cooking appliances.

Proper sizing and installation of devices such as heat recovery units, in addition to the use of high-efficiency electric fans, enable a considerable reduction of energy consumption derived from the first two items.
We also remind that a lack of ventilation/extraction allows the accumulation of high relative humidity values, vapor condensation that mixes with volatile compounds condensed on cold walls, which promotes the development of mold, bacterial flora, etc. that are very difficult to remove and generate unpleasant odors.
It must therefore be taken into consideration that in some cases extraction alone is not sufficient, but when close to residential areas, it is necessary to install activated carbon filtration and deodorization devices or wet scrubbers, to prevent the spread of unpleasant odors generated by the cooking process towards residential buildings.

VENTILATION IN THE COMMERCIAL AND PUBLIC SECTOR

It is the sector most involved in the adoption of integrated ventilation systems, imposed and regulated by current regulations for obtaining licenses for specific activities and for the usability of premises such as: offices, shops, shopping and sports centers, multiplex cinemas, etc.
In these environments, the need to perform air changes compatible with the number of occupants and maintain at low levels and withcontrolled the humidity present inside the premises, must take into account existing or under construction air conditioning systems, in order to limit energy consumption and related costs.
Depending on the context, specific solutions are adopted to meet these needs; for example, for medium-sized offices, optimal ventilation can be achieved with a few measures, but in a shopping center where there is a completely uncontrolled flow of people, with doors opening almost continuously allowing thermal exchange, it is more challenging to find a solution that maintains constant indoor air quality standards in every situation, as well as preserving energy

savings.
That is why, although the problem to be solved is common, depending on the context, multiple solutions and therefore multiple ventilation products are used; a good foundation in aeraulic concepts is therefore important, enabling multiple solutions, such as the use of internal/external pressure "games" to solve thermal exchange problems, or the use of heat exchangers to effectively achieve savings on air conditioning.

VENTILATION IN THE INDUSTRIAL SECTOR

Current industrial and manufacturing production processes generate air pollutants such as: fumes, fine dust, dust, gases, odors and vapors, oil mists, which depending on various factors, primarily the type of activity performed and its duration, can be kept within well-defined limits established by reference regulations.
In industrial settings, sometimes it is sufficient to adequately ventilate the environment where such pollutants are generated with a correct air flow, provided they are in low concentrations. However, in production environments where heavy-duty activities are carried out, it is necessary to extract air locally in close contact with the pollutant, in order to extract and evacuate it in the shortest possible time.
Generally, the extraction carried out to remove pollutants generated by the production process is accompanied by filtration (which can be of varying efficiency and composition) that prevents particulate matter from being released into the atmosphere. However, the need to install a ventilation system to reintroduce at least the same amount of air as that extracted must also be taken into consideration.
To comply with current national and international regulations, the best technologies are made available which, combined with extensive technical knowledge, offer safe products with respect for those who must use the equipment; therefore, the guaranteed filtration performance is established according to international guidelines that limit pollutant concentration levels in the air for professional activities for which a repeatedly exposed worker suffers no health damage (American Conference of Industrial Hygienists 08/20/1999).

VENTILATION IN POTENTIALLY EXPLOSIVE ZONES (ATEX)

Many processes and/or operations are characterized by the presence of flammable substances in the form of gases, vapors, mists or dusts which, in combustion with air, create potentially explosive mixtures, as for example in chemical, pharmaceutical, petrochemical plants and others.
Laws and standards relating to explosion protection have been developed in various countries to ensure an adequate level of safety; since 2003, two directives concerning potentially explosive atmospheres have become mandatory
explosive (Atmospheres Explosives):

- ATEX Directive 94/9/EC: equipment and protective systems (DPR 126/98);
- ATEX Directive 99/92/EC: workplaces and worker safety (Legislative Decree 81/08 - Title XI: explosive atmospheres; previously Legislative Decree 233/03).

Directive 94/9/EC has been replaced by Directive 2014/34/EU.
In summary, these directives define equipment requirements and prevention/protection measures for locations with explosion hazards.
The safety level required for equipment depends on the hazard level of the environments. For this purpose, hazardous areas are classified into Zone 0, Zone 1 and Zone 2, depending on the probability of explosive atmospheres being present (standard IEC/EN 60079-10).
Zone 0 is the most dangerous (highest probability) while Zone 2 is the least dangerous (lowest probability); hazardous zones are identified by a triangle with a yellow background, black border and the inscription EX inside.
Manufacturers of equipment with electrical and mechanical ignition sources (such as: electric motors, fans, pumps, gearboxes, etc.) must ensure that the equipment complies with the essential safety requirements (Essential Safety Requirements) as required by the ATEX Directive 2014/34/EU and applicable standards.
For surface equipment (Group II) there are 3 categories, depending on the protection level (zone of use):

- Category 1: very high level of protection (for zone 0);
- Category 2: high level of protection (for zone 1);
- Category 3: normal level of protection (zone 2).

A further subdivision (gas groups IIA, IIB, IIC) is provided for Group II equipment: respectively
Group IIA (least restrictive), IIB (medium), IIC (most restrictive, which also includes hydrogen and acetylene); Group IIC equipment is suitable for all applications.
For CE ATEX conformity and related marking purposes, different procedures are required depending on the product and of the category.
Category 1 equipment (electrical and non-electrical) and category 2 equipment (electrical and internal combustion engines) must be certified by an ATEX Notified Body, and the manufacturer in turn must have a production notification from an ATEX Notified Body through a quality system audit of the company.
For non-electrical equipment, such as category 2 fans, certification through a Notified Body is not required: internal manufacturing control and submission of the technical file to a Notified Body, which retains it and issues an appropriate receipt, is sufficient.
For category 3, for ATEX conformity purposes, the declaration of conformity and user manual are required.
Naturally, manufacturers may choose to also certify category 2 and 3 equipment through a notified body. This choice translates into an additional safety guarantee for the user.
Within the scope of the ATEX Directive 2014/34/EU, regarding non-electrical equipment, standards EN 1127-1, EN 13463-1 and EN 13463-5 are some of the most important reference standards, which manufacturers must comply with in order to meet the Essential Safety Requirements (ESR) of the Directive.
In addition to the cited standards, CEN (European Committee for Standardization) has published the harmonized European standard
EN 14986, the reference standard used for ATEX compliance and certification for combustible gases/vapors or dusts.
In the case of fans, the purpose is to prevent them from being a source of ignition, therefore they must be evaluated all risks and in particular those related to sparks caused by friction and/or impacts between fixed and rotating parts.
The scope of application of the ATEX Directive includes all equipment that must be installed, within
of the European Community, in environments potentially at risk of explosion.
Based on the type of hazardous substance, explosive atmospheres are classified as:

- Gas (indicated by the letter G)
- Dusts (indicated by the letter D)
- Gas-Dusts (indicated by the letters GD)

The connection between classified zone (according to European Directive 1999/92/EC) and the protection class of the equipment to be used, complies with the following table.

Level protection	Category	Area of use with gas presence	Category	Area of use with dust presence	Hazard level of the area of use
Very high	1G	Zone 0	1D	Zone 20	Explosive atmosphere ALWAYS PRESENT
High	2G	Zone 1	2D	Zone 21	Explosive atmosphere VERY LIKELY
Normal	3G	Zone 2	3D	Zone 22	Explosive atmosphere NOT LIKELY

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

When equipment must be installed in areas with the presence of flammable gases or vapors (Category G), verify the correct temperature class and custody group.

Group	Temperature class					
	T1	T2	T3	T4	T5	T6
IIC	Hydrogen	Acetylene				Ethyl nitrate Carbon disulphide
IIB	Coke Gas Water Gas	1,3-Butadiene Ethylbenzene Ethylene Ethylene oxide	Hydrogen Sulfide Isoprene Petroleum	Diethyl ether		
IIA	Ethyl Acetate Methyl Acetate Acetone Acetic Acid Methyl Alcohol Ammonia Benzene Benzol Butanone Chloromethylene Ethane Methane Methanol Carbon monoxide Naphthalene Propane Toluene Xylene	Butyl acetate Propyl Acetate Amyl Alcohol Ethyl Alcohol Isobutyl alcohol n-Butyl alcohol Acetic anhydride Cyclohexanone Liquid Gas Natural Gas Monoamyl acetate n-Butane	Cyclohexane Cyclohexanol Decane Heptane Hexane Diesel fuel Kerosene Naphtha Pentane	Acetaldehyde Ether		
I	Methane (Firedamp)					

The custody groups and temperature classes are arranged so that the higher one includes the lower one (e.g. IIC includes IIB and T5 includes T2).
The temperature class refers to the maximum temperature reached during operation under nominal conditions, at any point on the surface of the equipment.

Temperature class	Maximum surface temperature (°C) with ambient temperature of 40 °C
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85

ATEX ZONES

ZONE 0

Location where an explosive atmosphere consisting of a mixture of air and flammable substances in the form of gas, vapour or mist is present continuously, for long periods, or frequently.
Note: in general, these conditions, when they occur, affect the interior of tanks, pipes and vessels, etc.

ZONE 1

A place where an explosive atmosphere consisting of a mixture of air and flammable substances in the form of gas, vapor or mist is likely to occur occasionally during normal operation.
Note: this zone may include, among others:

- places in the immediate vicinity of zone 0;
- locations in the immediate vicinity of feed openings;
- locations in the immediate vicinity of filling and emptying openings;
- locations in the immediate vicinity of equipment, protective systems and fragile components of glass, ceramics and similar materials;
- locations in the immediate vicinity of inadequately sealed glands, for example on pumps and valves with glands.

ZONE 2

A place where an explosive atmosphere consisting of a mixture of air and flammable substances in the form of gas, vapor or mist is unlikely to occur during normal operation, but if it does occur, persists only for a short period.

Note: this zone may include, among others, areas surrounding zones 0 or 1.

ZONE 20

Location where an explosive atmosphere in the form of a cloud of combustible dust in air is present continuously, for long periods, or frequently.

Note: in general, these conditions, when they occur, affect the interior of tanks, pipes and vessels, etc.

ZONE 21

A place where an explosive atmosphere in the form of a cloud of combustible dust in air is likely to occur occasionally during normal operation.

Note: this zone may include, for example, places in the immediate vicinity of dust loading and unloading points and places where dust layers form or that, during normal operation, could produce an explosive concentration of combustible dust mixed with air.

ZONE 22

Location where an explosive atmosphere, in the form of a cloud of combustible dust in air, is unlikely to present during normal operation, but which, if it occurs, persists only for a short period.

Note: This zone may include, among others, places near equipment, protective systems and components containing dust, from which dust may escape due to leaks and form dust deposits (e.g. grinding rooms, where dust escapes from mills and settles).

CONSTRUCTION

ATEX CODING KEY FOR PRODUCTS FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES

ATEX marking examples:

Group II

Category 1	Category 2	Category 3
ZONE 0 Gas / ZONE 20 Dust	ZONE 1 Gas / ZONE 21 Dust	ZONE 2 Gas / ZONE 22 Dust
Atmosphere presence potentially explosive 24/24 HOURS	Atmosphere presence potentially explosive MIN. 10 – MAX. 100 HOURS/YEAR	Atmosphere presence potentially explosive 0 – MAX. 10 HOURS/YEAR
Explosive atmosphere only inside the fan	Explosive atmosphere only inside the fan	Explosive atmosphere only inside the fan
EXAMPLE OF ATEX fan construction features based on installation zone		
– Heavy duty construction – Fully welded inside/outside scroll – Special nozzle, welded to the spigot, brass spark guard – Brass spark guard between impeller hub and scroll housing – Scored floating seal – ATEX certified drive belts – Brass anti-spark between pulleys and guard – ATEX certified vibration and temperature sensors – Special use and maintenance manual – Dynamic FEM analysis available – Explosion resistance of 1 bar – Motor suitable for zone	– Heavy duty construction – Fully welded inside/outside scroll – Special nozzle, welded to the spigot, brass spark guard – Brass spark guard between impeller hub and scroll housing – Scored floating seal – ATEX certified drive belts – Brass anti-spark between pulleys and guard – ATEX certified vibration and temperature sensors – Special use and maintenance manual – Dynamic FEM analysis available – Explosion resistance of 1 bar – Motor suitable for zone	– Standard machine – Standard aluminium anti-spark nozzle – Standard anti-spark seal – Antistatic belts – Motor suitable for zone

ATEX marking	Appliance type
CE Ex II 2 GD c T4 T135 °C -10 °C ≤ Ta ≤ +60 °C	Mechanical
CE Ex II 2 GD E EX nA II T5 T100 °C -20 °C ≤ Ta ≤ +75 °C	Electric
CE Ex II 2 GD E EX ia IIC T5 T100 °C -20 °C ≤ Ta ≤ +75 °C	Electric

Coding key

CE	Ex	II	2	GD	E	EX	nA	II	T5	T100 °C	-20 °C ≤ Ta ≤ +75 °C	IP65
1	2	3	4	5	6	7	8	9	10	11	12	13

1 Mark 1
CE = CE Mark

2 Mark 2
Ex = EX Mark (approved for use in potentially explosive atmospheres)

3 Equipment group
I = used in mines
II = used in all other EX atmospheres

4 Equipment category
Protection level
1 = very high
2 = high
3 = normal

5 Atmosphere type
G = gas
D = dusts
2G = used in zone I
2GD = used in zone 21
3G = used in zone 2
3GD = used in zone 22

6 Equipment 1
E = CENELEC approved equipment

7 Equipment 2
EX = explosion-proof equipment

8 Type of ignition protection
nA = non-sparking equipment
b = with controlled ignition sources
c = designed for safety
d = flameproof enclosure
e = increased safety
fr = vapour-tight encapsulation
ia = intrinsic safety 1 or 2 events
ib = intrinsic safety 1 event
k = liquid encapsulation
m = encapsulation
o = oil immersion
p = pressurized encapsulation
q = sand filling

9 Explosion group
II = for all Group II Gases if the protection class allows it (e.g. "nA", see standard EN.50021)
IIA = for all Group IIA Gases if the protection class requires it (e.g. "iA", see standard EN.50020)
IIB = for all Group IIA-IIB Gases if the protection class requires it (e.g. "iA", see standard EN.50020)
IIC = for all Group IIA-IIB-IIC Gases if the protection class requires it (e.g. "ia", see standard EN.50020)

Different gases have different ignition temperatures. Some examples:

Group	Gas Type	Ignition temperature
A	Acetone	540 °C
	Acetic acid	485 °C
	Ammonia	630 °C
	Ethane	515 °C
	Methylene chloride	556 °C
	Methane (CH_4)	595 °C
	Carbon monoxide	605 °C
	Propane	470 °C
	n-butane	365 °C
	n-butyl	370 °C
	Hydrogen sulfide	270 °C
	n-hexane	240 °C
	Acetaldehyde	140 °C
	Diethyl ether	170 °C
	Ethyl nitrite	90 °C
B	Ethylene	425 °C
	Ethyl oxide	429-440 °C
C	Acetylene (C_2H_2)	305 °C
	Carbon disulfide	102 °C
	Hydrogen (H_2)	560 °C

10
Temperature classes (Gas)

Maximum surface temperature reachable for equipment for potential use in explosive gas atmosphere
Depends on the Gas family)

T-class	Maximum surface temperature	Minimum ignition temperature of Gas
T1	450 °C	>450 °C
T2	300 °C	>300 - ≤450 °C
T3	200 °C	>200 - ≤300 °C
T4	135 °C	>135 - ≤200 °C
T5	100 °C	>100 - ≤135 °C
T6	85 °C	>85 - ≤100 °C

11
Dust ignition temperature

Maximum surface temperature reachable for equipment for potential use in an area with potentially explosive dust. The ignition temperature of dusts depends on their consistency and nature (some examples).
N.B.: if the Gas Temperature Class is not specified (e.g. "TS"), the dust ignition temperature is also valid for the Gas Temperature Class.

Dusts	Nubi	Thickness 5 mm
Aluminium	560 °C	>450 °C
Charcoal	520 °C	320 °C
Coal dust	380 °C	225 °C
Cocoa	590 °C	250 °C
Coffee grounds	580 °C	290 °C
Corn	530 °C	460 °C
Methyl cellulose	420 °C	320 °C
Phenolic resin	530 °C	>450 °C
Polyethylene	440 °C	castings
PVC	700 °C	>450 °C
Sugar	490 °C	460 °C
Soot	810 °C	570 °C
Starch	460 °C	435 °C
Toner	520 °C	castings
Wheat	510 °C	300 °C

12
Operating range of the device

Maximum temperature range within which the equipment can be used inside the explosive atmosphere

13
Protection degree

IP65 = protection degree

IN-DEPTH LOOK AT THE ATEX CATEGORY

The term originates from the abbreviation of **AT**mospheres **EX**plosibles (Explosive atmospheres).
Directive 94/4/EC was created to harmonize the laws of individual European States concerning equipment, components and related protective systems for use in potentially explosive atmospheres.
Initially known as ATEX 100, and currently renamed ATEX 95, it is the European Directive that defines the minimum standard safety requirements for equipment and components.
The Directive has been incorporated into the national laws of the Member States and applied for the sale and free trade of equipment, components and protective systems intended for use in potentially explosive atmospheres.
It has been in force since 1 July 2003.
This Directive mainly concerns suppliers of equipment and components, in the case **TEKNOWOOL AIR**.
Directive 99/92/EC defines the minimum requirements for the safety of workers, the protection of their health (which may be endangered by working in potentially explosive atmospheres). Initially known as ATEX 118 - and currently renamed ATEX 137 - this Directive mainly concerns manufacturers, operators and maintenance personnel of installations working in potentially explosive atmosphere conditions.
For new installations the Directive has been effective since **1 July 2003**.

ATEX OBJECTIVE

Through the application of European Directives, ATEX aims to minimize incidents due to explosions.
Every year in Europe, several thousand explosions occur, caused by dust and gas mixtures, during the storage and handling of flammable substances.

EUROPEAN DIRECTIVES

>99/92/EC ATEX Social Directive

It is the responsibility of the plant manufacturer to prepare the documents relating to explosion protection and the risk assessment of installation in compliance with ATEX 137 – Directive 99/92/EC, concerning:

- **Zone classification**
- **Temperature classes**
- **Explosion groups (Gas)**
- **Ambient temperature**

Gas Zone	Dust Zone	Applications
0		Continuous-frequent
	20	For long periods
1		Occasional
	21	Occasional
2		Rarely
	22	For short periods

>94/9/EC ATEX 95 Product Directive

It is the responsibility of equipment and component suppliers to classify them in compliance with ATEX 95 – Directive 94/9/EC regarding:

- **Classification of equipment according to categories**
- **Temperature classes**
- **Explosion groups (Gas)**
- **Ambient temperature**

Group Appliances	Category Appliances	Applications
I	M1	Mines
I	M2	Mines
II		All other application areas non-mining
II	1G	Gas, mixed, vapour
II	1D	Dusts
II	2G	Gas, mixed, vapour
II	2D	Dusts
II	3G	Gas, mixed, vapour
II	3D	Dusts

SMOKE EXTRACTION VENTILATION

Statistical analyses of the last decade have shown that the majority of injuries to people in case of fire are caused not by heat exposure but by inhalation of harmful substances present in smoke.
The latter, in fact, reduce visibility in rooms, making evacuation by people very difficult.
For many years it was believed that the only effective system for preventing fire spread, especially on the horizontal plane, was compartmentalization through fireproof walls, preventing any ventilation of the premises until fire extinguishing equipment had intervened.
However, this philosophy has always been difficult to apply, especially in environments characterized by very large spaces that in fact cannot be compartmentalized. A more accurate study of the phenomena has therefore made it evident
how important a controlled smoke evacuation is from the earliest stages of a fire. In this field, TEKNOWOOL AIR has decided to dedicate a specific line of fans to be applied to smoke extraction systems, integrated with products intended for room compartmentalization.
All proposed solutions are approved and/or certified to comply with the most recent and stringent European regulations
that regulate the design and installation of these products.
The main reference standard at European level remains EN 12101-4 which establishes the temperature/duration requirements that certified products must meet.
Request the Fire & Smoke technical catalogue for more information or visit the website www.aercomponents.it.

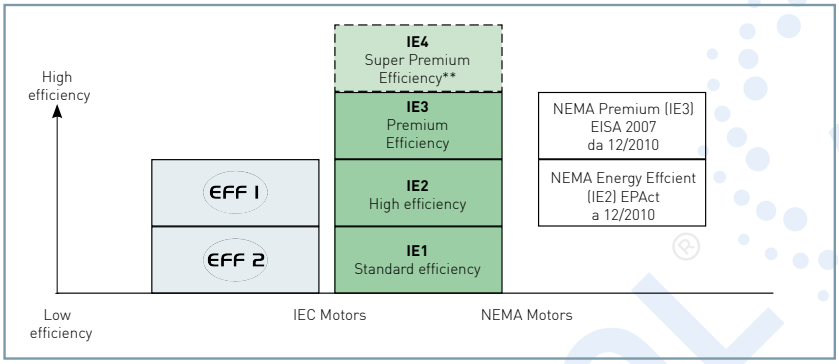
ENERGY SAVING

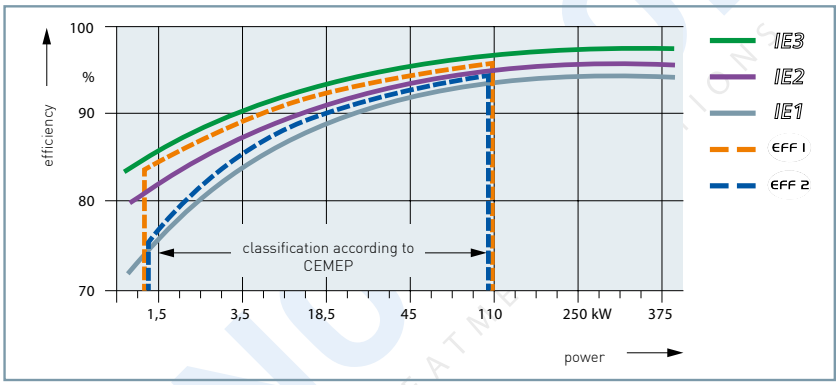
In recent years, Europe has focused on developing new directives to regulate and provide the right direction for processes towards ecological quality.
For this very reason, an EU ecological quality label was created, called *Ecolabel*, which is designed to promote all products that demonstrate high environmental performance, considering the entire product life cycle.
TEKNOWOOL AIR, which for over 30 years has been designing models with high efficiencies, has decided to embark on a new path aligned with these principles, offering new cutting-edge solutions capable of combining high performance and low environmental impact (low energy consumption/energy recovery).

The technologies developed in recent years therefore allow the supply of in the eco-friendly products market at relatively moderate prices, with estimated return on investment aligned at 2 years.

IEC/EN 61000-3-12

Standard concerning all drives directly connected to the public power grid; all residential, commercial and light industry installations must therefore refer to this standard.
Standard EN 61000-3-12 applies to specific components, such as inverters. By choosing devices that are already compliant with this directive, the plant manufacturer or system supplier can easily manage
the conformity of the installation without resorting to special test procedures or measurements on the finished system.





Technical introduction

BASIC INFORMATION

The fan is normally required to convey a certain fluid flow rate, which can be expressed in volume or weight per unit of time, and a certain pressure normally expressed in mm H_2O or Pascal (Pa), necessary to overcome the pressure losses that will occur in the circuit where this fluid will circulate. To perform the required duty, the fan must transmit to the fluid passing through it a certain amount of energy, energy that it receives in turn from the driving electric motor. The two energies are obviously not equal, otherwise the fan efficiency would be 100%. The mechanical energy delivered by the motor to the fan is always greater than that which the fan delivers to the transported fluid. The fan efficiency is therefore obtained from the ratio between the first and the second energy. All fans are therefore characterized by four fundamental values for proper selection:

- flow rate
- pressure
- absorbed power
- energy efficiency

FLOW RATE

Normally the required flow rate is volumetric, expressed in cubic meters per unit of time; the standardized time unit both nationally and internationally is the second, but m^3 per hour is still more familiar to system engineers.

PRESSURE

It is commonly expressed in mmH_2O, although internationally the Pascal has been promoted (1 mmH_2O=9.81 Pa) which is the unit of measurement chosen by TEKNOWOOL AIR technical department for all documentation.
1 mm water column equals one kgf/m^2, in fact, imagining having a surface area of 1 m^2 covered by 1mm of water, the total weight of this water will be 1 kg. Further confirmation comes from its volume equal to: 1 mm x 1,000 mm x 1.000 mm = 100.000 mm^3 = 1 dm^3 weighing 1 Kg.
The pressure generated by the fan is the sum of two pressures that manifest differently:

- the first is static pressure, which is the portion of total pressure that is inherent to the fluid itself, regardless of its velocity; it is obtained by subtracting the dynamic pressure from the total pressure. The use of the static pressure value has been chosen for our tables in order to assist in the correct selection of a fan;
- the second is the dynamic pressure which derives from the kinetic effect related to air and expressed by the term:
  Pdin=y c2 /2 g. Where:
  - "**y**" is the specific weight of the conveyed fluid (1.225 kg/m^3-air at 15 °C)
  - "**g**" is the acceleration of gravity (9.81 m/s^2)
  - "**c**" is, by convention, the average outlet velocity from the fan discharge, obtainable from the ratio between the flow rate in m^3/s and the inlet section in m^2. The sum of the two pressures is called total pressure.

ABSORBED POWER

The absorbed power is expressed in kW and the classic formula for calculating the absorbed power of a fan, given knowledge of the other parameters, is the following:

$$\mathbf{H(kW)} = \frac{\text{Flow rate } (m^3/s) \times \text{Total pressure (Pa)}}{10 \times \text{efficiency (\%)}}$$

The efficiency is related to the three characteristics described above, namely air flow rate, pressure and absorbed power, by the following expression:

$$\mathbf{r(\%)} = \frac{\text{Flow rate (m/s)} \times \text{Total pressure (Pa)}}{10 \times \text{absorbed Pt (kW)}}$$

FANS

Fans are divided into the following types:

- centrifugal or radial
- helical or axial.

TYPES AND CHARACTERISTICS OF CENTRIFUGAL FANS

Centrifugal fans can in turn be divided into three main types depending on the inclination of the impeller blades.

Fans with forward curved blades in the direction drotation

Fans with radially arranged blades

Fans with backward curved blades compared to adirection of rotation

FANS WITH FORWARD CURVED BLADES

This type of impeller consists of a series of blades curved forward in the direction of rotation. Maximum efficiency of 75%, suitable for handling clean air or fluids with a relative humidity rate below 80%. This type of fan is used in applications where size containment is a primary factor. Is rather quiet and is typically used in small domestic or industrial installations. Compared to other types of impellers, the air flow rate and therefore the energy exchange are considerably higher due to the blade loading imposed on individual blades. For this reason, this type of fan has a greater number of blades (approximately 70/80). The characteristic curve shows discontinuities in the low flow rate region, due to blade stall or air recirculation; furthermore, the absorbed power increases significantly with increasing air flow rate, consequently, if the system pressure losses have been overestimated, the electric motor could become overloaded.

FANS WITH RADIAL BLADES

This type of impeller is characterized by straight blades that push the flow radially. Maximum efficiency of 80%. These fans are suitable for handling clean or very dusty air with suspended materials and a relative humidity rate below 80%. The blades are self-cleaning, as they generally remain clean when contaminated air with dust or other substances passes through. Furthermore, the viscous losses imposed on the blades are greater than in fans with backward curved blades due to the blade profile. In this type of impeller too, the characteristic curve shows discontinuities due to stall and air recirculation, but less pronounced than in the forward curved blade impeller.

FANS WITH BACKWARD CURVED BLADES

This type of impeller is composed of blades curved backward with respect to the direction of rotation. Maximum efficiency of 85%, suitable for handling clean air and fluids or slightly dusty air with a relative humidity rate below 80%. They are used for medium to high flow rates and have the characteristic of having a steep characteristic curve, which implies that any large variations or errors in system pressure do not lead to large effects on the flow rate itself. The backward curved blade fan has a higher operating speed, which requires a sturdier and more precise machine construction. A further advantage concerns the required power: in the event of a variation in flow rate or system resistance, the selected motor will not become overloaded.

DIRECT DRIVE FANS

Axial fans can be divided according to application: ducted or panel-mounted.

Ducted axial fans

Airfoil blade fans, panel type

From an aeraulic point of view, the fundamental components of an axial fan are the following:

- **the impeller with hub**
- **the drum or any nozzle**

In addition to these components, there are other parts that essentially have a mechanical function and do not affect the aeraulic performance of the fan, namely:

- **electric motor**
- **support base of one or the other.**

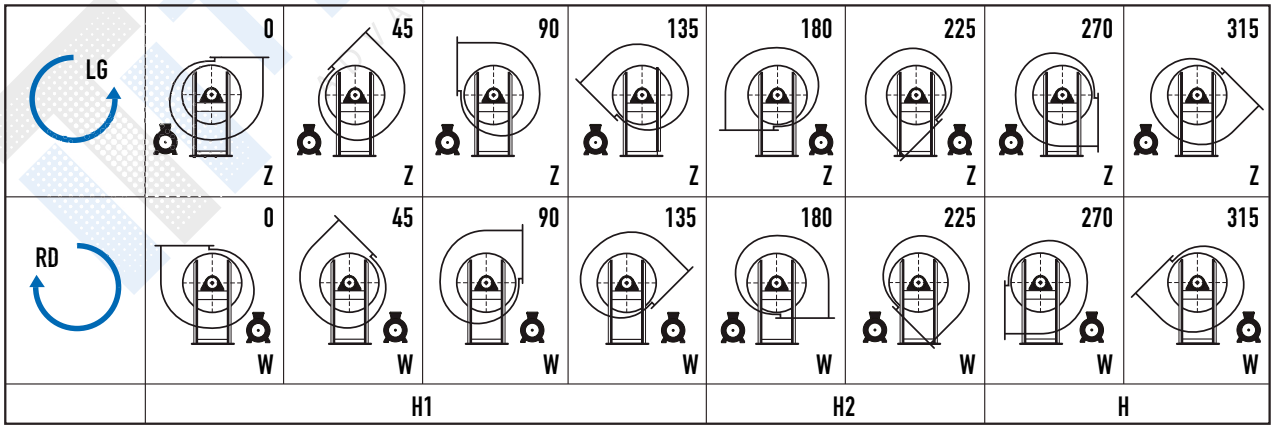
DUCTED AXIAL FANS

In this type of fan, the fluid is brought to a state of rest at a certain velocity with a direction parallel to the axis of rotation of the impeller. It is equipped with an inlet cone that has the dual function of reducing inlet pressure losses and of guensure a regular flow of air to the impeller. The section of the drum upstream of the impeller is generally under negative pressure while the downstream section is under positive pressure, therefore the fluid will try to return to the upstream zone due to the pressure difference through the annular section between the impeller and the drum. It is therefore important that this clearance is reduced to a minimum to reduce volumetric losses and the noise with which this phenomenon manifests itself.

PANEL FANS

In this type of fan, the inlet cone is not necessary and the drum is flanged directly to the duct. The impeller, while rotating, transfers to the fluid passing through it part of the energy transmitted by the electric motor. High air flow rates at moderate pressures. High-efficiency impeller with airfoil profile blades.

BELT-DRIVEN FANS



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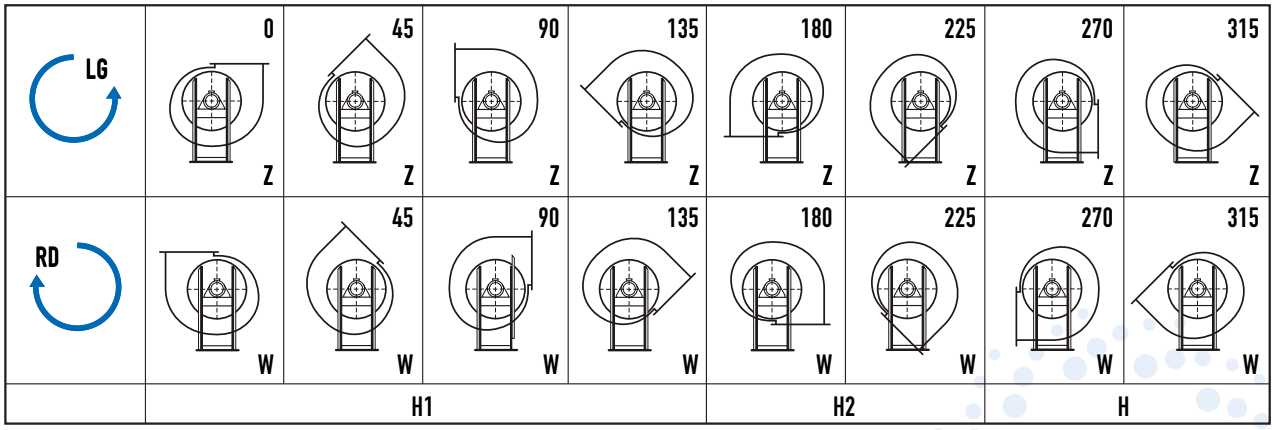


SELECTING A FAN FOR HIGH TEMPERATURES

Some of our fans can be manufactured to convey air or fluids at high temperatures. The full success of a fan conveying fluids at high temperatures requires careful consideration of the effects that these temperatures produce on the breaking load and on the creep resistance of the steels used in its construction. For this reason, the fan must be selected for an operating speed not exceeding the maximum allowed.

Since the fluid density varies, with respect to the reference density, with changes in temperature, chemical composition and altitude, to select a fan at high temperatures using the standard tables, the required fan pressure must be converted to the reference value; to this end, for fluids with a density equal to 1.2 kg/m^3 you can use the table shown below.

CORRECTION TABLE FOR FAN SELECTION BASED ON TEMPERATURE AND ALTITUDE

Temperature	Altitude in meters						
°C	0	250	500	750	1000	1500	2000
-40	0,79	0,81	0,83	0,86	0,88	0,93	0,99
-20	0,86	0,88	0,91	0,93	0,95	1,01	1,07
0	0,93	0,95	0,98	1,00	1,03	1,09	1,16
+20	1,00	1,02	1,05	1,08	1,11	1,17	1,24
+40	1,07	1,09	1,12	1,15	1,18	1,25	1,32
+60	1,14	1,16	1,19	1,22	1,26	1,33	1,41
+80	1,20	1,23	1,27	1,30	1,33	1,41	1,49
+100	1,27	1,30	1,34	1,37	1,41	1,49	1,58
+150	1,44	1,48	1,52	1,56	1,60	1,69	1,79
+200	1,61	1,65	1,70	1,74	1,79	1,89	2,00
+250	1,78	1,83	1,88	1,92	1,98	2,09	2,21
+300	1,96	2,00	2,05	2,11	2,17	2,29	2,42
+350	2,13	2,18	2,23	2,30	2,35	2,49	2,64
+400	2,30	2,35	2,41	2,48	2,54	2,69	2,85
+450	2,47	2,52	2,59	2,66	2,74	2,89	3,06
+500	2,64	2,69	2,77	2,85	2,93	3,09	3,27

Standards

TEKNOWOOL AIR, to ensure maximum safety and reliability for the operator, supplies products and solutions taking into account national and international regulatory references. The following standards are in force in the field of ventilation, specific to the regulation of fans and extractors.

RREGULATION CE 1253/2014/CE (ERP 2018)

Within the regulatory framework of the European Community ErP 2009/125/EC (Energy-related Products), also known as the Ecodesign Directive, on November 26, 2014, Regulation EC 1253/2014/EC came into force, which applies to ventilation units and establishes ecodesign specifications to be met for their placing on the market or putting into service.

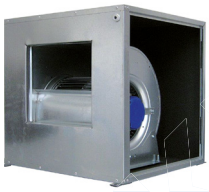
The regulation makes no distinction whatsoever between ventilation units that will serve systems for new construction buildings or those that will replace existing units.

Equally, intended uses are not distinguished. The main purpose is to significantly reduce the energy consumption of ventilation systems, whether they serve the commercial, hospital, industrial or other sectors.

The new requirements apply from 1 January 2018 within the European Economic Area.

For the purposes of this regulation, the following definitions apply:

- **ventilation unit (VU)**: an electrically powered device equipped with at least one impeller, a motor and a casing, intended to replace exhaust air with air from outside in a building or part of it;
- **residential ventilation unit (RVU)**: a ventilation unit: a) whose maximum flow rate does not exceed 250 m^3/h; b) whose maximum flow rate is between 250 and 1,000 m^3/h and intended, as declared by the manufacturer, exclusively for ventilation purposes in residential buildings;
- **non-residential ventilation unit (NRVU)**: a ventilation unit with a maximum flow rate of the ventilation unit exceeding 250 m^3/h and for which, if the maximum flow rate is between 250 and 1,000 m^3/h, the manufacturer has not declared that it is intended exclusively for ventilation purposes in residential buildings;
- **unidirectional ventilation unit (UVU)**: a ventilation unit that produces air flow in one direction only, whether from inside to outside (exhaust) or from outside to inside (supply);



- **bidirectional ventilation unit (BVU)**: ventilation unit that produces an airflow between indoors and outdoors and is equipped with both exhaust and supply fans.

REC Heat recovery unit

- Compliant with ErP2018 regulation;
- Load-bearing aluminium structure;
- Sandwich panelling thickness 25 mm;
- Double inlet fans with brushless motor;
- Constant flow rate control system;
- AUTOMATIC Free-Cooling;
- EFFICIENCY 85%

WHICH UNITÀ ARE NOT SUBJECT TO THIS REGULATION?

- Units that include a heat exchanger and a heat pump for heat recovery or to enable heat transfer or extraction in addition to the heat recovery system device.
- ATEX units designated exclusively as operating in potentially explosive atmospheres, as defined in Directive 94/9/EC.
- Classified as kitchen extraction hoods.
- Units operating in full recirculation mode.
- Units intended exclusively for use in emergency situations, for short periods of time, and that comply with the basic specifications for construction works regarding fire safety of Regulation (EU) No. 305/2011 of the European Parliament and of the Council.
- Fan-only units (extractors without filters). The standard definition is: if they are axial or centrifugal fans equipped solely with a housing in accordance with Regulation (EU) No. 327/2011.

WHAT ACTUALLY CHANGES?

- The minimum efficiency of recovery systems (static and rotary) must be at least 85%;
- The efficiency of coil recovery systems is 80%;
- All static heat recovery units must be equipped with a bypass;
- All ventilation units must be equipped with multi-speed drive or variable speed drive;
- SFPint value < of the SFPlimit value (equal to 230 for a UVU intended for use with one filter);
- If the product configuration includes a filter unit, the product must be equipped with a visual or acoustic dirty filter alarm signal that activates if the pressure drop across the filter exceeds the maximum permissible final pressure drop.

TESTING

ISO 5801-17	Industrial fans. Performance testing in standardized circuits.
AMCA 210-07	Industrial fans. Fan testing methods and related test data presentation.
UNE 100212:1990	Fans. Devices and installations for fan testing.
ISO 13350-15	Industrial fans. Performance testing of jet fans.
ISO 13348-07	Industrial fans - Tolerances, methods of conversion and technical data presentation.

HIGH TEMPERATURE FANS

EN 12101-3:2015	Smoke and heat control systems. Part 3: Specifications for powered smoke and heat exhaust ventilators.

ACOUSTICS

ISO 3744-10	Acoustics. Determination of sound power levels of noise sources from sound pressure. Engineering method for free-field conditions over a reflecting plane.

BALANCING AND VIBRATIONS

ISO 1940-1:2017	Mechanical vibrations. Balancing quality.
ISO 10816-1	Mechanical vibrations. Evaluation of machine vibrations.
ISO 14694	Industrial fans. Specifications for balance quality and vibration levels.

SAFETY (CE Declaration of Conformity)

EN ISO 12100-1	Safety of machinery. Basic concepts, general principles for design. Part 1: Basic terminology, methodology.
EN ISO 12100-2	Safety of machinery. Basic concepts, general principles for design. Part 2: Technical principles.
EN 60204-1: 2016	Safety of machinery. Electrical equipment of machines. Part 1: General requirements.
ISO 13857	Safety of machinery. Safety distances to prevent hazard zones being reached by upper and lower limbs.
UNI 100250	Industrial fans. Mechanical safety of fans (equivalent to ISO 12499).
ISO 12499	Industrial fans. Mechanical safety of fans.

DIRECTIVES

2006/42/CE	Machinery directive.
2014/35/UE	Low voltage directive.
2014/30/UE	Electromagnetic compatibility directive.
REG. UE 305/2011	Construction products directive.

ATEX VERSIONS

ATEX Directive 2014/34/EU	Equipment and protective systems for use in potentially explosive atmospheres.
EN 14986	Design of fans for operation in potentially explosive atmospheres.
EN 13463-1	Non-electrical equipment for potentially explosive atmospheres. Part 1: Basic requirements and methodology.
EN 1127-1	Explosive atmospheres. Explosion prevention and protection. Part 1: Basic concepts and methodology.

CENTRIFUGAL FANS

Ventilation

Comfort and performance at maximum efficiency energy

CBD

Forward curved blade double inlet centrifugal fan directly coupled

Product	CBD
Application	Civil and industrial applications
Construction	Forward curved blade impeller in steel sheet, galvanized steel casing complete with feet and anti-vibration mounts

FAN
Centrifugal fan with forward curved blades, double inlet with direct drive motor, made of galvanized steel. Flow rate up to 7750 m³/h and pressure up to 500 Pa.
Fan blade dynamically balanced according to ISO-1940.

MOTOR
Enclosed motor with class F ball bearings, in single-phase 230V 50 Hz or three-phase 400 V version
50 Hz, available with 4 or 6 poles.
Working temperature range (-20 ÷ +40) °C.

ACCESSORIES
ON/OFF Switch.
Electronic phase-cut speed controller for single-phase versions, inverter for three-phase versions.

APPLICATIONS

CIVIL VENTILATION

TECHNICAL ROOMS

OFFICES

PUBLIC SERVICES

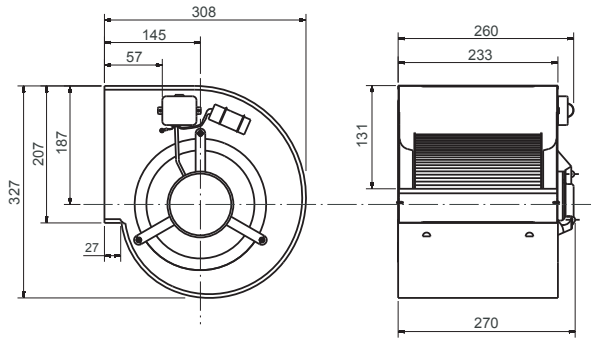
TECHNICAL FEATURES - OPERATING RANGE

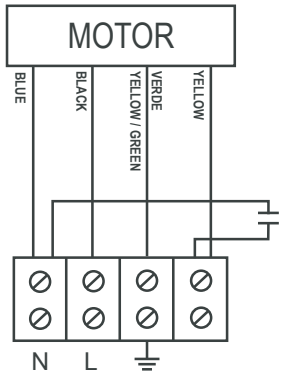
Operating range	Max flow rate (m³/h)	From 250 to 7,700
	Pressure (Pa)	From 30 to 450
Min. outlet	mm	230x208
Max. outlet	mm	473x404
Motor	Volt (±10%)/ph/Hz	230V/1ph/50 Hz - 400V/3ph/50Hz
	Poles	4-6
Fluid temp min. limit	°C	-20
Fluid max. temp limit	°C	+40

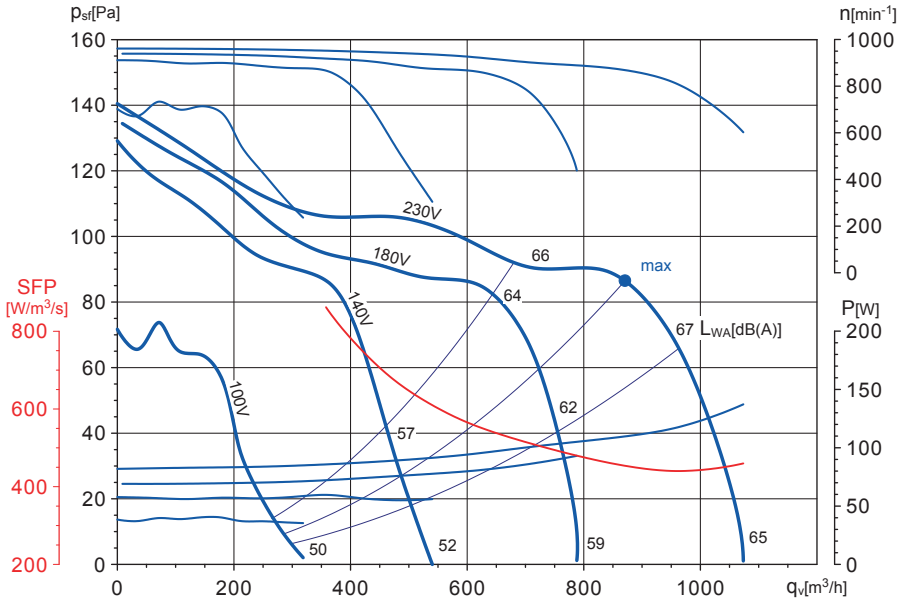
CHARACTERISTIC CURVES AND DIMENSIONS

7/7 0.07 KW 6 POLI M

Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	6 poles
Motor power	72W
Maximum absorption	0,6 A
Capacitor	3 mF/450V
Air temperature	-20°C<T<+50°C
Wt.	6,7 kg







Test standard: ***ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

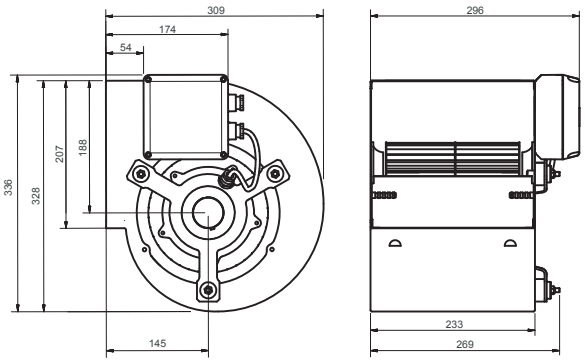
Corrections								
Hz	63	125	250	500	1000	2000	4000	8000
dB	29	22,5	16	9,5	3,5	5,5	9	15

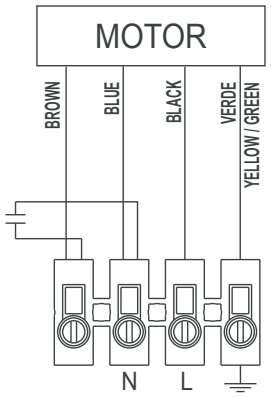
CBD

Forward curved blade double inlet centrifugal fan directly coupled

7/7 0.15 KW 4 POLI M

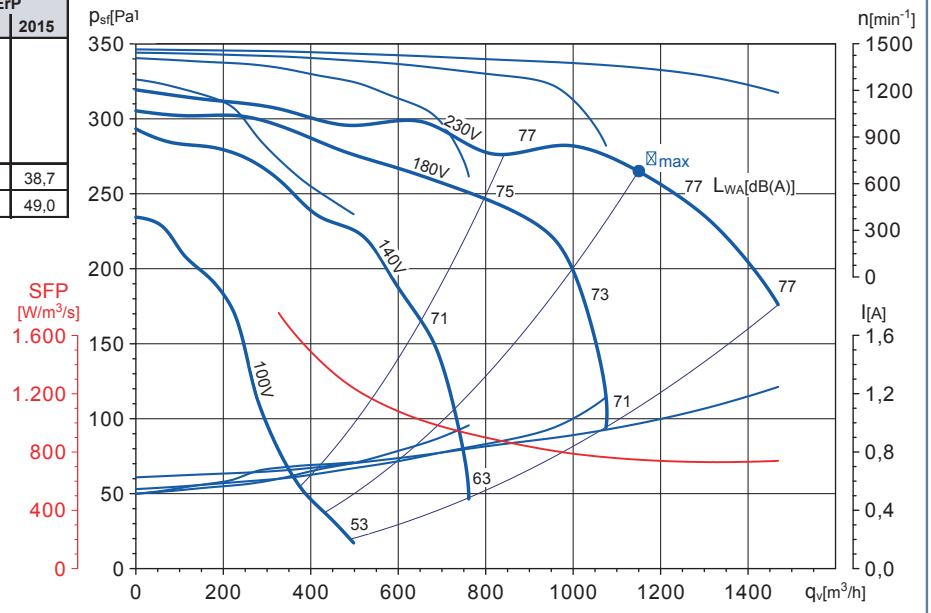
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	4 poles
Motor power	147W
Maximum absorption	1,2 A
Capacitor	7 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	6,9 kg





Fan data	ErP 2013	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	39	31,7	38,7
Efficiency grade	49,3	42,0	49,0
Absorbed power [kW]	0,239	
Air volume [m ^{3}/h]	1150	
Total pressure [Pa]	292	
Speed [RPM]	1346	

* Data at optimum efficiency working point



Test standard: ***ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

Corrections								
Hz	63	125	250	500	1000	2000	4000	8000
dB	27	21,5	15,5	9,5	4	5,5	8	15,5

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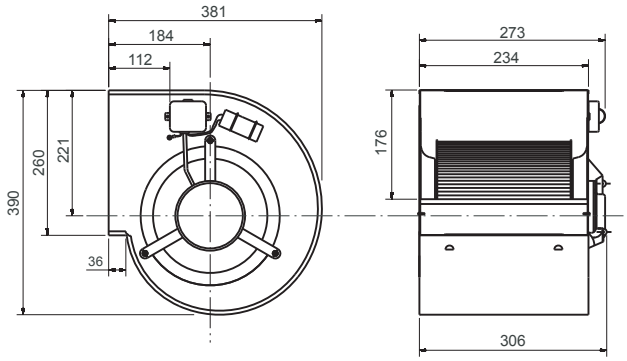
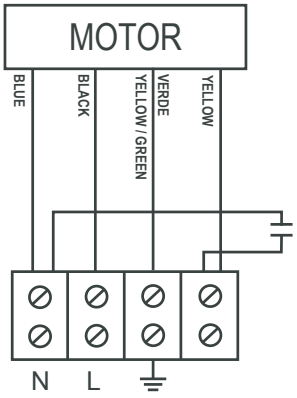
9/7 0.37 KW 4 POLI M

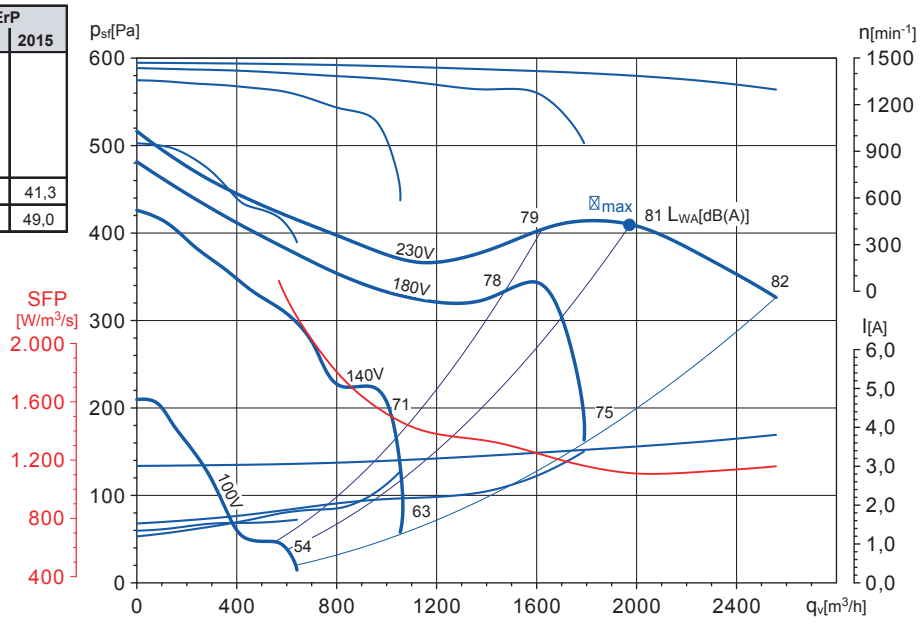
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	4 poles
Motor power	373W
Maximum absorption	3,8 A
Capacitor	10 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	11,3 kg





	Fan data	ErP 2013	ErP 2015
Installation category	B		
Efficiency category	Total		
VSD must be installed with the fan	No		
Specific ratio	1		
Overall efficiency [%]	41,3	34,3	41,3
Efficiency grade	49	42,0	49,0
Absorbed power [kW]	0,609		
Air volume [m 3/h]	1976		
Total pressure [Pa]	458		
Speed [RPM]	1387		

* Data at optimum efficiency working point



*Test standard: **ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

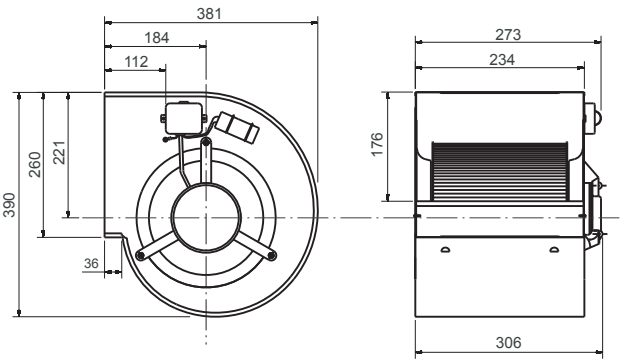
Corrections Hz	63	125	250	500	1000	2000	4000	8000
dB	33,5	21,5	13	7,5	4	6	10	20

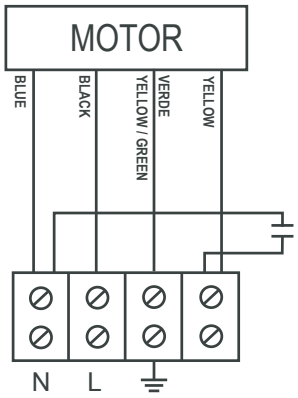
CBD

Forward curved blade double inlet centrifugal fan directly coupled

9/9 0.20 KW 6 POLI M

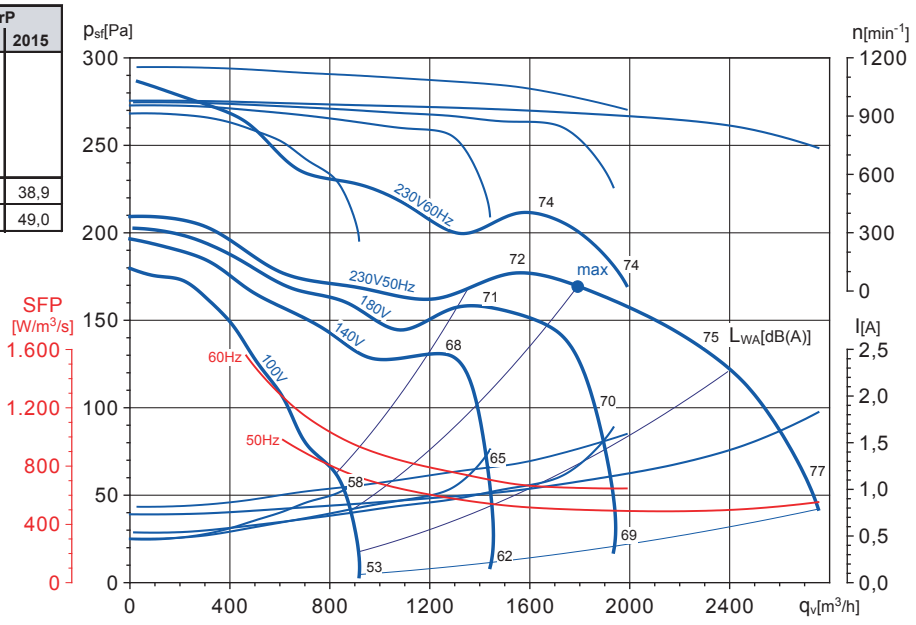
Voltage	1 ~ 230V 50/60Hz
Motor type	1V IP55 cl.F
Speed	6 poles
Motor power	200W
Maximum absorption	1,8 A
Capacitor	5 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	14,0 kg





	Fan data	ErP 2013	ErP 2015
Installation category	B		
Efficiency category	Total		
VSD must be installed with the fan	No		
Specific ratio	1		
Overall efficiency [%]	38,9	31,9	38,9
Efficiency grade	49	42,0	49,0
Absorbed power [kW]	0,249		
Air volume [m ^{3}/h]	1792		
Total pressure [Pa]	195		
Speed [RPM]	915		

* Data at optimum efficiency working point



Test standard: ***ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

Corrections Hz	63	125	250	500	1000	2000	4000	8000
dB	32,5	23	13	7,5	4	6	10,5	18,5

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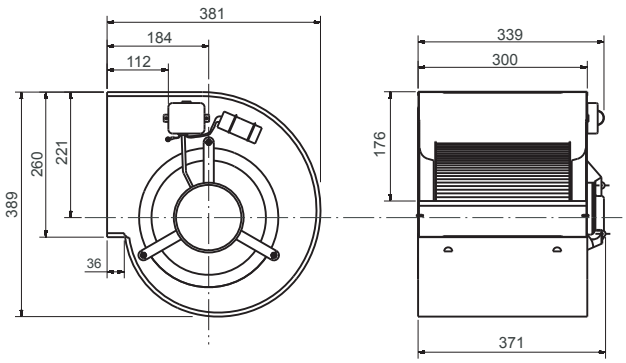
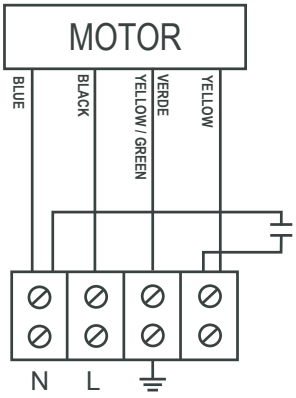
9/9 0.55 KW 4 POLI M

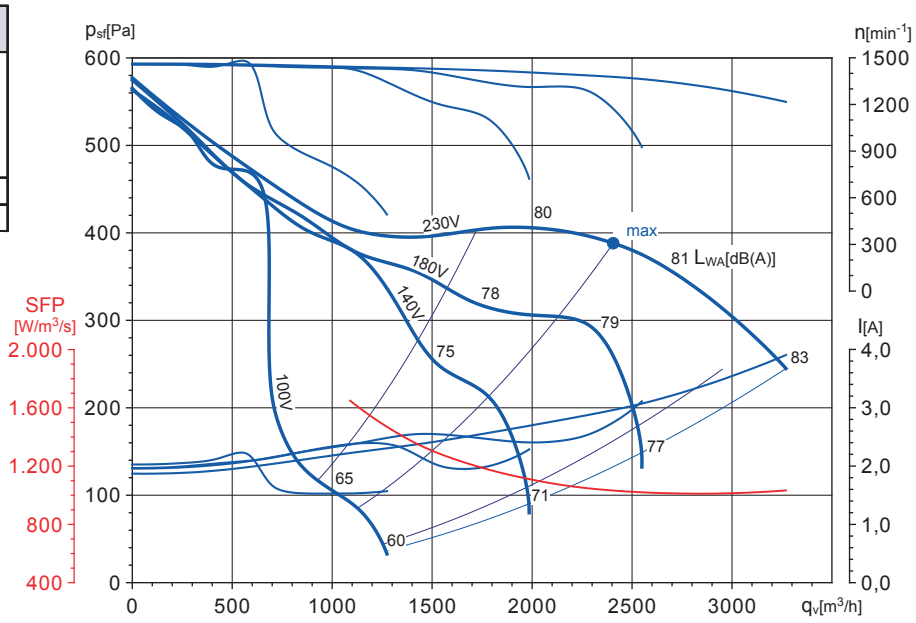
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	4 poles
Motor power	550W
Maximum absorption	3,9 A
Capacitor	25 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	14,0 kg





	Fan data	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	41,7	41,7
Efficiency grade	49	49,0
Absorbed power [kW]	0,693	
Air volume [m ^{3}/h]	2409	
Total pressure [Pa]	432	
Speed [RPM]	1376	

* Data at optimum efficiency working point



*Test standard: **ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

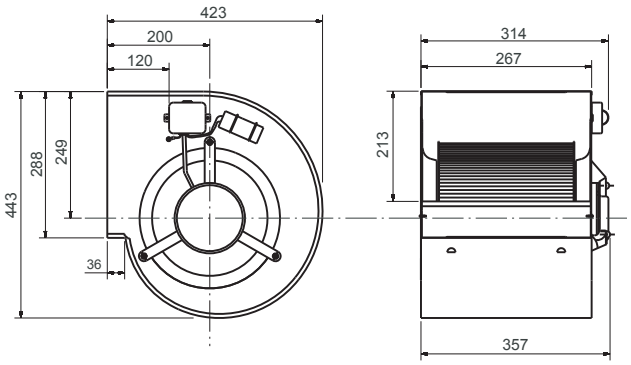
Corrections								
Hz	63	125	250	500	1000	2000	4000	8000
dB	31	21	12,5	9,5	4	5,5	8,5	17,5

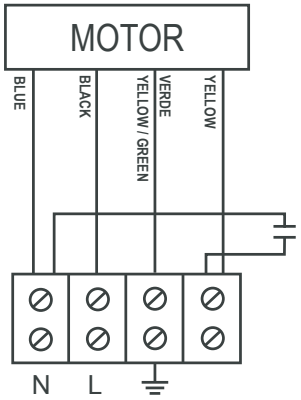
CBD

Forward curved blade double inlet centrifugal fan directly coupled

10/8 0.55 KW 4 POLI M

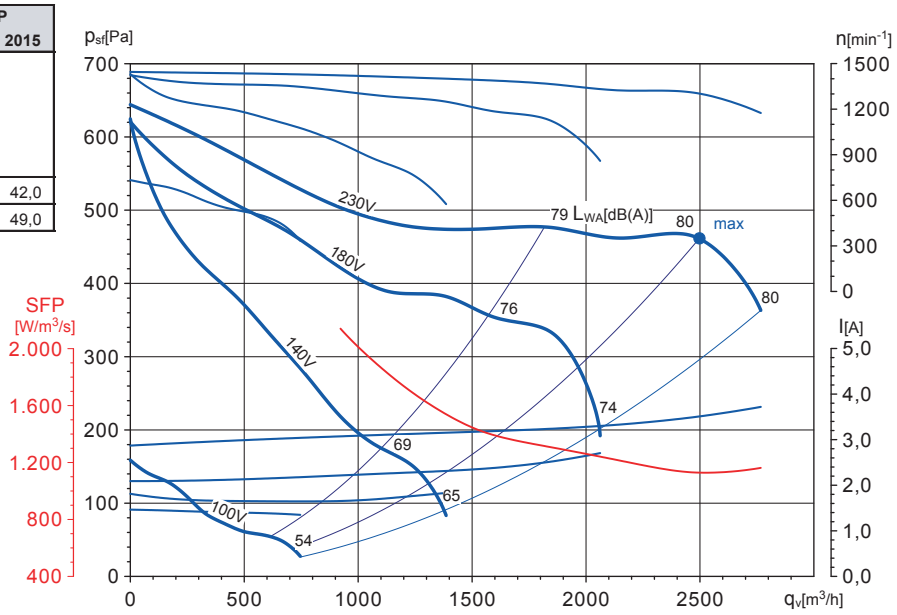
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	4 poles
Motor power	550W
Maximum absorption	4,5 A
Capacitor	25 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	15,0 kg





	Fan data	ErP 2013	ErP 2015
Installation category	B		
Efficiency category	Total		
VSD must be installed with the fan	No		
Specific ratio	1		
Overall efficiency [%]	44,9	35,0	42,0
Efficiency grade	51,9	42,0	49,0
Absorbed power [kW]	0,784		
Air volume [m ^{3}/h]	2505		
Total pressure [Pa]	513		
Speed [RPM]	1308		

* Data at optimum efficiency working point



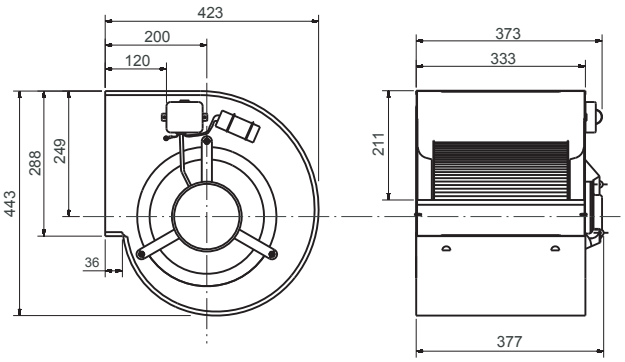
Test standard: ***ISO 5801***

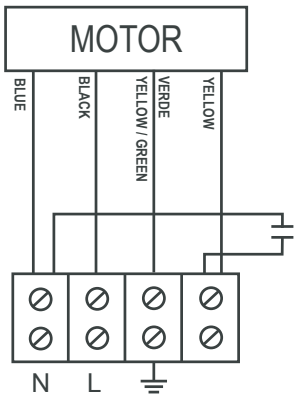
To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

Corrections Hz	63	125	250	500	1000	2000	4000	8000
dB	31,5	22,5	14,5	10	4,5	5	7,5	16

10/10 0.25 KW 6 POLI M

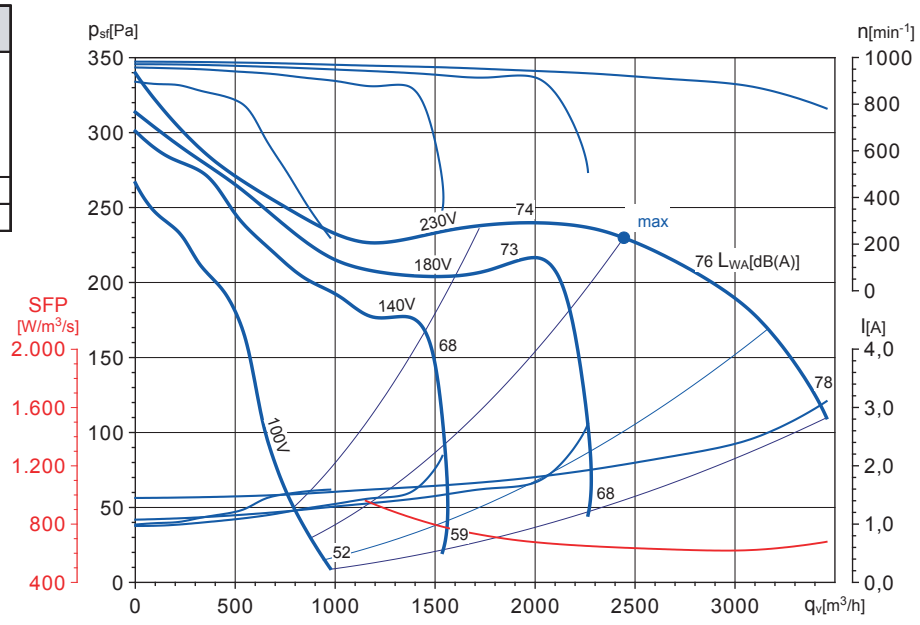
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	6 poles
Motor power	245W
Maximum absorption	3,1 A
Capacitor	8 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	15,4 kg





	Fan data	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	40,6	40,4
Efficiency grade	49,2	49,0
Absorbed power [kW]	0,43	
Air volume [m ^{3}/h]	2439	
Total pressure [Pa]	257	
Speed [RPM]	924	

* Data at optimum efficiency working point



*Test standard: **ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

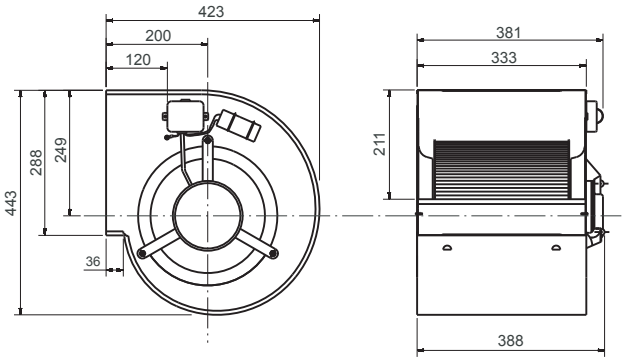
Corrections								
Hz	63	125	250	500	1000	2000	4000	8000
dB	32,5	22	14,5	8,5	4	5,5	9	16

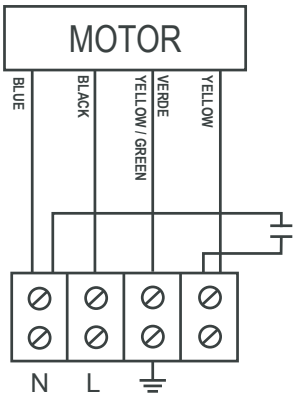
CBD

Forward curved blade double inlet centrifugal fan directly coupled

10/10 0.55 KW 4 POLI M

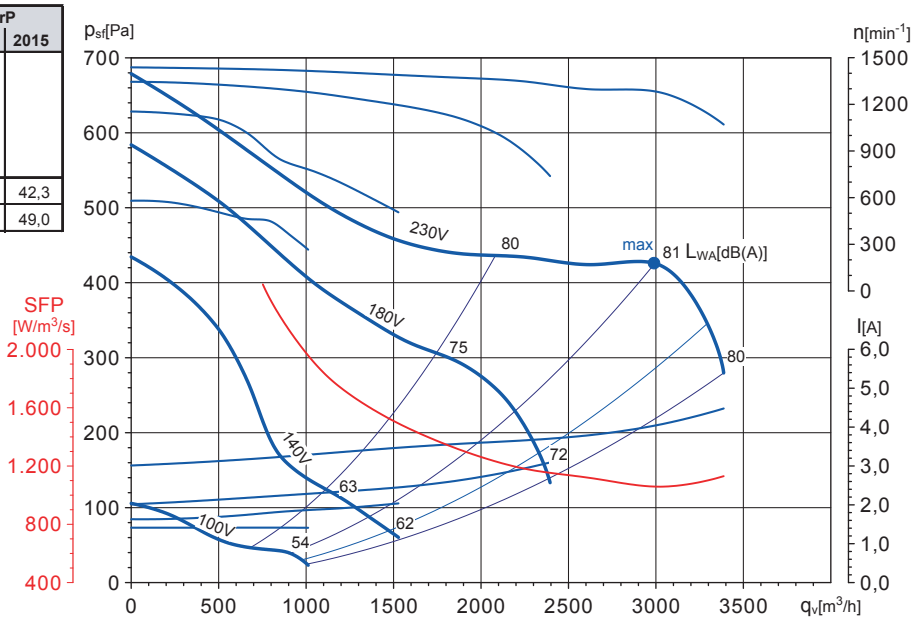
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	4 poles
Motor power	550W
Maximum absorption	4,5 A
Capacitor	25 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	15,3 kg





	Fan data	ErP 2013	ErP 2015
Installation category	B		
Efficiency category	Total		
VSD must be installed with the fan	No		
Specific ratio	1		
Overall efficiency [%]	43,7	35,3	42,3
Efficiency grade	50,4	42,0	49,0
Absorbed power [kW]	0,881		
Air volume [m ^{3}/h]	2993		
Total pressure [Pa]	471		
Speed [RPM]	1282		

* Data at optimum efficiency working point



*Test standard: **ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

Corrections								
Hz	63	125	250	500	1000	2000	4000	8000
dB	29	17,5	11,5	9,5	4,5	5,5	8,5	16,5

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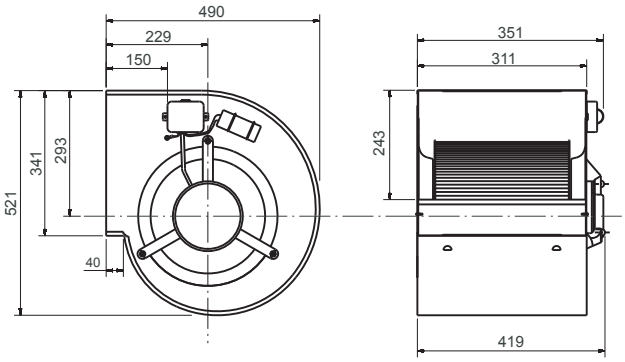
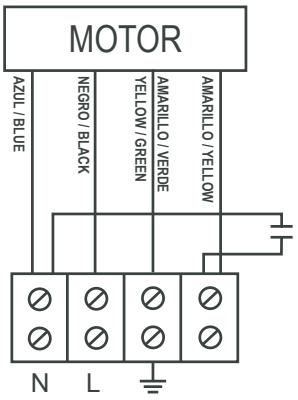
12/9 0.75 KW 6 POLI M

Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	6 poles
Motor power	736W
Maximum absorption	5,0 (6,7) A
Capacitor	25 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	24,2 kg



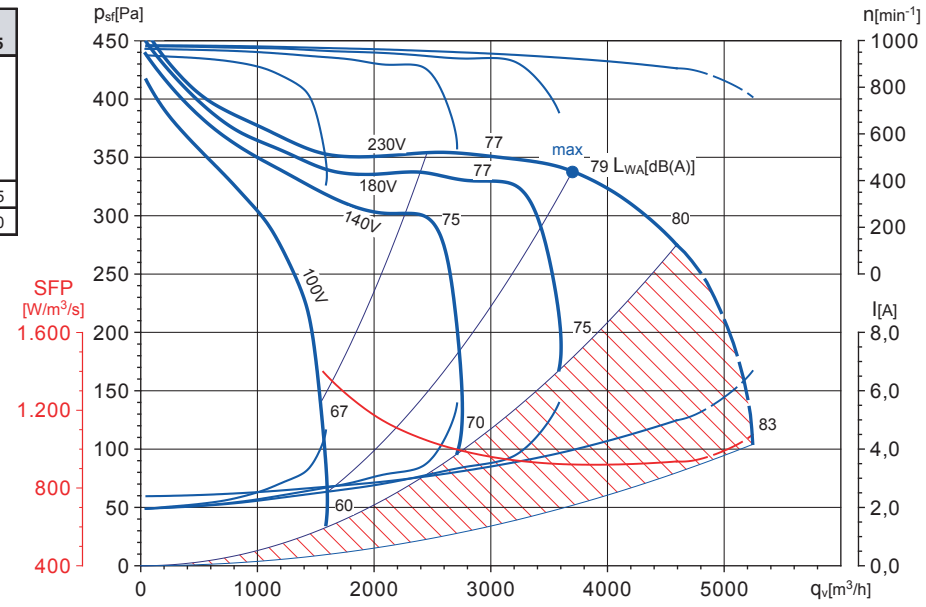


	Fan data	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	42,8	42,5
Efficiency grade	49,3	49,0
Absorbed power [kW]	0,948	
Air volume [m ^{3}/h]	3703	
Total pressure [Pa]	395	
Speed [RPM]	923	

* Data at optimum efficiency working point

Norma ensayo: **ISO 5801**
*Test standard: **ISO 5801***

Para obtener el espectro de potencia (LwA) en dB(A) restar estas correcciones del valor encontrado en las curvas
To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves



Zona no autorizada para regulacion de velocidad *Not authorized area for speed control*

Correcciones / *Corrections*

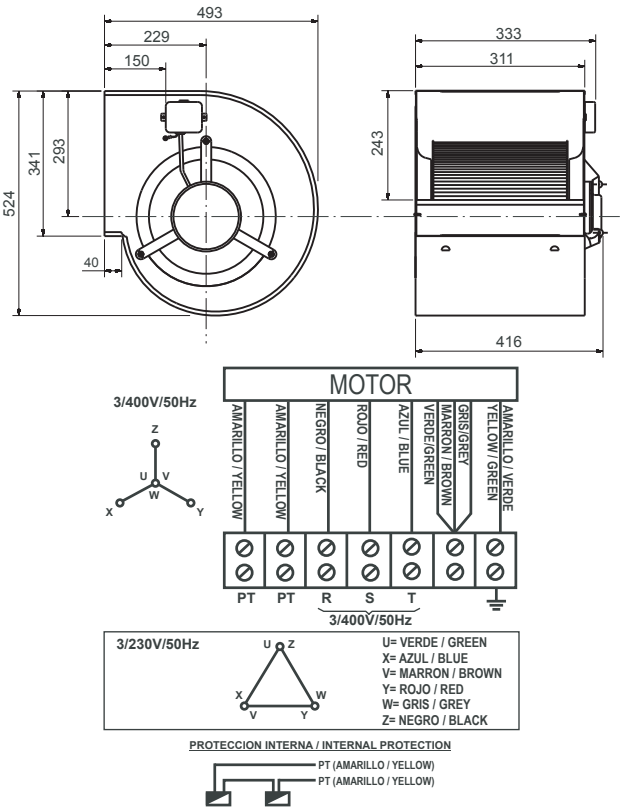
Hz	63	125	250	500	1000	2000	4000	8000
dB	31	17	13,5	9	6	4,5	8	15

CBD

Forward curved blade double inlet centrifugal fan directly coupled

12/9 1.1 KW 6 POLI M

Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	6 poles
Motor power	1100W
Maximum absorption	7,3/4,2 A
Capacitor	
Air temperature	-20°C<T<+40°C
Wt.	26,5 kg



	Fan data	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	43,1	42,9
Efficiency grade	49,2	49,0
Absorbed power [kW]	1,097	
Air volume [m ^{3}/h]	3959	
Total pressure [Pa]	430	
Speed [RPM]	945	

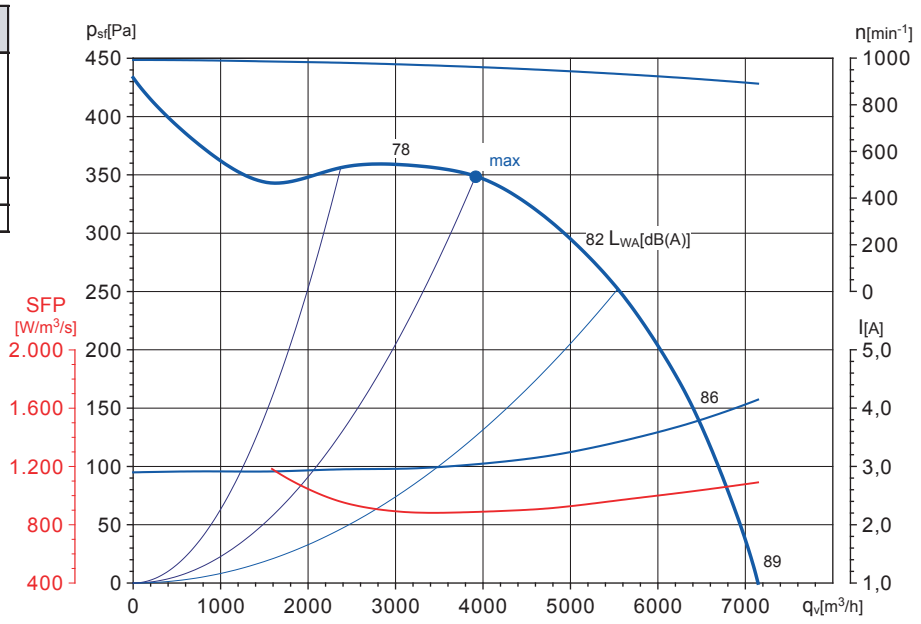
* Data at optimum efficiency working point

Norma ensayo: **ISO 5801**

*Test standard: **ISO 5801***

Para obtener el espectro de potencia (LwA) en dB(A) restar estas correcciones del valor encontrado en las curvas

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves



Correcciones / *Corrections*

Hz	63	125	250	500	1000	2000	4000	8000
dB	31	17	13,5	9	6	4,5	8	15

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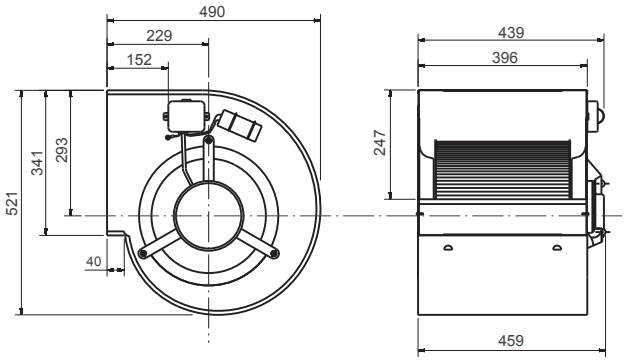
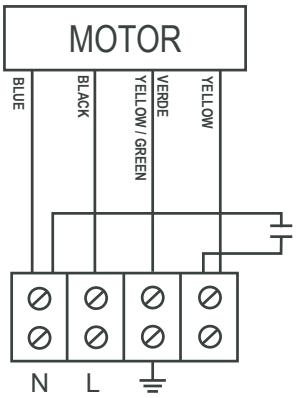
12/12 0.75 KW 6 POLI M

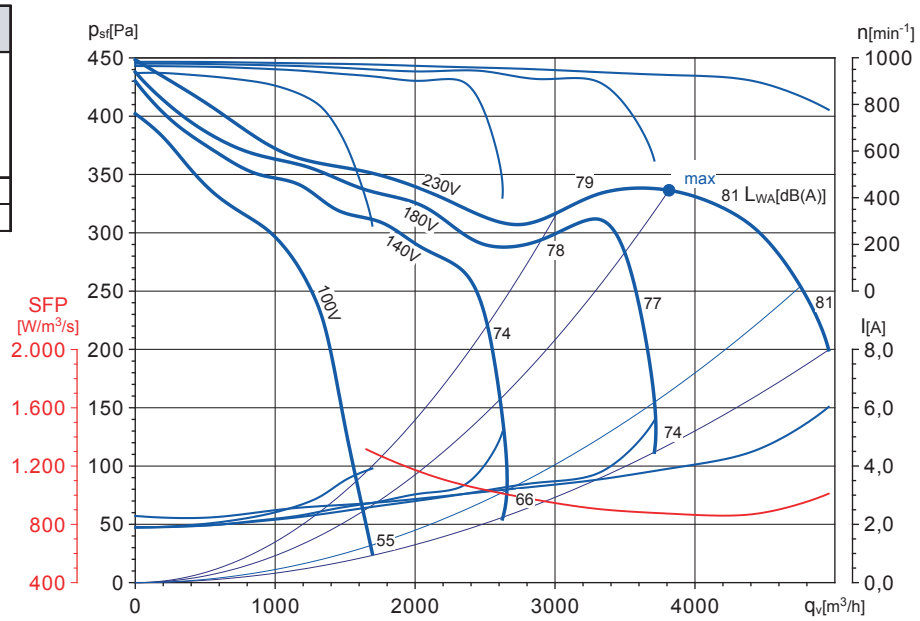
Voltage	Single-phase 230V 50Hz
Motor type	1V IP44 cl.F
Speed	6 poles
Motor power	736W
Maximum absorption	6,0 A
Capacitor	20 mF/450V
Air temperature	-20°C<T<+40°C
Wt.	26,5 kg





	Fan data	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	42,7	42,5
Efficiency grade	49,2	49,0
Absorbed power [kW]	0,926	
Air volume [m ^{3}/h]	3817	
Total pressure [Pa]	374	
Speed [RPM]	926	

* Data at optimum efficiency working point



*Test standard: **ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

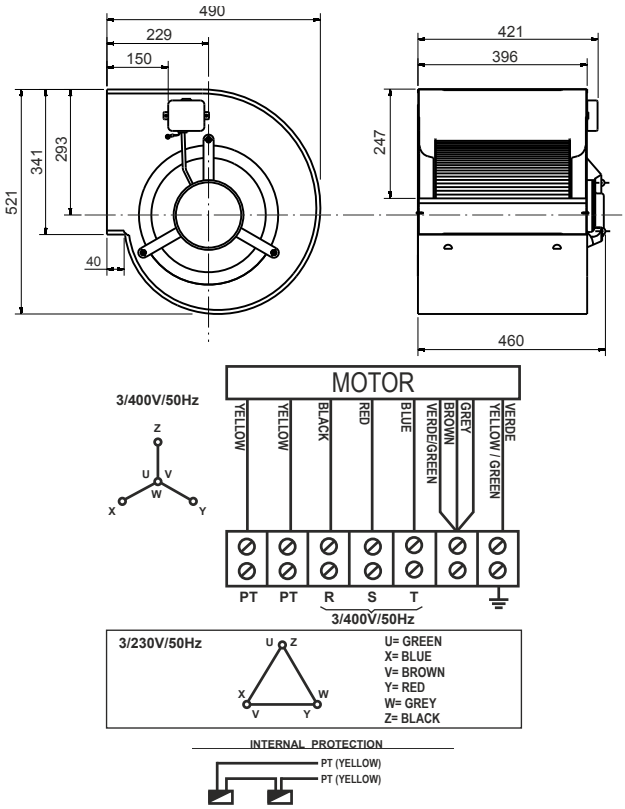
Corrections								
Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
dB	31	17	13,5	9	6	4,5	8	15

CBD

Forward curved blade double inlet centrifugal fan directly coupled

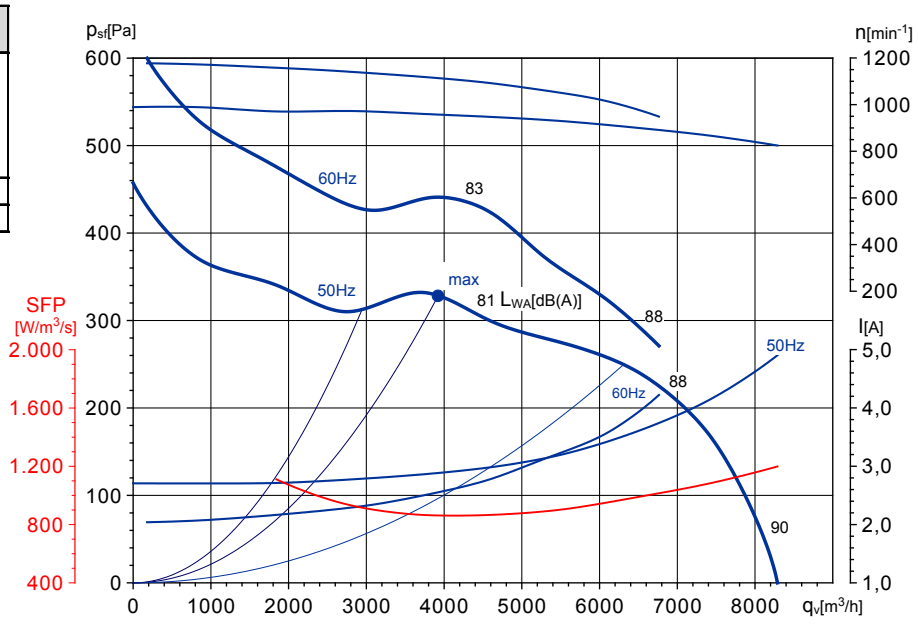
12/12 1.1 KW 6 POLI T

Voltage	3 ~ 230/400V 50/60Hz
Motor type	1V IP44 cl.F
Speed	6 poles
Motor power	1100W
Maximum absorption	8,5/4,9 A (50Hz) 7,3/4,2 A (60Hz)
Capacitor	
Air temperature	-20°C<T<+40°C
Wt.	28,6 kg



	Fan data	ErP 2015
Installation category	B	
Efficiency category	Total	
VSD must be installed with the fan	No	
Specific ratio	1	
Overall efficiency [%]	43	42,5
Efficiency grade	49,5	49,0
Absorbed power [kW]	0,942	
Air volume [m ^{3}/h]	3936	
Total pressure [Pa]	371	
Speed [RPM]	958	

* Data at optimum efficiency working point



*Test standard: **ISO 5801***

To obtain the sound power spectrum (LwA) in dB(A), substract the correction values from the value on the curves

Corrections								
Hz	**63**	**125**	**250**	**500**	**1000**	**2000**	**4000**	**8000**
dB	31	19	14	6,5	6,5	5,5	8,5	15,5

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ACCESSORIES

ON/OFF safety switch

3-speed selector

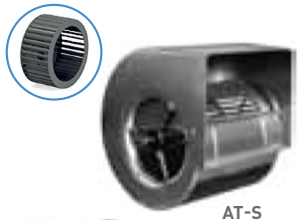
REM
Speed controller
single-phase

RVIT
Inverter IP20 AND IP66

All images are only indicative of the product type and may differ from the actual article.

AT-S/AT-SC/AT-AR

Double inlet centrifugal fans belt-driven



AT-S

AT-SC

AT-AR

Product AT

Construction Housing in galvanized steel sheet.
Fan wheel with forward curved blades in galvanized steel sheet.
Bearings supported with rubber dampers

Application Civil and industrial applications

FAN
Centrifugal fan with forward curved blades, double inlet for belt-driven version, made of galvanized steel.

VERSIONS
AT-S: Light-duty version. Maintenance-free bearings
AT-SC: Reinforced version with rectangular steel frames welded at the ends.
Maintenance-free bearings AT-AR:
Reinforced heavy-duty version with rectangular steel frames welded at the ends.
Pillow block bearings, lubricated, for medium-heavy duty use.

FINISH
Galvanized steel.

APPLICATIONS

TECHNICAL ROOMS | LARGE SPACES | HOSPITALS | CANTEENS | RESTAURANTS | FAST FOOD | OFFICES

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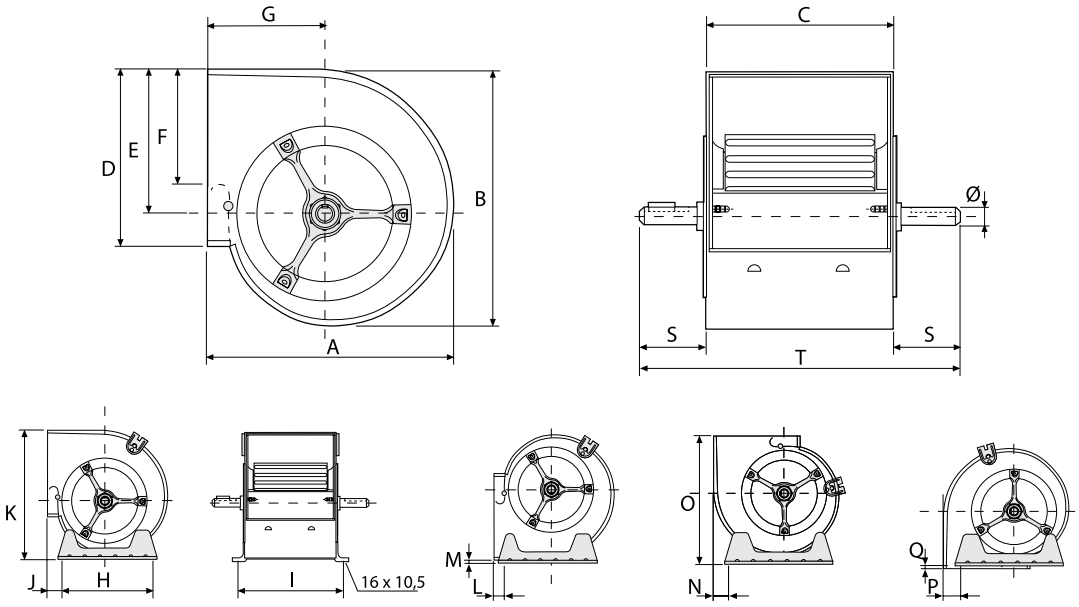
TECHNICAL CHARACTERISTICS AND DIMENSIONS

Model	Equivalence (mm)	Maximum recommended speed (r.p.m.)	Maximum flow rate (m3/h)	Wt. (kg)
ATS-7/7	180/180	2400	2800	5
ATS-9/9	240/240	2100	7000	9
ATS-10/10	270/270	1900	7900	11
ATS-12/12	320/320	1500	10000	16
ATS-15/15	380/380	1200	16000	23
ATS-18/18	460/460	950	22000	33



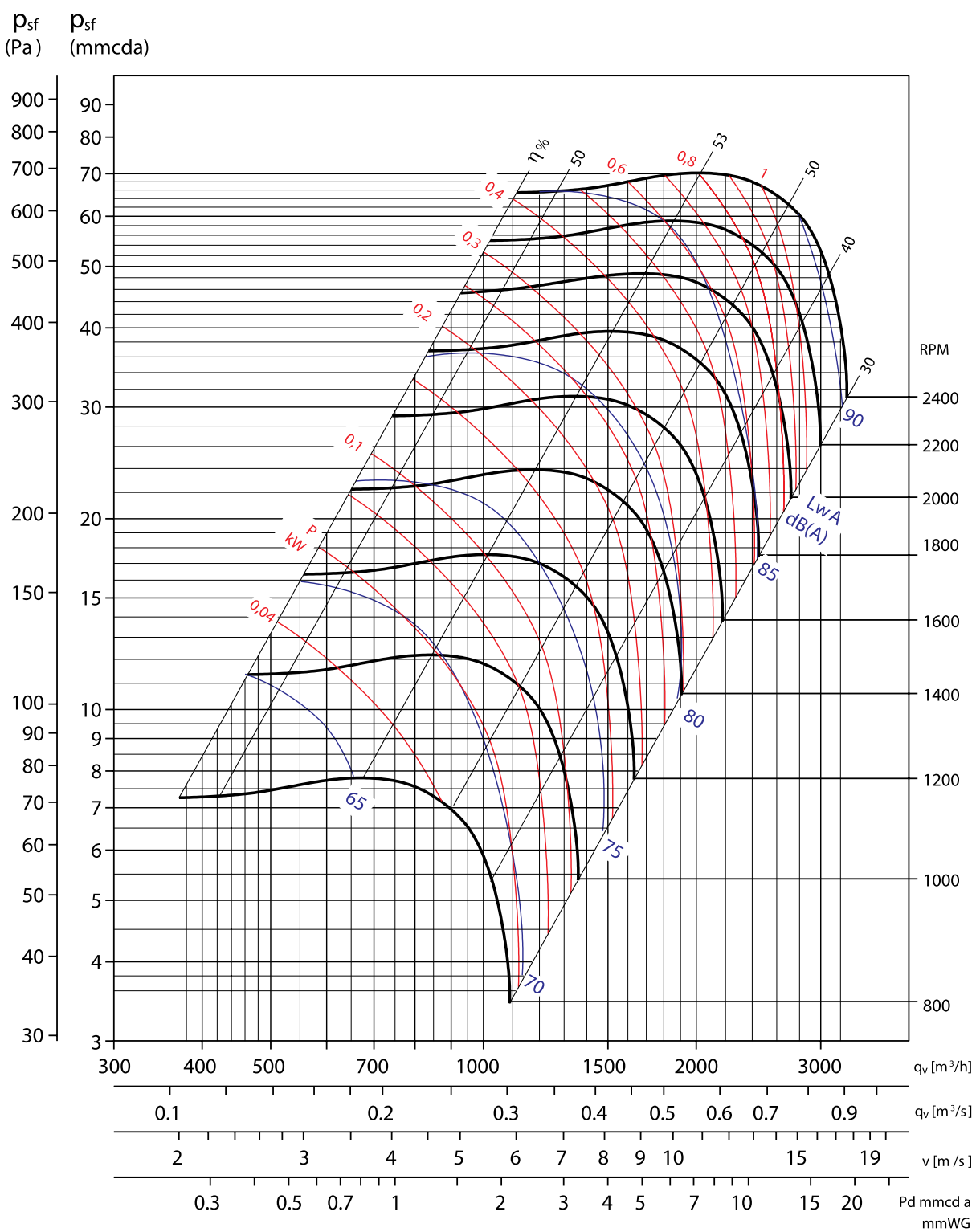
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	S	T	Ø
ATS-7/7	307	327	232	207	187	148	146	227	259	20,6	329,3	17,5	4,5	32	309,5	14,5	4,7	49	330	20
ATS-9/9	380	392	300	260	218	180	184	296	327	68,5	395,5	68,5	39	34,5	382	34,5	6	60	420	20
ATS-10/10	422	441	333	289	247	213	201	339	360	67	450,5	67	40	39	427	39	8	63,5	460	20
ATS-12/12	493	524	396	341	293	240	229	407	423	69,5	528	69,5	38,4	40,5	496,4	41,4	4,5	70	536	25
ATS-15/15	573	613	473	403	343	270	267	494	499,5	62,5	625	68,5	37	44,5	575	48,5	8	71	615	25
ATS-18/18	685	743	556	479	418	290	314	608	585	44,2	751	52,5	44	91,4	689,4	91,4	4,6	68	692	25

AT-S/AT-SC/AT-AR

Double inlet centrifugal fans belt-driven

CHARACTERISTIC CURVES

CHARACTERISTIC CURVES 7/7



Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	22	20	12	9	4.5	6.5	10	19

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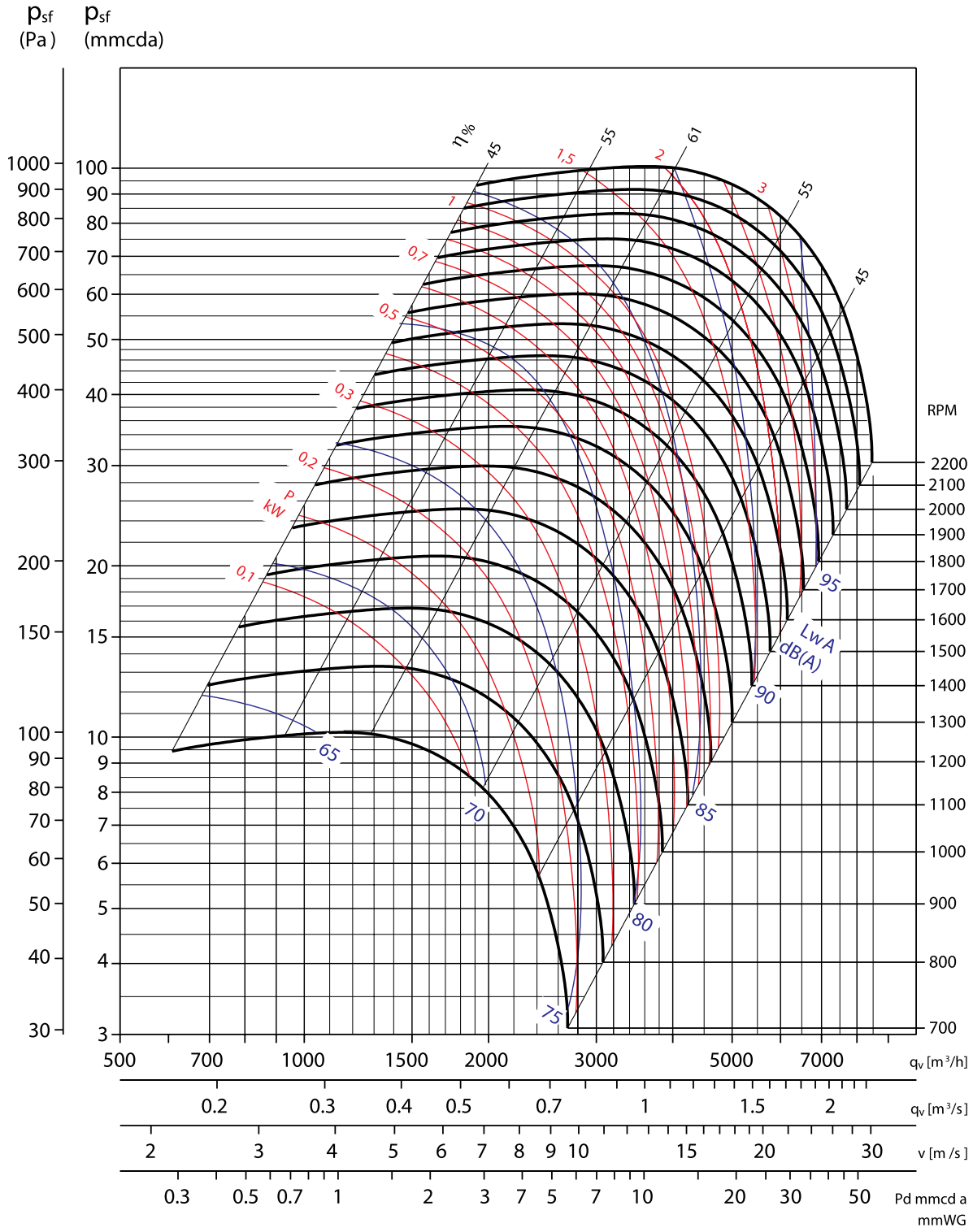
CHARACTERISTIC CURVES 9/9

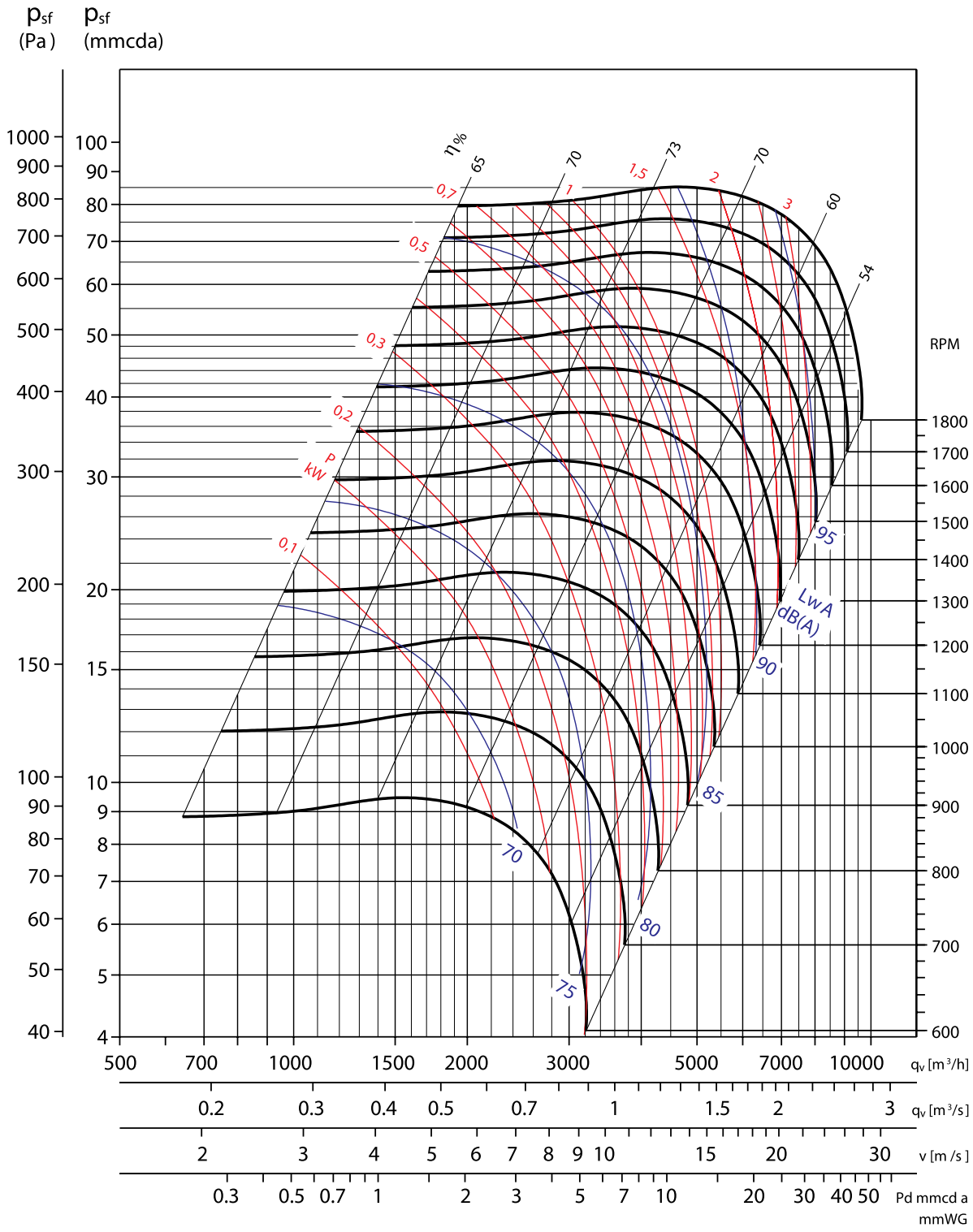


Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	25	21	12	10	4.1	5.5	9	16

AT-S/AT-SC/AT-AR

Double inlet centrifugal fans belt-driven

CHARACTERISTIC CURVES 10/10



Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	31	21	14	9	3.6	6.2	9	17

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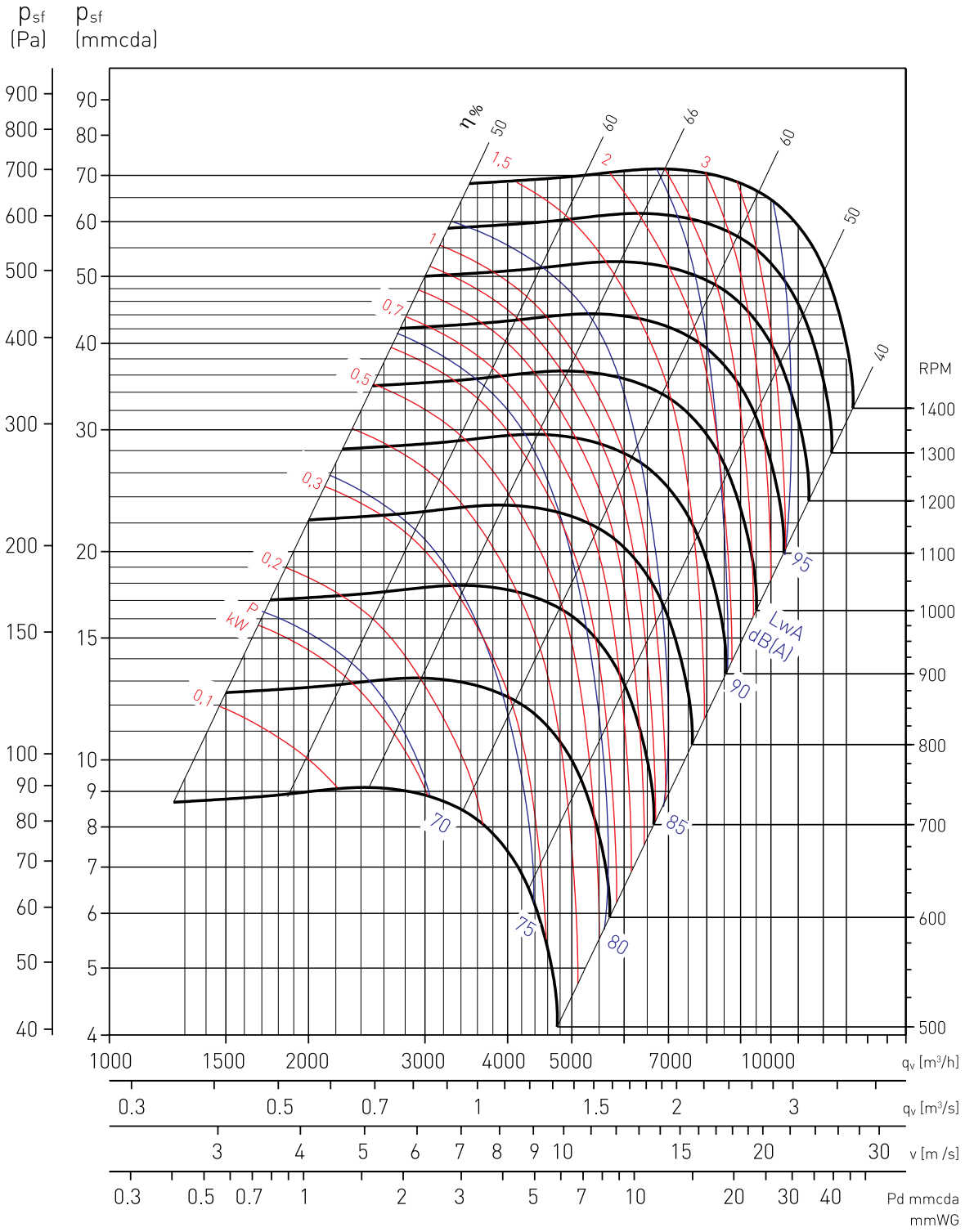
CHARACTERISTIC CURVES 12/12

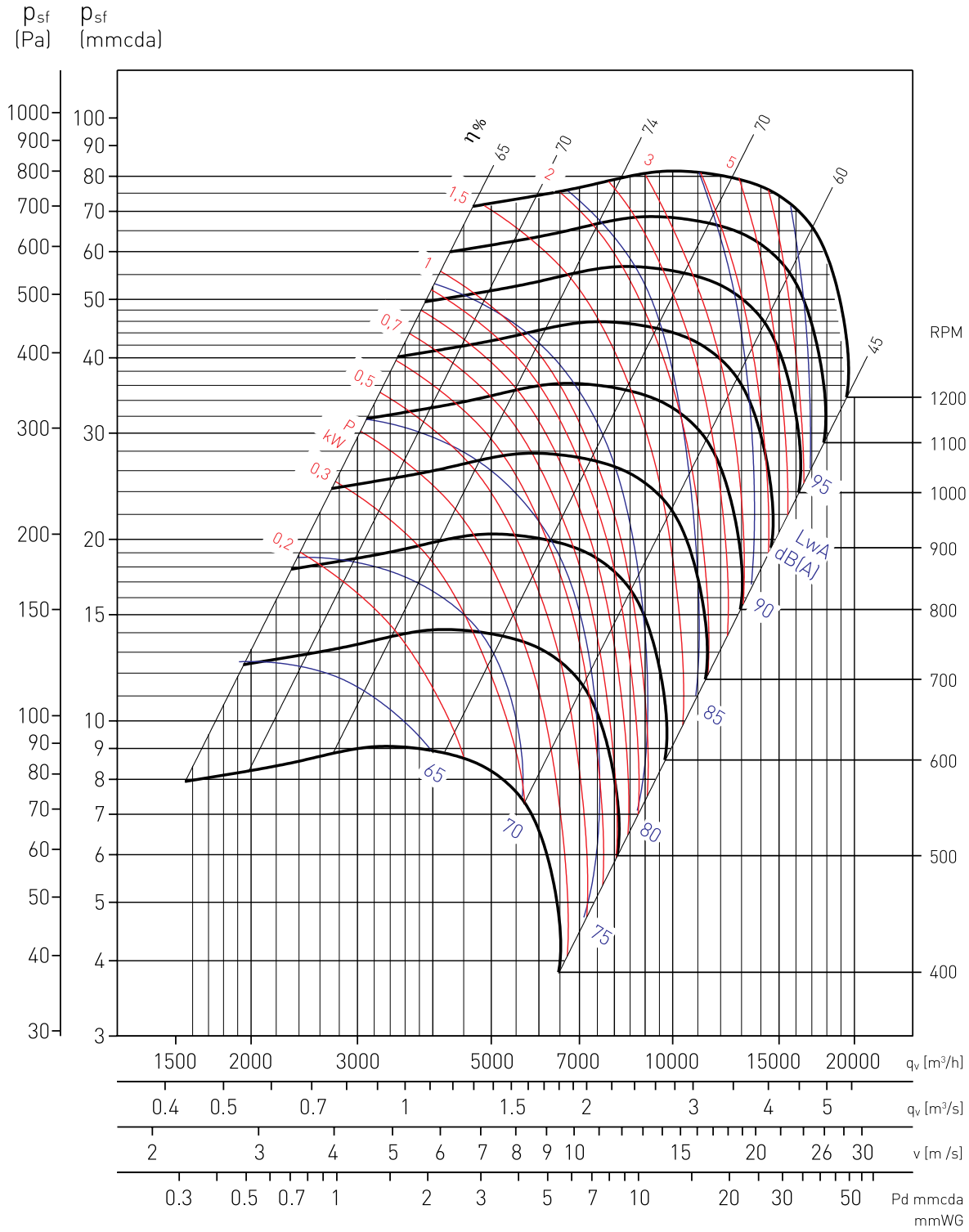


Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	30	21	15	8	3.8	5.7	10	19

AT-S/AT-SC/AT-AR

Double inlet centrifugal fans belt-driven

CHARACTERISTIC CURVES 15/15



Hz	63	125	250	500	1000	2000	4000	8000
ΔA dB	24.6	15.1	14.2	8.2	4.8	5.8	9.6	15.5

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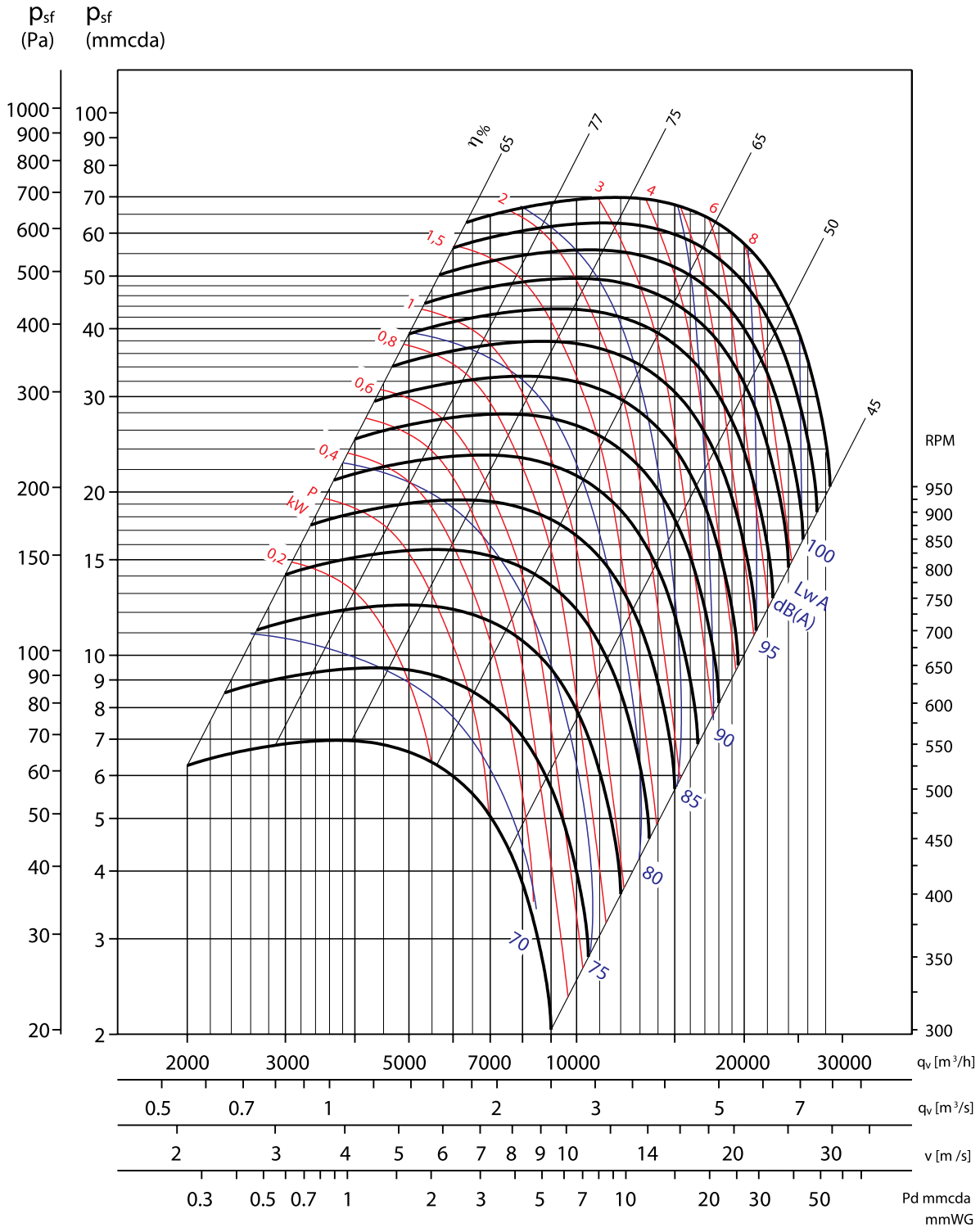
CHARACTERISTIC CURVES 18/18



Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	24	17	13	5	4.9	7	10	20

VCAP

Single inlet centrifugal fan, forward curved blades with direct drive, clean air

Product	VCAP
Construction	Welded steel sheet
Versions	Bearing cooling fan (VE): TMAX= 100 °C. ATEX version

FAN

Single inlet centrifugal fan, forward curved blades with direct drive, suitable
for the extraction of clean air, vapours, and where large air volumes are moved at low pressures.
Operating range at high flow rates, low pressures.
Forward curved blade impellers in welded galvanized steel sheet.
Statically and dynamically balanced according to ISO standards, keep to minimum levels
noise and vibrations.
Orientations: VCAP series fans allow 16 orientation positions (8 clockwise RD and 8 counterclockwise LG) defined looking at the fan from the motor side.

FEATURES

Robust construction entirely in thick welded steel sheet, coated with epoxy powder paint in grey RAL 7032 and/or blue RAL 5015.
Intake air conditions T=15 °C, p=760 mm Hg.
Mounting intended on support base.
Possibility to request an additional pedestal fixed to the suction inlet to increase the machine's rigidity.

MOTOR

Three-phase asynchronous with squirrel cage rotor, class IE3, in 230/400 V execution (for power ratings up to 4 kW), 400/690 V (for power ratings above 4 kW), B3 frame, IP55 protection, according to UNELMEC standards. Installed with 2, 4 or 6 poles depending on the required pressure, or with dual polarity for two-speed versions.
The power ratings shown in the performance tables have been sized taking into account the machine efficiency and an additional safety margin to compensate for any system anomalies.
Minimum fluid temperature: -25 °C.
Maximum fluid temperature: +60 °C in standard version.

APPLICATIONS

HOSPITALS · CANTEENS · INDUSTRIES · PUBLIC SERVICES · RESTAURANTS · ATEX

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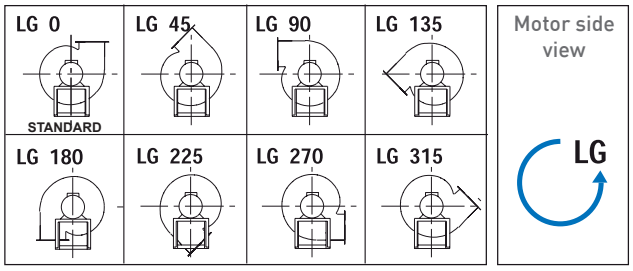
TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 540 to 19,000
	Pressure (Pa)	From 270 to 2,000
Min. impeller diameter	mm	200
Max. impeller diameter	mm	500
Motor	Volt (±10%)/Hz	230/50 M – 230-400/50 T – 400-690/50 T
	Poles	4-6
	IP	55
Fluid temp min. limit	°C	-25
Fluid max. temp limit	°C	+60

ORIENTATIONS

STANDARD orientation LG 0

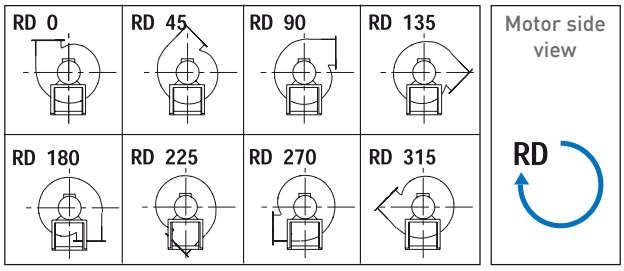


Dimensions

H = LG 0 - LG 45 - LG 90 - LG 135

H1 = LG 180 - LG 225

H2 = LG 270 - LG 315



Dimensions

H = RD 0 - RD 45 - RD 90 - RD 135

H1 = RD 180 - RD 225

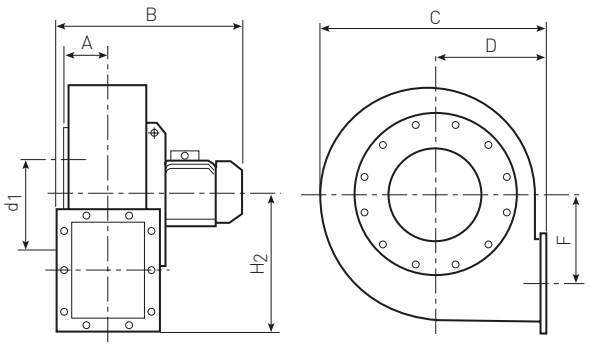
H2 = RD 270 - RD 315

VCAP

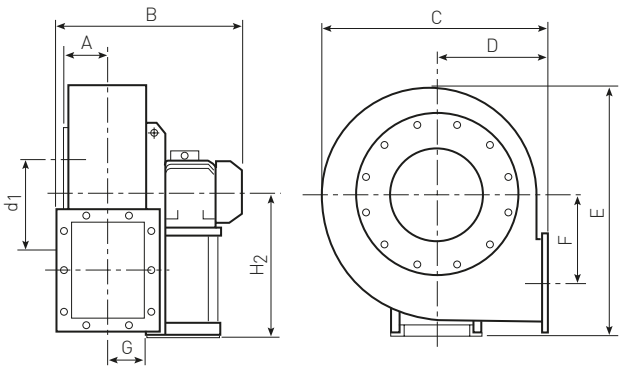
Single inlet centrifugal fan,
forward curved blades with direct drive, clean air

DIMENSIONS

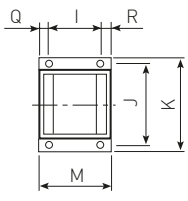
Model	Motor	KG F	PD^2 KG F m^2	Motor-driven fan										Suction flange				
				A	B	C	D	E	F	G	H	H_1	H_2	d	d_1	d_2	N.	Ø
200/2	80 B-2	30	0,11	77	413	368	165	440	120	76	265	165	265	205	241	275	8	8
200/2	90 L-2	37	0,11	77	453	368	165	440	120	76	265	165	265	205	241	275	8	8
250/2	100 LA-2	28	0,14	85	386	410	180	465	135	86	300	180	300	228	265	298	8	8
220/4	63 B-4	30	0,14	85	411	410	180	465	135	86	300	180	300	228	265	298	8	8
220/4	71 B-4	49	0,19	94	560	411	195	526	149	96	315	195	315	255	292	325	8	10
250/4	80 A-4	37	0,19	94	450	411	195	526	149	96	315	195	315	255	292	325	8	10
280/4	80 B-4	44	0,265	105	475	477	200	610	172	105	375	200	375	285	332	365	8	10
280/4	90 S-4	46	0,265	105	515	477	200	610	172	105	375	200	375	285	332	365	8	10
310/4	90 L-4	60	0,41	117	539	527	225	658	196	117	400	225	400	320	366	400	8	10
310/4	100 L-4	62	0,41	117	609	527	225	658	196	117	400	225	400	320	366	400	8	10
350/4	100 L-4	50	0,41	117	499	527	225	658	196	117	400	225	400	320	366	400	8	10
350/4	112 M-4	53	0,41	117	499	527	225	658	196	117	400	225	400	320	366	400	8	10
400/4	112 M-4	78	0,71	130	636	600	255	740	216	131	450	255	450	360	405	440	8	10
400/4	132 M-4	87	0,71	130	636	600	255	740	216	131	450	255	450	360	405	440	8	10
450/4	132 A-4	70	0,71	130	566	600	255	740	216	131	450	255	450	360	405	440	8	10
450/4	160 L-4	72	0,71	130	566	600	255	740	216	131	450	255	450	360	405	440	8	10
310/6	80 A-6	98	1,41	147	668	655	285	815	245	147	500	285	500	405	448	485	8	10
310/6	80 B-6	119	1,41	147	730	655	285	815	245	147	500	285	500	405	448	485	8	10
350/6	90 S-6	99	1,41	147	668	655	285	815	245	147	500	285	500	405	448	485	8	10
350/6	90 L-6	129	2,92	163	764	735	320	915	275	165	560	320	560	455	497	535	8	10
400/6	112 M-6	168	2,92	163	900	735	320	915	275	165	560	320	560	455	497	535	8	10
450/6	132 M-6	130	2,92	163	764	735	320	915	275	165	560	320	560	455	497	535	8	10
500/6	160 M-6	187	4,80	183	939	832	360	1000	303	185	600	360	600	505	551	585	8	10



Version without base, on request only (motor version **B5**)



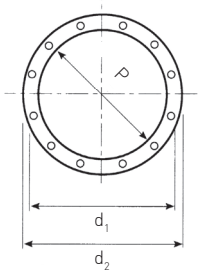
Standard version with base (motor version **B3**)



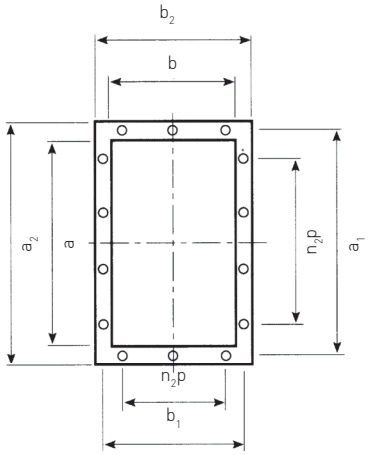
Mounting holes for electric motor support base

Motor side view

Discharge flange										Electric Motor Base						
a	b	a_1	b_1	a_2	b_2	$n_1$xp	$n_2$xp	No.	Ø	I	J	K	M	Q	R	Ø
207	148	241	182	277	218	1x112	1x112	8	12	121	203	225	180	45	14	10
207	148	241	182	277	218	1x112	1x112	8	12	133	234	260	205	55	17	10
231	166	265	200	301	236	1x112	1x112	8	12	86	184	206	145	45	14	10
231	166	265	200	301	236	1x112	1x112	8	12	121	203	225	180	45	14	10
258	185	292	219	328	255	1x112	2x112	10	12	197	289	324	250	30	23	12
258	185	292	219	328	255	1x112	2x112	10	12	121	203	225	180	45	14	10
288	205	332	249	368	285	1x125	2x125	10	12	121	203	225	180	45	14	10
288	205	332	249	368	285	1x125	2x125	10	12	133	234	260	205	55	17	10
322	229	366	273	402	309	1x125	2x125	10	12	133	234	260	205	55	17	10
322	229	366	273	402	309	1x125	2x125	10	12	197	289	324	250	30	23	12
322	229	366	273	402	309	1x125	2x125	10	12	121	203	225	180	45	14	10
322	229	366	273	402	309	1x125	2x125	10	12	121	203	225	180	45	14	10
361	256	405	300	441	336	1x125	2x125	10	12	197	289	324	250	30	23	12
361	256	405	300	441	336	1x125	2x125	10	12	197	289	324	250	30	23	12
361	256	405	300	441	336	1x125	2x125	10	12	133	234	260	205	55	17	10
361	256	405	300	441	336	1x125	2x125	10	12	133	234	260	205	55	17	10
404	288	448	332	484	368	2x125	3x125	14	12	197	289	324	250	30	23	12
404	288	448	332	484	368	2x125	3x125	14	12	237	337	372	300	40	23	12
404	288	448	332	484	368	2x125	3x125	14	12	197	289	324	250	30	23	12
453	322	497	366	533	402	2x125	3x125	14	12	237	337	372	300	40	23	12
453	322	497	366	533	402	2x125	3x125	14	12	337	395	440	415	50	28	14
453	322	497	366	533	402	2x125	3x125	14	12	237	337	372	300	40	23	12
507	361	551	405	587	441	2x125	3x125	14	12	337	395	440	415	50	28	14



Suction flange



Discharge flange

VCAP

Single inlet centrifugal fan,
forward curved blades with direct drive, clean air

QUICK SELECTION TABLE

Model	Motor	Power Installed kW	RPM	dB(A)	Total pressure PT = Pa Flow rate v = m³/h											
					540	612	684	756	828	930	1080	1190	1330	1500	1700	1900
200/2	80 B-2	1,10	2840	78	-	-	-	1140	1140	1140	1150	1160	1190	1210	1240	-
200/2	90 L-2	2,20	2860	79	-	-	-	1150	1150	1150	1160	1170	1200	1220	1250	1270
250/2	100 LA-2	3,00	2900	87	-	-	-	-	-	-	-	-	-	1770	1770	1770
220/4	63 B-4	0,18	1320	63	-	300	300	310	320	330	340	-	-	-	-	-
220/4	71 B-4	0,37	1360	63	-	320	320	330	340	350	360	370	370	360	350	320
250/4	80 A-4	0,55	1380	66	-	-	-	410	410	410	420	430	440	450	460	460
280/4	80 B-4	0,75	1380	70	-	-	-	-	-	-	510	510	510	520	530	550
280/4	90 S-4	1,10	1390	70	-	-	-	-	-	-	520	520	520	530	540	560
310/4	90 L-4	1,50	1390	74	-	-	-	-	-	-	-	-	-	700	700	700
310/4	100 L-4	2,20	1410	74	-	-	-	-	-	-	-	-	-	710	710	710
350/4	100 L-4	3,00	1420	77	-	-	-	-	-	-	-	-	-	-	-	-
350/4	112 M-4	4,00	1420	78	-	-	-	-	-	-	-	-	-	-	-	-
400/4	112 M-4	5,50	1430	82	-	-	-	-	-	-	-	-	-	-	-	-
400/4	132 M-4	7,50	1450	82	-	-	-	-	-	-	-	-	-	-	-	-
450/4	132 A-4	9,00	1460	83	-	-	-	-	-	-	-	-	-	-	-	-
450/4	160 L-4	15,00	1460	85	-	-	-	-	-	-	-	-	-	-	-	-
310/6	80 B-6	0,37	930	63	-	-	-	-	-	290	290	300	300	310	320	330
310/6	80 B-6	0,55	930	64	-	-	-	-	-	290	290	300	300	310	320	330
350/6	90 S-6	0,75	935	66	-	-	-	-	-	-	-	-	370	370	370	380
350/6	90 L-6	1,10	935	68	-	-	-	-	-	-	-	-	370	370	370	380
400/6	112 M-6	2,20	950	71	-	-	-	-	-	-	-	-	-	-	-	490
450/6	132 M-6	4,00	965	74	-	-	-	-	-	-	-	-	-	-	-	-
500/6	160 M-6	7,50	965	80	-	-	-	-	-	-	-	-	-	-	-	-

Performance data was measured with suitable instruments in our laboratories.
Air performance at 15 °C temperature with a pressure of 760 mmH_2O.
The indicated flow rate and pressure performances refer to the installation of the fan unit with ducted discharge.
The reported noise is expressed as sound pressure, measured at a distance of 1.5 m in free field.
The power values indicated refer to the actual installed power of the fan unit.
Refer to the performance curves for the correct model selection.

Total pressure PT = Pa Flow rate v = m³/h																			
2150	2400	2700	3050	3450	3850	4250	4750	5400	6150	6850	7650	8500	9500	10800	12000	13500	15300	17000	19000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1270	1250	1180	1090	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1780	1810	1900	1950	1960	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
450	430	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
570	590	600	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
580	590	600	580	550	510	-	-	-	-	-	-	-	-	-	-	-	-	-	-
710	720	750	770	790	790	780	-	-	-	-	-	-	-	-	-	-	-	-	-
720	730	760	780	790	790	780	770	720	640	-	-	-	-	-	-	-	-	-	-
900	900	900	910	920	950	960	1010	1030	1020	-	-	-	-	-	-	-	-	-	-
910	910	910	920	930	960	970	1020	1030	1020	970	950	870	-	-	-	-	-	-	-
-	-	-	-	1150	1150	1160	1170	1220	1240	1260	1280	1310	1300	-	-	-	-	-	-
-	-	-	-	1170	1170	1180	1190	1240	1260	1280	1300	1310	1300	-	1150	-	-	-	-
-	-	-	-	-	-	1460	1460	1460	1480	1510	1550	1570	1600	-	1630	-	-	-	-
-	-	-	-	-	-	1460	1460	1460	1480	1510	1550	1570	1600	-	1630	1600	1560	1410	1210
330	330	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
330	330	330	320	300	270	-	-	-	-	-	-	-	-	-	-	-	-	-	-
380	390	400	410	420	420	400	-	-	-	-	-	-	-	-	-	-	-	-	-
380	390	400	410	420	420	400	390	360	-	-	-	-	-	-	-	-	-	-	-
490	490	500	510	520	530	540	560	570	550	520	490	440	-	-	-	-	-	-	-
-	-	640	640	640	650	670	690	710	720	730	730	720	690	640	580	-	-	-	-
-	-	-	-	-	790	790	790	800	810	830	850	870	890	900	880	840	780	690	-

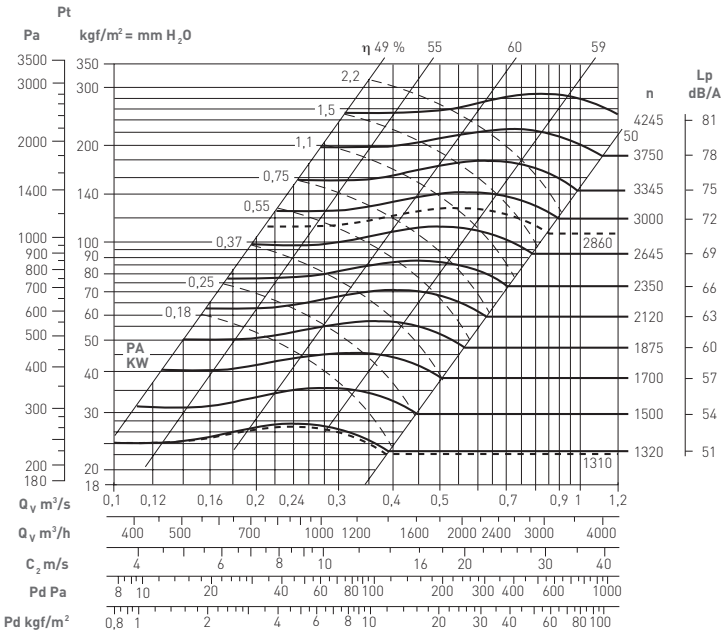
VCAP

Single inlet centrifugal fan,
forward curved blades with direct drive, clean air

CHARACTERISTIC CURVES

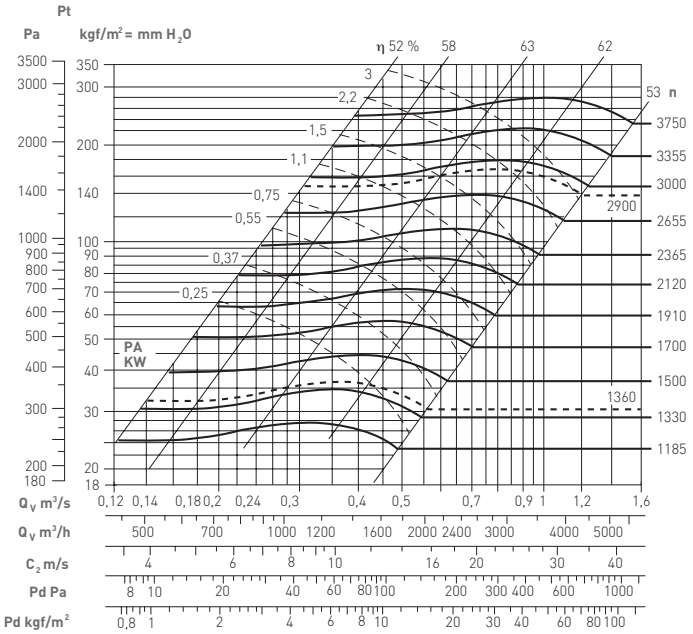
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCAP 200



Fan weight 23 Kgf
PD² e GD² = 0,11 Kgf²m
Maximum rotation speed
<100 °C = 3950
100 ÷ 200 °C= 3500
200 ÷ 300 °C= 3100
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCAP 220



Fan weight 27 Kgf
PD² e GD² = 0,14 Kgf²m
Maximum rotation speed
<100 °C = 3500
100 ÷ 200 °C= 3120
200 ÷ 300 °C= 2800
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

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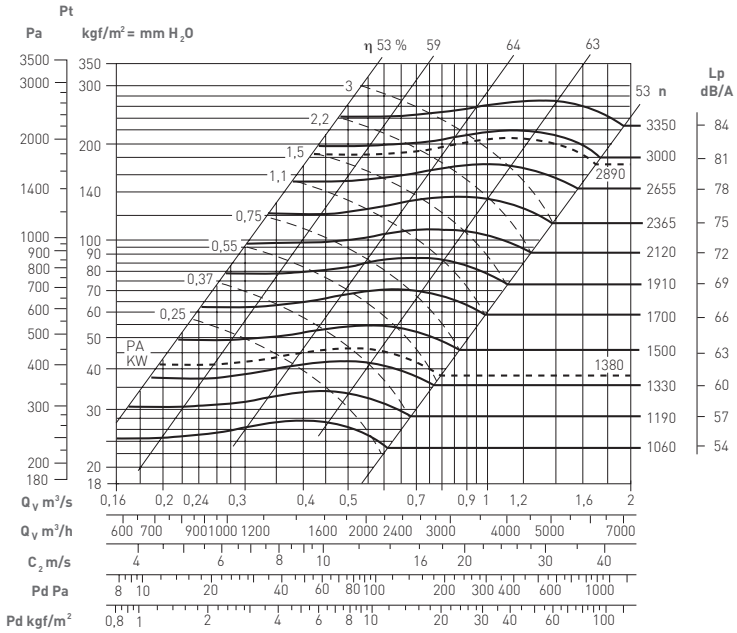
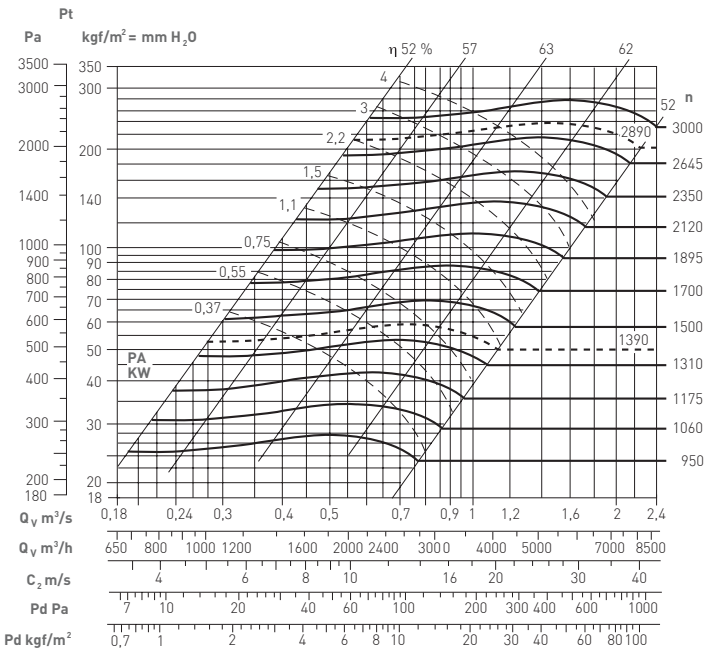
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCAP 250



Fan weight 31 Kgf
PD² e GD² = 0,19 Kgf²m
Maximum rotation speed
<100 °C = 3100
100 ÷ 200 °C= 2800
200 ÷ 300 °C= 2500
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCAP 280



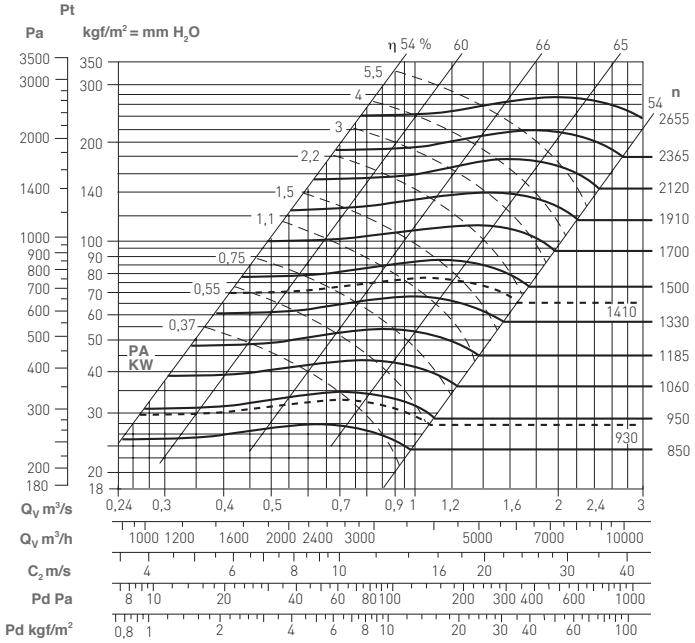
Fan weight 41 Kgf
PD² e GD² = 0,265 Kgf²m
Maximum rotation speed
<100 °C = 2800
100 ÷ 200 °C= 2500
200 ÷ 300 °C= 2200
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCAP

Single inlet centrifugal fan,
forward curved blades with direct drive, clean air

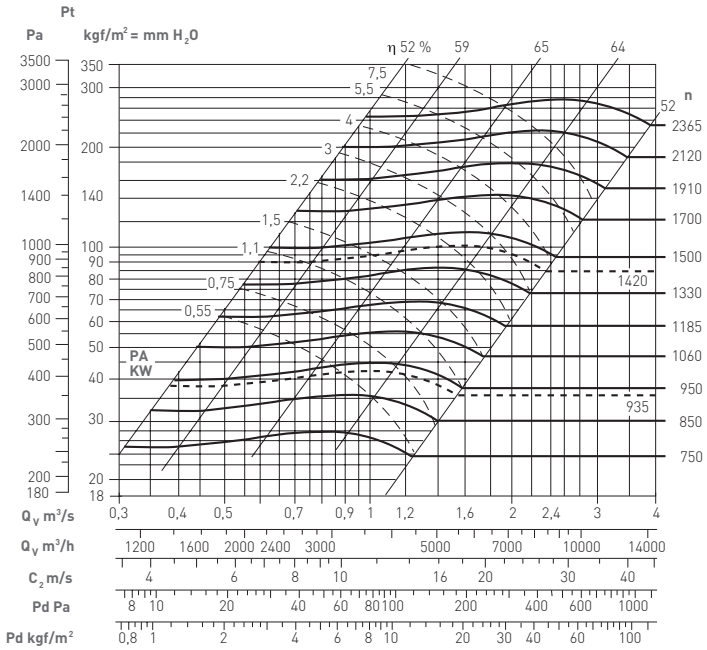
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCAP 310



Fan weight 47 Kgf
PD^2 e GD^2 = 0,41 Kgf^2m
Maximum rotation speed
<100 °C = 2500
100 ÷ 200 °C= 2230
200 ÷ 300 °C= 2000
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCAP 350



Fan weight 73 Kgf
PD^2 e GD^2 = 0,71 Kgf^2m
Maximum rotation speed
<100 °C = 2230
100 ÷ 200 °C= 2000
200 ÷ 300 °C= 1800
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

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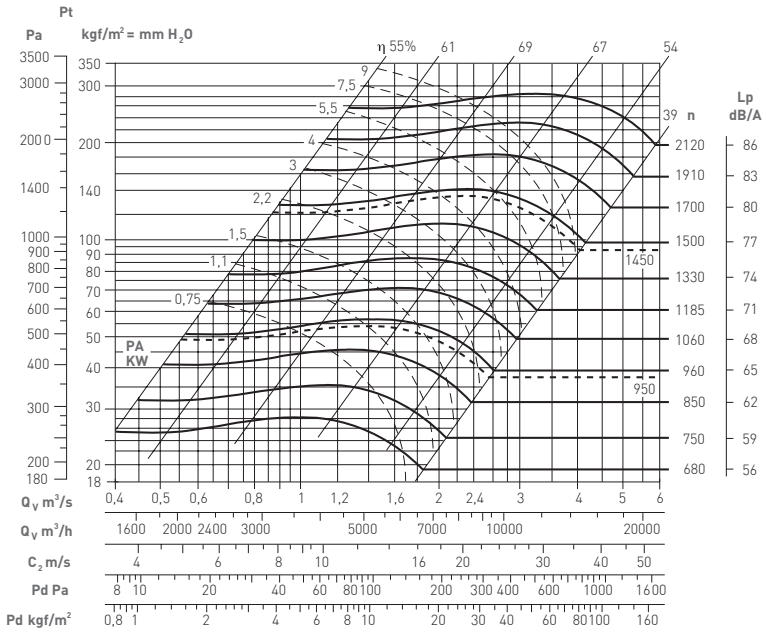
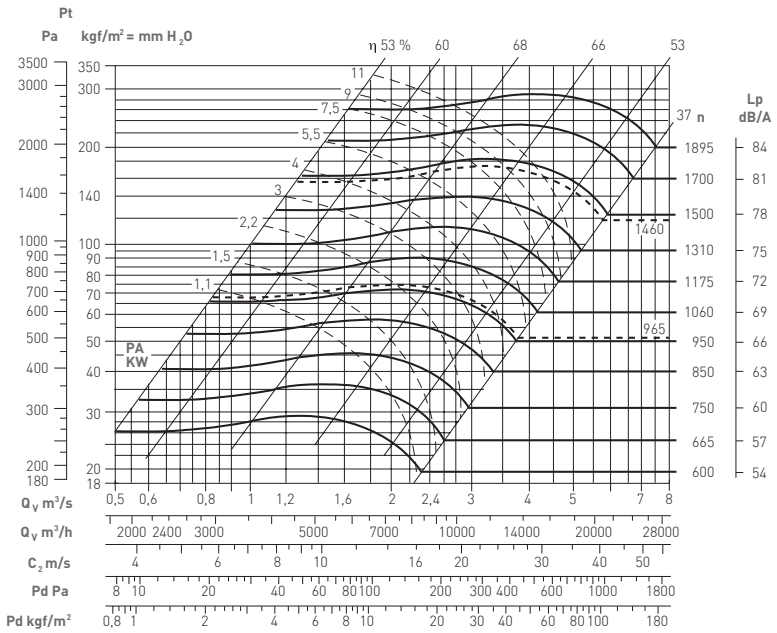
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCAP 400



Fan weight 88 Kgf
PD^2 e GD^2 = 1,41 Kgf^2m
Maximum rotation speed
<100 °C = 2800
100 ÷ 200 °C= 1800
200 ÷ 300 °C= 1600
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCAP 450



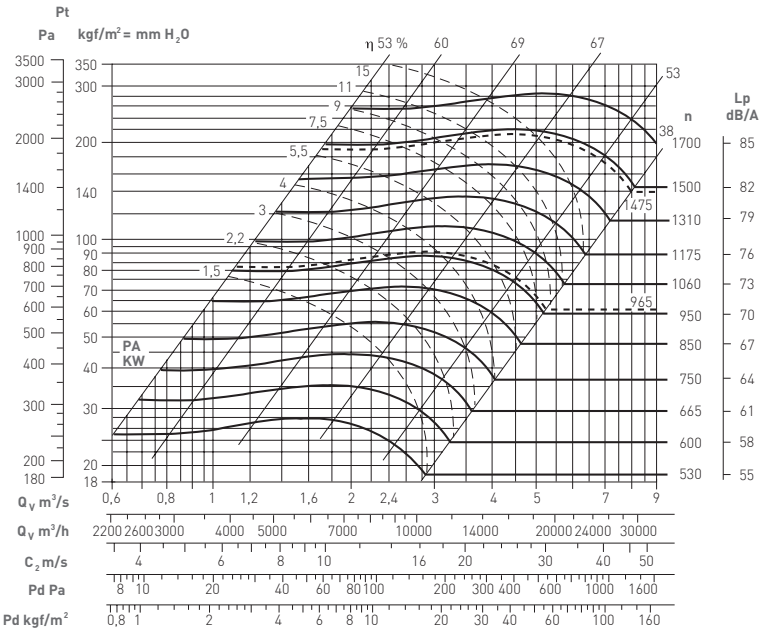
Fan weight 103 Kgf
PD^2 e GD^2 = 2,92 Kgf^2m
Maximum rotation speed
<100 °C = 1810
100 ÷ 200 °C= 1600
200 ÷ 300 °C= 1400
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCAP

Single inlet centrifugal fan,
forward curved blades with direct drive, clean air

Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCAP 500



Fan weight 143 Kgf
PD^2 e GD^2 = 4,8 Kgf^2m
Maximum rotation speed
<100 °C = 1600
100 ÷ 200 °C= 1400
200 ÷ 300 °C= 1240
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

ACCESSORIES


Torque counter flanges


Nozzle anti-spark


Anti-vibration joint for centrifugal fan unit


Protection grille for centrifugal fan unit on suction side


Damper for regulation manual


Safety switch ON/OFF


Soft starter for three-phase motor


Silencers


Square-to-round adapter for centrifugal fan unit discharge

All images are only indicative of the product type and may differ from the actual article.

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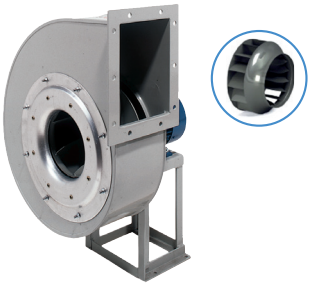
AVAILABLE MODELS

Model	Motor	Installed Power kW	RPM
200/2	80 B-2	1,10	2840
200/2	90 L-2	2,20	2860
250/2	100 LA-2	3,0	2900
220/4	63 B-4	0,18	1320
220/4	71 B-4	0,37	1360
250/4	80 A-4	0,55	1380
280/4	80 B-4	0,75	1380
280/4	90 S-4	1,10	1390
310/4	90 L-4	1,50	1390
310/4	100 L-4	2,20	1410
350/4	100 L-4	3,00	1420
350/4	112 M-4	4,00	1420
400/4	112 M-4	5,50	1430
400/4	132 M-4	7,50	1450
450/4	132 A-4	7,50	1460
450/4	160 L-4	15,00	1460
310/6	80 B-6	0,37	930
310/6	80 B-6	0,55	930
350/6	90 S-6	0,75	935
350/6	90 L-6	1,10	935
400/6	112 M-6	2,20	950
450/6	132 M-6	3,00	965
500/6	160 M-6	5,50	965

* For RD and LG 180 and 225 orientations, contact the sales office

VCRP

Single inlet centrifugal fan, backward curved blades with direct drive, clean air



Product	VCRP
Construction	Scroll housing: carbon steel painted RAL 7032 and/or RAL 5015. Impeller: painted steel
Versions	Bearing cooling fan (VE): TMAX= 100 °C. ATEX version

FAN

Single-inlet centrifugal fan, backward curved blades, with direct drive, suitable for extraction of clean or slightly dusty air, for a wide variety of industrial system and civil and industrial air conditioning applications. Operating range at high flow rates, medium/low pressures.
Backward curved blade impeller in welded galvanized steel sheet.
Statically and dynamically balanced according to ISO standards, keeps to minimum levels noise and vibrations.
Orientations: VCRP series fans allow 16 orientation positions (8 clockwise RD and 8 counterclockwise LG) defined looking at the fan from the motor side.

FEATURES

Scroll housing in carbon steel painted RAL 7032 and/or RAL 5015, impeller in painted steel with static and dynamic balancing.
Robust construction entirely in thick welded steel sheet, then painted with epoxy powders in grey RAL 7032 and/or blue RAL 5015.
Intake air conditions T=15 °C, p=760 mm Hg.
Mounting intended on support base.
Possibility to request an additional pedestal fixed to the suction inlet to increase the machine's rigidity.

MOTOR

Three-phase asynchronous with squirrel cage rotor, class IE3, in 230/400 V execution (for power ratings up to 4 kW), 400/690 V (for power ratings above 4 kW), B3 frame, IP55 protection, according to UNELMEC standards. Installed with 2, 4 or 6 poles depending on the required pressure, or with dual polarity for two-speed versions.
The power ratings shown in the performance tables have been sized taking into account the machine efficiency and an additional safety margin to compensate for any system anomalies.
Minimum fluid temperature: -25 °C.
Maximum fluid temperature: +60 °C in standard version.

APPLICATIONS

HOSPITALS · CANTEENS · INDUSTRIES · PUBLIC SERVICES · RESTAURANTS · ATEX

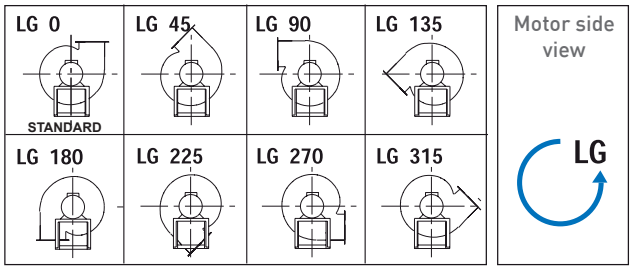
TEKNOWOOL AIR Tel. +39 049 641 679 | commerciale@teknowoolair.com | www.teknowoolair.com

TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 930 to 24,200
	Pressure (Pa)	From 380 to 3,700
Min. impeller diameter	mm	250
Max. impeller diameter	mm	630
Motor	Volt (±10%)	230-400 T / 400-690 T
	Poles	2-4-6
	IP	55
Fluid temp min. limit	°C	-25
Fluid max. temp limit	°C	+60

ORIENTATIONS

STANDARD orientation LG 0

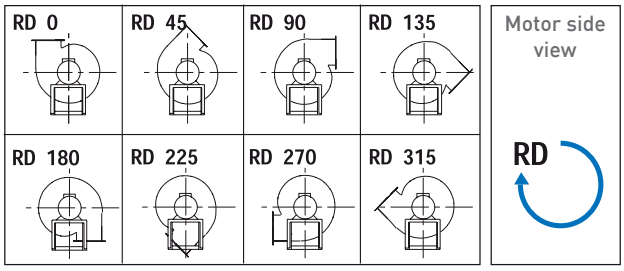


Dimensions

H = LG 0 - LG 45 - LG 90 - LG 135

H1 = LG 180 - LG 225

H2 = LG 270 - LG 315



Dimensions

H = RD 0 - RD 45 - RD 90 - RD 135

H1 = RD 180 - RD 225

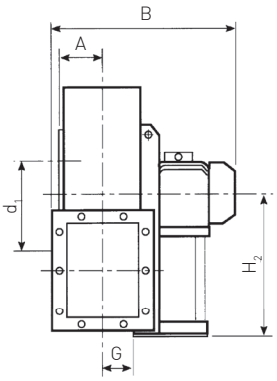
H2 = RD 270 - RD 315

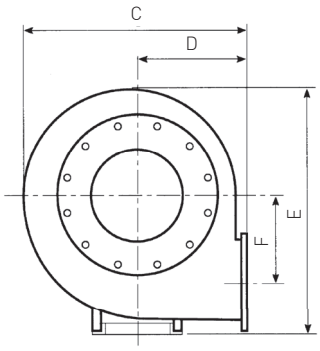
VCRP

Single inlet centrifugal fan,
backward curved blades with direct drive, clean air

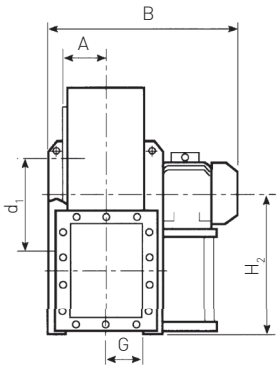
DIMENSIONS

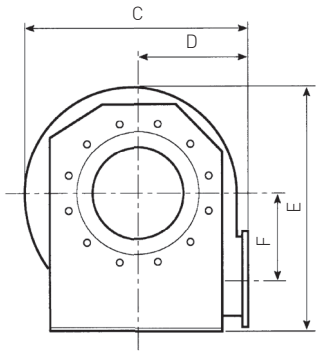
Model	Motor	KG F	PD² KG F m²	Motor-driven fan										Suction flange				
				A	B	C	D	E	F	G	H	H_1	H_2	d	d_1	d_2	N.	Ø
250/2	71B-2	33	0,145	94	435	441	195	526	149	96	315	195	315	255	292	325	8	10
280/2	80B-2	43	0,195	105	450	477	200	610	172	105	375	200	375	285	332	365	8	10
310/2	90L-2	52	0,32	117	539	527	225	658	196	117	400	225	400	320	366	400	8	10
310/4	63B-4	42	0,32	117	454	527	225	658	196	117	400	225	400	320	366	400	8	10
350/2	100L-2	80	0,52	130	636	600	255	740	216	131	450	255	450	360	405	440	8	10
350/4	71B-4	65	0,52	130	506	600	255	740	216	131	450	255	450	360	405	440	8	10
400/2	112M-2	95	1,1	147	668	655	285	815	245	147	500	285	500	405	448	485	8	10
400/2	132S- 2	108	1,1	147	730	655	285	815	245	147	500	285	500	405	448	485	8	10
400/4	80A-4	75	1,1	147	558	655	285	815	245	147	500	285	500	405	448	485	8	10
450/2	132S- 2	124	1,9	163	764	735	320	915	275	165	560	320	560	455	497	535	8	10
450/2	160M-2	160	1,9	163	900	735	320	915	275	165	560	320	560	455	497	535	8	10
450/4	80B-4	89	1,9	163	592	735	320	915	275	165	560	320	560	455	497	535	8	10
450/4	90S- 4	94	1,9	163	632	735	320	915	275	165	560	320	560	455	497	535	8	10
500/2	160M-2	187	3,1	183	939	832	360	1000	303	185	600	360	600	505	551	585	8	10
500/2	160L-2	196	3,1	183	939	832	360	1000	303	185	600	360	600	505	551	585	8	10
500/4	90L-4	123	3,1	183	671	832	360	1000	303	185	600	360	600	505	551	585	8	10
500/4	100L-4	129	3,1	183	741	832	360	1000	303	185	600	360	600	505	551	585	8	10
500/6	80A-6	115	3,1	183	631	832	360	1000	303	185	600	360	600	505	551	585	8	10
500/6	80B-6	116	3,1	183	631	832	360	1000	303	185	600	360	600	505	551	585	8	10
560/4	100L-4	141	5,5	205	797	940	400	1126	332	206	670	400	670	565	629	665	16	10
560/4	112M-4	146	5,5	205	797	940	400	1126	332	206	670	400	670	565	629	665	16	10
560/6	90S- 6	131	5,5	205	727	940	400	1126	332	206	670	400	670	565	629	665	16	10
560/6	90L-6	133	5,5	205	727	940	400	1126	332	206	670	400	670	565	629	665	16	10
630/4	132S- 4	190	8,7	250	908	1052	450	1260	373	231	755	450	750	635	698	735	16	12
630/4	132M-4	204	8,7	250	908	1052	450	1260	373	231	755	450	750	635	698	735	16	12
630/6	100L-6	173	8,7	250	846	1052	450	1260	373	231	755	450	750	635	698	735	16	12
630/6	112M-6	179	8,7	250	846	1052	450	1260	373	231	755	450	750	635	698	735	16	12





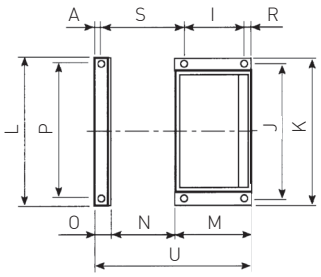
Version from size 250 to size 500
with electric motor in **B3**.



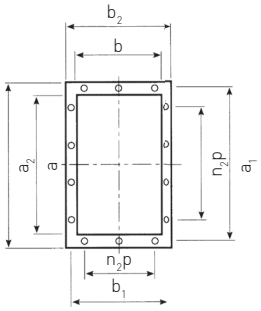


Version from size 560 to size 630
with electric motor in **B3**.

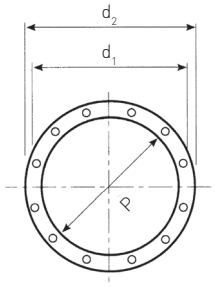
Discharge flange										Electric Motor Base														
a	b	a_1	b_1	a_2	b_2	$n_1$xp	$n_2$xp	No.	Ø	I	J	K	L	M	N	O	P	Q	R	S	T	U	Ø
258	185	292	219	328	255	1x112	2x112	10	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
288	205	332	249	368	285	1x125	2x125	10	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
322	229	366	273	402	309	1x125	2x125	10	12	133	234	260	-	205	-	-	-	55	17	-	-	-	10
322	229	366	273	402	309	1x125	2x125	10	12	86	184	206	-	145	-	-	-	45	14	-	-	-	10
361	256	405	300	441	336	2x125	3x125	10	12	197	289	324	-	250	-	-	-	30	23	-	-	-	12
361	256	405	300	441	336	2x125	3x125	10	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
404	288	448	332	484	368	2x125	3x125	14	12	197	289	324	-	250	-	-	-	30	23	-	-	-	12
404	288	448	332	484	368	2x125	3x125	14	12	237	337	372	-	300	-	-	-	40	23	-	-	-	12
404	288	448	332	484	368	2x125	3x125	14	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
453	322	497	366	533	402	2x125	3x125	14	12	237	337	372	-	300	-	-	-	40	23	-	-	-	12
453	322	497	366	533	402	2x160	3x160	14	12	337	395	440	-	415	-	-	-	50	28	-	-	-	14
453	322	497	366	533	402	2x160	3x160	14	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
453	322	497	366	533	402	2x160	3x160	14	12	133	234	260	-	205	-	-	-	55	17	-	-	-	10
507	361	551	405	587	441	2x160	3x160	14	12	337	395	440	-	415	-	-	-	50	28	-	-	-	14
507	361	551	405	587	441	1x125	2x125	14	12	337	395	440	-	415	-	-	-	50	28	-	-	-	14
507	361	551	405	587	441	1x125	2x125	14	12	133	234	260	-	205	-	-	-	55	17	-	-	-	10
507	361	551	405	587	441	2x125	3x125	14	12	197	289	324	-	250	-	-	-	30	23	-	-	-	12
507	361	551	405	587	441	2x125	3x125	14	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
507	361	551	405	587	441	2x125	3x125	14	12	121	203	225	-	180	-	-	-	45	14	-	-	-	10
569	404	629	464	669	504	2x125	3x125	14	14	197	289	324	692	250	408	53	632	-	23	468	23	711	12
569	404	629	464	669	504	2x125	3x125	14	14	197	289	324	692	250	408	53	632	-	23	468		711	12
569	404	629	464	669	504	2x125	3x125	14	14	133	234	260	692	205	408	53	632	-	17	493		666	10
569	404	629	464	669	504	2x125	3x125	14	14	133	234	260	692	205	408	53	632	-	17	493		666	10
638	453	698	513	738	553	2x160	3x160	14	14	237	337	372	762	300	457	53	702	-	23	527	23	810	12
638	453	698	513	738	553	2x160	3x160	14	14	237	337	372	762	300	457	53	702	-	23	527	23	810	12
638	453	698	513	738	553	2x160	3x160	14	14	197	289	324	762	250	457	53	702	-	23	517	23	760	12
638	453	698	513	738	553	2x160	3x160	14	14	197	289	324	762	250	457	53	702	-	23	517	23	760	12



Holes for base on suction inlet



Discharge flange



Suction flange

VCRP

Single inlet centrifugal fan,
backward curved blades with direct drive, clean air

QUICK SELECTION TABLE

Model	Motor	Power Installed kW	RPM	dB(A)	Total pressure PT = Pa Flow rate v = m³/h										
					930	1080	1190	1330	1500	1700	1900	2150	2400	2700	3050
250/2	71 B-2	0,55	2820	70	870	850	830	800	760	720	680	600	520	380	-
280/2	80 B-2	1,10	2840	72	-	-	-	1100	1060	1030	1000	960	910	850	770
310/2	90L-2	2,20	2850	76	-	-	-	-	-	-	1390	1360	1320	1280	1230
350/2	100LA-2	3,00	2900	79	-	-	-	-	-	-	-	-	-	1850	1820
400/2	112M-2	4,00	2900	82	-	-	-	-	-	-	-	-	-	-	-
400/2	132SA-2	5,50	2900	84	-	-	-	-	-	-	-	-	-	-	-
450/2	132SB-2	7,50	2900	86	-	-	-	-	-	-	-	-	-	-	-
450/2	160M-2	11,00	2930	88	-	-	-	-	-	-	-	-	-	-	-
500/2	160M-2	15,00	2940	89	-	-	-	-	-	-	-	-	-	-	-
500/2	160L-2	18,50	2940	92	-	-	-	-	-	-	-	-	-	-	-
310/4	63B-4	0,18	1310	57	290	280	270	260	250	230	210	180	140	80	-
350/4	71B-4	0,37	1360	60	-	-	-	400	390	380	370	350	330	300	270
400/4	80A-4	0,55	1370	64	-	-	-	-	-	-	520	500	490	470	450
450/4	80B-4	0,75	1380	65	-	-	-	-	-	-	-	-	-	610	600
450/4	90S- 4	1,10	1390	67	-	-	-	-	-	-	-	-	-	660	650
500/4	90L-4	1,50	1400	69	-	-	-	-	-	-	-	-	-	-	-
500/4	100L-4	2,20	1420	71	-	-	-	-	-	-	-	-	-	-	-
560/4	100LA-4	3,00	1430	72	-	-	-	-	-	-	-	-	-	-	-
560/4	112M-4	4,00	1430	74	-	-	-	-	-	-	-	-	-	-	-
630/4	132SA-4	5,50	1440	75	-	-	-	-	-	-	-	-	-	-	-
630/4	132M-4	7,50	1450	78	-	-	-	-	-	-	-	-	-	-	-
500/6	80A-6	0,55	930	57	-	-	-	-	-	-	-	-	350	340	330
500/6	80B-6	0,75	930	59	-	-	-	-	-	-	-	-	270	360	350
560/6	90S- 6	0,75	930	60	-	-	-	-	-	-	-	-	-	-	-
560/6	90L-6	1,10	930	62	-	-	-	-	-	-	-	-	-	-	-
630/6	100L-6	1,50	950	66	-	-	-	-	-	-	-	-	-	-	-
630/6	112M-6	2,20	950	68	-	-	-	-	-	-	-	-	-	-	-

Performance data was measured with suitable instruments in our laboratories.
Air performance at 15 °C temperature with a pressure of 760 mmH_2O.
The indicated flow rate and pressure performances refer to the installation of the fan unit with ducted discharge.
The reported noise is expressed as sound pressure, measured at a distance of 1.5 m in free field.
The power values indicated refer to the actual installed power of the fan unit.
Refer to the performance curves for the correct model selection.

Total pressure PT = Pa Flow rate v = m³/h																	
3450	3850	4250	4750	5400	6150	6850	7650	8500	9500	10800	12000	13500	13300	17000	19000	21600	24200
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
670	520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1780	1740	990	870	680	-	-	-	-	-	-	-	-	-	-	-	-	-
1780	1740	1680	1600	1500	1370	1220	980	-	-	-	-	-	-	-	-	-	-
-	2130	2100	2070	2010	1940	1840	1700	1480	950	-	-	-	-	-	-	-	-
-	2310	2260	2200	2140	2070	1970	1850	1710	1480	1170	760	-	-	-	-	-	-
-	-	-	-	2690	2680	2670	2630	2580	2440	2200	1870	1270	-	-	-	-	-
-	-	-	-	2920	2890	2840	2780	2660	2530	2340	2130	1850	1560	1070	-	-	-
-	-	-	-	-	-	-	3350	3310	3270	3200	3090	2910	2680	2270	1460	-	-
-	-	-	-	-	-	-	3700	3660	3570	3460	3340	3200	3020	2810	2490	2000	1220
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
230	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
430	390	350	300	230	-	-	-	-	-	-	-	-	-	-	-	-	-
590	580	560	520	460	370	190	-	-	-	-	-	-	-	-	-	-	-
640	620	590	570	530	480	410	320	-	-	-	-	-	-	-	-	-	-
-	760	750	740	730	710	660	570	430	170	-	-	-	-	-	-	-	-
-	870	850	830	810	770	730	690	630	540	400	-	-	-	-	-	-	-
-	-	-	-	980	970	960	940	910	840	740	600	290	-	-	-	-	-
-	-	-	-	1100	1070	1040	1010	9700	930	860	780	660	530	290	-	-	-
-	-	-	-	-	-	-	1280	1260	1240	1210	1170	1090	980	810	470	-	-
-	-	-	-	-	-	-	1530	1500	1460	1420	1370	1320	1230	1130	1010	820	520
320	310	290	260	210	140	-	-	-	-	-	-	-	-	-	-	-	-
340	330	320	300	270	230	190	-	-	-	-	-	-	-	-	-	-	-
430	420	410	400	380	360	320	270	170	-	-	-	-	-	-	-	-	-
470	460	450	440	420	400	380	350	310	230	-	-	-	-	-	-	-	-
-	-	-	-	560	550	540	520	500	450	380	270	-	-	-	-	-	-
-	-	-	-	600	590	580	570	550	510	470	420	350	230	-	-	-	-

VCRP

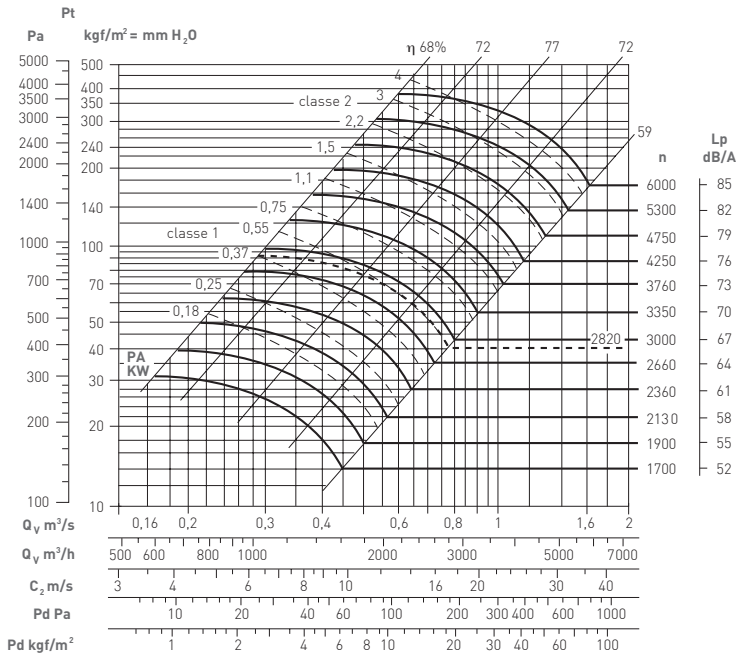
Single inlet centrifugal fan,
backward curved blades with direct drive, clean air

CHARACTERISTIC CURVES

Q= Flow rate expressed in m^3/h, m^3/s and cfm

Pe= Static pressure expressed in mmH_2O, e Pa

VCRP 250



Fan weight 30 Kgf

PD² e GD² = 0,145 Kgf²m

Maximum rotation speed

<100 °C = 4950

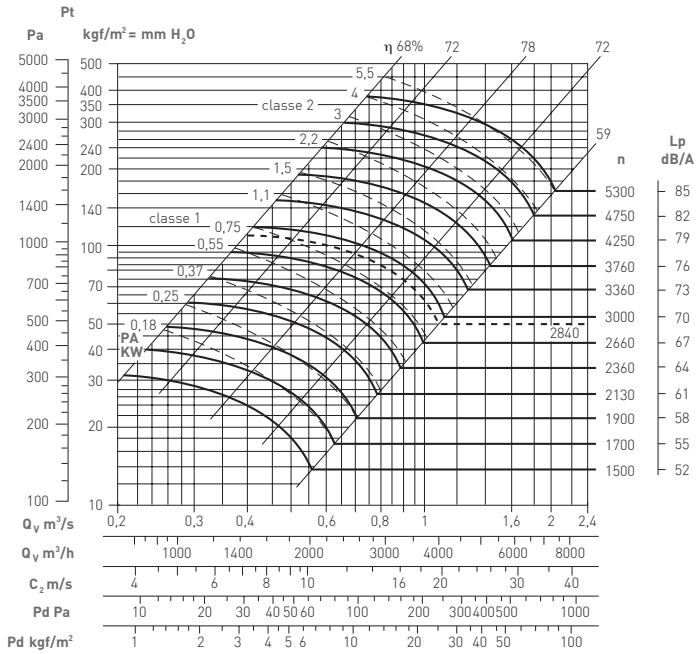
100 ÷ 200 °C= 4500

200 ÷ 300 °C= 4000

Tolerance on noise level + 3 dB

Tolerance on absorbed power ± 3%

VCRP 280



Fan weight 41 Kgf

PD² e GD² = 0,195 Kgf²m

Maximum rotation speed

<100 °C = 3950

100 ÷ 200 °C= 3550

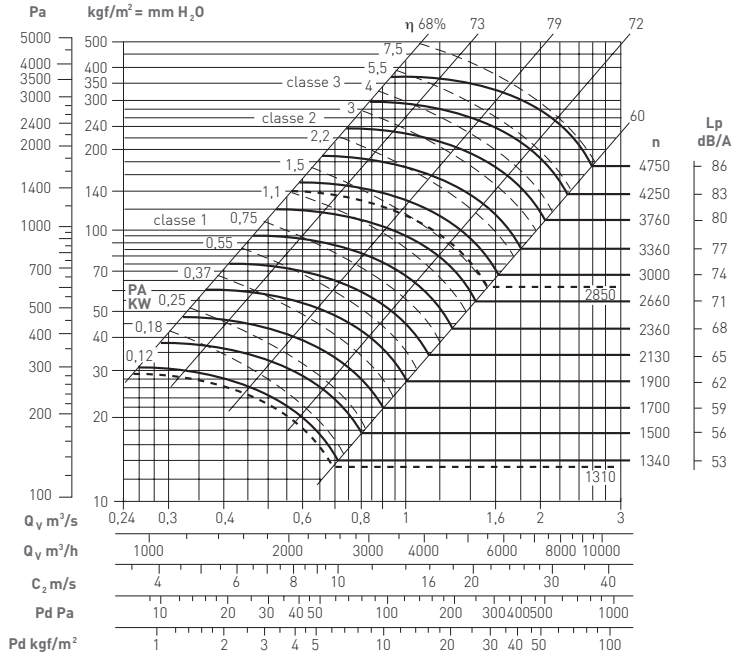
200 ÷ 300 °C= 3120

Tolerance on noise level + 3 dB

Tolerance on absorbed power ± 3%

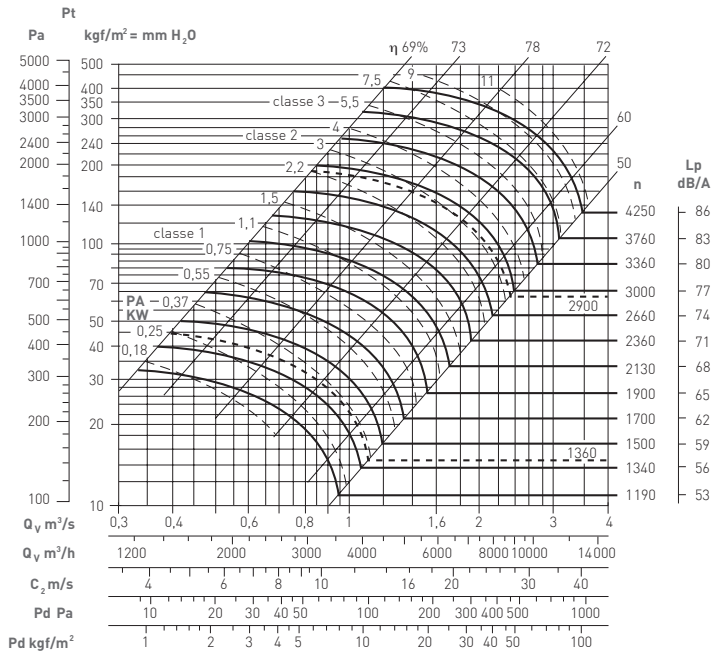
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRP 310



Fan weight 46 Kgf
PD^2 e GD^2 = 0,32 Kgf^2m
Maximum rotation speed
<100 °C = 3100
100 ÷ 200 °C= 2800
200 ÷ 300 °C= 2500
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRP 350



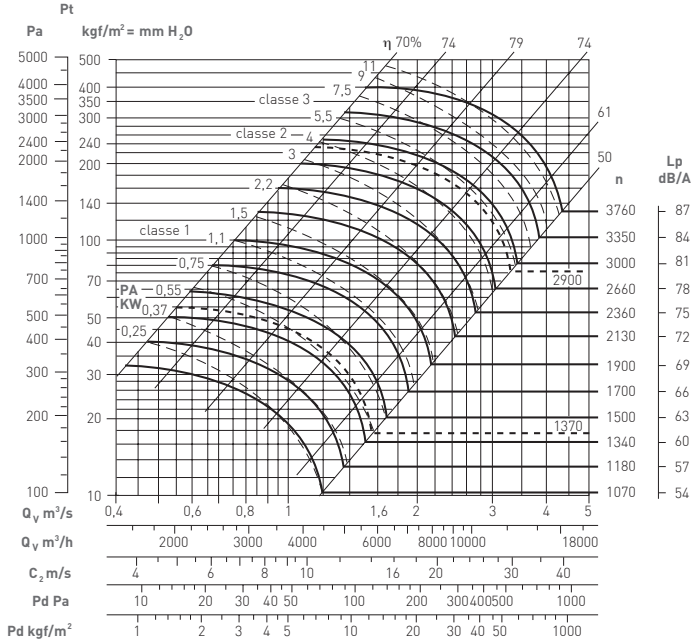
Fan weight 72 Kgf
PD^2 e GD^2 = 0,52 Kgf^2m
Maximum rotation speed
<100 °C = 2800
100 ÷ 200 °C= 2500
200 ÷ 300 °C= 2250
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRP

Single inlet centrifugal fan,
backward curved blades with direct drive, clean air

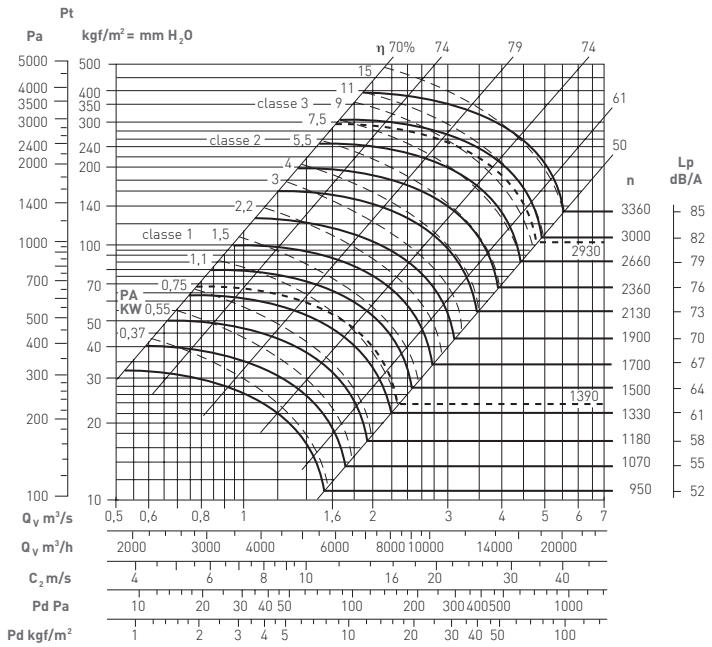
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRP 400



Fan weight 85 Kgf
PD² e GD² = 1,1 Kgf²m
Maximum rotation speed
<100 °C = 2840
100 ÷ 200 °C= 2250
200 ÷ 300 °C= 2000
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRP 450



Fan weight 100 Kgf
PD² e GD² = 1,9 Kgf²m
Maximum rotation speed
<100 °C = 2200
100 ÷ 200 °C= 2000
200 ÷ 300 °C= 1870
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

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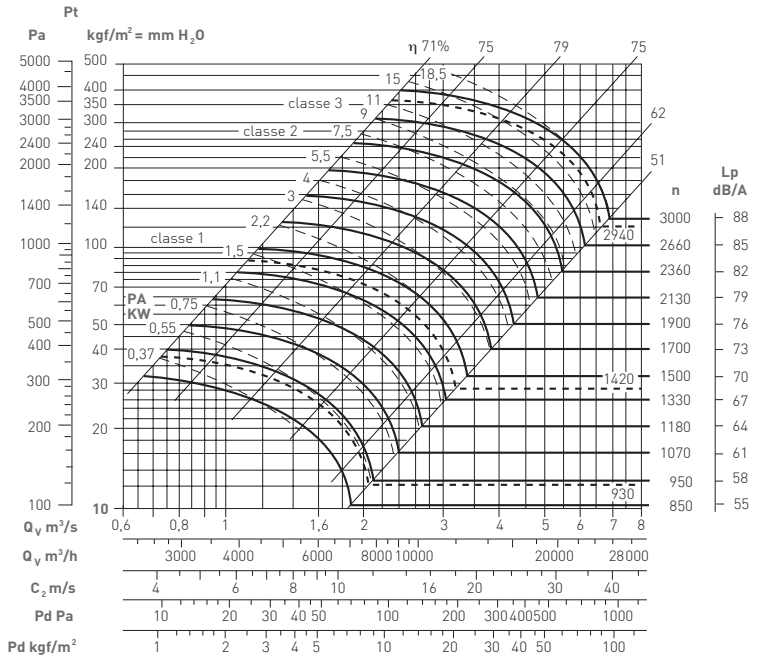
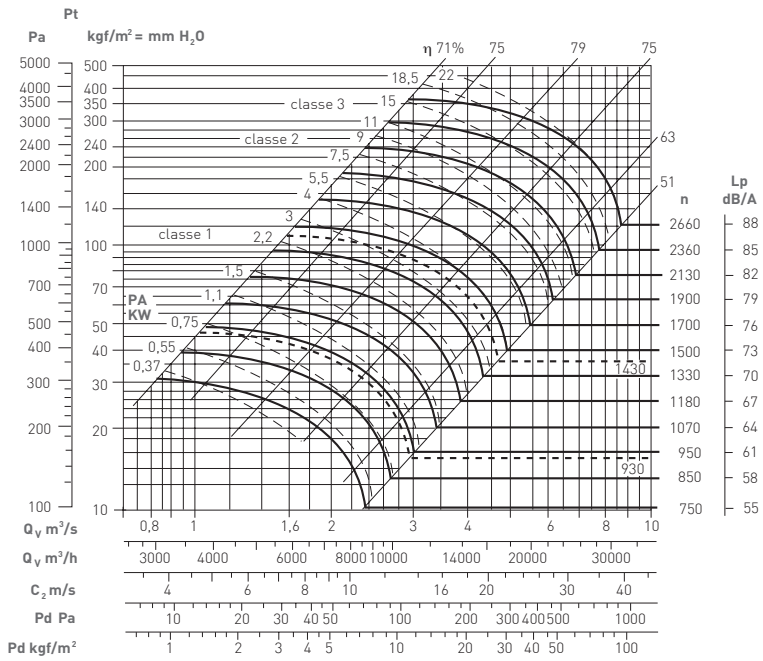
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRP 500



Fan weight 141 Kgf
PD^2 e GD^2 = 3,1 Kgf^2m
Maximum rotation speed
<100 °C = 2050
100 ÷ 200 °C= 1800
200 ÷ 300 °C= 1580
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRP 560



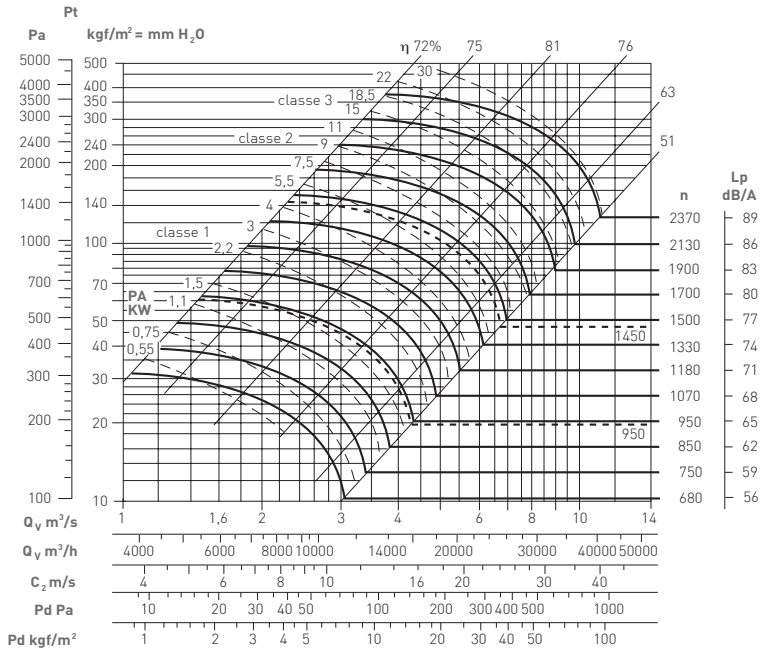
Fan weight 178 Kgf
PD^2 e GD^2 = 5,5 Kgf^2m
Maximum rotation speed
<100 °C = 1800
100 ÷ 200 °C= 1600
200 ÷ 300 °C= 1400
Noise tolerance + 3 dB
Tolerance on absorbed power ± 3%

VCRP

Single inlet centrifugal fan,
backward curved blades with direct drive, clean air

Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRP 630



Fan weight 230 Kgf
PD^2 e GD^2 = 8,7 Kgf^2m
Maximum rotation speed
<100 °C = 1600
100 ÷ 200 °C= 1390
200 ÷ 300 °C= 1250
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

ACCESSORIES


Torque counter flanges


Suction cone


Discharge cone


Wall brackets


Motor cover


Vibrostop


Electrical panel


Nozzle anti-spark


Switch on/off

All images are only indicative of the product type and may differ from the actual article.

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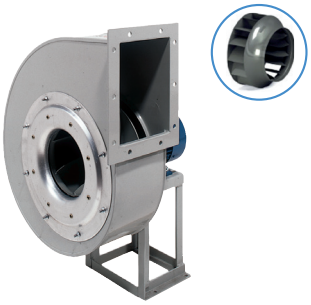
AVAILABLE MODELS

Model	Motor	Installed Power kW	RPM
250/2	71 B-2	0,55	2820
280/2	80 B-2	1,10	2840
310/2	90L-2	2,20	2850
350/2	100LA-2	3,00	2900
400/2	112M-2	4,00	2900
400/2	132SA-2	5,50	2900
450/2	132SB-2	7,50	2900
450/2	160M-2	11,00	2930
500/2	160M-2	15,00	2940
500/2	160L-2	18,50	2940
310/4	63B-4	0,18	1310
350/4	71B-4	0,37	1360
400/4	80A-4	0,55	1370
450/4	80B-4	0,75	1380
450/4	90S- 4	1,10	1390
500/4	90L-4	1,50	1400
500/4	100L-4	2,20	1420
560/4	100LA-4	3,00	1430
560/4	112M-4	4,00	1430
630/4	132SA-4	5,50	1440
630/4	132M-4	7,50	1450
500/6	80A-6	0,55	930
560/6	90S- 6	0,75	930
560/6	90L-6	1,10	930
630/6	100L-6	1,50	950
630/6	112M-6	2,20	950

* For RD and LG 180 and 225 orientations, contact the sales office

VCRS

Single inlet centrifugal fan, backward curved blades with direct drive, dirty air



Product	VCRS
Construction	Scroll housing: carbon steel painted RAL 7032 and/or RAL 5015. Impeller: painted steel
Versions	Bearing cooling fan (VE): TMAX= 100 °C. ATEX version

FAN

Single-inlet centrifugal fan, backward curved blades, suitable for extraction of dusty air, sawdust, shavings, granular materials in low concentrations excluding filamentous materials.
Operating range at high flow rates, medium/high pressures.
Backward curved blade impeller in welded galvanized steel sheet.
Statically and dynamically balanced according to ISO standards, keeps to minimum levels
noise and vibrations.
Orientations: VCRS series fans allow 16 orientation positions (8 clockwise RD and 8 counterclockwise LG) defined looking at the fan from the motor side.

FEATURES

Scroll housing in carbon steel painted RAL 7032 and/or RAL 5015, impeller in painted steel with static and dynamic balancing.
Robust construction entirely in thick welded steel sheet, then painted with
epoxy powders in grey RAL 7032 and/or blue RAL 5015.
Intake air conditions T=15°C, p=760 mm Hg.
Mounting intended on support base.
Possibility to request an additional pedestal fixed to the suction inlet to increase the machine's rigidity.

MOTOR

Three-phase asynchronous with squirrel cage rotor, class IE3, in 230/400 V execution (for power ratings up to 4 kW), 400/690 V (for power ratings above 4 kW), B3 frame, IP55 protection, according to UNELMEC standards. Installed with 2, 4 or 6 poles depending on the required pressure, or with dual polarity for two-speed versions.
The power ratings shown in the performance tables have been sized taking into account the machine efficiency and an additional safety margin to compensate for any system anomalies.
Minimum fluid temperature: -25 °C.
Maximum fluid temperature: +60 °C in standard version.

APPLICATIONS

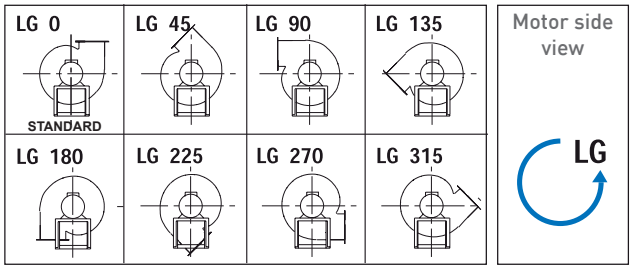
HOSPITALS | CANTEENS | INDUSTRIES | PUBLIC SERVICES | RESTAURANTS | ATEX

TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 470 to 17,000
	Pressure (Pa)	From 410 to 5,610
Min. impeller diameter	mm	200
Max. impeller diameter	mm	630
Motor	Volt (±10%)	230-400 T / 400-690 T
	Poles	2-4-6
	IP	55
Fluid temp min. limit	°C	-25
Fluid max. temp limit	°C	+60

ORIENTATIONS

STANDARD orientation LG 0

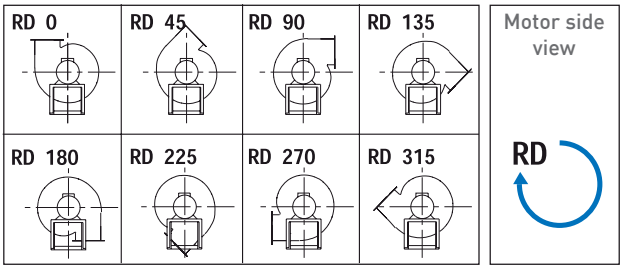


Dimensions

H = LG 0 - LG 45 - LG 90 - LG 135

H1 = LG 180 - LG 225

H2 = LG 270 - LG 315



Dimensions

H = RD 0 - RD 45 - RD 90 - RD 135

H1 = RD 180 - RD 225

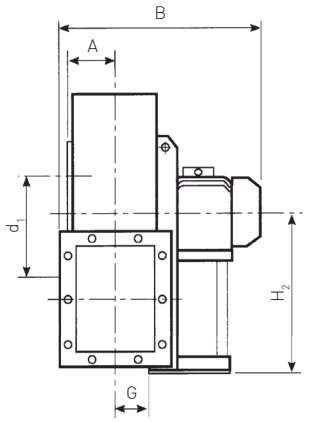
H2 = RD 270 - RD 315

VCRS

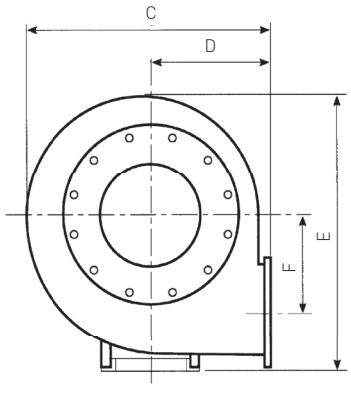
Single inlet centrifugal fan,
backward curved blades with direct drive, dirty air

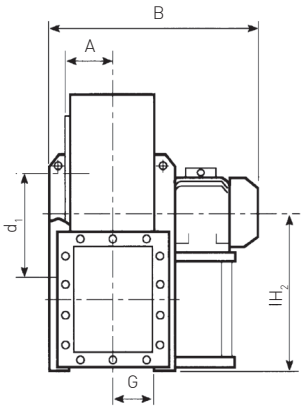
DIMENSIONS

Model	Motor	KG F	PD² KG F m²	Motor-driven fan										Suction flange				
				A	B	C	D	E	F	G	H	H_1	H_2	d	d_1	d_2	N.	Ø
250/2	63 B-2	25	0,09	86	380	441	195	526	175	76	315	195	315	185	219	255	8	8
250/2	71 A-2	26	0,10	86	400	441	195	526	175	76	315	195	315	185	219	255	8	8
280/2	71 B-2	30	0,15	95	420	477	200	610	202	86	375	200	375	205	241	275	8	8
280/2	80 A-2	32	0,16	95	440	477	200	610	202	86	375	200	375	205	241	275	8	8
310/2	80 B-2	41	0,19	105	460	527	225	658	229	96	400	225	400	228	265	298	8	8
310/2	90 S-2	44	0,21	105	480	527	225	658	229	96	400	225	400	228	265	298	8	8
350/2	90 S-2	66	0,43	115	500	600	255	740	253	107	450	255	450	255	292	325	8	10
350/2	90 L-2	69	0,50	115	530	600	255	740	253	107	450	255	450	255	292	325	8	10
400/2	100 LA-2	107	0,70	127	590	655	285	815	286	118	500	285	500	285	332	365	8	10
400/2	112 M-2	110	0,80	127	630	655	285	815	286	118	500	285	500	285	332	365	8	10
450/2	132 SA-2	150	1,2	141	670	735	320	915	321	131	560	320	560	320	366	400	8	10
450/2	132 SB-2	158	1,4	141	670	735	320	915	321	131	560	320	560	320	366	400	8	10
500/2	160 M-2	235	2,3	157	830	832	360	1000	355	148	600	360	600	360	405	440	8	10
500/2	160 M-2	247	2,6	157	830	832	360	1000	355	148	600	360	600	360	405	440	8	10
560/2	160 L-2	132	2,1	157	580	832	360	1000	355	148	600	360	600	360	405	440	8	10
560/2	180 M-2	135	2,2	157	615	832	360	1000	355	148	600	360	600	360	405	440	8	10
500/4	90 S-4	286	3,4	177	880	940	400	1126	390	165	670	400	670	405	448	485	12	10
500/4	90 L-4	316	3,8	177	935	940	400	1126	390	165	670	400	670	405	448	485	12	10
560/4	100 L-4	140	3,2	177	705	940	400	1126	390	165	670	400	670	405	448	485	12	10
560/4	100 L-4	144	3,3	177	705	940	400	1126	390	165	670	400	670	405	448	485	12	10
630/4	112 M-4	178	5,6	195	775	1052	450	1260	439	185	750	450	750	455	497	535	12	10
630/4	132 S-4	191	6,3	195	815	1052	450	1260	439	185	750	450	750	455	497	535	12	10

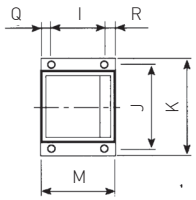


Version from size 250 to size 500 with electric motor in **B3**.



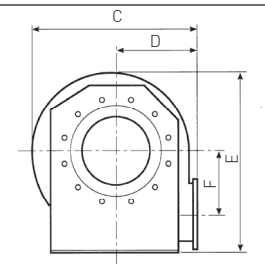


Version from size 560 to size 630 with electric motor in **B3**.

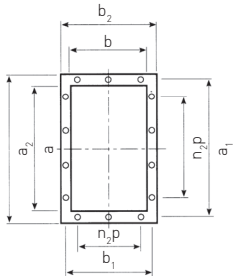


Holes for electric motor support base

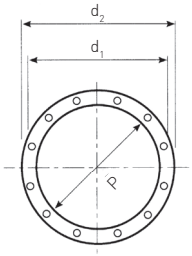
Discharge flange										Electric Motor Base													
a	b	a_1	b_1	a_2	b_2	$n_1$xp	$n_2$xp	No.	Ø	I	J	K	L	M	N	O	P	Q	R	S	T	U	Ø
207	148	241	182	277	218	1x112	1x112	8	12	86	184	206	–	145	–	–	–	45	14	–	–	–	10
207	148	241	182	277	218	1x112	1x112	8	12	121	203	225	–	180	–	–	–	45	14	–	–	–	10
231	166	265	200	301	236	1x112	1x112	8	12	121	203	225	–	180	–	–	–	45	14	–	–	–	10
231	166	265	200	301	236	1x112	1x112	8	12	121	203	225	–	180	–	–	–	45	14	–	–	–	10
258	185	292	219	328	255	1x112	2x112	10	12	121	203	225	–	180	–	–	–	45	14	–	–	–	10
258	185	292	219	328	255	1x112	2x112	10	12	133	234	260	–	205	–	–	–	55	17	–	–	–	10
288	205	332	249	368	285	1x125	2x125	10	12	133	234	260	–	205	–	–	–	55	17	–	–	–	10
288	205	332	249	368	285	1x125	2x125	10	12	133	234	260	–	205	–	–	–	55	17	–	–	–	10
322	229	366	273	402	309	1x125	2x125	10	12	197	289	324	–	250	–	–	–	30	23	–	–	–	12
322	229	366	273	402	309	1x125	2x125	10	12	197	289	324	–	250	–	–	–	30	23	–	–	–	12
361	256	405	300	441	336	1x125	2x125	10	12	237	337	372	–	300	–	–	–	40	23	–	–	–	12
361	256	405	300	441	336	2x125	3x125	10	12	237	337	372	–	300	–	–	–	40	23	–	–	–	12
404	288	448	332	484	368	2x125	3x125	10	12	337	395	440	–	–	–	–	–	50	28	–	–	–	14
404	288	448	332	484	368	2x125	3x125	10	12	337	395	440	–	415	–	–	–	50	28	–	–	–	14
404	288	448	332	484	368	2x125	3x125	14	12	133	234	260	–	205	–	–	–	55	17	–	–	–	10
404	288	448	332	484	368	2x125	3x125	14	12	133	234	260	–	205	–	–	–	55	17	–	–	–	10
453	322	497	366	533	402	2x125	3x125	14	12	337	395	440	692	415	322	53	–	–	28	410	23	–	14
453	322	497	366	533	402	2x125	3x125	14	12	357	434	488	692	460	322	53	632	–	33	430	23	835	17
453	322	497	366	533	402	2x125	3x125	14	12	197	289	324	692	250	322	53	632	–	23	390	23	625	12
453	322	497	366	533	402	2x125	3x125	14	12	197	289	324	692	250	322	53	632	–	23	390	23	625	12
507	361	551	405	587	441	2x125	3x125	14	12	197	289	324	762	250	361	53	702	–	23	430	23	664	12
507	361	551	405	587	411	2x125	3x125	14	12	237	337	372	762	300	361	–	702	–	23	440	23	714	12



Holes for support base on suction inlet



Discharge flange



Suction flange

VCRS

Single inlet centrifugal fan,
backward curved blades with direct drive, dirty air

QUICK SELECTION TABLE

Model	Motor	Power Installed kW	RPM	dB(A)	Total pressure PT = Pa Flow rate v = m³/h												
					470	540	615	680	750	830	930	1080	1190	1330	1500	1700	1900
250/2	63 B-2	0,25	2780	65	880	880	880	840	800	760	680	630	530	410	-	-	-
250/2	71 A-2	0,37	2780	67	1020	1010	1000	980	950	880	820	750	660	550	-	-	-
280/2	71 B-2	0,55	2780	69	-	-	-	1130	1130	1110	1090	1030	960	870	800	690	530
280/2	80 A-2	0,75	2830	70	-	-	-	1300	1290	1280	1260	1210	1130	1060	950	830	690
310/2	80 B-2	1,10	2830	72	-	-	-	-	-	-	1440	1430	1410	1390	1290	1210	1100
310/2	90 S-2	1,50	2840	73	-	-	-	-	-	-	1650	1640	1630	1600	1540	1420	1330
350/2	90 S-2	1,50	2840	76	-	-	-	-	-	-	-	-	-	1840	1830	1800	1760
350/2	90 L-2	2,20	2850	78	-	-	-	-	-	-	-	-	-	2100	2100	2080	2040
400/2	100 LA-2	3,00	2900	80	-	-	-	-	-	-	-	-	-	-	-	-	2470
400/2	112 M-2	4,00	2900	81	-	-	-	-	-	-	-	-	-	-	-	-	2770
450/2	132 SA-2	5,50	2900	84	-	-	-	-	-	-	-	-	-	-	-	-	-
450/2	132 SB-2	7,50	2900	85	-	-	-	-	-	-	-	-	-	-	-	-	-
500/2	160 M-2	11,00	2930	89	-	-	-	-	-	-	-	-	-	-	-	-	-
500/2	160 M-2	15,00	2930	89	-	-	-	-	-	-	-	-	-	-	-	-	-
560/2	160 L-2	18,50	2940	91	-	-	-	-	-	-	-	-	-	-	-	-	-
560/2	180 M-2	22,00	1420	92	-	-	-	-	-	-	-	-	-	-	-	-	-
500/4	90 S-4	1,10	1430	68	-	-	-	-	-	-	-	-	-	-	-	-	890
500/4	90 L-4	1,50	1425	69	-	-	-	-	-	-	-	-	-	-	-	-	1020
560/4	100 L-4	2,20	1440	71	-	-	-	-	-	-	-	-	-	-	-	-	-
560/4	100 L-4	3,00	1450	72	-	-	-	-	-	-	-	-	-	-	-	-	-
630/4	112 M-4	4,00	1440	75	-	-	-	-	-	-	-	-	-	-	-	-	-
630/4	132 S-4	5,50	1440	78	-	-	-	-	-	-	-	-	-	-	-	-	-

Performance data was measured with suitable instruments in our laboratories.
Air performance at 15 °C temperature with a pressure of 760 mmH_2O.
The indicated flow rate and pressure performances refer to the installation of the fan unit with ducted discharge.
The reported noise is expressed as sound pressure, measured at a distance of 1.5 m in free field.
The power values indicated refer to the actual installed power of the fan unit.
Refer to the performance curves for the correct model selection.

Total pressure PT = Pa Flow rate v = m³/h																		
2150	2400	2700	3050	3450	3850	4250	4750	5400	6150	6850	7650	8500	9500	10800	12000	13500	15300	17000
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1000	850	680	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1210	1060	880	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1630	1550	1420	1280	1070	850	-	-	-	-	-	-	-	-	-	-	-	-	-
1980	1820	1710	1550	1340	1130	-	-	-	-	-	-	-	-	-	-	-	-	-
2400	2380	2380	-	-	-	-	1410	1120	740	-	-	-	-	-	-	-	-	-
2750	2730	2690	2560	2400	2290	2050	1780	1480	1010	-	-	-	-	-	-	-	-	-
-	-	3050	3020	2990	2930	2740	2550	2340	2120	1800	1420	970	-	-	-	-	-	-
-	-	3500	3480	3440	3380	3260	3010	2820	2570	2230	1860	1270	-	-	-	-	-	-
-	-	.	.	.	3920	3880	3840	3770	3520	3280	3600	3280	2830	2360	1800	-	-	-
-	-	-	-	-	4480	4420	4400	4320	4160	3820	3600	3280	2360	1800	-	-	-	-
-	-	-	-	-	-	-	-	4890	4850	4790	4700	4400	4100	3760	3410	2860	2250	1510
-	-	-	-	-	-	-	-	5610	5610	5490	5400	5210	4820	4530	4120	3570	2970	2210
880	860	830	800	750	680	630	530	420	-	-	-	-	-	-	-	-	-	-
1010	1000	970	940	860	820	750	660	540	-	-	-	-	-	-	-	-	-	-
-	-	1140	1130	1120	1070	1010	940	880	800	690	530	-	-	-	-	-	-	-
-	-	1300	1290	1270	1250	1200	1120	1040	940	830	700	-	-	-	-	-	-	-
-	-	-	-	-	1480	1460	1410	1380	1350	1290	1230	1120	980	780	570	-	-	-
-	-	-	-	-	1700	1660	1630	1600	1560	1510	1420	1310	1150	990	750	-	-	-

VCRS

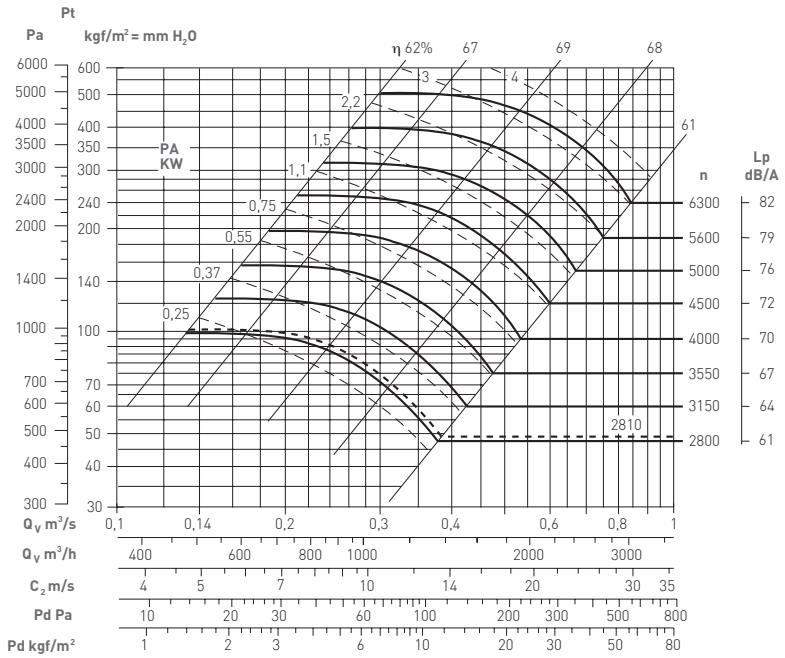
Single inlet centrifugal fan,
backward curved blades with direct drive, dirty air

CHARACTERISTIC CURVES

Q= Flow rate expressed in m^3/h, m^3/s and cfm

Pe= Static pressure expressed in mmH_2O, e Pa

VCRS 250



Fan weight 25 Kgf

PD² e GD² = 0,10 Kgf²m

Maximum rotation speed

<100 °C = 5600

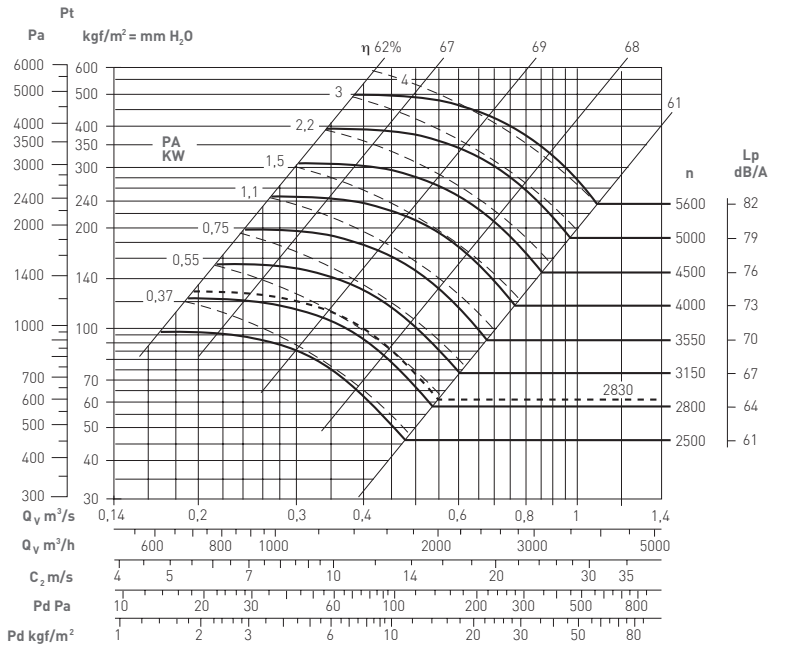
100 ÷ 200 °C= 5000

200 ÷ 300 °C= 4500

Tolerance on noise level + 3 dB

Tolerance on absorbed power ± 3%

VCRS 280



Fan weight 36 Kgf

PD² e GD² = 0,16 Kgf²m

Maximum rotation speed

<100 °C = 5000

100 ÷ 200 °C= 4500

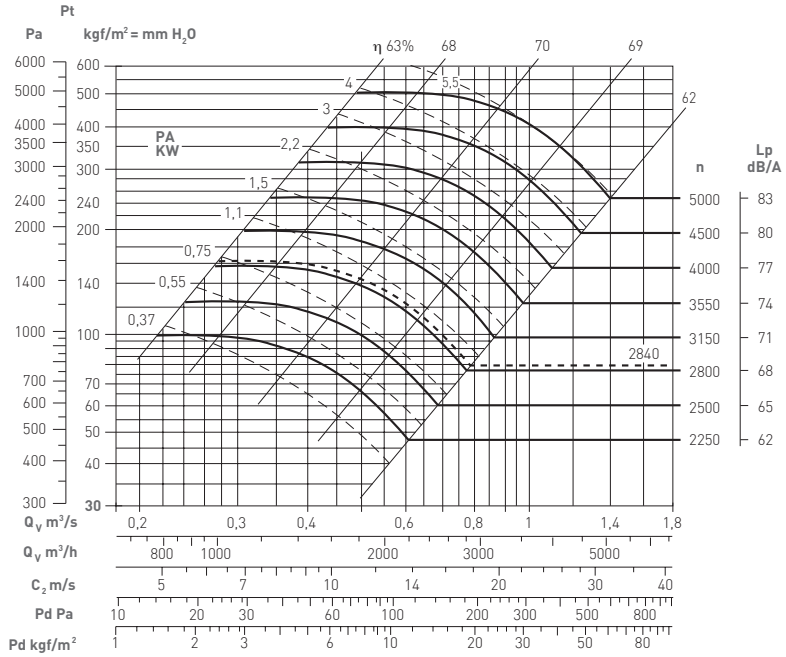
200 ÷ 300 °C= 4000

Tolerance on noise level + 3 dB

Tolerance on absorbed power ± 3%

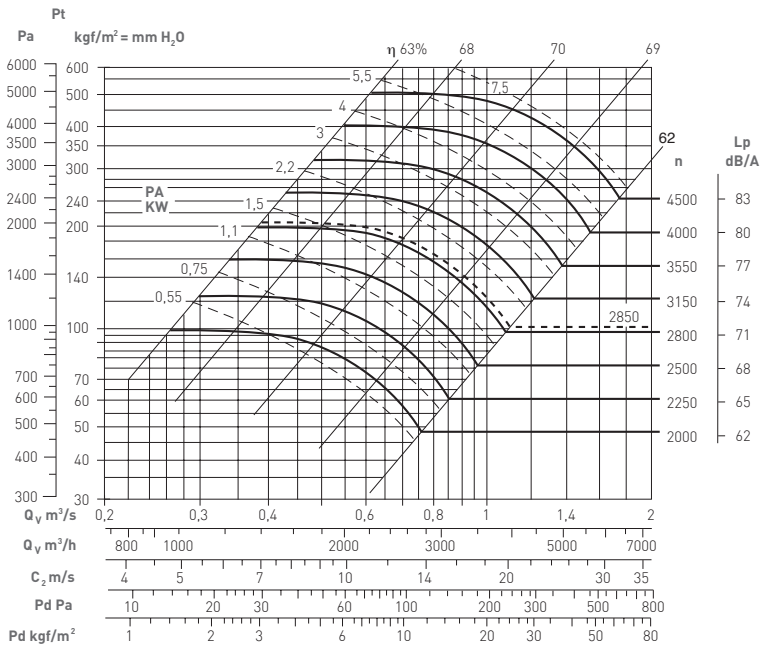
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRS 310



Fan weight 43 Kgf
PD^2 e GD^2 = 0,21 Kgf^2m
Maximum rotation speed
<100 °C = 4500
100 ÷ 200 °C= 4000
200 ÷ 300 °C= 3550
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRS 350



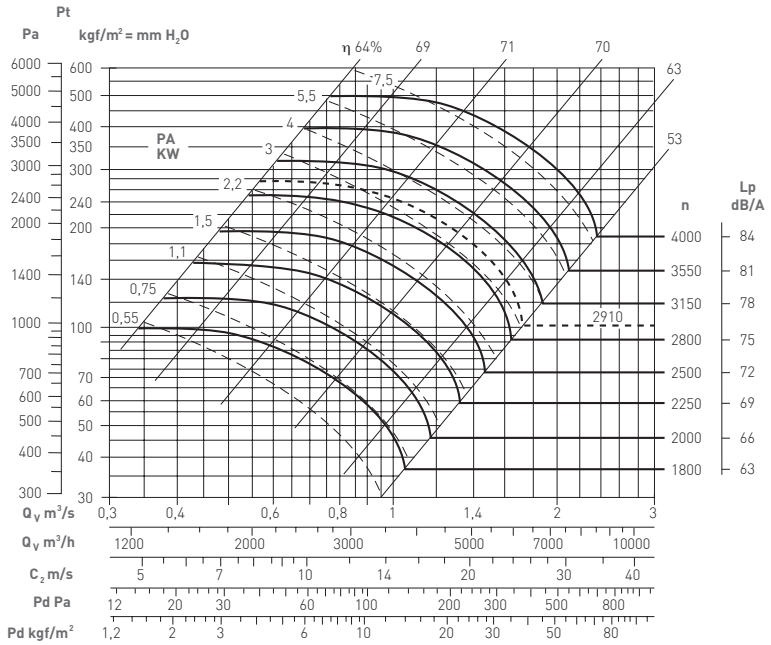
Fan weight 72 Kgf
PD^2 e GD^2 = 0,5 Kgf^2m
Maximum rotation speed
<100 °C = 4000
100 ÷ 200 °C= 3550
200 ÷ 300 °C= 3150
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRS

Single inlet centrifugal fan,
backward curved blades with direct drive, dirty air

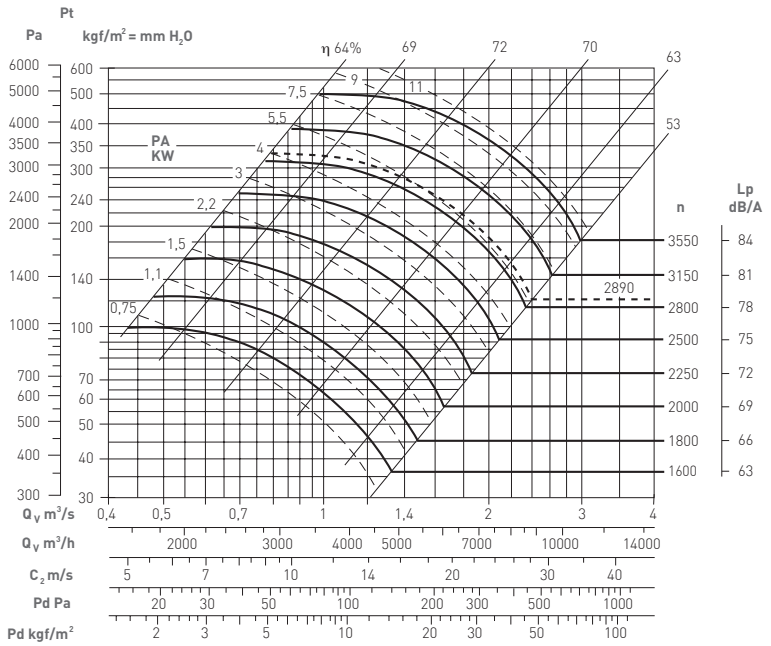
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRS 400



Fan weight 85 Kgf
PD^2 e GD^2 = 0,8 Kgf^2m
Maximum rotation speed
<100 °C = 3550
100 ÷ 200 °C= 3150
200 ÷ 300 °C= 2800
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRS 450



Fan weight 102 Kgf
PD^2 e GD^2 = 1,4 Kgf^2m
Maximum rotation speed
<100 °C = 3150
100 ÷ 200 °C= 2800
200 ÷ 300 °C= 2500
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

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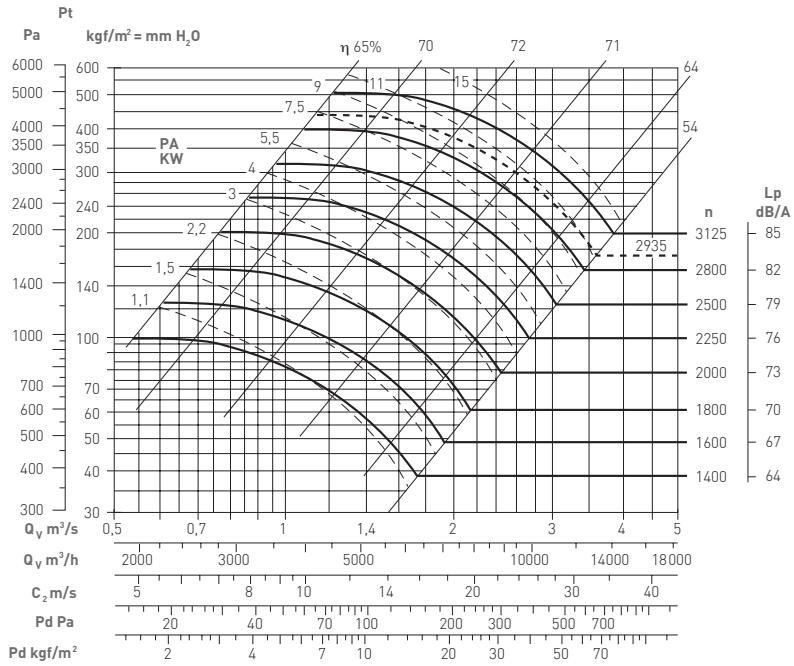
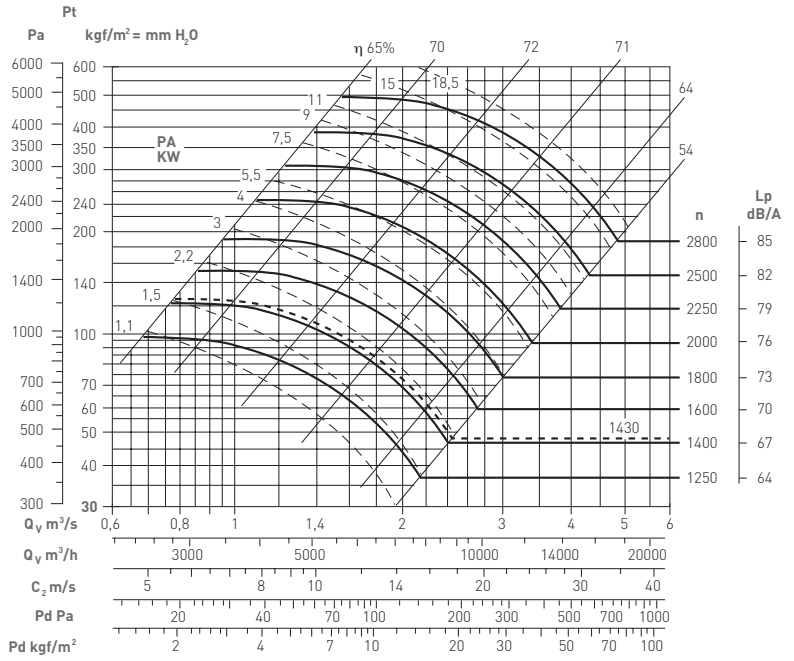
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRS 500



Fan weight 145 Kgf
PD^2 e GD^2 = 2,6 Kgf^2m
Maximum rotation speed
<100 °C = 2800
100 ÷ 200 °C= 2500
200 ÷ 300 °C= 2550
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRS 560



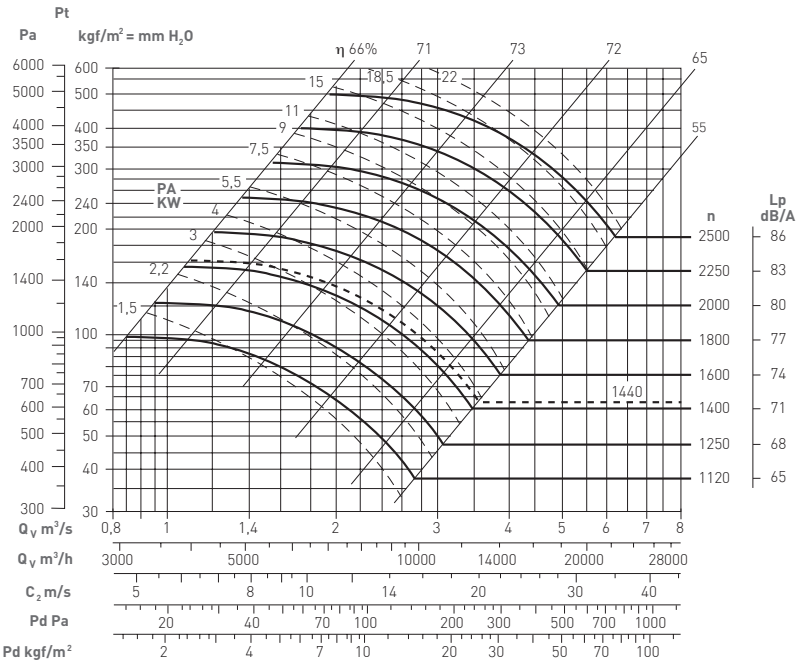
Fan weight 172 Kgf
PD^2 e GD^2 = 3,8 Kgf^2m
Maximum rotation speed
<100 °C = 2500
100 ÷ 200 °C= 2550
200 ÷ 300 °C= 2000
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

VCRS

Single inlet centrifugal fan,
backward curved blades with direct drive, dirty air

Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

VCRS 630



Fan weight 210 Kgf
PD^2 e GD^2 = 6,7 Kgf^2m
Maximum rotation speed
<100 °C = 2550
100 ÷ 200 °C= 2000
200 ÷ 300 °C= 1800
Tolerance on noise level + 3 dB
Tolerance on absorbed power ± 3%

ACCESSORIES


Torque counter flanges


Suction cone


Discharge cone


Wall brackets


Motor cover


Vibrostop


Electrical panel


Nozzle anti-spark


Switch on/off

All images are only indicative of the product type and may differ from the actual article.

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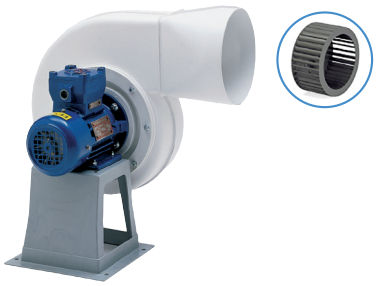
AVAILABLE MODELS

Model	Motor	Installed Power kW	RPM
250/2	63 B-2	0,25	2780
250/2	71 A-2	0,37	2780
280/2	71 B-2	0,55	2780
280/2	80 A-2	0,75	2830
310/2	80 B-2	1,10	2830
310/2	90 S-2	1,50	2840
350/2	90 S-2	1,50	2840
350/2	90 L-2	2,2	2850
400/2	100 LA-2	3,00	2900
400/2	112 M-2	4,00	2900
450/2	132 SA-2	5,50	2900
450/2	132 SB-2	7,50	2900
500/2	160 M-2	11,00	2930
500/2	160 M-2	15,00	2930
560/2	160 L-2	18,50	2940
560/2	180 M-2	22,00	1420
500/4	90 S-4	1,10	1430
500/4	90 L-4	1,50	1425
560/4	100 L-4	2,20	1440
560/4	100 L-4	3,00	1450
630/4	112 M-4	4,00	1440
630/4	132 S-4	5,50	1440

* For RD and LG 180 and 225 orientations, contact the sales office

ACP

Single inlet centrifugal fan, forward curved blades in polypropylene for corrosive fluids



Product ACP

Construction Fan wheel and scroll housing: polypropylene with high-performance graphite nylon hub

FAN

Centrifugal fan made of injection-molded polypropylene, constructed with acid-resistant material for corrosive fume extraction, commonly used in laboratories, extraction hoods, systems pharmaceutical and electroplating plants. Particularly used where resistance to chemical agents, low noise and energy savings are required.
Adjustable scroll housing in UV-resistant polypropylene.
Forward curved blade impeller made of polypropylene, statically balanced and dynamically according to ISO standards.
Perfect balance, low noise and durability are ensured, guaranteeing quality and long service life.

MOTOR

Three-phase asynchronous with squirrel cage rotor, class IE3, in single-phase 230 V/50 Hz B3 frame, IP55 protection class, according to UNELMEC standards.
Installed as 2, 4 or 6 pole depending on the required speed, or dual polarity for two-speed versions.
Mounting is intended on a support base.
Minimum fluid temperature: -25 °C.
Maximum fluid temperature: +60 °C.

MODELS

- ATEX version II 2G: EEx-d IIB, EEx-d IIC, T4.

APPLICATIONS

HOSPITALS

INDUSTRIES CHEMICAL

ATEX

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TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 100 to 10,000
	Pressure (Pa)	From 20 to 1,000
Min. impeller diameter	mm	140
Max. impeller diameter	mm	240
Motor	Volt (±10%)	230 M / 230-400 T / 400-690 T
	Poles	2-4-6
	IP	55
Fluid temp min. limit	°C	-25
Fluid max. temp limit	°C	+60

QUICK SELECTION TABLE

Model	Power Installed kW	RPM	dB(A)	Total pressure PT = Pa / Flow rate v = m^3/h																				
				100	150	200	250	350	450	600	800	950	1200	1600	2000	2400	2800	3500	4000	5000	6000	7000	8000	9000	10000
ACP 14/2	0,18	2800	60	-	440	430	340	240	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACP 14/4	0,13	1450	55	110	100	60	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACP 20/2	1,10	2900	70	-	-	-	-	-	-	-	800	810	840	710	-	-	-	-	-	-	-	-	-	-
ACP 20/4	0,18	1450	57	-	-	-	-	-	200	210	190	110	-	-	-	-	-	-	-	-	-	-	-	-
ACP 20/6	0,18	950	45	-	-	-	-	100	90	30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ACP 23/4	0,55	1450	62	-	-	-	-	-	-	-	440	400	370	280	130	-	-	-	-	-	-	-	-	-
ACP 23/6	0,18	950	58	-	-	-	-	-	-	180	170	150	90	-	-	-	-	-	-	-	-	-	-	-
ACP 24/2	2,20	2900	71	-	-	-	-	-	-	-	-	-	-	-	1200	1230	1180	-	-	-	-	-	-	-
ACP 24/4	0,55	1450	61	-	-	-		-	-	-	-	300	340	280	180	30	-	-	-	-	-	-	-	-
ACP 24/6	0,18	950	58	-	-	-	-	-	-	-	150	140	100	20	-	-	-	-	-	-	-	-	-	-
ACP 25/2	2,20	2900	72	-	-	-	-	-	-	-	-	-	-	-	1780	1630	1530	-	-	-	-	-	-	-
ACP 25/4	0,55	1450	62	-	-	-	-	-	-	-	430	440	410	330	240	-	-	-	-	-	-	-	-	-
ACP 25/6	0,18	950	57	-	-	-	-	-	-	-	180	160	130	30	-	-	-	-	-	-	-	-	-	-
ACP 30/4	0,75	1450	65	-	-	-	-	-	-	-	-	-	-	530	520	510	-	-	-	-	-	-	-	-
ACP 30/4	1,10	1450	65	-	-	-	-	-	-	-	-	-	-	530	520	510	360	310	150	-	-	-	-	-
ACP 30/6	0,37	950	60	-	-	-	-	-	-	-	-	230	230	220	200	30	-	-	-	-	-	-	-	-
ACP 35/4	2,20	1450	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	610	380	-	-	-
ACP 35/4	3,00	1450	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	730	720	610	380	-	-	-
ACP 35/6	1,10	950	65	-	-	-	-	-	-	-	-	-	-	-	350	340	310	230	150	-	-	-	-	-
ACP 42/4	5,50	1450	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000	1000	990	870	-	-
ACP 42/4	7,50	1450	78	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1001	1000	990	870	800	520
ACP 42/6	3,00	950	72	-	-	-	-	-	-	-	-	-	-	-	-	-	-	430	440	400	300	110	-	-	-

Performance data was measured with suitable instruments in our laboratories.
Air performance at 15 °C temperature with a pressure of 760 mmH_2O.
The indicated flow rate and pressure performances refer to the installation of the fan unit with ducted discharge.
The reported noise is expressed as sound pressure, measured at a distance of 1.5 m in free field.
The power values indicated refer to the actual installed power of the fan unit.
Refer to the performance curves for the correct model selection.

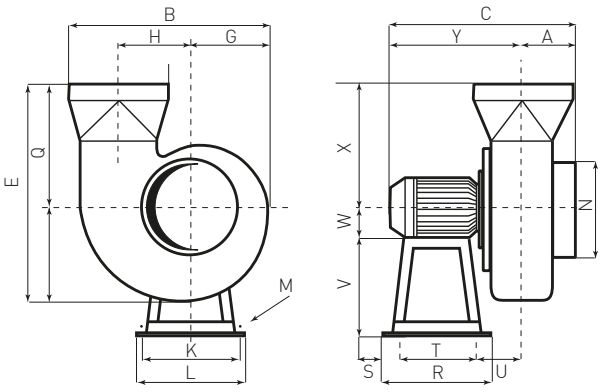
ACP

Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids

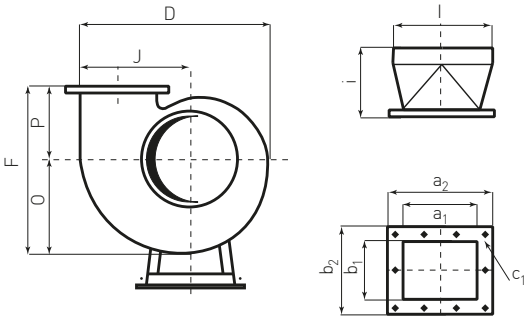
DIMENSIONS

Model	Dimensions (mm)															
	A	B	C	D	E	F	G	H	ØI	J	K	L	ØM	ØN	O	P
ACP 14	72	293	293	263,5	324,5	241,5	118	103	1255 F	85x85	175	200	10	125	135,5	106
ACP 20	120	418	420	398	501	349	170	148	200 F	160x130	215	240	10	200	201	148
ACP 23	145	-	504,5	467	455	411	202	182,5	200 F	165x165	255	280	10	250	236	175
ACP 24	129	520	486,3	495	570	428	210	185	250 F	200x160	255	280	10	250	250	178
ACP 25	129	520	486,5	495	570	428	210	185	250 F	200x160	255	280	10	250	250	178
ACP 30	185	598	565	593	545	515	251	222	250 F	240x195	234	260	12	315	300	215
ACP 35	210	-	660	696	-	628	297	259	-	280x225	285	380	12	335	353	275
ACP 42	245	-	810	834,5	-	724	357	310	-	335x270	315	350	12	400	424	300

Model	Dimensions (mm)															
	Q	R	S	T	U	V	W	X	Y	ØI	i	a_1	a_2	b_1	b_2	ØZ
ACP 14	189	200	35	130	80	130	*1	189	221	125 F	95	85	135	85	135	7
ACP 20	300	240	35	170	95	200	*2	300	300	200 F	168	160	194	130	180	7
ACP 23	220	280	52,5	176	132	250	*3	175	359,5	200 F	155	165	221	165	221	7
ACP 24	320	280	52,5	175	130	250	*44	320	357,5	250 F	160	200	266	160	228	7
ACP 25	320	280	52,5	175	130	250	*5	320	357,5	250 F	160	200	266	160	228	7
ACP 30	245	275	50	175	155	310	*6	215	380	250 F	170	240	306	195	265	9
ACP 35	-	300	50	200	170	320	*7	275	450	-	210	280	356	225	305	9
ACP 42	-	350	50	250	197	410	*8	300	565	-	230	335	421	270	362	9



Version **A** with optional square-to-round adapter



Version **B** with standard flanged outlet

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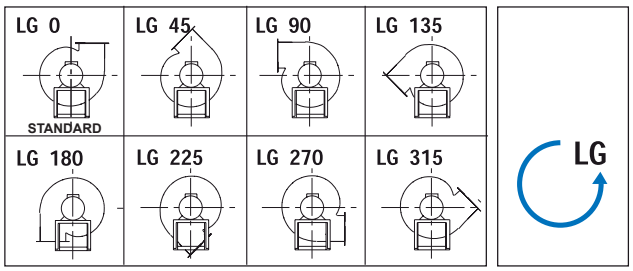
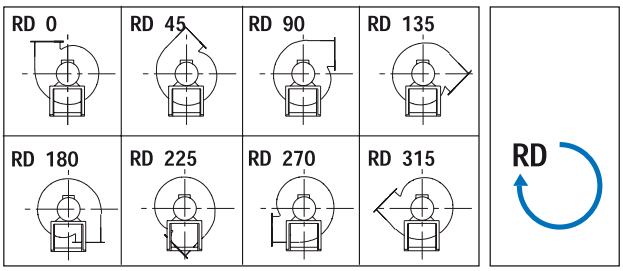
ORIENTATIONS

STANDARD orientation LG 0





Dimensions

H = LG 0 - LG 45 - LG 90 - LG 135

H1 = LG 180 - LG 225

H2 = LG 270 - LG 315

Dimensions

H = RD 0 - RD 45 - RD 90 - RD 135

H1 = RD 180 - RD 225

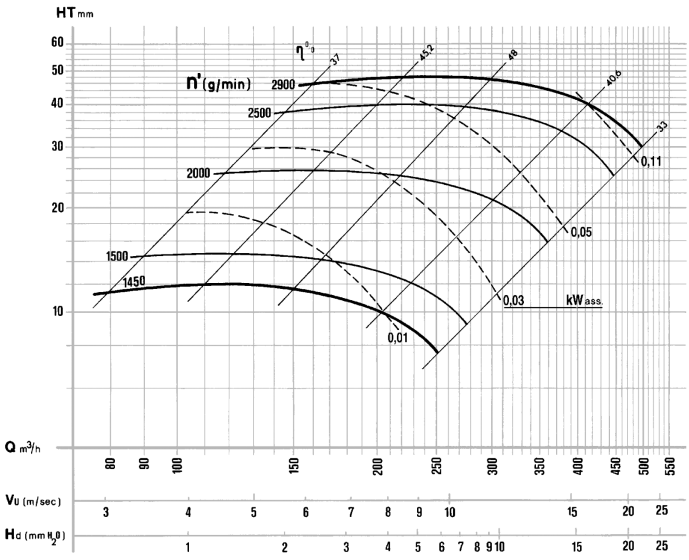
H2 = RD 270 - RD 315

CHARACTERISTIC CURVES

Q= Flow rate expressed in m^3/h, m^3/s and cfm

Pe= Static pressure expressed in mmH_2O, e Pa

ACP 14

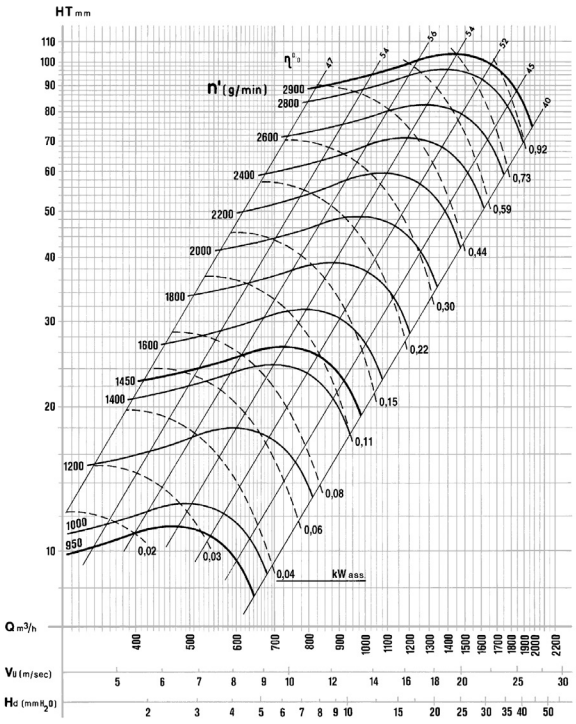


ACP

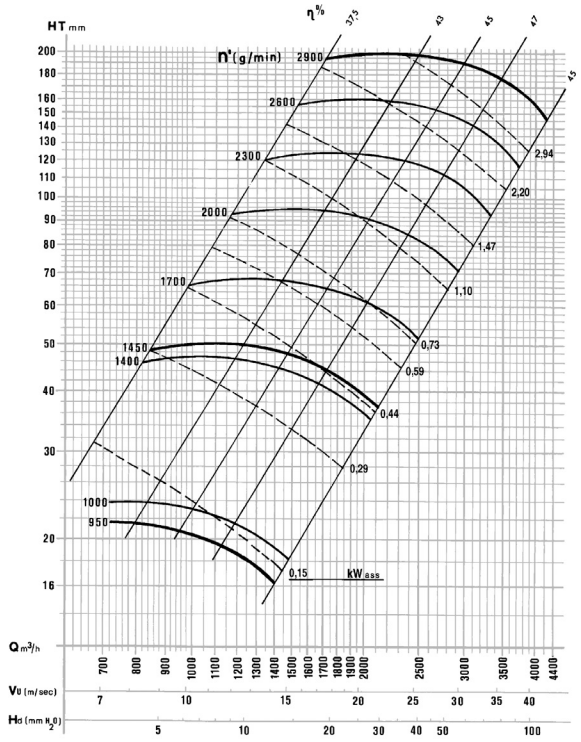
Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids

Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

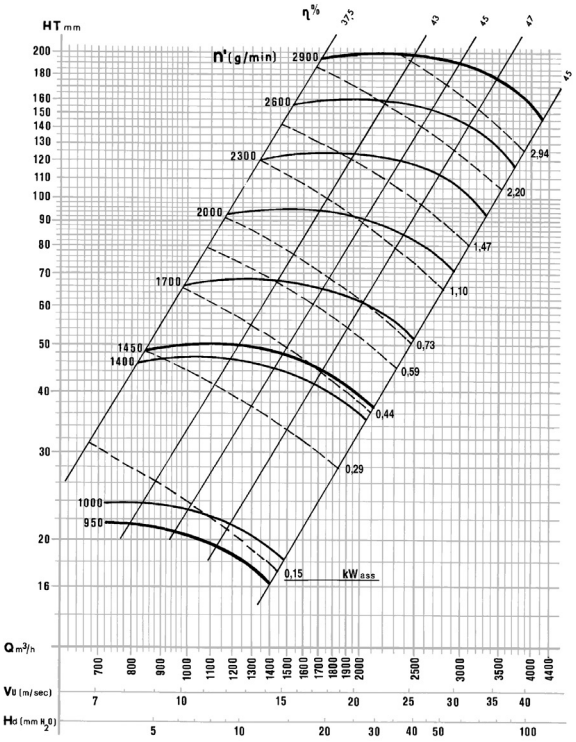
ACP 20



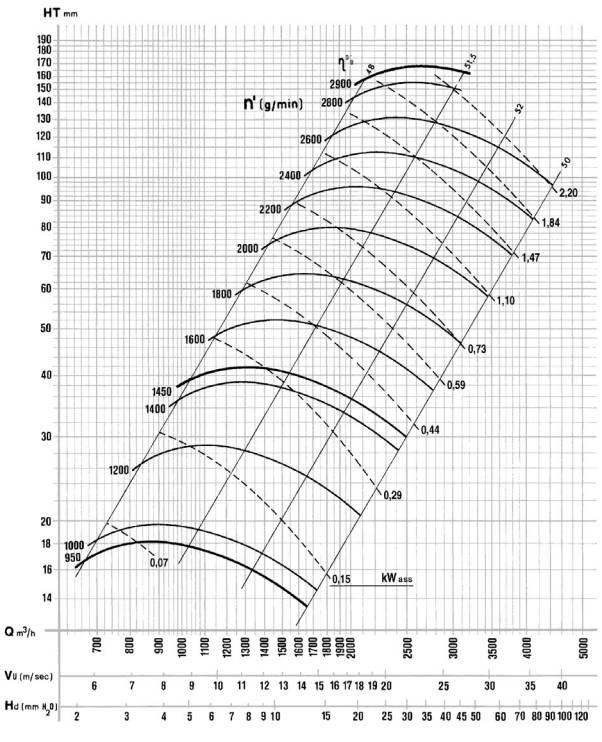
ACP 22



ACP 23



ACP 24



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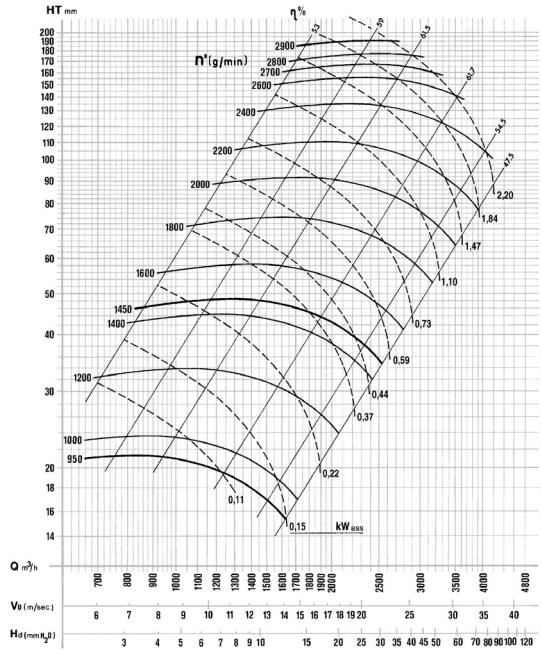
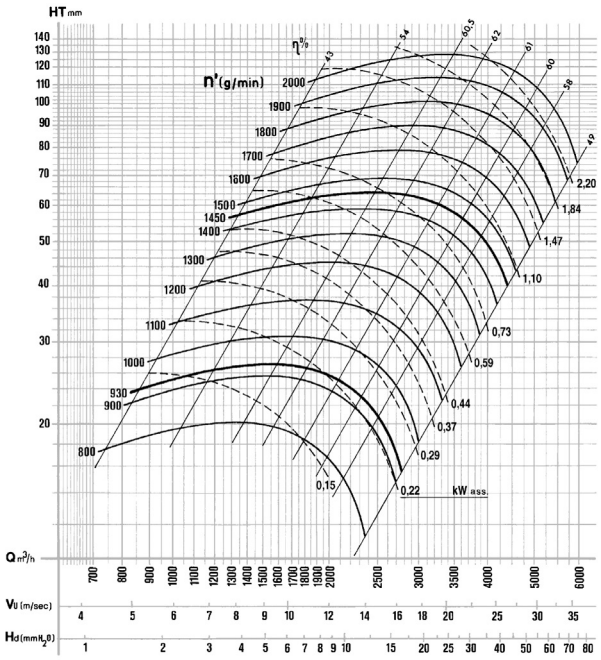
Q= Flow rate expressed in m^3/h, m^3/s and cfm
Pe= Static pressure expressed in mmH_2O, e Pa

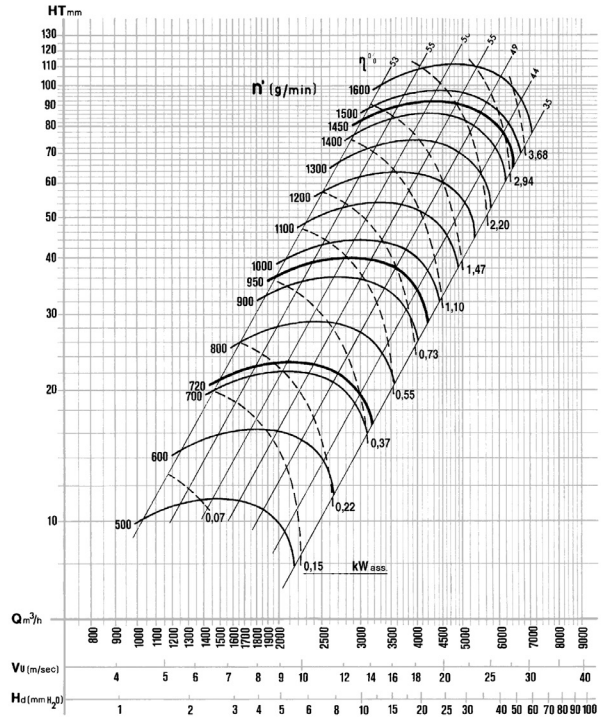
ACP 25



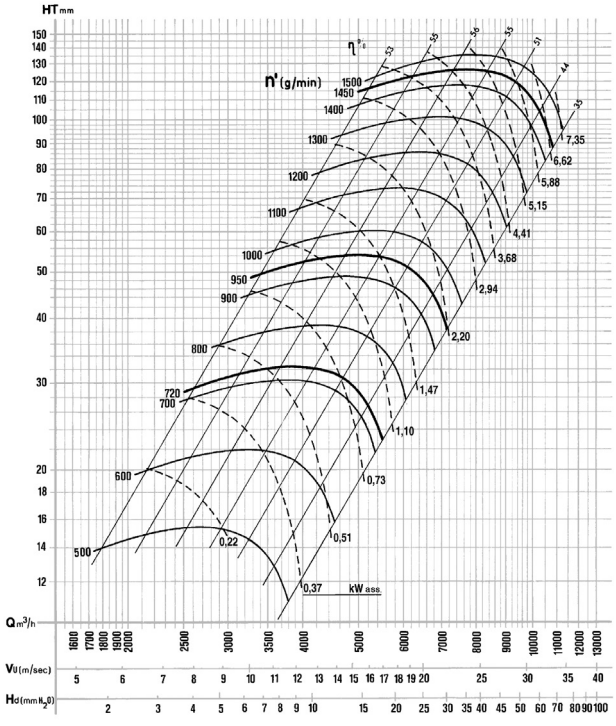
ACP 30



ACP 35



ACP 42



ACP

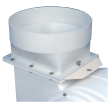
Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids

Model	Poles	Installed Power kW	Power supply Volt/Hz/f
ACP14	2	0,18	230/50/1
ACP14	4	0,18	230/50/1
ACP14	2	0,18	400/50/3
ACP14	4	0,18	400/50/3
ACP20	6	0,18	230/50/1
ACP20	4	0,18	230/50/1
ACP20	2	1,1	230/50/1
ACP20	6	0,18	400/50/3
ACP20	4	0,18	400/50/3
ACP20	2	1,1	400/50/3
ACP23	6	0,18	230/50/1
ACP23	4	0,55	230/50/1
ACP23	6	0,18	400/50/3
ACP23	4	0,55	400/50/3
ACP24	2	2,2	400/50/3
ACP24	4	0,55	400/50/3
ACP24	6	0,18	400/50/3
ACP24	2	2,2	230/50/1
ACP24	4	0,55	230/50/1
ACP24	6	0,18	230/50/1
ACP25	6	0,18	400/50/3
ACP25	6	0,18	230/50/1
ACP25	4	0,55	400/50/3
ACP25	4	0,55	230/50/1
ACP30	6	0,37	230/50/1
ACP30	6	0,37	400/50/3
ACP30	4	1,1	230/50/1
ACP30	4	1,1	400/50/3
ACP35	6	1,1	400/50/3
ACP35	6	1,1	230/50/1
ACP35	4	3	400/50/3

ATEX version available.
For RD and LG 180 and 225 orientations, contact the sales office

ACCESSORIES

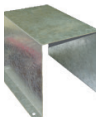

Discharge fitting square-to-round


Discharge fitting square-to-round with damper


Butterfly damper manual


Butterfly damper gravity-type


Flexible joint


PVC motor cover or polypropylene

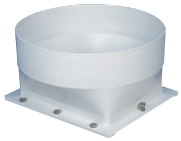

Exhaust connector flanged with mesh

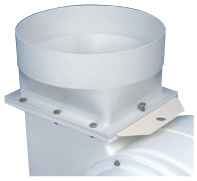

Exhaust connector flanged with mesh and damper


Safety switch ON/OFF


Soft starter for three-phase motor

All images are only indicative of the product type and may differ from the actual article.

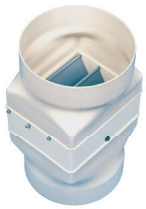
Discharge fitting square-to-round	Code	Description
	RPREACP1400000	Square-to-round discharge fitting ACP 14 Ø 125
	RPREACP2000000	Square-to-round discharge fitting ACP 20 Ø 200
	RPREACP2300000	Square-to-round discharge fitting ACP 23 Ø 250
	RPREACP2400000	Square-to-round discharge fitting ACP 24 Ø 250
	RPREACP2500000	Square-to-round discharge fitting ACP 25 Ø 250
	RPREACP3000000	Square-to-round discharge fitting ACP 30 Ø 315
	RPREACP3500000	Square-to-round discharge fitting ACP 35 Ø 355 PVC
	RPREACP4200000	Square-to-round discharge fitting ACP 42 Ø 400 PVC

Discharge fitting square-to-round with damper	Code	Description
	RSEACP14000000	Square-to-round discharge adapter with damper ACP 14 Ø 125
	RSEACP20000000	Square-to-round discharge adapter with damper ACP20 Ø 200
	RSEACP23000000	Square-to-round discharge adapter with damper ACP23 Ø 250
	RSEACP24000000	Square-to-round discharge adapter with damper ACP24 Ø 250
	RSEACP25000000	Square-to-round discharge adapter with damper ACP25 Ø 250
	RSEACP30000000	Square-to-round discharge adapter with damper ACP30 Ø 315
	RSEACP35000000	Square-to-round discharge adapter with damper ACP35 Ø 355
	RSEACP42000000	Square-to-round discharge adapter with damper ACP35 Ø 400

ACP

Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids

Butterfly damper manual	Code	Description
	SFMP1400000000	Manual butterfly damper in PVC ACP 14 Ø 125
	SFMP2000000000	Manual butterfly damper in PVC ACP 20 Ø 200
	SFMP2300000000	Manual butterfly damper in PVC ACP 23 Ø 250
	SFMP2400000000	Manual butterfly damper in PVC ACP 24 Ø 250
	SFMP2500000000	Manual butterfly damper in PVC ACP 25 Ø 250
	SFMP3000000000	Manual butterfly damper in PVC ACP 30 Ø 315
	SFMP4200000000	Manual butterfly damper in PVC ACP 42 Ø 400

Butterfly damper gravity-type	Code	Description
	SFGP1400000000	Gravity butterfly damper in PVC ACP 14 Ø 125
	SFGP2000000000	Gravity butterfly damper in PVC ACP 20 Ø 200
	SFGP2300000000	PVC gravity butterfly damper ACP 23 Ø 250 PVC
	SFGP2400000000	PVC gravity butterfly damper ACP 24 Ø 250 PVC
	SFGP2500000000	PVC gravity butterfly damper ACP 25 Ø 250 PVC
	SFGP3000000000	PVC gravity butterfly damper ACP 30 Ø 315 PVC
	SFGP4200000000	PVC gravity butterfly damper ACP 42 Ø 400 PVC

Flexible joint	Code	Description
	GFXACP14000000	Flexible joint for ACP 14 Ø 125
	GFXACP20000000	Flexible joint for ACP 20 Ø 200
	GFXACP23000000	Flexible joint for ACP 23 Ø 250
	GFXACP24000000	Flexible joint for ACP 24 Ø 250
	GFXACP25000000	Flexible joint for ACP 25 Ø 250
	GFXACP30000000	Flexible joint for ACP 30 Ø 315
	GFXACP35000000	Flexible joint for ACP 35 Ø 355
	GFXACP42000000	Flexible joint for ACP 42 Ø 400

Flanged exhaust connector with mesh	Code	Description
	TRESPACP14C000	Flanged discharge spigot with guard ACP 14
	TRESPACP20C000	Flanged discharge spigot with guard ACP 20
	TRESPACP23C000	Flanged discharge spigot with guard ACP 23
	TRESPACP24C000	Flanged discharge spigot with guard ACP 24
	TRESPACP25C000	Flanged discharge spigot with guard ACP 25
	TRESPACP30C000	Flanged discharge spigot with guard ACP 30
	TRESPACP35C000	Flanged discharge spigot with guard ACP 35
	TRESPACP42C000	Flanged discharge spigot with guard ACP 42

Flanged exhaust connector with mesh and damper	Code	Description
	TRESPACP14RETE	Flanged discharge spigot with guard and damper ACP 14
	TRESPACP20RETE	Flanged discharge spigot with guard and damper ACP 20
	TRESPACP23RETE	Flanged discharge spigot with guard and damper ACP 23
	TRESPACP24RETE	Flanged discharge spigot with guard and damper ACP 24
	TRESPACP25RETE	Flanged discharge spigot with guard and damper ACP 25
	TRESPACP30RETE	Flanged discharge spigot with guard and damper ACP 30
	TRESPACP35RETE	Flanged discharge spigot with guard and damper ACP 35
	TRESPACP42RETE	Flanged discharge spigot with guard and damper ACP 42

ACP

**Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids**

CHEMICAL RESISTANCE TABLE POLYPROPYLENE - PVC

(+) = Resistant
(0) = Partially resistant
(–) = Not resistant

Reagent	Chemical formula	Concentration	Temp. °C	PVC	PP
Ammonium acetate	CH_3COONH_4	All, aqueous	20	+	+
			40	+	+
Methyl acetate	CH_3COOCH_3	Technically pure	20	–	+
			40		+
Sodium acetate	CH_3COONa	All, aqueous	20	+	+
			40		+
Acetone	$CH_3–CO–CH_3$	Technically pure	20	–	+
			40		+
Acetic acid	CH_3COOH	Technically pure glacial	20	0	+
			40	–	+
Dichloroacetic acid	$Cl_2CHCOOH$	Technically pure	20	+	+
			40	+	+
Trichloroacetic acid	CCl_3COOH	Technically pure	20	0	+
			40		+
Arsenic acid	H_3AsO_4	80% aqueous	20	+	+
			40	+	+
Aqueous boric acid	H_3BO_3	All, aqueous	20	+	+
			40	+	+
Hydrocyanic acid	HCN	Technically pure	20	+	+
			40	+	+
Chloric acid	$HClO_3$	10% aqueous	20	+	–
			40	+	
Hydrochloric acid	HCl	5% aqueous	20	+	+
			40	+	+
		10% aqueous	20	+	+
			40	+	+
		Up to 30% aqueous	20	+	+
			40	+	0
		36% aqueous	20	+	+
			40	+	0
		Technically pure	20	+	+
			40	+	+
Chromic acid	H_2CrO_4	< 50% aqueous	20	+	0
			40	+	–
Hydrofluoric acid	HF	< 40% aqueous	20	+	+
			40	0	+
Fluorosilicic acid	H_2SiF_6	32% aqueous	20	+	+
			40	+	
Formic acid	HCOOH	< 50% aqueous	20	+	+
			40	+	
		Technically pure	20	+	+
			40	0	0
Aqueous phosphoric acid	H_3PO4	< 30% aqueous	20	+	+
			40	+	+
		50% aqueous	20	+	+
			40	+	+
		85% aqueous	20	+	+
			40	+	+

This chemical resistance table is given for guidance only. No guarantee can be given for the information contained

Reagent	Chemical formula	Concentration	Temp. °C	PVC	PP
Glycolic acid	$CH_2OHCOOH$	37% aqueous	20	+	+
Lactic acid	$C_3H_6O_3$	10% aqueous	20	+	+
			40	0	+
Maleic acid	$C_4H_4O_4$	Aqueous, cold saturated	20	+	+
			40	+	+
Nitric acid	HNO_3	6,3% aqueous	20	+	+
			40	+	
		< 40% aqueous	20	+	0
			40	+	
		< 65% aqueous	20	0	–
			40	0	
Oxalic acid	$(COOH)_2$	Aqueous, cold saturated	20	+	+
			40	+	+
Perchloric acid	$HClO_4$	10% aqueous	20	+	+
			40	+	+
Propionic acid	CH_3CH_2COOH	50% aqueous	20	+	+
			40	+	+
Hydrogen sulfide	H_2S	Technically pure	20	+	+
			40	+	+
Sulfuric acid	H_2SO_4	< 40% aqueous	20	+	+
			40	+	+
		< 60% aqueous	20	+	+
			40	+	+
		< 80% aqueous	20	+	+
			40	+	+
		< 90% aqueous	20	+	0
			40	+	
		< 96% aqueous	20	+	–
			40	+	
Sulfurous acid	H_2SO3	Saturated, aqueous	20	+	+
			40	+	+
Tartaric acid, aqueous	$C_4H_6O_6$	All, aqueous	20	+	+
			40	+	+
Seawater			20	+	+
			40	+	+
Ethyl alcohol	C_2H_5OH	96% Technically pure	20	+	+
			40	+	+
Methyl alcohol	CH_3OH	All	20	+	+
			40	+	+
Chrome alum	$KCr(SO_4)_2$	Aqueous, cold saturated	20	+	+
			40	+	+
Ammonia	NH_3	Technically pure, gaseous	20	+	+
			40	+	+
Acetic anhydride	$(CH_3CO)_2O$	Technically pure	20	–	+
			40		0
Carbon dioxide	CO_2	Technically pure, dry	20	+	+
			40	+	+
		Technically pure, moist	20	+	+
			40	+	+

This chemical resistance table is given for guidance only. No guarantee can be given for the information contained

ACP

**Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids**

Reagent	Chemical formula	Concentration	Temp. °C	PVC	PP
Sulfur trioxide	SO_3		20	–	–
Sulfur dioxide	SO_2	Technically pure, dry	20	+	+
			40	+	+
		All, moist	20	+	+
			40	+	+
		Technically pure, liquid	20	–	–
Aniline	$C_6H_5NH^2$	Technically pure	20	–	–
Gasoline	C_nH2_{n+2}	Lead-free	20	+	0
			40	+	
Sodium bicarbonate	$NaHCO_3$	Aqueous, cold saturated	20	+	+
			40	+	+
Potassium dichromate	$K_2Cr_2O_7$	Saturated, aqueous	20	+	+
			40	+	+
Beer		Normal concentration	20	+	+
			40	+	+
Sodium bisulfite	$NaHSO_3$	All, aqueous	20	+	+
			40	0	+
Borite	$Na_2B_4O_7$	All, aqueous	20	+	+
			40	+	+
Potassium borate	K_3BO_3	10% aqueous	20	+	+
			40	+	+
Sodium bromate	$NaBrO_3$	All, aqueous	20	+	+
			40	0	0
Liquid bromine	Br_2	Technically pure	20	–	–
Potassium bromide	KBr	All, aqueous	20	+	+
			40	+	+
Sodium bromide	NaBr	All, aqueous	20	+	+
			40	+	+
Butanediol	HOC_4H_8OH	10% aqueous	20	+	+
			40	0	+
Butane, gaseous	C_4H_{10}	Technically pure	20	+	+
Butane, aqueous	C_4H_9OH	Technically pure	20	+	+
			40	+	+
Butene	C_4H_8	Technically pure	20	+	–
Sodium carbonate	Na_2CO_3	Aqueous, cold saturated	20	+	+
			40	+	+
Cyclohexanol	$C_6H_{11}OH$	Technically pure	20	+	+
			40	+	+
Chlorine	Cl_2	Moist, 97% - gaseous	20	0	–
Chlorobenzene	C_+H_5Cl	Technically pure	20	–	+
Chloroform	$CHCl_3$	Technically pure	20	–	0
Ammonium chloride	HN_4Cl	10% aqueous	20	+	+
			40	+	+
Antimony chloride	$SbCl_3$	90% aqueous	20	+	+
			40	+	+

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Reagent	Chemical formula	Concentration	Temp. °C	PVC	PP
Dichlorobenzene	$C_6H_4Cl_2$	Technically pure	20	–	0
Diisobutyl ketone	$C_9H_{18}O$	Technically pure	20	–	+
Dioxane	$C_4H_8O_2$	Technically pure	20	–	0
			40		0
Hexane	C_6H_{14}	Technically pure	20	+	+
Ethane	C_7H_{16}	Technically pure	20	+	+
Ethylenediamine	$C_2H_8N_2$	Technically pure	20	0	+
Fluorine, dry	F_2	Technically pure	20	0	–
Ammonium fluoride	NH_4HF_2	50% aqueous	20	+	+
			40	+	+
Sodium fluoride	NaF	Aqueous, cold saturated	20	+	+
			40	+	
Formamide	$HCONH_2$	Technically pure	20	–	+
			40		+
Ammonium phosphate	$NH_4H_2PO_4$	Aqueous, cold saturated	20	+	+
			40	+	+
Sodium phosphate	Na_3PO_4	Aqueous, cold saturated	20	+	+
			40	+	+
Nitrous gases	Nox	Diluted, wet and dry	20	+	+
			40		0
Diesel fuel			20	+	0
			40	+	
Glucose	$C_{6H}12_06$	All, aqueous	20	+	+
			40	+	+
Hydrogen	H_2	Technically pure	20	+	+
			40	+	+
Sodium hydrosulfite	$Na_2S_2O_4$	< 10% aqueous	20	+	+
			40	+	+
Barium hydroxide	$Ba(OH)_2$	Saturated, aqueous	20	+	+
			40	+	+
Potassium iodide	Kj	Aqueous, cold saturated	20	+	+
			40	+	+
Sodium iodide	NaJ	All, aqueous	20	+	+
			40	+	
Calcium hypochlorite	$Ca(OCl)_2$	Aqueous, cold saturated	20	+	+
			40	+	+
Mercury	Hg	Pure	20	+	+
			40	+	+
Methane	CH_4	Technically pure	20	+	+
Methylamine	CH_3NH_2	32% aqueous	20	0	+
Methyl ethyl ketone	$CH_3COC_2H_5$	Technically pure	20	–	+
			40		0
Ammonium nitrate	NH_4NO_3	10% aqueous	20	+	+
			40	+	+
Potassium nitrate	KNO_3	50% aqueous	20	+	+
			40	+	+

This chemical resistance table is given for guidance only. No guarantee can be given for the information contained

ACP

**Single inlet centrifugal fan,
forward curved blades in polypropylene for corrosive fluids**

Reagent	Chemical formula	Concentration	Temp. °C	PVC	PP
Sodium nitrate	$NaNO_3$	Aqueous, cold saturated	20	+	+
			40	+	+
Oleum	$H_2SO_4+SO_3$	10% di SO_3	20	–	–
Olive oil			20	+	+
			40	+	+
Oxygen	O_2	Technically pure	20	+	+
			40	+	
Ozone	O_3	In air: < 2%	20	+	0
			40		–
Phosphorus pentoxide	P_2O_5	Technically pure	20	+	+
			40	+	
Hydrogen peroxide	H_2O_2	10% aqueous	20	+	+
			40	+	+
Potassium persulfate	$K_2S_2O_8$	All, aqueous	20	+	+
			40	+	+
Sodium metabisulfite	$Na_2S_2O_5$	All, aqueous	20	+	+
			40		+
Potash	K_2CO_3	Aqueous, cold saturated	20	+	+
			40	+	+
Propane	K_3H_8	Technically pure, aqueous	20	+	+
Sodium silicate	Na_2SiO_3	All, aqueous	20	+	+
			40	+	+
Caustic soda	NaOH	< 10% aqueous	20	+	+
			40	+	+
Sodium sulfate	Na_2SO_4	Aqueous, cold saturated	20	+	+
			40	+	+
Carbon disulphide	CS_2	Technically pure	20	–	0
Tetrachloroethane	$C_2H_2Cl_4$	Technically pure	20	–	0
Trioctyl phosphate	$(C_8H_{17})_3PO_4$	Technically pure	20	–	+
Urea	$H_2N–CO–NH_2$	< 30% aqueous	20	+	+
			40	+	+
Bromine vapours	Br_2	High	20	–	–
Xylene (xylol)	C_8H}	Technically pure	20	–	–
Sulfur	S	Technically pure	20	0	+
			40	–	+

This chemical resistance table is given for guidance only. No guarantee can be given for the information contained

BOX FANS

Ventilation

Comfort and performance at maximum efficiency energy

CJBD

Box fan with panelling in sheet metal direct drive with forward curved blades

Product	CJBD
Application	Civil and industrial applications
Construction	Structure: pre-bent steel

CABINET
Self-supporting structure in press-bent galvanized sheet metal, with thermal and acoustic insulation in 3 mm thick closed-cell polyurethane. Easily removable side inspection panels.
Cable gland for the power supply cable entry.

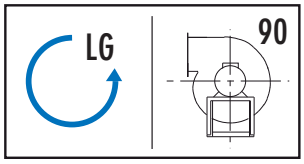
FAN
Centrifugal fan with forward curved blades, double inlet with direct drive motor, made of galvanized steel.

MOTOR
Motor with ball bearings, in single-phase 230 V 50 Hz or three-phase 400 V version 50 Hz, available with 4 or 6 poles.
On request Brushless or 3-speed motor.

APPLICATIONS

CIVIL VENTILATION · TECHNICAL ROOMS · OFFICES · PUBLIC SERVICES · CANTEENS · RESTAURANTS · FAST FOOD

ORIENTATIONS



Available only in LG 90 version. Electrical connection on the left side (following the airflow)

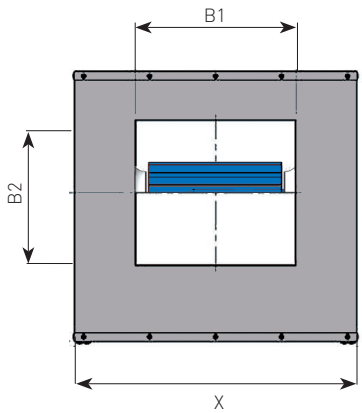
Fan characteristic curves are available on page 27 (section CBD - Forward Curved Blade Centrifugal Fan)

TECHNICAL FEATURES - OPERATING RANGE

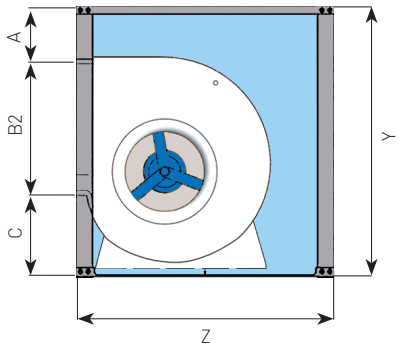
Operating range	Max flow rate (m^3/h)	From 250 to 7,800
	Pressure (Pa)	From 50 to 550
Min. outlet	mm	230x208
Max. outlet	mm	387x345
Motor	Volt (±10%)	230 M / 230-400 T
	Poles	4-6

DIMENSIONS

Fan blade Inches	Supply outlet B1xB2 mm	X mm	Y mm	Z mm	C mm	A mm	Nominal weight kg
7/7	230x208	450	460	500	135	117	20
9/7	230x263	500	520	550	147	110	30
9/9	300x263	500	520	550	147	110	30
10/8	260x292	550	575	600	168	115	35
10/10	326x292	550	575	600	168	115	35
12/9	300x345	650	650	700	191	114	50
12/12	387x345	650	650	700	191	114	50



FRONT VIEW



SIDE VIEW

CJBD

Centrifugal box fan with sheet metal cladding direct drive with forward curved blades

AVAILABLE MODELS

Fan blade Inches	Power installed kW	Power supply Volt/Hz/f	Speed RPM	Poles Number
7/7	0,07	230/50/1	820	6
7/7	0,15	230/50/1	1346	4
9/7	0,37	230/50/1	1387	4
9/9	0,20	230/50/1	915	6
9/9	0,55	230/50/1	1376	4
10/8	0,55	230/50/1	1310	4
10/10	0,25	230/50/1	924	6
10/10	0,55	230/50/1	1282	4
12/9	0,75	230/50/1	923	6
12/9	1,1	230/50/1	945	6
12/12	0,75	230/50/1	926	6
12/12	1,1	400/50/3	958	6

ACCESSORIES

ON/OFF safety switch

3-speed selector

REM
Speed controller

RVIT
Inverter IP20 AND IP66

All images are only indicative of the product type and may differ from the actual article.

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CADN

Double panel Box fan
direct drive with forward curved blades

Product	CADN
Application	Civil and industrial applications
Construction	Load-bearing structure: frame and aluminium profiles Panels: double sound-absorbing paneling th. 25 mm or single pre-painted panel cladding equipped with acoustic insulation

CABINET
Structure made with extruded aluminium profiles connected by ABS corner joints. Sandwich panels in external pre-painted sheet metal RAL 7032 and internal galvanized sheet metal, with EPDM sealing profile, with interposed
25 mm rigid expanded polyurethane with density 47 kg/m^3
and thermal conductivity of
0.0247 Wm°K at 10 °C UNI 7891 according to ISO1923, sound insulation power Rw = 40 dB (ISO 140/10).
Inspection door with sealed closure.

FAN
Centrifugal fan with forward curved blades, double inlet with direct drive motor, made of galvanized steel. Flow rate up to 7750 m^3/h and pressure up to 500 Pa.
Fan blade dynamically balanced according to ISO-1940.

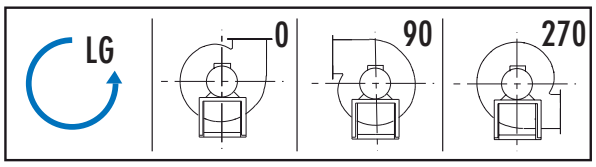
MOTOR
Motor with ball bearings, in execution single-phase 230 V 50 Hz or three-phase 400 V 50 Hz, available in 4 or 6 poles.
On request Brushless or 3-speed motor.

APPLICATIONS

CIVIL VENTILATION · TECHNICAL ROOMS · OFFICES · PUBLIC SERVICES · CANTEENS · RESTAURANTS · FAST FOOD

Fan characteristic curves are available on page 27 (section CBD - Forward Curved Blade Centrifugal Fan)

ORIENTATIONS



STANDARD orientation LG 90.
Electrical wiring on the left side in LG 90, right side in LG0 and LG270 orientation (following the airflow).
Optional anti-vibration joint mandatory in LG0.

TECHNICAL FEATURES - OPERATING RANGE

Operating range	Max flow rate (m^3/h)	From 250 to 7,800
	Pressure (Pa)	From 50 to 550
Min. outlet	mm	230x208
Max. outlet	mm	387x345
Motor	Volt (±10%)	230 M / 230-400 T
	Poles	4-6

CABINET TECHNICAL FEATURES

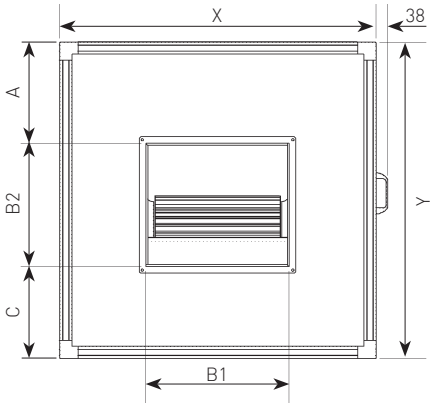
The thermal and acoustic containment walls in CADN units are composed of sandwich panels, 25 mm thick, consisting of an insulating component in expanded polyurethane lined on one side with galvanized sheet metal and on the other with pre-painted sheet metal, grey RAL 7032. It has a density of 47 kg/m^3. The insulating component is expanded using water, therefore the foam contains neither CFC nor HCFC.
Thanks to the high number of closed cells, exceeding 95%, the panel foam has a thermal conductivity, measured according to UNI 7891 standard, of 0.0247 W/(m K) at a temperature of 10 °C. Regarding sound insulation, according to ISO 140/10 standard, it is equal to Rw=40 dB.
The panel can be used in a temperature range between -40 °C and +80 °C in continuous operation and without substantial changes in thermal insulation characteristics.
Structure made with extruded aluminium profiles connected by ABS corner joints.
Inspection door panel equipped with sealed closures, panel opposite the inspection and opposite the discharge removable by means of screws.

CADN

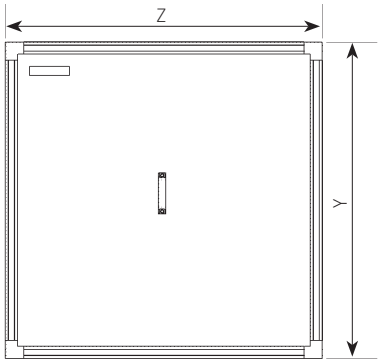
Centrifugal box fan
direct drive with forward curved blades

DIMENSIONS

Fan blade	Inlet discharge				Inlet height in standard 90 configuration		Wt. nominal
Inches	B1xB2 mm	X mm	Y mm	Z mm	C mm	A mm	kg
7/7	230x208	500	500	500	185	107	35
9/7	230x263	600	600	600	197	140	40
9/9	300x263	600	600	600	197	140	40
10/8	260x292	600	600	600	218	90	40
10/10	326x292	600	600	600	218	90	40
12/9	300x345	750	750	750	241	164	65
12/12	387x345	750	750	750	241	164	65



FRONT VIEW



RIGHT SIDE VIEW

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AVAILABLE MODELS

Fan blade Inches	Power installed kW	Power supply Volt/Hz/f	Speed RPM	Poles Number
7/7	0,07	230/50/1	820	6
7/7	0,15	230/50/1	1346	4
9/7	0,37	230/50/1	1387	4
9/9	0,20	230/50/1	915	6
9/9	0,55	230/50/1	1376	4
10/8	0,55	230/50/1	1310	4
10/10	0,25	230/50/1	924	6
10/10	0,55	230/50/1	1282	4
12/9	0,75	230/50/1	923	6
12/9	1,1	230/50/1	945	6
12/12	0,75	230/50/1	926	6
12/12	1,1	400/50/3	958	6

ACCESSORIES


Anti-vibration joint


Rain guard roof


Exhaust connector with mesh protection


Duct connector
Ductable filter holder


Support feet


Safety switch ON/OFF


3-speed selector

Speed controller single-phase

All images are only indicative of the product type and may differ from the actual article.

CPAN

Belt-driven box fan with forward curved blades

Product CPAN

Application Civil and industrial applications

Construction Load-bearing structure: aluminium frame and profiles.
Panels: double sound-absorbing paneling th. 25 mm
or single pre-painted panel cladding equipped with acoustic insulation

CABINET
Structure made with extruded aluminium profiles connected by ABS corner joints. Sandwich panels in external pre-painted sheet metal RAL 7032 and internal galvanized sheet metal, with EPDM sealing profile, with interposed
25 mm rigid expanded polyurethane with density 47 kg/m^3 and thermal conductivity of
0.0247 Wm K at 10 °C UNI 7891 according to ISO1923, sound insulation power Rw = 40 dB (ISO 140/10). Inspection door with CE standard closure.

FAN
Centrifugal fan with forward curved blades, double inlet, belt-driven execution, made of galvanized steel. Lightweight execution. Maintenance-free bearings mounted in stamped steel spider brackets.

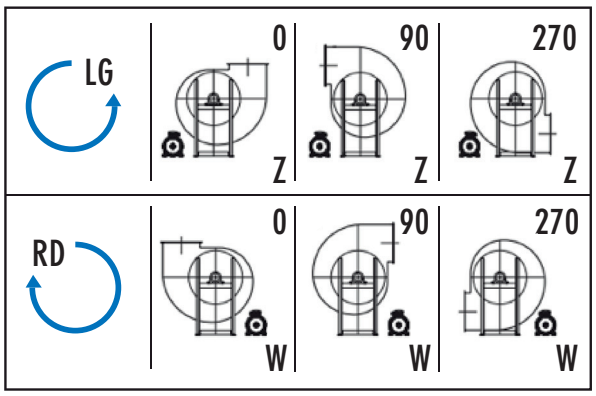
MOTOR
4-pole three-phase asynchronous motor with squirrel cage rotor, class IE3, in 400 V - 50/60 Hz version, IP55 protection.
Available in dual polarity 4/6 poles, 2 speeds.
Belt drive with SPA pulleys coupled with TAPER BUSH to the shafts. Belt tensioning slide on
aluminium base.
Working temperature range
(-20 ÷ +60) °C.

APPLICATIONS

TECHNICAL ROOMS · LARGE SPACES · HOSPITALS · CANTEENS · RESTAURANTS · FAST FOOD · OFFICES

Fan characteristic curves are available on page 40 (section ATS - Belt-Driven Centrifugal Fan)

ORIENTATIONS



STANDARD orientation LG 90. Inspection: left side.
FOLLOWING THE AIRFLOW DIRECTION.
Optional anti-vibration joint, mandatory in LG0 and RD0.

TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 2,300 to 21,700
	Pressure (Pa)	From 960 to 1,370
Min. outlet	mm	232x208
Max. outlet	mm	557x478
Motor	Volt (±10%)	230-400 T / 400-690 T
	Poles	4-6
	IP	55
Fluid temp min. limit	°C	-20
Fluid max. temp limit	°C	+60

TECHNICAL CHARACTERISTICS OF THE CABINET

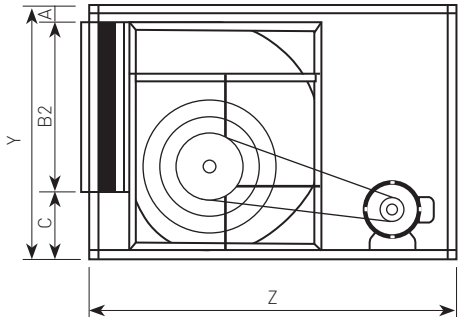
The thermal and acoustic containment walls in CPAN units are composed of sandwich panels, 25 mm thick, consisting of an insulating component in expanded polyurethane lined on one side with galvanized sheet metal and on the other with pre-painted sheet metal, grey RAL 7032. It has a density of 47 kg/m³.
The insulating component is expanded using water, therefore the foam contains neither CFC nor HCFC.
Thanks to the high number of closed cells, exceeding 95%, the panel foam has a thermal conductivity, measured according to UNI 7891 standard, of 0.0247 W/(m K) at a temperature of 10 °C.
Regarding the sound insulation power, according to ISO 140/10 standard, it is equal to Rw=40 dB.
The panel can be used in a temperature range between -40 °C and +80 °C in continuous operation and without substantial changes in thermal insulation characteristics.
CPAS version available on request only in RD 90 and LG 90 orientations.
Made with pre-painted sheet metal panels in grey RAL 7032, equipped with 3 mm thick thermal and acoustic insulation.
Structure made with extruded aluminium profiles connected by ABS corner joints.
Inspection door panel equipped with sealed closures, panel opposite the inspection and opposite the discharge removable by means of screws.

CPAN

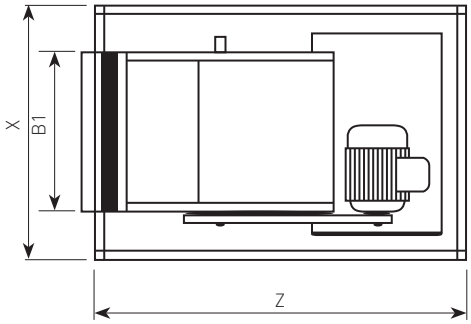
Centrifugal box fan
belt-driven with forward curved blades

DIMENSIONS

Fan blade	Inlet discharge B1xB2	X	Y	Z	Inlet height in standard 90 configuration C	A	Wt. nominal
Inches	mm	mm	mm	mm	mm	mm	kg
7/7	232x208	600	600	750	237	155	50
9/9	298x262	600	600	750	245	93	75
10/10	331x289	750	750	900	284	177	85
12/12	395x341	750	750	900	310	99	90
15/15	471x404	900	900	1000	335	161	130
18/18	557x478	1000	1000	1200	391	131	170



LEFT SIDE VIEW



TOP VIEW

TECHNICAL CHARACTERISTICS - OPERATING LIMITS

Fan blade	Max. speed	Max. power installed	Flow rate maximum	Pressure max. static
Inches	RPM	kW	m^3/h	Pa
7/7	2600	3	2300	1070
9/9	2100	3	6800	1180
10/10	2000	4	8500	1370
12/12	1500	5,5	12000	1110
15/15	1200	5,5	14900	960
18/18	1100	7,5	21700	1110

ACCESSORIES


Anti-vibration joint


Rain guard roof


Exhaust connector with mesh protection


Duct connector
Ductable filter holder


Support feet


Switch safety ON/OFF

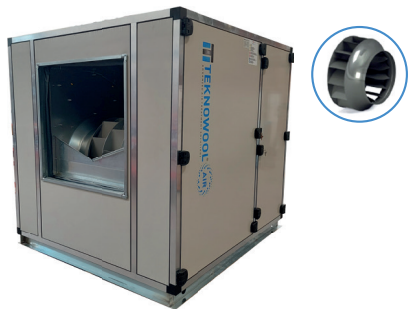

RVIT
Inverter IP20 AND IP66


Disconnector and switch 2 V 20 A

All images are only indicative of the product type and may differ from the actual article.

CPR

Belt-driven box fan with backward curved blades



Product	CPR
Application	Civil and industrial applications
Construction	Load-bearing structure: aluminium frame and profiles. Panels: double sound-absorbing paneling th. 25 mm

CABINET
Structure made with extruded aluminium profiles connected by ABS corner joints. Sandwich panels in external pre-painted sheet metal RAL 7032 and internal galvanized sheet metal, with EPDM sealing profile, with interposed
25 mm rigid expanded polyurethane with density 47 kg/m^3 and thermal conductivity of
0.0247 Wm°K at 10 °C UNI 7891 according to ISO1923, sound insulation power Rw = 40 dB (ISO 140/10).
Inspection door with CE-compliant closure.

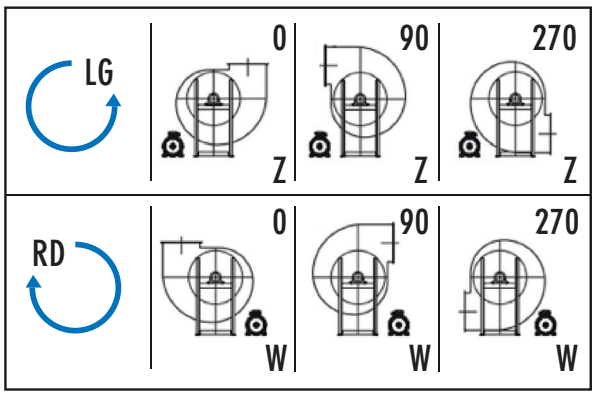
FAN
Double-inlet centrifugal fan with backward curved blades, mounted on rubber anti-vibration mounts and complete with anti-vibration coupling on the discharge outlet, to isolate the structure and the system from all types of vibration. Reinforced execution with rectangular welded steel frames at the extremities.
Sealed, self-aligning, maintenance-free bearings.

MOTOR
Three-phase asynchronous 4-pole motor with squirrel cage rotor, class IE3, in 400 V - 50/60 Hz execution, IP55 protection. Available in dual polarity 4/6-pole 2-speed version.
Belt drive with SPA pulleys coupled with TAPER BUSH to the shafts.
Belt tensioner slide on aluminium base.
Working temperature range
(-20 ÷ +60) °C.

APPLICATIONS

TECHNICAL ROOMS · LARGE SPACES · HOSPITALS · CANTEENS · RESTAURANTS · FAST FOOD · OFFICES

ORIENTATIONS



STANDARD orientation LG 90.

TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 1,500 to 43,200
	Pressure (Pa)	From 200 to 1,400
Min. outlet	mm	322x322
Max. outlet	mm	898x898
Motor	Volt (±10%)	230-400 T / 400-690 T
	Poles	4-6
	IP	55
Fluid temp min. limit	°C	-20
Fluid max. temp limit	°C	+80

TECHNICAL CHARACTERISTICS OF THE CABINET

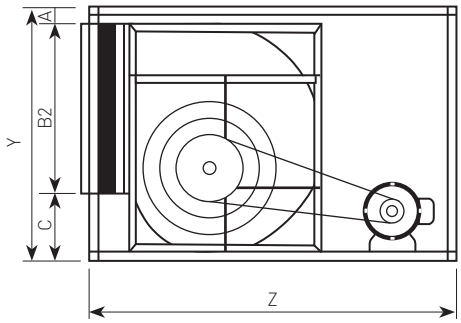
The thermal and acoustic containment walls in CPR units are composed of sandwich panels, 25 mm thick, consisting of an insulating component in expanded polyurethane lined on one side with galvanized sheet metal and on the other with pre-painted sheet metal, grey RAL 7032. It has a density of 47 kg/m³.
The insulating component is expanded using water, therefore the foam contains neither CFC nor HCFC.
Thanks to the high number of closed cells, exceeding 95%, the panel foam has a thermal conductivity, measured according to UNI 7891 standard, of 0.0247 W/(m K) at a temperature of 10 °C.
Regarding the sound insulation power, according to ISO 140/10 standard, it is equal to Rw=40 dB.
The panel can be used in a temperature range between -40 °C and +80 °C in continuous operation and without substantial changes in thermal insulation characteristics.
CPR 1/2/3 structure made with 30 mm extruded aluminium profiles connected by ABS corner pieces.
CPR 4/5/6 structure made with 40 mm extruded aluminum profiles connected together by die-cast aluminum corner brackets and galvanized steel base.
Inspection door panel equipped with sealed closures, panel opposite the inspection and opposite the discharge removable by means of screws.

CPR

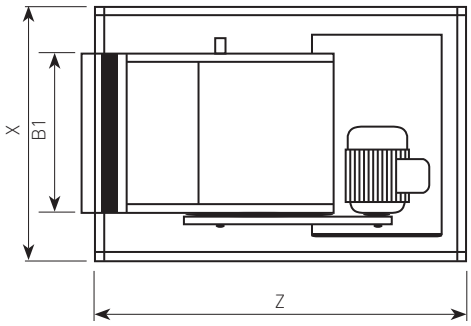
Centrifugal box fan
belt-driven with backward curved blades

DIMENSIONS

Model	Fan blade Inches	Supply outlet B1xB2 mm	X mm	Y mm	Z mm	C mm	A mm	Wt. kg
CPR1	250	322x322	750	750	900	269	159	100
CPR2	315	404x404	900	900	1000	304	192	140
CPR3	400	507x507	1000	1000	1200	359	134	190
CPR4	500	638x638	1290	1290	1540	410	242	280
CPR5	630	801x801	1540	1540	1790	526	213	460
CPR6	710	898x898	1790	1790	2040	575	317	750



LEFT SIDE VIEW



TOP VIEW

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QUICK SELECTION TABLE

CPR Model	Fan	Flow rate m^3/h	Pa 200 RPM-kW	Pa 400 RPM-kW	Pa 550 RPM-kW	Pa 700 RPM-kW	Pa 850 RPM-kW	Pa 1000 RPM-kW	Pa 1150 RPM-kW	Pa 1300 RPM-kW	dB(A) min./max.
CPR 1	250	1500	1648-0,37	1944-0,37	2333-0,55	2488-1,1	2800-1,1	2955-1,5	3111-1,5	3484-2,2	50/65
		2000	1835-0,37	2082-0,55	2333-1,1	2644-1,1	2800-1,1	3111-1,5	3322-1,5	3484-2,2	50/65
		3000	2177-0,55	2488-1,1	2644-1,1	2955-1,1	3111-1,5	3322-1,5	3484-2,2	3527-2,2	56/67
		4000	2644-0,55	2800-1,5	3111-1,5	3322-2,2	3484-2,2	3500-2,2	3737-3	3888-3	62/70
CPR 2	315	3000	1400-0,37	1648-1,1	1835-1,1	2053-1,5	2333-1,5	2488-2,2	2644-2,2	2800-3	50/67
		4000	1555-1,1	1835-1,1	1944-1,5	2177-1,5	2333-2,2	2488-2,2	2644-3	2800-3	56/67
		6000	1944-1,1	2177-1,5	2333-2,2	2488-3	2644-3	2800-3	2955-4	3111-4	64/70
		8000	-	2644-3	2800-4	2800-4	2955-4	3111-5,5	3322-5,5	3322-5,5	70/75
CPR 3	400	4000	1008-0,55	1260-1,1	1400-1,1	1555-1,5	1750-2,2	1944-3	2053-3	2177-3	53/67
		5000	1125-1,1	1326-1,1	1400-1,5	1651-2,2	1750-2,2	1944-3	2053-3	2177-4	54/65
		6000	1189-1,1	1400-1,5	1555-1,5	1651-2,2	1835-3	1944-3	2053-4	2177-4	56/67
		7000	1260-1,1	1400-1,5	1568-2,2	1742-3	1835-3	2053-4	2177-5,5	2177-5,5	61/69
		9000	1400-2,2	1648-3	1742-3	1944-4	2053-4	2177-5,5	2177-5,5	2333-7,5	66/72
		11000	-	1835-4	1944-4	2053-5,5	2177-5,5	2333-7,5	2333-7,5	2488-7,5	69/74
CPR 4	500	7000	840-1,1	1008-1,5	1186-2,2	1326-3	1400-4	1568-4	1648-5,5	1742-5,5	56/70
		8000	900-1,1	1008-1,5	1186-2,2	1326-3	1400-4	1568-4	1648-5,5	1750-7,5	57/70
		9000	900-1,5	1061-2,2	1189-3	1321-4	1400-4	1555-5,5	1648-5,5	1750-7,5	58/70
		10000	955-1,5	1120-2,2	1260-3	1321-4	1400-4	1555-5,5	1651-7,5	1750-7,5	60/70
		12000	1061-2,2	1189-3	1321-4	1400-4	1555-5,5	1651-7,5	1750-7,5	1750-11	64/71
		14000	1189-3	1321-4	1400-4	1400-5,5	1568-7,5	1651-7,5	1750-7,5	1875-11	66/72
		16000	-	1400-5,5	1400-5,5	1568-7,5	1651-7,5	1750-11	1875-11	1875-11	69/74
CPR 5	630	10000	-	778-2,2	900-3	1061-4	1120-5,5	1277-5,5	1350-7,5	-	56/75
		12000	663-1,5	824-2,2	933-4	1061-4	1120-5,5	1254-7,5	1329-7,5	1400-11	58/75
		14000	700-2,2	840-3	933-4	1068-5,5	1120-7,5	1254-7,5	1326-11	1400-11	60/75
		16000	741-3	840-4	955-5,5	1068-5,5	1188-7,5	1250-11	1326-11	1400-11	62/75
		18000	787-3	933-4	1008-5,5	1068-5,5	1188-7,5	1250-11	1326-11	1400-11	64/75
		20000	840-4	955-5,5	1061-7,5	1120-7,5	1250-11	1326-11	1363-11	1460-11	66/75
		22000	875-4	1008-5,5	1061-7,5	1188-7,5	1250-11	1326-11	1363-11	1455-15	67/75
CPR 6	710	16000	-	700-4	840-5,5	900-5,5	1000-7,5	1101-11	1167-11	1202-11	60/73
		18000	-	741-4	840-5,5	900-5,5	1000-7,5	1101-11	1167-11	1202-11	60/73
		20000	663-3	741-4	840-5,5	933-7,5	1032-11	1101-11	1202-11	1225-15	63/73
		22000	700-3	787-5,5	875-7,5	933-7,5	1032-11	1101-11	1202-11	1225-15	64/73
		25000	741-4	840-5,5	933-7,5	972-11	1032-11	1134-11	1225-15	1293-15	66/75
		28000	787-5,5	875-7,5	972-11	1032-11	1101-11	1164-15	1225-15	1293-15	68/75
		30000	824-7,5	933-7,5	972-11	1032-11	1134-11	1164-15	1225-15	-	69/75

Performance data was measured with suitable instruments in our laboratories.
Air performance at 15 °C temperature with a pressure of 760 mmH2O.
The indicated flow rate and pressure performances refer to the installation of the fan unit with ducted discharge.
The reported noise is expressed as sound pressure, measured at a distance of 1.5 m in free field.
The power values indicated refer to the actual installed power of the fan unit.
Refer to the performance curves for the correct model selection.

CPR

Centrifugal box fan
belt-driven with backward curved blades

ACCESSORIES

Anti-vibration joint

Rain guard roof

Exhaust connector with mesh protection

Duct connector
Ductable filter holder

Support feet

Switch
safety ON/OFF

RVIT
Inverter IP20 AND IP66

Disconnector
and switch 2 V 20 A

All images are only indicative of the product type and may differ from the actual article.

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CPB

Directly coupled Brushless Plug-fan box

Product CPB

Application Civil and industrial applications

Construction Load-bearing structure: aluminium frame and profiles.
Panels: double sound-absorbing paneling th. 25 mm

CABINET
Structure made with extruded aluminum profiles connected together by ABS corner brackets. Sandwich panels with external pre-painted sheet metal RAL 7032 and internal galvanized sheet metal, with EPDM sealing profile and 25 mm of rigid expanded polyurethane with density 47 kg/m3 and thermal conductivity of 0.0247 Wm°K at 10°C UNI 7891 according to ISO 1923, sound insulation Rw = 40 dB (ISO 140/10).
Inspection door with sealed closure.

FAN
Backward curved blade centrifugal fan with permanent magnet BRUSHLESS motor, direct drive.
High suction performance, compact dimensions, easily adjustable operating point, maximum reliability, virtually no maintenance.

ACCESSORIES
Potentiometer

MOTOR
Speed regulation via 0-10V signal or optional manual potentiometer, operation and fault signaling, external enable input, fault relay, performance and motor current limitation, passive PFC, RS485 MODBUS-RTU, progressive start-up, overheating protection for electronics/motor, low voltage/phase loss detection. Power supply 400 V - 3ph - 50/60 Hz. Operating temperature range: -25 ÷ +50 °C.

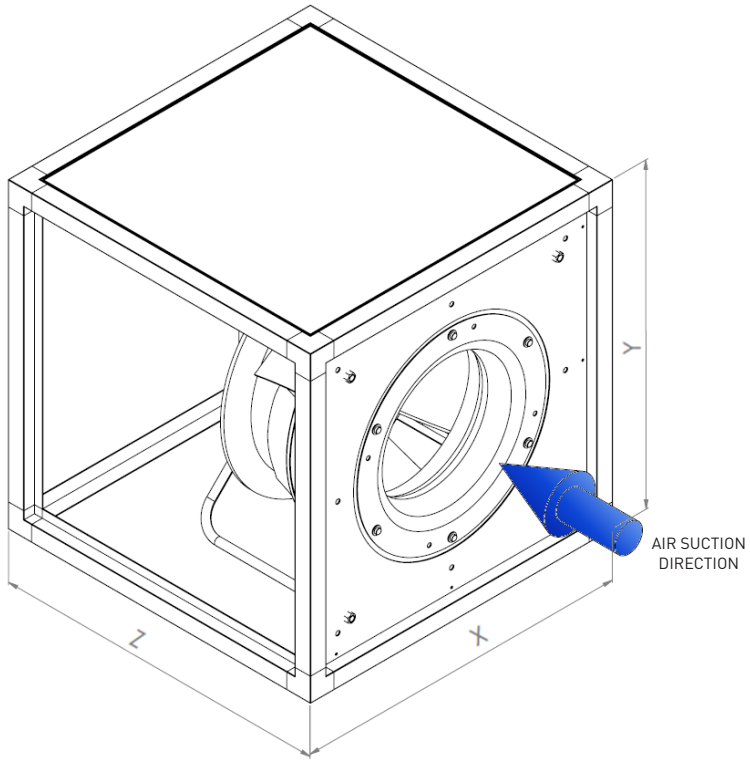
APPLICATIONS

CIVIL VENTILATION · TECHNICAL ROOMS · OFFICES · PUBLIC SERVICES · CANTEENS · RESTAURANTS · FAST FOOD

QUICK SELECTION TABLE

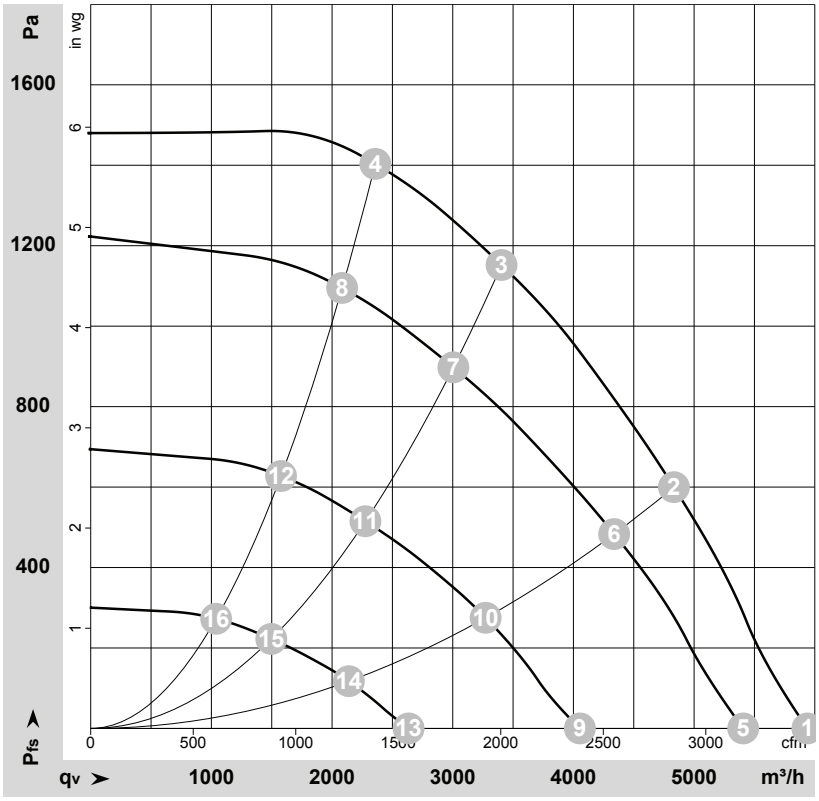
Model	Impeller	Rated performance		Dimensions (mm) X x Y x Z	Weight (Kg)
		mc/h	Pa		
CPB 2 310	310	3000	1100	620 x 620 x 620	55
CPB 2 355	355	4500	1100	620 x 620 x 620	55
CPB 2 400	400	6000	1100	620 x 620 x 620	55
CPB 3 450	450	7500	1100	770 x 770 x 770	80
CPSB 3 500	500	9000	1100	770 x 770 x 770	80

DIMENSIONAL



CHARACTERISTIC CURVES: AIR FLOW RATE 50 HZ

310



$\rho = 1{,}15\ kg/m^3 \pm 2\ \%$

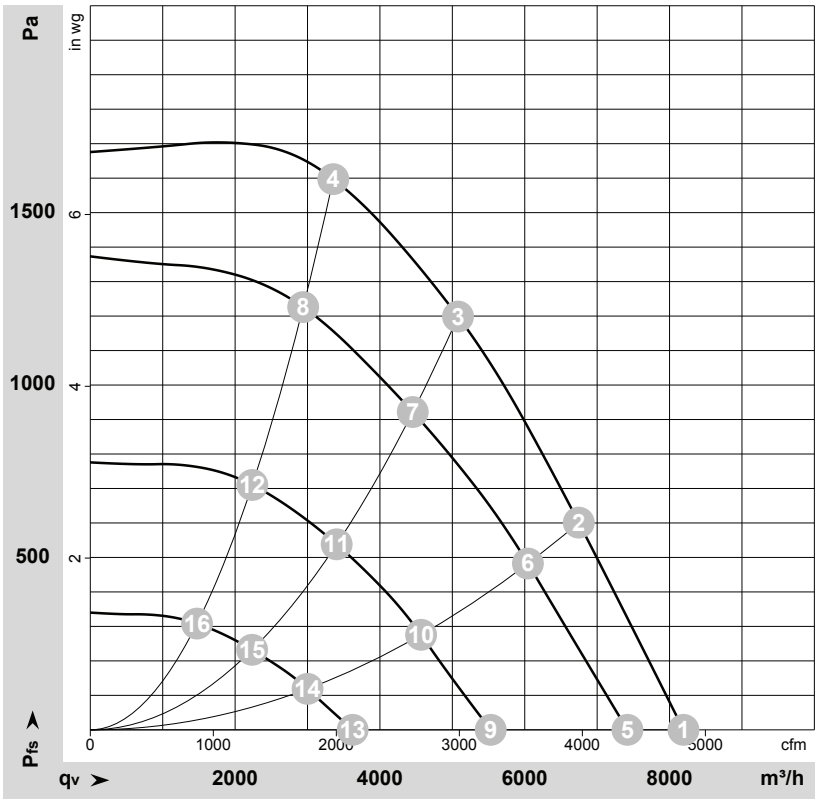
Measurement: LU-174742-1

Air flow rate measured according to ISO 5801, installation category A. Contact ebm-papst for measurement procedure details. Noise level on the suction side: LwA according to ISO 13347 / LpA measured on the fan axis at 1 m distance. Data are valid only under the specified measurement conditions and may vary depending on installation conditions. In case of deviations from standard installation, check the characteristic values on the mounted unit.

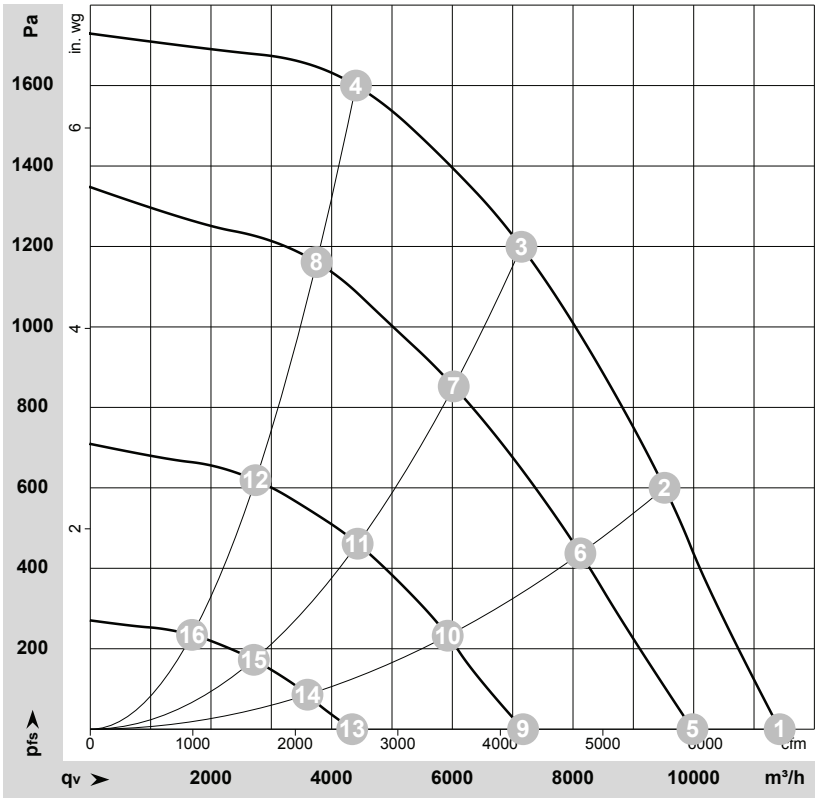
CPB

Directly coupled Brushless Plug-fan box

355



400



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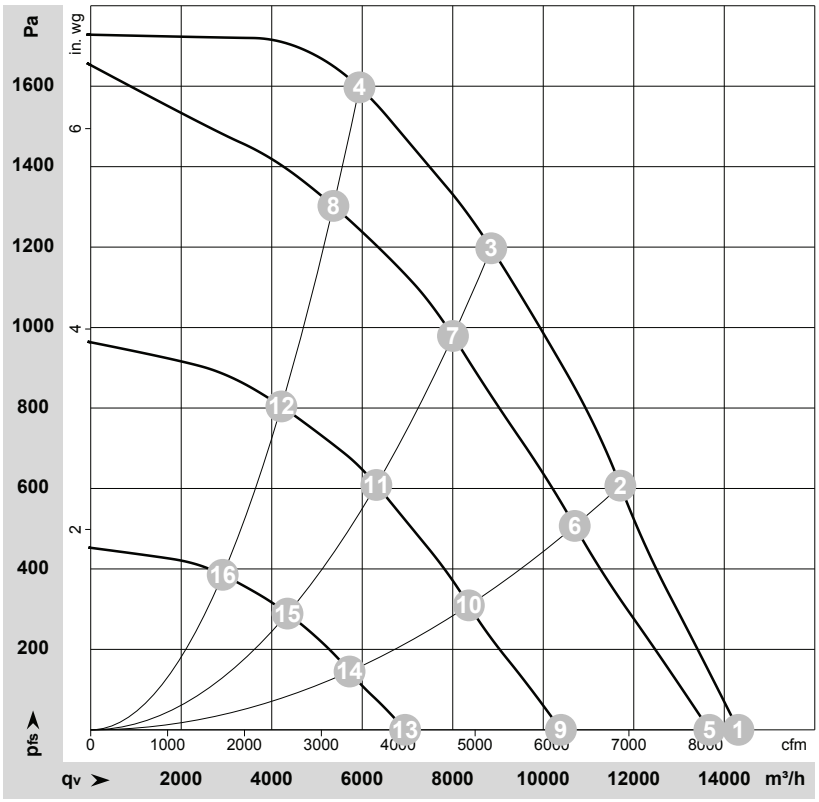
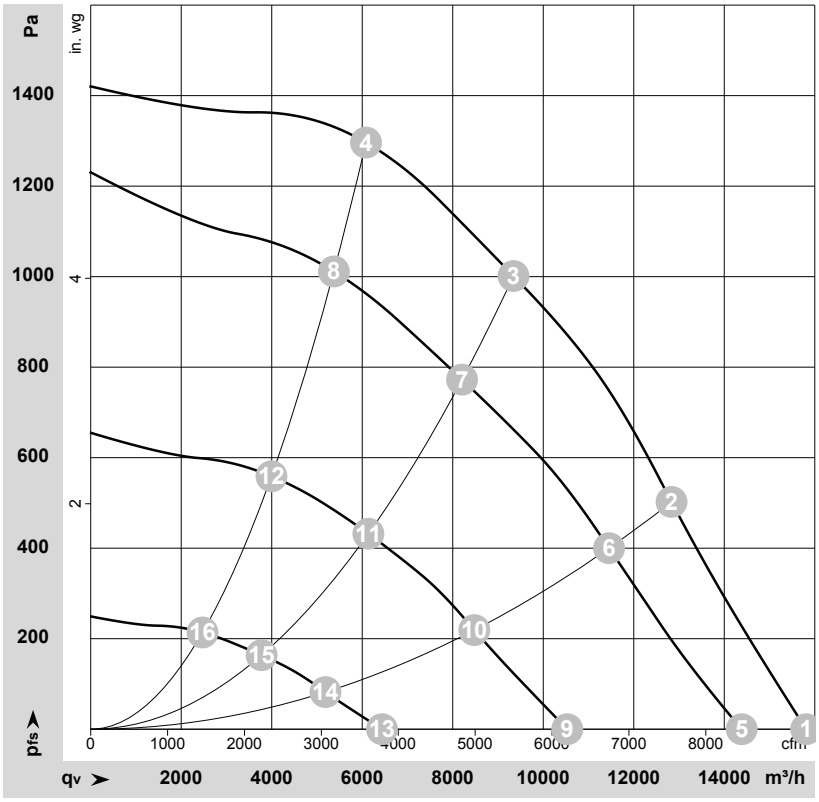
450


Pa
in. wg
1600
1400
1200
1000
800
600
400
200
6
4
2
pfs
0
1000
2000
3000
4000
5000
6000
7000
8000
cfm
qv
2000
4000
6000
8000
10000
12000
14000
m³/h

500


Pa
in. wg
1400
1200
1000
800
600
400
200
4
2
pfs
0
1000
2000
3000
4000
5000
6000
7000
8000
cfm
qv
2000
4000
6000
8000
10000
12000
14000
m³/h

MPC

Plug fan box unit

Product	MPC
Application	Civil and industrial applications
Construction	External housing: galvanized steel sheet lined with 30 mm non-combustible mineral wool

CABINET
Double-wall cubic casing in galvanized steel sheet lined with 30 mm fire-resistant mineral wool, non-combustible according to DIN EN 13501-1, building material class A1.
Cabinet equipped with condensate collection tray and drain valve.
For cleaning and maintenance work, the inspection door can be completely removed using the door handle.
The door handle is included in the supply and can be mounted on any side, as desired.
The side panels and the cap can be easily removed, allowing three possible discharge directions (left, right or upward).
The side panels are installed in the frame so that no screws protrude inside the enclosure.

FAN
The high-performance impeller with backward curved blades consists of a powder-coated steel plate.
The impeller is dynamically balanced according to quality class G 6.3 of DIN / ISO 1940, on 2 planes.
Ball bearings are maintenance-free and self-lubricated, sealed on both sides.
In three-phase models, the impeller is mounted on the motor shaft with a special shaft seal that prevents the ingress of oil and water.

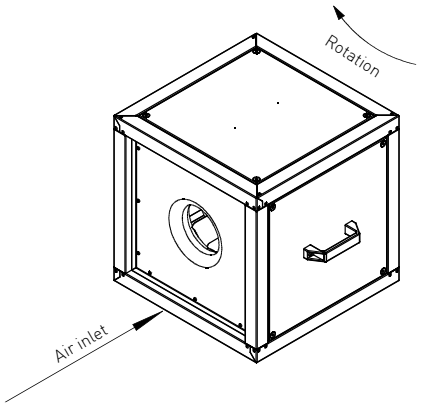
MOTOR
Motor in three-phase 400 V/50 Hz version, IEC standard.
Speed control possible via frequency control.
The motor is located outside the airflow.

APPLICATIONS

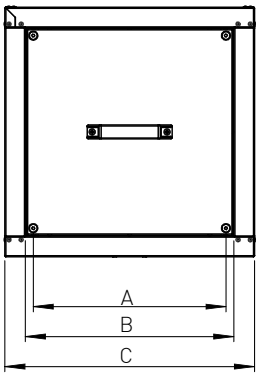
TECHNICAL ROOMS · LARGE SPACES · HOSPITALS · CANTEENS · RESTAURANTS · FAST FOOD · OFFICES

DIMENSIONS

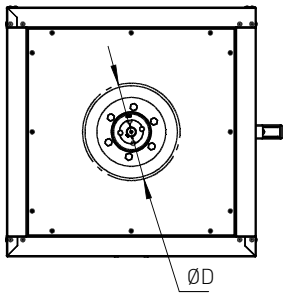
MPC Model	A mm	B mm	C mm	ØD mm
225 D2 40	386	417	500	195
250 D2 40	386	417	500	220
280 D2 40	386	417	500	240
315 D2 40	386	417	500	270
315 D4 40	386	417	500	270
355 D4 40	586	617	700	300
400 D4 40	586	617	700	340
450 D4 40	586	617	700	385
500 D4 40	586	617	700	430
560 D4 40	786	817	900	465
630 D4 40	786	817	900	520
710 D6 40	1086	1117	1200	620



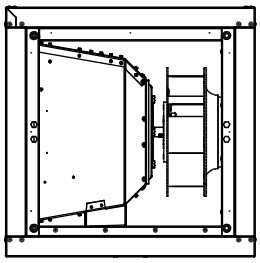
LEGEND
D = three-phase



LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

MPC
Plug fan box unit

TECHNICAL CHARACTERISTICS

MPC Model	Flow rate max. m³/h	Speed max. RPM	Power supply Volt/Hz	I max. A	Power max. absorbed W	Sound power dB(A)	Degree of protection	Wt. kg
225 D2 40	2020	3530	400/50	0,86	306	85	IP55	35.0
250 D2 40	2730	3490	400/50	1,2	441	84	IP55	35.5
280 D2 40	2970	2925	400/50	1,23	686	84	IP55	36.0
315 D2 40	4295	2960	400/50	2,4	1162	87	IP55	39.0
315 D4 40	3410	2360	400/50	1,1	205	82	IP55	39.0
355 D4 40	4620	2050	400/50	1,41	349	81	IP55	63.0
400 D4 40	4730	1480	400/50	1,1	553	76	IP55	66.0
450 D4 40	7275	1640	400/50	2,45	945	84	IP55	73.0
500 D4 40	8180	1485	400/50	3	1521	85	IP55	76.0
560 D4 40	13410	1470	400/50	5,04	2688	88	IP55	134.0
630 D4 40	17410	1490	400/50	9	4520	93	IP55	144.0
710 D6 40	19555	990	400/50	7	2838	82	IP55	242.0
800 D6 40	22560	990	400/50	9,7	4600	90	IP55	248.0

ACCESSORIES

THREE-PHASE

Safety switch ON/OFF

RVIT Inverter IP20 e IP66

Disconnector and switch 2 V 20 A

Base frame for MPC in galvanized steel sheet

MPC weather protection compartment in galvanized steel sheet

Motor protection grille in sheet metal in galvanized steel

Weather protection grille for MPC/MPC T in sheet metal in galvanized steel

Closing panel for MPC in sheet metal in galvanized steel

Connection flange for MPC/MPC T in sheet metal in galvanized steel

Panel with socket connection for MPC/MPC T in sheet metal in galvanized steel

Connection flange for MPC/MPC T in steel sheet galvanized

Terminals for closing and noise reduction

Rain guard roof in sheet metal of galvanized steel

All images are only indicative of the product type and may differ from the actual article.

MPC T

High temperature Box plug fan

Product	MPC T
Application	Civil and industrial applications
Construction	External housing: galvanized steel sheet lined with 30 mm non-combustible mineral wool

CABINET
Double-wall cubic casing in galvanized steel sheet lined with 30 mm fire-resistant mineral wool, non-combustible according to DIN EN 13501-1, building material class A1.
Cabinet equipped with condensate collection tray and drain valve.
For cleaning and maintenance work, the inspection door can be completely removed using the door handle.
The door handle is included in the supply and can be mounted on any side, as desired.
The side panels and the cap can be easily removed, allowing three possible discharge directions (left, right or upward).
The side panels are installed in the frame so that no screws protrude inside the enclosure.
Operating temperature: up to 120° continuous.

FAN
The high-performance impeller with backward curved blades consists of a powder-coated steel plate.
The impeller is dynamically balanced according to quality class G 6.3 of DIN / ISO 1940, on 2 planes.
Ball bearings are maintenance-free and self-lubricated, sealed on both sides.
In three-phase models, the impeller is mounted on the motor shaft with a special shaft seal that prevents the ingress of oil and water.

MOTOR
Motor in three-phase 400 V/50 Hz version, IEC standard.
Speed control possible via frequency control.
The motor is located outside the airflow.

APPLICATIONS

TECHNICAL ROOMS · LARGE SPACES · HOSPITALS · CANTEENS · RESTAURANTS · FAST FOOD · OFFICES

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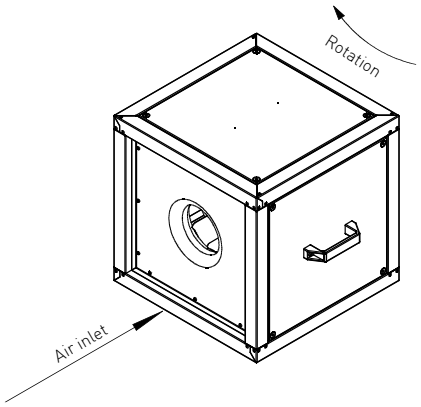
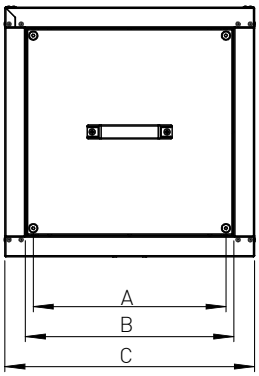
DIMENSIONS

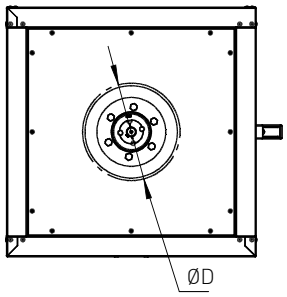
MPC T Model	A mm	B mm	C mm	ØD mm
225 D2 T40	386	417	500	195
250 D2 T40	386	417	500	220
280 D2 T40	386	417	500	240
315 D2 T40	386	417	500	270
315 D4 T40	386	417	500	270
355 D4 T40	586	617	700	300
400 D4 T40	586	617	700	340
450 D4 T40	586	617	700	385
500 D4 T40	586	617	700	430
560 D4 T40	786	817	900	465
630 D4 T40	786	817	900	520
710 D6 T40	1086	1117	1200	620



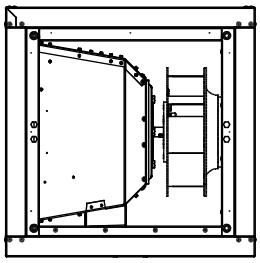
LEGEND
D = three-phase



LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

MPC T

High temperature Box plug fan

TECHNICAL CHARACTERISTICS

MPC T Model	Flow rate max. m^3/h	Speed max. RPM	Power supply Volt/Hz	I max. A	Power max. absorbed W	Sound power dB(A)	Degree of protection	Wt. kg
225 D2 T30	2010	3520	400/50	0,9	440	83	IP55	35
250 D2 T30	2630	3490	400/50	1,2	692	84	IP55	35
280 D2 T30	2830	2920	400/50	1,3	686	85	IP55	36
315 D2 T30	4115	2950	400/50	2,5	1208	88	IP55	41
315 D4 T30	3300	2360	400/50	1,1	658	81	IP55	40
355 D4 T30	4590	2060	400/50	1,4	793	84	IP55	63
400 D4 T30	4840	1470	400/50	1,1	564	76	IP55	65
450 D4 T30	7125	1630	400/50	2,5	1226	85	IP55	73
500 D4 T30	8090	1485	400/50	2,9	1440	86	IP55	75
560 D4 T30	13060	1470	400/50	5	2661	88	IP55	127
630 D4 T30	17540	1480	400/50	8,8	4325	92	IP55	140
710 D6 T40	19550	990	400/50	7	2761	83	IP55	235

ACCESSORIES

THREE-PHASE

Safety switch ON/OFF

RVIT Inverter IP20 e IP66

Disconnector and switch 2 V 20 A

Base frame for MPC in galvanized steel sheet

MPC weather protection compartment in galvanized steel sheet

Motor protection grille in sheet metal in galvanized steel

Weather protection grille for MPC/MPC T in sheet metal in galvanized steel

Closing panel for MPC in sheet metal in galvanized steel

Connection flange for MPC/MPC T in sheet metal in galvanized steel

Panel with socket connection for MPC/MPC T in sheet metal in galvanized steel

Connection flange for MPC/MPC T in steel sheet galvanized

Terminals for closing and noise reduction

Rain guard roof in sheet metal of galvanized steel

All images are only indicative of the product type and may differ from the actual article.

MPC EC

EC plug fan box unit

Product MPC EC

Application Civil and industrial applications

Construction External housing: galvanized steel sheet lined with 30 mm non-combustible mineral wool

CABINET
Double-wall cubic casing in galvanized steel sheet lined with 30 mm fire-resistant mineral wool, non-combustible according to DIN EN 13501-1, building material class A1.
Cabinet equipped with condensate collection tray and drain valve.
For cleaning and maintenance work, the inspection door can be completely removed using the door handle.
The door handle is included in the supply and can be mounted on any side, as desired.
The side panels and the cap can be easily removed, allowing three possible discharge directions (left, right or upward).
The side panels are installed in the frame so that no screws protrude inside the enclosure.

FAN
The high-performance impeller with backward curved blades consists of a powder-coated steel plate.
The impeller is dynamically balanced according to quality class G 6.3 of DIN / ISO 1940, on 2 planes.
Ball bearings are maintenance-free and self-lubricated, sealed on both sides.
In three-phase models, the impeller is mounted on the motor shaft with a special shaft seal that prevents the ingress of oil and water.

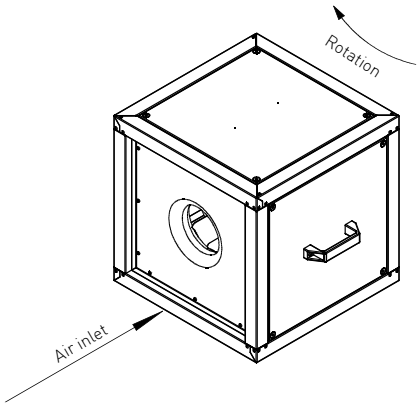
MOTOR
BRUSHLESS permanent magnet motor, directly coupled. Speed regulation via 0-10V signal or optional manual potentiometer, progressive start-up, overheating protection for electronics/motor, low voltage/phase loss detection. Power supply 400V - 3ph - 50/60Hz. Operating temperature range: -25 ÷ +40 °C. High extraction performance, compact dimensions, easily adjustable operating point, maximum reliability, virtually maintenance-free.

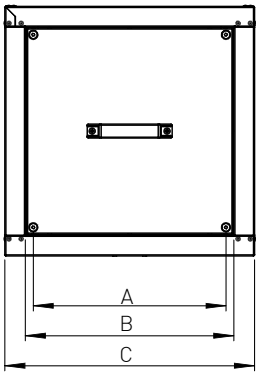
APPLICATIONS

TECHNICAL ROOMS · LARGE SPACES · HOSPITALS · CANTEENS · RESTAURANTS · FAST FOOD · OFFICES

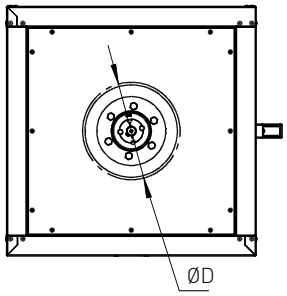
DIMENSIONS

MPC EC Model	A mm	B mm	C mm	ØD mm
225 EC 40	386	417	500	195
250 EC 40	386	417	500	220
280 EC 40	386	417	500	240
400 EC 40	586	617	700	340
450 EC 40	586	617	700	350
500 EC 40	586	617	700	430
560 EC 40	786	817	900	500
630 EC 40	786	817	900	550

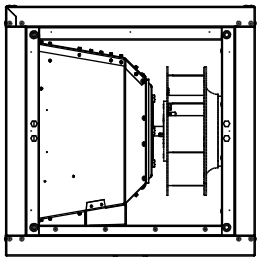




LEFT SIDE VIEW



FRONT VIEW



RIGHT SIDE VIEW

TECHNICAL CHARACTERISTICS

MPC EC Model	Flow rate max. m^3/h	Speed max. RPM	Power supply Volt/Hz	I max. A	Power max. absorbed W	Sound power dB(A)	Degree of protection	Wt. kg
225 EC 40	1030	2920	230/50	0,99	116	69	IP44	27,7
250 EC 40	1520	2995	230/50	1,76	207	79	IP44	28,9
280 EC 40	2030	2900	230/50	1,91	270	78	IP44	29,1
400 EC 40	5680	1935	230/50	2,44	529	76	IP44	62,0
450 EC 40	6270	1510	230/50	2,43	527	75	IP44	65,0
500 EC 40	9830	1600	400/50	2,10	1343	81	IP44	56,2
560 EC 40	15560	1790	400/50	5,42	3530	89	IP44	101
630 EC 40	17720	1300	400/50	4,25	2733	84	IP44	98,0

MPS

Kitchen oily fume extraction fan

Product	MPS
Application	Civil and industrial applications
Construction	External housing: galvanized steel sheet lined with 40 mm non-combustible mineral wool

SPECIFICATIONS

Fan wheel for extraction of oily kitchen fumes, with an average and maximum air temperature of 120 °C. External casing in galvanized steel sheet lined with 40 mm non-combustible mineral wool according to DIN EN 13501-1 standard, building material class A1.

Assembled mounting guides fitted with rubber anti-vibration mounts; they can also be repositioned on the housing, allowing three discharge directions.

Air duct connectors with standard dimensions and double-lip seals for airtight connections.

Grease container / condensate drain integrated in the body, usable only if installed with upward discharge.

Condensate drain valve located under the base of the device.

FAN

High-performance impeller with backward curved blades consisting of a powder-coated steel plate, dynamically balanced according to quality class G 6.3 of DIN/ISO 1940, on 2 planes.

Maintenance-free, self-lubricating ball bearings, sealed on the cabinet sides.

In three-phase models, the impeller is mounted on the motor shaft with a special shaft seal that prevents the ingress of oil and water.

Openable fan section, lockable in the open position and therefore also usable as an access door for cleaning and maintenance work.

MOTOR

Motor in three-phase 400 V/50 Hz version, IEC standard. Speed control possible via frequency converter.

Motor outside the airflow for optimal protection from dirt.

In three-phase models, the motor thermal protection must be installed on site.

ON REQUEST: version with EC motor.

APPLICATIONS

CANTEENS | RESTAURANTS | FAST FOOD

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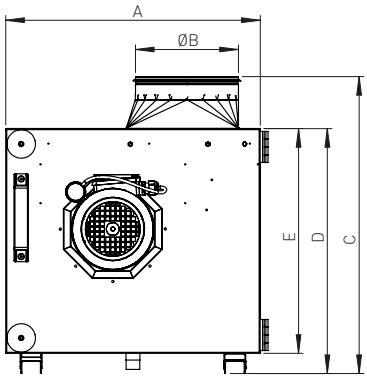
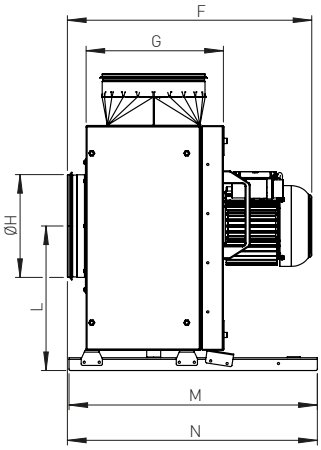
DIMENSIONS

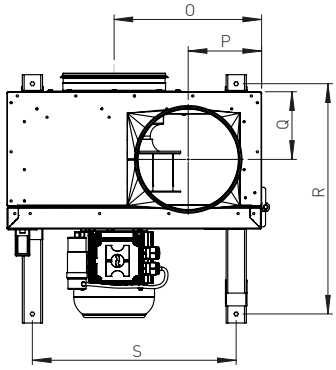
Size	A	ØB	C	D	E	F	G	ØH	L	M	N	O	P	Q	R	S
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
225 D2 30	492	199	574	474	435	481	265	199	279	480	483	285	142	131	445	394
250 D2 30	592	249	693	561	522	550	315	249	329	540	562	344	166	156	505	494
280 D2 30	592	314	692	561	522	555	315	314	329	540	567	344	199	156	505	494
315 D2 30	700	354	790	663	624	624	365	354	382	590	620	404	218	181	555	602
315 D4 30	700	354	790	663	624	624	365	354	382	590	620	404	218	181	555	602
355 D4 30	700	354	790	663	624	624	365	354	382	590	620	404	218	181	555	602
400 D4 30	832	354	916	789	750	624	365	354	448	590	620	477	218	181	555	734
450 D4 30	832	354	916	789	751	667	365	354	448	590	620	477	218	181	555	734
500 D4 30	1016	399	1098	954	915	821	510	399	539	834	873	584	242	253	799	918
560 D4 30	1016	499	1112	954	915	859	510	499	539	834	876	584	290	253	799	918



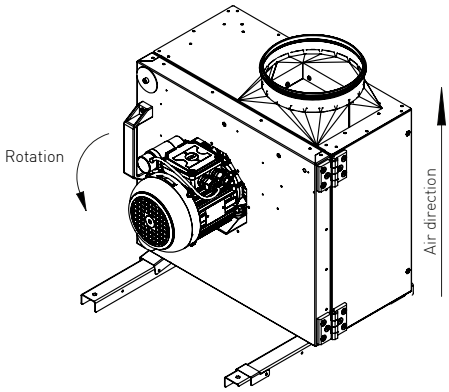
FRONT VIEW



LEFT SIDE VIEW



TOP VIEW



MPS

Kitchen oily fume extraction fan

TECHNICAL CHARACTERISTICS

MPS Model	Max. flow rate m^3/h	Max. speed RPM	Power supply Volt/Hz	I max. A	Max. absorbed power W	Sound power dB(A)	Protection degree	Wt. kg
225 D2 30	1960	3530	400/50	0,9	486	83	IP55	29,3
250 D2 30	2730	3480	400/50	1,3	756	85	IP55	38
280 D2 30	3350	2920	400/50	1,3	759	85	IP55	38,5
315 D2 30	4520	2950	400/50	2,4	1221	87	IP55	52,9
315 D4 30	3580	2360	400/50	1,2	669	80	IP55	52,9
355 D4 30	4350	2060	400/50	1,4	775	82	IP55	54,7
400 D4 30	4450	1480	400/50	1,1	564	74	IP55	72,1
450 D4 30	6660	1630	400/50	2,5	1278	82	IP55	74,9
500 D4 30	7890	1490	400/50	3	1504	83	IP55	112,7
560 D4 30	11840	1480	400/50	5	2577	86	IP55	115

ACCESSORIES

THREE-PHASE

Safety switch
ON/OFF

RVIT
Inverter IP20 and IP66

Disconnector
and switch 2V 20A

Wall bracket in galvanized steel sheet
(1 set= 2 pcs)

Terminals for closing and noise reduction
(1 set = 2 pcs)

Duct-mounted damper with external frame in galvanized steel sheet and aluminium blades

Duct-mounted damper with seal and external frame in galvanized steel sheet and aluminium blades

All images are only indicative of the product type and may differ from the actual article.

MPS F4

Oily fume extraction fan for kitchen

Product	MPS F4
Application	Civil and industrial applications
Construction	External housing: galvanized steel sheet lined with 40 mm non-combustible mineral wool

SPECIFICATIONS

Fan wheel for oily kitchen fume extraction with average conveyed temperatures up to 200 °C in continuous operation or
400 °C for 120 minutes.
External casing in galvanized steel sheet lined with 40 mm non-combustible mineral wool according to DIN EN 13501-1 standard, building material class A1.
Assembled mounting guides fitted with rubber vibration dampers; they can also be repositioned on the housing, allowing three discharge directions. Air tube connectors with standard dimensions and double-lip seals for airtight connections.
Grease container / condensate drain integrated in the body, usable only if installed with upward discharge.
Condensate drain tap located under the base of the device.

FAN

High-performance impeller with backward curved blades consisting of a powder-coated steel plate, mounted on the shaft of a three-phase motor with a special seal that prevents oil and water ingress.
It is dynamically balanced according to quality class G 6.3
of DIN / ISO 1940, on 2 planes.
Maintenance-free, self-lubricating ball bearings, sealed on the cabinet sides.
Openable fan section, lockable in the open position and therefore also usable as an access door for cleaning and maintenance work.

MOTOR

Motor in three-phase 400V/50 Hz version, IEC standard.
Speed control via frequency converter.
Motor outside the airflow for optimal protection from dirt.
The motor thermal protection must be installed on site.

APPLICATIONS

CANTEENS | RESTAURANTS | FAST FOOD

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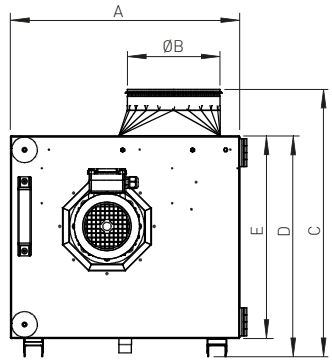
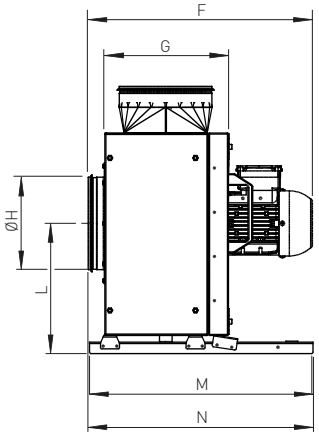
DIMENSIONS

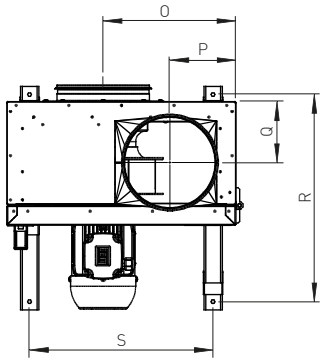
MPS F4 Model	A mm	ØB mm	C mm	D mm	E mm	F mm	G mm	ØH mm	L mm	M mm	N mm	O mm	P mm	Q mm	R mm	S mm
225 D2 F4 30	492	199	574	474	435	481	265	199	279	480	483	285	142	131	445	394
250 D2 F4 30	592	249	693	561	522	550	315	249	329	540	562	344	166	156	505	494
280 D2 F4 30	592	314	692	561	522	555	315	314	329	540	567	344	199	156	505	494
315 D2 F4 30	700	354	790	663	624	624	365	354	382	590	620	404	218	181	555	602
315 D4 F4 30	700	354	790	663	624	624	365	354	382	590	620	404	218	181	555	602
355 D4 F4 30	700	354	790	663	624	624	365	354	382	590	620	404	218	181	555	602
400 D4 F4 30	832	354	916	789	750	624	365	354	448	590	620	477	218	181	555	734
450 D4 F4 30	832	354	916	789	750	667	365	354	448	590	620	477	218	181	555	734
500 D4 F4 30	1016	399	1098	954	915	821	510	399	539	834	873	584	242	253	799	918
560 D4 F4 30	1016	499	1112	954	915	859	510	499	539	834	876	584	290	253	799	918



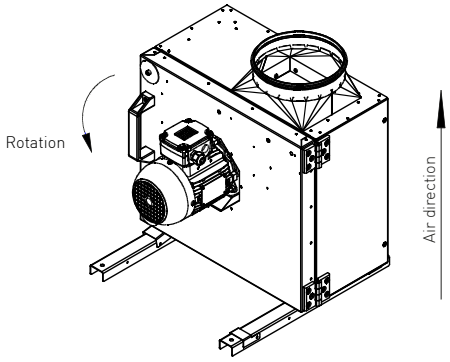
FRONT VIEW



LEFT SIDE VIEW



TOP VIEW



MPS F4

Kitchen oily fume extraction fan

TECHNICAL CHARACTERISTICS

MPS F4 Model	Flow rate max. m^3/h	Speed max. RPM	Power supply Volt/Hz	I max. A	Power max. absorbed W	Sound power dB(A)	Degree of protection	Wt. kg
225 D2 F4 30	1960	3530	400/50	0,9	486	83	IP55	29,3
250 D2 F4 30	2730	3480	400/50	1,3	756	85	IP55	38
280 D2 F4 30	3350	2920	400/50	1,3	759	85	IP55	38,5
315 D2 F4 30	4520	2950	400/50	2,4	1221	87	IP55	52,9
315 D4 F4 30	3580	2360	400/50	1,2	669	80	IP55	52,9
355 D4 F4 30	4350	2060	400/50	1,4	775	82	IP55	54,7
400 D4 F4 30	4450	1480	400/50	1,1	564	74	IP55	72,1
450 D4 F4 30	6660	1630	400/50	2,5	1278	82	IP55	74,9
500 D4 F4 30	7890	1490	400/50	3	1504	83	IP55	112,7
560 D4 F4 30	11840	1480	400/50	5	2577	86	IP55	115

ACCESSORIES

Safety switch
ON/OFF

RVIT
Inverter IP20 and IP66

Disconnector
and switch 2 V 20 A

Weather protection
enclosure in galvanized
steel sheet

Wall bracket in galvanized
steel sheet
(1 set= 2 pcs)

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MPC F4T

Centrifugal box fan for smoke extraction

Ventilation

Comfort and performance at maximum efficiency energy

Product MPC F4T

Application Civil and industrial applications

Construction External housing: double wall in galvanized steel sheet lined with 30 mm non-combustible mineral wool

CABINET

Structure designed for average conveyed temperatures up to 200 °C in continuous operation or 400 °C for 120 minutes.
Double-wall cubic casing in galvanized steel sheet lined with fire-resistant mineral wool of
30 mm, non-combustible according to DIN EN 13501-1 standard, building material class A1.
Cabinet equipped with condensate collection tray and drain valve.
For cleaning and maintenance work, the inspection door can be completely removed using the door handle.
The door handle is included in the supply and can be mounted on any side, as desired.
The side panels and the cap can be easily removed, allowing three possible discharge directions (left, right or upward).

FAN

The high-performance impeller with backward curved blades consists of a powder-coated steel plate.
The impeller is dynamically balanced according to quality class G 6.3 of DIN/ISO 1940, mounted on the shaft of an IEC three-phase motor with a special shaft seal that prevents oil and water ingress.
Ball bearings are maintenance-free and lubricated.

MOTOR

Motor in three-phase execution 400 V/50 Hz, IEC standard.
Speed control possible via frequency converter. The motor is located outside the airflow.
The motor thermal protection must be installed on-site (thermal motor current monitoring via a motor protection switch or VFD).

APPLICATIONS

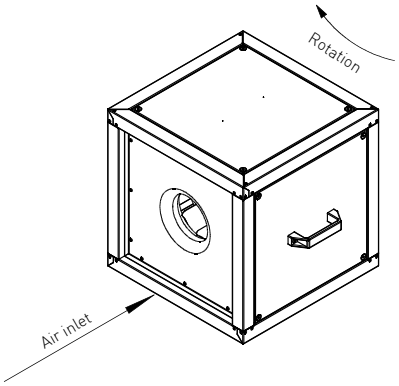
TECHNICAL ROOMS · LARGE SPACES · HOSPITALS · CANTEENS · RESTAURANTS · FAST FOOD · OFFICES

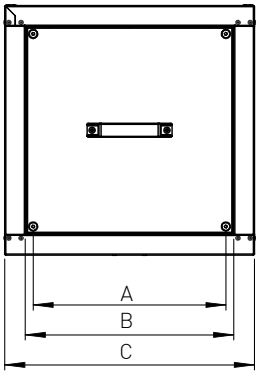
MPC F4T

Centrifugal box fan
for smoke extraction

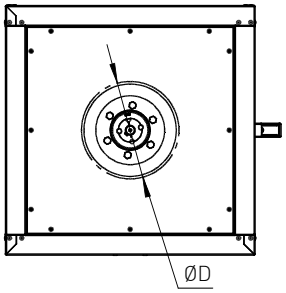
DIMENSIONS

MPC F4T Model	A mm	B mm	C mm	ØD mm
225 D2 F4 T30	386	417	500	195
250 D2 F4 T30	386	417	500	220
280 D2 F4 T30	386	417	500	240
315 D2 F4 T30	386	417	500	270
315 D4 F4 T30	386	417	500	270
355 D4 F4 T30	586	617	700	300
400 D4 F4 T30	586	617	700	340
450 D4 F4 T30	586	617	700	385
500 D4 F4 T30	586	617	700	430
560 D4 F4 T30	786	817	900	465
630 D4 F4 T30	786	817	900	520

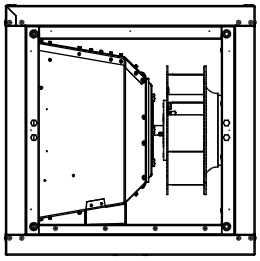




RIGHT SIDE VIEW



FRONT VIEW



LEFT SIDE VIEW

TECHNICAL CHARACTERISTICS

MPC F4T Model	Flow rate max. m^3/h	Speed max. RPM	Power supply Volt/Hz	I max. A	Power max. absorbed W	Sound power dB(A)	Degree of protection	Wt. kg
225 D2 F4 T30	2010	3520	400/50	0,9	440	83	IP55	35
250 D2 F4 T30	2630	3490	400/50	1,2	692	84	IP55	35
280 D2 F4 T30	2830	2920	400/50	1,3	686	85	IP55	36
315 D2 F4 T30	4115	2950	400/50	2,5	1208	88	IP55	41
315 D4 F4 T30	3300	2360	400/50	1,1	658	81	IP55	40
355 D4 F4 T30	4590	2060	400/50	1,4	793	84	IP55	63
400 D4 F4 T30	4840	1470	400/50	1,1	564	76	IP55	65
450 D4 F4 T30	7125	1630	400/50	2,5	1226	85	IP55	73
500 D4 F4 T30	8090	1485	400/50	2,9	1440	86	IP55	75
560 D4 F4 T30	13060	1470	400/50	5	2661	88	IP55	127
630 D4 F4 T30	17540	1480	400/50	8,8	4325	92	IP55	140

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ACCESSORIES

Safety switch
ON/OFF

RVIT
Inverter IP20 and IP66

Disconnector
and switch 2 V 20 A

Base frame for MPC in galvanized steel sheet

Closing panel for MPC
in galvanized steel sheet

Connection flange
for MPC/MPC T
in galvanized steel sheet

Panel with socket connection for
MPC/MPC T
in galvanized steel sheet

Connection flange
for MPC/MPC T in sheet metal
in galvanized steel

Sheet metal rain guard roof
in galvanized steel

All images are only indicative of the product type and may differ from the actual article.

CPH

Belt-driven box fan certified 400°C/2H

Product CPH

Application Industrial and commercial applications

Construction Galvanized sheet metal box with forward curved blade fan and external motor

FEATURES

The CPH series double-inlet belt-driven fans are forward curved blade Centrifugal box fans designed for industrial and commercial use. They are used in systems for standard ventilation (such as kitchens, bathrooms, hotel rooms...). However, in the event of fire, they are capable of extracting smoke at temperatures up to 200°C in continuous operation or up to 400°C for 2 consecutive hours in case of fire.

The entire product range covers a flow rate field varying from a minimum of 1,500 m3/h to a maximum of 35,000 m3/h, with static pressures ranging from a minimum of 100 Pa to a maximum of 1,760 Pa.

STRUCTURE

Fully dismountable galvanized steel sheet structure with belt drive protection guard. Motor positioned outside the structure, therefore outside the hot fume stream, resulting in increased reliability and lifespan. Height-adjustable motor mounting plate that allows optimal belt tensioning, with the possibility of positioning the transmission and motor either on the right or left side of the unit (facing the discharge outlet) according to system requirements

Configurations:

- motor above fan for all models with motor power equal to or less than 7.5 kW;
- floor-mounted motor for all models with motor power equal to or greater than 11 kW.

FAN

Double-inlet centrifugal fan with forward curved blade impeller in galvanized steel. Bearings mounted on anti-vibration supports outside the air flow.

MOTOR

Three-phase asynchronous electric motor up to 30230/400V IP55 UNELMEC class F, in 4 or 6 pole or dual-speed version.

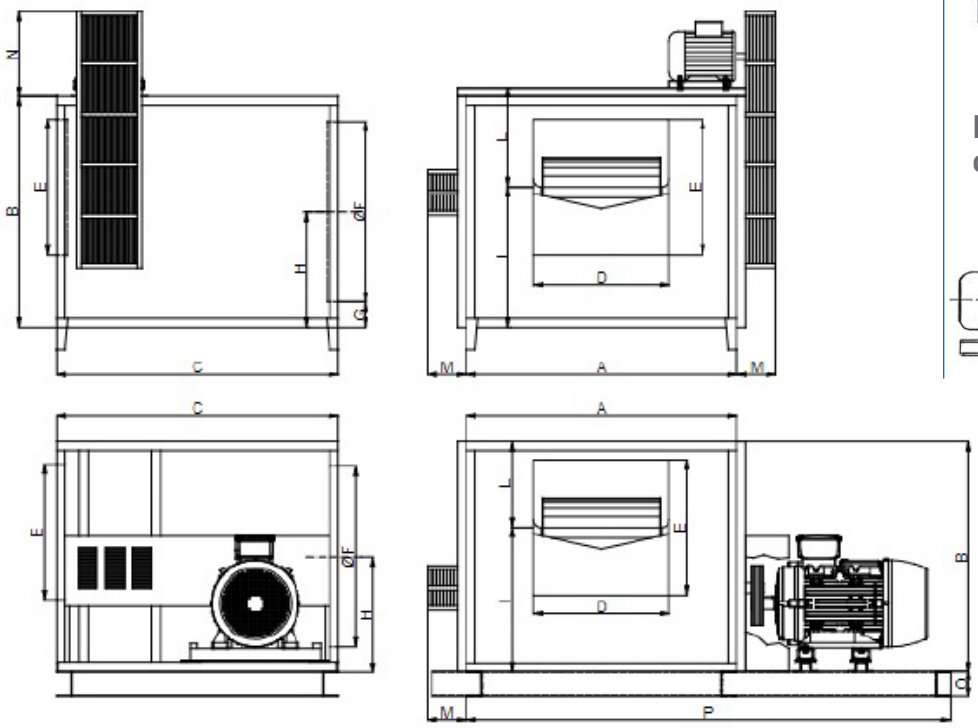
TECHNICAL CHARACTERISTICS

Ducted air	Clean
Flow rates	1500-35000mc/h
Pressure heads	100-1760Pa
Air temperature	-20°C/+200°C - +400°C 2H
Supply voltage	400V-3ph-50Hz

DIMENSIONS

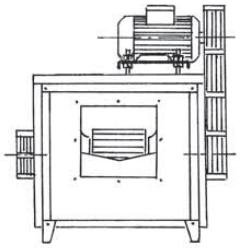
Size	250	300	350	400	450	500	unit of measurement
A	600	700	800	900	1000	1200	[mm]
B	600	680	750	840	960	1020	[mm]
C	650	730	860	1030	1200	1250	[mm]
D	300	350	400	450	500	600	[mm]
E	300	350	400	450	500	600	[mm]
ø F	405	500	610	650	750	800	[mm]
G	100	100	100	100	100	100	[mm]
H	300	340	375	420	480	510	[mm]
I	370	425	470	535	630	640	[mm]
L	230	255	280	305	330	380	[mm]
M	158	173	173	173	173	173	[mm]
N_1	270 | 350	340 | 410	340 | 410	360 | 420	350 | 420	380 | 420	[mm]
O	100	100	100	100	120	120	[mm]
P_2	1100	1200	1580	1680	1850	2150	[mm]
Wt.	60	85	130	180	230	280	[kg]

[1] Minimum and maximum values depending on the electric motor installed.
[2] Dimensions referred to the largest motor size for each model (configuration "/A").

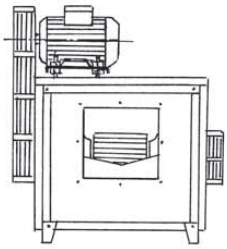


MOTOR POSITION

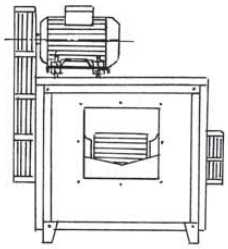
Right position on roof



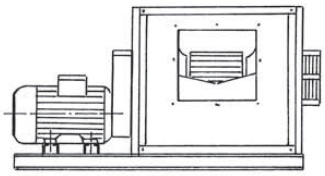
Left position on roof



Right position on base



Left position on base

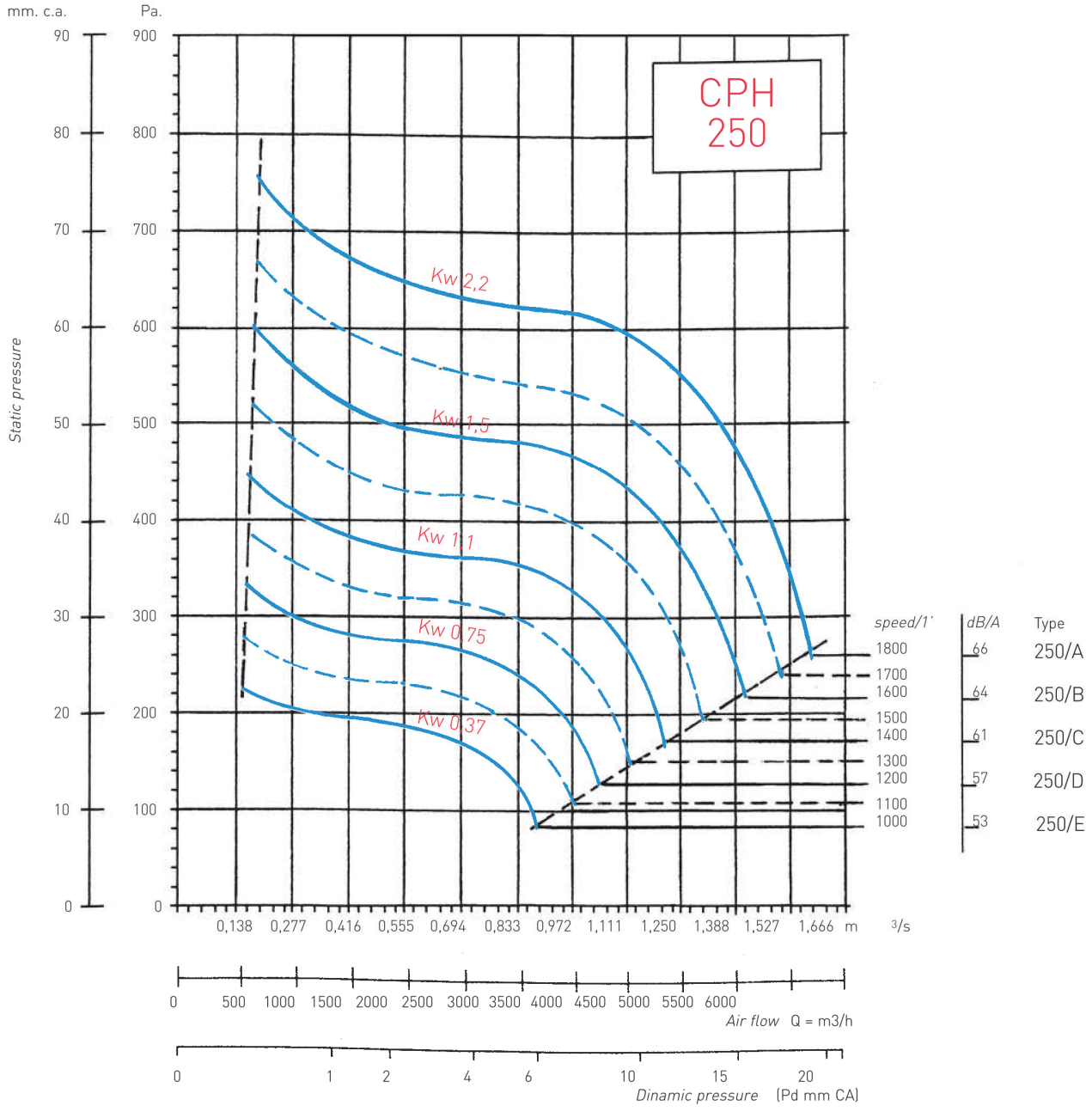


CPH

Belt-driven box fan certified 400°C/2H

CHARACTERISTIC CURVES

CPH 250



kW referred to installed power
Sound pressure level at 3 m in free field, from the fan center with ducted outlets. Tolerance ~ 3 dB.
All performances are referred to air at 15°C - Barometric pressure 760 mm Hg - Specific weight 1.22 kg/m³

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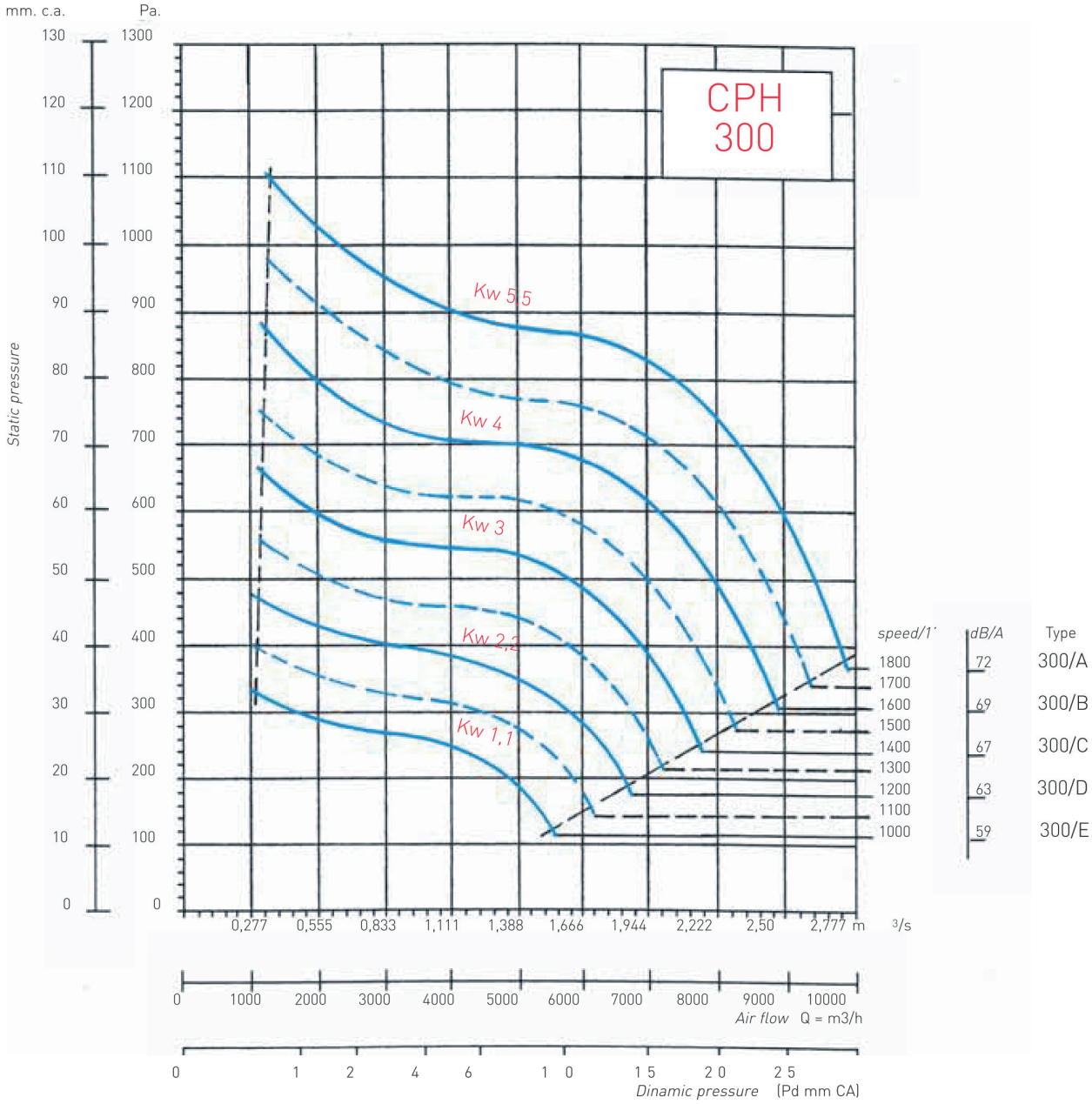
CPH 300

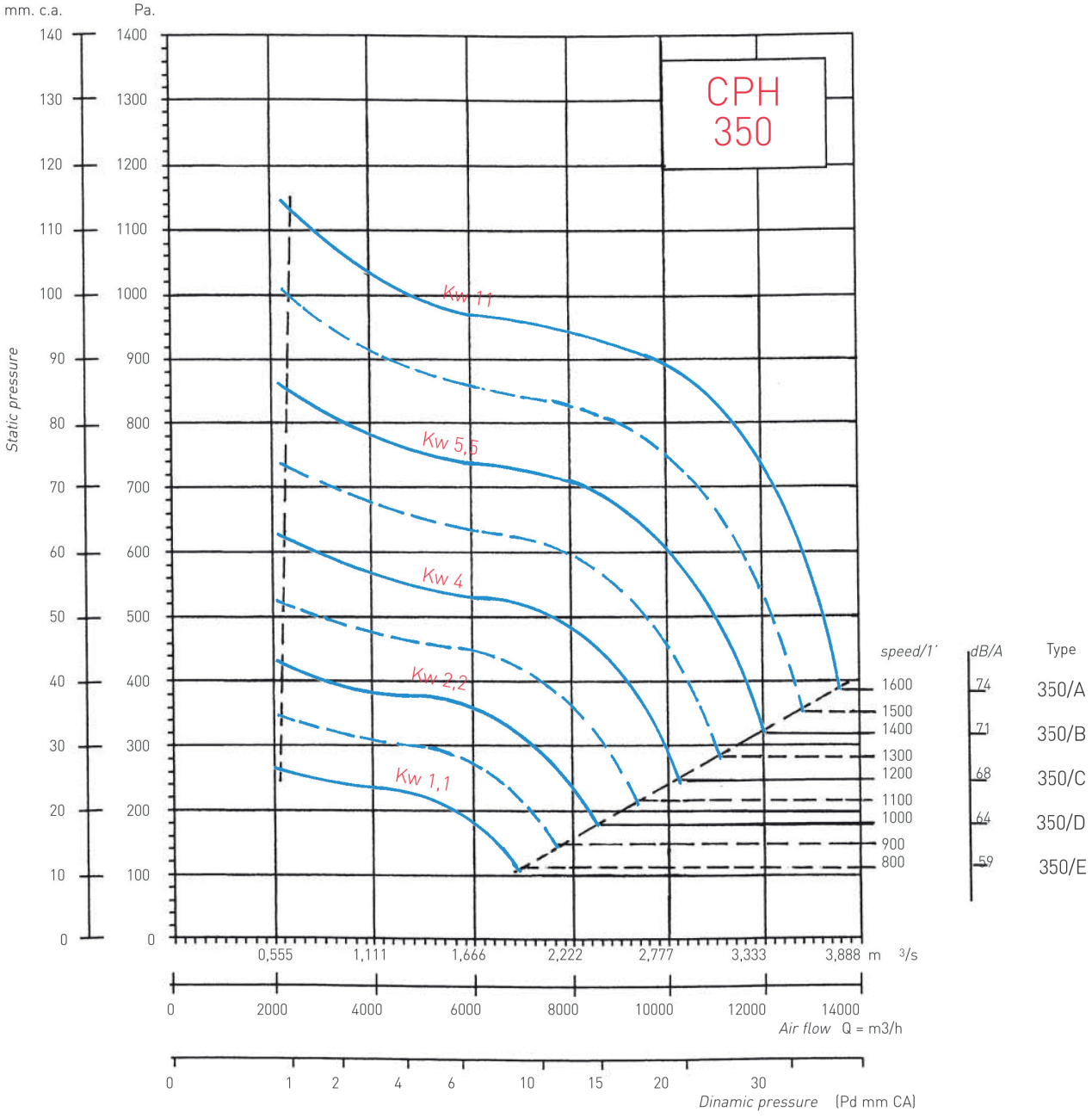


kW referred to installed power
Sound pressure level at 3 m in free field, from the fan center with ducted outlets. Tolerance ~ 3 dB.
All performances are referred to air at 15°C - Barometric pressure 760 mm Hg - Specific weight 1.22 kg/m³

CPH

Belt-driven box fan certified 400°C/2H

CPH 350



kW referred to installed power
Sound pressure level at 3 m in free field, from the fan center with ducted outlets. Tolerance ~ 3 dB.
All performances are referred to air at 15°C - Barometric pressure 760 mm Hg - Specific weight 1.22 kg/m³

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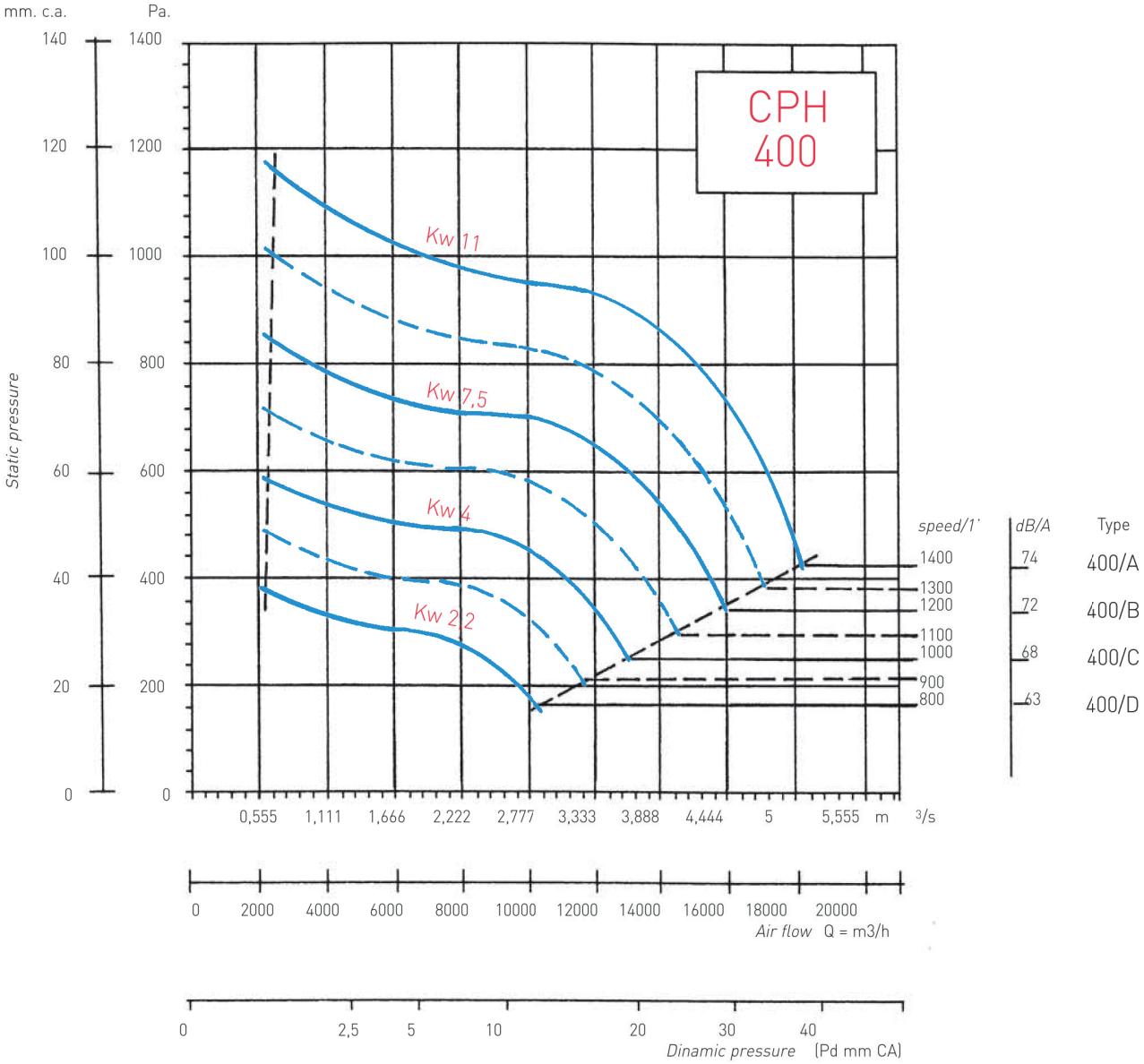
CPH 400

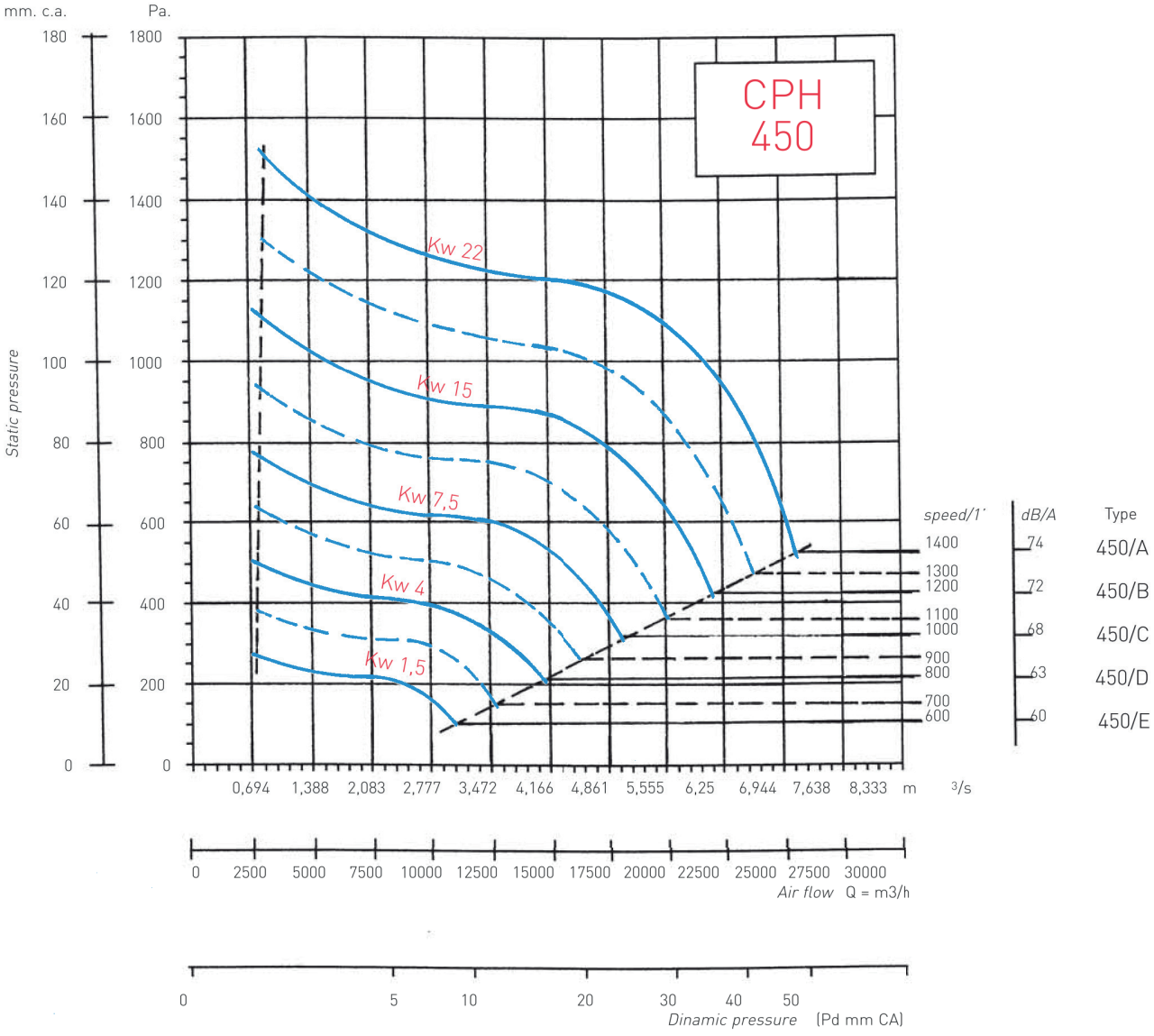


kW referred to installed power
Sound pressure level at 3 m in free field, from the fan center with ducted outlets. Tolerance ~ 3 dB.
All performances are referred to air at 15°C - Barometric pressure 760 mm Hg - Specific weight 1.22 kg/m³

CPH

Belt-driven box fan certified 400°C/2H

CPH 450



kW referred to installed power
Sound pressure level at 3 m in free field, from the fan center with ducted outlets. Tolerance ~ 3 dB.
All performances are referred to air at 15°C - Barometric pressure 760 mm Hg - Specific weight 1.22 kg/m³

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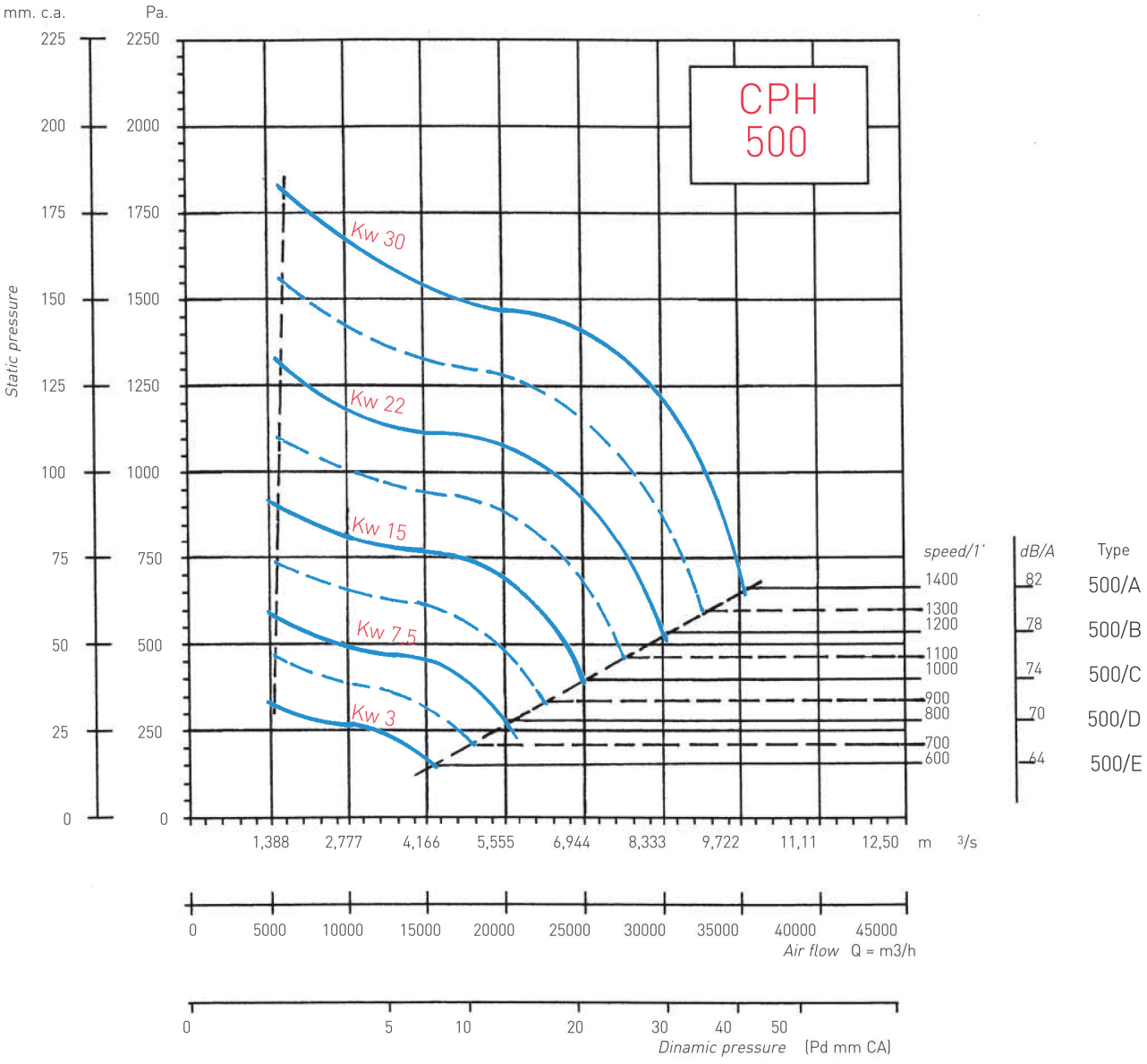
CPH 500

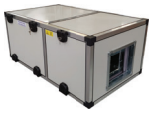


kW referred to installed power
Sound pressure level at 3 m in free field, from the fan center with ducted outlets. Tolerance ~ 3 dB.
All performances are referred to air at 15°C - Barometric pressure 760 mm Hg - Specific weight 1.22 kg/m³

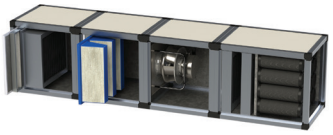
FILTRATION AND DEODORIZATION CONTROL UNITS

Ventilation

Comfort and performance at maximum efficiency energy



CBOX SERIES
Compact control unit for deodorization p. 152



U SERIES
Modular air handling unit p. 156

CBOX SERIES

Compact control unit for deodorization

Product CBOX

Application Civil and industrial applications

Construction Structure and profiles: aluminium
Panels: double sound-absorbing paneling th. 25 mm

FEATURES

The CBOX unit is a compact ventilation unit for the extraction and filtration of lightly dusty and odour absorption
in low concentrations.
It consists of a single compact module containing:

- a forward curved blade fan with direct drive motor, equipped with coupling and rubber anti-vibration mounts.
- a pre-filter F12 efficiency G4 (ISO coarse 75%).
- an activated carbon filter F19C (CTC 45%) 160 mm cartridges.

FAN

Centrifugal fan with forward curved blades, double inlet with direct drive motor, made of galvanized steel.

MOTOR

Enclosed motor with class F ball bearings, in single-phase 230 V/50 Hz 4-pole version.

APPLICATIONS

HOSPITALS | LARGE SPACES | CANTEENS | RESTAURANTS | FAST FOOD

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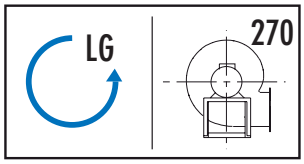
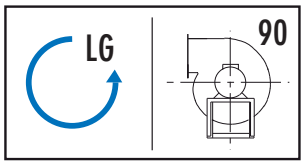
ORIENTATIONS



CBOX 15 Available only in LG 270 version.



CBOX 25 Available only in LG 90 version.

TECHNICAL FEATURES - OPERATING RANGE

Operating range	Flow rate (m^3/h)	From 1,500 to 2,500
	Pressure (Pa)	Up to 150
Min. outlet	mm	300 x 263
Max. outlet	mm	326 x 292
Motor	Volt (±10%)	230 V
	Poles	4
	IP	54
Fluid temp min. limit	°C	-20
Fluid max. temp limit	°C	60

CABINET TECHNICAL FEATURES

The thermal and acoustic containment walls in CBOX units are composed of sandwich panels, having a thickness of 25 mm, consisting of an insulating component in expanded polyurethane coated on one side with galvanized sheet metal and from the top
with pre-painted sheet metal, grey colour RAL 7032. It has a density of 47 kg/m^3.
The insulating component is expanded using water, therefore the foam contains neither CFC nor HCFC.
Thanks to the high number of closed cells, exceeding 95%, the panel foam presents a thermal conductivity thermal conductivity, measured according to UNI 7891 standard, of 0.0247 W/(m K) at a temperature of 10 °C. Regarding the
sound insulation power, according to ISO 140/10 standard, is equal to Rw=40 dB.
The panel can be used in a temperature range between -40 °C and +80 °C in continuous operation and without substantial changes in thermal insulation properties.
Structure made with extruded aluminium profiles connected by ABS corner joints.
Inspection door panel equipped with sealed closures, panel opposite the inspection and opposite the discharge removable by means of screws.

CBOX SERIES

Compact control unit for deodorization

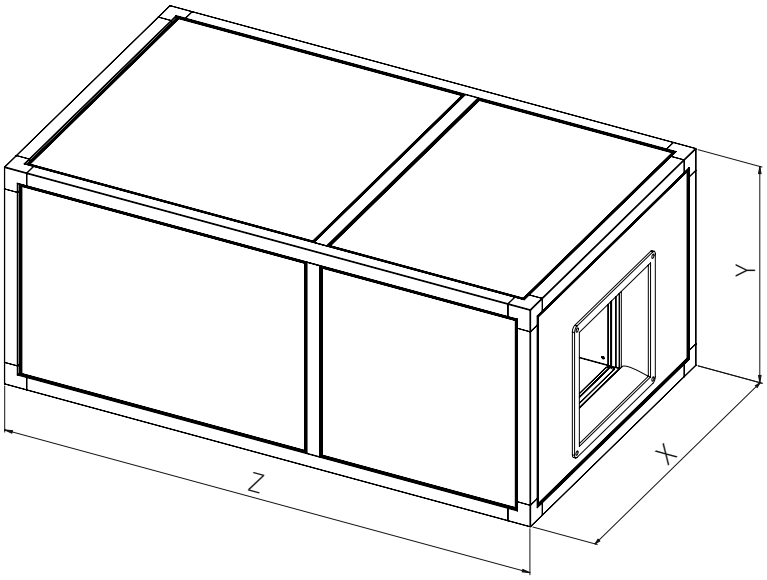
QUICK SELECTION TABLE

Model	Fan	Power	Speed	Total static pressure	Flow rate	Filter F12		
						Quantity	Dimensions	Efficiency
	CBD	kW	RPM	Pa	m^3/h	N.	mm	
CBOX 15	9/9	0,55	1310	370	1500	1	287x592x48	G4 (ISO coarse 75%)
CBOX 25	10/10	0,55	1310	400	2500	1	592x592x48	

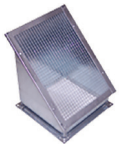
DIMENSIONS

Model	Fan	Dimensions (mm)					
	CBD	X	Y	Z	Supply outlet B1xB2	C	A
CBOX 15	9/9	700	500	1170	300 x 263	60	177
CBOX 25	10/10	700	700	1170	326 x 292	245	163

	F19 C Filter					
Pressure drop average / recommended final Pa	Cartridges N.	Efficiency	Dimensions cartridges Ø mm	Average pressure drop Pa	Pressure drop total medium Pa	Pressure drop total final Pa
125 / 200	5 / 9	CTC 45%	160 x 400	180	305	380



ACCESSORIES


Exhaust connector with protection mesh


Support feet

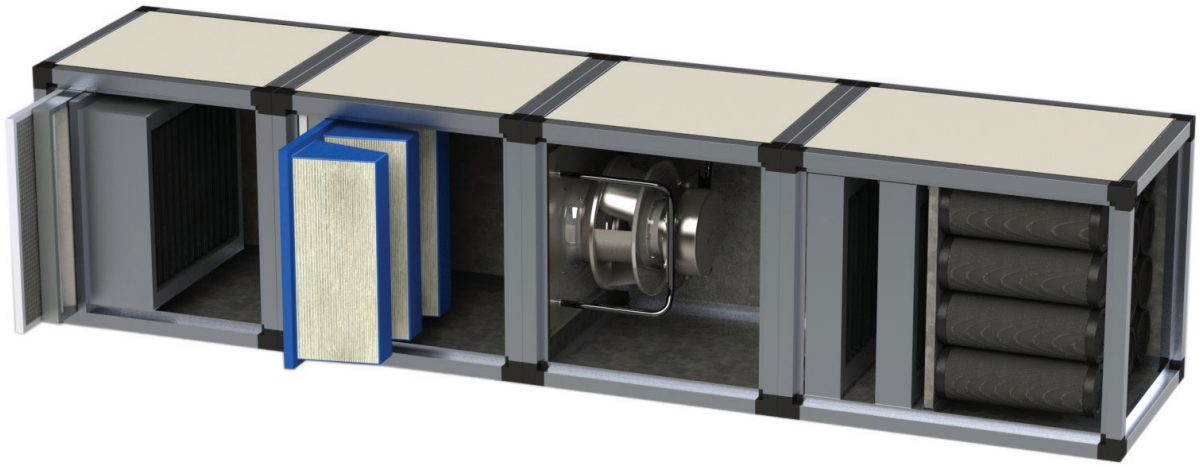
Speed controller single-phase


Differential pressure switch

All images are only indicative of the product type and may differ from the actual article.

U SERIES

Modular air handling unit



FAN MODULES

UPB: High-efficiency PLUG-FAN ventilation unit with backward curved blades and directly coupled BRUSHLESS motor. Speed regulation via 0-10 V signal or optional manual potentiometer.

UTR: Fan Unit with forward curved blade centrifugal fan, double inlet, driven by asynchronous motor with belt drive.

FILTER MODULES

UFT: Bag Filter Unit – Multi-stage filtration up to F18 class (EN 779) F8 (ISO ePm1 60%).

UFTF: Bag Filter Unit - Multi-stage filtration up to F16S class (EN 779) F9 (ISO ePm1 85%).

UFTH: H13 Bag Filter Unit - Multi-stage filtration up to F18H HEPA class (EN 779) H13 (ISO ePm1 99%).

UFES: Electrostatic Filter Unit – Multi-stage filtration up to electrostatic action class (EN 779) E10 (ISO ePm1 95%).

UFC: Activated carbon filtering and deodorizing unit - F19C cartridges (CTC 45%) 160 mm (3.1 kg activated carbon each) or on request 140 mm (2.5 kg activated carbon each).

UFIOC: Combined Filter Unit for MAXIMUM ODOUR REDUCTION – Ionizing Stage (ion emission 5 million per cm^3) Ozone stage (O emissions$_3$ 294 $\mu g/m^3$) and Activated Carbon Stage F19C (CTC 45%) 140 mm cartridges (2.5 kg activated carbon) or 160 mm (3 kg activated carbon).

APPLICATIONS

CIVIL VENTILATION

TECHNICAL ROOMS

OFFICES

PUBLIC SERVICES

CANTEENS

RESTAURANTS

FAST FOOD

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CHARACTERISTICS OF THE U SERIES STRUCTURE

The thermal and acoustic containment walls in the U series are composed of sandwich panels, having a thickness of 25 mm, consisting of an insulating component in expanded polyurethane lined on one side with galvanized sheet metal and on the other with pre-painted sheet metal, grey RAL 7032. It has a density of 47 kg/m³.
The insulating component is expanded using water, therefore the foam contains neither CFC nor HCFC.
Thanks to the high number of closed cells, exceeding 95%, the panel foam has a thermal conductivity, measured according to UNI 7891 standard, of 0.0247 W/(m K) at a temperature of 10 °C.
Regarding the sound insulation power, according to ISO 140/10 standard, it is equal to Rw=40 dB.
The panel can be used in a temperature range between -40 °C and +80 °C in continuous operation and without substantial changes in thermal insulation characteristics.
Structures made with 40 mm extruded aluminium profiles connected by die-cast aluminium corner pieces.
Inspection door panel equipped with sealed closures, panel opposite the inspection and opposite the discharge removable by means of screws.

ACCESSORIES

Code	Description
RVEBM106FE0008	Potentiometer for manual speed adjustment via 0-10 V signal. To be used with UPB module
ACC0MFE0000080	Detergent for cleaning electrostatic cells. 10 kg container
DB1PAN05730633	Front closure panel - Size 3000 - 573x633
DB1PAN08630633	Front closure panel - Size 4500 - 863x633
DB1PAN11680633	Front closure panel - Size 6000 - 1168x633
DB1PAN14580633	Front closure panel - Size 7500 - 1458x633
DB1PAN11680923	Front closure panel - Size 9000 - 1168x923
DB1PAN11681228	Front closure panel - Size 12000 - 1168x1228
2x DB1PAN02561228 + 1x DB1PAN11681228	Front closure panel - Size 18000 - 2x 1228x256 + 1x 1168x1228

ON REQUEST

Heating/cooling and dehumidification coil
Water coil (hot/cold)
Electric heating coil


Potentiometer


Detergent for electrostatic cells


Closing panel front


Water coil


Electric heater

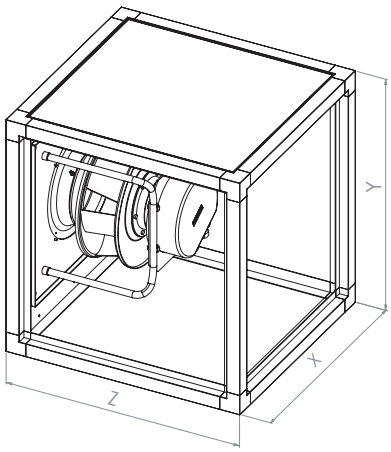
U SERIES
Modular air handling unit

FAN MODULE
UPB

High-efficiency BRUSHLESS PLUG-FAN ventilation unit.
Centrifugal fan with backward curved blades and BRUSHLESS permanent magnet motor, directly coupled. Speed regulation via 0-10V signal or optional manual potentiometer, operation and fault signaling, external enable input, fault relay, performance and motor current limitation, passive PFC, RS485 MODBUS-RTU, progressive start-up, overheating protection for electronics/motor, low voltage/phase loss detection. Power supply 400 V - 3ph - 50/60 Hz. Operating temperature range: -25 ÷ +50 °C.
High suction performance, compact dimensions, easily adjustable operating point, maximum reliability, virtually no maintenance.

DIMENSIONS

Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	54	655	715	700
4500	1	67	945	715	700
6000	1	79	1250	715	700
7500	1	93	1540	715	700
9000	1	101	1250	1005	700
12000	1	130	1250	1310	700
18000	1	134	1845	1310	700

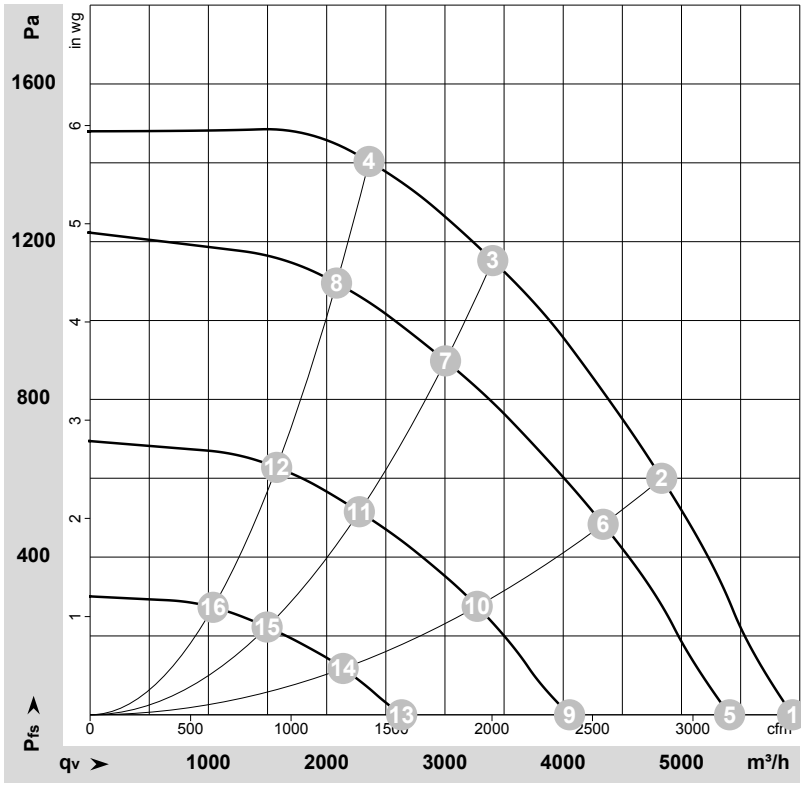


QUICK SELECTION TABLE

Model	Fan	Flow rate m³/h	Pressure Pa	Power Duty point W	Max. motor power W	RPM RPM	Power sound dB
3000	K3G310PH3805	3000	1100	1517	1800	3191	67
4500	K3G355PI9305	4500	1100	2162	2680	2960	67
6000	K3G400PA2762	6000	1100	2761	3650	2526	72
7500	K3G450PA3161	7500	1100	3386	4450	2221	69
9000	K3G500PB2461	9000	1100	3990	3900	2011	71
12000	2x K3G400PA2762	12000	1100	5551	2x 3650	2530	70
18000	2x K3G450PB2405	18000	1100	8386	2x 5250	2398	75

CHARACTERISTIC CURVES - AIR FLOW RATE 50 HZ

UPB 3000 - K3G310PH3805

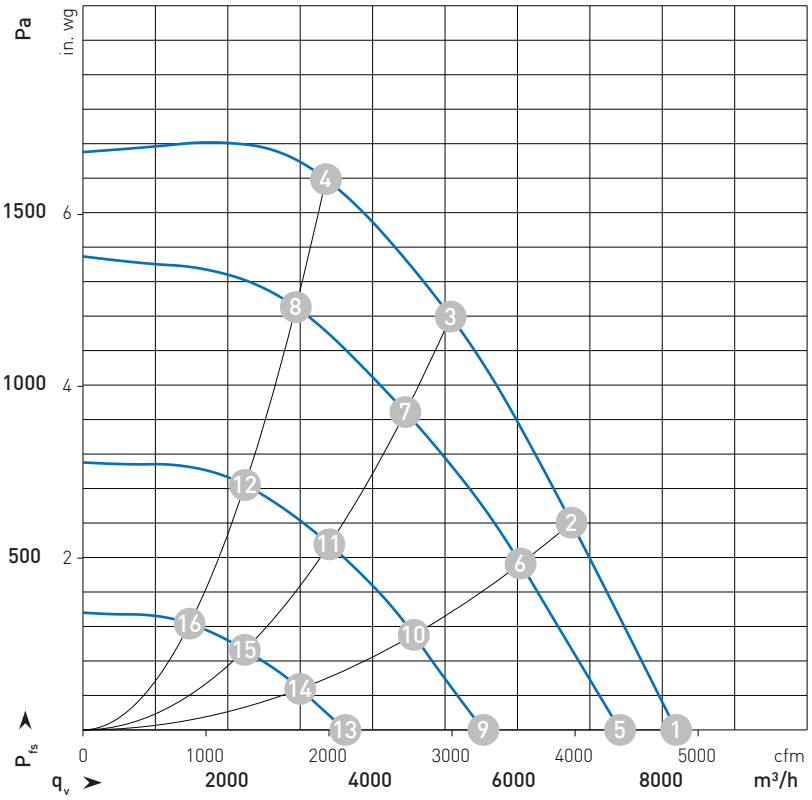


	U	F	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_v	p_{fs}	q_v	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	400	50	3410	1045	1,68	87	93	95	5940	0	3495	0,00
2	400	50	3410	1543	2,40	79	86	90	4835	600	2845	2,41
3	400	50	3410	1800	2,80	75	83	88	3405	1150	2005	4,62
4	400	50	3410	1745	2,69	78	87	90	2360	1400	1390	5,62
5	400	50	3145	824	1,37	84	91	93	5405	0	3180	0,00
6	400	50	3070	1130	1,79	76	84	88	4340	485	2555	1,95
7	400	50	3035	1243	1,96	72	80	85	3005	898	1770	3,61
8	400	50	3035	1224	1,93	75	83	88	2085	1096	1225	4,40
9	400	50	2360	394	0,76	76	84	86	4055	0	2385	0,00
10	400	50	2315	528	0,97	69	77	81	3275	276	1925	1,11
11	400	50	2300	585	1,05	66	73	79	2275	515	1340	2,07
12	400	50	2300	572	1,03	69	76	81	1575	628	930	2,52
13	400	50	1550	148	0,36	66	75	76	2635	0	1550	0,00
14	400	50	1525	187	0,42	59	67	72	2140	118	1260	0,47
15	400	50	1510	204	0,45	57	64	70	1495	223	880	0,90
16	400	50	1510	203	0,44	58	66	71	1040	273	610	1,10

U = Supply voltage. **f** = Frequency. **n** = Speed (RPM). P_{ed} = Absorbed power. **I** = Absorbed current. LpA_{in} = Sound pressure level on suction side. LwA_{in} = Sound power level on suction side. LwA_{out} = Sound power level on pressure side. q_v = Volume flow rate. p_{fs} = Pressure increase.

U SERIES
Modular air handling unit

UPB 4500 - K3G355PI9305



	U	F	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_v	p_{fs}	q_v	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	400	50	3230	1483	2,30	86	93	95	8190	0	4820	0,00
2	400	50	3230	2164	3,32	79	87	91	6745	600	3970	2,41
3	400	50	3230	2680	4,10	75	83	88	5080	1200	2990	4,82
4	400	50	3230	2560	3,94	79	87	91	3355	1600	1975	6,42
5	400	50	2955	1123	1,78	83	90	93	7420	0	4365	0,00
6	400	50	2885	1550	2,40	76	84	88	6045	483	3555	1,94
7	400	50	2840	1800	2,76	72	80	85	4455	922	2620	3,70
8	400	50	2845	1750	2,69	76	83	88	2940	1227	1730	4,93
9	400	50	2215	525	0,96	76	84	87	5530	0	3255	0,00
10	400	50	2185	718	1,22	70	78	82	4570	276	2690	1,11
11	400	50	2165	831	1,37	67	74	80	3405	538	2005	2,16
12	400	50	2165	815	1,35	70	77	81	2240	711	1315	2,85
13	400	50	1460	194	0,43	65	74	77	3625	0	2130	0,00
14	400	50	1440	248	0,51	60	68	73	3000	119	1765	0,48
15	400	50	1425	280	0,57	58	65	71	2235	232	1315	0,93
16	400	50	1425	276	0,56	59	66	72	1475	309	870	1,24

U = Supply voltage. f = Frequency. n = Speed (RPM). P_{ed} = Absorbed power. I = Absorbed current. LpA_{in} = Sound pressure level on suction side. LwA_{in} = Sound power level on suction side. LwA_{out} = Sound power level on pressure side. q_v = Volume flow rate. p_{fs} = Pressure increase.

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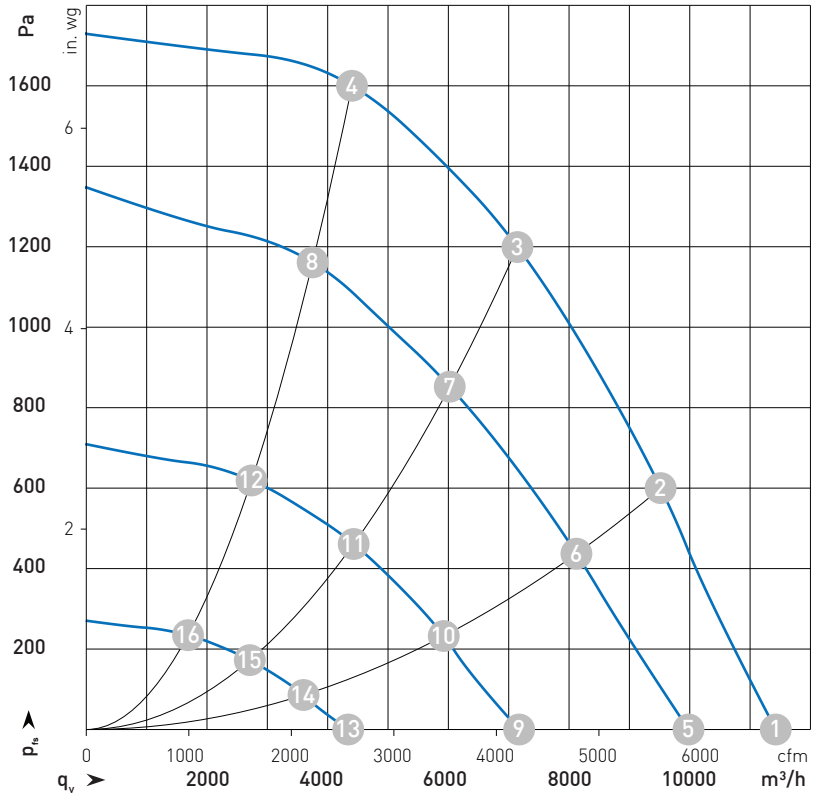
UPB 6000 - K3G400PA2762
UPB 12000 - 2x K3G400PA2762*



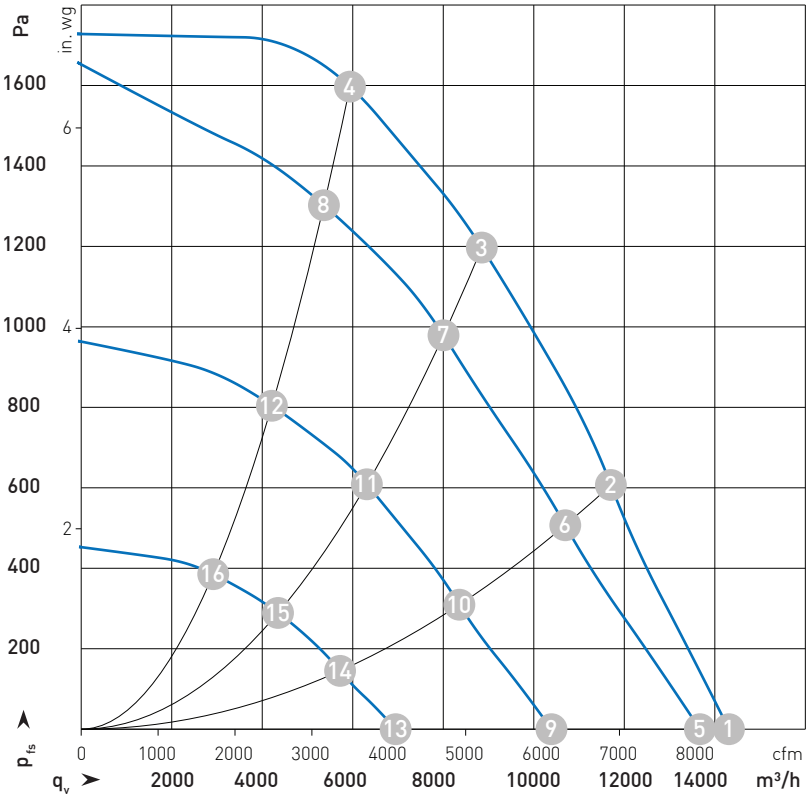
* Referring to the graph, double the flow rates

	Wiring	U	F	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_v	p_{fs}	q_v	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	3~	400	50	2800	2291	3,54	91	98	100	11425	0	6725	0,00
2	3~	400	50	2800	3219	4,92	83	91	96	9520	600	5600	2,41
3	3~	400	50	2800	3650	5,50	78	86	93	7145	1200	4205	4,82
4	3~	400	50	2800	3429	5,23	82	89	95	4405	1600	2590	6,42
5	3~	400	50	2455	1579	2,51	87	94	96	9980	0	5875	0,00
6	3~	400	50	2375	2009	3,13	79	87	91	8120	441	4780	1,77
7	3~	400	50	2360	2200	3,42	73	81	88	6025	855	3545	3,43
8	3~	400	50	2380	2133	3,32	77	84	89	3750	1163	2210	4,67
9	3~	400	50	1770	665	1,24	78	85	88	7175	0	4220	0,00
10	3~	400	50	1745	846	1,48	70	78	83	5925	236	3485	0,95
11	3~	400	50	1735	931	1,59	65	73	80	4430	463	2610	1,86
12	3~	400	50	1740	891	1,54	68	75	81	2740	620	1610	2,49
13	3~	400	50	1090	199	0,56	65	73	75	4340	0	2555	0,00
14	3~	400	50	1075	237	0,62	58	66	72	3600	87	2120	0,35
15	3~	400	50	1070	256	0,66	54	62	68	2710	173	1595	0,69
16	3~	400	50	1070	248	0,64	55	62	69	1685	235	990	0,94

Wiring = Wiring. **U** = Supply voltage. **f** = Frequency. **n** = Speed (RPM). P_{ed} = Absorbed power. **I** = Absorbed current. LpA_{in} = Sound pressure level on suction side.LwA_{in} = Sound power level on suction side. LwA_{out} = Sound power level on pressure side. q_v = Volume flow rate. p_{fs} = Pressure increase.

U SERIES
Modular air handling unit

UPB 7500 - K3G450PA3161



	Wiring	U	F	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_v	p_{fs}	q_v	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	3~	400	50	2480	2775	4,26	91	99	99	14310	0	8425	0,00
2	3~	400	50	2480	3925	5,98	85	92	95	11705	600	6890	2,41
3	3~	400	50	2480	4450	6,80	78	85	91	8850	1200	5210	4,82
4	3~	400	50	2480	4413	6,71	82	89	94	5940	1600	3495	6,42
5	3~	400	50	2365	2421	3,74	90	97	98	13670	0	8045	0,00
6	3~	400	50	2260	2968	4,56	82	89	93	10695	507	6295	2,04
7	3~	400	50	2225	3286	5,03	75	83	89	8005	980	4710	3,93
8	3~	400	50	2230	3210	4,91	80	86	91	5365	1305	3155	5,24
9	3~	400	50	1815	1132	1,87	84	91	92	10390	0	6115	0,00
10	3~	400	50	1775	1451	2,33	76	83	87	8355	309	4920	1,24
11	3~	400	50	1755	1624	2,58	69	77	82	6310	609	3715	2,44
12	3~	400	50	1755	1574	2,50	72	80	85	4215	806	2480	3,24
13	3~	400	50	1240	422	0,92	73	81	84	6950	0	4090	0,00
14	3~	400	50	1220	518	1,05	66	73	77	5720	145	3365	0,58
15	3~	400	50	1215	578	1,14	60	68	73	4350	289	2560	1,16
16	3~	400	50	1215	567	1,12	62	70	75	2915	386	1715	1,55

Wiring = Wiring. **U** = Supply voltage. **f** = Frequency. **n** = Speed (RPM). P_{ed} = Absorbed power. **I** = Absorbed current. LpA_{in} = Sound pressure level on suction side. LwA_{in} = Sound power level on suction side. LwA_{out} = Sound power level on pressure side. q_v = Volume flow rate. p_{fs} = Pressure increase.

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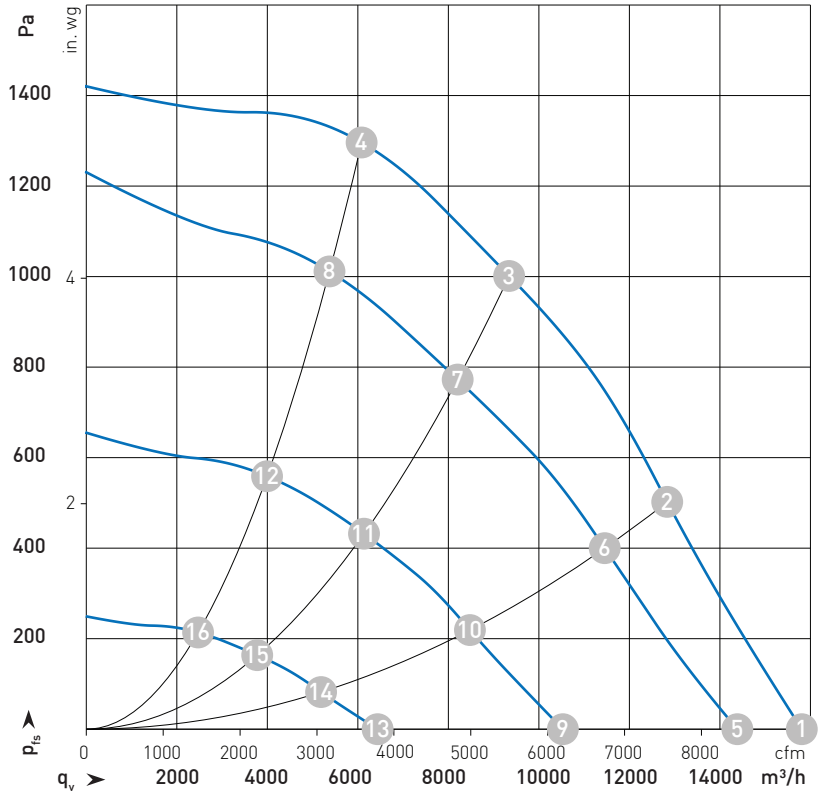
UPB 9000 - K3G500PB2461

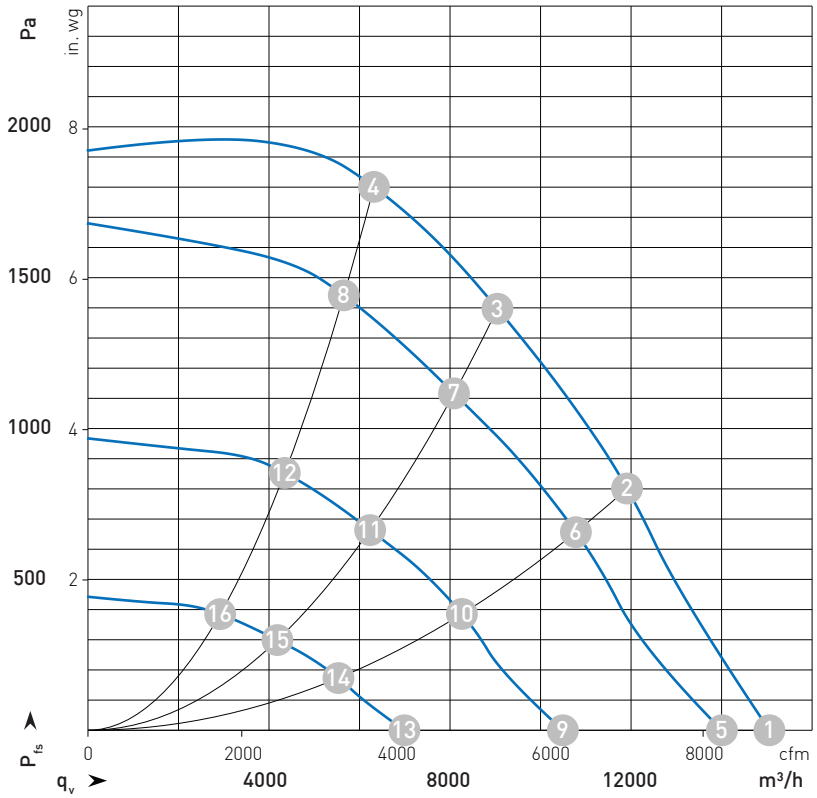


	Wiring	U	F	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_v	p_{fs}	q_v	p_{fs}
		V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m³/h	Pa	cfm	in. wg
1	3~	400	50	2000	2410	3,73	94	101	101	15810	0	9305	0,00
2	3~	400	50	2000	3374	5,15	86	93	94	12835	500	7555	2,01
3	3~	400	50	2000	3900	6,00	79	86	89	9340	1000	5500	4,01
4	3~	400	50	2000	3748	5,71	82	88	91	6085	1300	3580	5,22
5	3~	400	50	1835	1847	2,90	91	99	99	14385	0	8465	0,00
6	3~	400	50	1795	2389	3,70	83	91	92	11455	400	6740	1,61
7	3~	400	50	1765	2636	4,07	75	82	86	8205	773	4830	3,10
8	3~	400	50	1780	2588	3,99	78	85	89	5375	1012	3160	4,06
9	3~	400	50	1355	812	1,44	83	91	93	10530	0	6200	0,00
10	3~	400	50	1335	1038	1,75	75	83	85	8475	219	4990	0,88
11	3~	400	50	1320	1143	1,89	67	75	79	6135	432	3610	1,73
12	3~	400	50	1325	1117	1,86	69	78	81	3995	559	2350	2,24
13	3~	400	50	835	226	0,61	71	80	80	6435	0	3790	0,00
14	3~	400	50	820	277	0,69	62	71	73	5190	82	3055	0,33
15	3~	400	50	820	300	0,73	55	63	67	3775	164	2220	0,66
16	3~	400	50	815	299	0,73	56	63	69	2470	214	1455	0,86

Wiring = Wiring. **U** = Supply voltage. **f** = Frequency. **n** = Speed (RPM). P_{ed} = Absorbed power. **I** = Absorbed current. LpA_{in} = Sound pressure level on suction side. LwA_{in} = Sound power level on suction side. LwA_{out} = Sound power level on pressure side. q_v = Volume flow rate. p_{fs} = Pressure increase.

U SERIES
Modular air handling unit

UPB 18000 - 2 x K3G450PB2405*



* Referring to the graph, double the flow rates

	U	F	n	P_{ed}	I	LpA_{in}	LwA_{in}	LwA_{out}	q_v	p_{fs}	q_v	p_{fs}
	V	Hz	min^{-1}	W	A	dB(A)	dB(A)	dB(A)	m^3/h	Pa	cfm	in. wg
1	400	50	2600	3067	4,78	95	102	102	15055	0	8860	0,00
2	400	50	2600	4640	7,13	85	92	97	11910	800	7010	3,21
3	400	50	2600	5250	8,00	80	87	96	9045	1400	5325	5,62
4	400	50	2600	5141	7,89	84	91	97	6320	1800	3720	7,23
5	400	50	2430	2502	3,95	92	99	100	14010	0	8245	0,00
6	400	50	2360	3460	5,36	82	89	96	10780	660	6345	2,65
7	400	50	2335	3767	5,81	77	84	95	8090	1117	4760	4,48
8	400	50	2345	3677	5,68	80	87	95	5655	1445	3325	5,80
9	400	50	1840	1122	2,04	84	92	94	10495	0	6175	0,00
10	400	50	1815	1598	2,67	75	82	90	8260	388	4865	1,56
11	400	50	1800	1761	2,89	71	78	89	6235	663	3670	2,66
12	400	50	1805	1708	2,82	74	81	89	4350	855	2560	3,43
13	400	50	1235	402	0,84	74	81	85	6990	0	4115	0,00
14	400	50	1215	543	1,08	64	71	77	5535	176	3260	0,71
15	400	50	1210	594	1,17	62	69	76	4185	299	2465	1,20
16	400	50	121	574	1,14	64	71	77	2920	386	1720	1,55

U = Supply voltage. **f** = Frequency. **n** = Speed (RPM). P_{ed} = Absorbed power. **I** = Absorbed current. LpA_{in} = Sound pressure level on suction side.LwA_{in} = Sound power level on suction side. LwA_{out} = Sound power level on pressure side. q_v = Volume flow rate. p_{fs} = Pressure increase.

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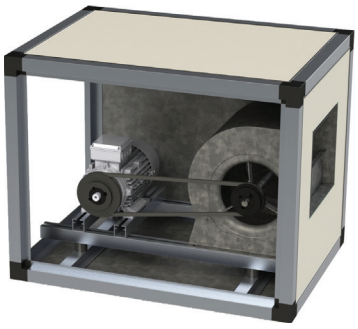
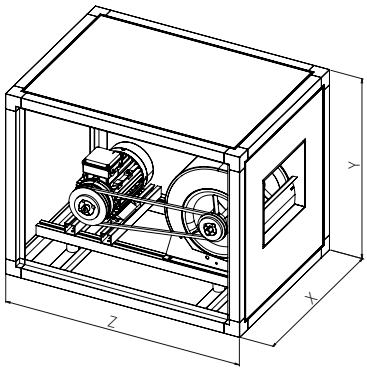
FAN MODULE
UTR



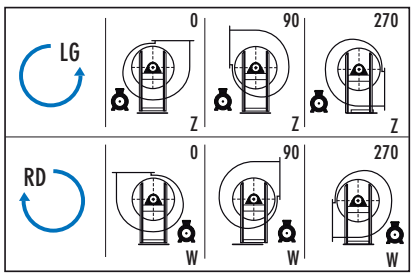
Forward curved blade fan unit with belt drive.
Galvanized steel centrifugal fan with forward curved blades, double inlet, belt-driven.
Rubber anti-vibration mounts and anti-vibration coupling on the discharge outlet.
Belt-driven execution with maintenance-free bearings mounted in stamped steel bearing frames.
Three-phase asynchronous 4-pole motors with squirrel cage rotor, class IE3, in 400 V - 3ph - 50/60 Hz execution, IP55 protection. Available in dual polarity double winding 4/6-pole 2-speed version. SPA pulley transmission coupled with TAPER BUSH to shafts. Belt tensioning slide on aluminum base.
Operating temperature range -20 ÷ +60 °C.
Represents the most economical and widely used solution in the restaurant and catering sector, where the extraction load remains constant over time. With the appropriate transmission ratio, it will be possible to vary the desired operating point.

DIMENSIONS

Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	2	70	655	715	900
4500	2	90	945	715	1000
6000	2	120	1250	715	1000
7500	2	140	1540	715	1000
9000	2	160	1250	1005	1000
12000	2	190	1250	1310	1000



ORIENTATIONS



STANDARD orientation 3000-4500-9000-12000: LG90.
STANDARD orientation 6000-7500: RD270.

NOTE - At the time of ordering, please communicate the required operating point and orientation.

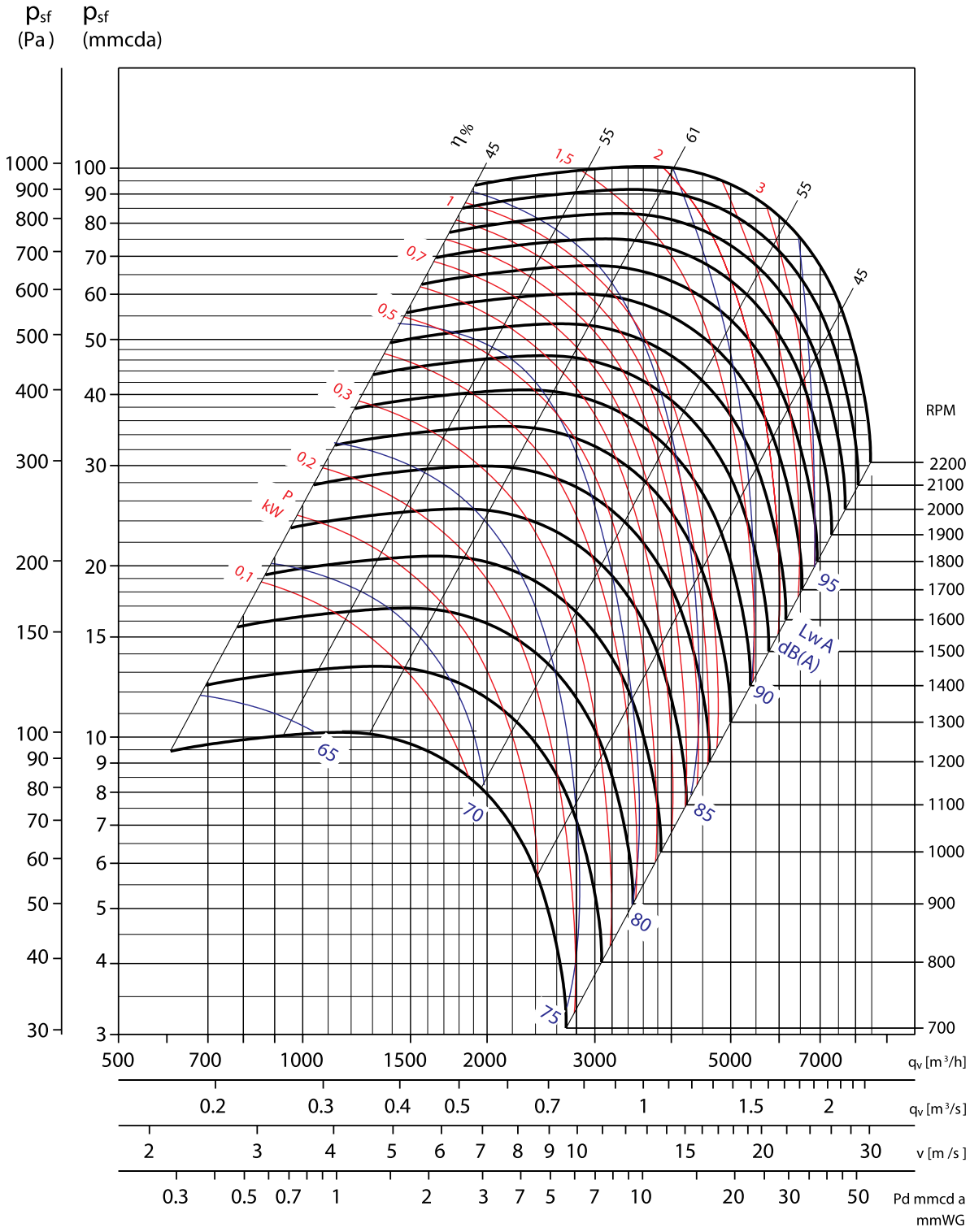
U SERIES
Modular air handling unit

QUICK SELECTION TABLE

Model	Fan	Flow rate m^3/h	Max. total pressure Pa	Power nominal kW	Power Duty point kW	RPM RPM	Power sound dB
3000	9/9	3000	850	1,5	1,4	2014	65
4500	10/10	4500	850	2,2	2,1	1743	67
6000	12/12	6000	800	3	2,7	1460	68
7500	12/12	7500	850	4	3,7	1479	69
9000	15/15	9000	750	4	3,7	1167	68
12000	18/18	12000	750	5,5	4,9	978	68

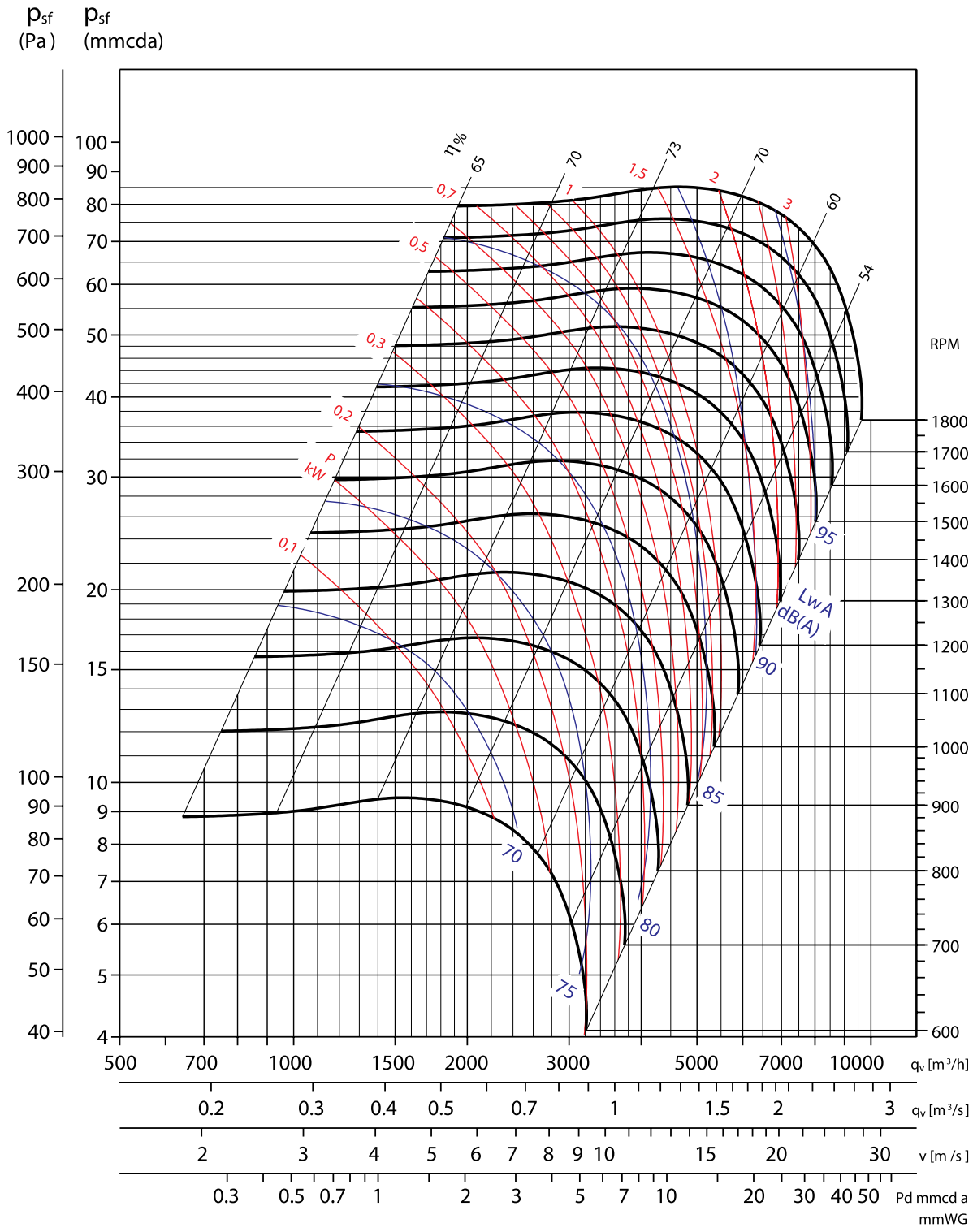
CHARACTERISTIC CURVES

UTR 3000 - 9/9



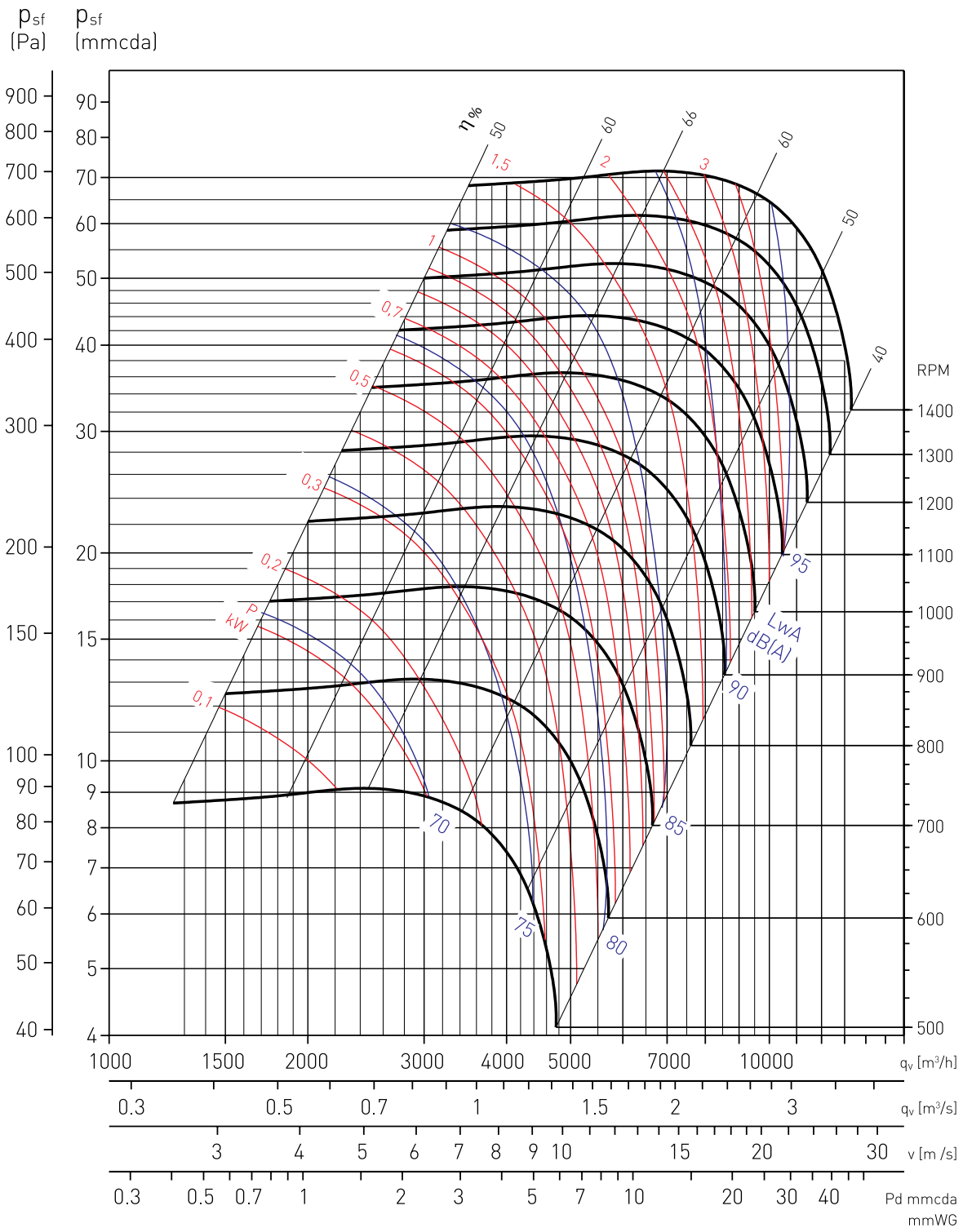
Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	25	21	12	10	4.1	5.5	9	16

UTR 4500 - 10/10



Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	31	21	14	9	3.6	6.2	9	17

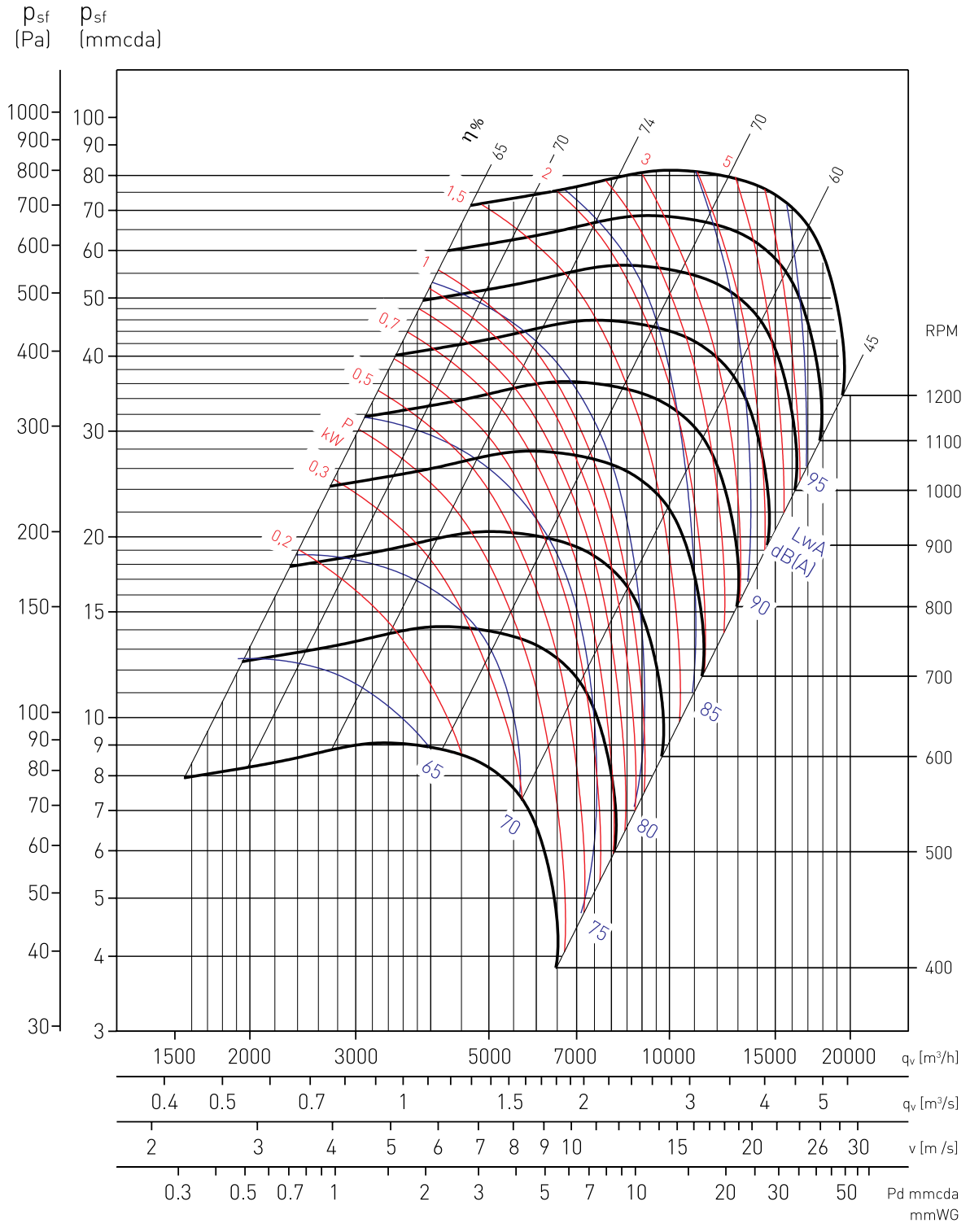
UTR 6000/ UTR 7500 - 12/12



Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	30	21	15	8	3.8	5.7	10	19

U SERIES
Modular air handling unit

UTR 9000 - 15/15



Hz	63	125	250	500	1000	2000	4000	8000
-Δ dB	24.6	15.1	14.2	8.2	4.8	5.8	9.6	15.5

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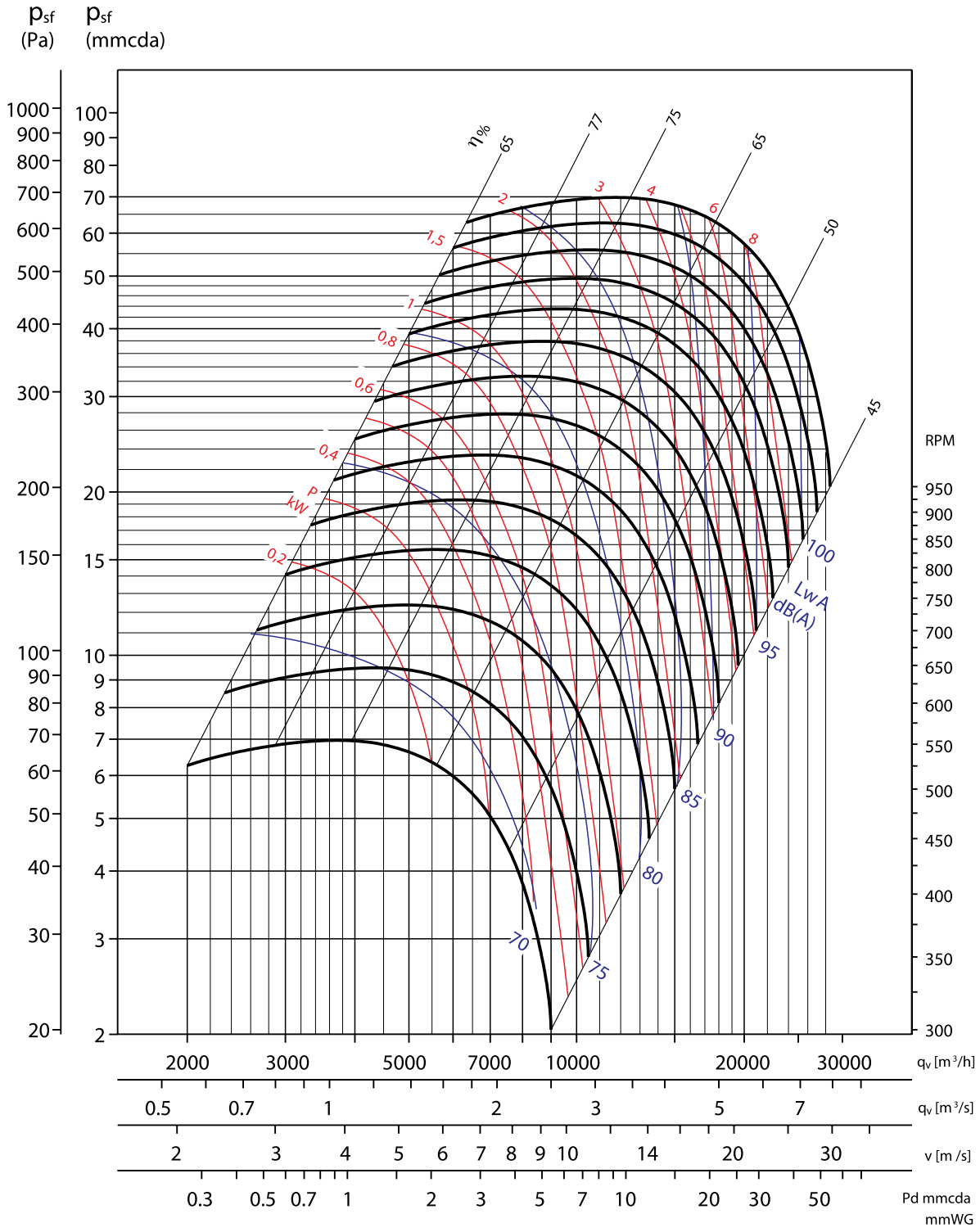
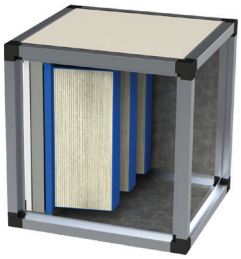
UTR 12000 - 18/18



Hz	63	125	250	500	1000	2000	4000	8000
Δ dB	24	17	13	5	4.9	7	10	20

U SERIES
Modular air handling unit

FILTER MODULE
UFT



Filter unit ideal for the civil air conditioning sector and air filtration in industrial processes. Capable of retaining air impurities, improving air quality.

F13 Filter class (EN 779) **G2** in flat section aluminium wire (**ISO coarse 25%**).

F12 Filter class (EN 779) **G4** pleated polyester fibre (**ISO coarse 75%**).

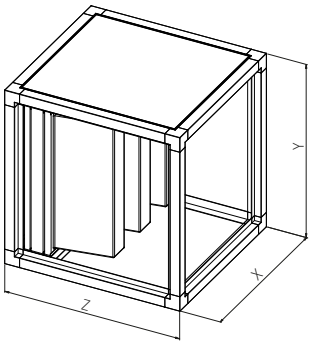
F18 Filter class (EN 779) **F8** (**ISO ePm1 60%**) 4 rigid bags.

QUICK SELECTION TABLE

Model/Flow rate	F13				F12		
	Quantity	Dimensions	Efficiency	Pressure drop medium / final recommended	Quantity	Dimensions	Efficiency
m^3/h	N.	mm		Pa	N.	mm	
3000	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
4500	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
6000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
7500	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
9000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	2	592x287x22	G2 ISO coarse 25%	80 / 150	2	592x287x48	G4 ISO coarse 75%
12000	4	592x592x22	G2 ISO coarse 25%	80 / 150	4	592x592x48	G4 ISO coarse 75%
18000	6	592x592x22	G2 ISO coarse 25%	80 / 150	6	592x592x48	G4 ISO coarse 75%

DIMENSIONS

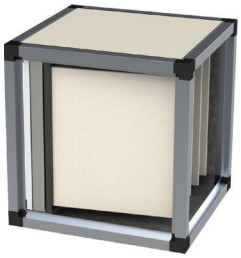
Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	39	655	715	700
4500	1	51	945	715	700
6000	1	61	1250	715	700
7500	1	74	1540	715	700
9000	1	83	1250	1005	700
12000	1	86	1250	1310	700
18000	1	130	1845	1310	700



			F18/4 95%			
Pressure drop medium / final recommended Pa	Quantity N.	Dimensions mm	Efficiency	Pressure drop medium / final recommended Pa	Pressure total average load Pa	Pressure load total final Pa
125 / 200	1	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	1	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	1	592x287x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	2	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	2	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	1	592x287x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	2	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	2	592x287x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	4	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950
125 / 200	6	592x592x292	F8 ISO ePm1 60%	330 / 600	535	950

U SERIES
Modular air handling unit

UFTF



Filter unit ideal for the civil air conditioning sector and air filtration in industrial processes. Represents the right compromise between cost and filtration efficiency.

F13 Filter class (EN 779) **G2** in flat section aluminium wire (**ISO coarse 25%**).

F12 Filter class (EN 779) **G4** pleated polyester fibre (**ISO coarse 75%**).

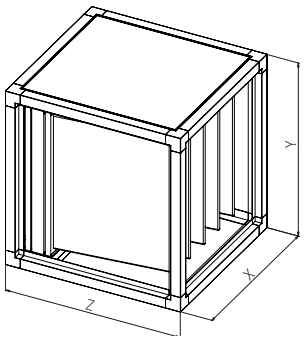
F16 S Filter class (EN 779) **F9** (**ISO ePm1 85%**) 12 flexible bags thickness 380 mm.

QUICK SELECTION TABLE

Model/Flow rate	F13				F12		
	Quantity	Dimensions	Efficiency	Pressure drop average / recommended final	Quantity	Dimensions	Efficiency
m^3/h	N.	mm		Pa	N.	mm	
3000	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
4500	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
6000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
7500	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
9000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	2	592x287x22	G2 ISO coarse 25%	80 / 150	2	592x287x48	G4 ISO coarse 75%
12000	4	592x592x22	G2 ISO coarse 25%	80 / 150	4	592x592x48	G4 ISO coarse 75%
18000	6	592x592x22	G2 ISO coarse 25%	80 / 150	6	592x592x48	G4 ISO coarse 75%

DIMENSIONS

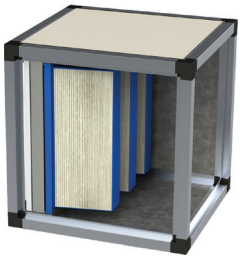
Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	39	655	715	700
4500	1	51	945	715	700
6000	1	61	1250	715	700
7500	1	74	1540	715	700
9000	1	83	1250	1005	700
12000	1	86	1250	1310	700
18000	1	130	1845	1310	700



			F16 90 S			
Pressure drop medium / final recommended Pa	Quantity N.	Dimensions mm	Efficiency	Pressure drop medium / final recommended Pa	Pressure total average load Pa	Pressure load total final Pa
125 / 200	1	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	1	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	1	592x287x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	2	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	2	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	1	592x287x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	2	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	2	592x287x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	4	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800
125 / 200	6	592x592x380	F9 ISO ePm1 85%	310 / 450	515	800

U SERIES
Modular air handling unit

UFTH



Filter unit ideal for the hospital and chemical/biological research sector. Capable of retaining not only fine dust but also viruses and bacteria thanks to its extremely high efficiency.

F13 Filter class (EN 779) **G2** in flat section aluminium wire (**ISO coarse 25%**).

F12 Filter class (EN 779) **G4** pleated polyester fibre (**ISO coarse 75%**).

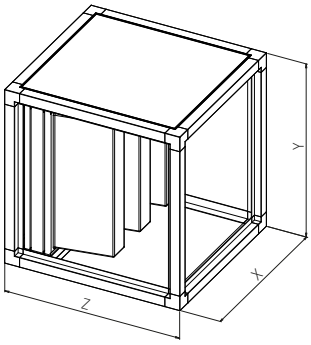
F18H Filter class (EN 779) **H13** (**ISO ePm1 99%**) 4 rigid bags.

QUICK SELECTION TABLE

Model/Flow rate	F13				F12		
	Quantity	Dimensions	Efficiency	Pressure drop average / recommended final	Quantity	Dimensions	Efficiency
m^3/h	N.	mm		Pa	N.	mm	
3000	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
4500	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
6000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
7500	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
9000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	2	592x287x22	G2 ISO coarse 25%	80 / 150	2	592x287x48	G4 ISO coarse 75%
12000	4	592x592x22	G2 ISO coarse 25%	80 / 150	4	592x592x48	G4 ISO coarse 75%
18000	6	592x592x22	G2 ISO coarse 25%	80 / 150	6	592x592x48	G4 ISO coarse 75%

DIMENSIONS

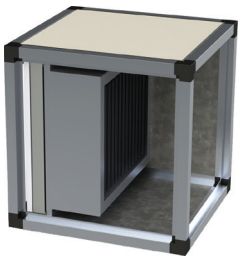
Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	39	655	715	700
4500	1	51	945	715	700
6000	1	61	1250	715	700
7500	1	74	1540	715	700
9000	1	83	1250	1005	700
12000	1	86	1250	1310	700
18000	1	130	1845	1310	700



		F18/4 H13				
Pressure drop medium / final recommended Pa	Quantity N.	Dimensions mm	Efficiency	Pressure drop medium / final recommended Pa	Pressure load total medium Pa	Pressure load total final Pa
125 / 200	1	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	1	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	1	592x287x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	2	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	2	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	1	592x287x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	2	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	2	592x287x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	4	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950
125 / 200	6	592x592x292	H13 ISO ePm1 99%	425 / 600	630	950

U SERIES
Modular air handling unit

UFES



Filter unit ideal across all sectors. It is the top of filtration. Unlike conventional mechanical filtration, the electrostatic filter attracts onto its plates everything that passes through it with 95% efficiency. Advantages include extremely low pressure drop throughout the entire operating cycle. Furthermore, the filter is permanent: simply clean and rinse it with the appropriate product (see accessories) to restore it to its original condition. This makes it possible to use less powerful fans with lower electricity consumption, thus generating less noise, more reliability and long-term cost savings.

F13 Filter class (EN 779) **G2** in flat section aluminium wire (**ISO coarse 25%**).

F12 Filter class (EN 779) **G4** pleated polyester fibre (**ISO coarse 75%**).

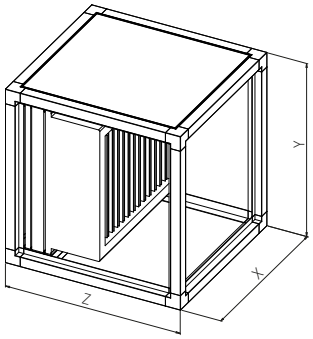
FE-H Filter class (EN 779) **E10** electrostatic filter (**ISO ePm1 95%**).

QUICK SELECTION TABLE

Model/Flow rate	F13				F12		
	Quantity	Dimensions	Efficiency	Pressure drop average / recommended final	Quantity	Dimensions	Efficiency
m^3/h	N.	mm		Pa	N.	mm	
3000	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
4500	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
6000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
7500	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%
9000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%
	2	592x287x22	G2 ISO coarse 25%	80 / 150	2	592x287x48	G4 ISO coarse 75%
12000	4	592x592x22	G2 ISO coarse 25%	80 / 150	4	592x592x48	G4 ISO coarse 75%
18000	6	592x592x22	G2 ISO coarse 25%	80 / 150	6	592x592x48	G4 ISO coarse 75%

DIMENSIONS

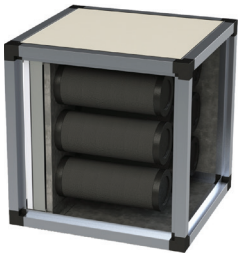
Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	54	655	715	700
4500	1	71	945	715	700
6000	1	91	1250	715	700
7500	1	107	1540	715	700
9000	1	125	1250	1005	700
12000	1	155	1250	1310	700
18000	1	250	1845	1310	700



			FEH			
Pressure drop medium / final recommended Pa	Quantity N.	Dimensions mm	Efficiency	Pressure drop medium / final recommended Pa	Pressure load total medium Pa	Pressure total final load Pa
125 / 200	1	592x592x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	1	592x592x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	1	592x287x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	2	592x592x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	2	592x592x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	1	592x287x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	2	592x592x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	2	592x287x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	4	592x592x218	E10 ePm1 95%	50 / 80	255	430
125 / 200	6	592x592x218	E10 ePm1 95%	50 / 80	255	430

U SERIES
Modular air handling unit

UFC



Filter unit ideal for the industrial, catering and restaurant sector. Thanks to activated carbon cartridges, it is capable of absorbing unpleasant odors from food cooking and chemical vapors generated by welding.

F13 Filter class (EN 779) **G2** in flat section aluminium wire (**ISO coarse 25%**).

F12 Filter class (EN 779) **G4** pleated polyester fibre (**ISO coarse 75%**).

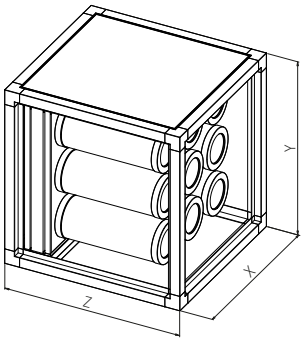
F19C Filter (**CTC 45%**) 160 mm cartridges (3.1 kg activated carbon each) or on request 140 mm (2.5 kg activated carbon each).

QUICK SELECTION TABLE

Model/Flow rate	F13				F12			
	Quantity	Dimensions	Efficiency	Pressure drop medium / final recommended	Quantity	Dimensions	Efficiency	Loss of medium load / finale recommended
m³/h	N.	mm		Pa	N.	mm		Pa
3000	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%	125 / 200
4500	1	592x592x22	G2 ISO coarse 25%	80 / 150	1	592x592x48	G4 ISO coarse 75%	125 / 200
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%	125 / 200
6000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%	125 / 200
7500	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%	125 / 200
	1	592x287x22	G2 ISO coarse 25%	80 / 150	1	592x287x48	G4 ISO coarse 75%	125 / 200
9000	2	592x592x22	G2 ISO coarse 25%	80 / 150	2	592x592x48	G4 ISO coarse 75%	125 / 200
	2	592x287x22	G2 ISO coarse 25%	80 / 150	2	592x287x48	G4 ISO coarse 75%	125 / 200
12000	4	592x592x22	G2 ISO coarse 25%	80 / 150	4	592x592x48	G4 ISO coarse 75%	125 / 200
18000	6	592x592x22	G2 ISO coarse 25%	80 / 150	6	592x592x48	G4 ISO coarse 75%	125 / 200

DIMENSIONS

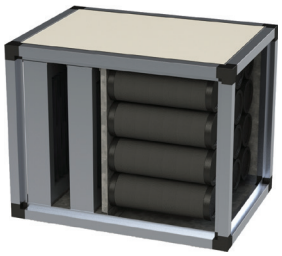
Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	63	655	715	700
4500	1	91	945	715	700
6000	1	118	1250	715	700
7500	1	142	1540	715	700
9000	1	164	1250	1005	700
12000	1	210	1250	1310	700
18000	1	300	1845	1310	700



F19 C										
Quantity	Plate size	Efficiency	160 mm cartridges			140 mm cartridges			Pressure total average load (F19 160/140)	Pressure total final load (F19 160/140)
			Cartridges	Carbon active	Pressure load	Cartridges	Carbon active	Pressure load		
N.	mm		mm / N.	kg	Pa	mm / N.	kg	Pa	Pa	Pa
1	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600
1	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600
1	592x287x24	CTC 45%	Ø 160x400 / 4	3,1	180	Ø 140x400 / 7	2,5	250	385 / 530	530 / 600
2	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600
2	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600
1	592x287x24	CTC 45%	Ø 160x400 / 4	3,1	180	Ø 140x400 / 7	2,5	250	385 / 530	530 / 600
2	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600
2	592x287x24	CTC 45%	Ø 160x400 / 4	3,1	180	Ø 140x400 / 7	2,5	250	385 / 530	530 / 600
4	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600
6	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250	385 / 530	530 / 600

U SERIES
Modular air handling unit

UFIOC



Additional filter unit to be placed after the fan module (following air flow direction). Represents the most performant version of the UFC unit. Ideal in the catering and restaurant sector for the triple combined action of negative ionization, ozone and activated carbon, which eliminates any unpleasant odor from food cooking and vapors.
The unit contains:
- **Negative ionization stage**. It exploits the corona effect principle, whereby the fine particles passing through it become negatively charged and stick to surfaces, thus no longer remaining suspended in the air.
- **Ozone generator stage**. By recombining oxygen molecules, it creates ozone which, through oxidation-reduction, eliminates all odor-causing molecules, as well as viruses and molds. Furthermore, being placed before the activated carbon, the ozone is able to extend its lifespan.
- **Activated carbon cartridge stage**. It is capable of absorbing unpleasant odours from cooking food and vapours.

Ionizing cell (ion emission 5 million per cm^3).

Ozone-generating cell (O3 emissions 294 $\mu g/m^3$).

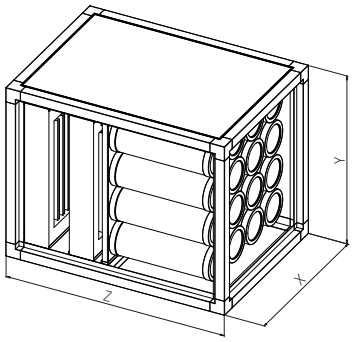
F19C Filter (CTC 45%) 160 mm cartridges (3.1 kg activated carbon each) or on request 140 mm (2.5 kg activated carbon each).

QUICK SELECTION TABLE

Model/Flow rate	Ionizing cell			Ozone-generating cell		
	Quantity	Dimensions	Emission ion	Quantity	Dimensions	Emission ozone
m^3/h	N.	mm	million/cm^3	N.	mm	$\mu g/m^3$
3000	1	592x592x95	5	1	592x592x95	196
4500	1	592x592x95	5	1	592x592x95	196
	1	592x287x95	5	1	592x287x95	196
6000	2	592x592x95	5	2	592x592x95	196
7500	2	592x592x95	5	2	592x592x95	196
	1	592x287x95	5	1	592x287x95	196
9000	2	592x592x95	5	2	592x592x95	196
	2	592x287x95	5	2	592x287x95	196
12000	4	592x592x95	5	4	592x592x95	196
18000	6	592x592x95	5	6	592x592x95	196

DIMENSIONS

Size	Type box	Wt. kg	X mm	Y mm	Z mm
3000	1	92	655	715	900
4500	1	120	945	715	1000
6000	1	170	1250	715	1000
7500	1	200	1540	715	1000
9000	1	250	1250	1005	1000
12000	1	286	1250	1310	1000
18000	1	440	1845	1310	1000



			F19 C					
Quantity	Plate size	Efficiency	160 mm cartridges			140 mm cartridges		
			Cartridges	Carbon active	Pressure load	Cartridges	Carbon active	Pressure load
N.	mm		mm / N.	kg	Pa	mm / N.	kg	Pa
1	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250
1	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250
1	592x287x24	CTC 45%	Ø 160x400 / 4	3,1	180	Ø 140x400 / 7	2,5	250
2	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250
2	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250
1	592x287x24	CTC 45%	Ø 160x400 / 4	3,1	180	Ø 140x400 / 7	2,5	250
2	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250
2	592x287x24	CTC 45%	Ø 160x400 / 4	3,1	180	Ø 140x400 / 7	2,5	250
4	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250
6	592x592x24	CTC 45%	Ø 160x400 / 9	3,1	180	Ø 140x400 / 16	2,5	250

HEAT RECOVERY UNITS AND AHU

Ventilation

Comfort and performance at maximum efficiency energy

REC
Double panel heat recovery unit with EC fans

p. 190

AHU
Non-residential Ventilation Unit for high air flow rates

p. 214

REC

Heat recovery unit with EC fans

Product REC

Construction Composite structure with simple galvanized sheet metal panels (SP version)
or with sandwich panels with internal acoustic insulation in expanded polyurethane
Thickness 23 mm (DP version)

FEATURES
External enclosure in double-panel galvanized sheet metal for models up to size 4900.
For larger sizes (5400-12000): aluminum profiles and double galvanized steel paneling 23 mm thick, with interposed thermo-acoustic insulation in expanded polyurethane with a density of 40 kg/m^3. High-efficiency cross-flow heat exchangers (minimum 73% with dry air and 80% with humid air). 2 temperature probes (one for supply air and one for return air). Motorized bypass damper (IP54 actuator) controllable both manually and automatically.
Pressure switch for measuring the clogging level of supply filters.

Control board already set up for connection of a CO2 or humidity sensor (both optional). Condensate collection tray and drain. Easy installation and maintenance.
Convenient filter access points.

FANS
Backward curved blades up to 2000 m^3/h, forward curved blades on larger sizes.
Speed independently adjustable for both supply and return.

ON REQUEST
Colour display
Hot/cold water-air coil
Electric heater with circular body
Replacement filters F7/F8/F9
Roof for outdoor use
Inclined exhaust duct
Flanged circular replacement connectors
Room and duct CO2 sensor, 0-10 V DC
Differential pressure switch
NTC temperature probes
3-way valve
Rotary actuator for 3-way valve
Relay for smoke control board

BASIC CONTROL (standard)
EQUIPPED WITH 1 RS485 PORT MODBUS COMPATIBLE
Allows connecting a remote control or multiple boards in series connected to a single remote control. In this configuration, only the sensors of the first unit are used, while those of all other units, except for the static pressure switches, are ignored. Up to 32 units can be controlled separately but each unit can be adjusted independently. The filter replacement indicator on the remote control lights up when the filters of one or more units need to be replaced
TWO OPERATING MODES:
MANUAL: the user can directly set the speed of supply and return fans, as well as control
the bypass damper (opening/closing). It is also possible to set the speed of one of the two fans so that its speed is always a fraction of the reference fan. If a CO2, relative humidity or room temperature sensor is present,
the measured value is displayed on the remote control panel.
AUTOMATIC: both fans and bypass are managed by the controller without the possibility of user intervention. The fan speed
varies automatically in order to maintain the measured carbon dioxide level in the room below the reference value set by the user. However, it is possible to set the minimum speed of both fans in a range between 4% and 20%. The bypass damper always closes and opens automatically based on the reference temperature set by the user.

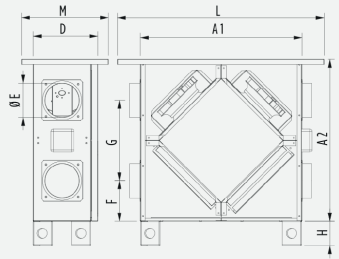
REMOTE CONTROL
Standard model (standard supply) Backlit graphic LCD display
Possibility to manage MAX 32 heat recovery units separately via RS 485 MOD BUS port
CO2 sensor management from 2000/5000 ppm, humidity sensor, room thermostat, electric heaters with 0-10 Volt signal, water coils with 0-10 Volt signal, fire alarm
Automatic/manual bypass
Weekly calendar management (automatic)
Automatic sanitization output management (optional)
Filter quality management
Independent fan speed control
Internal/external temperature management

DIMENSIONS

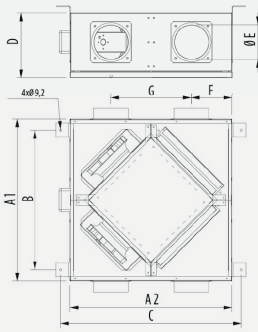
	Dimensions (mm)												
Model	A1	A2	B	C	D	øE	F	G	H	L	M	Kg H	Kg V
REC 700	1050	1050	900	1100	400	150	275	500	100	1200	450	77,0	80,0
REC 1000	1050	1050	900	1100	400	180	225	600	100	1200	450	96,0	104,0
REC 1500	1250	1250	1100	1310	550	315	300	650	100	1450	610	132,0	140,0
REC 2000	1250	1250	1100	1310	550	315	300	650	100	1450	610	148,0	160,0
REC 2500	1380	1380	1200	1440	600	315	315	750	100	1650	670	193,0	200,0
REC 3000	1380	1380	1200	1440	700	350	340	700	100	1650	770	225,0	250,0
REC 4000	1380	1380	1200	1440	800	350	315	750	100	1550	850	258,0	294,0
REC 5000	1650	1650	-	-	860	350	365	920	100	1900	850	370,0	408,0
REC 6000	1650	1650	-	-	860	450	365	920	100	1900	1000	370,0	408,0

HEAT RECOVERY UNIT WITH SINGLE-INLET CENTRIFUGAL FANS WITH BACKWARD-CURVED BLADES

VERTICAL

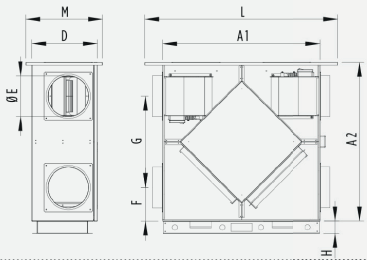


HORIZONTAL

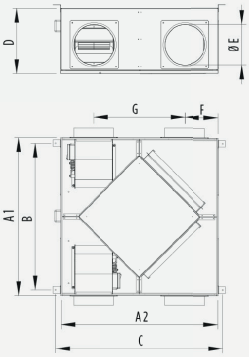


HEAT RECOVERY UNIT WITH SINGLE-INLET CENTRIFUGAL FANS WITH FORWARD-CURVED BLADES

VERTICAL



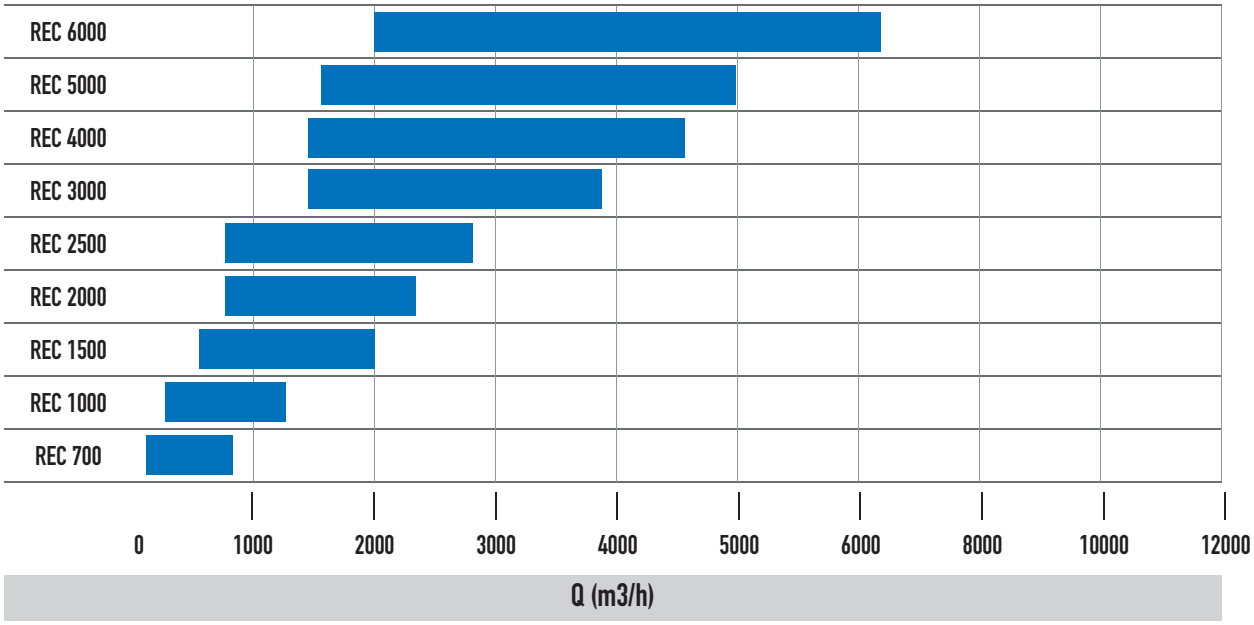
HORIZONTAL



REC

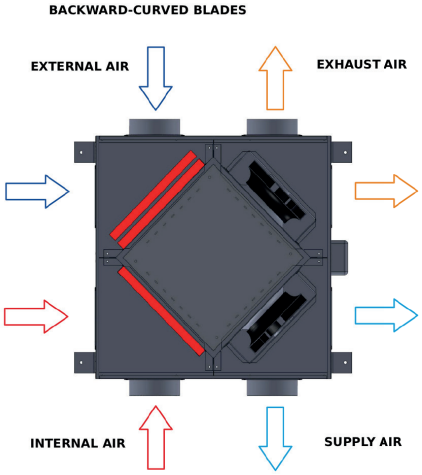
Heat recovery unit with EC fans

MODELS / AIR FLOW RATE RANGE



HORIZONTAL CONFIGURATION

For backward curved blade models only (sizes 2000 and smaller), the connection positions can be changed at will, while for all others the configurations shown below are available. The bypass must in any case always be on the supply side, regardless of the model.
ALL VIEWS ARE FROM BELOW (COVER SIDE)



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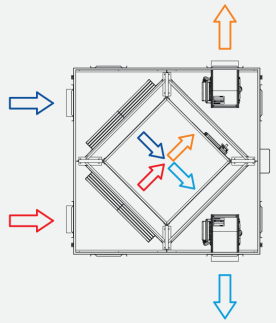
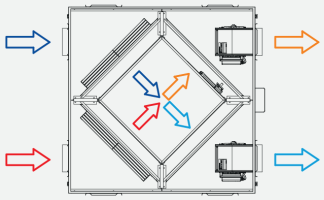
FORWARD-CURVED BLADES

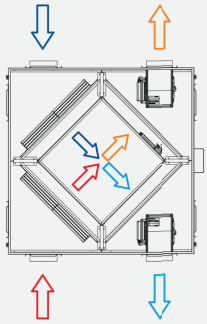
D1



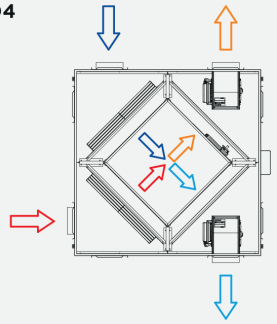
D2



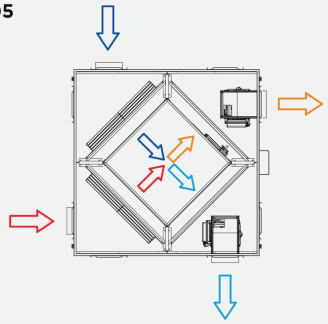
D3 - STANDARD



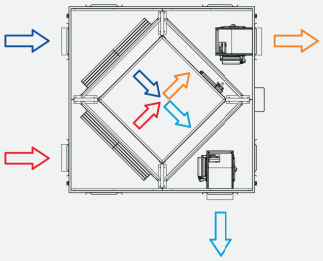
D4



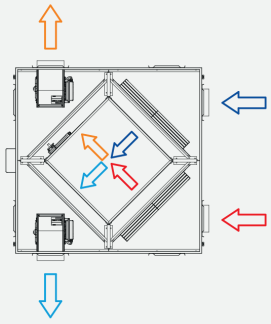
D5



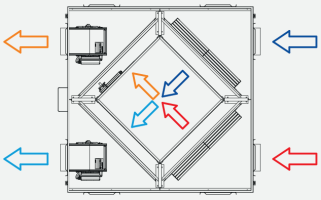
D6



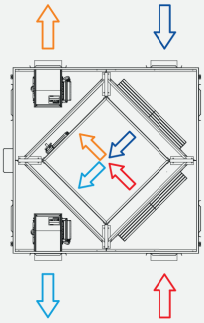
D7



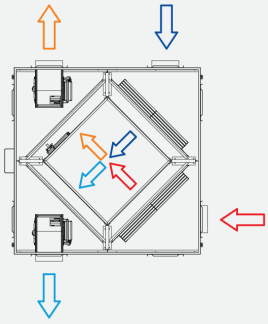
D8



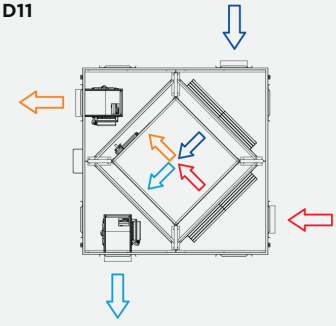
D9



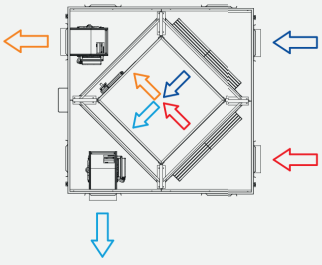
D10



D11



D12



SUPPLY AIR

EXHAUST AIR

EXTERNAL AIR

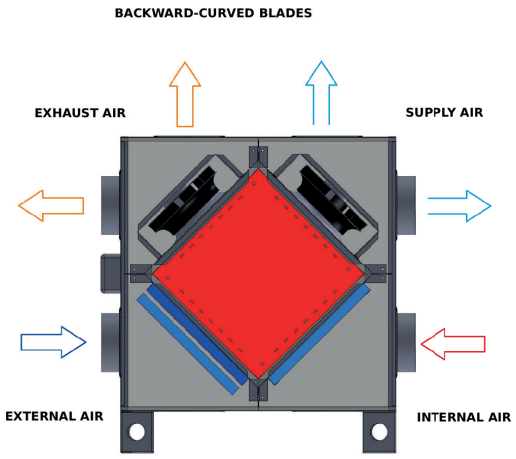
INTERNAL AIR

REC

Heat recovery unit with EC fans

VERTICAL CONFIGURATION

For backward curved blade models only (sizes 2000 and smaller), the connection positions can be changed at will, while for all others the configurations shown below are available. The bypass must in any case always be on the supply side, regardless of the model.



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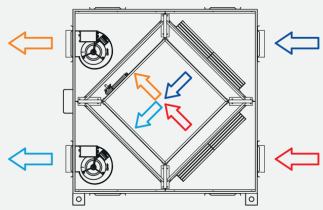
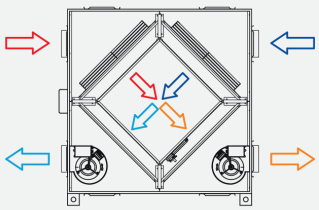
FORWARD-CURVED BLADES

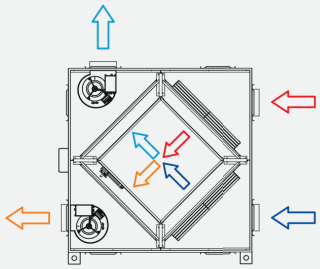
D1



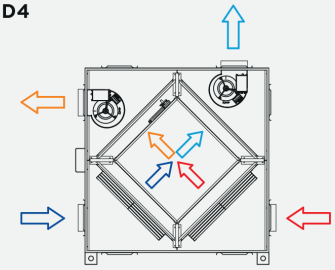
D2



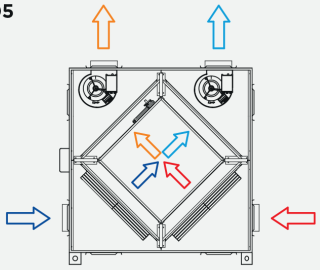
D3



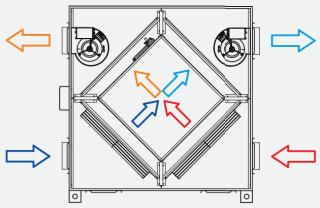
D4



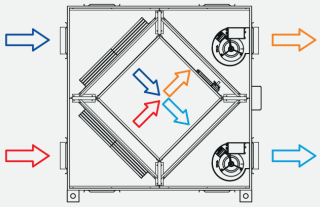
D5



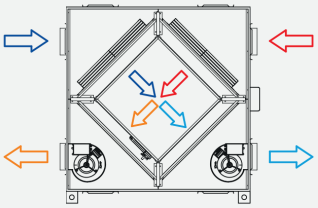
D6 - STANDARD



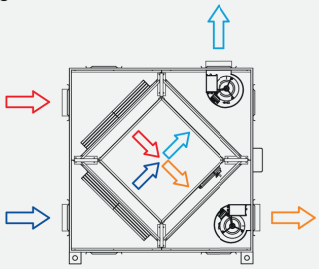
D7



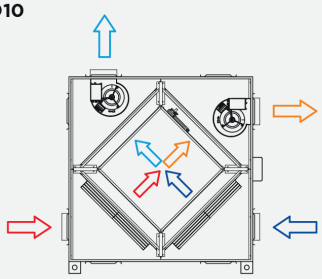
D8



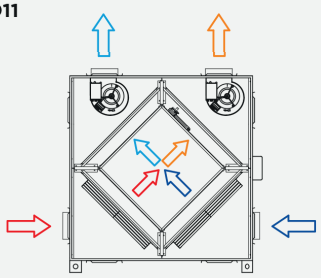
D9



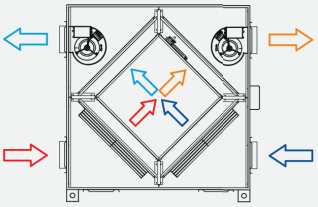
D10



D11



D12



SUPPLY AIR

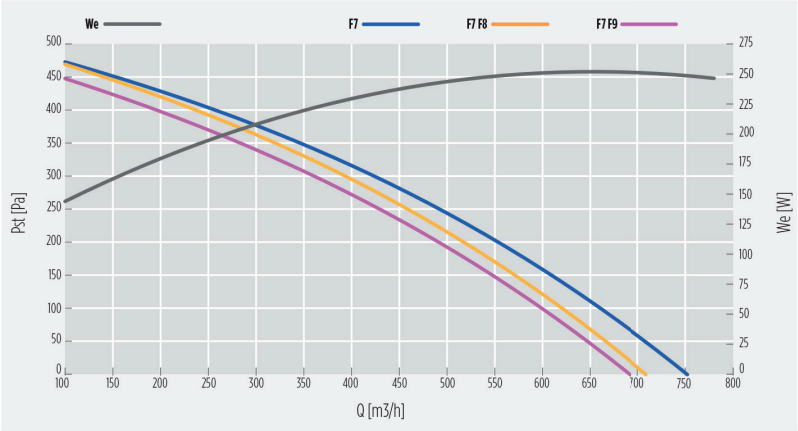
EXHAUST AIR

EXTERNAL AIR

INTERNAL AIR

REC 700

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	710	[m3/h]	0,197
Air flow rate @ 150 [Pa]	[m3/h]	610	[m3/h]	0,169

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	720
	[m3/h]	0,2
Absorbed electrical power (We, eff)	[W]	246
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1076
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1090
Face velocity at design flow rate	[m/s]	0,25
Nominal external pressure (ΔPs, ext)	[Pa]	37
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	241
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	246
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	73,7
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	45,5
Sound power on casing (LWA)	[dB(A)]	51
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	0,96x2	123x2	2760

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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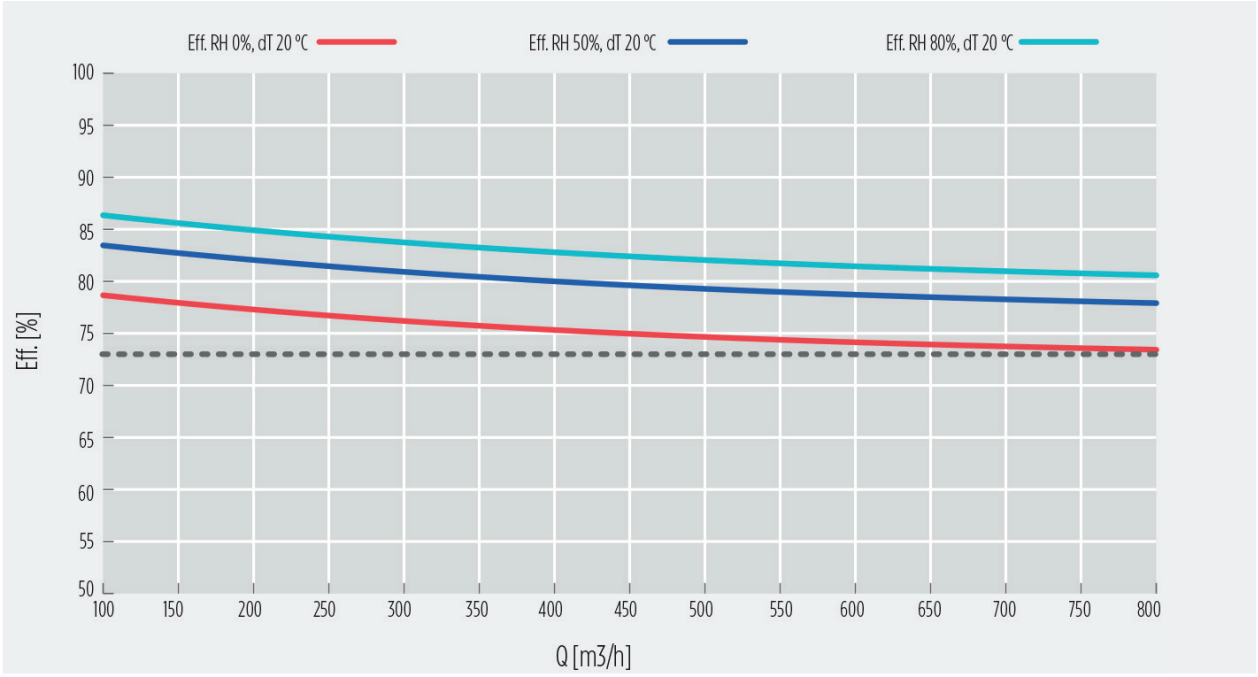
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
70	70	70	62	63	64	61	56	76	70	51	45

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

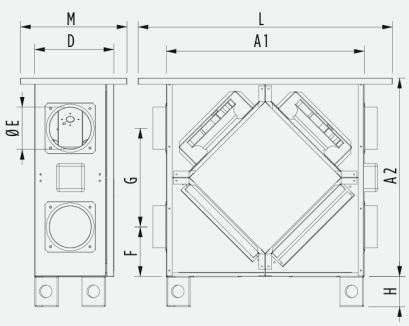
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



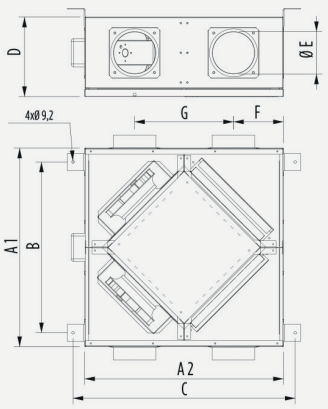
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1050	1050	900	1110	400	150	275	500	100	1200	450	77,0	80,0

VERTICAL



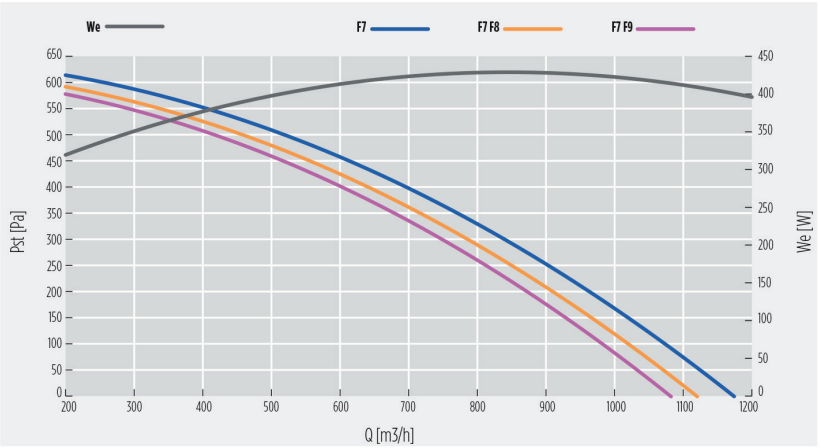
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 450 x 340 x 23 (mm)

REC 1000

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	1120	[m3/h]	0,311
Air flow rate @ 150 [Pa]	[m3/h]	1030	[m3/h]	0,286

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	1120
	[m3/h]	0,311
Absorbed electrical power (We, eff)	[W]	409
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1076
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1117
Face velocity at design flow rate	[m/s]	0,35
Nominal external pressure (ΔPs, ext)	[Pa]	54
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	257
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	262
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	75,1
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	52,0
Sound power on casing (LWA)	[dB(A)]	53
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	1,76x2	274x2	2573

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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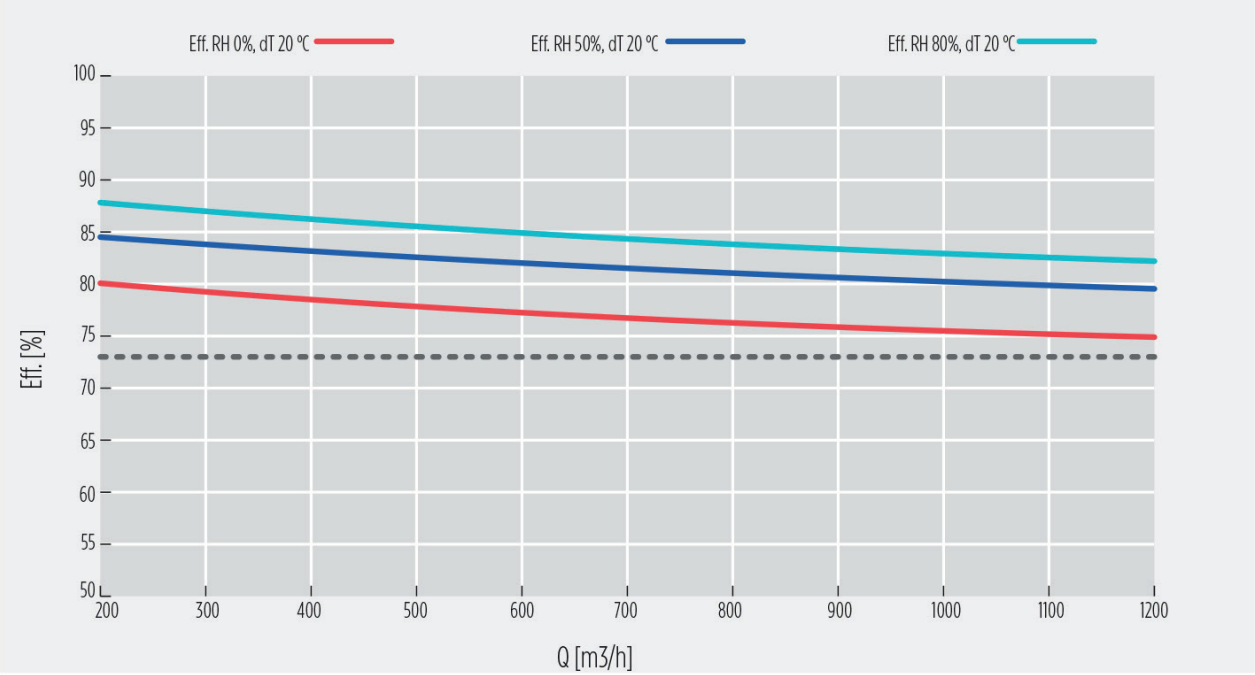
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
84	82	83	75	75	75	73	69	90	82	53	46

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

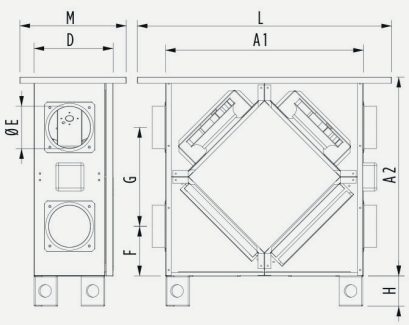
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



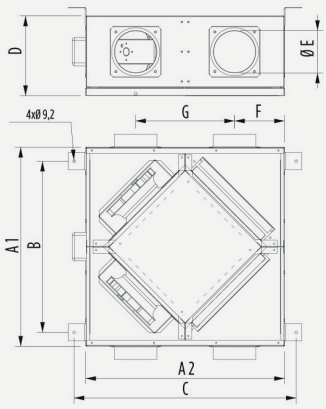
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1050	1050	900	1110	400	180	225	600	100	1200	450	96,0	104,0

VERTICAL



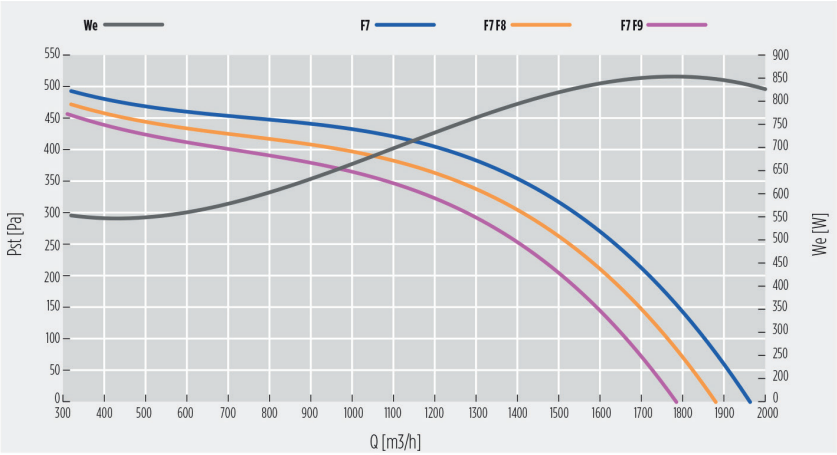
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 450 x 340 x 23 (mm)

REC 1500

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	1930	[m3/h]	0,536
Air flow rate @ 150 [Pa]	[m3/h]	1810	[m3/h]	0,502

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	1780
	[m3/h]	0,494
Absorbed electrical power (We, eff)	[W]	850
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1070
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1075
Face velocity at design flow rate	[m/s]	0,7
Nominal external pressure (ΔPs, ext)	[Pa]	365
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	264
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	269
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,6
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	53,2
Sound power on casing (LWA)	[dB(A)]	56
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	2,8x2	425x2	2760

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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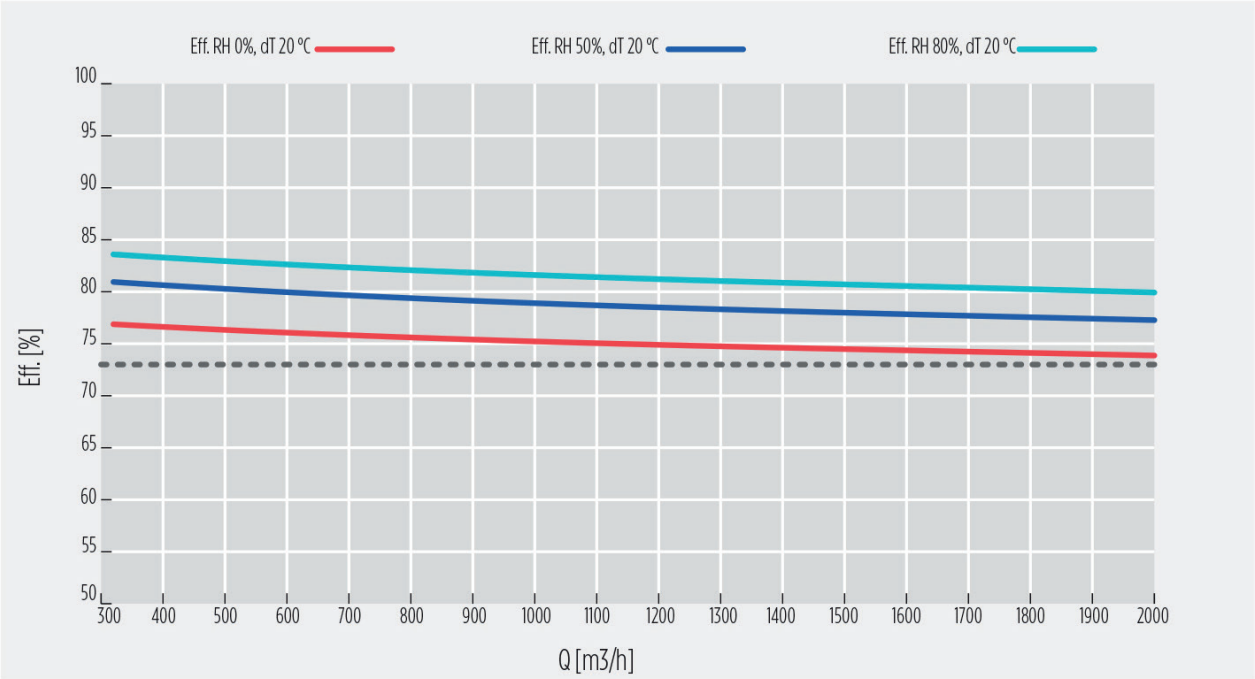
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
93	85	88	80	78	79	78	74	96	86	56	50

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

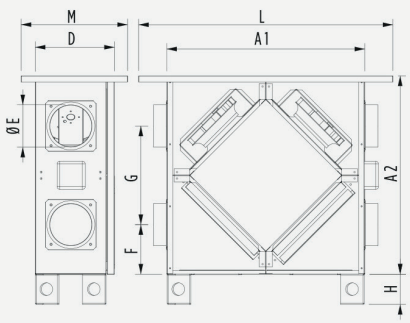
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



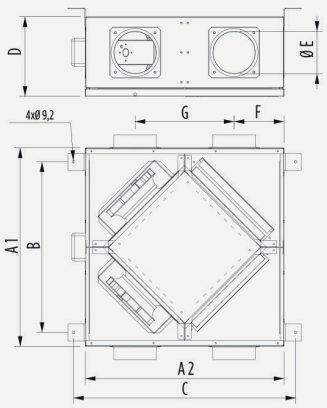
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1250	1250	1100	1310	550	315	300	650	100	1450	610	132,0	140,0

VERTICAL



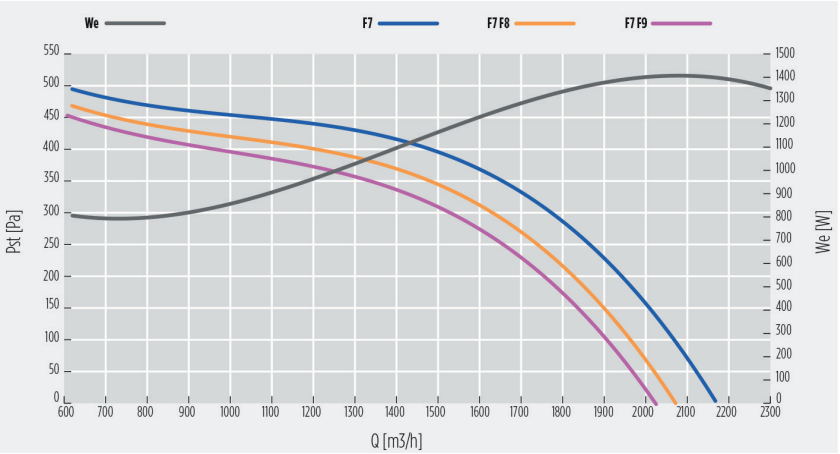
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 500 x 625 x 48 (mm)

REC 2000

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	2200	[m3/h]	0,611
Air flow rate @ 150 [Pa]	[m3/h]	2090	[m3/h]	0,580

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	1780
	[m3/h]	0,494
Absorbed electrical power (We, eff)	[W]	1633
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1326
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1380
Face velocity at design flow rate	[m/s]	0,7
Nominal external pressure (ΔPs, ext)	[Pa]	365
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	264
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	269
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,6
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	53,2
Sound power on casing (LWA)	[dB(A)]	56
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	3,5x2	816x2	2011

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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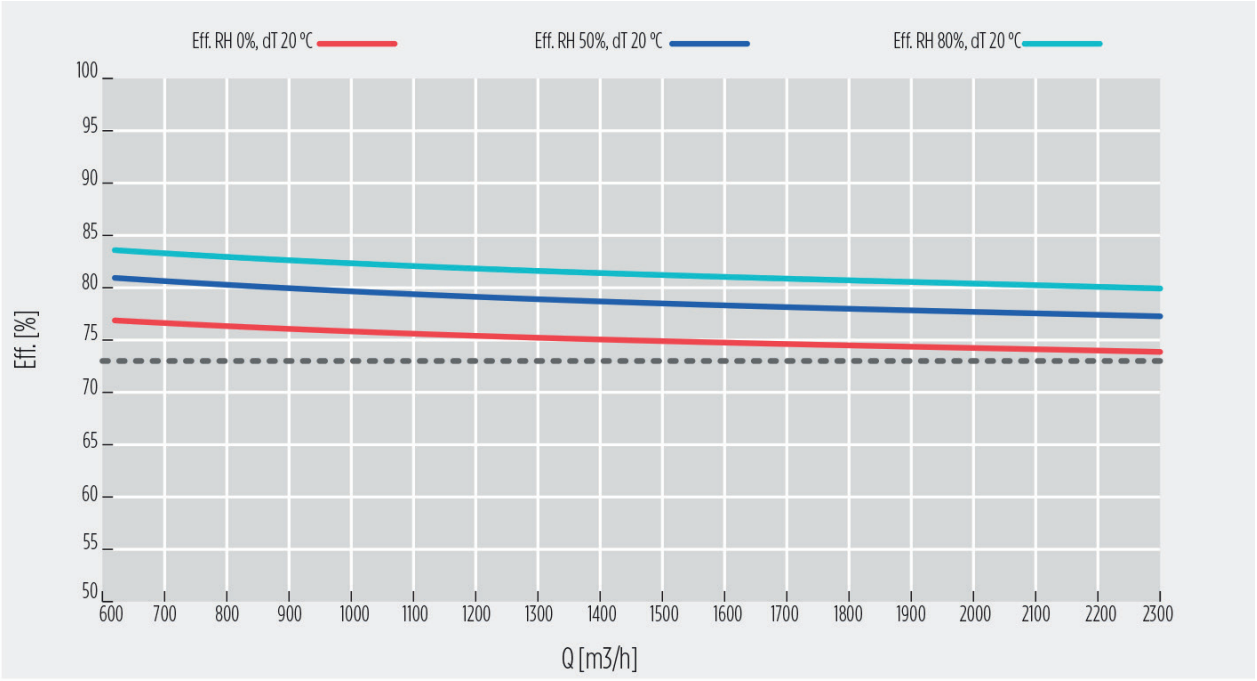
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
65	75	85	79	76	75	71	68	83	76	56	50

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

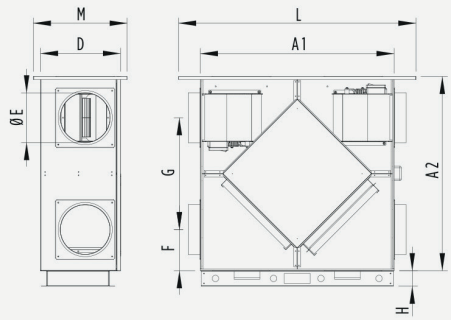
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



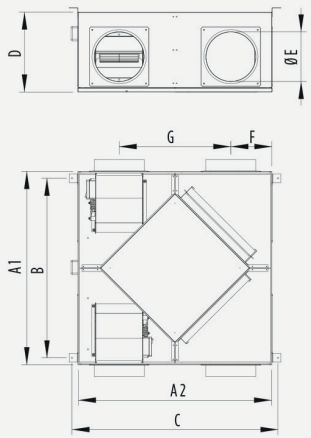
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1250	1250	1100	1310	550	315	300	650	100	1450	610	148,0	160,0

VERTICAL



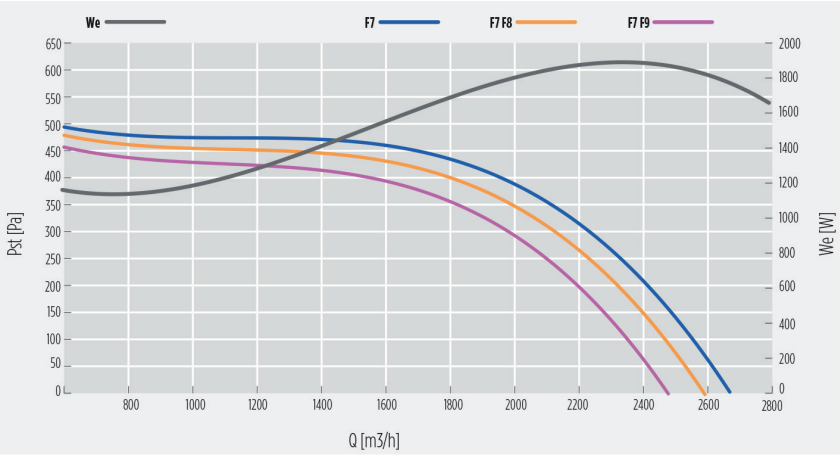
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 500 x 625 x 48 (mm)

REC 2500

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	2750	[m3/h]	0,764
Air flow rate @ 150 [Pa]	[m3/h]	2600	[m3/h]	0,722

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	2160
	[m3/h]	0,600
Absorbed electrical power (We, eff)	[W]	1980
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1297
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1300
Face velocity at design flow rate	[m/s]	0,85
Nominal external pressure (ΔPs, ext)	[Pa]	406
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	256
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	261
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,7
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	53,2
Sound power on casing (LWA)	[dB(A)]	59
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	4,5x2	1040x2	1903

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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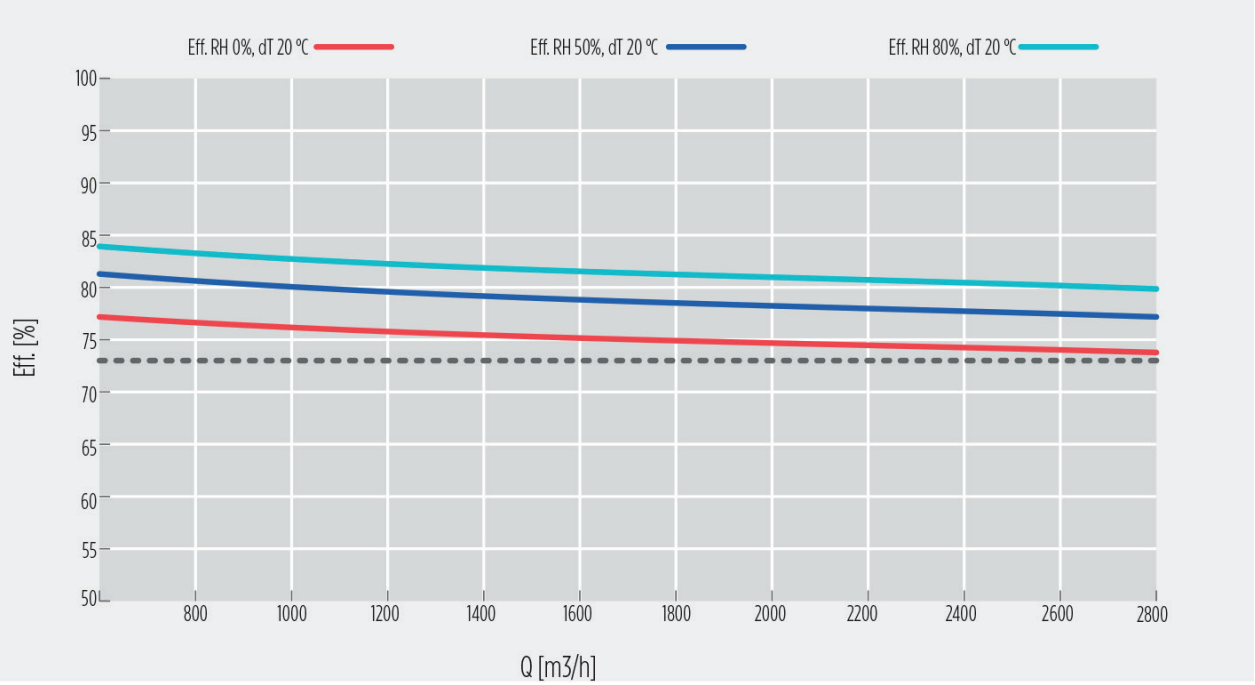
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
69	78	84	80	79	79	75	72	85	75	59	51

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

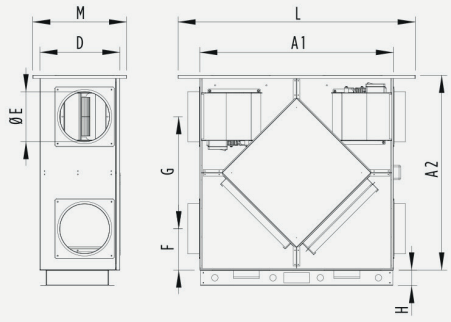
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



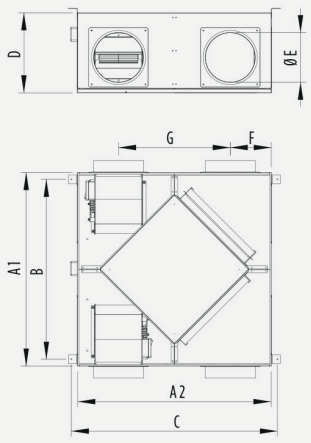
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1380	1380	1200	1440	600	315	315	750	100	1650	670	193,0	200,0

VERTICAL



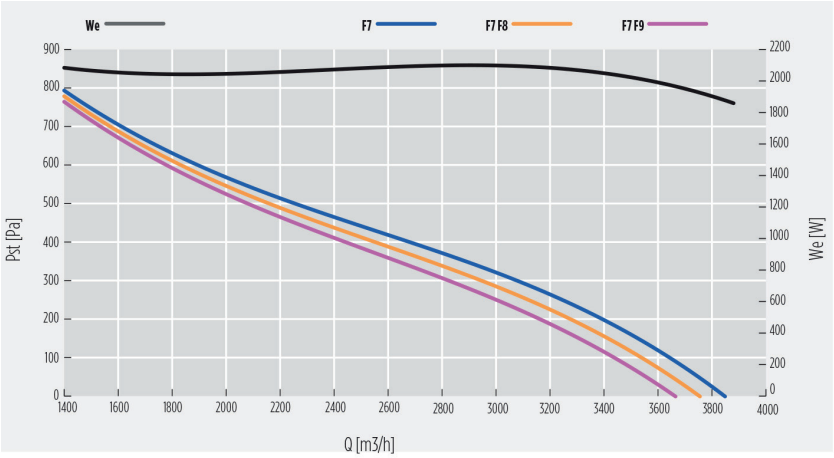
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 500 x 625 x 48 (mm)

REC 3000

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	3700	[m3/h]	1,000
Air flow rate @ 150 [Pa]	[m3/h]	3500	[m3/h]	0,933

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	2760
	[m3/h]	0,767
Absorbed electrical power (We, eff)	[W]	2097
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1038
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1038
Face velocity at design flow rate	[m/s]	1,1
Nominal external pressure (ΔPs, ext)	[Pa]	381
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	238
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	243
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,8
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	59,8
Sound power on casing (LWA)	[dB(A)]	60
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	4,2x2	954x2	1184

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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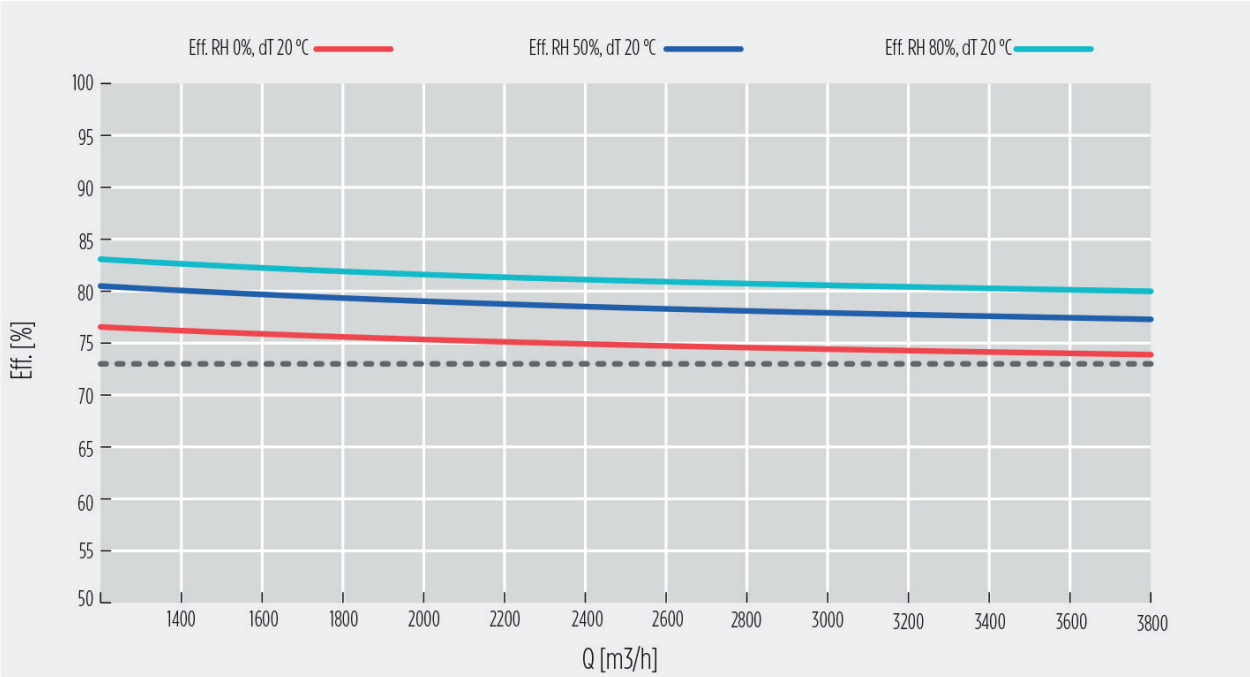
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
67	87	83	71	72	73	68	61	80	78	60	54

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

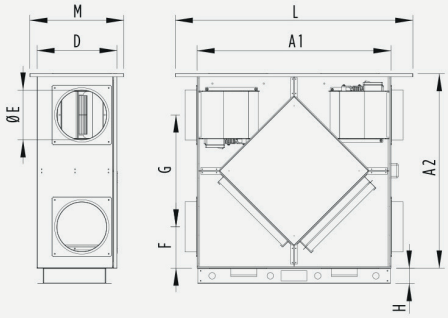
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



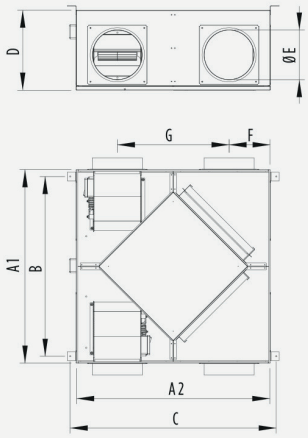
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1380	1380	1200	1440	700	350	340	700	100	1650	770	225,0	250,0

VERTICAL



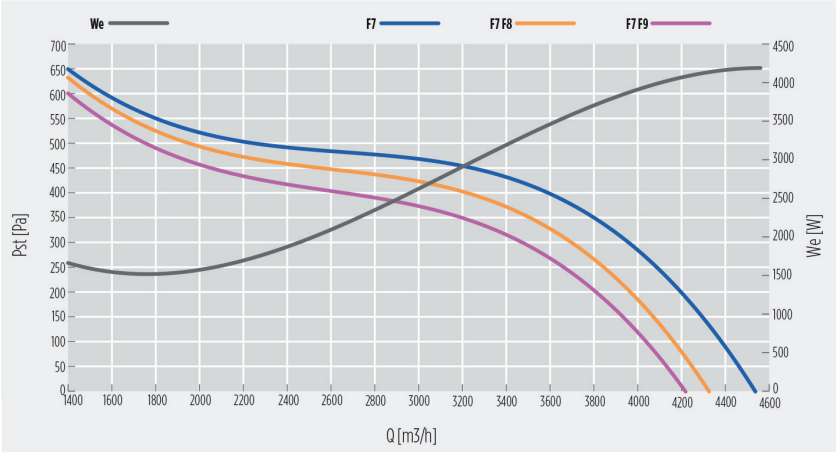
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 600 x 625 x 48 (mm)

REC 4000

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	4460	[m3/h]	1,239
Air flow rate @ 150 [Pa]	[m3/h]	4280	[m3/h]	1,189

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	2680
	[m3/h]	0,744
Absorbed electrical power (We, eff)	[W]	2192
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	1031
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	1035
Face velocity at design flow rate	[m/s]	1,6
Nominal external pressure (ΔPs, ext)	[Pa]	481
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	264
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	269
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,6
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	59,1
Sound power on casing (LWA)	[dB(A)]	61
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	9,1x2	2200x2	1979

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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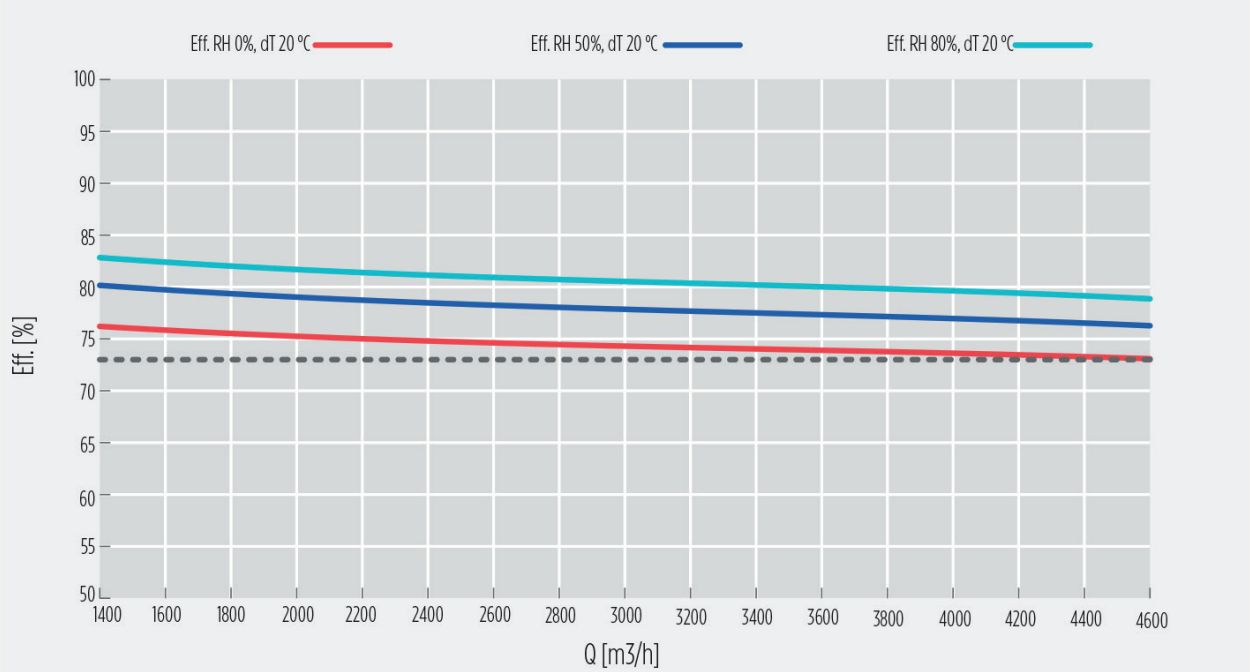
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
105	89	94	85	83	84	83	79	106	92	61	55

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

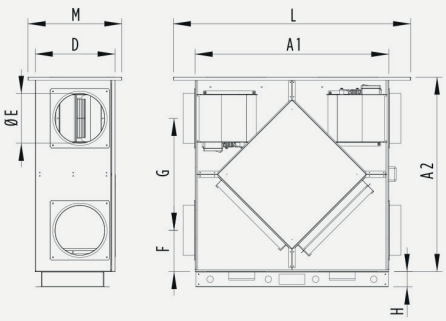
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



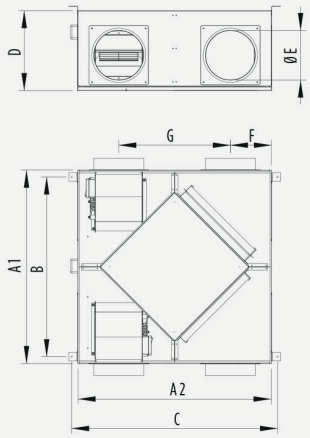
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1380	1380	1200	1440	800	350	315	750	100	1550	850	258,0	294,0

VERTICAL



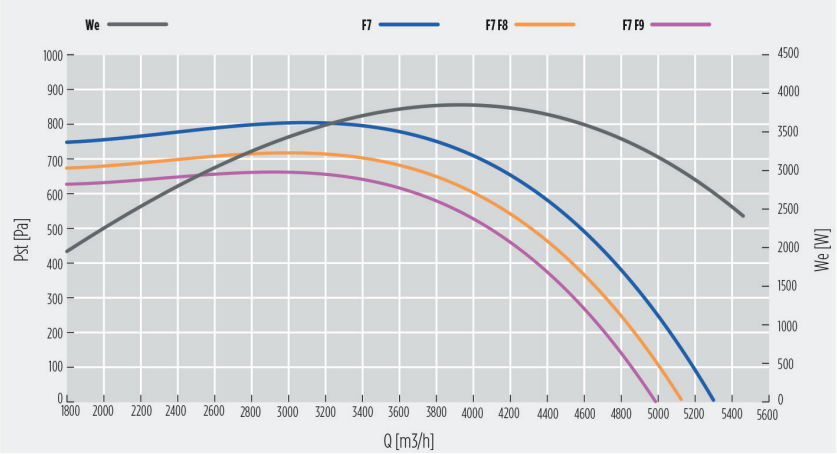
HORIZONTAL



Packaging: L x H x P
N.1 filter per side, dimensions: 700 x 625 x 48 (mm)

REC 5000

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	5360	[m3/h]	1,489
Air flow rate @ 150 [Pa]	[m3/h]	5260	[m3/h]	1,461

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	4780
	[m3/h]	1,328
Absorbed electrical power (We, eff)	[W]	3937
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	956
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	957
Face velocity at design flow rate	[m/s]	1,7
Nominal external pressure (ΔPs, ext)	[Pa]	511
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	248
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	253
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,9
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	61,4
Sound power on casing (LWA)	[dB(A)]	62
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	9,53x2	2200x2	1986

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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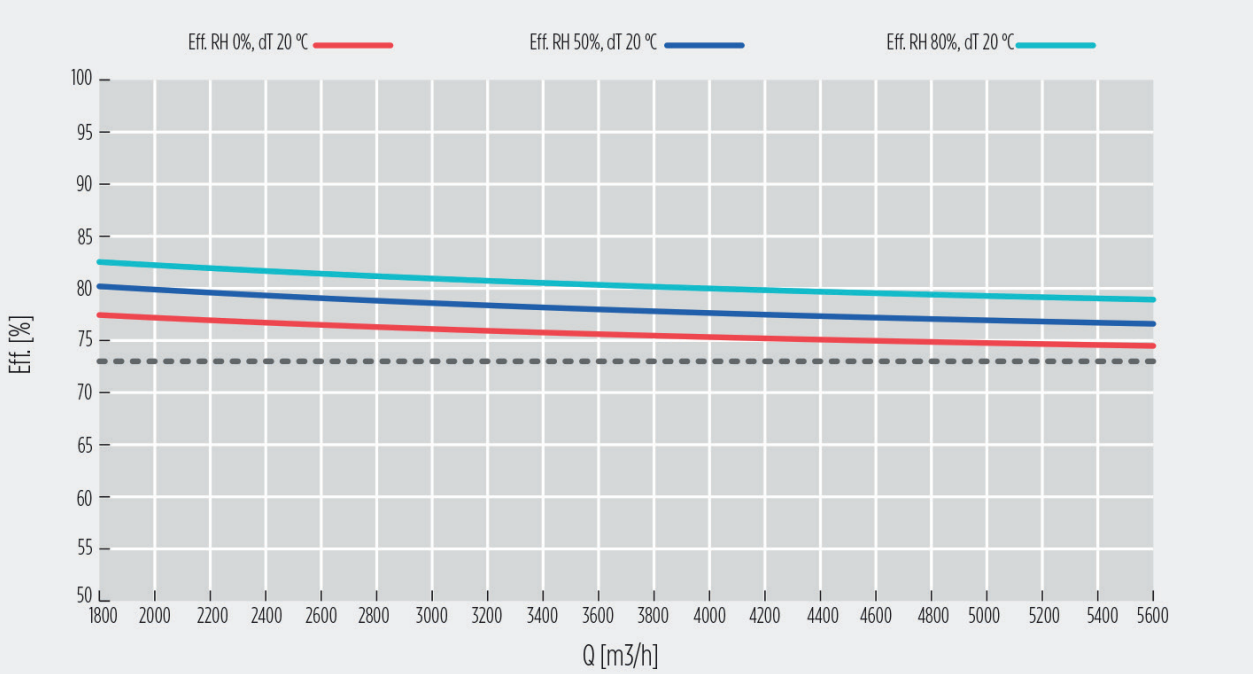
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
79	83	86	77	78	77	75	70	84	79	62	58

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

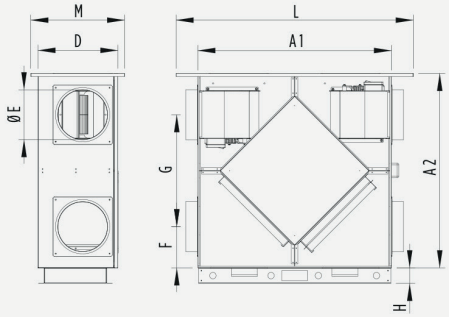
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



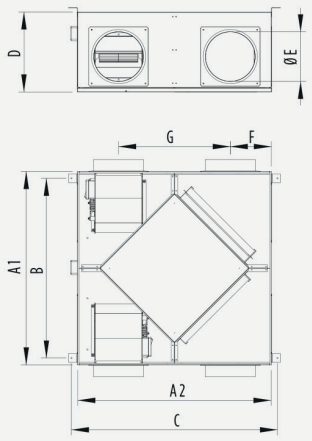
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1650	1650	-	-	860	350	365	920	100	1900	850	370,0	408,0

VERTICAL



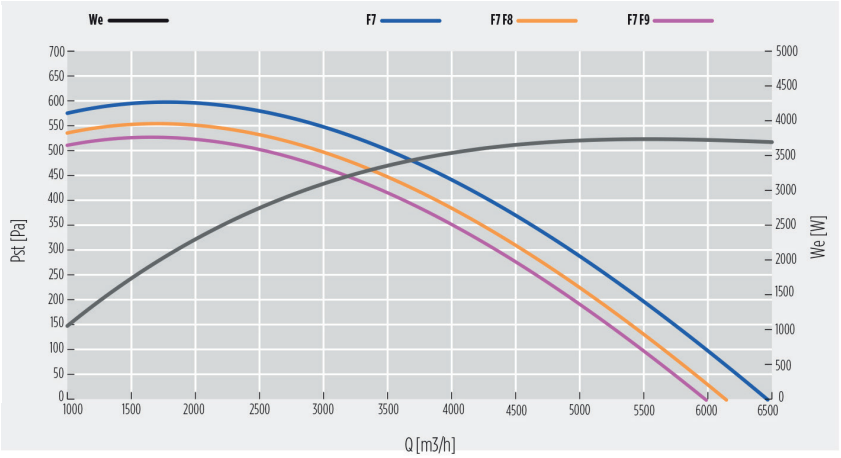
HORIZONTAL



Packaging: L x H x P
N.2 filters per side, dimensions: 800 x 350 x 48 (mm)

REC 6000

Heat recovery unit with EC fans



Maximum thermal efficiency of heat recovery				
Air flow rate @ 50 [Pa]	[m3/h]	6400	[m3/h]	1,778
Air flow rate @ 150 [Pa]	[m3/h]	5800	[m3/h]	1,611

Nominal data (ECODESIGN: Directive 2009/125/EC, Regulation No. 1253/2014)		
Nominal flow rate	[m3/h]	4880
	[m3/h]	1,356
Absorbed electrical power (We, eff)	[W]	4662
Internal specific fan power of ventilation components (SFPint)	[W/(m3/s)]	942
Internal specific fan power of ventilation components, 2018 limit	[W/(m3/s)]	951
Face velocity at design flow rate	[m/s]	1,7
Nominal external pressure (ΔPs, ext)	[Pa]	669
Internal pressure drop of ventilation components (ΔPs, int), supply	[Pa]	257
Internal pressure drop of ventilation components (ΔPs, int), return	[Pa]	261
Thermal efficiency of heat recovery (nt, dry air, ΔT 20 [°C])	[%]	74,8
Static efficiency of fans (as per EU Regulation No. 327/2011)	[%]	62,8
Sound power on casing (LWA)	[dB(A)]	62
External leakage	max 3,5 @ -400 Pa	(EN 13141-7)
Internal leakage	max 5,5 @ +250 Pa	(EN 13141-7)

- The nominal data refer to a configuration (graph series "F7") in which the fans operate with a regulation voltage of 10 [V] and in which two glass microfiber filters are installed: one class F7 on the supply side and one class F7 on the return side. The "flow rate/pressure" graph refers to the supply side.
- Non-residential ventilation unit (NRVU) bidirectional (BVU).
- Air-to-air heat recovery system.
- Drive type: 10V control.
- Motorized bypass damper controllable automatically and/or manually via control screen.
- Equipped as standard with a probe for detecting indoor air temperature and one for outdoor air temperature.
- Equipped with a differential pressure switch for monitoring the filter clogging level. A status indicator on the control screen connected to this pressure switch signals the filter clogging level.
- Any additional accessories and features depend on the type of control selected.

Rated data for electric motors					
Volt [V]	Phase / Phase	Freq. [Hz]	Inom1 [A]	Potnom1 [W]	Vnom1 [rpm]
230 + - 15%	1~	50/60	7,4x2	1790x2	2823

(1) Values referred to a regulation voltage of 10 V and nominal flow rate. / Assuming working voltage is 10 V.

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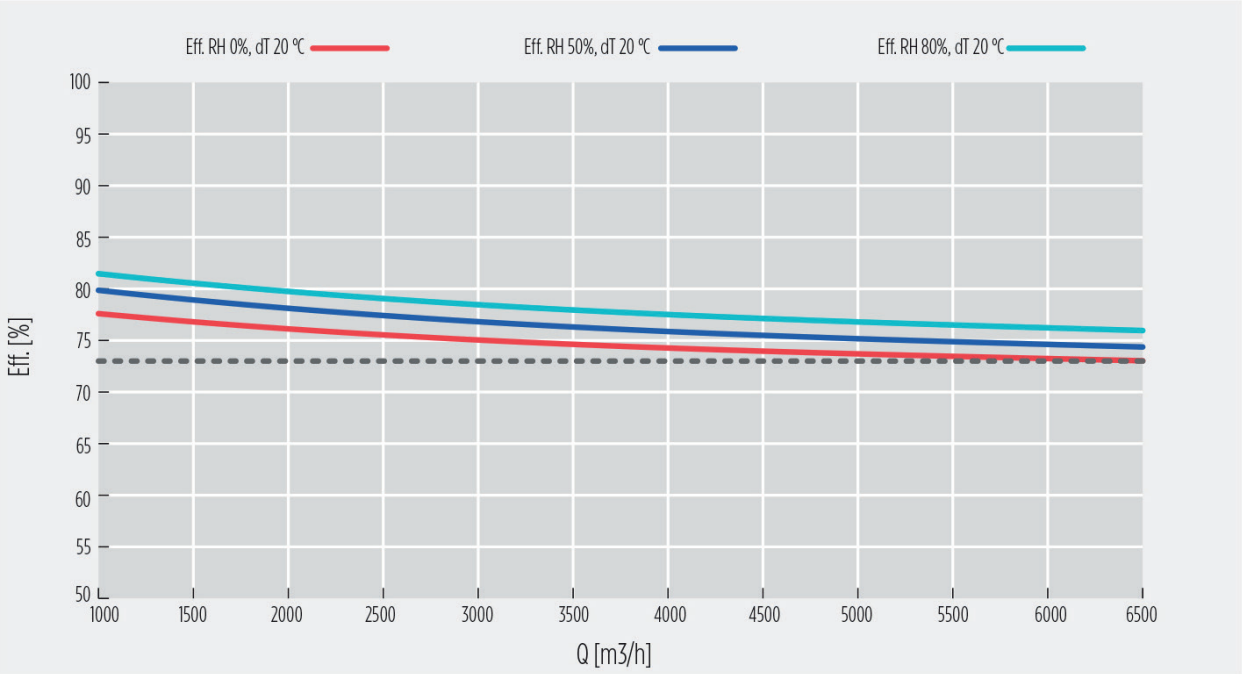
Sound levels											
SWL(1) [dB] Octave band [Hz] / octave band [Hz]								SWL(1)		SPL(3) casing / case	
63	125	250	500	1000	2000	4000	8000	[dB]	[dB(A)]	1m [dB(A)]	3m [dB(A)]
79	84	82	86	80	79	76	67	87	81	63	60

1 = sound power per octave band.
2 = total sound power.
3 = sound pressure, measured at 1 [m] and 3 [m] from the machine casing.

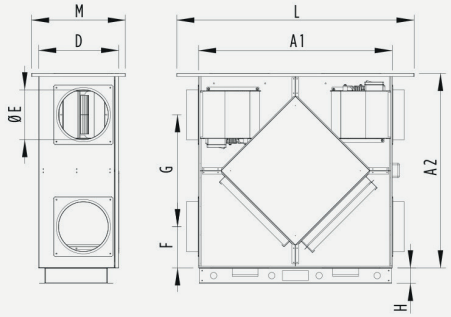
FLOW RATE VS THERMAL EFFICIENCY OF HEAT RECOVERY



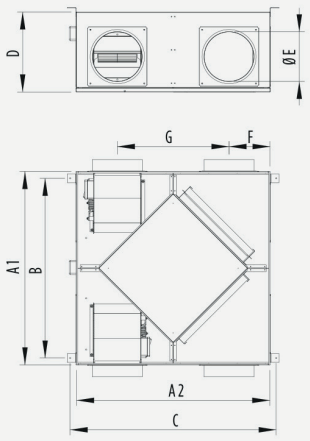
DIMENSIONS

A1	A2	B	C	D	ØE	F	G	H	L	M	Kg H	Kg V
1650	1650	-	-	860	450	365	920	100	1900	1000	370,0	408,0

VERTICAL



HORIZONTAL



Packaging: L x H x P
N.2 filters per side, dimensions: 800 x 350 x 48 (mm)

AHU

Non-residential Ventilation Unit for high air flow rates

Product	AHU
Application	Industrial and commercial applications

STRUCTURAL CHARACTERISTICS

The modular air handling units of the AHU series are available for variable flow rates from 1,000 to 100,000 m3/h. These units have been designed to facilitate the work of those who will subsequently carry out installation and maintenance.

All units are equipped with multiple openings that facilitate inspectability. The structure rests on appropriate support feet and is composed of an aluminum profile frame and infill panels made of galvanized sheet metal on both the external and internal sides. For special applications, panels in different materials are available, such as pre-painted, plastic-coated, aluminum, stainless steel and perforated sheet metal in all possible combinations. The special sandwich structure and the high density of the polyurethane foam or rock wool used minimize vibration and resonance phenomena, as well as preventing heat transmission to the outside.

AHU MODULES

FAN MODULE

The fans are selected based on the required application and the system characteristics in terms of required flow rates and pressure, with forward or backward curved blades, belt-driven with AC motor or directly coupled Plug Fan type with high-efficiency EC Brushless motor.

FILTER MODULES

Use of high-efficiency filters. Their combination within the filter section is essential to ensure optimal hygienic comfort conditions indoors. HEPA filters, electrostatic filters and activated carbon deodorizing filters are available.

HEAT EXCHANGE MODULES

Use of coils consisting of copper tubes and continuous pack aluminum fins. The geometry may differ depending on whether the operation is with low-pressure hot water, chilled water, or direct expansion refrigerant.

HUMIDIFICATION MODULE

Cellulose pack humidification, impregnated with phenolic resins. Steam humidification with stainless steel distributor pipe with orifices. Single and double bank nozzle humidification with once-through water or external circulation pump. Atomized humidification with water jet fragmentation down to 5-8 microns.

SILENCER MODULE

Significantly reduces noise emissions produced by air handling units. The baffles are made of mineral wool complete with an anti-erosion black fiberglass veil coating.

HEAT RECOVERY MODULE

Static cross-flow heat recovery units, made of aluminium with very high efficiency (exceeding 80%).

MACHINE SELECTION

Project setting

Before proceeding with the selection of the unit, it is advisable to define in detail the composition of the AHU based on the treatments to which the air to be introduced into the environment is to be subjected. The data required for sizing the machine are as follows: the air flow rate and the useful static pressure. These data essentially determine the type of fans to be used. The treatments to which the air must be subjected, with consequent definition of the characteristics of the heating, cooling and possibly post-heating coils, as well as the type of humidification and filtration necessary to give the air the required characteristics. To better visualize the design, it may be convenient to both plot the air transformations on a psychrometric chart and draw the unit in detail with its sections.

Size selection

The selection of the unit size is made based on the air flow rate required by the system and its velocity through the air handling unit. Regarding this latter parameter, it should be noted that as velocity increases, the size of the selectable unit decreases, with a corresponding inevitable increase in the sound pressure level produced by the machine itself. It is therefore necessary to define the right compromise between technical and economic factors, while keeping in mind the type of application being considered. In general, we recommend considering air velocity values between 2.2 and 2.8 m/s.

AHU

Non-residential ventilation unit for high air flow rates

CONFIGURATION EXAMPLES

FIGURE 1

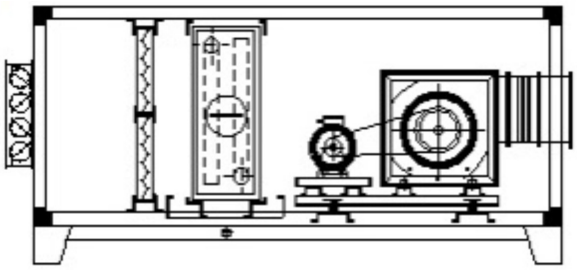


FIGURE 1
- External air intake
- Pleated filter
- Cooling coil
- Fan head

FIGURE 2

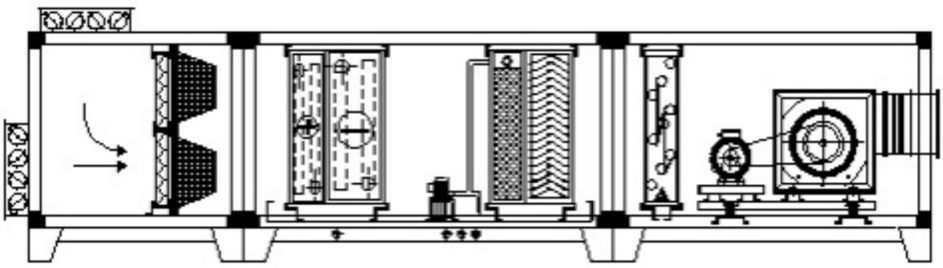


FIGURE 2
- Mixing chamber with 2 dampers
- Pleated filter
- Rigid bag filter
- Pre-heating coil
- Cooling coil
- Recirculating pump pack humidification
- Droplet separator
- Electric post-heating coil
- Fan head

FIGURE 3

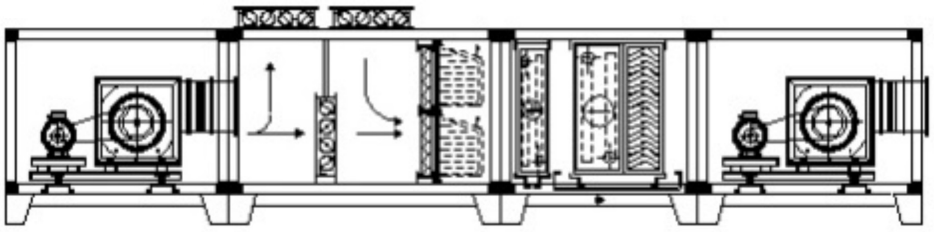


FIGURE 3
- Fan head
- Mixing chamber with 3 dampers
- Pleated filter
- Flexible bag filter
- Pre-heating coil
- Cooling coil
- Droplet separator
- Fan head

FIGURE 4

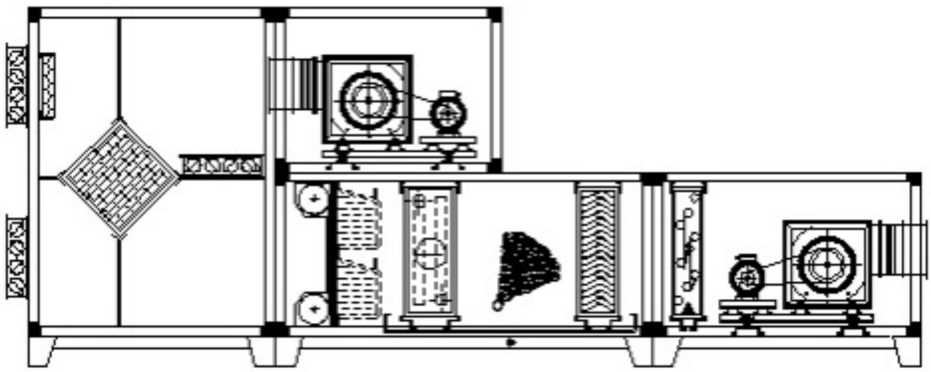


FIGURE 4
- Fan head
- Static cross-flow heat recovery unit with exhaust intake and air recirculation dampers
- Roll filter
- Flexible bag filter
- Cooling coil
- Steam distribution section
- Droplet separator
- Electric post-heating coil
- Fan head

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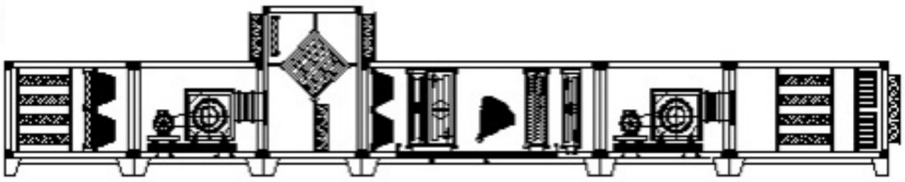
FIGURE 5



FIGURE

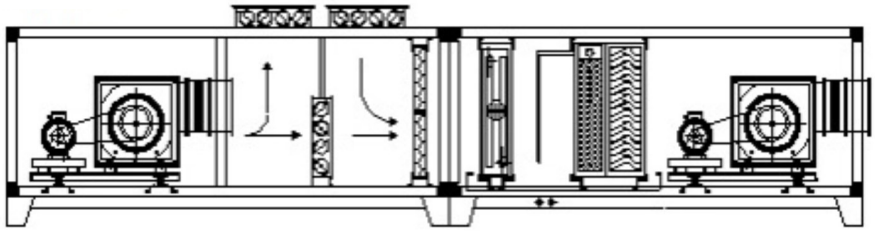


FIGURE 7

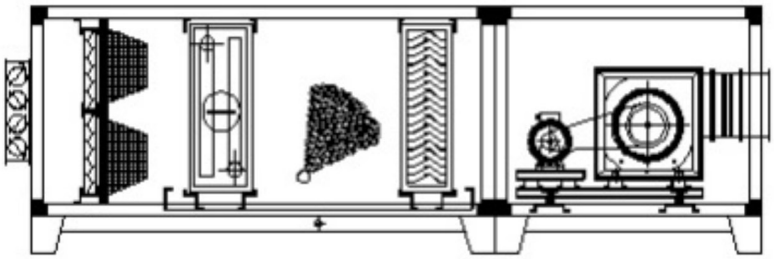


FIGURE 8

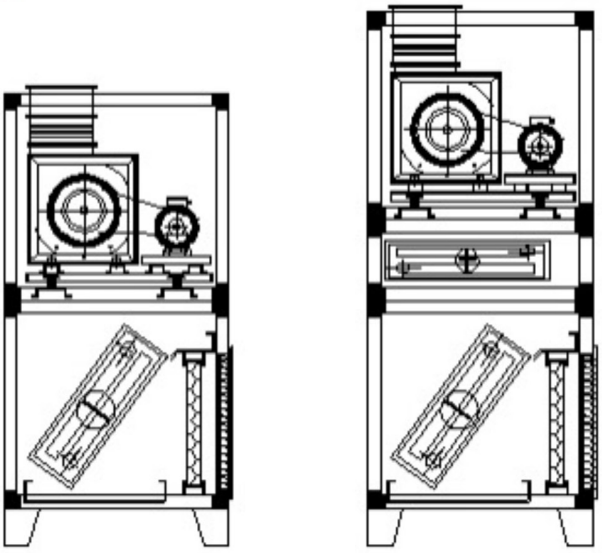


FIGURE 5
- Baffle silencer
- Pleated filter
- Rigid bag filter
- Fan head
- Cross-flow heat recovery unit with exhaust outlet and air recirculation
- Bag filter
- Pre-heating coil
- Cooling coil
- Steam distribution section
- Droplet separator
- Post-heating coil
- Fan head
- Silencer
- Absolute filter
- Damper

FIGURE 6
- Fan head
- Mixing chamber with 3 dampers
- Pleated filter
- Pre-heating coil
- Once-through pack humidification
- Droplet separator
- Fan head

FIGURE 7
- External air intake with damper
- Pleated filter
- Rigid bag filter
- Cooling coil
- Steam distribution section
- Droplet separator
- Fan head

FIGURE 8
- Grille with mesh
- Pleated filter
- Cooling coil
- Heating coil (*)
- Fan head

(*) optional

AXIAL FANS

Ventilation

Comfort and performance at maximum efficiency energy

AFPM

Panel-mounted axial fan with "UNEL MEC" motor

Product AFPM

Installation Wall-mounted

FEATURES
AFPM series axial fans are ideal for applications requiring substantial air flow rates and moderate pressures, in wall or panel mounting applications.
They consist of an impeller featuring a robust die-cast aluminium clamp hub for fixing of the blades, manufactured by stamping from various materials, always with the objective of withstanding high workloads.
The motor is built following international standards, thus guaranteeing reliability and - in the long term - an economical fan recovery, by simply repairing or replacing the motor itself.

FAN
Square-frame inlet cone with wide suction range in corrosion-resistant or weather-protected material.
Motor support and safety guard mesh on the motor side in steel wire, protected against atmospheric agents, manufactured in compliance with UNI EN ISO 12499 standard. High-efficiency impeller with airfoil profile blades, with adjustable pitch angle at standstill in technopolymer and die-cast aluminum hub. Balancing according to UNI ISO 21940-11 standards.

MOTOR
AC asynchronous electric motor, three-phase or single-phase, IP 55 protection, insulation class F, duty S1, form B5, manufactured in compliance with IEC/EEC (UNEL-MEC) standards. Execution 5 (direct coupling with overhung impeller).

ON REQUEST
Versions with impeller having die-cast aluminium blades.
ATEX versions.
Versions with airflow from impeller to motor, position B (FGM).
Gravity closure damper (SG).
Impeller-side safety guard (PG-P) (Required for free inlet use).

APPLICATIONS
Ventilation of factories, car parks, farms, cooling of electrical and refrigeration equipment, etc.

APPLICATIONS

PLANT VENTILATION

CAR PARKS

LIVESTOCK FARMS

COOLING OF ELECTRICAL EQUIPMENT, COLD ROOMS, ETC.

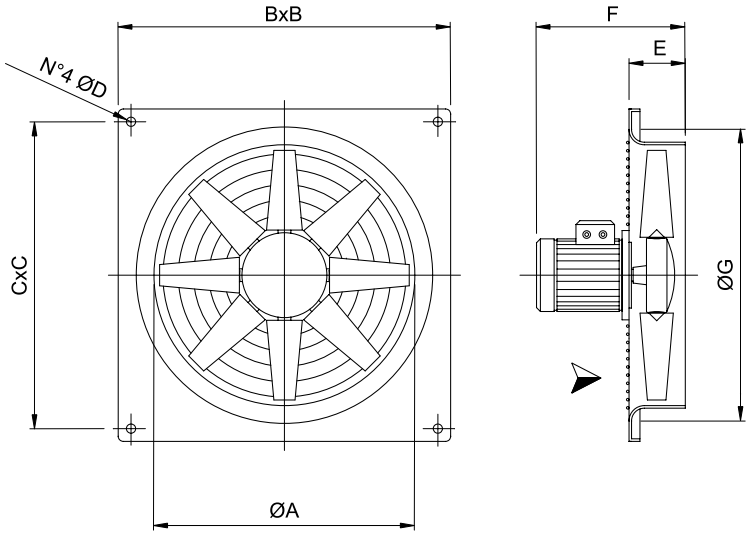
TECHNICAL CHARACTERISTICS

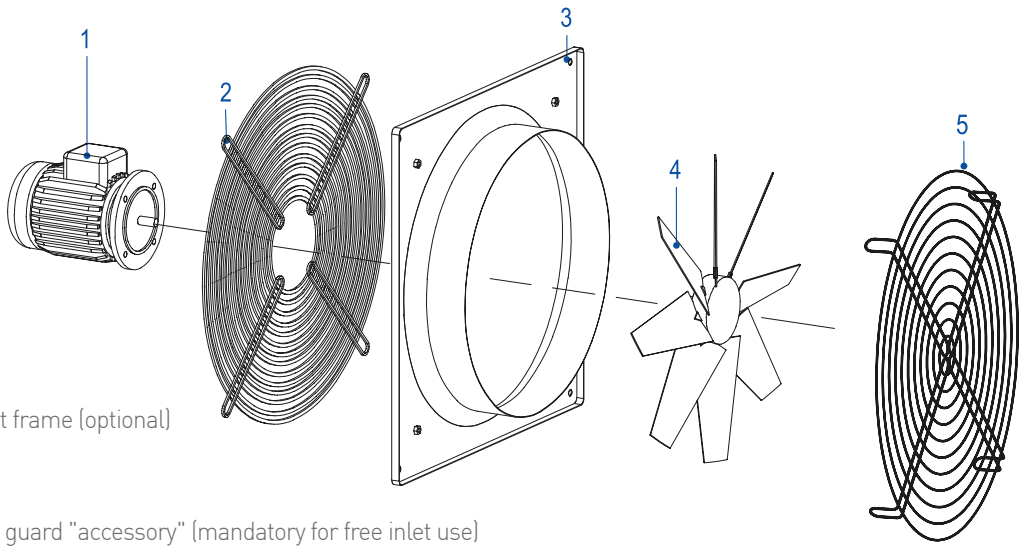
Ducted air	Clean or slightly dusty, non-abrasive
Conveyed air temperature	-20°C / +50°C
Supply voltage	Three-phase version (T) 400V-3Ph-50Hz
	Single-phase version (M) 230V-1Ph-50Hz
	Airflow from motor to impeller, position A (FMG)

DIMENSIONS

Model	ØA mm	BxB mm	CxC mm	ØD mm	E mm	F(*) mm	ØG mm	Weight(*) kg
25	260	340	300	10	90	270	315	6
31	310	390	350	10	110	320	365	7
35	360	440	400	10	110	320	410	8
40	410	500	450	10	110	320	465	9
45	460	560	510	10	110	340	510	13
50	510	650	580	10	110	360	570	18
56	570	700	630	10	130	380	630	22
63	640	800	730	12	130	400	700	25
71	710	850	800	12	130	460	770	33
80	810	950	900	12	180	460	900	46

(*) Indicative





1- Motor
2- Motor support frame (optional)
3- Panel
4- Impeller
5- Impeller-side guard "accessory" (mandatory for free inlet use)

AFPM

Panel-mounted axial fan with "UNEL MEC" motor

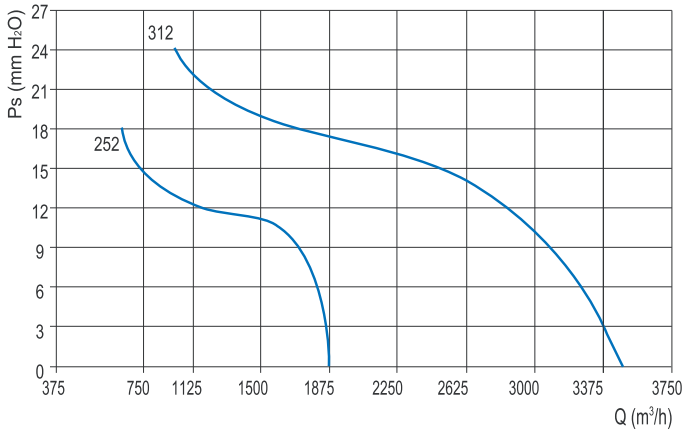
CHARACTERISTIC CURVES

2 POLES (3000 RPM) - SINGLE-PHASE (1PH-230V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
252 M	1850	0.09	0.8	56	64
312 M	3500	0.25	1.7	63	70

2 POLES (3000 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
252 T	1850	0.09	0.4	56	64
312 T	3500	0.25	0.7	63	70

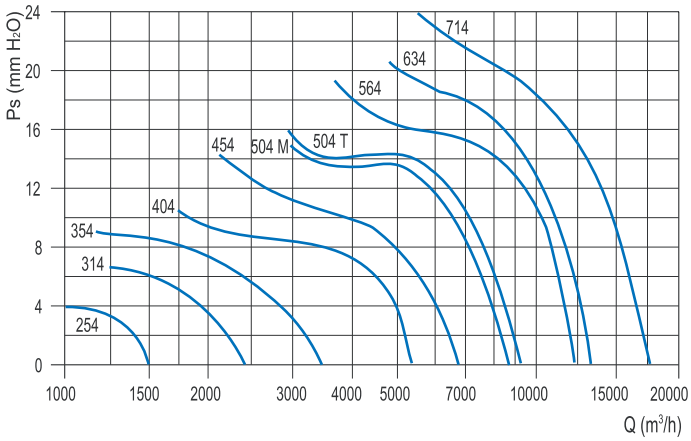


4 POLES (1500 RPM) - SINGLE-PHASE (1PH-230V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
254 M	1400	0.06	0.4	56	47
314 M	2300	0.09	1	56	52
354 M	3200	0.09	1	63	57
404 M	5200	0.18	1.4	63	62
454 M	6800	0.25	1.8	71	66
504 M	8500	0.37	3.3	80	69

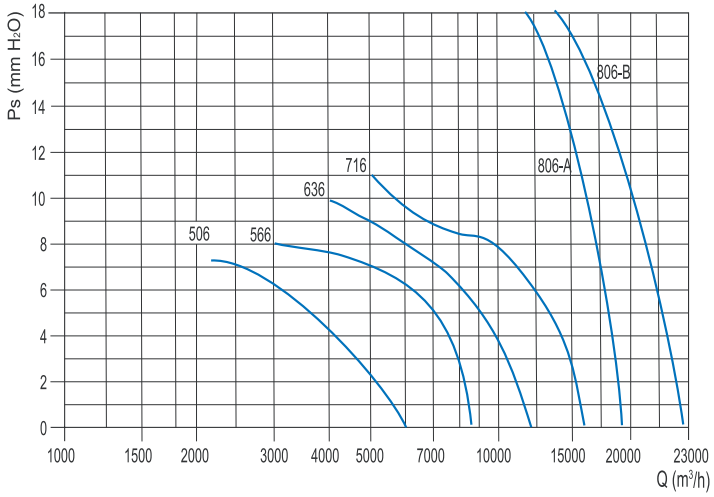
4 POLES (1500 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
254 T	1400	0.06	0.3	56	47
314 T	2300	0.09	0.4	56	52
354 T	3200	0.09	0.4	63	57
404 T	5200	0.18	0.6	63	62
454 T	6800	0.25	0.8	71	66
504 T	9500	0.55	1.6	80	69
564 T	12500	0.75	2	80	72
634 T	13500	0.75	2	80	76
714 T	17500	1.5	3.5	90	77



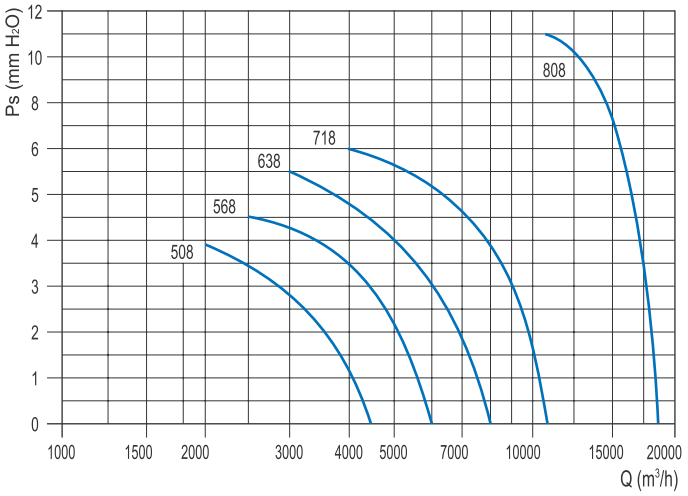
6 POLES (1000 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
506 T*	6000	0,18	0,7	71	59
566 T	8500	0,25	1	71	62
636 T	12000	0,37	1,3	80	66
716 T	16000	0,75	2,2	90	67
806/A T	19500	1,1	3	90	69
806/B T	23000	1,5	4	100	70



8 POLES (750 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
508 T	4500	0,08	0,6	71	52
568 T	6000	0,12	0,7	71	56
638 T*	8000	0,18	0,8	80	60
718 T*	11000	0,25	1,1	80	61
808 T*	18200	0,75	2,3	100	63

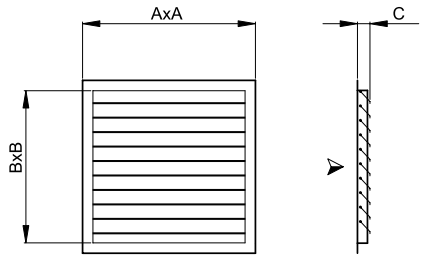


(*) Only for installation outside EU

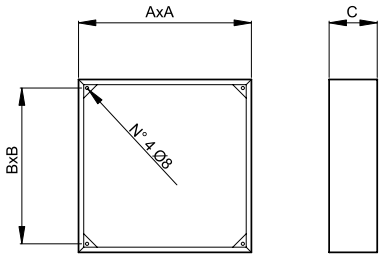
AFPM

Panel-mounted axial fan with "UNEL MEC" motor

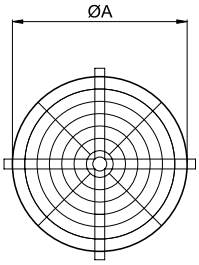
ACCESSORIES



DAMPER
The damper blades open with the air movement when the fan is running and close by gravity when it is switched off, preventing heat loss, and the entry of rain, wind and birds. Made entirely of plastic material.



SPACER
These spacing flanges can be used to fix the damper to the fan when the wall or panel, on which it is to be mounted, has a thickness less than the depth of the inlet cone.



IMPELLER SIDE GUARD
Prevents intrusion from the impeller side by birds, rodents and accidental contact with the rotating impeller. Made of electro-welded steel wire, in compliance with safety regulations.
(Required for free inlet/outlet use)

Model	A	B	C	Kg
AFPM 25-31	370	300	35	0,6
AFPM 35	440	370	35	0,8
AFPM 40-45	510	440	35	1
AFPM 50	580	510	35	1,2
AFPM 56	650	580	35	1,6
AFPM 63	720	650	35	2,6
AFPM 71	785	715	35	3
AFPM 80	920	850	25	6,8

Model	A	B	C	Kg
AFPM 25	390	300	140	3
AFPM 31	390	350	140	3
AFPM 35	440	400	140	3,5
AFPM 40	510	450	140	4
AFPM 45	560	510	140	4,5
AFPM 50	630	580	140	5
AFPM 56	700	630	140	5,5
AFPM 63	790	730	140	6
AFPM 71	840	800	140	6,5
AFPM 80	940	900	200	9

Model	A	Kg
AFPM 25	260	0,4
AFPM 31	320	0,6
AFPM 35	360	0,7
AFPM 40	410	0,9
AFPM 45	460	1
AFPM 50	510	1,3
AFPM 56	570	1,5
AFPM 63	640	1,8
AFPM 71	720	2,5
AFPM 80	820	3

AFPS

Axial panel fan with compact motor

Product AFPS

Installation Wall-mounted

FEATURES
AFPM series axial fans are ideal for applications requiring substantial air flow rates and moderate pressures, in wall or panel mounting applications.
They are characterized by extreme compactness, thanks to the minimal motor protrusion, and by the perfect speed regulation capability, without producing noise (electrical hum) or abnormal current absorption. This is possible thanks to a compact motor, without its own ventilation, designed exclusively for use in axial fans.

FAN
Square-frame inlet cone with wide suction range in corrosion-resistant or weather-protected material.
Motor support and safety guard mesh on the motor side in steel wire, protected against atmospheric agents, manufactured in compliance with UNI EN ISO 12499 standard.
High-efficiency impeller with airfoil profile blades, with adjustable pitch angle at standstill in technopolymer and die-cast aluminum hub. Balancing according to UNI ISO 21940-11 standards.

MOTOR
AC asynchronous electric motor, three-phase or single-phase with thermal protection, variable speed, IP 55 protection, insulation class F, duty S1. Execution 5 (direct coupling with overhung impeller).

ON REQUEST
Versions with impeller having die-cast aluminium blades.
Versions with airflow from impeller to motor, position B (FGM).
Gravity closure damper (SG).
Impeller-side safety guard (PG-P) (Required for free inlet use).

APPLICATIONS
Ventilation of factories, car parks, farms, cooling of electrical and refrigeration equipment, etc.

APPLICATIONS

PLANT VENTILATION

CAR PARKS

LIVESTOCK FARMS

COOLING OF ELECTRICAL EQUIPMENT, COLD ROOMS, ETC.

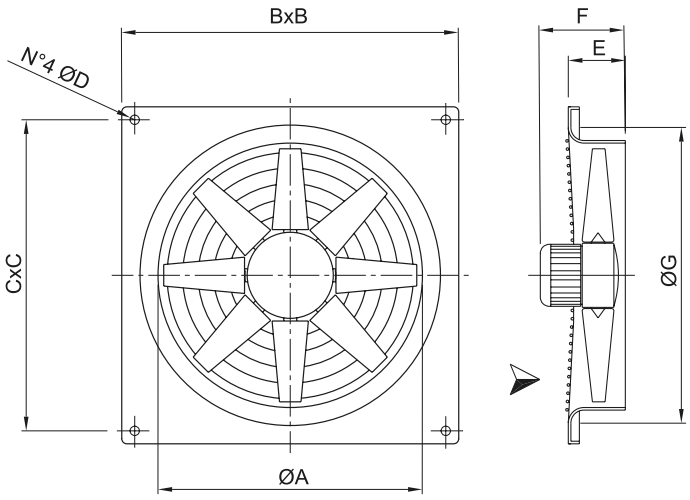
TECHNICAL CHARACTERISTICS

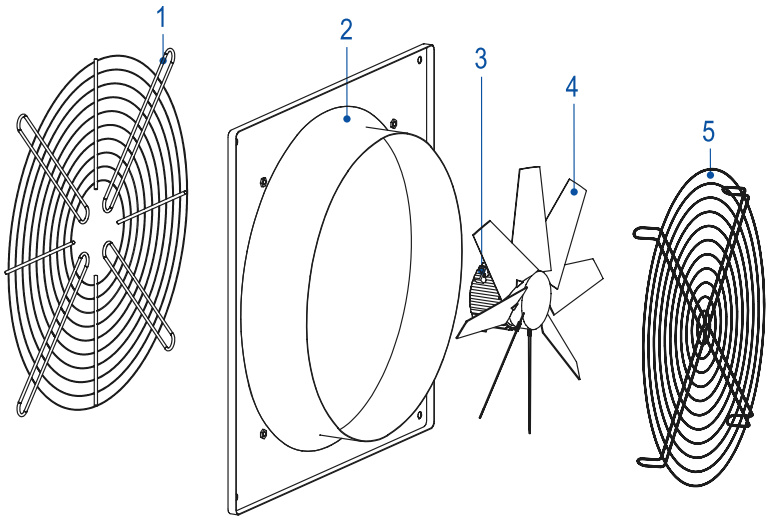
Ducted air	Clean or slightly dusty, non-abrasive
Conveyed air temperature	-20°C / +50°C
Supply voltage	Three-phase version (T) 400V-3Ph-50Hz
	Single-phase version (M) 230V-1Ph-50Hz
	Airflow from motor to impeller, position A (FMG)

DIMENSIONS

Model	ØA mm	BxB mm	CxC mm	ØD mm	E mm	F(*) mm	ØG mm	Weight(*) kg
31	310	390	350	10	110	170	365	7
35	360	440	400	10	110	170	410	7
40	410	500	450	10	110	170	465	9
45	460	560	510	10	110	175	510	10
50	510	650	580	10	110	175	570	12
56	570	700	630	10	130	210	630	18
63	640	800	730	12	130	210	700	20
71	710	850	800	12	130	220	770	26

(*) Indicative





1- Motor support frame (optional)
2- Panel
3- Motor
4- Impeller
5- Impeller-side guard "accessory" (mandatory for free inlet use)

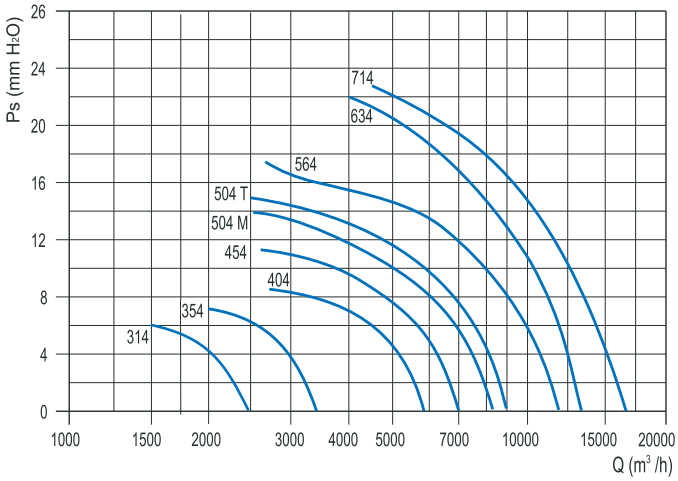
AFPS

Axial panel fan with compact motor

CHARACTERISTIC CURVES

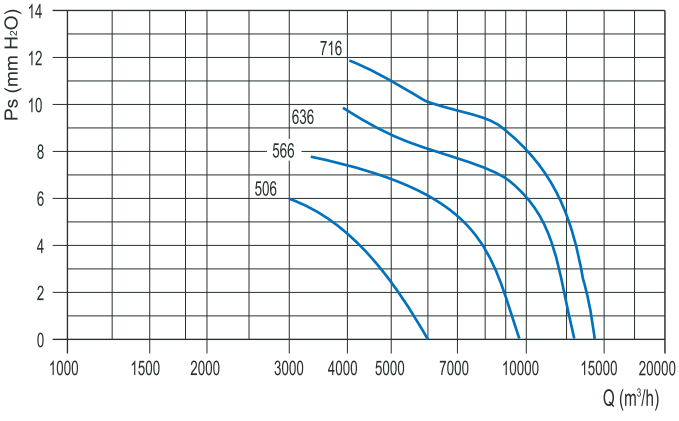
4 POLES (1400 RPM) - SINGLE-PHASE (1PH-230V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
314 M	2300	0,09	0,8	52
354 M	3500	0,09	0,8	57
404 M	6000	0,18	1,7	62
454 M	7000	0,25	2,2	66
504 M	8500	0,25	2,3	69
564 M	11500	0,55	3,8	72
634 T	13500	0,75	2	76
714 T	17500	1,5	3,5	77



4 POLES (1400 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
314 T	2300	0,09	0,5	52
354 T	3500	0,09	0,5	57
404 T	6000	0,18	0,75	62
454 T	7000	0,25	1,1	66
504 T	9000	0,35	1,5	69
564 T	11500	0,55	1,6	72
634 T	13500	0,74	2,2	76
714 T	17000	1,1	2,6	77

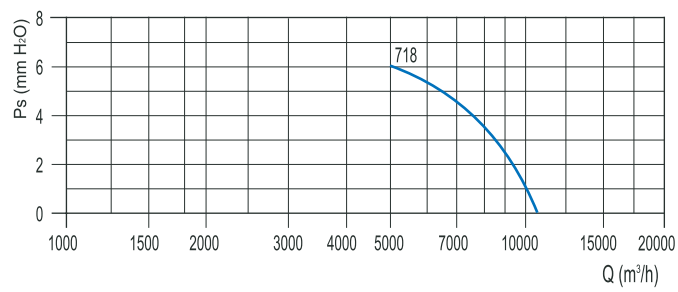


6 POLES (900 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
506 T*	6000	0,18	0,8	58
566 T	9500	0,25	1,2	62
636 T	13000	0,55	1,7	66
716 T	14500	0,55	1,7	67

8 POLES (700 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
718 T*	10500	0,28	1,3	60



(*) Only for installation outside EU

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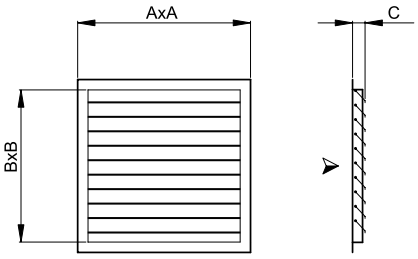
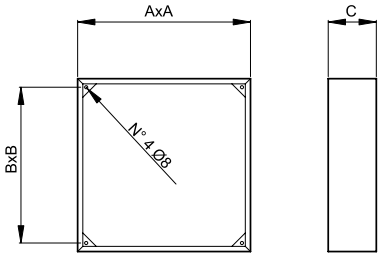
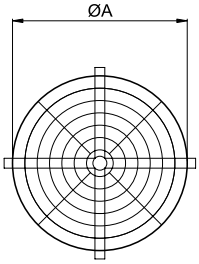
ACCESSORIES



DAMPER
The damper blades open with the air movement when the fan is running and close by gravity when it is switched off, preventing heat loss, and the entry of rain, wind and birds. Made entirely of plastic material.



SPACER
These spacing flanges can be used to fix the damper to the fan when the wall or panel, on which it is to be mounted, has a thickness less than the depth of the inlet cone.



IMPELLER SIDE GUARD
Prevents intrusion from the impeller side by birds, rodents and accidental contact with the rotating impeller. Made of electro-welded steel wire, in compliance with safety regulations. (Required for open inlet operation).

Model	A	B	C	Kg
AFPS 25-31	370	300	35	0,6
AFPS 35	440	370	35	0,8
AFPS 40-45	510	440	35	1
AFPS 50	580	510	35	1,2
AFPS 56	650	580	35	1,6
AFPS 63	720	650	35	2,6
AFPS 71	785	715	35	3
AFPS 80	920	850	25	6,8

Model	A	B	C	Kg
AFPS 25	390	300	140	3
AFPS 31	390	350	140	3
AFPS 35	440	400	140	3,5
AFPS 40	510	450	140	4
AFPS 45	560	510	140	4,5
AFPS 50	630	580	140	5
AFPS 56	700	630	140	5,5
AFPS 63	790	730	140	6
AFPS 71	840	800	140	6,5
AFPS 80	940	900	200	9

Model	A	Kg
AFPS 25	260	0,4
AFPS 31	320	0,6
AFPS 35	360	0,7
AFPS 40	410	0,9
AFPS 45	460	1
AFPS 50	510	1,3
AFPS 56	570	1,5
AFPS 63	640	1,8
AFPS 71	720	2,5
AFPS 80	820	3

AFTM

Ducted axial fan with "UNEL-MEC" motor

Product AFTM

Installation Ducted

FEATURES
AFTM fans are ideal for applications requiring large air flow rates and relatively moderate pressures, in duct mounting applications.
They are characterized by extreme construction robustness, essentially due to the flanges machined directly from the casing (not attached), and the thickness of the materials used. Another characteristic is the variety of versions and models in the series, which allows the right solution for numerous ventilation problems. The impeller features a robust clamp hub in die-cast aluminum for blade attachment. Blades manufactured by stamping from various materials, always with the objective of withstanding high workloads.

FAN
Steel sheet casing protected with epoxy-polyester paint coating. Flanges dimensioned according to UNI EN ISO 13351/Tab.1. High-efficiency impeller with airfoil profile blades, with adjustable pitch angle stationary, in technopolymer or die-cast aluminium, die-cast aluminium hub. Balancing according to UNI ISO 21940-11 standards.

MOTOR
AC asynchronous electric motor, IP 55 protection, insulation class F, duty S1, form B3, manufactured in compliance with IEC/EEC (UNELMEC) standards. Execution 4 (direct coupling with overhung impeller).

VERSIONS
Mm: medium inlet cone: motor/impeller assembly almost completely included within the casing length
Ml: long inlet cone: motor/impeller assembly completely "included" within the casing length.
Ms: short inlet cone: motor protruding from the casing and accessible.

ON REQUEST
Performance different from those shown.
Versions with aluminium blade impeller.
Versions with "effectively" reversible airflow.
ATEX versions.
Fire smoke versions.
Versions with inlet cone in stainless steel or aluminium or hot-dip galvanized sheet metal.
Versions with airflow from impeller to motor, position B (FGM).
Suction nozzle (IN).
Silencers (SIL-DU).
Flat safety guard (FPG-DU) and conical guard (CPG-DU) (Required for free inlet use).
Inspection hatch.
Anti-vibration joint (FC-DU).
Anti-vibration supports (AV).
Counter flange (CF-DU).
External terminal block (OTB).
Fixing feet (FF-DU).

APPLICATIONS
For example: industrial ventilation and air conditioning systems in mining, naval, cooling tower, heat exchanger, electrical equipment cooling, refrigeration applications, etc.

APPLICATIONS

INDUSTRIAL VENTILATION AND AIR CONDITIONING SYSTEMS IN MINING, NAVAL APPLICATIONS, EVAPORATIVE TOWERS, HEAT EXCHANGERS

COOLING OF ELECTRICAL EQUIPMENT, COLD ROOMS, ETC.

TECHNICAL CHARACTERISTICS

Ducted air	Clean or slightly dusty, non-abrasive
Conveyed air temperature	-20°C / +50°C
Supply voltage	Three-phase version (T) 400V-3Ph-50Hz
	Single-phase version (M) 230V-1Ph-50Hz
	Airflow from motor to impeller, position A (FMG)

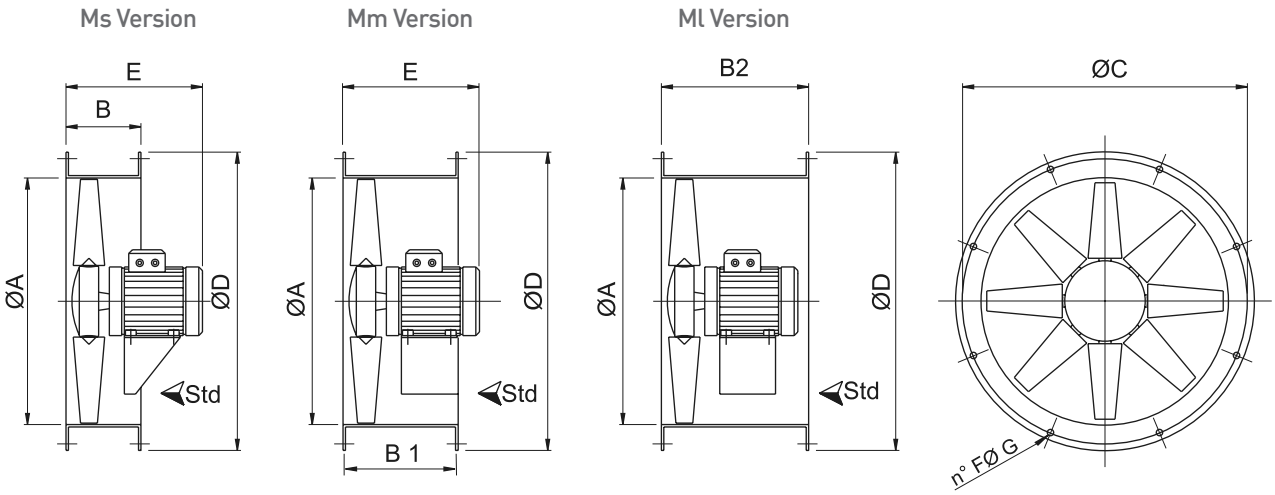
DIMENSIONS

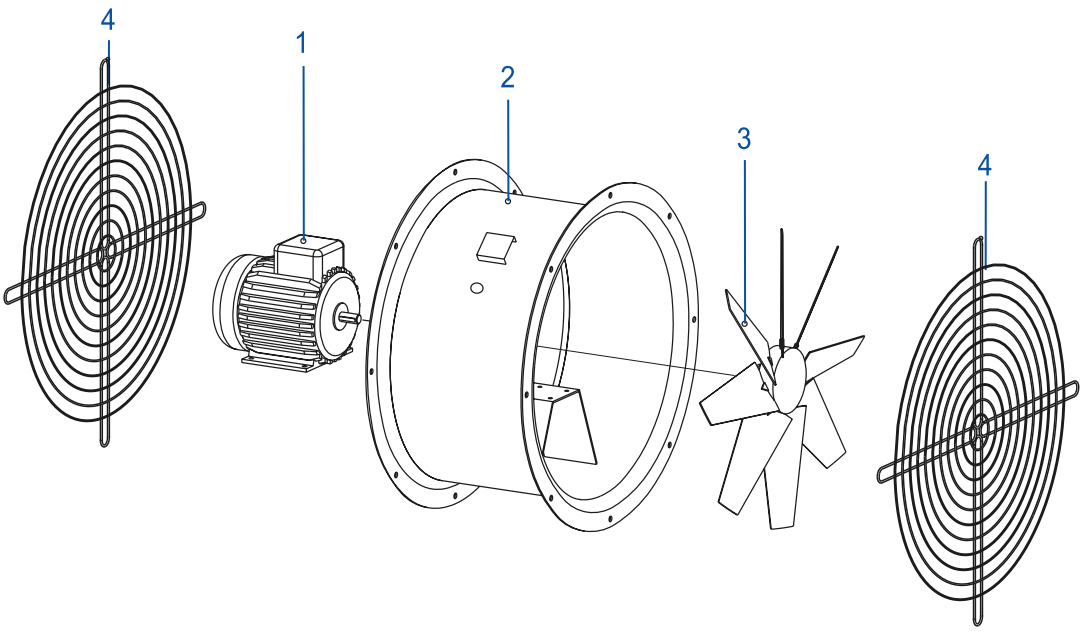
Model	A mm	Motor (H) mm	B (Ms) mm	B1 (Ms) mm	B2 (Ms) mm	C mm	D mm	*E mm	F mm	G mm	*Kg (Ms)	*Kg (Mm)	*Kg (Ml)
31	310	56-63	260	260	400	355	390	250/320	8	10	13/17	13/17	13/19
35	360	56-71	260	260	400	395	430	250/320	8	10	14/19	14/19	14/22
40	410	63-80	260	260	400	450	490	300/380	8	12	16/24	16/24	19/27
45	460	71-80	260	260	450	500	540	350/390	8	12	21/30	21/30	23/33
50	510	71-80	260	260	450	560	595	350/390	12	12	24/35	24/35	27/38
56	570	71-90	260	260	450	620	655	350/390	12	12	28/37	28/37	34/43
63	640	90-100	260	350	500	690	725	400/490	12	12	34/51	37/54	44/61
71	710	90-112	260	350	600	770	805	400/490	16	12	41/62	44/67	53/77
80	810	90-132	350	450	600	860	900	450/610	16	12	50/105	54/110	60/115
90	910	100-132	350	450	700	970	1010	450/690	16	16	80/162	87/169	105/187
100	1010	100-160	-	560	800	1070	1110	700/830	16	16	-	107/330	123/346
		180		800	900								
112	1130	132	-	560	800	1190	1230	700/880	20	16	-	136/355	157/455
		160-200		800	900								
		225		800	1000								
		250		900	1150								
125	1260	132	-	5560	800	1320	1360	700/1000	20	16	-	169/451	192/545
		160-200		800	900								
		225		800	1000								
		250-280		900	1150								
140	1400	160-225	-	800	1000	1470	1520	900/1000	20	16	-	381/895	411/935
		250-280		900	1150								
160	1610	160-255	-	800	1000	1680	1730	900/1100	24	20	-	489/963	519/1013
		250-280		900	1150								

(*) Indicative

AFTM

Ducted axial fan with "UNEL-MEC" motor





1- Motor
2- Air conveyor
3- Impeller
4- Guard "accessory" (mandatory for free inlet use)

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CHARACTERISTIC CURVES

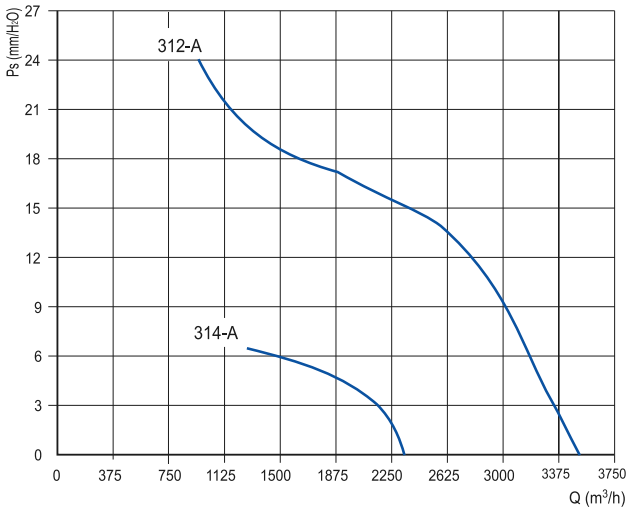
2 POLES (3000 RPM) - SINGLE-PHASE (1PH-230V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
312/A M	3500	0,25	1,7	63	70
352/A M*	5250	0,55	4	71	74
402/A M*	8200	1,1	8	80	79

2 POLES (3000 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
312/A T	3500	0,25	0,7	63	70
352/A T	5250	0,55	1,6	71	74
402/A T	8200	1,1	2,6	80	79

310



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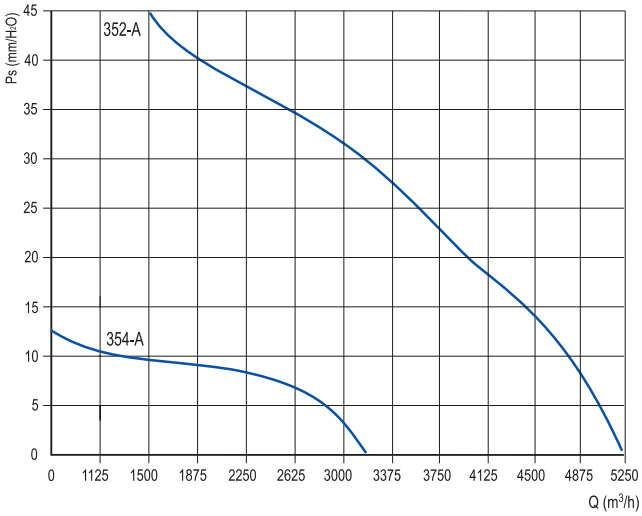

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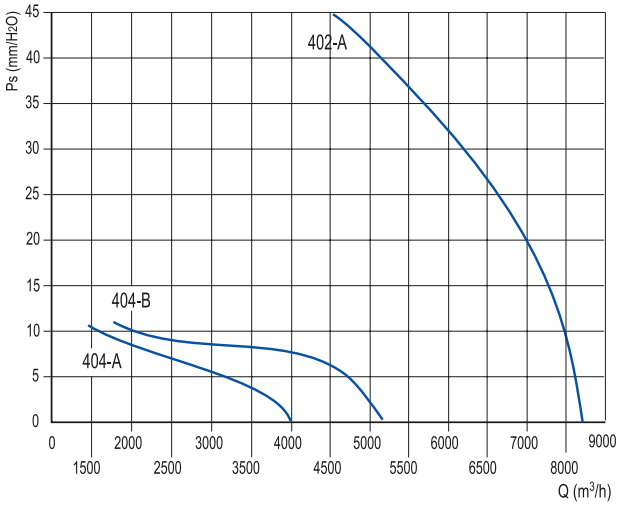


AFTM

Ducted axial fan with "UNEL-MEC" motor

4 POLES (1500 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
314/A T	2300	0,09	0,4	56	52
354/A T	3200	0,09	0,4	56	56
404/A T*	4000	0,12	0,5	63	61
404/B T	5200	0,18	0,6	63	62
454/A T	6500	0,25	0,8	71	65
454/B T	7600	0,37	1,2	71	66
504/A T*	8000	0,37	1,2	71	68
504/B T	9000	0,55	1,6	80	69
564/A T*	10000	0,55	1,6	80	71
564/B T	12500	0,75	2	80	72
634/A T	13000	0,75	2	80	75
634/B T	16000	1,1	2,8	90	76
634/C T	17000	2,2	5	100	76
714/A T	17000	1,5	3,5	90	77
714/B T	20500	2,2	5	100	77
714/C T	18500	2,2	5	100	77
714/D T	23500	3	6,5	100	79
804/A T	24000	3	6,5	100	79
804/B T	29000	4	8,2	112	79
804/C T	35000	5,5	11	132	80
804/D T	40000	7,5	15	132	80
904/A T	38000	5,5	11	132	85
904/B T	43000	7,5	15	132	86
904/C T	47000	7,5	15	132	86
904/D T	52500	9,2	18	132	86
1004/A T	41000	5,5	11	132	88
1004/B T	50000	7,5	15	132	89
1004/C T	59000	11	21	160	89
1004/D T	65000	15	27,8	160	90
1004/E T	72500	18,5	32,6	180	90
1124/A T	80000	18,5	32,6	180	93
1124/B T	87000	22	38,8	180	94
1124/C T	100000	30	53	200	94
1254/A T	95000	22	38,8	180	97
1254/B T	110000	30	53	200	98
1254/C T	125000	37	64	225	98

4 POLES (1500 RPM) - ONE-PHASE (1PH-230V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
314/A M	2300	0,09	1	56	52
354/A M	3200	0,09	1	56	56
404/A M*	4000	0,12	1,1	63	61
404/B M*	5200	0,18	1,4	63	62
454/A M*	6500	0,25	1,8	71	65
454/B M*	7600	0,37	3,3	71	66

(*) Only for installation outside EU

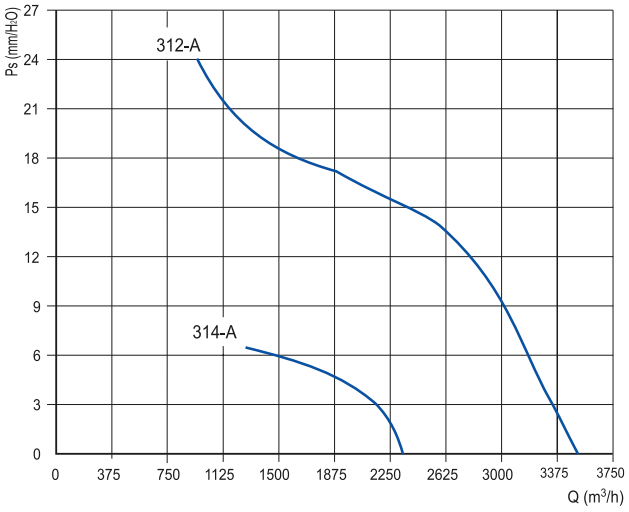
6 POLES (1000 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
506/A T*	6000	0,18	0,7	71	58
566/A T	8500	0,25	1	71	62
636/A T	12500	0,37	1,3	80	66
636/B T	14000	0,75	2,2	90	65
716/A T	16000	0,75	2,2	90	67
716/B T	17000	1,1	3	90	66
806/A T	16000	0,75	2,2	90	68
806/B T	19000	1,1	3	90	68
806/C T	22500	1,5	4	100	69
906/A T	25000	1,5	4	100	75
906/B T	29000	2,2	5	112	75
906/C T	32000	2,2	5	112	75
1006/A T	27000	1,5	4	100	79
1006/B T	33000	2,2	5	112	79
1006/C T	41000	3	7	132	80
1126/B T	45000	4	9	132	83
1126/C T	54000	5,5	12	132	83
1256/B T	61000	7,5	15	160	87
1256/C T	73000	11	22	160	88
1256/D T	85000	11	22	160	88
1406/A T	115000	18,5	35	200	91

8 POLES (750 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Motor (H)	Lp dB(A)
568/A T	6000	0,12	0,7	71	56
638/A T*	8000	0,18	0,8	80	60
718/A T*	11000	0,37	1,5	90	61
808/A T*	10000	0,37	1,5	90	61
808/B T*	13000	0,37	1,5	90	62
908/A T	17000	0,75	2,3	100	69
908/B T	20500	0,75	2,3	100	69
1008/A T	20500	0,75	2,3	100	74
1008/B T	40500	2,2	5,5	132	77
1128/C T	40500	2,2	5,5	132	77
1258/A T	34500	2,2	5,5	132	81
1258/B T	43000	3	7,3	132	81
1258/C T	52000	4	9,3	160	82
1258/D T	59000	4	9,3	160	82
1408/A T	87000	7,5	14,7	160	85
1126/B T	45000	4	9	132	83
1126/C T	54000	5,5	12	132	83
1256/B T	61000	7,5	15	160	87
1256/C T	73000	11	22	160	88
1256/D T	85000	11	22	160	88
1406/A T	115000	18,5	35	200	91

310



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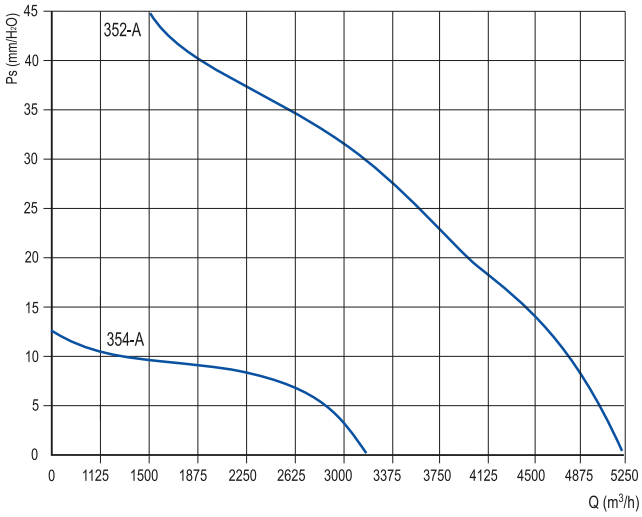

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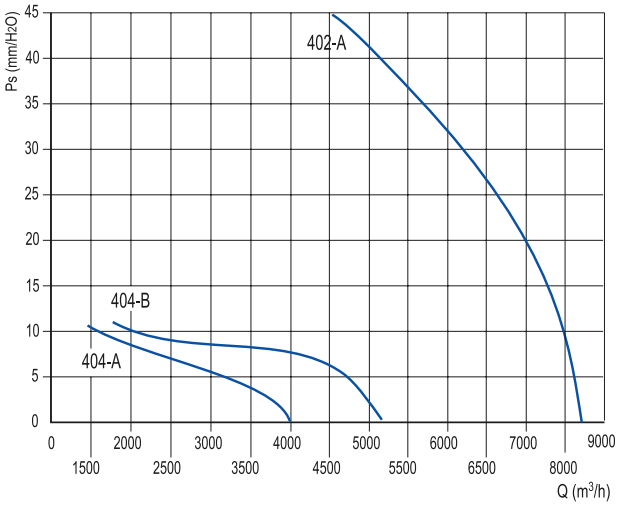

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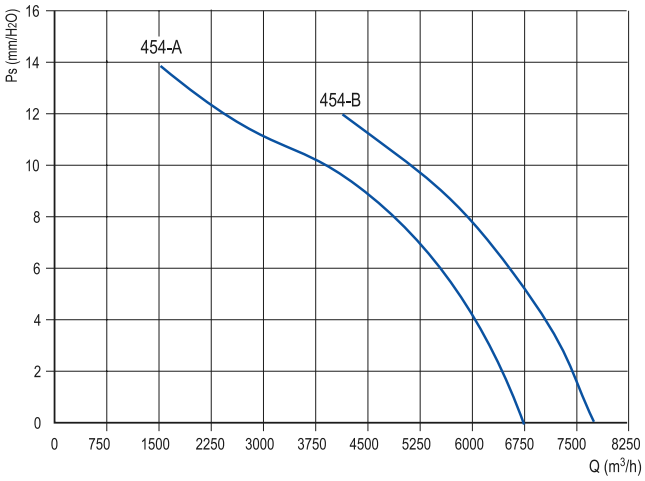

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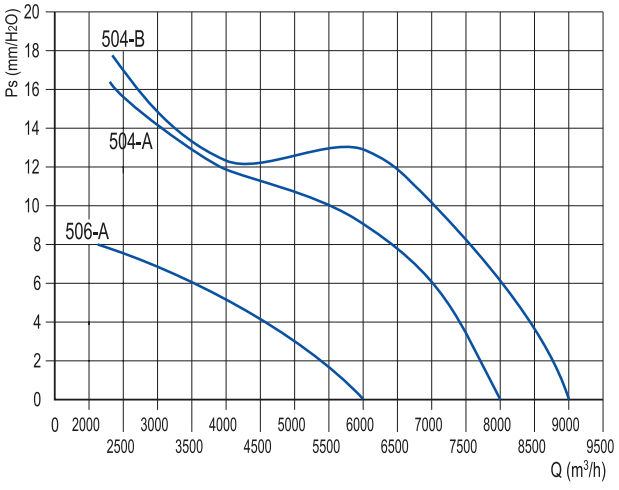

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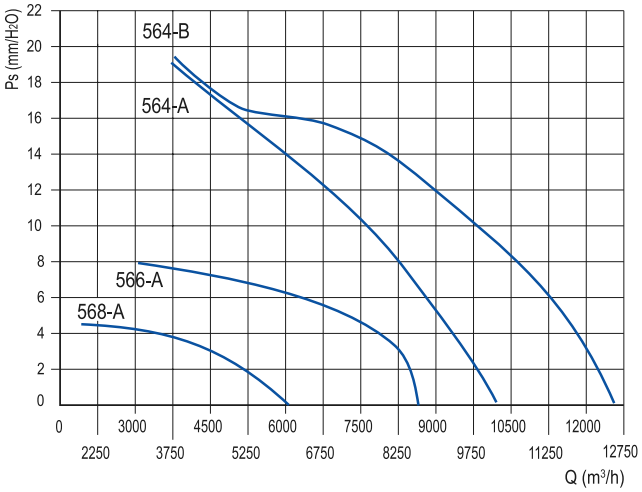
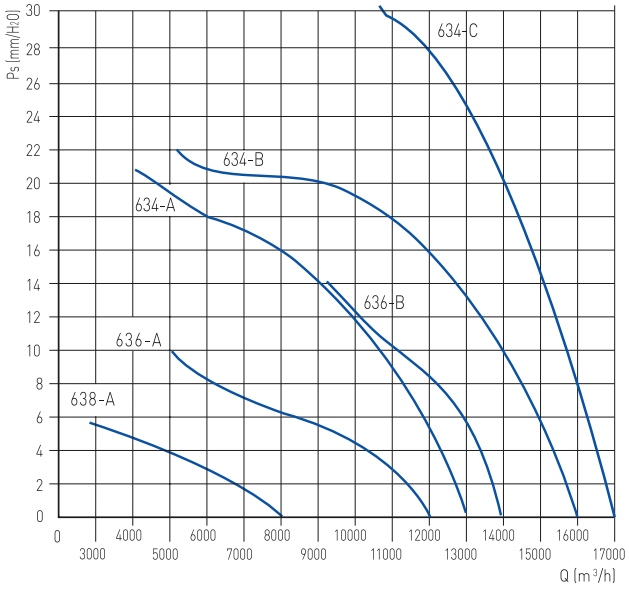


AFTM

Ducted axial fan with "UNEL-MEC" motor

630



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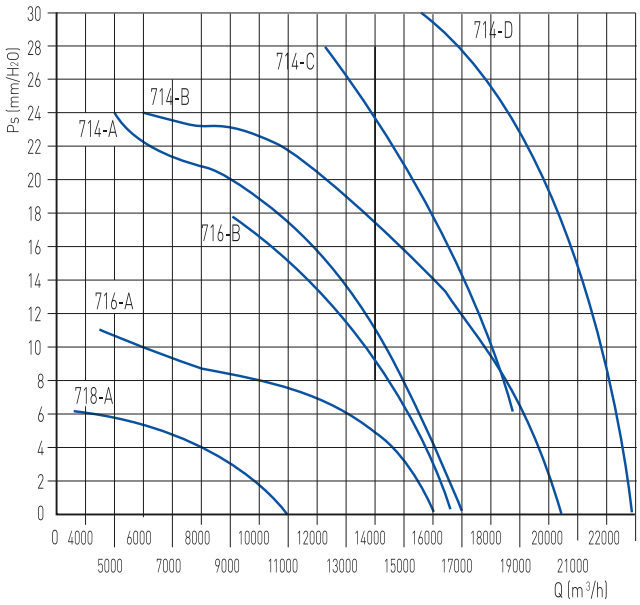
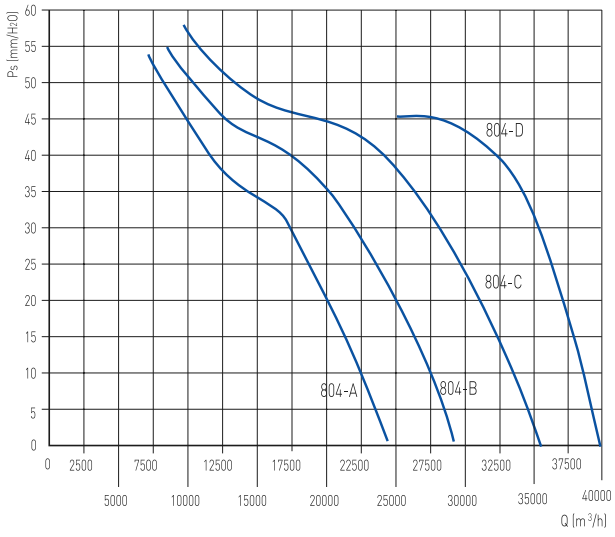
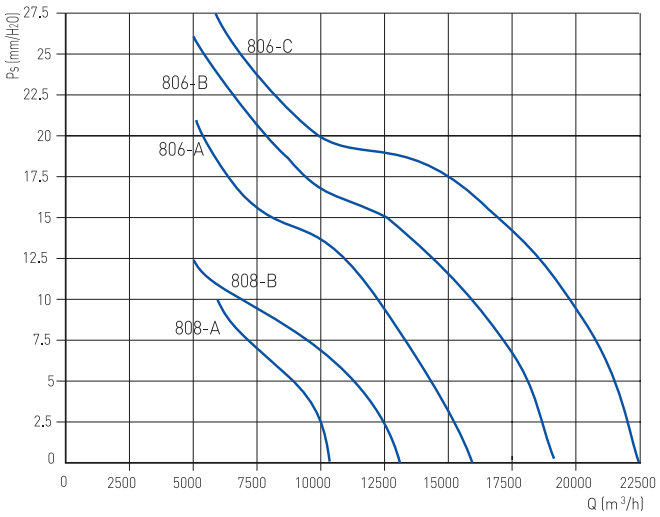


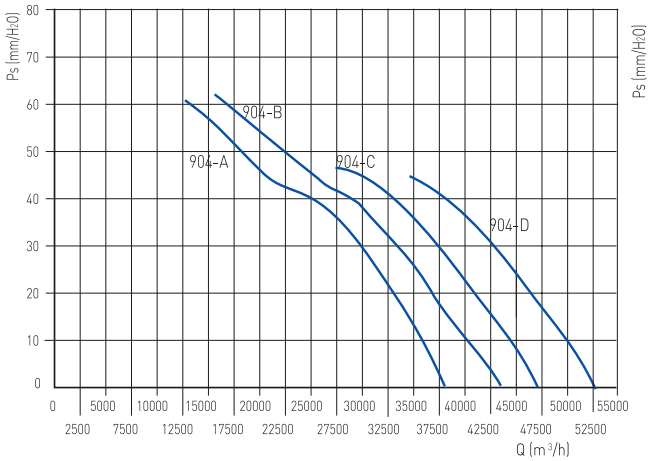
800 - 4 POLES



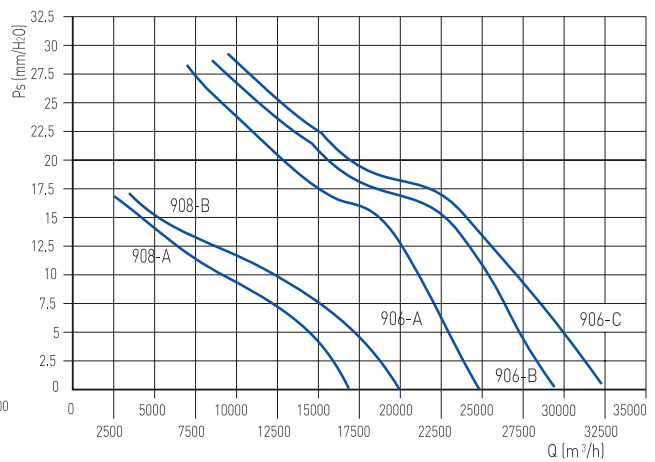
800 - 6 POLES AND 8 POLES



900 - 4 POLES



900 - 6 POLES AND 8 POLES



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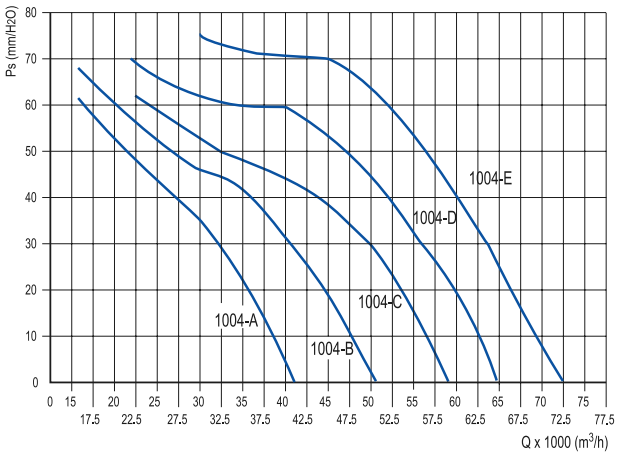
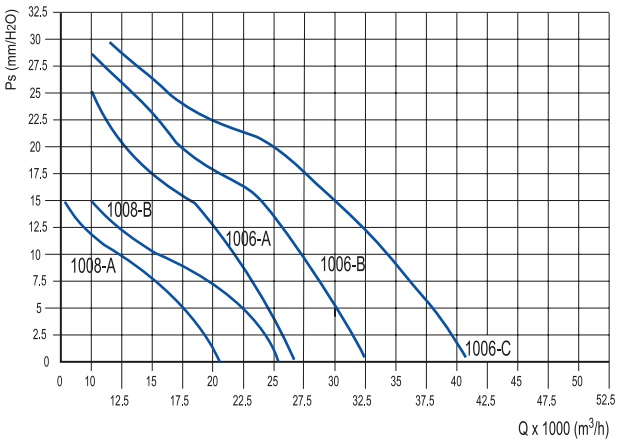
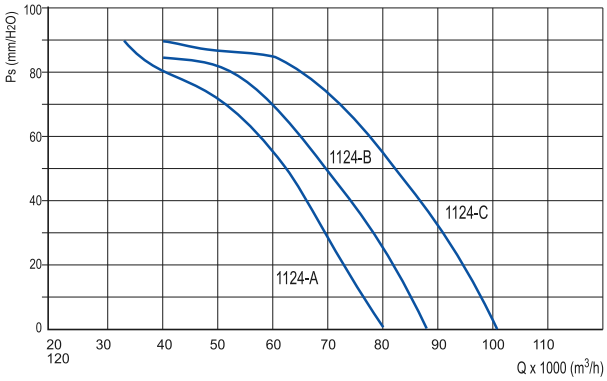
1000 - 4 POLES



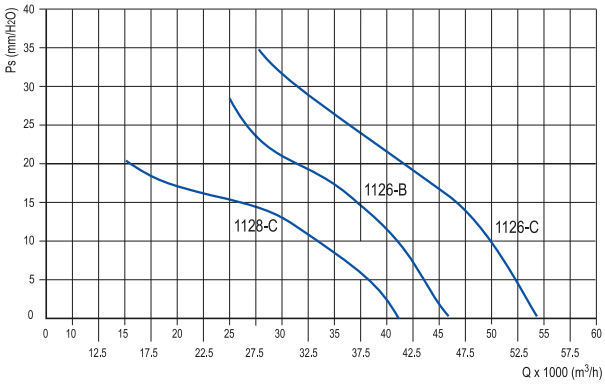
1000 - 6 POLES AND 8 POLES



1120 - 4 POLES



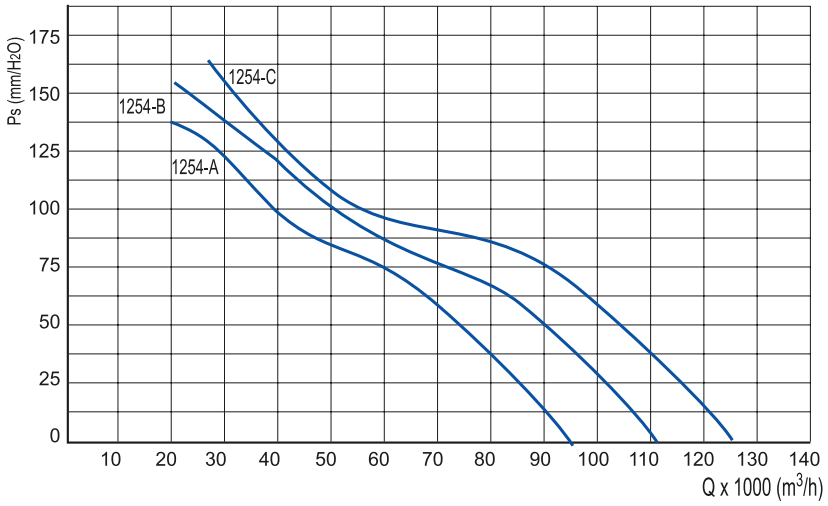
1120 - 6 POLES AND 8 POLES



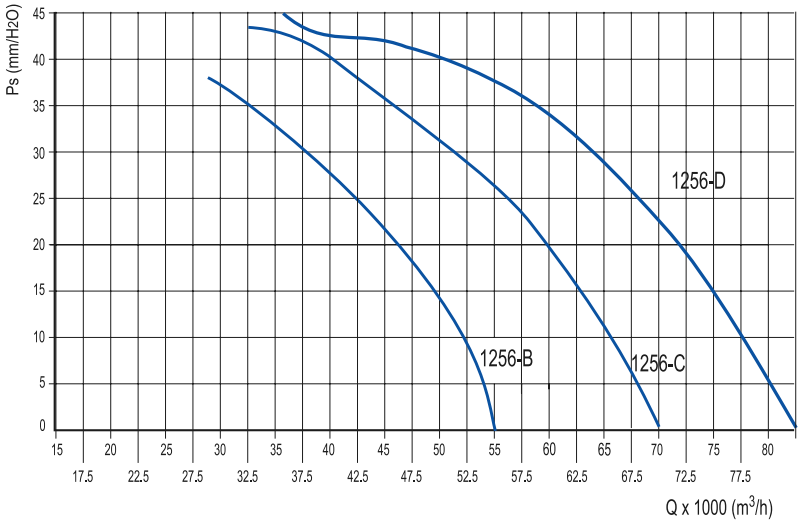
AFTM

Ducted axial fan with "UNEL-MEC" motor

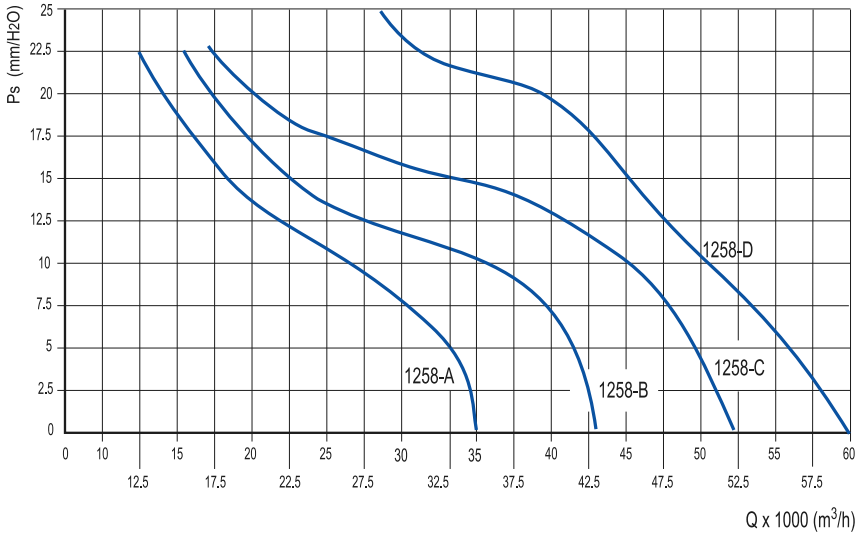
1250 - 4 POLES



1250 - 6 POLES



1250 - 8 POLES



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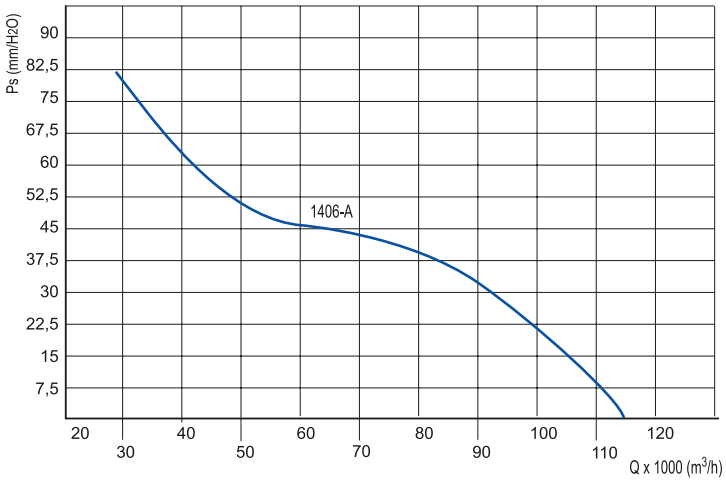
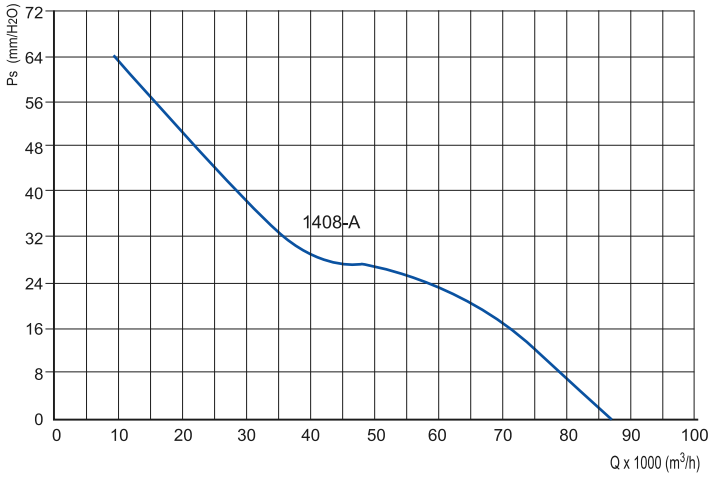
1400 - 6 POLES



1400 - 8 POLES



AFTS

Ducted axial fan with compact motor

Product AFTS

Installation Ducted

FEATURES
AFTS fans are ideal for applications requiring substantial air flow rates and low pressures, in duct mounting applications.
They are characterized by extreme compactness, thanks to the minimal size of the motor-impeller assembly; therefore, with dimensions smaller than those of a standard short-casing axial fan with a standard motor, the absence of protruding parts from the flanges, typical of "long-casing" fans, has been achieved, with the consequent possibility of installation both at the ends and in the middle of ductwork. Another distinctive feature is the perfect speed regulation capability, without producing noise (electrical hum) or abnormal current absorption.

FAN
Steel sheet casing protected with epoxy-polyester paint coating. Flanges dimensioned according to UNI EN ISO 13351/Tab.1. High-efficiency impeller with airfoil profile blades, with adjustable pitch angle at standstill, in technopolymer or cast aluminum, die-cast aluminum hub. Balancing according to UNI ISO 21940-11 standards.

MOTOR
AC asynchronous electric motor, three-phase or single-phase with thermal protection, variable speed, IP 55 protection, insulation class F, duty S1. Execution 5 (direct coupling with overhung impeller).

ON REQUEST
Versions with impeller having die-cast aluminium blades.
Versions with airflow from impeller to motor, position B (FGM).
Flat safety guard (FPG-DU) (Required for free inlet use).
Fixing feet (FF-DU).
Suction nozzle (IN).
Anti-vibration joint (FC-DU).
Anti-vibration supports (AM).
Counter flange (CF-DU).
Circular silencers (SIL-DU).

APPLICATIONS
Ventilation of plants, parking garages, machine rooms, livestock farms, cooling of electrical and refrigeration equipment, in the industrial or naval sector.

APPLICATIONS

PLANT VENTILATION | CAR PARKS | MACHINE ROOM | LIVESTOCK FARMS | COOLING OF ELECTRICAL EQUIPMENT, COLD ROOMS, ETC.

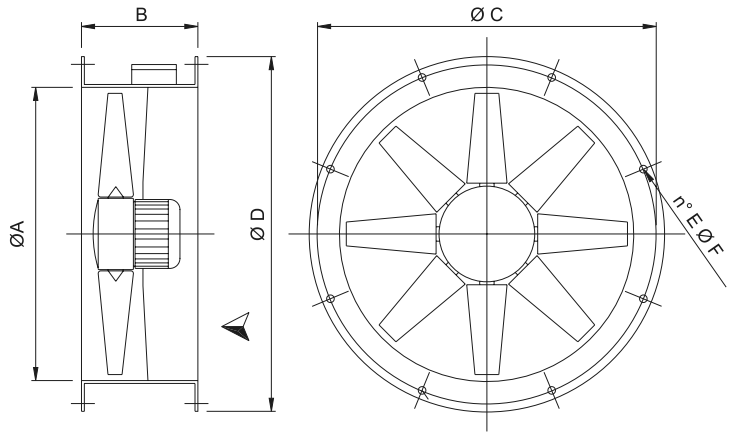
TECHNICAL CHARACTERISTICS

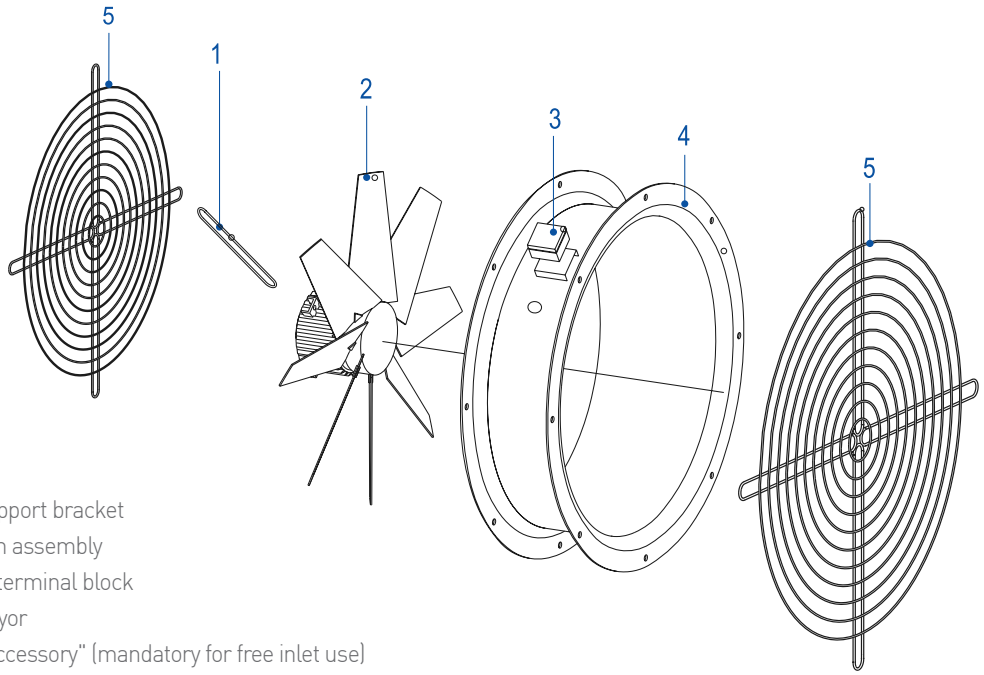
Ducted air	Clean or slightly dusty, non-abrasive
Conveyed air temperature	-20°C / +50°C
Supply voltage	Three-phase version (T) 400V-3Ph-50Hz
	Single-phase version (M) 230V-1Ph-50Hz
External terminal block	Airflow from motor to impeller, position A (FMG)

DIMENSIONS

Model	ØA mm	B mm	ØC mm	ØD mm	E mm	ØF mm	Weight(*) kg
31	310	260	355	390	8	10	10
35	360	260	395	430	8	10	11
40	410	260	450	490	8	12	15
45	460	260	500	540	8	12	16
50	510	260	560	600	12	12	17
56	570	260	620	655	12	12	22
63	640	260	690	725	12	12	23
71	710	260	770	805	16	12	26

(*) Indicative





1- Motor support bracket
2- Motor-fan assembly
3- External terminal block
4- Air conveyor
5- Guard "accessory" (mandatory for free inlet use)

AFTS

Ducted axial fan with compact motor

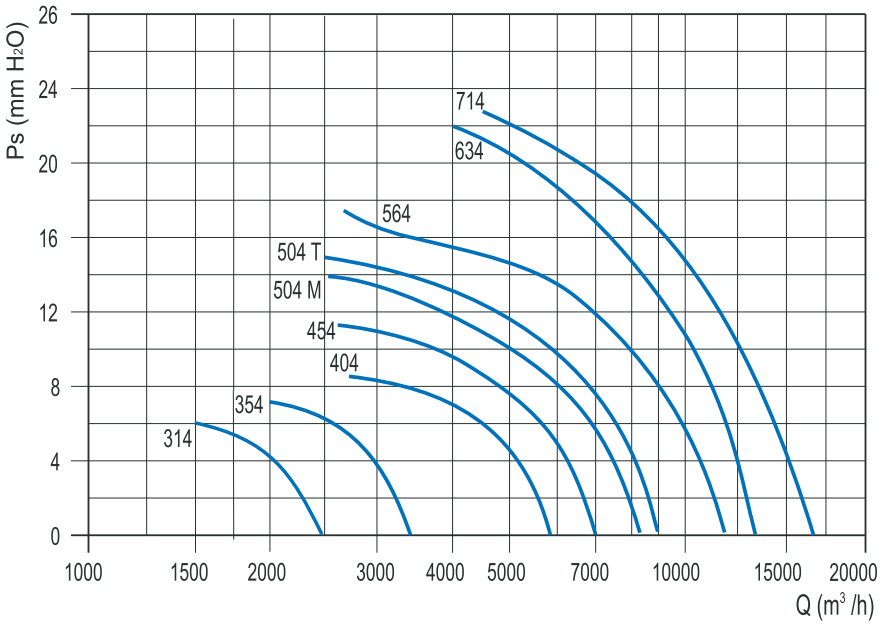
CHARACTERISTIC CURVES

4 POLES (1400 RPM) - SINGLE-PHASE (1PH-230V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
314 M	2300	0,09	0,8	50
354 M	3500	0,09	0,8	54
404 M	6000	0,18	1,7	55
454 M	7000	0,25	2,2	58
504 M	8500	0,25	2,3	62
564 M	11500	0,55	3,8	69

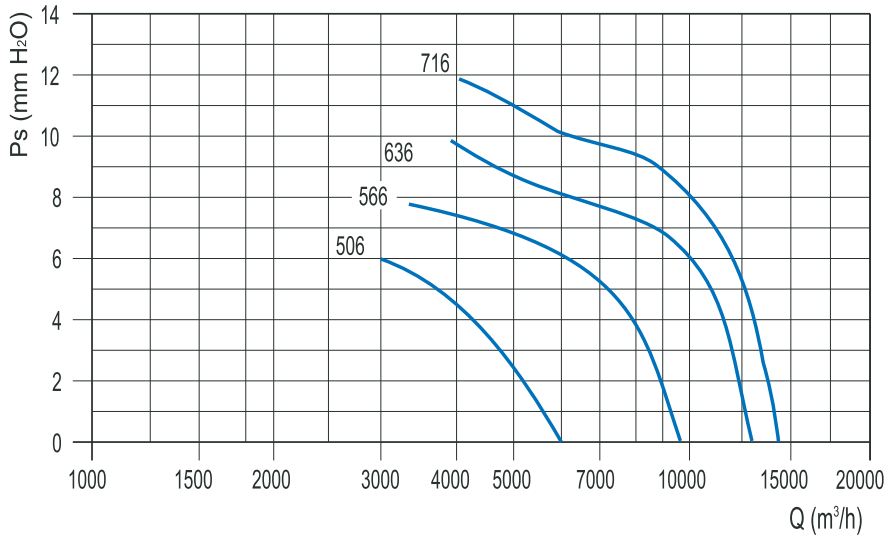
4 POLES (1400 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
314 T	2300	0,09	0,5	50
354 T	3500	0,09	0,5	54
404 T	6000	0,18	0,75	55
454 T	7000	0,25	1,1	58
504 T	9000	0,35	1,5	62
564 T	11500	0,55	1,6	69
634 T	13500	0,75	2,2	72
714 T	17000	1,1	2,6	73



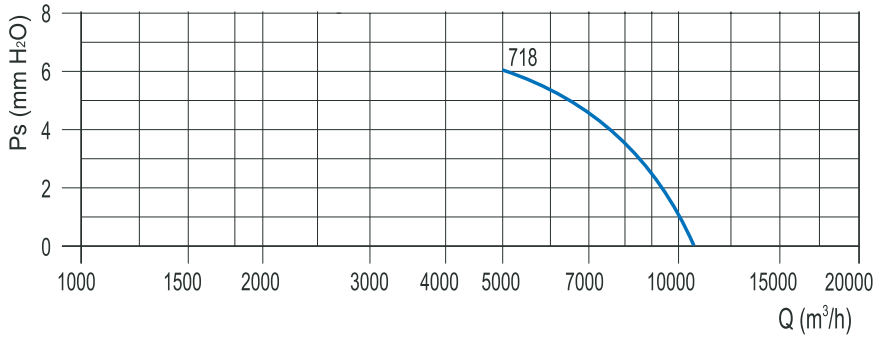
6 POLES (900 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
506 T*	6000	0,18	0,8	53
566 T	9500	0,25	1,2	60
636 T	13000	0,55	1,7	62
716 T	14500	0,55	1,7	64



8 POLES (700 RPM) - THREE-PHASE (3PH-400V 50HZ)

Model	Flow rate (m^3/h)	Pm kW	In max A	Lp dB(A)
718 T*	10500	0,28	1,3	58



(*) Only for installation outside EU.

IN-LINE EXTRACTORS

Ventilation

Comfort and performance at maximum efficiency energy

KCFC

Circular section ductable inline extractor

Product	KCFC
Application	Civil applications
Construction	Casing: painted galvanized sheet metal RAL 7035 Impeller: plastic and metal

SPECIFICATIONS
Circular section inline duct extractor for extraction and supply of clean air up to 1170 m³/h at low pressures.
The circular cross-section with inline flow simplifies installation in existing circuits or new installations with rigid or flexible circular ducts at inlet and outlet.
Structure made entirely of turned aluminum alloy sheet in two parts joined together by exposed screws. Inside the structure, flow straighteners are present that reduce fluid turbulence and limit straight duct lengths. On the outside of the casing, the junction box is located from which all electrical connections can be made.

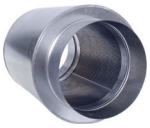
FAN
Backward curved centrifugal impeller, made of plastic and metal, directly coupled to the external rotor motor, dynamically balanced on two planes according to G6.3 DIN ISO standard.
Scroll housing in galvanized sheet metal painted light grey RAL 7035, also suitable for exposed installations.
Horizontal or vertical mounting. Integrated mounting bracket for easy installation of the fan unit.
Can be used for both supply and return.

MOTOR
IP33 protection motor with insulation class F and external rotor. Only single-phase 230 V, 50 Hz power supply is available.
Thermal protection with automatic reset, ball bearings. A built-in thermostat switch protects the motor from overload and automatically restarts the fan unit after internal temperature dissipation.
Min. fluid temp. = -20 °C.
Max. fluid temp. = +60 °C.

ACCESSORIES

Circular overpressure damper

Speed controller single-phase



Circular silencer without nose cone, bayonet connection

All images are only indicative of the product type and may differ from the actual article.

APPLICATIONS

CIVIL VENTILATION

FAST FOOD

CANTEENS

RESTAURANTS

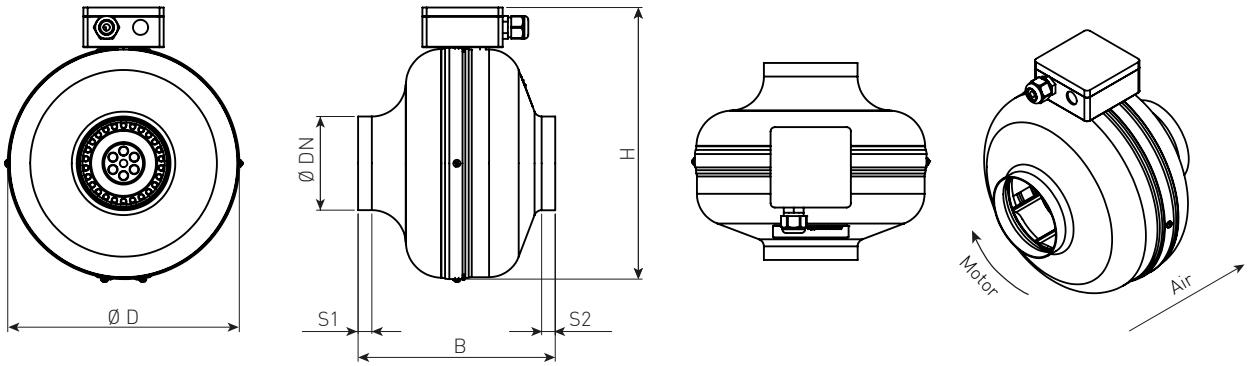
GARAGE

TECHNICAL FEATURES - OPERATING RANGE

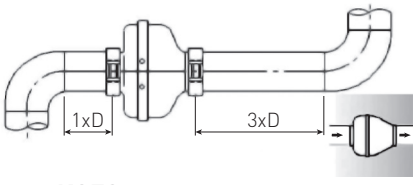
Operating range	Flow rate (m^3/h)	From 20 to 1,170
	Pressure (Pa)	Up to 600
Min. outlet	mm	100
Max. outlet	mm	315
Motor	Volt (±10%)	230 V
	Poles	2-4
	IP	33
Fluid temp min. limit	°C	-20
Fluid max. temp limit	°C	60

DIMENSIONS

KCFC Model	Dimensions (mm) Ø DN	Ø D	B	H	S1	S2
100L	99	245	209	287	15	14,4
125L	124	245	194	287	15	14,4
150	149	270	191	312	15	20
160	159	270	205	310	20	21
200L	199	344	243,5	386	20	30
200	199	344	243,5	386	20	30
250L	249	344	243	386	30	36
250	249	344	243	386	30	36
315	314	402	253,5	444	27	40



Correct installation



KCFC

KCFC

Circular section ductable inline extractor

QUICK SELECTION TABLE

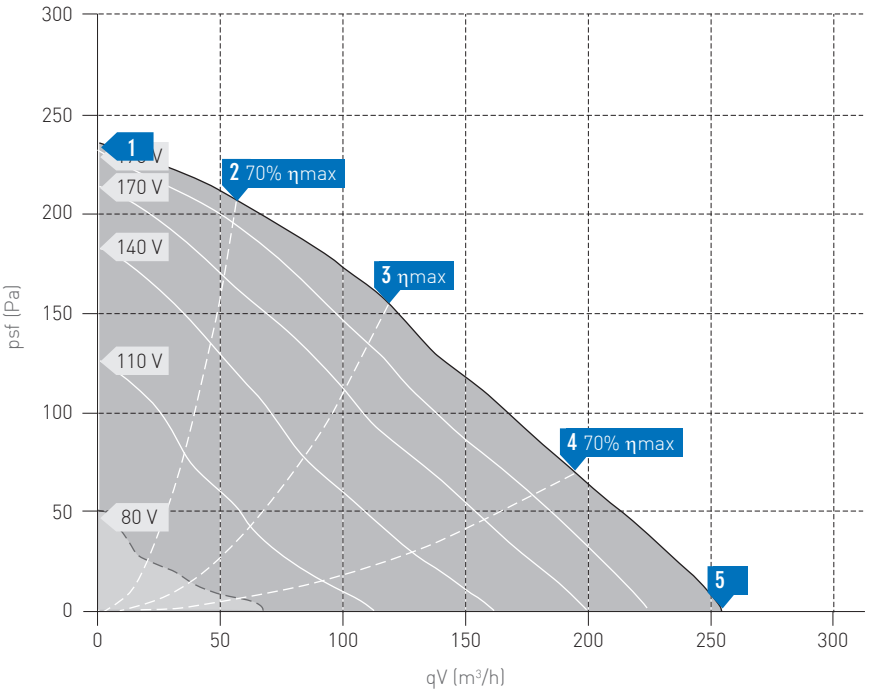
KCFC Model	Max. flow rate m^3/h	Speed RPM	Power supply Volt/Hz	I max. A	Installed power W	Degree protection	Sound power dB
100L	250	2390	230/50	0,23	28	IP 33	59
125L	300	2400	230/50	0,23	28	IP 33	-
150	440	2420	230/50	0,30	48	IP 33	62
160	460	2300	230/50	0,30	49	IP 33	62
200L	1040	2710	230/50	0,90	154	IP 33	70
200	810	2450	230/50	0,50	100	IP 33	71
250L	1090	2700	230/50	0,90	161	IP 33	68
250	890	2420	230/50	0,50	100	IP 33	71
315	1170	2700	230/50	0,90	162	IP 33	68

CHARACTERISTIC CURVES

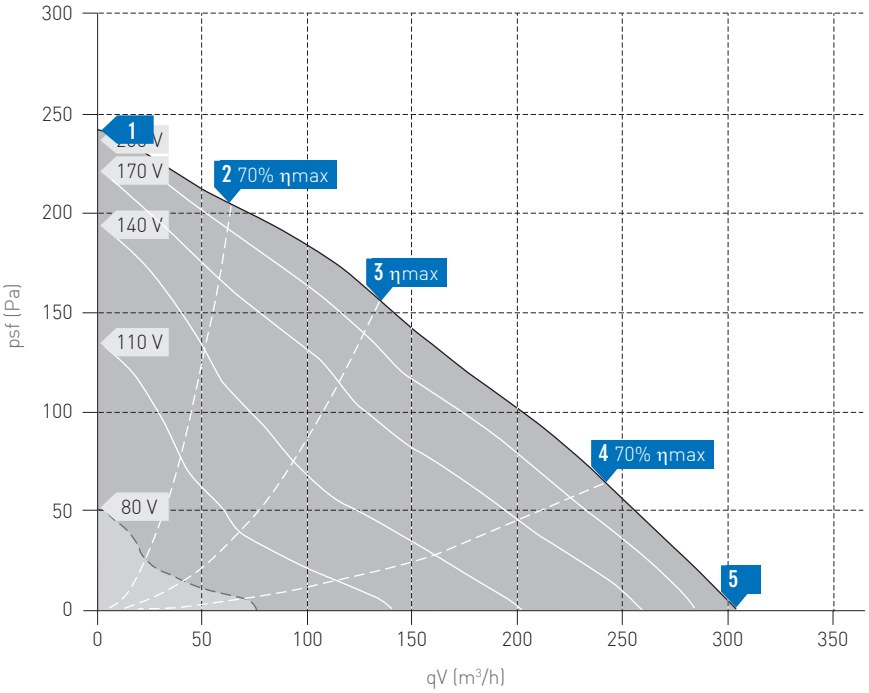
Q= Flow rate expressed in m^3/h, m^3/s and cfm

Pe= Static pressure expressed in mm W.G., Pa and in wg

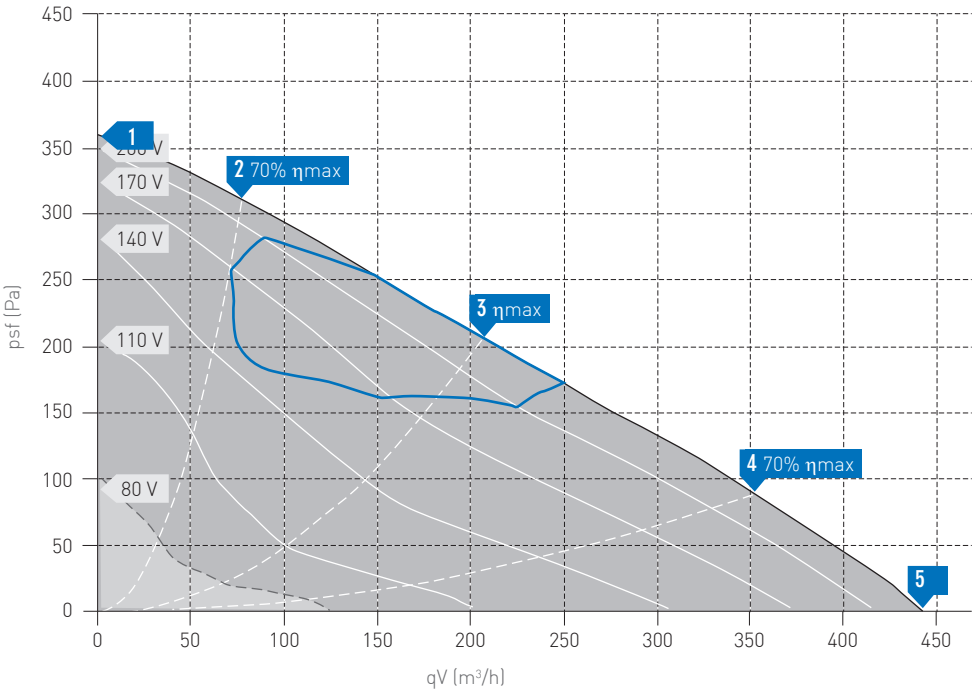
KCFC 100L



KCFC 125L



KCFC 150

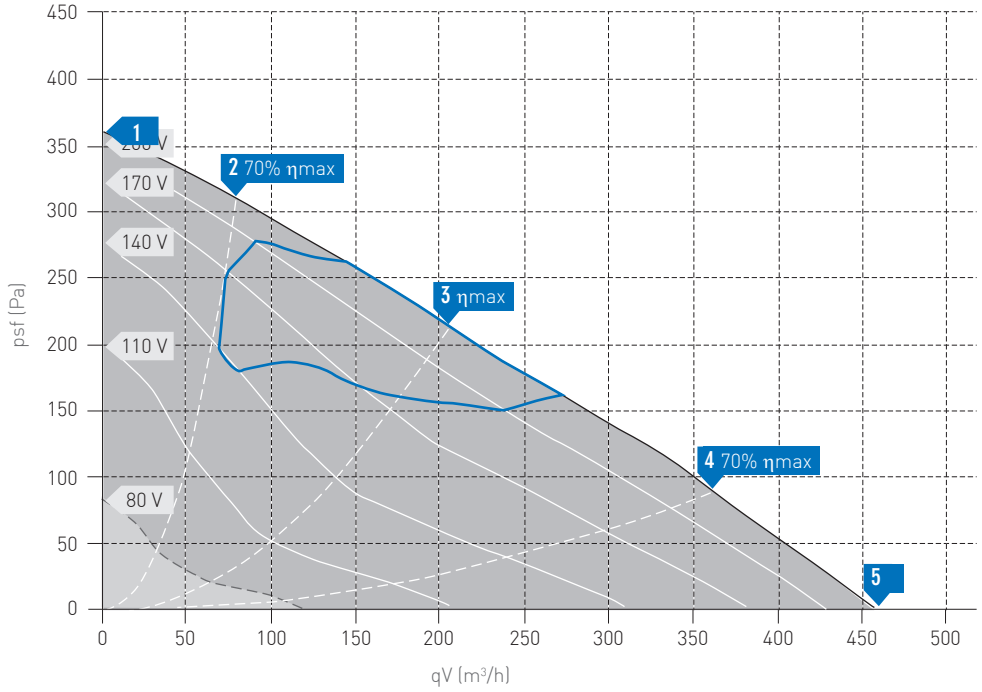


Q= Flow rate expressed in m³/h, m³/s and cfm
Pe= Static pressure expressed in mm W.G., Pa and in wg

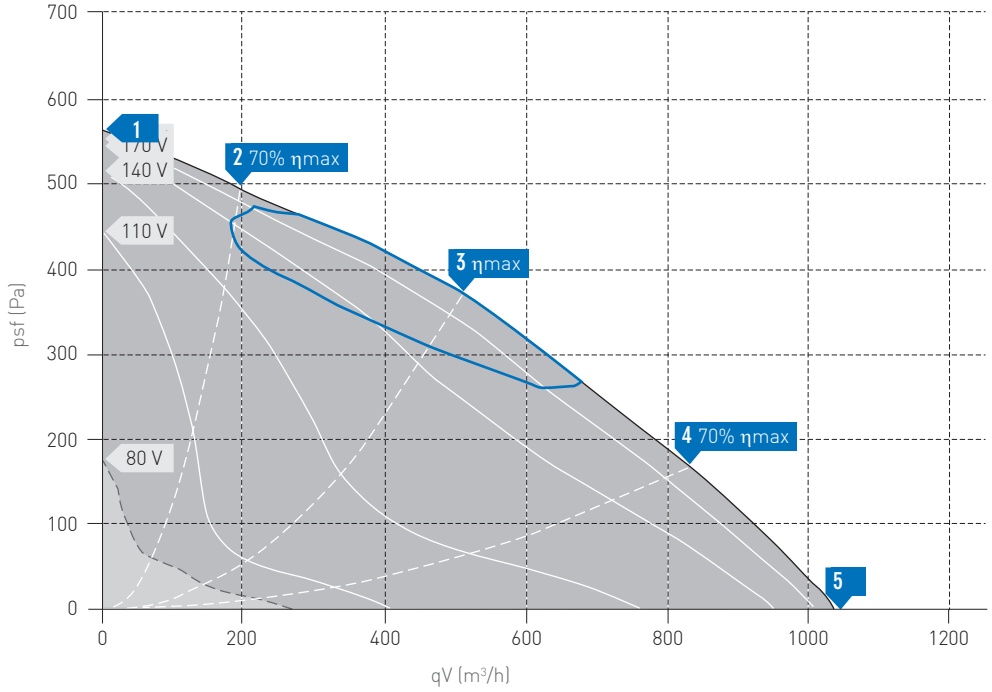
KCFC

Circular section ductable inline extractor

KCFC 160



KCFC 200L



Q= Flow rate expressed in m³/h, m³/s and cfm

Pe= Static pressure expressed in mm W.G., Pa and in wg

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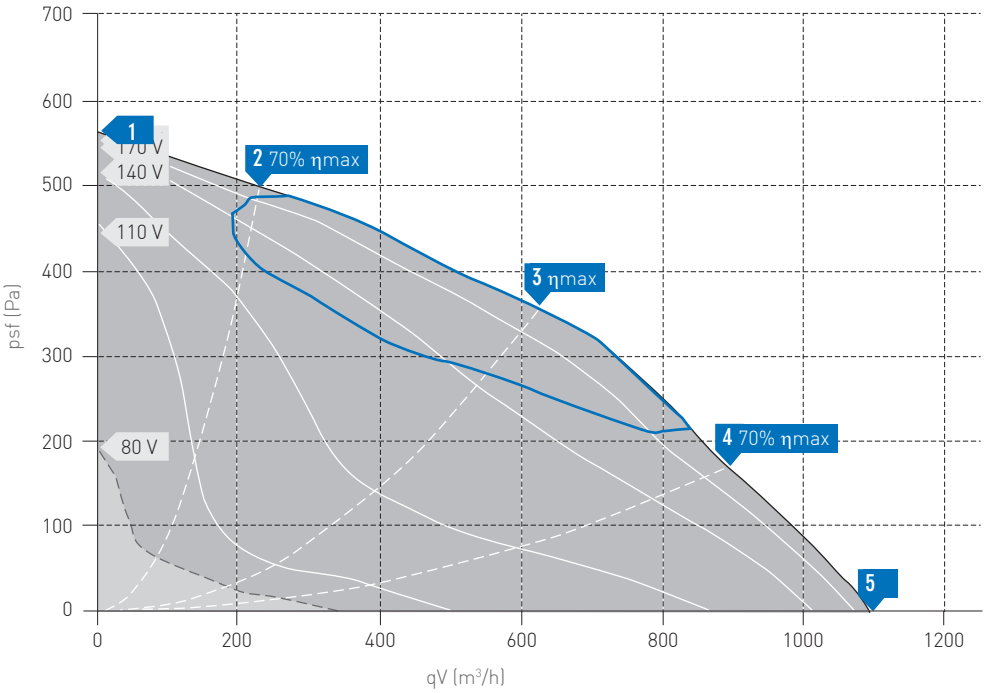
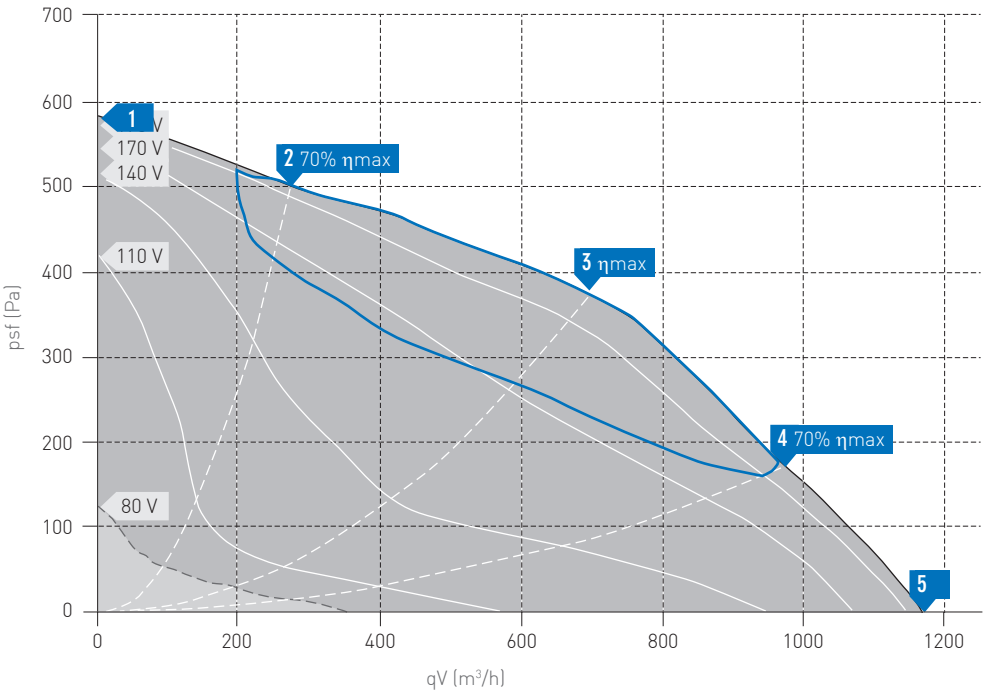
KCFC 250L



KCFC 315



FANLINE

Polypropylene inline extractor

FANLINE

FANLINE VERSION EC

Product	FANLINE
Application	Civil applications
Construction	Impeller and structure in polypropylene

SPECIFICATIONS
Inline fan suitable for air renewal in bathrooms and small enclosed rooms.
Operating temperature range: -25°C to +60°C.
Protection class: IPX4.

MOTOR
Single-phase motor, 3 speeds, equipped with ball bearings, with impeller and terminal box fixed to the structure with locking devices and easily removable.
Standard voltages 230 V 50 Hz.
Integrated thermostatic switch. Mounting bracket included.

VERSIONS
EC version on request.

APPLICATIONS

CIVIL VENTILATION | FAST FOOD | CANTEENS | RESTAURANTS | GARAGE

TECHNICAL FEATURES - OPERATING RANGE

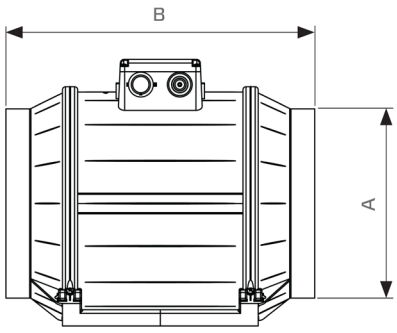
Operating range	Flow rate (m^3/h)	From 100 to 3,000
	Pressure (Pa)	Up to 600
Motor	Volt (±10%)	230 V
Max. operating temperature	°C	50

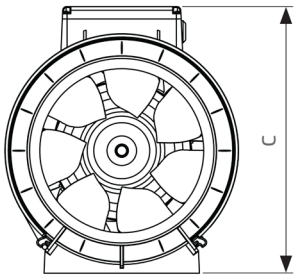
QUICK SELECTION TABLE

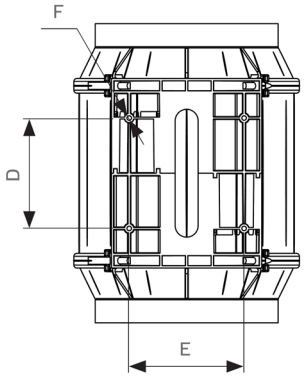
FANLINE Model	Speed max. RPM	Power supply V/Hz	Max. allowed current A	Power max. kW	Flow rate max. m³/h	Sound power dB(A)	Wt. approx. kg
150L	2730	230/50	0,3	0,046	600	69	2,4
160L	2820	230/50	0,3	0,045	615	66	2,5
200	2850	230/50	0,6	0,117	1220	72	4
250	2880	230/50	0,8	0,170	1625		5,7
315	2850	230/50	2,1	0,436	3180	82	12,4
400	3300	230/50	1	0,211	3300	71	15,27

DIMENSIONS

FANLINE Model	A mm	B mm	C mm	D mm	E mm	F mm
150L	Ø150	390	238,5	94	100	4x Ø5
160L	Ø160	289	238,5	94	100	4x Ø5
200	Ø200	325	280	120	125	4x Ø5
250	Ø250	215	299	80	125	4x Ø5
315	Ø315	300	361	210	264	4x Ø9
400	Ø400	350	452	225	330	4x Ø9





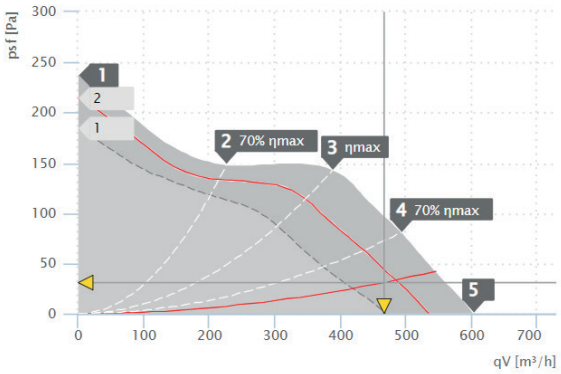


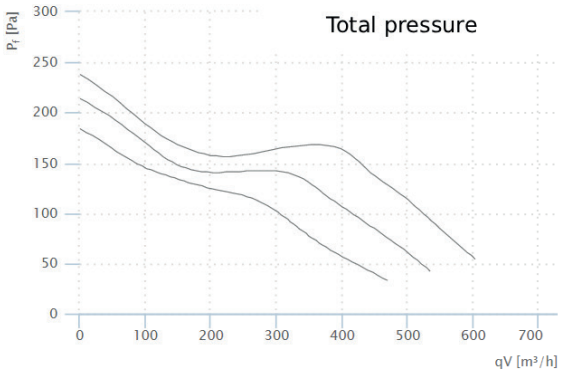
FANLINE

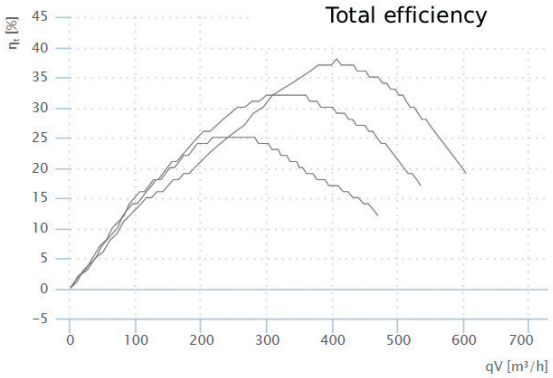
In-line extractor

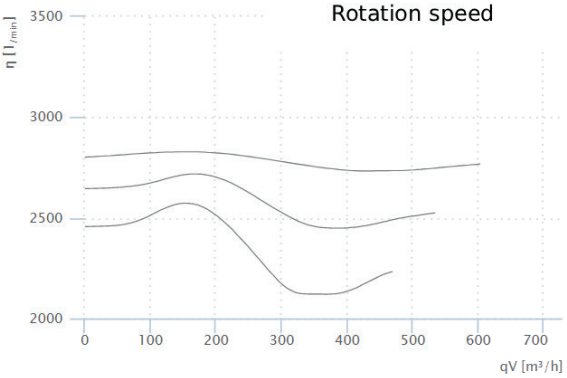
CHARACTERISTIC CURVES

FANLINE 150

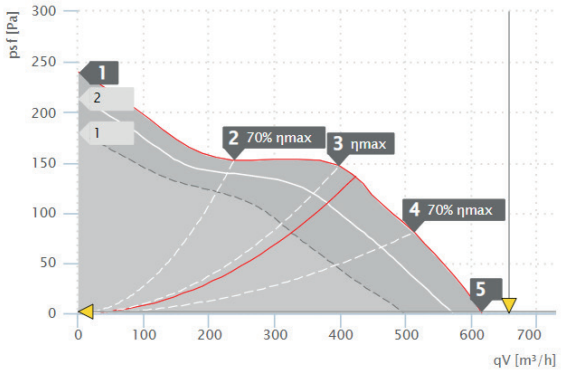


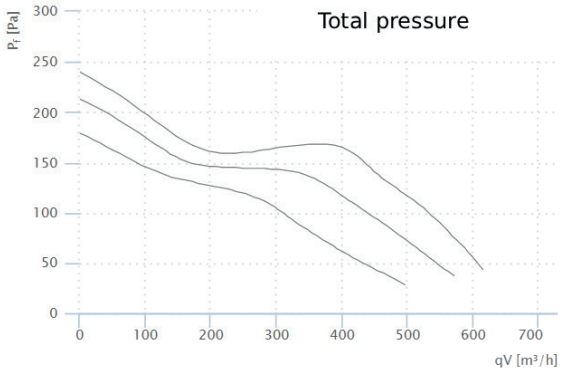


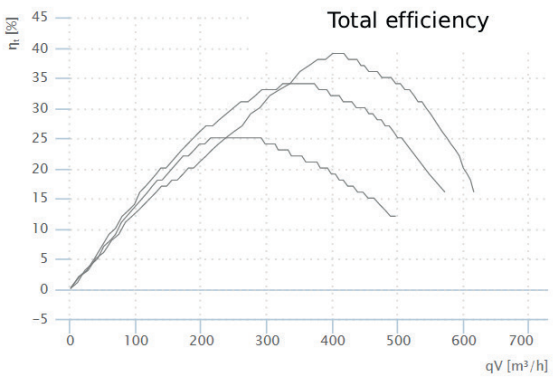


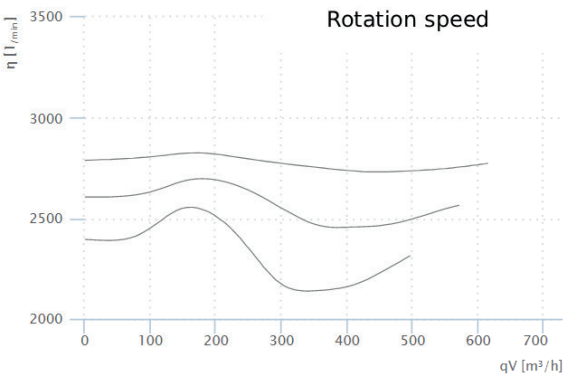


FANLINE 160









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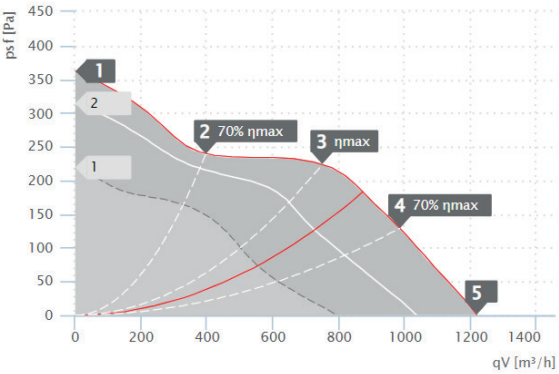

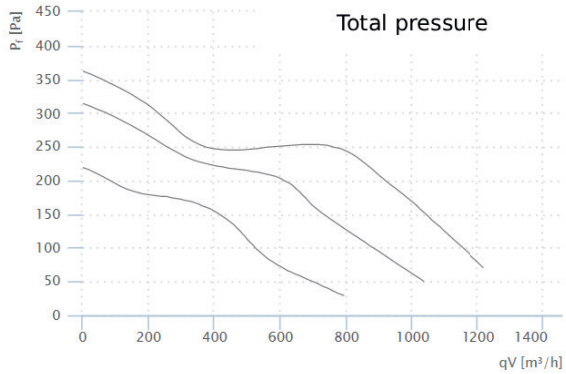

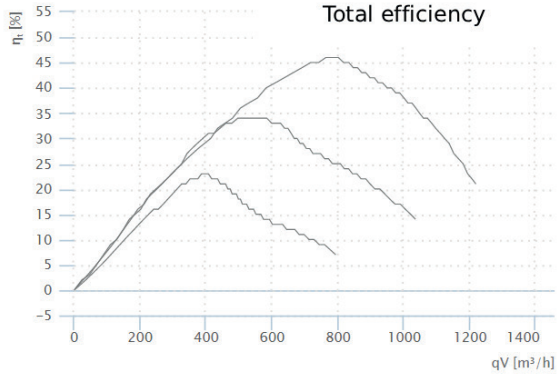

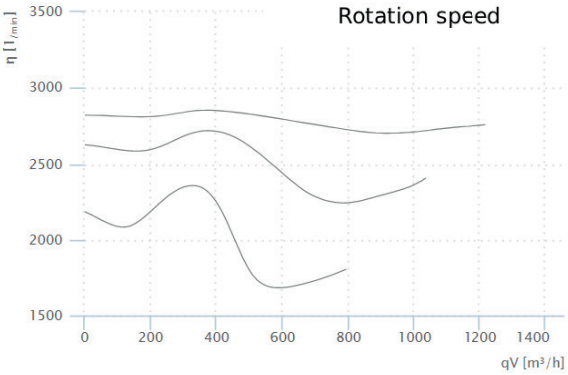

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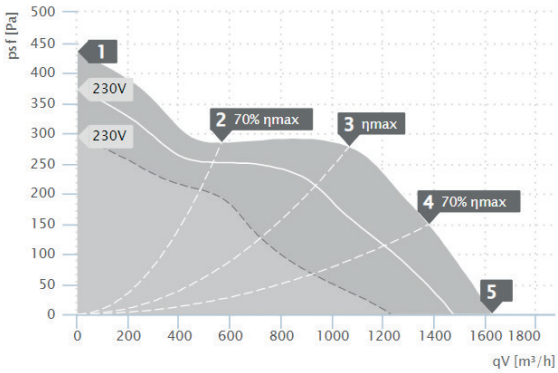
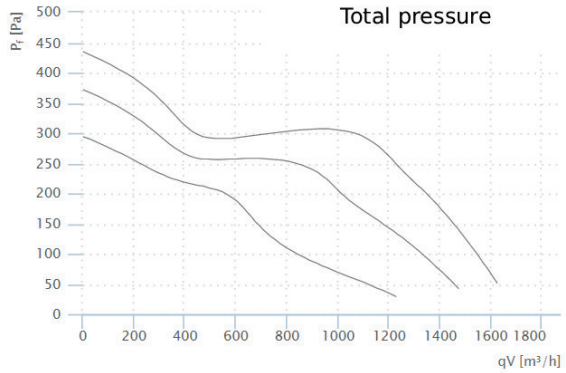
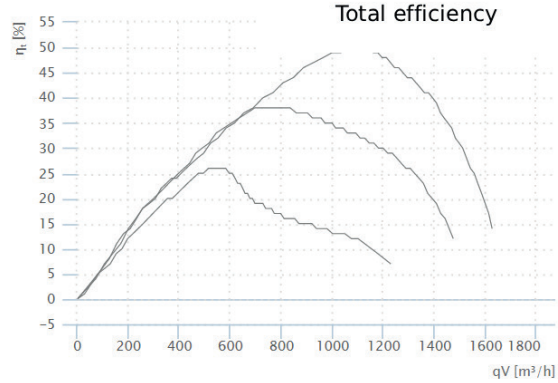
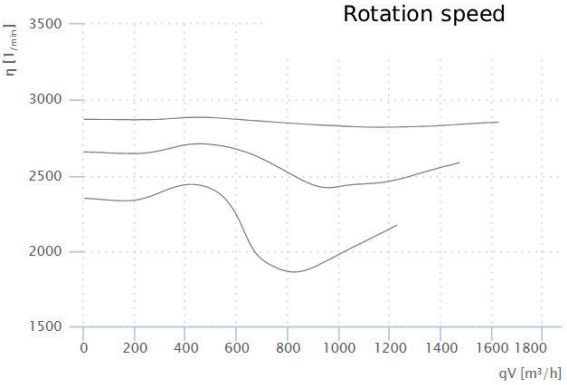




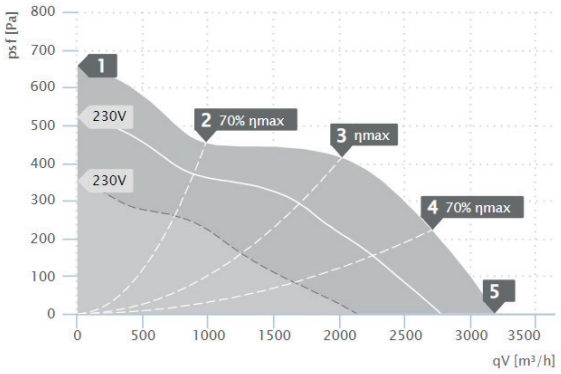


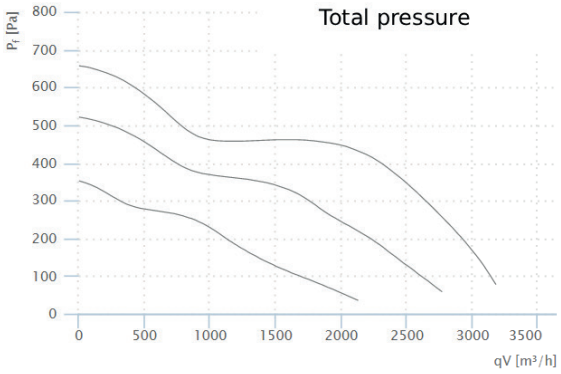


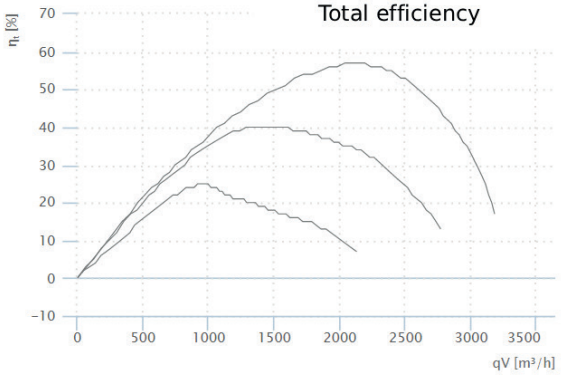
FANLINE

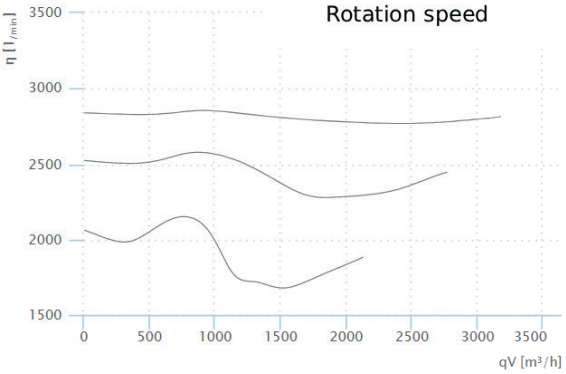
In-line extractor

FANLINE 315

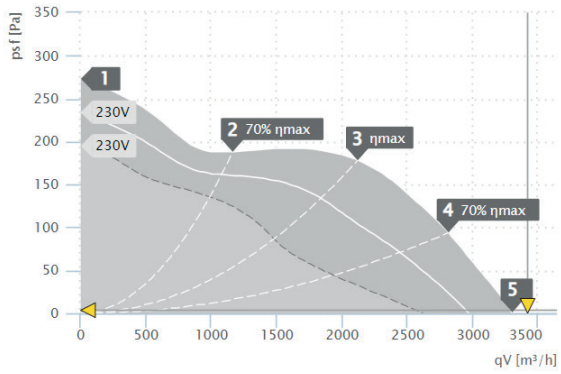


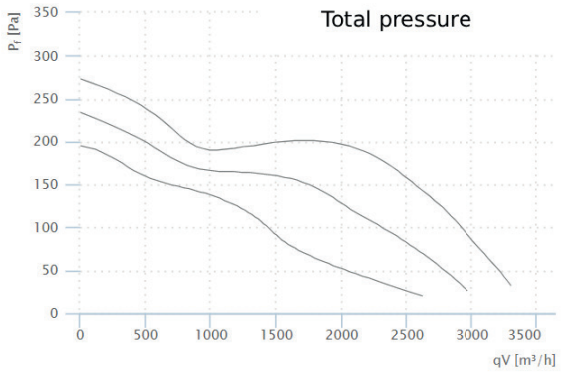


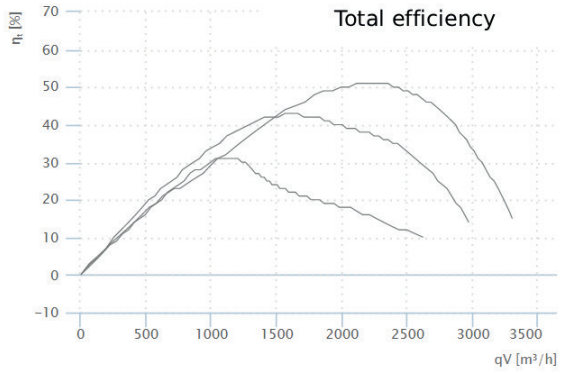


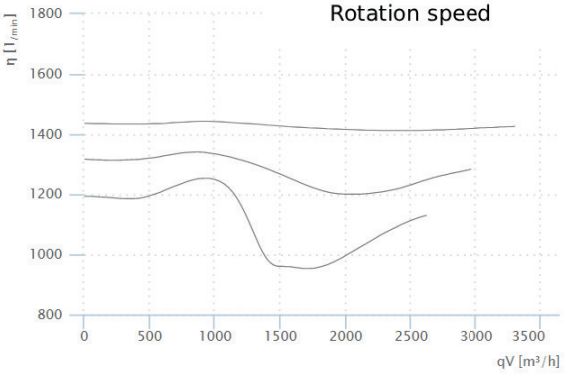


FANLINE 400









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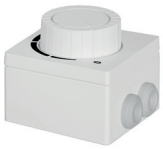
ACCESSORIES



4-stage start-stop selector (0-1-2-3)

Safety start/stop switch
to stop the fan before any maintenance work.
Compliant with IEC 947-3 standard.
Protection IP-65

All images are only indicative of the product type and may differ from the actual article.

BVI

Super silenced inline centrifugal fan box

Product	BVI
Application	Civil applications
Construction	galvanized sheet metal box with panels lined with sound-absorbing material

FEATURES
The SILENT BOX series consists of carefully soundproofed ventilation box units. The range comprises 7 models with port diameters from 125 to 400 mm. The high thickness of the high-density sound-absorbing lining containing the fan, the minimal height of the plenum, the adjustable motor speed, are characteristics that make the SILENT BOX indispensable in installations where compact dimensions or low noise levels are required.

FAN
Galvanized sheet metal containment housing with walls insulated with high-density sound-absorbing material, 50 mm thick. Circular duct connection ports. Openable panel for fan access. Double-inlet centrifugal fan with forward curved blade impeller.

MOTOR
Single-phase electric motor, IP44 or IP20, cl. B, with thermal protection, electronically adjustable speed.

APPLICATIONS
Ideal for extracting or supplying air through circular ducts in environments such as: public premises, offices, shops, bars, gyms, workshops, bathrooms, garages, restaurants.

APPLICATIONS

TECHNICAL CHARACTERISTICS

Ducted air	Clean
Air temperature	-20°C/+40°C
Supply voltage	single-phase 230V-1ph-50Hz

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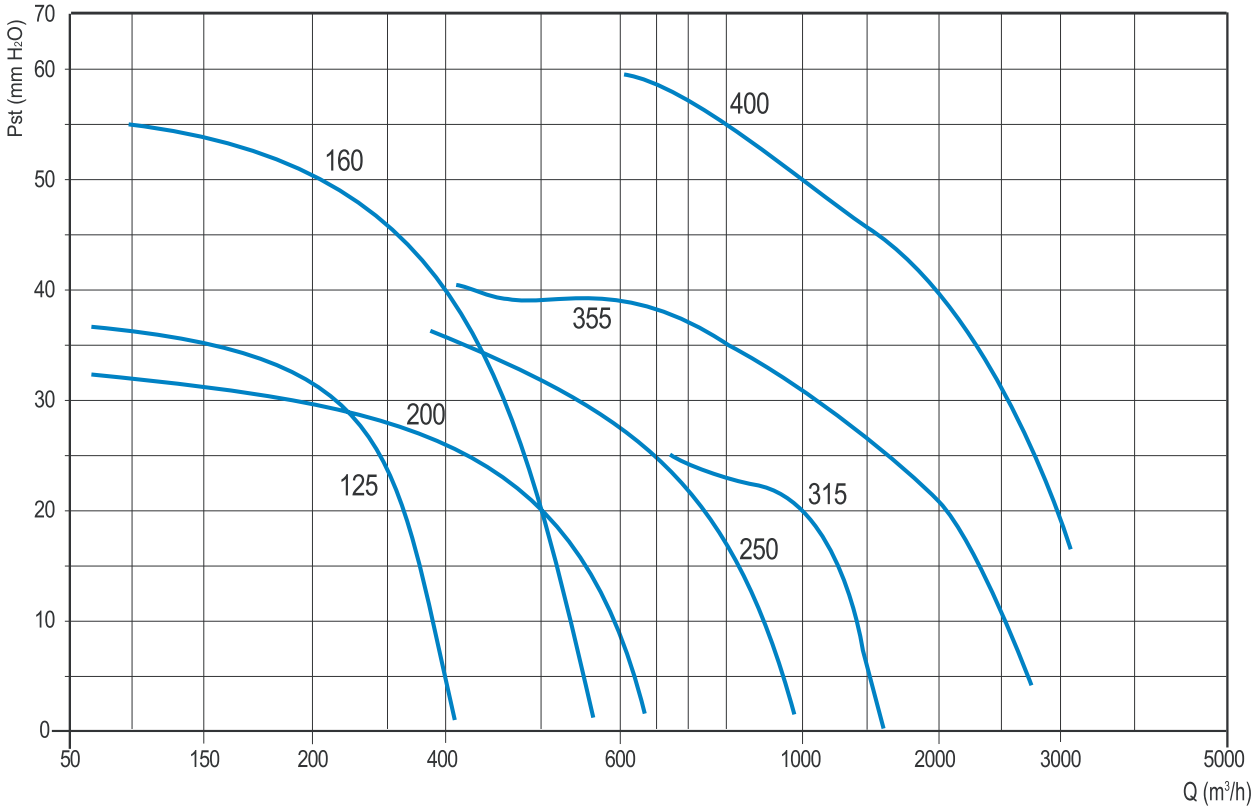
CHARACTERISTIC CURVES

BVI



All ventilation units, in accordance with European Regulation 1253/14, must be driven by a speed controller depending on the type of electric motor. The speed controller specification is indicated in the documentation of the ventilation unit itself.

Tolerances: aeraulic performance and noise levels are within the tolerances specified in DIN 24166 standard, Class 2.

In case of installation in the EU, use only for extraction in environments NOT exclusively occupied by people (e.g.: professional kitchens, industrial and agricultural applications, machinery, data centers, etc.)

* Only for installation outside EU

QUICK SELECTION TABLE

Model	RPM	Pm (W)	In max (A)	Lp dB(A)
125 M	2480	120	0,5	27
160 M*	2647	270	1,2	33
200 M*	1550	160	0,7	29
250 M*	2082	265	1,1	35
315 M	1400	147	1,2	42
355 M	1400	420	3,7	46
400 M	1400	550	5	50

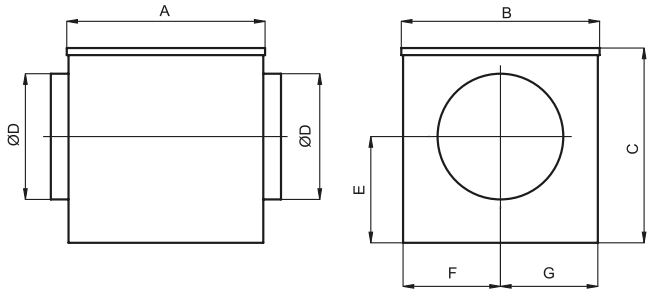
Model: single-phase (230V 50Hz)
Rpm= Rated motor speed
Pm= Motor power
In= Absorbed current
Lp=Sound pressure level in free field at 3 m from the fan with ducted openings.

BVI

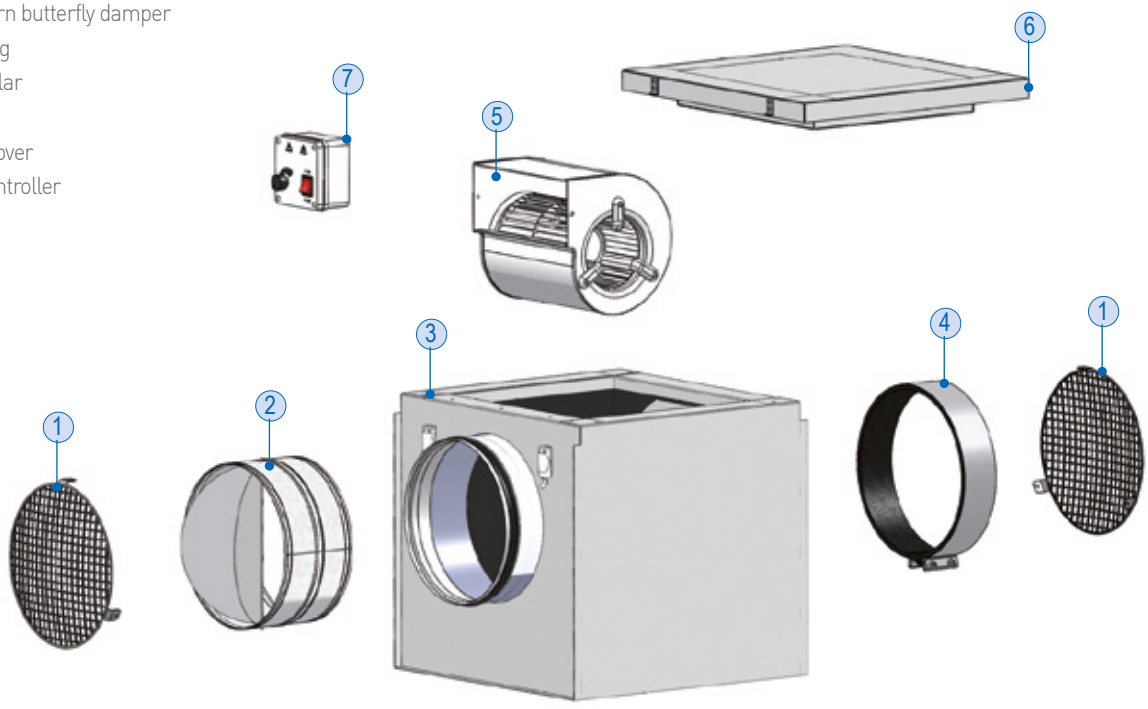
Super silenced inline centrifugal fan box

DIMENSIONS

Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	Kg
125	400	410	300	125	171	277	133	14
160	400	410	300	160	142	148	262	15
200	444	444	420	200	251	222	222	18
250	444	444	420	250	221	222	222	19
315	550	550	550	315	300	275	275	39
355	550	550	550	355	300	275	275	41
400	650	650	650	400	380	325	325	60



1- Protection guard (accessory) - Mandatory for free inlet use
2- Non-return butterfly damper
3- Box casing
4- Fixing collar
5- Fan
6- Closing cover
7- Speed controller



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BVIEC

Inline centrifugal fan box with EC motor

Ventilation

Comfort and performance at maximum efficiency energy

Product	BVIEC
Application	Civil applications
Construction	In galvanized sheet metal with panels lined with sound-absorbing material

FEATURES

The SILENT BOX series consists of carefully soundproofed ventilation box units. The range comprises 5 models with port diameters from 125 to 315 mm. The high thickness of the high-density sound-absorbing lining containing the fan, the minimal height of the plenum, the adjustable speed of the high-efficiency EC brushless motor, make the SILENT BOX EC indispensable in installations where compact dimensions or low noise levels are required.

FAN

Galvanized sheet metal containment housing with walls insulated with high-density sound-absorbing material, 50 mm thick. Circular duct connection ports. Openable panel for fan access. Centrifugal fan with backward curved blade impeller.

MOTOR

Single-phase EC brushless high-efficiency electric motor IP44 (IP54 mod.315) 100% adjustable with a potentiometer or 0-10V signal with thermal protection. External terminal box IP55.

APPLICATIONS

Ideal for extracting or supplying air through circular ducts in environments such as: public premises, offices, shops, bars, gyms, workshops, bathrooms, garages, restaurants.

APPLICATIONS

PUBLIC PREMISES · OFFICES · SHOPS · BAR · GYMS · LABORATORIES · BATHROOMS · WORKSHOPS · RESTAURANTS

TECHNICAL CHARACTERISTICS

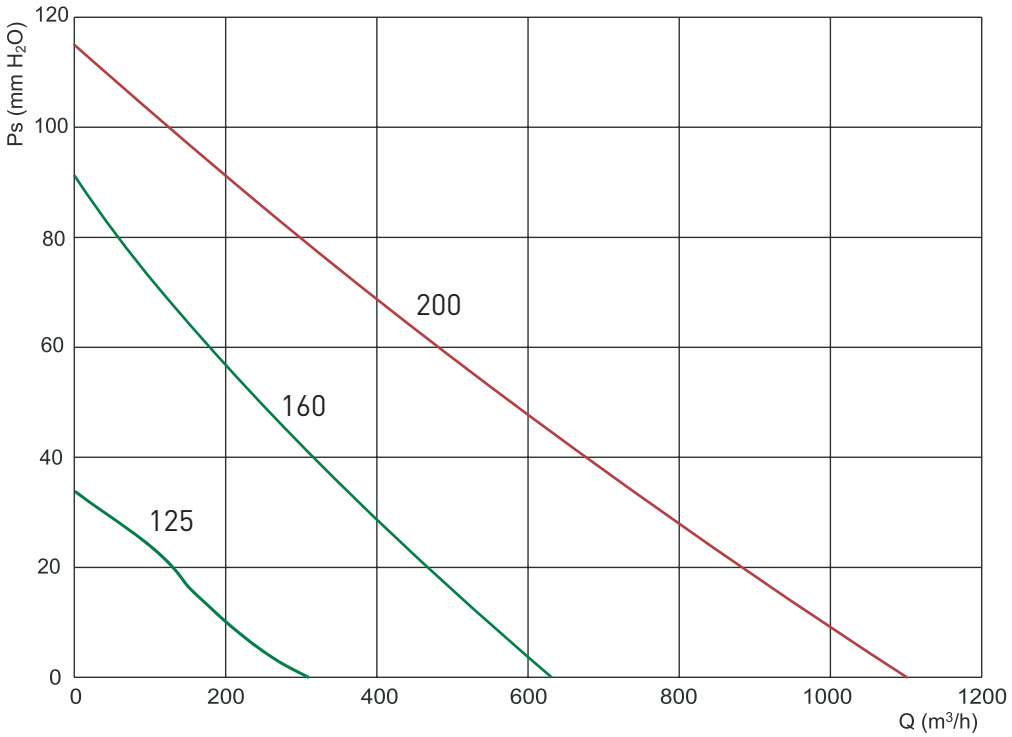
Ducted air	Clean
Air temperature	-20°C/+50°C
Supply voltage	single-phase 230V-1ph-50Hz
Speed controller	0-10V (SRC10)

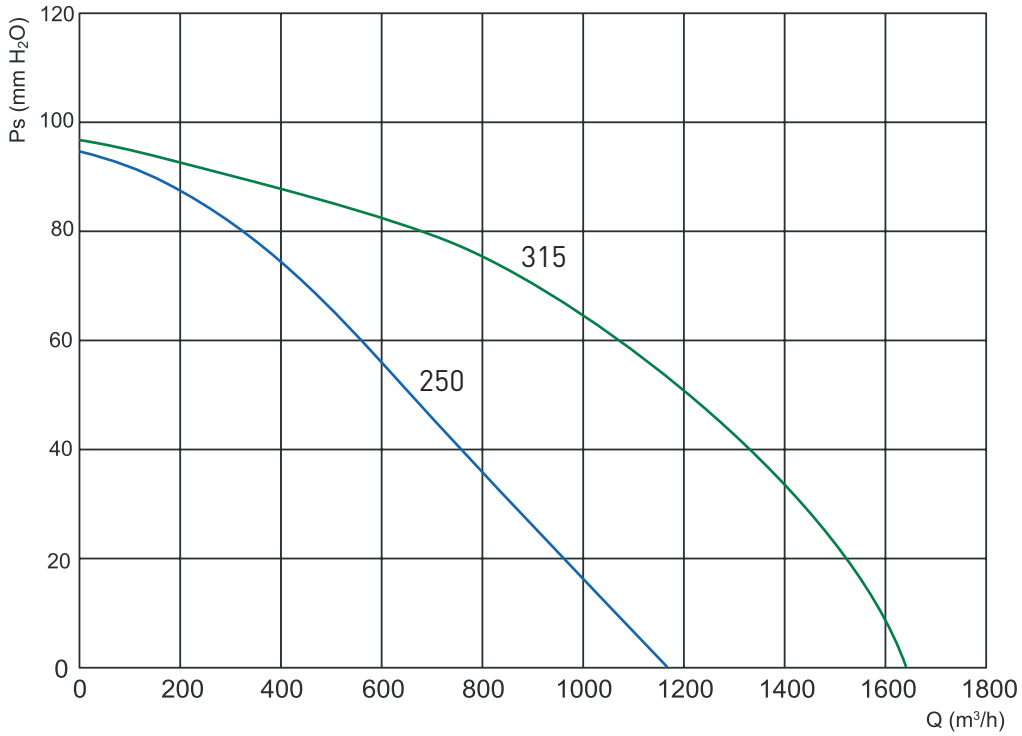
BVIEC

Inline centrifugal fan box with EC motor

CHARACTERISTIC CURVES

BVIEC





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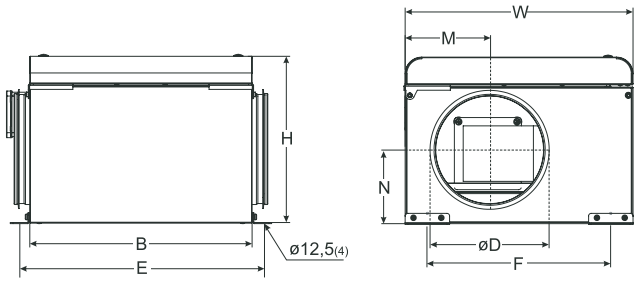
QUICK SELECTION TABLE

Model	RPM	Pm (W)	In max (A)	Lp dB(A)
125 M	4480	53	0,4	47
160 M	3490	114	0,99	54
200 M	3380	195	1,45	58
250 M	3220	213	1,69	63
315 M	3400	400	3	65

Rpm= Rated motor speed
Pm= Motor power
In= Absorbed current
Lp=Sound pressure level in free field at 1 m from the fan with ducted openings.

DIMENSIONS

Model	B mm	W mm	H mm	M mm	N mm	D mm	E mm	F mm	Kg
125 M	400	410	325	205	165,5	125	440	330	12,3
160 M	550	485	340	149	193	160	590	405	19
200 M	600	545	425	170	259,3	200	640	465	25
250 M	600	545	425	194	234,5	250	640	465	25
315 M	437	595	475	297,5	238	315	477	515	31



KVR

Inline extractor for rectangular ducts

Product	KVR
Application	Civil and industrial applications
Construction	Aluminium profile, galvanized sandwich panels

FEATURES
The KVR series inline extractors are suitable for inline installation along rectangular ducts. They consist of a compact galvanized steel sheet casing with standard flanges of
20 mm on both sides.
Both horizontal and vertical mounting positions possible.
They are suitable for air renewal in commercial and industrial buildings and for installation in ventilation and air conditioning systems.
Maximum operating temperature: 70 °C.

FAN
Impeller with backward curved blades, mounted on the external rotor of a voltage-controllable motor. The impeller is dynamically balanced according to quality class G 6.3 of DIN/ISO 1940, on 2 planes.
Fan easy to clean thanks to the tilting fan section, therefore also suitable for handling slightly contaminated air.

MOTOR
Motor in single-phase 230 V/50 Hz or three-phase 400 V/50 Hz execution. Enclosed drive motor with maintenance-free ball bearings with lifetime lubrication, sealed on both sides. In single-phase models, it is equipped with an integrated thermal contact in the winding, internally wired in series; in three-phase models, the motor thermal protection must be externally wired.

ON REQUEST
EC version

APPLICATIONS

CIVIL VENTILATION | FAST FOOD | CANTEENS | RESTAURANTS | GARAGE

TECHNICAL FEATURES - OPERATING RANGE

Operating range	**Flow rate (m^3/h)**	**From 500 to 11,460**
Motor	**Volt (±10%)/Hz**	**230/50 - 400/50**
Max. continuous operating temperature	**°C**	**70**

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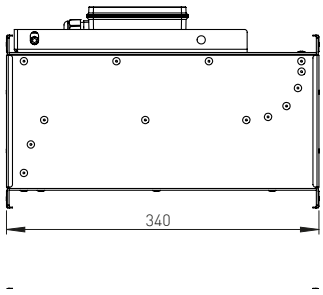
QUICK SELECTION TABLE

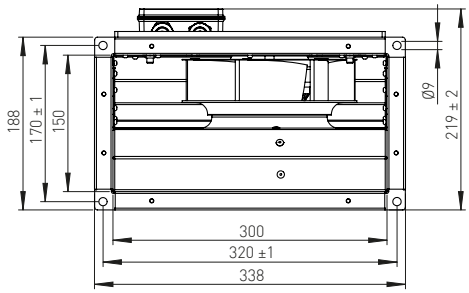
KVR Model	Speed RPM	Power supply V/Hz	Max. allowed current A	Power kW	Flow rate max. m^3/h	Power sound dB(A)	Wt. kg
3015 E2 40	2350	230/50	0,3	0,52	500	68	6,1
4020 E2 30	2720	230/50	0,9	0,158	1060	78	9,8
6035 E4 30	1350	230/50	1,4	0,256	3020	71	24
6035 E4 31	1360	230/50	3,1	0,453	3920	80	23,6
8050 D4 30	1370	400/50	3,5	1,524	9120	84	59,9
10050 D4 30	1400	400/50	4,7	1,867	11.460	88	80

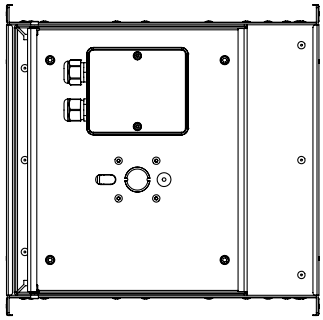
DIMENSIONS

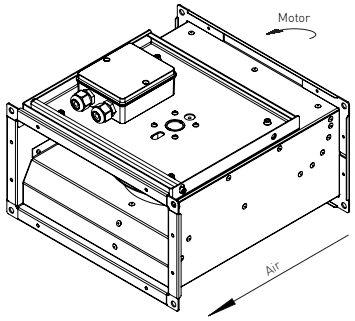
KVR Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	ØH mm	I mm	L mm
3015 E2 40	–	340	150	170	188	300	320	339	9	219
4020 E2 30	302	420	200	220	238	400	420	440	9	269
6035 E4 30	485	610	350	370	388	600	620	638	9	419
6035 E4 31	485	610	350	370	388	600	620	638	9	419
8050 D4 30	644	830	500	520	538	800	820	838	9	589
10050 D4 30	644	830	500	520	538	1000	1020	1038	9	568

3015 E2 40





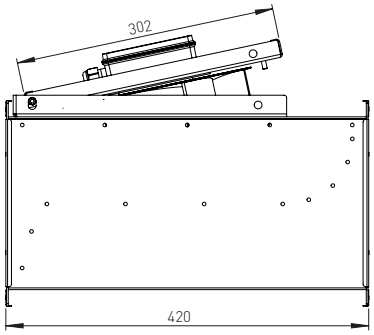


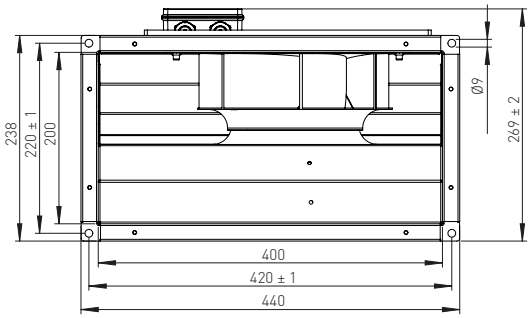


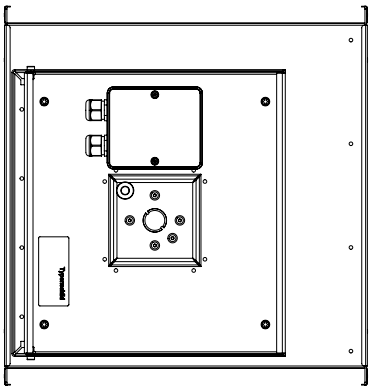
KVR

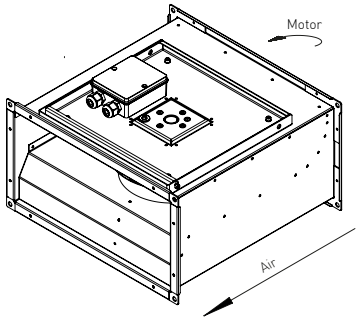
Inline extractor for rectangular ducts

4020 E2 30

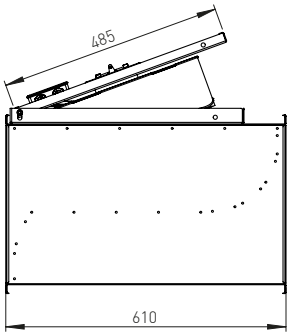


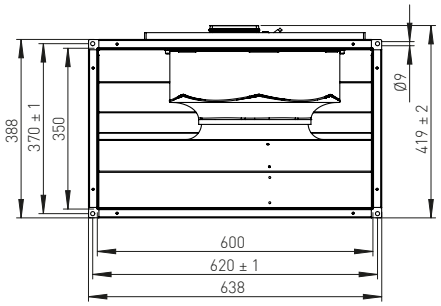


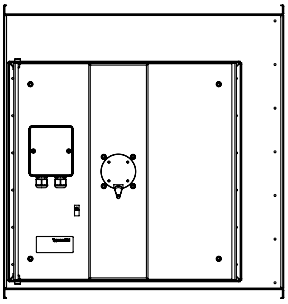


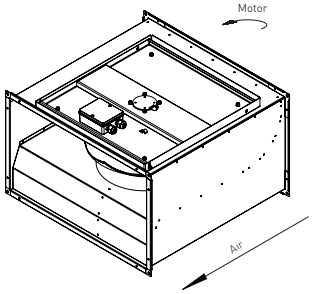


6035 E4 30









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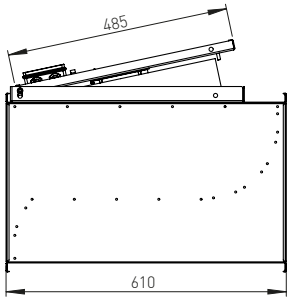
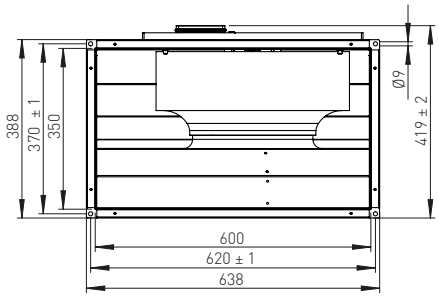
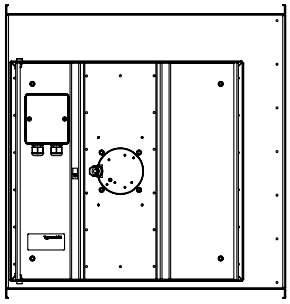
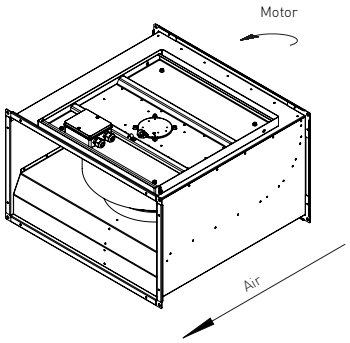
6035 E4 31

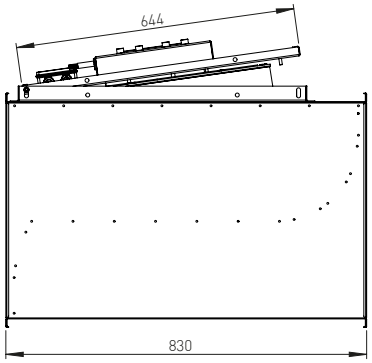


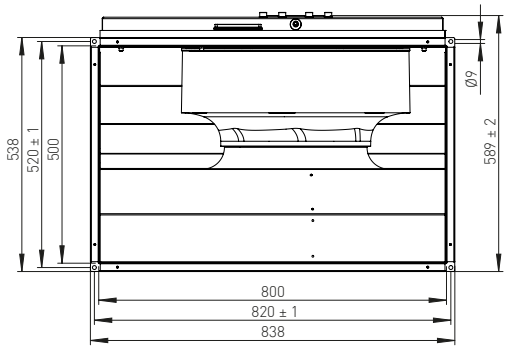


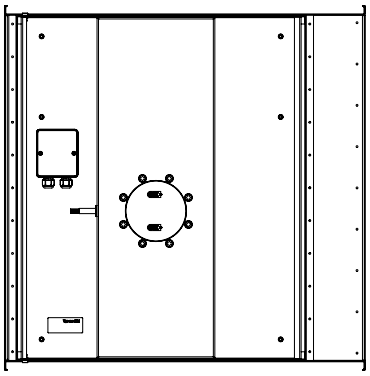


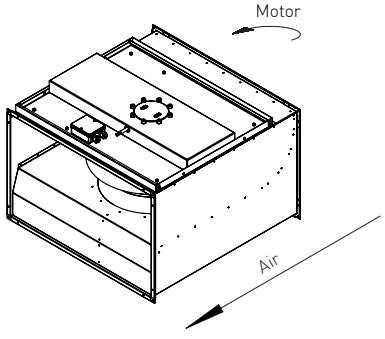


8050 D4 30





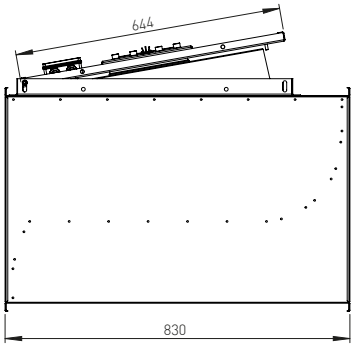


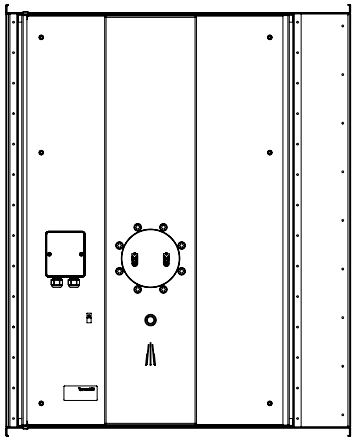


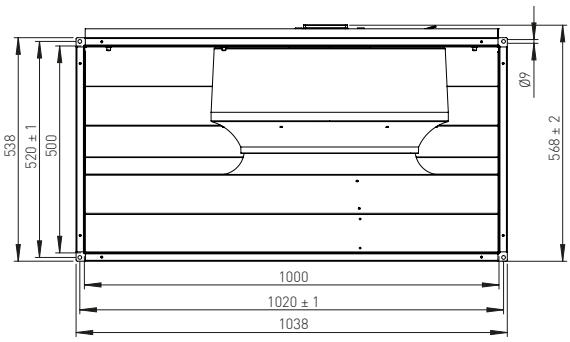
KVR

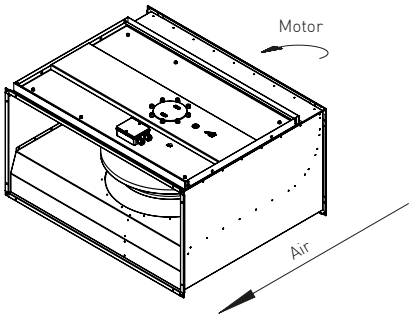
Inline extractor for rectangular ducts

10050 D4 30



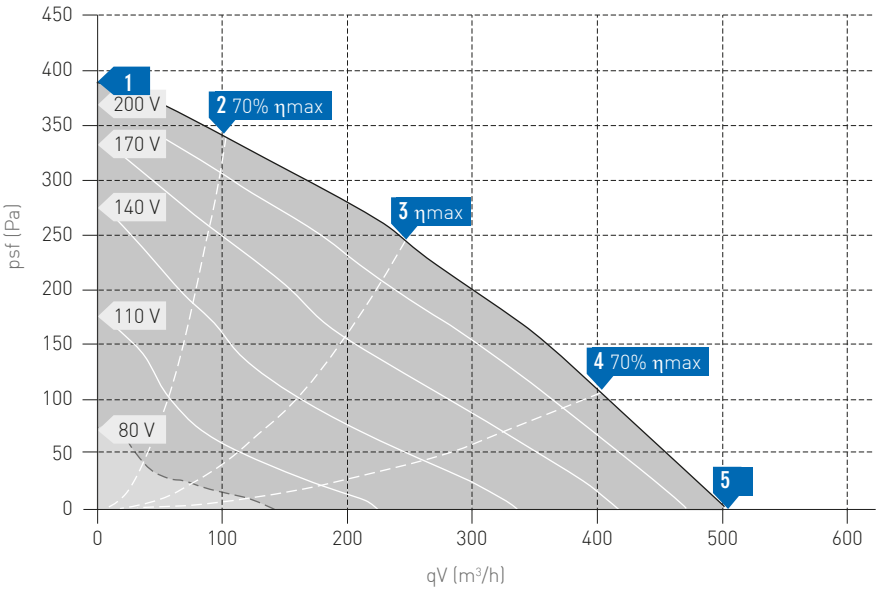






CHARACTERISTIC CURVES

3015 E2 40



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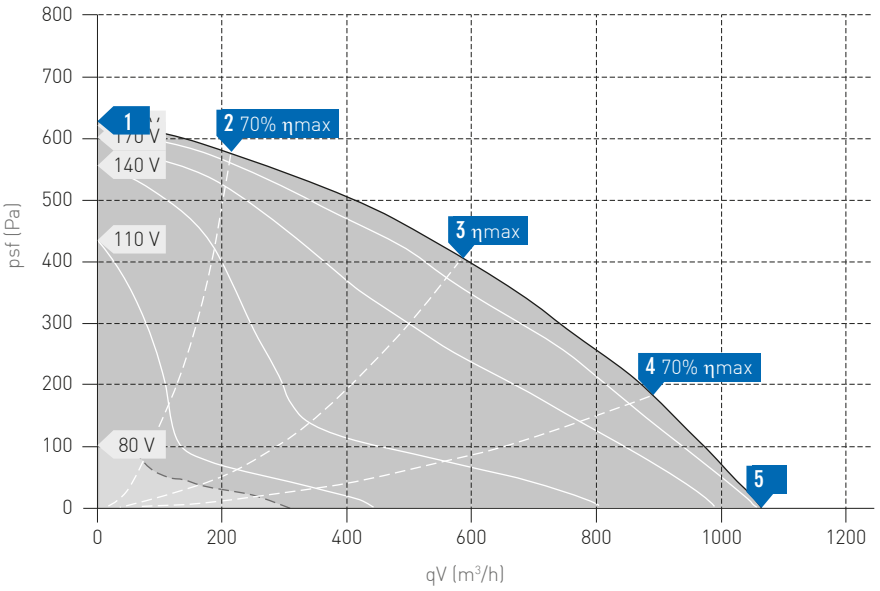
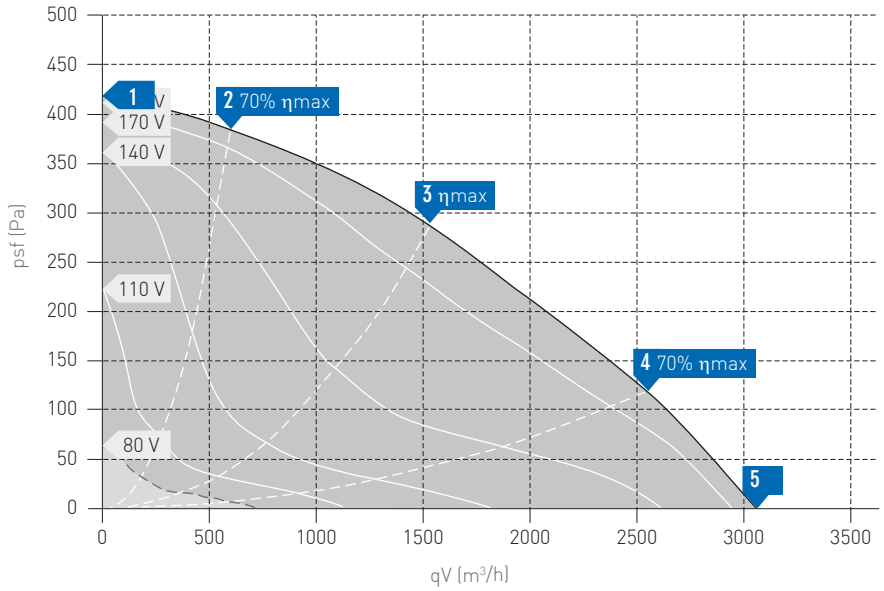


KVR

Inline extractor for rectangular ducts

6035 E4 30



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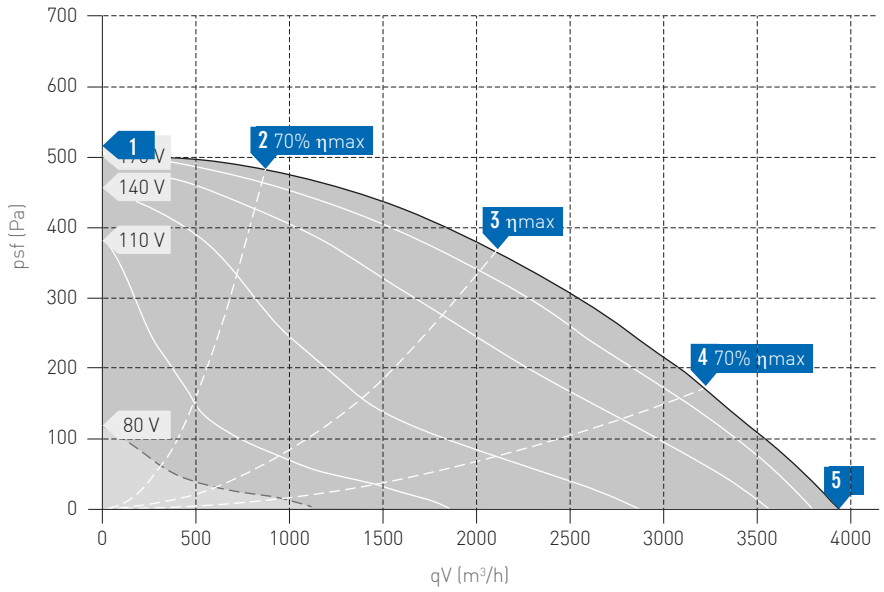

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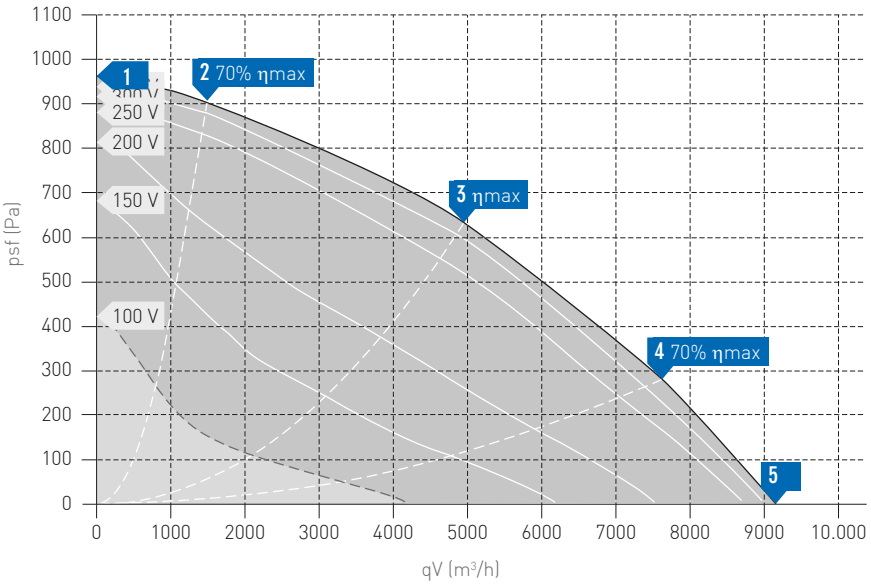
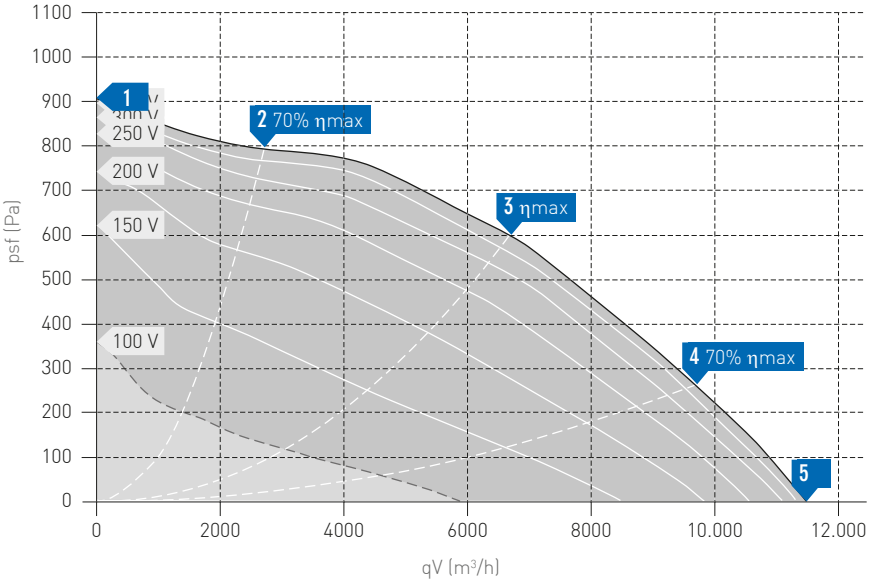
8050 D4 30



10050 D4 30



KVR

Inline extractor for rectangular ducts

ACCESSORIES

Safety start/stop switch to stop the fan before
of any maintenance work.
Compliant with IEC 947-3 standard.
Protection IP-65

RVIT
Inverter IP20 AND IP66

Speed controller
single-phase

Anti-vibration joint

Regulation damper

All images are only indicative of the product type and may differ from the actual article.

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ROOF EXTRACTORS

Ventilation

Comfort and performance at maximum efficiency energy

TRC

Centrifugal roof extractor with horizontal discharge

Product TRC

Construction Base, uprights, motor mounting plate and protection guard in galvanized sheet metal
protection cap in UV-resistant thermoplastic polymer (ABS)

Applications Extraction of stale air with temperature between -20 °C and 80 °C in commercial and industrial buildings

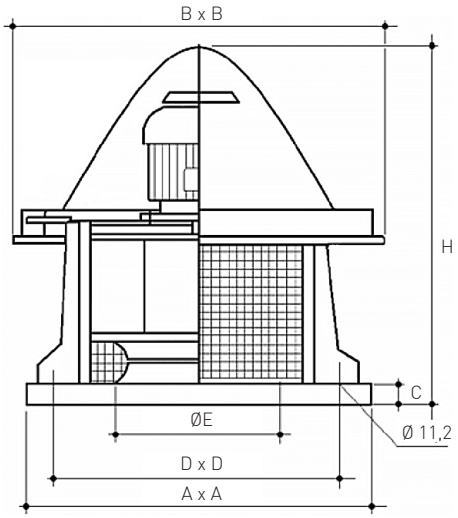
FEATURES
Horizontal discharge centrifugal roof extractor, for extraction of vapors and fumes from professional kitchen hoods, air renewal in commercial buildings, workshops and warehouses.

FAN
Backward curved blade centrifugal impeller in galvanized sheet metal (aluminium for sizes 110 and 120).

MOTOR
Protection rating IP 55 and insulation class "F", single-phase motors with 230 V 50 Hz supply voltage, three-phase single-speed motors with 230/400 V 50 Hz voltage, three-phase two-speed motors with single 400 V 50 Hz voltage.

DIMENSIONS
TRC

Size	Dimensions (mm)						Wt.
	A	B	C	D	E	h	kg
05	400	470	40	350	200	520	14
20	400	470	40	350	250	520	18
30	560	595	40	460	300	650	25
40	560	595	40	460	350	650	30
50	710	800	40	610	400	700	40
60	710	800	40	610	450	700	48
70	900	1000	40	800	500	880	57
80	900	1000	45	800	550	910	76
90	900	1000	45	800	600	940	96
100	900	1000	45	800	600	960	110
110	1200	1250	45	1100	640	1120	170
120	1200	1250	45	1100	710	1160	195



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TRV

Centrifugal roof extractor with vertical discharge

Product TRV

Construction Base, uprights, motor mounting plate and protection guard in galvanized sheet metal
protection cap in UV-resistant thermoplastic polymer (ABS)

Applications Extraction of stale air with temperature between -20 °C and 80 °C in commercial and industrial buildings

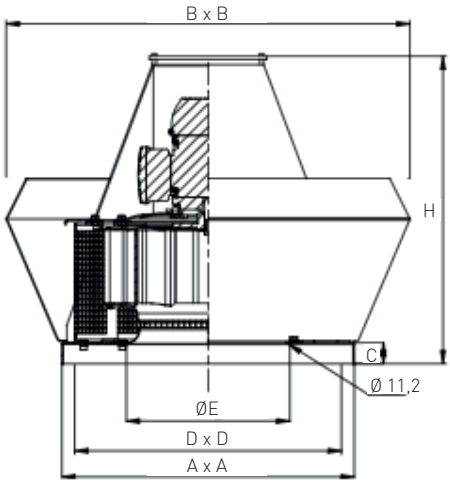
FEATURES
Centrifugal roof extractor with vertical discharge, for extraction of vapors and fumes from professional kitchen hoods, air renewal in commercial buildings, workshops and warehouses.

FAN
Backward curved blade centrifugal impeller in galvanized sheet metal (aluminium for sizes 110 and 120).

MOTOR
Protection rating IP 55 and insulation class "F", single-phase motors with 230 V 50 Hz supply voltage, three-phase single-speed motors with 230/400 V 50 Hz voltage, three-phase two-speed motors with single 400 V 50 Hz voltage.

DIMENSIONS
TRV

Size	AxA (mm)	BxB (mm)	C (mm)	DxD (mm)	øE (mm)
05	400	590	40	350	200
20	400	590	40	350	250
30	560	780	40	460	300
40	560	780	40	460	350
50	710	930	40	610	400
60	710	930	40	610	450
70	900	1210	40	800	500
80	900	1210	45	800	550
90	900	1210	45	800	600
100[1]	900	1210	45	800	600
110[1.2]	1200	1600	50	1100	640
120[1.2]	1200	1600	50	1100	710



TRC/TRV

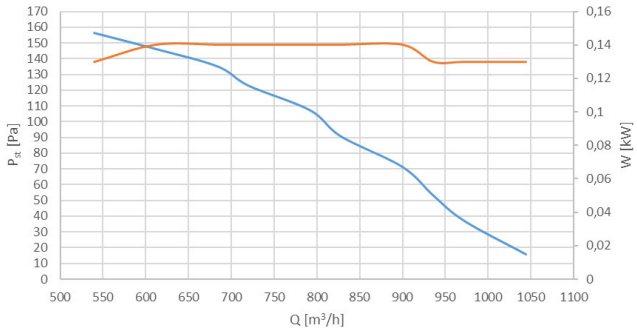
Centrifugal roof extractors with horizontal or vertical discharge

QUICK SELECTION TABLE

Model TRV/TRV	Technical data				
	Phase	Max air flow rate	Max. static pressure	Power	Speed
		(m^3/h)	(Pa)	(kW)	(RPM)
TRC/TRV 05 P4M	1	1150	190	0,12	1400
TRC/TRV 05 P4T	3	1150	190	0,12	1400
TRC/TRV 05 P6T	3	750	100	0,09	900
TRC/TRV 20 P4M	1	1800	290	0,18	1400
TRC/TRV 20 P4T	3	1800	290	0,18	1400
TRC/TRV 20 P6T	3	1100	120	0,09	900
TRC/TRV 20 P4/6T	3	1800/1100	120/290	0,26/0,09	1400/900
TRC/TRV 30 P4M	1	3050	380	0,25	1400
TRC/TRV 30 P4T	3	3050	380	0,25	1400
TRC/TRV 30 P6T	3	2000	155	0,18	900
TRC/TRV 30 P8T	3	1600	90	0,12	700
TRC/TRV 30 P4/6T	3	3050/2000	380/155	0,26/0,09	1400/900
TRC/TRV 40 P4M	1	4050	450	0,37	1400
TRC/TRV 40 P4T	3	4050	450	0,37	1400
TRC/TRV 40 P6T	3	2650	185	0,18	900
TRC/TRV 40 P8T	3	1900	130	0,12	700
TRC/TRV 40 P4/6T	3	4050/2650	450/185	0,55/0,18	1400/900
TRC/TRV 50 P4M	1	5600	540	0,75	1400
TRC/TRV 50 P4T	3	5600	540	0,75	1400
TRC/TRV 50 P6T	3	3600	230	0,37	900
TRC/TRV 50 P8T	3	2600	140	0,18	700
TRC/TRV 50 P4/6T	3	5600/3600	540/230	0,75/0,25	1400/900
TRC/TRV 50 P6/8T	3	3600/2600	230/140	0,37/0,15	900/700
TRC/TRV 60 P4T	3	7800	620	1,5	1400
TRC/TRV 60 P6T	3	5100	260	0,37	900
TRC/TRV 60 P8T	3	3900	155	0,18	700
TRC/TRV 60 P4/6T	3	7800/5100	620/260	1,1/0,37	1400/900
TRC/TRV 60 P6/8T	3	5100/3900	260/155	0,37/0,15	900/700
TRC/TRV 70 P4T	3	9500	900	2,2	900
TRC/TRV 70 P6T	3	7000	380	0,75	900
TRC/TRV 70 P8T	3	5500	230	0,37	700
TRC/TRV 70 P4/6T	3	9500/7000	900/380	2,2/0,75	1400/900
TRC/TRV 70 P6/8T	3	7000/5500	380/230	1,25/0,60	900/700
TRC/TRV 80 P6T	3	10700	490	1,1	900
TRC/TRV 80 P8T	3	8400	290	0,55	700
TRC/TRV 80 P6/8T	3	10700/8400	490/290	1,25/0,60	900/700
TRC/TRV 90 P6T	3	14000	550	2,2	900
TRC/TRV 90 P8T	3	11000	330	1,1	700
TRC/TRV 90 P6/8T	3	14000/11000	550/330	1,84/0,81	900/700
TRC/TRV 100 P6T	3	18200	640	3	900
TRC/TRV 100 P8T	3	15000	15000	2,2	700
TRC/TRV 100 P6/8T	3	18200/15000	18200/15000	3/1,5	900/700
TRC/TRV 110 P6T	3	23800	720	4	900
TRC/TRV 110 P8T	3	19000	430	3	700
TRC/TRV 110 P6/8T	3	23800/19000		4,4/2,9	900/700
TRC/TRV 120 P6T	T	30000	760	7,5	900
TRC/TRV 120 P8T	T	24800	460	4	700
TRC/TRV 120 P6/8T	T	30000/24800	760/460	7,5/3,7	900/700

CURVE 4-POLE CHARACTERISTICS

05 P4



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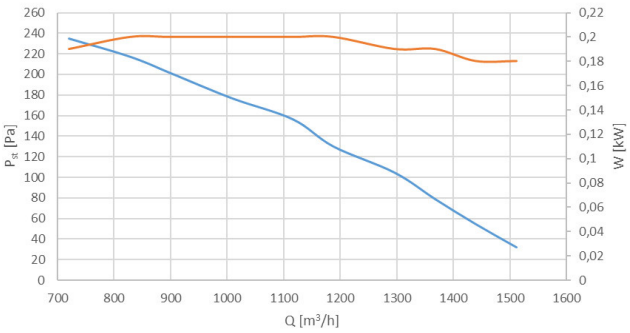

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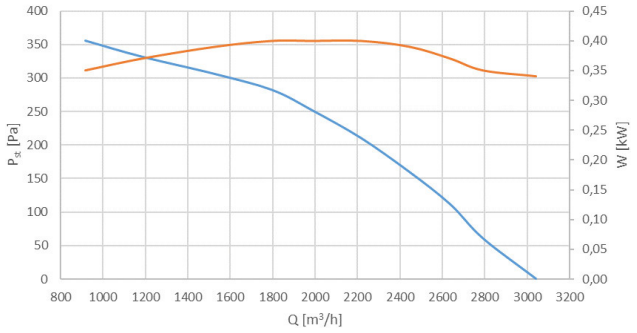

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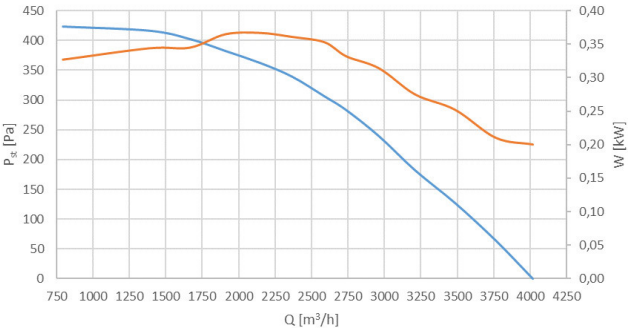

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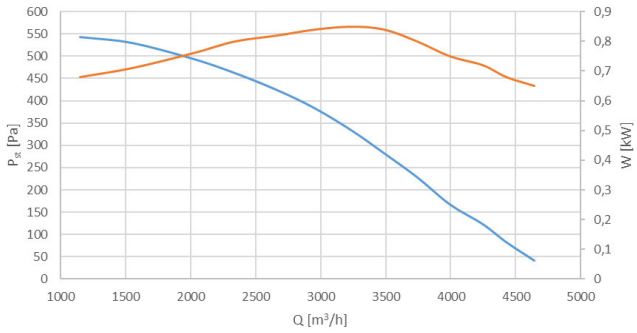

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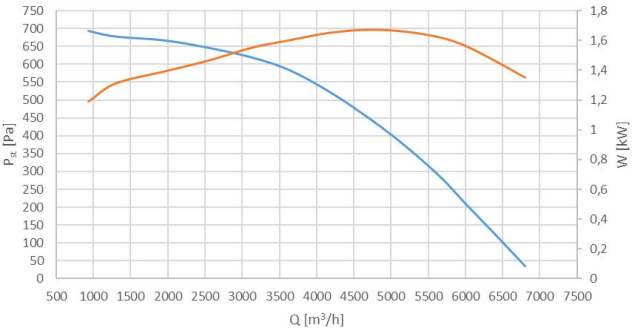

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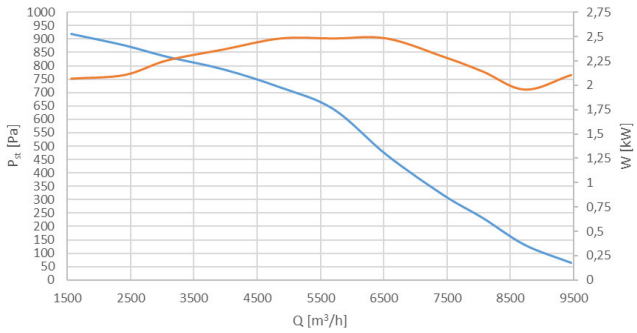
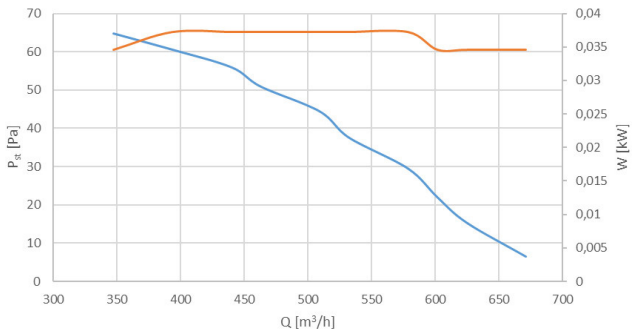


TRC/TRV

Centrifugal roof extractors with horizontal or vertical discharge

CURVE 6-POLE CHARACTERISTICS

05 P6



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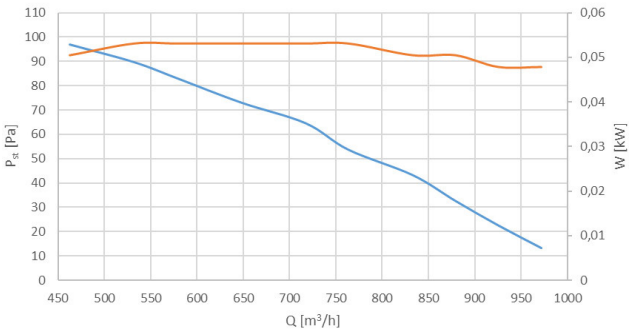

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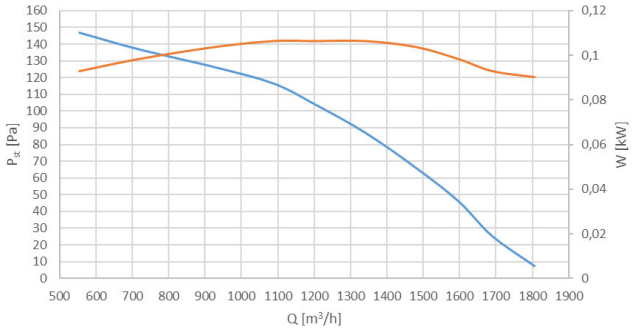

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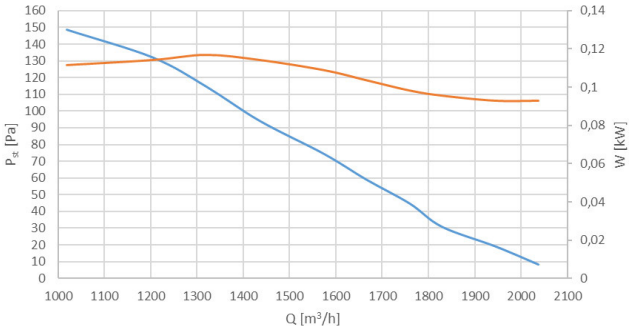

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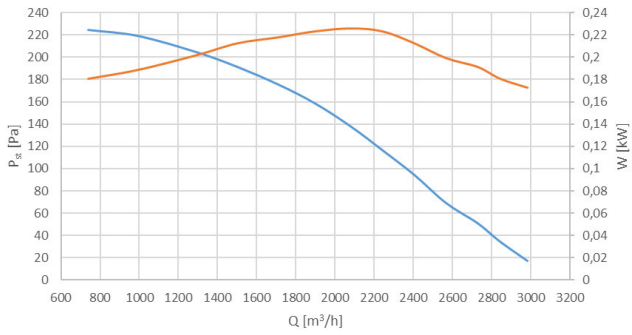

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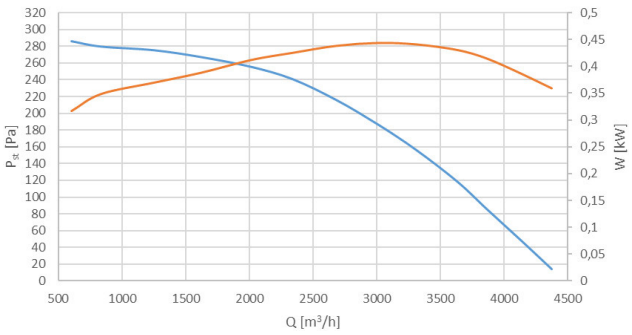

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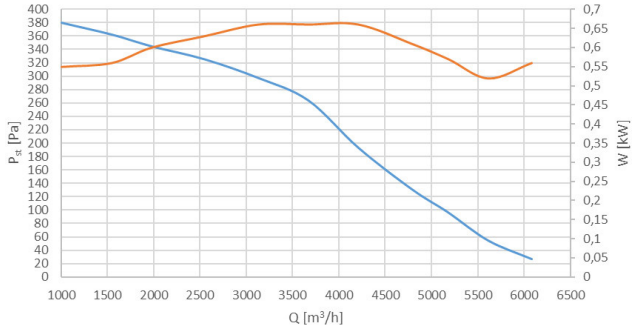

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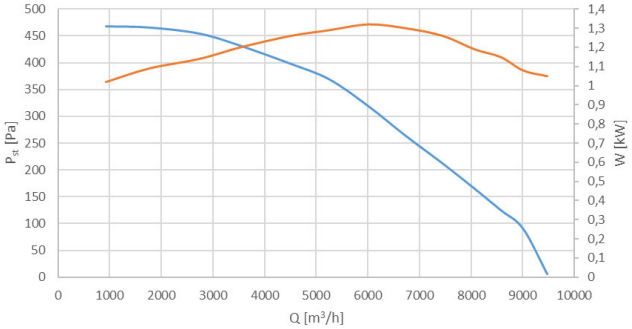

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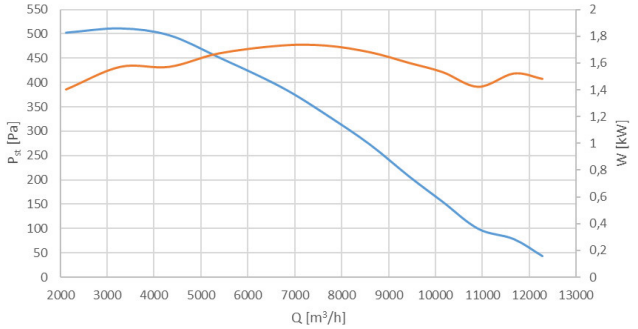

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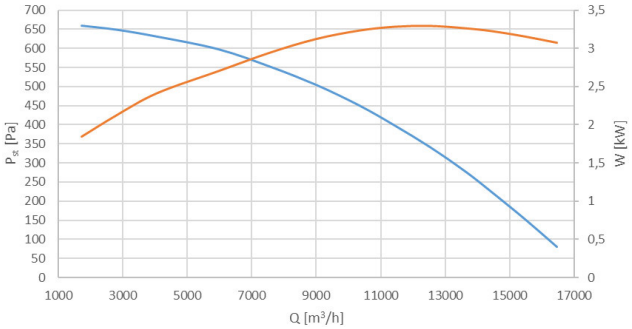

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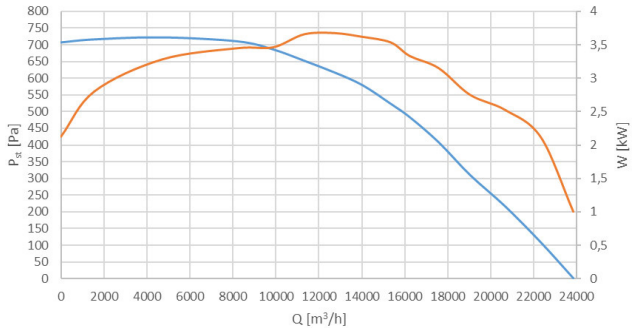

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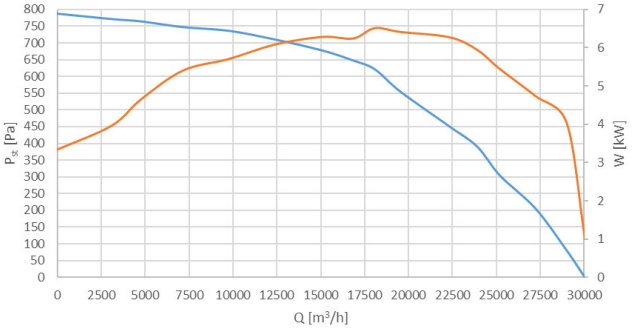
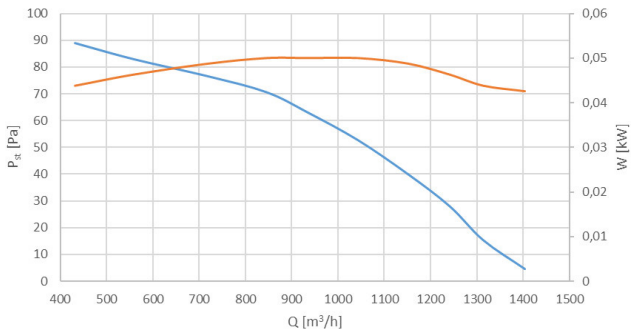


TRC/TRV

Centrifugal roof extractors with horizontal or vertical discharge

CURVE 8-POLE CHARACTERISTICS

30 P8



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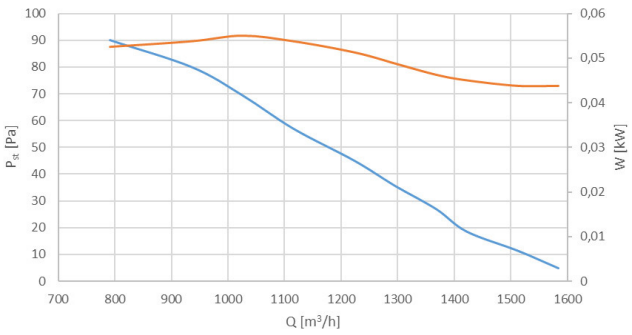

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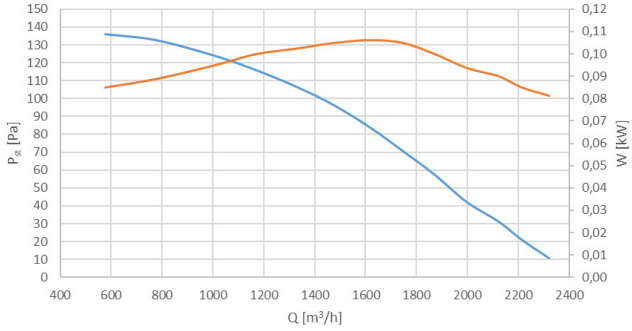

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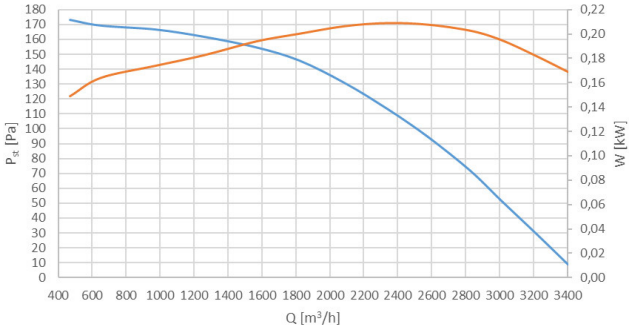

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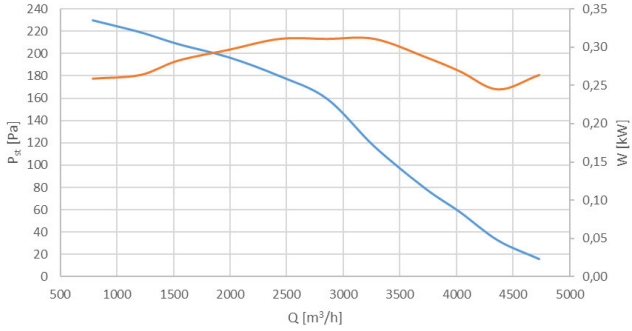

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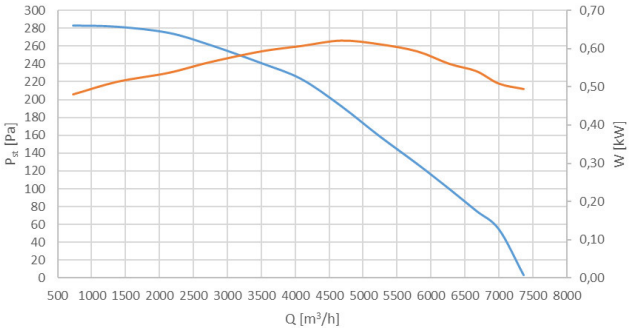

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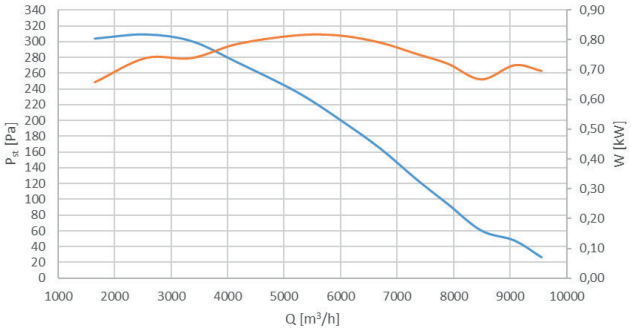

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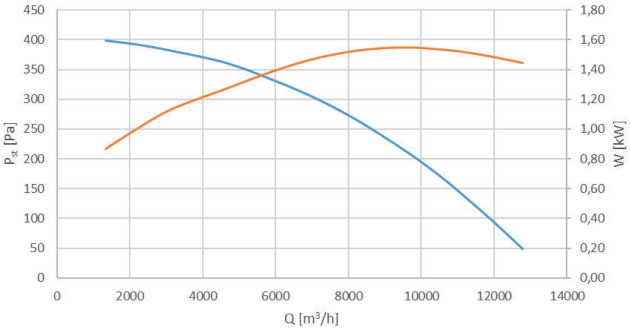

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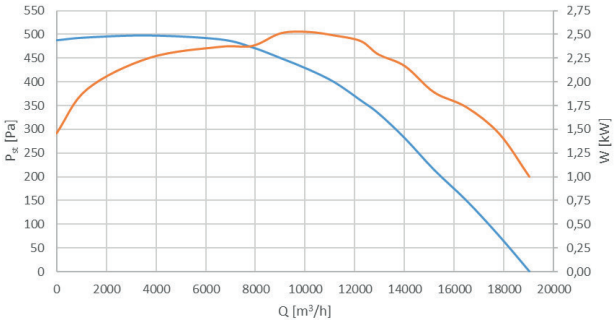

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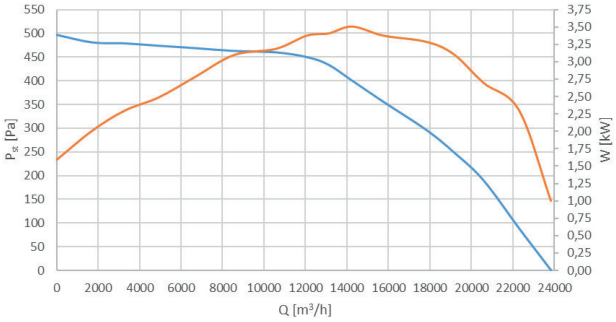


ACCESSORIES

Gravity damper

Built-in counter base

Speed controller single-phase

RVIT
Inverter IP20 and IP66

All images are only indicative of the product type and may differ from the actual article.

TRE

Axial roof extractor with horizontal discharge

Product TRE

Construction Galvanized steel sheet structure, rain hood in thermoplastic polymer (ABS), protection guard between motor and impeller

Applications Vapour and fume extraction, air renewal in commercial buildings and workshops, warehouses

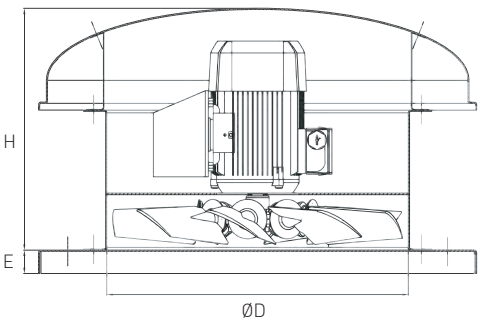
FEATURES
Horizontal discharge axial roof extractor, for exhaust air extraction with operating temperature between -20°C and +50 °C. Used in industrial warehouses, storage facilities, etc. as well as in commercial buildings and in general in all cases where extraction of large air flow rates is required (between 1,000 m3/h and 44,000 m3/h).

FAN
Axial impeller with aerofoil profile blades in glass fibre reinforced polypropylene, die-cast aluminium hub.

MOTOR
Protection rating IP 55 and insulation class "F", single-phase motors with 230 V 50 Hz supply voltage, three-phase single-speed motors with 230/400 V 50 Hz voltage, three-phase two-speed motors with single 400 V 50 Hz voltage.

DIMENSIONS
TRE

Size	Dimensions (mm)						Wt.
	A	B	C	øD	E	h	kg
400	650	550	750	410	40	500	36
450	700	600	750	468	40	520	44
500	750	650	750	515	40	540	55
560	850	750	1000	564	45	650	65
630	900	800	1000	640	45	700	80
710	1000	900	1000	715	45	700	90
800	1100	1000	1400	810	45	720	105
900	1250	1150	1400	912	45	740	135
1000	1400	1300	1400	1013	45	780	155



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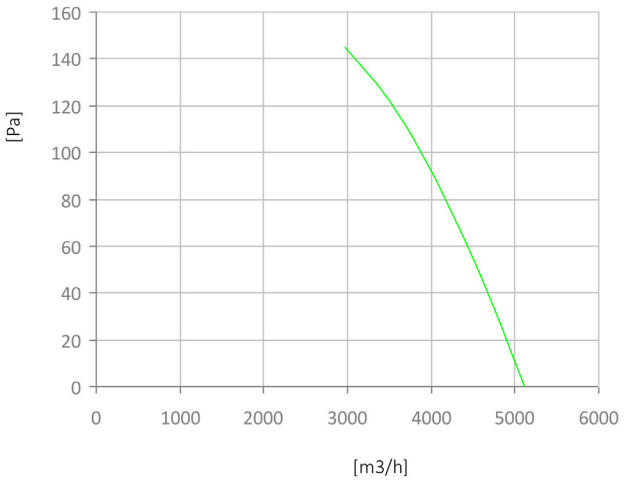
QUICK SELECTION TABLE

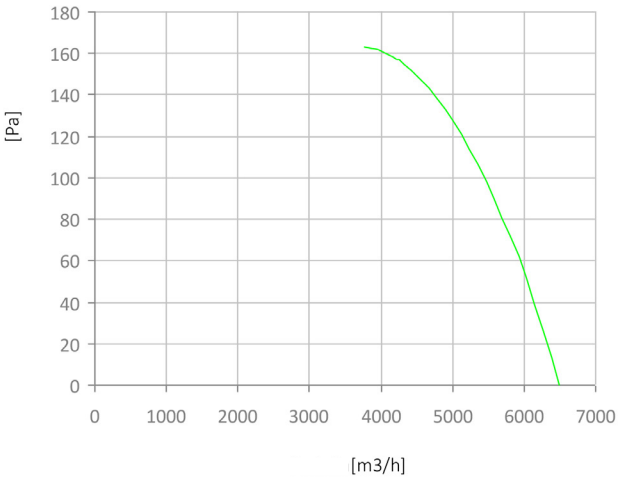
Model TRV/TRV	Technical data				
	Phase	Max air flow rate	Max. static pressure	Power	Speed
		(m^3/h)	(Pa)	(kW)	(RPM)
TRE 404 M	1	4400	130	0,18	1400
TRE 404 T	3	4400	130	0,18	1400
TRE 406 T	3	2850	50	0,18	900
TRE 404/6 T	3	4400/2850	130/50	0,26/0,09	1400/900
TRE 454 M	1	7050	120	0,37	1400
TRE 454 T	3	7050	120	0,37	1400
TRE 456 T	3	4650	65	0,18	900
TRE 454/6 T	3	7050/4650	120/65	0,37/0,12	1400/900
TRE 504 M	1	9200	145	0,55	1400
TRE 504 T	3	9200	145	0,55	1400
TRE 506 T	3	6000	65	0,18	900
TRE 504/6 T	3	9200/6000	145/65	0,55/0,18	1400/900
TRE 564 M	1	13300	225	1,1	1400
TRE 564 T	3	13300	225	1,1	1400
TRE 566 T	3	8150	85	0,37	900
TRE 56/8 T	3	6450	50	0,12	700
TRE 564/6 T	3	13300/8150	225/85	1,1/0,37	1400/900
TRE 566/8 T	3	8150/6450	85/50	0,37/0,15	900/700
TRE 634 T	3	17100	240	1,5	1400
TRE 636 T	3	10600	95	0,37	900
TRE 638 T	3	8000	55	0,18	700
TRE 634/6 T	3	15800/9820	240/95	1,7/0,6	1400/900
TRE 636/8 T	3	10600/8000	95/55	0,37/0,15	900/700
TRE 716 T	3	16700	105	0,75	900
TRE 718 T	3	12400	55	0,37	700
TRE 716/8 T	3	16700/12400	105/55	1,25/0,60	900/700
TRE 806 T	3	25400	130	1,5	900
TRE 808 T	3	18800	65	0,55	700
TRE 806/8 T	3	25400/18800	130/65	1,25/0,60	900/700
TRE 906 T	3	33800	145	2,2	900
TRE 908 T	3	25000	80	1,1	700
TRE 906/8 T	3	33800/25000	145/80	2,2/1,1	900/700
TRE 1006 T	3	43700	180	3	900
TRE 1008 T	3	33000	100	1,5	700
TRE 1006/8 T	3	43700/33000	180/100	3,5/1,5	900/700

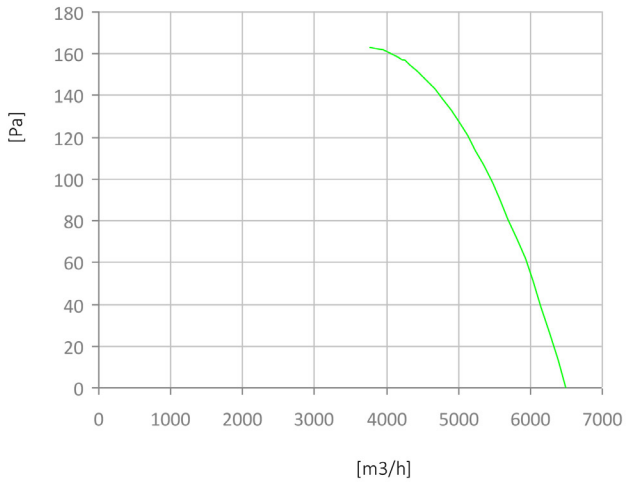
TRE

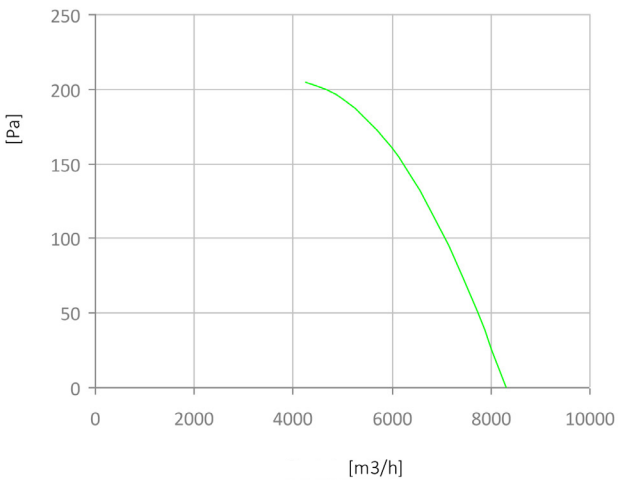
Axial roof extractor with horizontal discharge

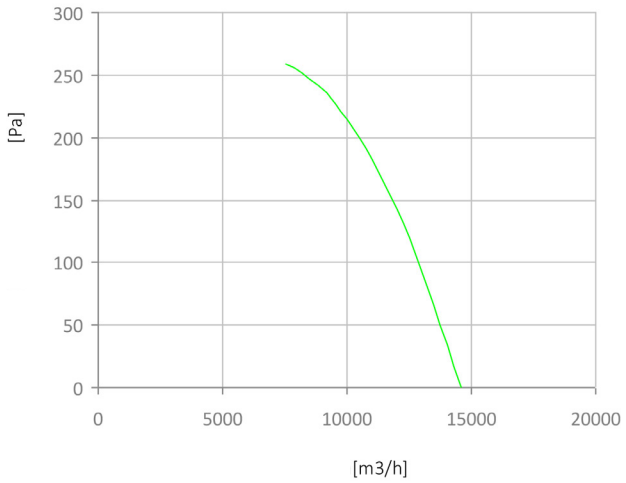
CURVE 4-POLE CHARACTERISTICS

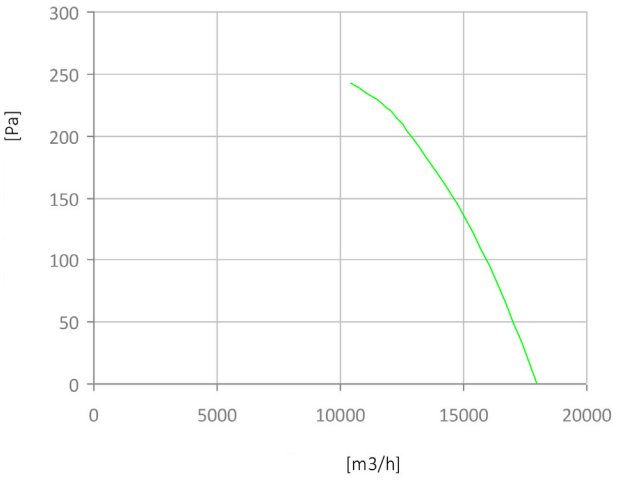




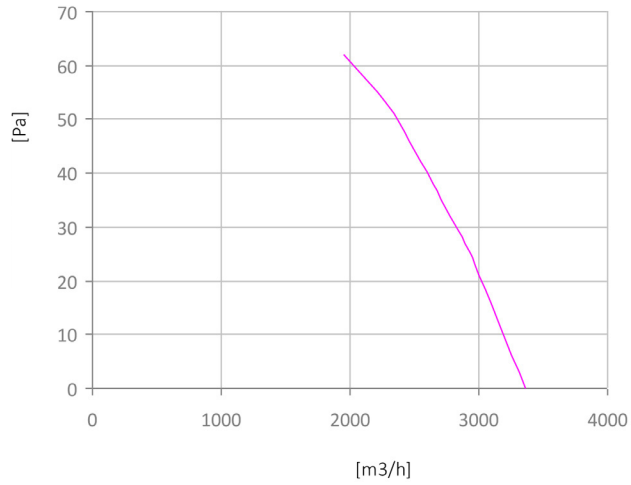


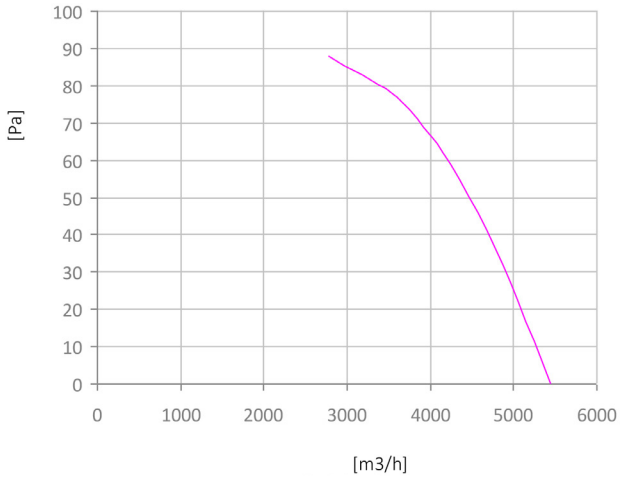


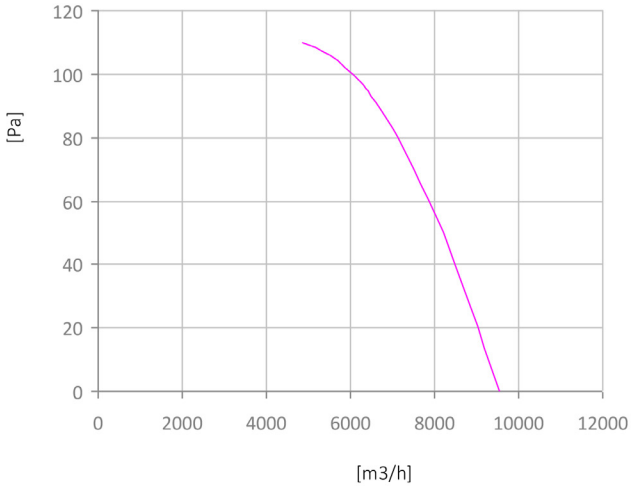


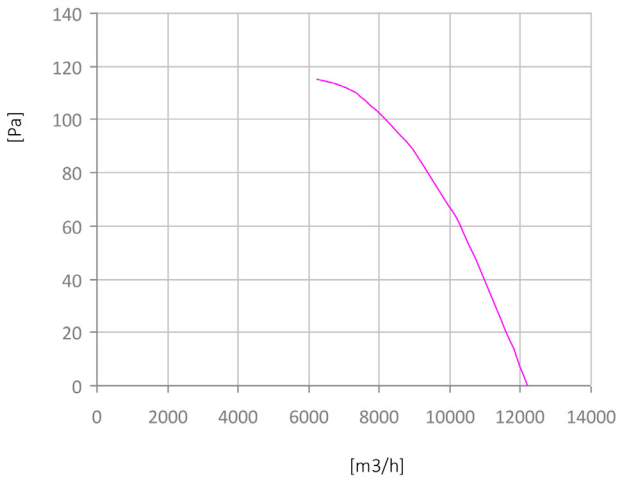


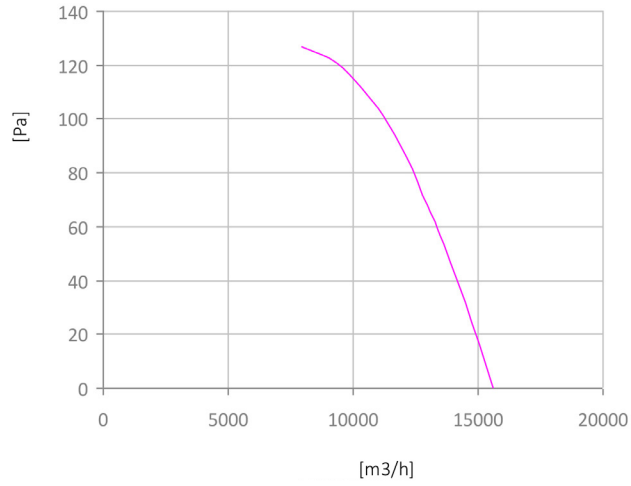
CURVE 6-POLE CHARACTERISTICS

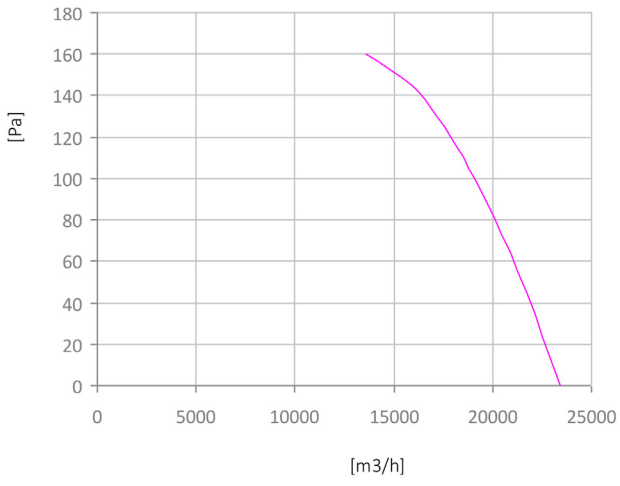






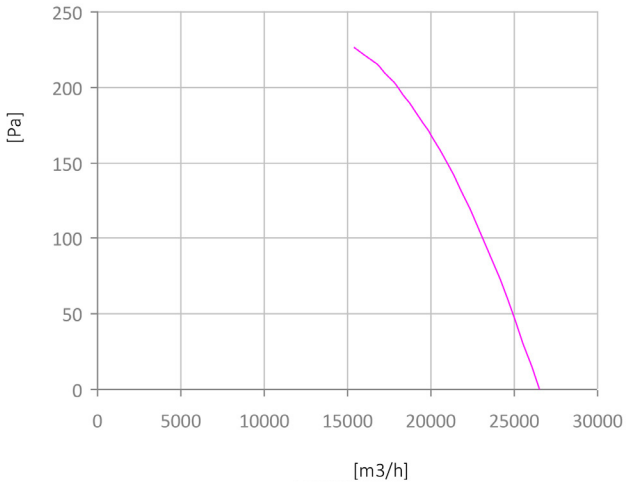


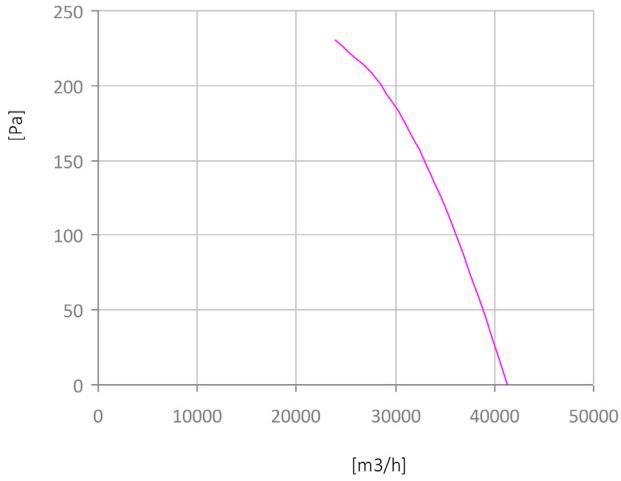




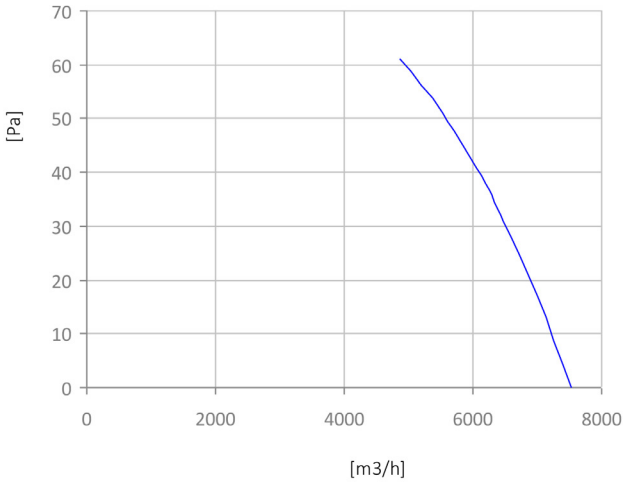
TRE

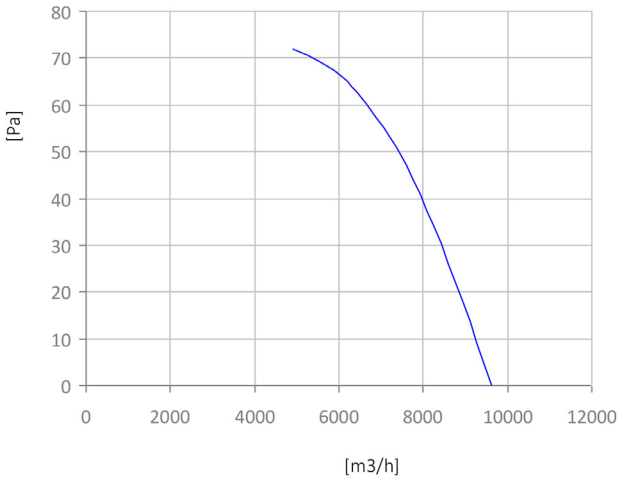
Axial roof extractor with horizontal discharge

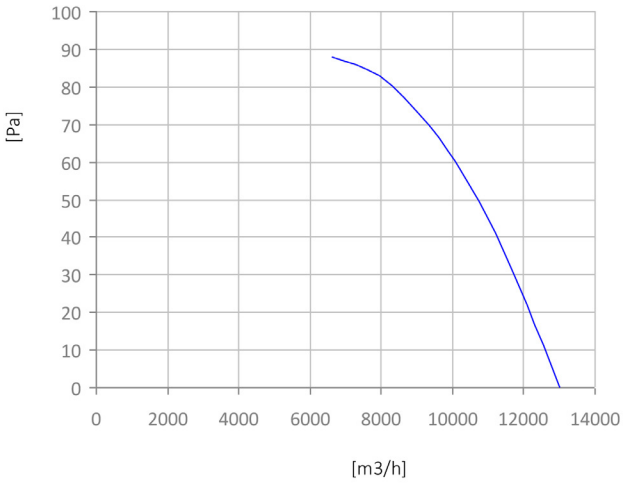


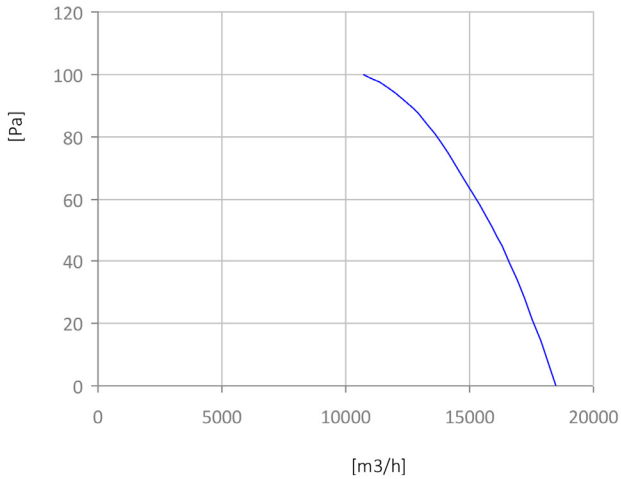


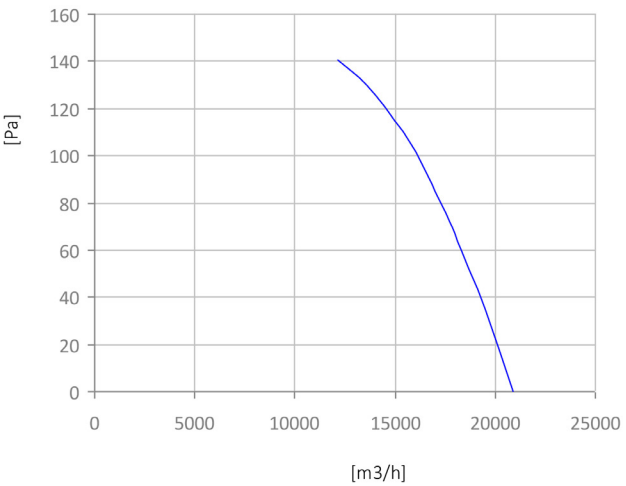
CURVE 8-POLE CHARACTERISTICS

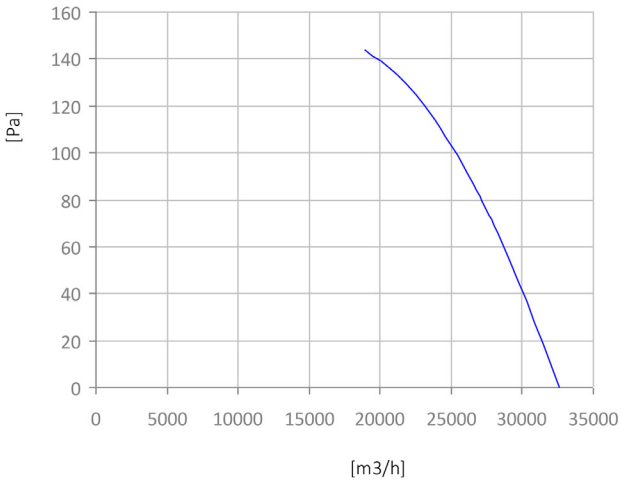












TVE

Axial roof extractor with vertical discharge

Product TVE

Construction Base with cylindrical ring in galvanized steel, helical impeller with airfoil profile blades in glass fiber reinforced polypropylene and die-cast aluminum hub, galvanized steel wind deflector ring, gravity-operated rain-proof aluminum damper, protective mesh between impeller and damper

Applications Vapour and fume extraction, air renewal in commercial buildings and workshops, warehouses

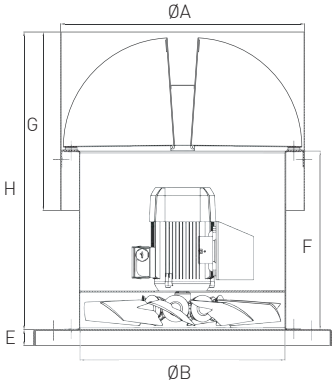
FEATURES
Vertical discharge axial roof extractor, for exhaust air extraction with operating temperature between -20°C and +50 °C. Used in industrial warehouses, storage facilities, etc. as well as in commercial buildings and in general in all cases where extraction of large air flow rates is required (between 1,000 m3/h and 110,000 m3/h). The standard series offers various fan sizes with impeller diameters ranging from 500 mm to 1,400 mm.

FAN
Axial impeller with aerofoil profile blades in glass fibre reinforced polypropylene, die-cast aluminium hub.

MOTOR
Protection rating IP 55 and insulation class "F", single-phase motors with 230 V 50 Hz supply voltage, three-phase single-speed motors with 230/400 V 50 Hz voltage, three-phase two-speed motors with single 400 V 50 Hz voltage.

DIMENSIONS
TVE

Size	Dimensions (mm)								Wt.
	øA	øB	C	D	E	F	G	h	kg
500	680	516	650	750	40	450	450	800	63
560	730	564	750	850	45	450	480	830	74
630	800	640	800	900	45	450	520	870	92
710	875	715	900	1000	45	450	560	910	103
800	950	810	1000	1100	45	620	600	1120	120
900	1070	910	1150	1250	45	620	600	1170	155
1000	1170	1010	1300	1400	45	700	600	1300	177
1125	1290	1125	1450	1550	50	700	760	1350	210
1250	1410	1250	1600	1700	50	900	820	1650	245
1400	1560	1400	1750	1850	50	1000	900	1800	290



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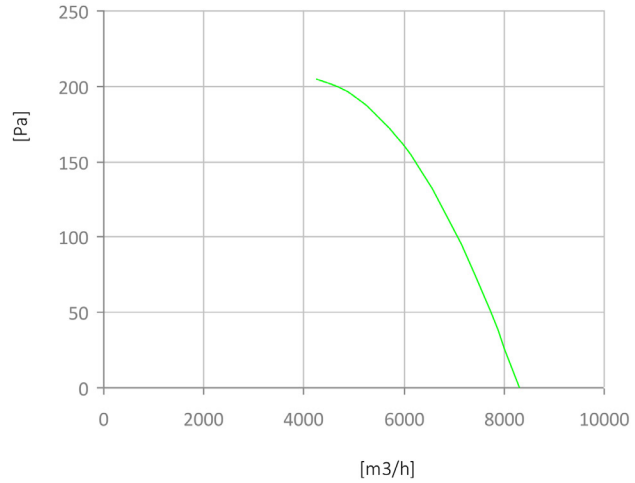
QUICK SELECTION TABLE

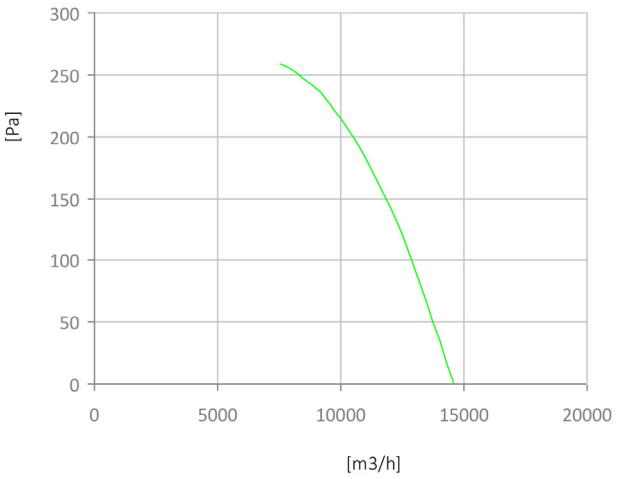
Model TRV/TRV	Technical data				
	Phase	Max air flow rate	Max. static pressure	Power	Speed
		(m^3/h)	(Pa)	(kW)	(RPM)
TVE 504 M	1	9200	145	0,55	1400
TVE 504 T	3	9200	145	0,55	1400
TVE 506 T	3	6000	65	0,18	900
TVE 504/6 T	3	9200/6000	145765	0,55/0,18	1400/900
TVE 564 M	1	13300	225	1,1	1400
TVE 564 T	3	13300	225	1,1	1400
TVE 566 T	3	8150	85	0,37	900
TVE 56/8 T	3	6450	80	0,12	700
TVE 564/6 T	3	13300/8150	225/85	1,1/0,37	1400/900
TVE 566/8 T	3	8150/6450	85/50	0,37/0,15	900/700
TVE 634 M	3	17100	240	1,5	1400
TVE 636 T	3	10600	95	0,37	900
TVE 638 T	3	8000	55	0,18	700
TVE 634/6 T	3	15800/9820	240/95	1,7/0,6	1400/900
TVE 636/8 T	3	10600/8000	95/55	0,37/0,15	900/700
TVE 714 T	3	25700	250	3	1400
TVE 716 T	3	16700	105	0,75	900
TVE 718 T	3	12400	55	0,37	700
TVE 714/6 T	3	25700/16700	250/105	3,0/0,9	1400/900
TVE 716/8 T	3	16700/12400	105/55	1,25/0,60	900/700
TVE 806 T	3	25400	130	1,5	900
TVE 808 T	3	18800	65	0,55	700
TVE 806/8 T	3	25400/18800	130/65	1,25/0,60	900/700
TVE 906 T	3	33800	145	2,2	900
TVE 908 T	3	25000	80	1,1	700
TVE 906/8 T	3	33800/25000	145/80	2,2/1,1	900/700
TVE 1006 T	3	43700	180	3	900
TVE 1008 T	3	33000	100	1,5	700
TVE 1006/8 T	3	43700/33000	180/100	3,5/1,5	900/700
TVE 1126 T	3	71000	280	11	900
TVE 1128 T	3	52300	150	4	700
TVE 1126/8 T	3	71000/52300	280/150	10,0/5,0	900/700
TVE 1256 T	3	91000	300	15	900
TVE 1258 T	3	67400	160	5,5	700
TVE 1256/8 T	3	91000/67400	300/160	16,5/7,8	900/700
TVE 1406 T	3	120000	340	18,5	900
TVE 1408 T	3	89000	185	7,5	700
TVE 1406/8 T	3	120000/89000	340/185	16,5/7,8	900/700

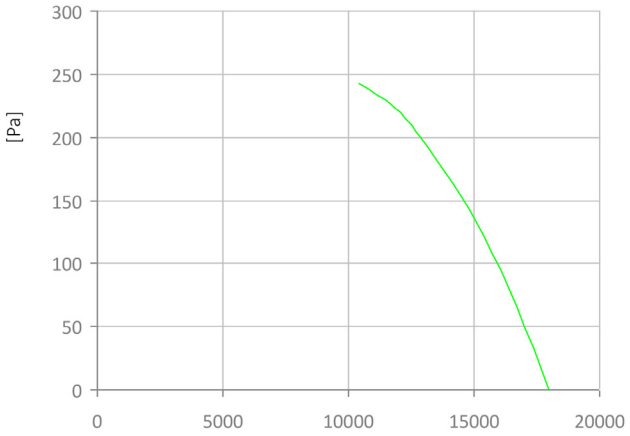
TVE

Axial roof extractor with vertical discharge

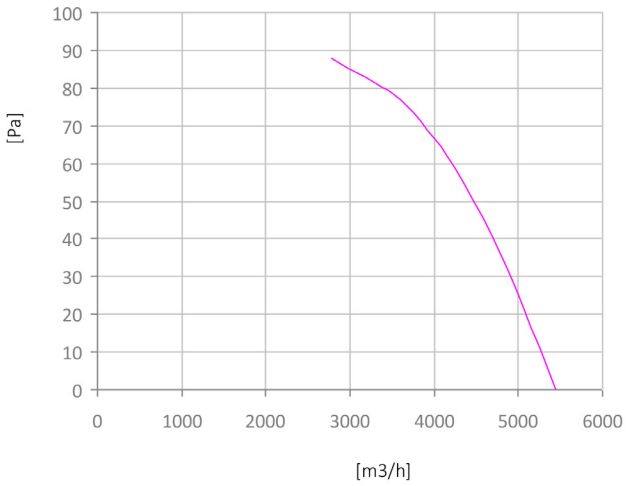
CURVE 4-POLE CHARACTERISTICS

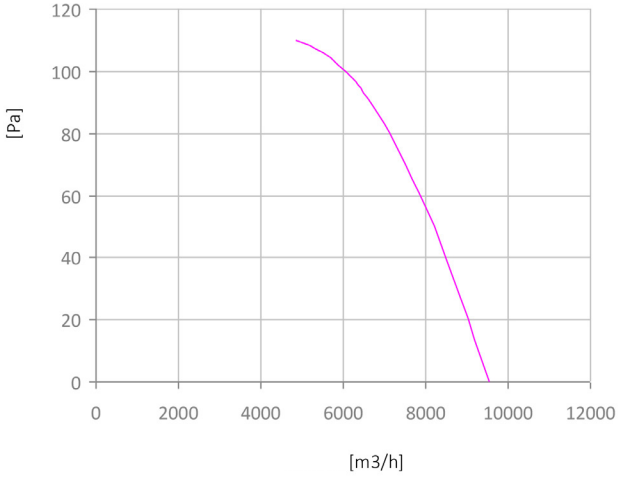


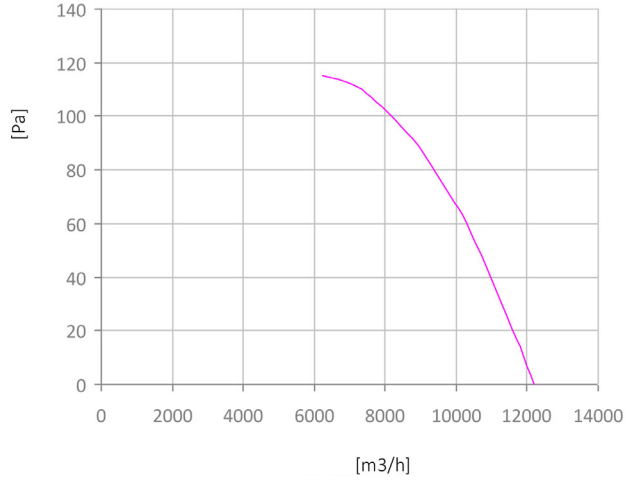


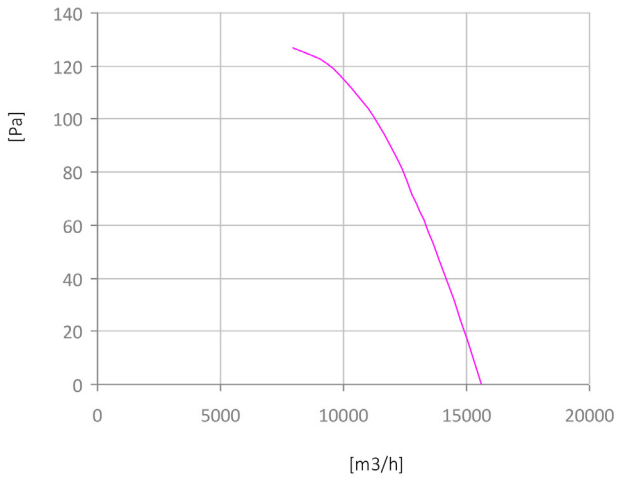


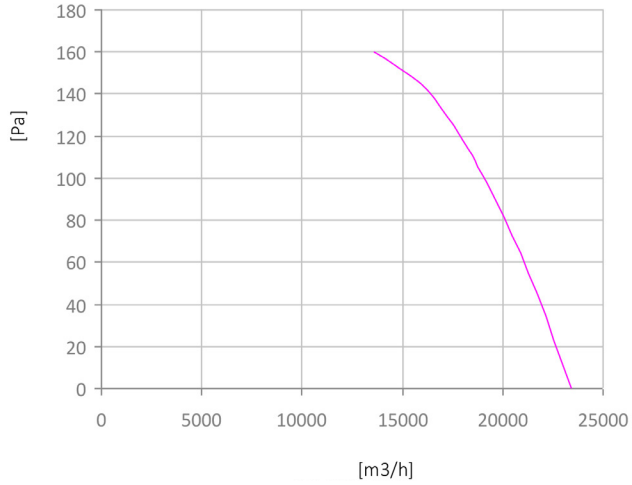
CURVE 6-POLE CHARACTERISTICS

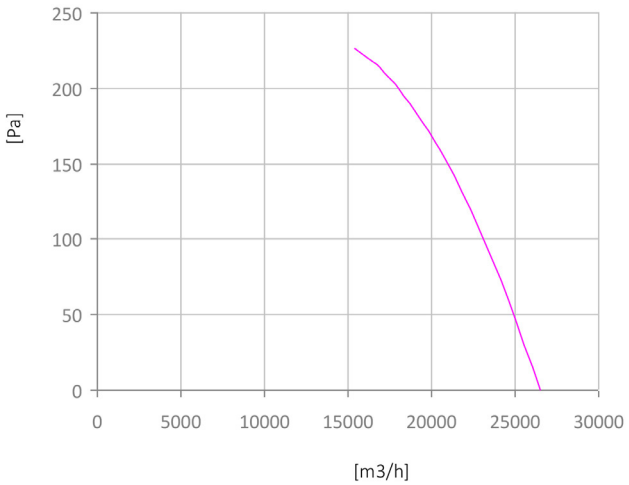






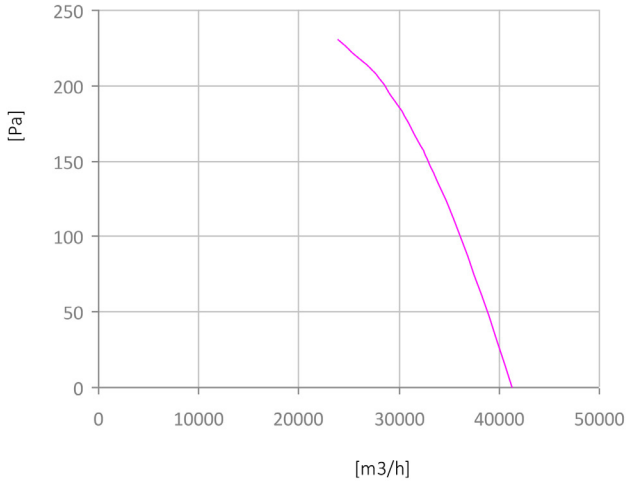


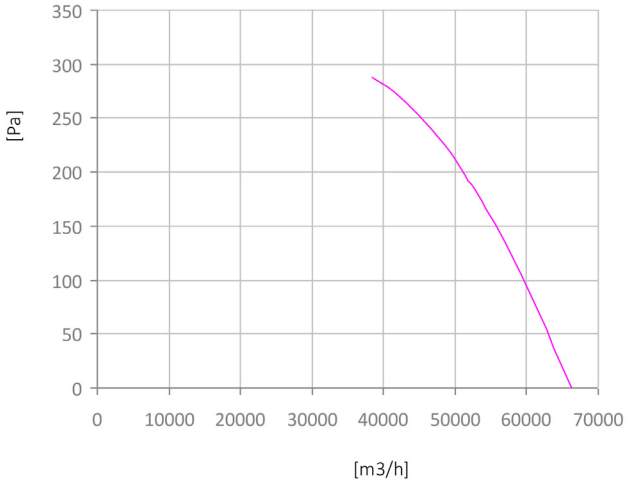


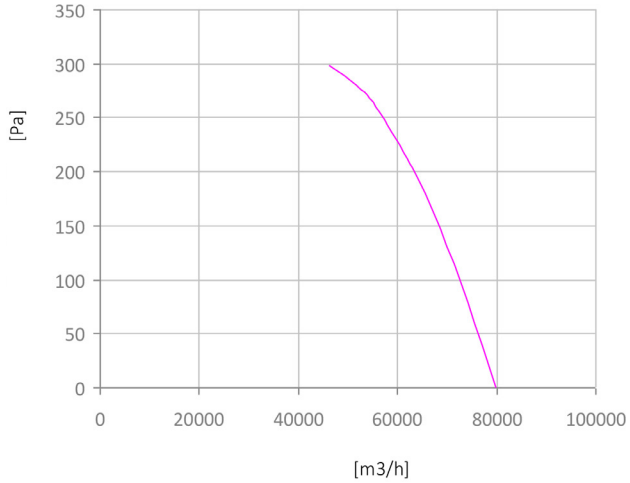


TVE

Axial roof extractor with vertical discharge







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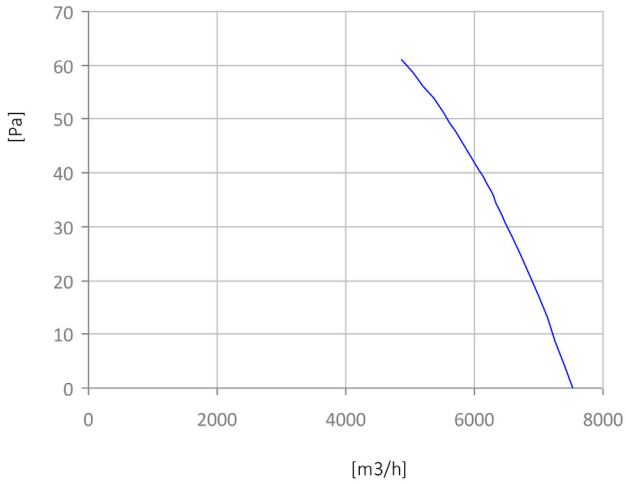
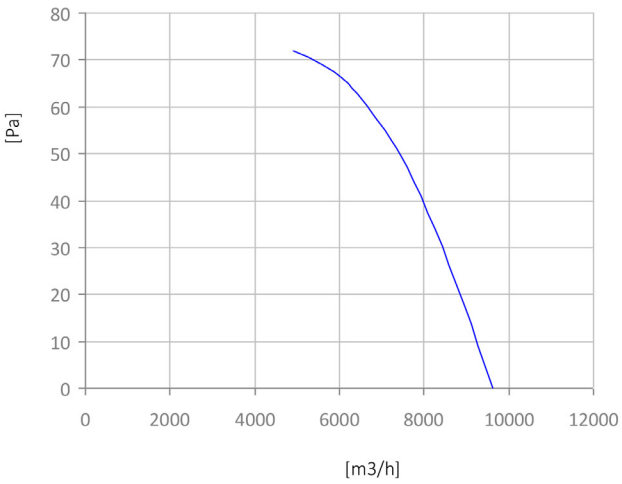
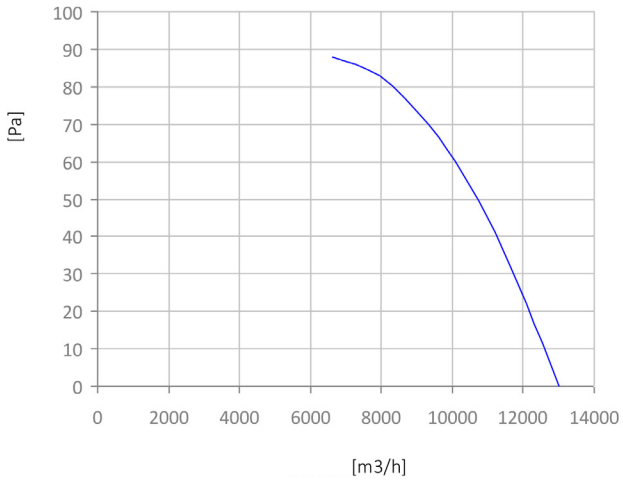
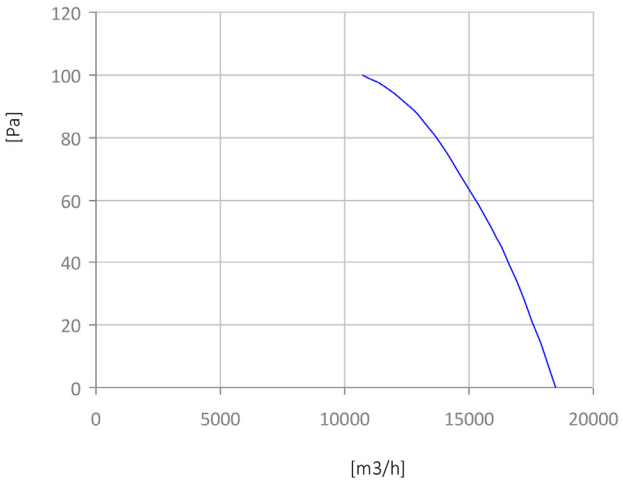
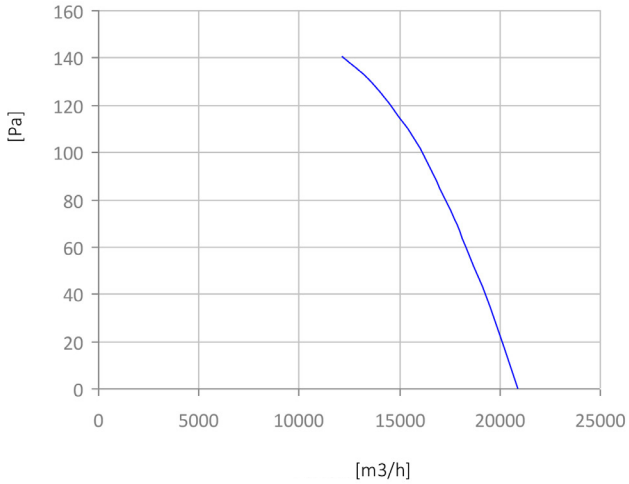
CURVE 8-POLE CHARACTERISTICS

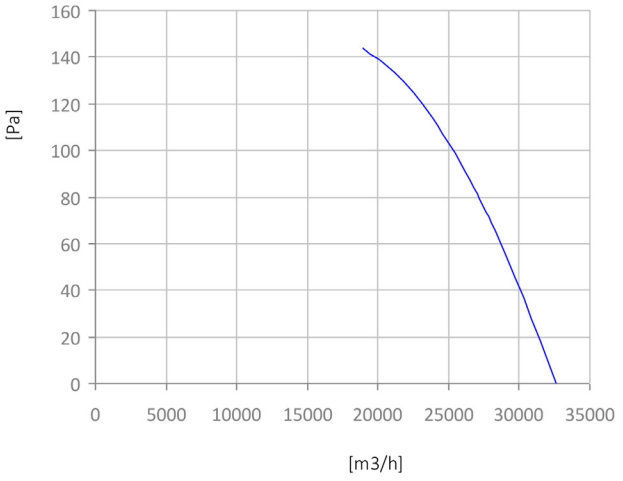






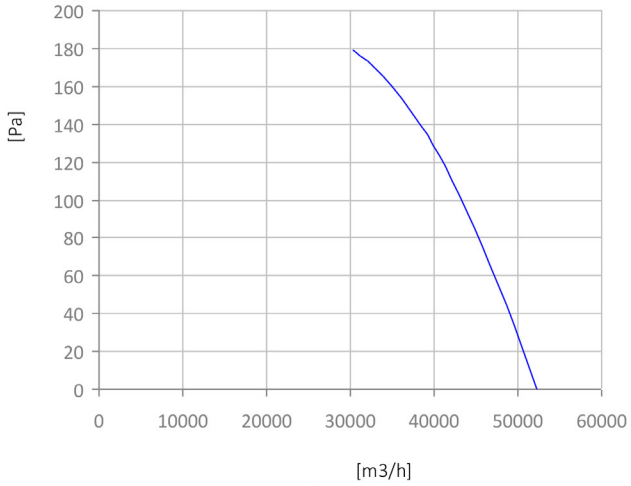


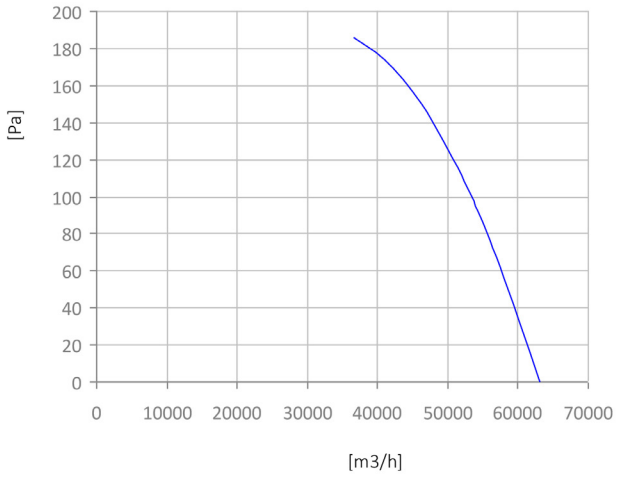




TVE

Axial roof extractor with vertical discharge





TRK

Centrifugal roof extractor for fireplaces

Ventilation

Comfort and performance at maximum efficiency energy

Product TRK

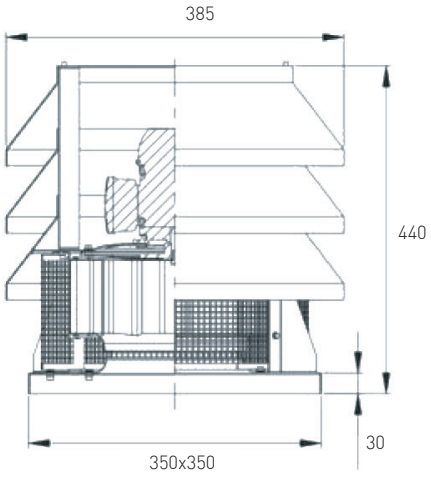
Construction Base, uprights, motor mounting plate, protection cap and protection guard in galvanized sheet metal

Applications Extraction of fumes from fireplaces. When the fireplace is off, it can be used as a normal extractor

FEATURES
Centrifugal extractor for fireplace. Its design allows architectural integration in harmony with most residential settings. When fire is present in the fireplace, TRK must be activated to prevent overheating of the electric motor. With the fireplace off, TRK can be used as a standard extractor. Operating temperature from -20 [°C] to +200 [°C] max.

FAN
Backward curved blade centrifugal impeller in aluminium.

MOTOR
Protection class IP 55 and insulation class "F", single-phase electric motor with supply voltage 230 V 50 Hz.



QUICK SELECTION TABLE

Model TRV/TRV	Technical data				
	Phase	Max air flow rate	Max. static pressure	Power	Speed
		(m^3/h)	(Pa)	(kW)	(RPM)
TRK / RA	1	1000	190	0,08	1400
TRK / AL	1	1000	190	0,08	1400
TRK / ZN	1	1000	190	0,08	1400

EXTRACTION HOODS

Ventilation

Comfort and performance at maximum efficiency energy

ACS

Snack wall hood

Product ACS

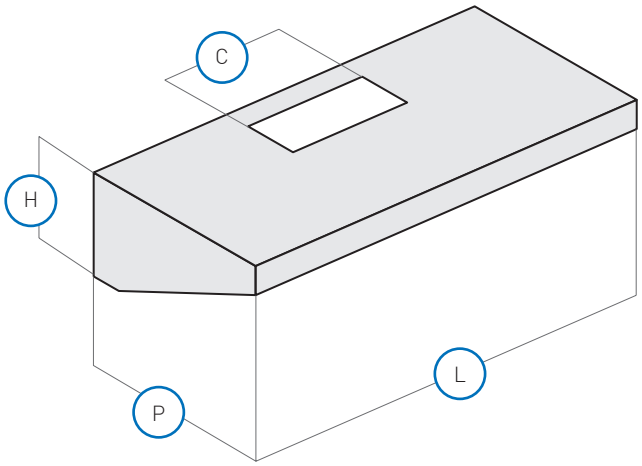
Construction

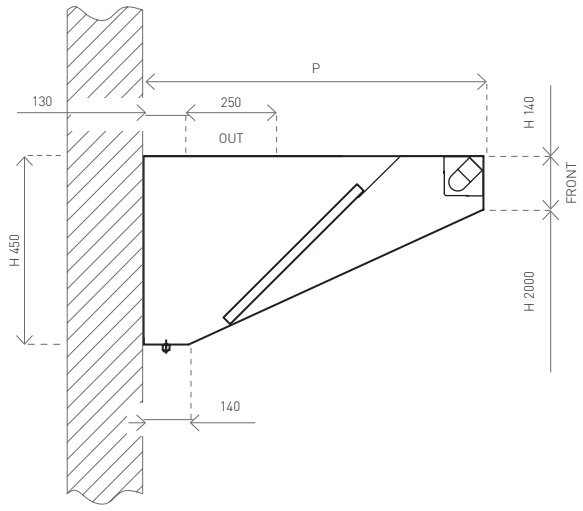
Suitable for installation in particularly low-ceiling kitchen environments. The extraction bodies are supplied in a single piece up to lengths of 4 meters. This ensures absolute cleanability thanks to the absence of joints and extreme ease of installation, as no assembly is required during installation.

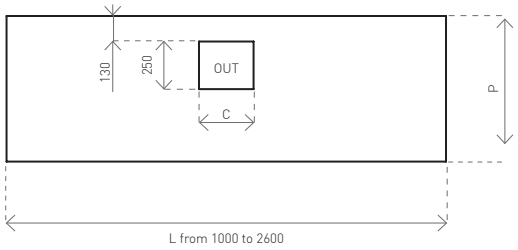
FEATURES

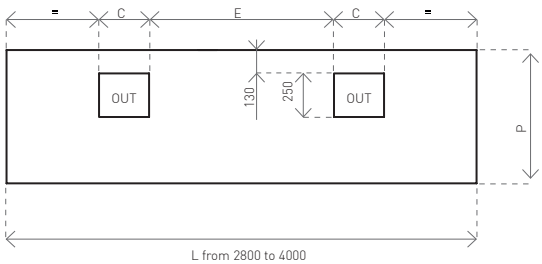
INCLUDED

ON REQUEST









EXTRACTION HOODS

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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
ACS 7/10	1000	700	450	250	-	2	800	1 x 8,4	28
ACS 7/12	1200	700	450	400	-	2	950	1 x 8,4	33
ACS 7/14	1400	700	450	500	-	3	1100	1 x 16,8	37
ACS 7/16	1600	700	450	500	-	3	1250	1 x 16,8	41
ACS 7/18	1800	700	450	600	-	4	1400	2 x 8,4	44
ACS 7/20	2000	700	450	600	-	4	1550	2 x 8,4	48
ACS 7/22	2200	700	450	700	-	5	1700	2 x 8,4	51
ACS 7/24	2400	700	450	700	-	5	1850	2 x 8,4	53
ACS 7/26	2600	700	450	700	-	5	2000	2 x 8,4	57
ACS 7/28	2800	700	450	400	1000	5	2150	2 x 16,8	60
ACS 7/30	3000	700	450	400	1100	6	2300	2 x 16,8	63
ACS 7/32	3200	700	450	500	1100	6	2450	2 x 16,8	68
ACS 7/34	3400	700	450	600	1100	7	2600	2 x 16,8	70
ACS 7/36	3600	700	450	600	1200	7	2750	2 x 16,8/1 x 8,4	73
ACS 7/38	3800	700	450	700	1200	8	2900	2 x 16,8/1 x 8,4	76
ACS 7/40	4000	700	450	700	1300	8	3050	2 x 16,8/1 x 8,4	79
ACS 9/10	1000	900	450	250	–	2	1000	1 x 8,4	32
ACS 9/12	1200	900	450	400	–	2	1200	1 x 8,4	36
ACS 9/14	1400	900	450	500	–	3	1400	1 x 16,8	39
ACS 9/16	1600	900	450	500	–	3	1600	1 x 16,8	43
ACS 9/18	1800	900	450	600	–	4	1750	1 x 16,8	47
ACS 9/20	2000	900	450	600	–	4	1950	2 x 8,4	50
ACS 9/22	2200	900	450	700	–	5	2150	2 x 8,4	54
ACS 9/24	2400	900	450	700	–	5	2350	2 x 8,4	57
ACS 9/26	2600	900	450	700	–	5	2550	2 x 8,4	61
ACS 9/28	2800	900	450	400	1000	5	2750	2 x 16,8	64
ACS 9/30	3000	900	450	400	1100	6	2950	2 x 16,8	67
ACS 9/32	3200	900	450	500	1100	6	3150	2 x 16,8	72
ACS 9/34	3400	900	450	600	1100	7	3350	2 x 16,8	75
ACS 9/36	3600	900	450	600	1200	7	3500	2 x 16,8 / 1 x 8,4	78
ACS 9/38	3800	900	450	700	1200	8	3700	2 x 16,8 / 1 x 8,4	82
ACS 9/40	4000	900	450	700	1300	8	3900	2 x 16,8 / 1 x 8,4	85
ACS 11/10	1000	1100	450	250	–	2	1200	1 x 8,4	34
ACS 11/12	1200	1100	450	400	–	2	1450	1 x 8,4	38
ACS 11/14	1400	1100	450	500	–	3	1700	1 x 16,8	41
ACS 11/16	1600	1100	450	500	–	3	1950	1 x 16,8	45
ACS 11/18	1800	1100	450	600	–	4	2150	1 x 16,8	48
ACS 11/20	2000	1100	450	600	–	4	2400	2 x 8,4	52
ACS 11/22	2200	1100	450	700	–	5	2650	2 x 8,4	57
ACS 11/24	2400	1100	450	700	–	5	2900	2 x 8,4	61
ACS 11/26	2600	1100	450	700	–	5	3100	2 x 8,4	65
ACS 11/28	2800	1100	450	400	1000	5	3350	2 x 16,8	68
ACS 11/30	3000	1100	450	400	1100	6	3600	2 x 16,8	71
ACS 11/32	3200	1100	450	500	1100	6	3850	2 x 16,8	76
ACS 11/34	3400	1100	450	600	1100	7	4050	2 x 16,8	79
ACS 11/36	3600	1100	450	600	1200	7	4300	2 x 16,8 / 1 x 8,4	83
ACS 11/38	3800	1100	450	700	1200	8	4550	2 x 16,8 / 1 x 8,4	87
ACS 11/40	4000	1100	450	700	1300	8	4800	2 x 16,8 / 1 x 8,4	91

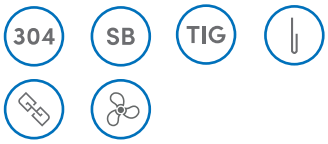
ACSM

Wall-mounted snack hood with motor

Product ACSM

Construction Suitable for installation in particularly low-ceiling kitchen environments. The extraction bodies are supplied in a single piece up to lengths of 3 meters. This ensures absolute cleanability thanks to the absence of joints and extreme ease of installation, as no assembly is required during installation.

FEATURES



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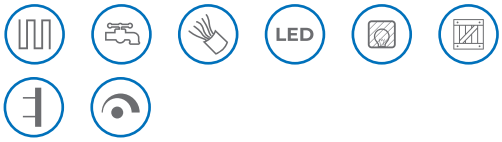

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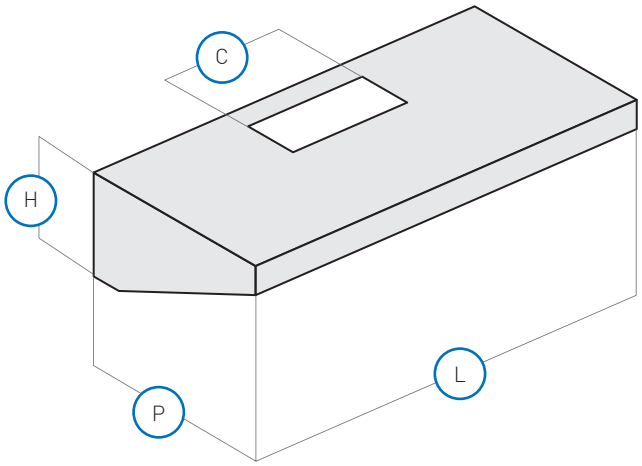

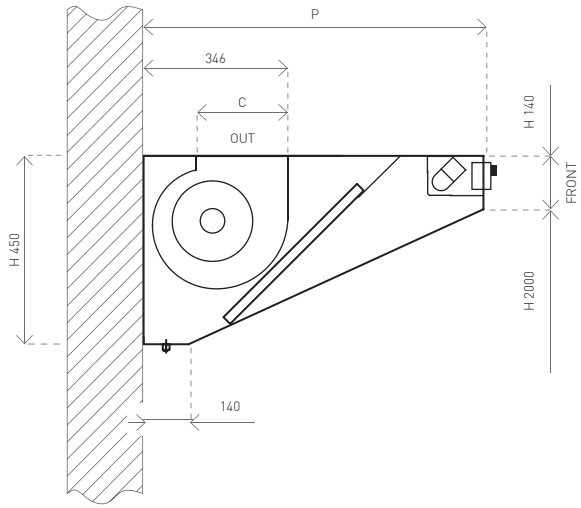

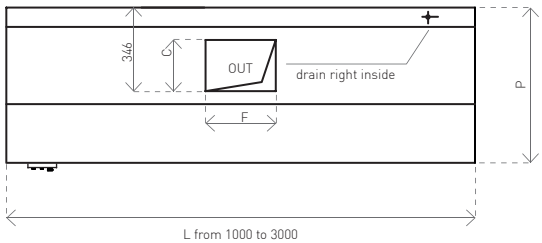

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DIMENSIONS

Model	L	P	H	Filters	Max indicative flow Mc/h	Lights	Wt.	Motor power W	F x C
	mm	mm	mm	N°		W	Kg		mm
ACSM 7/10	1000	700	450	2	1000-240	1 x 8,4	41	1x200	232 x 208
ACSM 7/12	1200	700	450	2	1000-240	1 x 8,4	46	1x200	232 x 208
ACSM 7/14	1400	700	450	2	1000-240	1 x 16,8	49	1x200	232 x 208
ACSM 7/16	1600	700	450	2	1000-240	1 x 16,8	53	1x200	232 x 208
ACSM 7/18	1800	700	450	3	1000-240	1 x 16,8	59	1x200	232 x 208
ACSM 7/20	2000	700	450	4	2000-300	2 x 8,4	62	1x420	298 x 262
ACSM 7/22	2200	700	450	4	2000-300	2 x 8,4	64	1x420	298 x 262
ACSM 7/24	2400	700	450	4	2000-300	2 x 8,4	66	1x420	298 x 262
ACSM 7/26	2600	700	450	4	2000-300	2 x 8,4	69	1x420	298 x 262
ACSM 7/28	2800	700	450	5	2000-300	2 x 16,8	70	1x420	298 x 262
ACSM 7/30	3000	700	450	6	2000-300	2 x 16,8	72	1x420	298 x 262
ACSM 9/10	1000	900	450	2	1000-240	1 x 8,4	43	1x200	232 x 208
ACSM 9/12	1200	900	450	2	1000-240	1 x 8,4	48	1x200	232 x 208
ACSM 9/14	1400	900	450	2	1000-240	1 x 16,8	51	1x200	232 x 208
ACSM 9/16	1600	900	450	2	1000-240	1 x 16,8	55	1x200	232 x 208
ACSM 9/18	1800	900	450	3	1000-240	1 x 16,8	61	1x200	232 x 208
ACSM 9/20	2000	900	450	4	2000-300	2 x 8,4	64	1x420	298 x 262
ACSM 9/22	2200	900	450	4	2000-300	2 x 8,4	66	1x420	298 x 262
ACSM 9/24	2400	900	450	4	2000-300	2 x 8,4	68	1x420	298 x 262
ACSM 9/26	2600	900	450	4	2000-300	2 x 8,4	71	1x420	298 x 262
ACSM 9/28	2800	900	450	5	2000-300	2 x 16,8	72	1x420	298 x 262
ACSM 9/30	3000	900	450	6	2000-300	2 x 16,8	74	1x420	298 x 262
ACSM 11/10	1000	1100	450	2	1000-240	1 x 8,4	43	1x200	232 x 208
ACSM 11/12	1200	1100	450	2	1000-240	1 x 8,4	48	1x200	232 x 208
ACSM 11/14	1400	1100	450	2	1000-240	1 x 16,8	51	1x200	232 x 208
ACSM 11/16	1600	1100	450	2	1000-240	1 x 16,8	55	1x200	232 x 208
ACSM 11/18	1800	1100	450	3	1000-240	1 x 16,8	61	1x200	232 x 208
ACSM 11/20	2000	1100	450	4	2000-300	2 x 8,4	64	1x420	298 x 262
ACSM 11/22	2200	1100	450	4	2000-300	2 x 8,4	66	1x420	298 x 262
ACSM 11/24	2400	1100	450	4	2000-300	2 x 8,4	68	1x420	298 x 262
ACSM 11/26	2600	1100	450	4	2000-300	2 x 8,4	71	1x420	298 x 262
ACSM 11/28	2800	1100	450	5	2000-300	2 x 16,8	72	1x420	298 x 262
ACSM 11/30	3000	1100	450	6	2000-300	2 x 16,8	74	1x420	298 x 262

ACSP

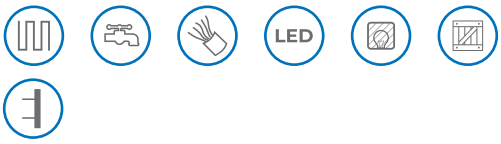
Wall-mounted sloping hood

Product ACSP

Construction Wall-mounted hood with sloped profile. Suitable for installation in kitchen environments where multiple hoods of the same shape are present. Its sloped profile lends itself, in its upper flat section, to complete closure up to the ceiling.

FEATURES

INCLUDED



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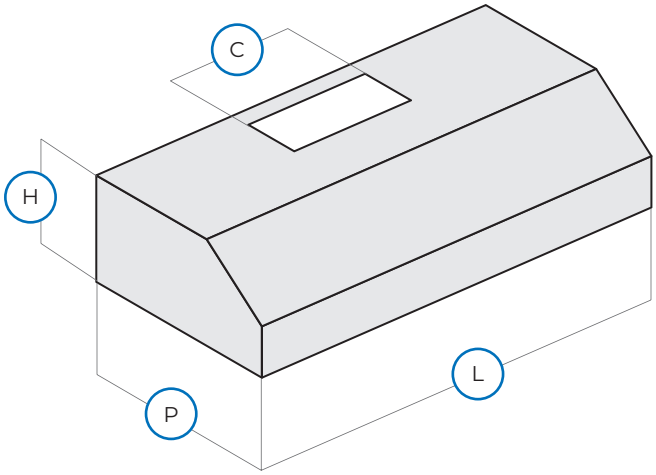

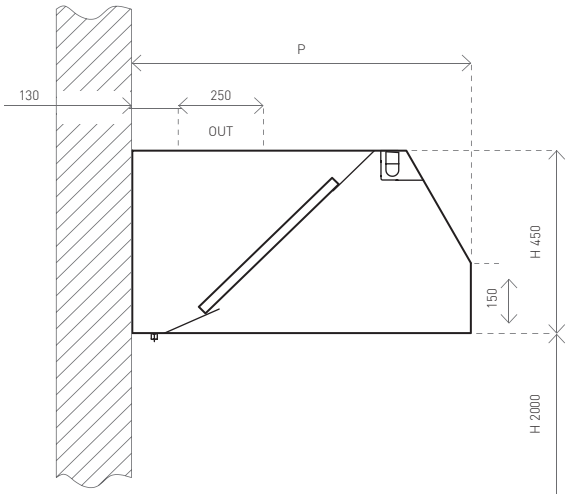

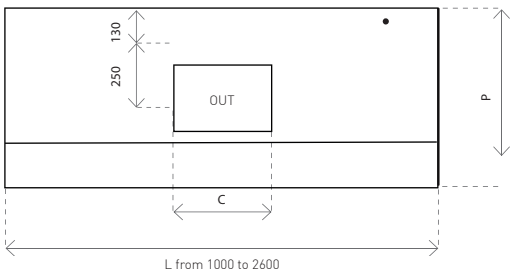

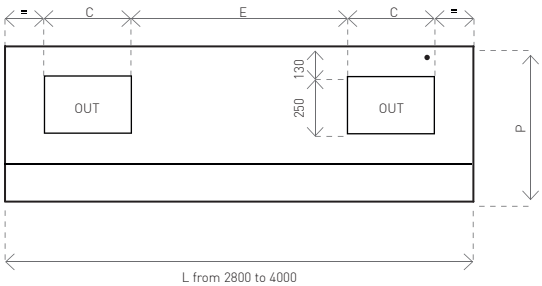

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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
ACSP 9/10	1000	900	450	250	–	2	1000	1 x 8,4	34
ACSP 9/12	1200	900	450	400	–	2	1200	1 x 8,4	38
ACSP 9/14	1400	900	450	500	–	3	1400	1 x 16,8	41
ACSP 9/16	1600	900	450	500	–	3	1600	1 x 16,8	45
ACSP 9/18	1800	900	450	600	–	4	1750	1 x 16,8	49
ACSP 9/20	2000	900	450	600	–	4	1950	2 x 8,4	52
ACSP 9/22	2200	900	450	700	–	5	2150	2 x 8,4	56
ACSP 9/24	2400	900	450	700	–	5	2350	2 x 8,4	59
ACSP 9/26	2600	900	450	700	–	5	2550	2 x 8,4	63
ACSP 9/28	2800	900	450	400	1000	5	2750	2 x 16,8	66
ACSP 9/30	3000	900	450	400	1100	6	2950	2 x 16,8	69
ACSP 9/32	3200	900	450	500	1100	6	3150	2 x 16,8	74
ACSP 9/34	3400	900	450	600	1100	7	3350	2 x 16,8	77
ACSP 9/36	3600	900	450	600	1200	7	3500	2 x 16,8 / 1 x 8,4	80
ACSP 9/38	3800	900	450	700	1200	8	3700	2 x 16,8 / 1 x 8,4	84
ACSP 9/40	4000	900	450	700	1300	8	3900	2 x 16,8 / 1 x 8,4	87
ACSP 11/10	1000	1100	450	250	–	2	1200	1 x 8,4	36
ACSP 11/12	1200	1100	450	400	–	2	1450	1 x 8,4	40
ACSP 11/14	1400	1100	450	500	–	3	1700	1 x 16,8	43
ACSP 11/16	1600	1100	450	500	–	3	1950	1 x 16,8	47
ACSP 11/18	1800	1100	450	600	–	4	2150	1 x 16,8	50
ACSP 11/20	2000	1100	450	600	–	4	2400	2 x 8,4	54
ACSP 11/22	2200	1100	450	700	–	5	2650	2 x 8,4	59
ACSP 11/24	2400	1100	450	700	–	5	2900	2 x 8,4	63
ACSP 11/26	2600	1100	450	700	–	5	3100	2 x 8,4	67
ACSP 11/28	2800	1100	450	400	1000	5	3350	2 x 16,8	70
ACSP 11/30	3000	1100	450	400	1100	6	3600	2 x 16,8	73
ACSP 11/32	3200	1100	450	500	1100	6	3850	2 x 16,8	78
ACSP 11/34	3400	1100	450	600	1100	7	4050	2 x 16,8	81
ACSP 11/36	3600	1100	450	600	1200	7	4300	2 x 16,8 / 1 x 8,4	85
ACSP 11/38	3800	1100	450	700	1200	8	4550	2 x 16,8 / 1 x 8,4	89
ACSP 11/40	4000	1100	450	700	1300	8	4800	2 x 16,8 / 1 x 8,4	93
ACSP 14/10	1000	1400	450	250	–	2	1550	1 x 8,4	38
ACSP 14/12	1200	1400	450	400	–	2	1850	1 x 8,4	42
ACSP 14/14	1400	1400	450	500	–	3	2150	1 x 16,8	45
ACSP 14/16	1600	1400	450	500	–	3	2450	1 x 16,8	49
ACSP 14/18	1800	1400	450	600	–	4	2750	1 x 16,8	52
ACSP 14/20	2000	1400	450	600	–	4	3050	2 x 8,4	56
ACSP 14/22	2200	1400	450	700	–	5	3350	2 x 8,4	61
ACSP 14/24	2400	1400	450	700	–	5	3650	2 x 8,4	65
ACSP 14/26	2600	1400	450	700	–	5	3950	2 x 8,4	69
ACSP 14/28	2800	1400	450	400	1000	5	4250	2 x 16,8	72
ACSP 14/30	3000	1400	450	400	1100	6	4550	2 x 16,8	75
ACSP 14/32	3200	1400	450	500	1100	6	4850	2 x 16,8	80
ACSP 14/34	3400	1400	450	600	1100	7	5150	2 x 16,8	83
ACSP 14/36	3600	1400	450	600	1200	7	5450	2 x 16,8 / 1 x 8,4	87
ACSP 14/38	3800	1400	450	700	1200	8	5750	2 x 16,8 / 1 x 8,4	91
ACSP 14/40	4000	1400	450	700	1300	8	6050	2 x 16,8 / 1 x 8,4	95

ACPM

Wall-mounted sloping hood with motor

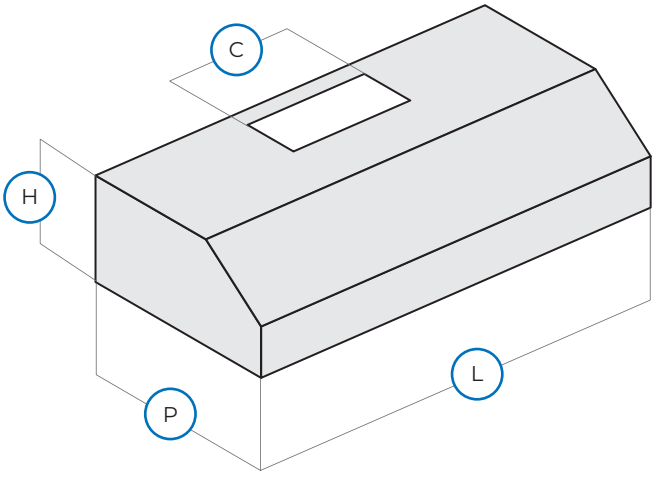
Product ACPM

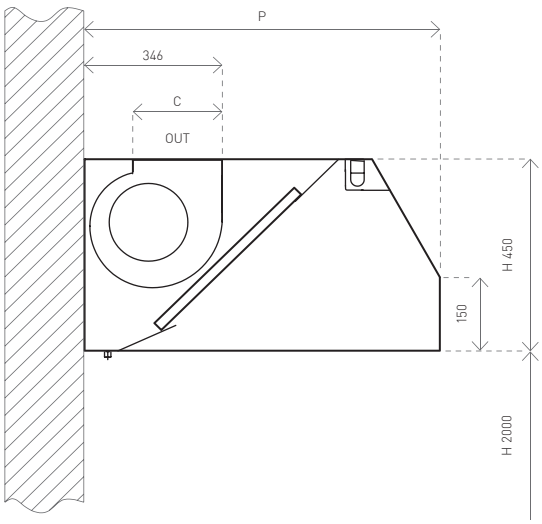
Construction Wall-mounted hood with sloped profile. Suitable for installation in kitchen environments where multiple hoods of the same shape are present. Its sloped profile lends itself, in its upper flat section, to complete closure up to the ceiling.

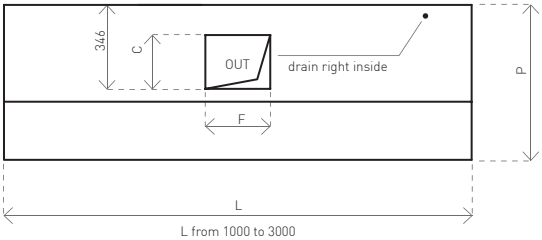
FEATURES

INCLUDED

ON REQUEST







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DIMENSIONS

Model	L	P	H	Filters	Max indicative flow Mc/h	Lights	Wt.	Motor power W	F x C
	mm	mm	mm	N°		W	Kg		mm
ACPM 9/10	1000	900	450	2	1000-240	1 x 8,4	46	1x200	232 x 208
ACPM 9/12	1200	900	450	2	1000-240	1 x 8,4	50	1x200	232 x 208
ACPM 9/14	1400	900	450	3	1000-240	1 x 16,8	53	1x200	232 x 208
ACPM 9/16	1600	900	450	3	1000-240	1 x 16,8	57	1x200	232 x 208
ACPM 9/18	1800	900	450	4	1000-240	1 x 16,8	61	1x200	232 x 208
ACPM 9/20	2000	900	450	4	2000-300	2 x 8,4	64	1x420	298 x 262
ACPM 9/22	2200	900	450	5	2000-300	2 x 8,4	68	1x420	298 x 262
ACPM 9/24	2400	900	450	5	2000-300	2 x 8,4	71	1x420	298 x 262
ACPM 9/26	2600	900	450	5	2000-300	2 x 8,4	75	1x420	298 x 262
ACPM 9/28	2800	900	450	5	2000-300	2 x 16,8	78	1x420	298 x 262
ACPM 9/30	3000	900	450	6	2000-300	2 x 16,8	81	1x420	298 x 262
ACPM 11/10	1000	1100	450	2	1000-240	1 x 8,4	48	1x200	232 x 208
ACPM 11/12	1200	1100	450	2	1000-240	1 x 8,4	52	1x200	232 x 208
ACPM 11/14	1400	1100	450	3	1000-240	1 x 16,8	55	1x200	232 x 208
ACPM 11/16	1600	1100	450	3	1000-240	1 x 16,8	59	1x200	232 x 208
ACPM 11/18	1800	1100	450	4	1000-240	1 x 16,8	62	1x200	232 x 208
ACPM 11/20	2000	1100	450	4	2000-300	2 x 8,4	66	1x420	298 x 262
ACPM 11/22	2200	1100	450	5	2000-300	2 x 8,4	71	1x420	298 x 262
ACPM 11/24	2400	1100	450	5	2000-300	2 x 8,4	75	1x420	298 x 262
ACPM 11/26	2600	1100	450	5	2000-300	2 x 8,4	79	1x420	298 x 262
ACPM 11/28	2800	1100	450	5	2000-300	2 x 16,8	82	1x420	298 x 262
ACPM 11/30	3000	1100	450	6	2000-300	2 x 16,8	85	1x420	298 x 262
ACPM 14/10	1000	1400	450	2	1000-240	1 x 8,4	50	1x200	232 x 208
ACPM 14/12	1200	1400	450	2	1000-240	1 x 8,4	54	1x200	232 x 208
ACPM 14/14	1400	1400	450	3	1000-240	1 x 16,8	57	1x200	232 x 208
ACPM 14/16	1600	1400	450	3	1000-240	1 x 16,8	61	1x200	232 x 208
ACPM 14/18	1800	1400	450	4	1000-240	1 x 16,8	64	1x200	232 x 208
ACPM 14/20	2000	1400	450	4	2000-300	2 x 8,4	68	1x420	298 x 262
ACPM 14/22	2200	1400	450	5	2000-300	2 x 8,4	73	1x420	298 x 262
ACPM 14/24	2400	1400	450	5	2000-300	2 x 8,4	77	1x420	298 x 262
ACPM 14/26	2600	1400	450	5	2000-300	2 x 8,4	81	1x420	298 x 262
ACPM 14/28	2800	1400	450	5	2000-300	2 x 16,8	84	1x420	298 x 262
ACPM 14/30	3000	1400	450	6	2000-300	2 x 16,8	87	1x420	298 x 262

ACSC

Central snack hood

Product ACSC

Construction Construction designed for installation in particularly low-ceiling kitchen environments. Its sloped profile lends itself, in its upper flat section, to complete closure up to the ceiling.

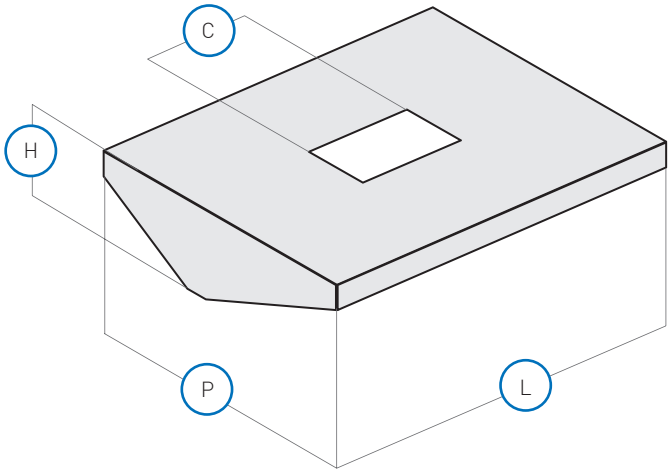
FEATURES

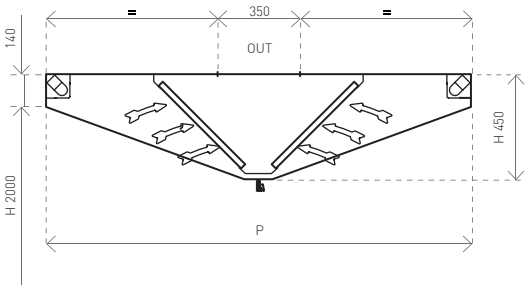
304 SB TIG

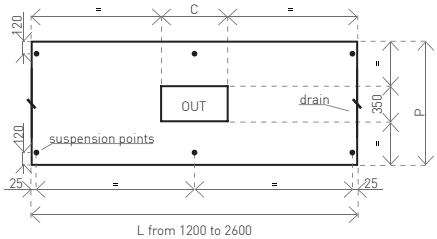
INCLUDED

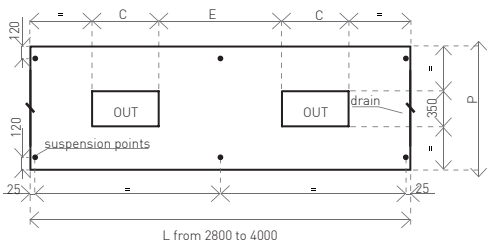
LED

ON REQUEST









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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
ACSC 12/12	1200	1200	450	400	–	4	1600	2 x 8,4	60
ACSC 12/14	1400	1200	450	500	–	6	1850	2 x 16,8	64
ACSC 12/16	1600	1200	450	500	–	6	2100	2 x 16,8	68
ACSC 12/18	1800	1200	450	600	–	8	2350	2 x 16,8	69
ACSC 12/20	2000	1200	450	600	–	8	2600	4 x 8,4	70
ACSC 12/22	2200	1200	450	700	–	8	2900	4 x 8,4	80
ACSC 12/24	2400	1200	450	700	–	8	3150	4 x 8,4	89
ACSC 12/26	2600	1200	450	700	–	10	3400	4 x 8,4	93
ACSC 12/28	2800	1200	450	400	1000	10	3650	4 x 16,8	97
ACSC 12/30	3000	1200	450	400	1100	12	3900	4 x 16,8	100
ACSC 12/32	3200	1200	450	500	1100	12	4150	4 x 16,8	104
ACSC 12/34	3400	1200	450	600	1100	14	4450	4 x 16,8	109
ACSC 12/36	3600	1200	450	600	1200	14	4700	4 x 16,8 / 2 x 8,4	113
ACSC 12/38	3800	1200	450	700	1200	16	4950	4 x 16,8 / 2 x 8,4	117
ACSC 12/40	4000	1200	450	700	1300	16	5200	4 x 16,8 / 2 x 8,4	120
ACSC 15/12	1200	1500	450	400	–	4	1950	2 x 8,4	62
ACSC 15/14	1400	1500	450	500	–	6	2300	2 x 16,8	66
ACSC 15/16	1600	1500	450	500	–	6	2600	2 x 16,8	70
ACSC 15/18	1800	1500	450	600	–	8	2950	2 x 16,8	71
ACSC 15/20	2000	1500	450	600	–	8	3250	4 x 8,4	72
ACSC 15/22	2200	1500	450	700	–	8	3600	4 x 8,4	82
ACSC 15/24	2400	1500	450	700	–	8	3900	4 x 8,4	91
ACSC 15/26	2600	1500	450	700	–	10	4250	4 x 8,4	95
ACSC 15/28	2800	1500	450	400	1000	10	4550	4 x 16,8	99
ACSC 15/30	3000	1500	450	400	1100	12	4900	4 x 16,8	102
ACSC 15/32	3200	1500	450	500	1100	12	5200	4 x 16,8	106
ACSC 15/34	3400	1500	450	600	1100	14	5550	4 x 16,8	111
ACSC 15/36	3600	1500	450	600	1200	14	5850	4 x 16,8 / 2 x 8,4	115
ACSC 15/38	3800	1500	450	700	1200	16	6200	4 x 16,8 / 2 x 8,4	119
ACSC 15/40	4000	1500	450	700	1300	16	6500	4 x 16,8 / 2 x 8,4	122
ACSC 18/16	1600	1800	450	500	–	6	3150	2 x 16,8	74
ACSC 18/18	1800	1800	450	600	–	8	3500	2 x 16,8	77
ACSC 18/20	2000	1800	450	600	–	8	3900	4 x 8,4	79
ACSC 18/22	2200	1800	450	700	–	8	4300	4 x 8,4	87
ACSC 18/24	2400	1800	450	700	–	8	4700	4 x 8,4	94
ACSC 18/26	2600	1800	450	700	–	10	5100	4 x 8,4	99
ACSC 18/28	2800	1800	450	400	1000	10	5450	4 x 16,8	104
ACSC 18/30	3000	1800	450	400	1100	12	5850	4 x 16,8	107
ACSC 18/32	3200	1800	450	500	1100	12	6250	4 x 16,8	110
ACSC 18/34	3400	1800	450	600	1100	14	6650	4 x 16,8	115
ACSC 18/36	3600	1800	450	600	1200	14	7000	4 x 16,8 / 2 x 8,4	120
ACSC 18/38	3800	1800	450	700	1200	16	7400	4 x 16,8 / 2 x 8,4	124
ACSC 18/40	4000	1800	450	700	1300	16	7800	4 x 16,8 / 2 x 8,4	127
ACSC 22/16	1600	2200	450	500	–	6	2100	2 x 16,8	81
ACSC 22/18	1800	2200	450	600	–	8	2350	2 x 16,8	85
ACSC 22/20	2000	2200	450	600	–	8	2600	4 x 8,4	88
ACSC 22/22	2200	2200	450	700	–	8	2900	4 x 8,4	92
ACSC 22/24	2400	2200	450	700	–	8	3150	4 x 8,4	96
ACSC 22/26	2600	2200	450	700	–	10	3400	4 x 8,4	104
ACSC 22/28	2800	2200	450	400	1000	10	3650	4 x 16,8	111
ACSC 22/30	3000	2200	450	400	1100	12	3900	4 x 16,8	112
ACSC 22/32	3200	2200	450	500	1100	12	4150	4 x 16,8	114
ACSC 22/34	3400	2200	450	600	1100	14	4450	4 x 16,8	119
ACSC 22/36	3600	2200	450	600	1200	14	4700	4 x 16,8 / 2 x 8,4	123
ACSC 22/38	3800	2200	450	700	1200	16	4950	4 x 16,8 / 2 x 8,4	128
ACSC 22/40	4000	2200	450	700	1300	16	5200	4 x 16,8 / 2 x 8,4	132

ACC

Central hood

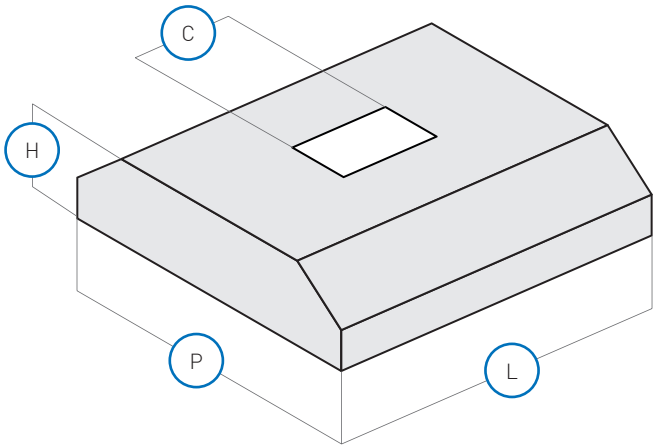
Product ACC

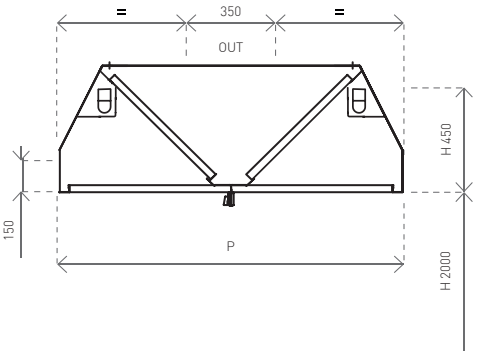
Construction Hood with sloped profile. Suitable for installation in kitchen environments where multiple hoods of the same shape are present. Its sloped profile lends itself, in its upper flat section, to complete closure up to the ceiling.

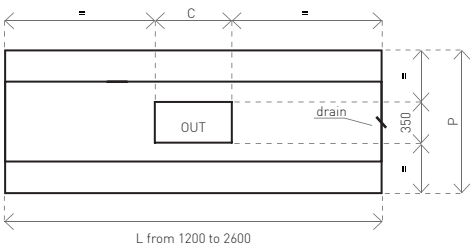
FEATURES

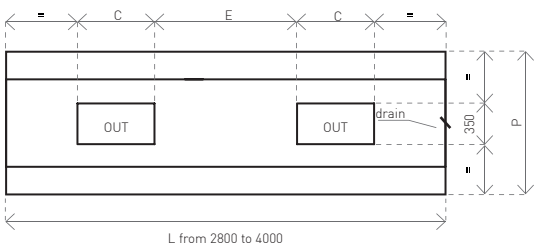
INCLUDED

ON REQUEST









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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
ACC 12/12	1200	1200	450	400	–	4	1600	2 x 8,4	60
ACC 12/14	1400	1200	450	500	–	6	1850	2 x 16,8	64
ACC 12/16	1600	1200	450	500	–	6	2100	2 x 16,8	68
ACC 12/18	1800	1200	450	600	–	8	2350	2 x 16,8	69
ACC 12/20	2000	1200	450	600	–	8	2600	4 x 8,4	70
ACC 12/22	2200	1200	450	700	–	8	2900	4 x 8,4	80
ACC 12/24	2400	1200	450	700	–	8	3150	4 x 8,4	89
ACC 12/26	2600	1200	450	700	–	10	3400	4 x 8,4	93
ACC 12/28	2800	1200	450	400	1000	10	3650	4 x 16,8	97
ACC 12/30	3000	1200	450	400	1100	12	3900	4 x 16,8	100
ACC 12/32	3200	1200	450	500	1100	12	4150	4 x 16,8	104
ACC 12/34	3400	1200	450	600	1100	14	4450	4 x 16,8	109
ACC 12/36	3600	1200	450	600	1200	14	4700	4 x 16,8 / 2 x 8,4	113
ACC 12/38	3800	1200	450	700	1200	16	4950	4 x 16,8 / 2 x 8,4	117
ACC 12/40	4000	1200	450	700	1300	16	5200	4 x 16,8 / 2 x 8,4	120
ACC 15/12	1200	1500	450	400	–	4	1950	2 x 8,4	62
ACC 15/14	1400	1500	450	500	–	6	2300	2 x 16,8	66
ACC 15/16	1600	1500	450	500	–	6	2600	2 x 16,8	70
ACC 15/18	1800	1500	450	600	–	8	2950	2 x 16,8	71
ACC 15/20	2000	1500	450	600	–	8	3250	4 x 8,4	72
ACC 15/22	2200	1500	450	700	–	8	3600	4 x 8,4	82
ACC 15/24	2400	1500	450	700	–	8	3900	4 x 8,4	91
ACC 15/26	2600	1500	450	700	–	10	4250	4 x 8,4	95
ACC 15/28	2800	1500	450	400	1000	10	4550	4 x 16,8	99
ACC 15/30	3000	1500	450	400	1100	12	4900	4 x 16,8	102
ACC 15/32	3200	1500	450	500	1100	12	5200	4 x 16,8	106
ACC 15/34	3400	1500	450	600	1100	14	5550	4 x 16,8	111
ACC 15/36	3600	1500	450	600	1200	14	5850	4 x 16,8 / 2 x 8,4	115
ACC 15/38	3800	1500	450	700	1200	16	6200	4 x 16,8 / 2 x 8,4	119
ACC 15/40	4000	1500	450	700	1300	16	6500	4 x 16,8 / 2 x 8,4	122
ACC 18/16	1600	1800	450	500	–	6	3150	2 x 16,8	74
ACC 18/18	1800	1800	450	600	–	8	3500	2 x 16,8	77
ACC 18/20	2000	1800	450	600	–	8	3900	4 x 8,4	79
ACC 18/22	2200	1800	450	700	–	8	4300	4 x 8,4	87
ACC 18/24	2400	1800	450	700	–	8	4700	4 x 8,4	94
ACC 18/26	2600	1800	450	700	–	10	5100	4 x 8,4	99
ACC 18/28	2800	1800	450	400	1000	10	5450	4 x 16,8	104
ACC 18/30	3000	1800	450	400	1100	12	5850	4 x 16,8	107
ACC 18/32	3200	1800	450	500	1100	12	6250	4 x 16,8	110
ACC 18/34	3400	1800	450	600	1100	14	6650	4 x 16,8	115
ACC 18/36	3600	1800	450	600	1200	14	7000	4 x 16,8 / 2 x 8,4	120
ACC 18/38	3800	1800	450	700	1200	16	7400	4 x 16,8 / 2 x 8,4	124
ACC 18/40	4000	1800	450	700	1300	16	7800	4 x 16,8 / 2 x 8,4	127
ACC 22/16	1600	2200	450	500	–	6	3850	2 x 16,8	81
ACC 22/18	1800	2200	450	600	–	8	4300	2 x 16,8	85
ACC 22/20	2000	2200	450	600	–	8	4800	4 x 8,4	88
ACC 22/22	2200	2200	450	700	–	8	5250	4 x 8,4	92
ACC 22/24	2400	2200	450	700	–	8	5750	4 x 8,4	96
ACC 22/26	2600	2200	450	700	–	10	6200	4 x 8,4	104
ACC 22/28	2800	2200	450	400	1000	10	6700	4 x 16,8	111
ACC 22/30	3000	2200	450	400	1100	12	7150	4 x 16,8	112
ACC 22/32	3200	2200	450	500	1100	12	7650	4 x 16,8	114
ACC 22/34	3400	2200	450	600	1100	14	8100	4 x 16,8	119
ACC 22/36	3600	2200	450	600	1200	14	8600	4 x 16,8 / 2 x 8,4	123
ACC 22/38	3800	2200	450	700	1200	16	9095	4 x 16,8 / 2 x 8,4	128
ACC 22/40	4000	2200	450	700	1300	16	9550	4 x 16,8 / 2 x 8,4	132

ACCM

Central hood with motor

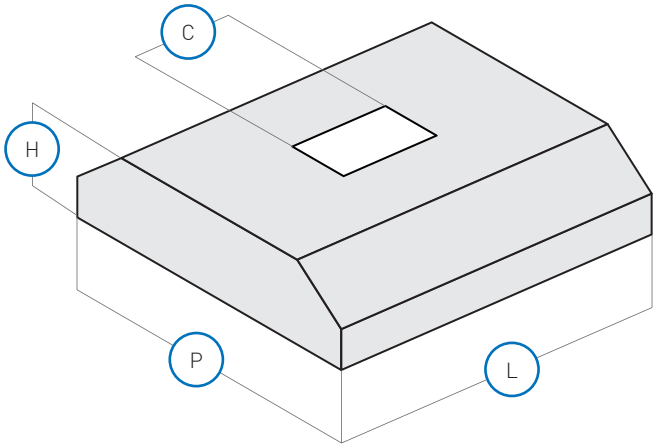
Product ACCM

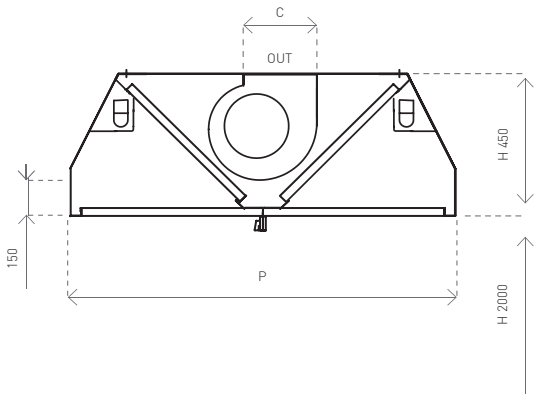
Construction Hood with sloped profile. Suitable for installation in kitchen environments where multiple hoods of the same shape are present. Its sloped profile lends itself, in its upper flat section, to complete closure up to the ceiling.

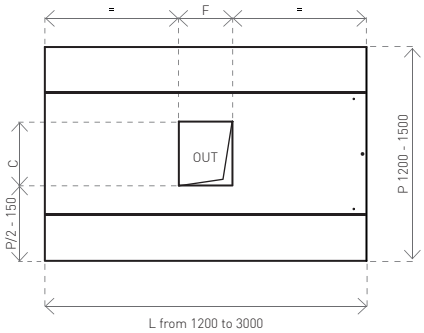
FEATURES

INCLUDED

ON REQUEST







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DIMENSIONS

Model	L mm	P mm	H mm	Filters N°	Max indicative flow Mc/h	Lights W	Wt. Kg	Motor power W	F x C mm
ACCM 12/12	1200	1200	450	4	1000-240	2 x 8,4	72	1x200	232 x 208
ACCM 12/14	1400	1200	450	6	1000-240	2 x 16,8	76	1x200	232 x 208
ACCM 12/16	1600	1200	450	6	1000-240	2 x 16,8	80	1x200	232 x 208
ACCM 12/18	1800	1200	450	8	2000-300	2 x 16,8	81	1x420	298 x 262
ACCM 12/20	2000	1200	450	8	2000-300	4 x 8,4	82	1x420	298 x 262
ACCM 12/22	2200	1200	450	8	2000-300	4 x 8,4	92	1x420	298 x 262
ACCM 12/24	2400	1200	450	8	2000-300	4 x 8,4	101	1x420	298 x 262
ACCM 12/26	2600	1200	450	10	2000-300	4 x 8,4	105	1x420	298 x 262
ACCM 12/28	2800	1200	450	10	2000-300	4 x 16,8	109	1x420	298 x 262
ACCM 12/30	3000	1200	450	12	2000-300	4 x 16,8	112	1x420	298 x 262
ACCM 15/12	1200	1500	450	4	1000-240	2 x 8,4	75	1x200	232 x 208
ACCM 15/14	1400	1500	450	6	1000-240	2 x 16,8	79	1x200	232 x 208
ACCM 15/16	1600	1500	450	6	1000-240	2 x 16,8	83	1x200	232 x 208
ACCM 15/18	1800	1500	450	8	2000-300	2 x 16,8	84	1x420	298 x 262
ACCM 15/20	2000	1500	450	8	2000-300	4 x 8,4	85	1x420	298 x 262
ACCM 15/22	2200	1500	450	8	2000-300	4 x 8,4	95	1x420	298 x 262
ACCM 15/24	2400	1500	450	8	2000-300	4 x 8,4	104	1x420	298 x 262
ACCM 15/26	2600	1500	450	10	2000-300	4 x 8,4	108	1x420	298 x 262
ACCM 15/28	2800	1500	450	10	2000-300	4 x 16,8	112	1x420	298 x 262
ACCM 15/30	3000	1500	450	10	2000-300	4 x 16,8	112	1x420	298 x 262

AKP

Wall-mounted cubic hood

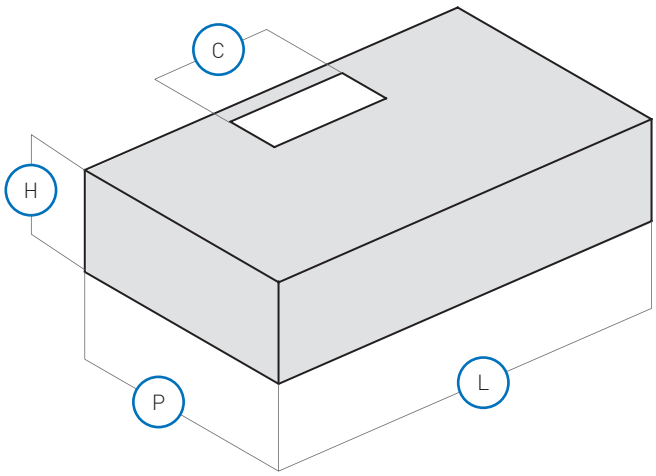
Product AKP

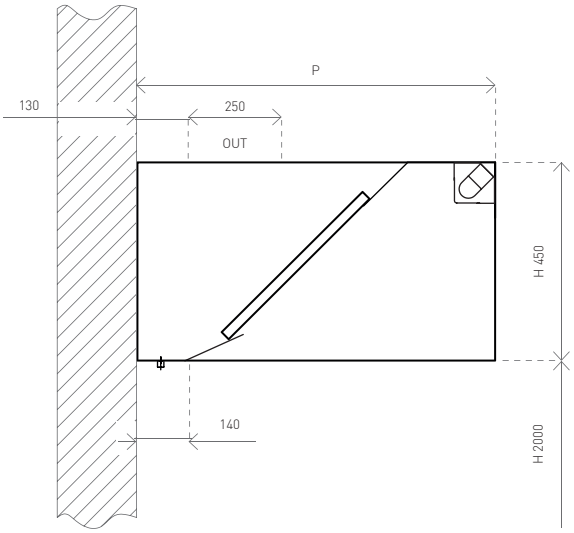
Construction Suitable for installation in kitchen environments where multiple hoods of the same shape are present. The distinctive feature of the cubic series hoods lies in the quality of workmanship and the robustness of the assembly.

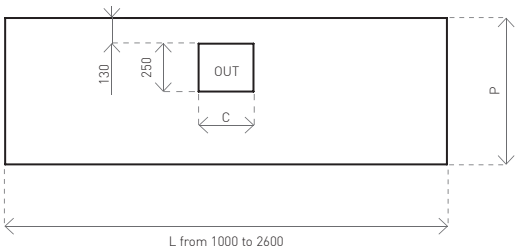
FEATURES

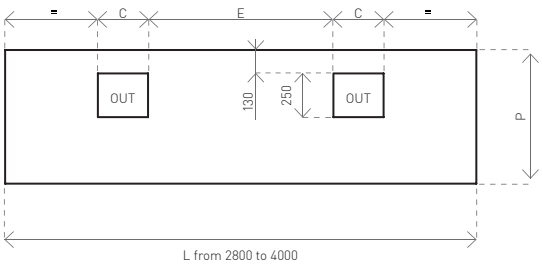
INCLUDED

ON REQUEST









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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
AKP 9/10	1000	900	450	250	–	2	1000	1 x 8,4	34
AKP 9/12	1200	900	450	400	–	2	1200	1 x 8,4	38
AKP 9/14	1400	900	450	500	–	3	1400	1 x 16,8	41
AKP 9/16	1600	900	450	500	–	3	1600	1 x 16,8	45
AKP 9/18	1800	900	450	600	–	4	1750	1 x 16,8	49
AKP 9/20	2000	900	450	600	–	4	1950	2 x 8,4	52
AKP 9/22	2200	900	450	700	–	5	2150	2 x 8,4	56
AKP 9/24	2400	900	450	700	–	5	2350	2 x 8,4	59
AKP 9/26	2600	900	450	700	–	5	2550	2 x 8,4	63
AKP 9/28	2800	900	450	400	1000	5	2750	2 x 16,8	66
AKP 9/30	3000	900	450	400	1100	6	2950	2 x 16,8	69
AKP 9/32	3200	900	450	500	1100	6	3150	2 x 16,8	74
AKP 9/34	3400	900	450	600	1100	7	3350	2 x 16,8	77
AKP 9/36	3600	900	450	600	1200	7	3500	2 x 16,8 / 1 x 8,4	80
AKP 9/38	3800	900	450	700	1200	8	3700	2 x 16,8 / 1 x 8,4	84
AKP 9/40	4000	900	450	700	1300	8	3900	2 x 16,8 / 1 x 8,4	87
AKP 11/10	1000	1100	450	250	–	2	1200	1 x 8,4	36
AKP 11/12	1200	1100	450	400	–	2	1450	1 x 8,4	40
AKP 11/14	1400	1100	450	500	–	3	1700	1 x 16,8	43
AKP 11/16	1600	1100	450	500	–	3	1950	1 x 16,8	47
AKP 11/18	1800	1100	450	600	–	4	2150	1 x 16,8	50
AKP 11/20	2000	1100	450	600	–	4	2400	2 x 8,4	54
AKP 11/22	2200	1100	450	700	–	5	2650	2 x 8,4	59
AKP 11/24	2400	1100	450	700	–	5	2900	2 x 8,4	63
AKP 11/26	2600	1100	450	700	–	5	3100	2 x 8,4	67
AKP 11/28	2800	1100	450	400	1000	5	3350	2 x 16,8	70
AKP 11/30	3000	1100	450	400	1100	6	3600	2 x 16,8	73
AKP 11/32	3200	1100	450	500	1100	6	3850	2 x 16,8	78
AKP 11/34	3400	1100	450	600	1100	7	4050	2 x 16,8	81
AKP 11/36	3600	1100	450	600	1200	7	4300	2 x 16,8 / 1 x 8,4	85
AKP 11/38	3800	1100	450	700	1200	8	4550	2 x 16,8 / 1 x 8,4	89
AKP 11/40	4000	1100	450	700	1300	8	4800	2 x 16,8 / 1 x 8,4	93
AKP 14/10	1000	1400	450	250	–	2	1550	1 x 8,4	38
AKP 14/12	1200	1400	450	400	–	2	1850	1 x 8,4	42
AKP 14/14	1400	1400	450	500	–	3	2150	1 x 16,8	45
AKP 14/16	1600	1400	450	500	–	3	2450	1 x 16,8	49
AKP 14/18	1800	1400	450	600	–	4	2750	1 x 16,8	52
AKP 14/20	2000	1400	450	600	–	4	3050	2 x 8,4	56
AKP 14/22	2200	1400	450	700	–	5	3350	2 x 8,4	61
AKP 14/24	2400	1400	450	700	–	5	3650	2 x 8,4	65
AKP 14/26	2600	1400	450	700	–	5	3950	2 x 8,4	69
AKP 14/28	2800	1400	450	400	1000	5	4250	2 x 16,8	72
AKP 14/30	3000	1400	450	400	1100	6	4550	2 x 16,8	75
AKP 14/32	3200	1400	450	500	1100	6	4850	2 x 16,8	80
AKP 14/34	3400	1400	450	600	1100	7	5150	2 x 16,8	83
AKP 14/36	3600	1400	450	600	1200	7	5450	2 x 16,8 / 1 x 8,4	87
AKP 14/38	3800	1400	450	700	1200	8	5750	2 x 16,8 / 1 x 8,4	91
AKP 14/40	4000	1400	450	700	1300	8	6050	2 x 16,8 / 1 x 8,4	95

AKPM

Wall-mounted cubic hood with motor

Product AKPM

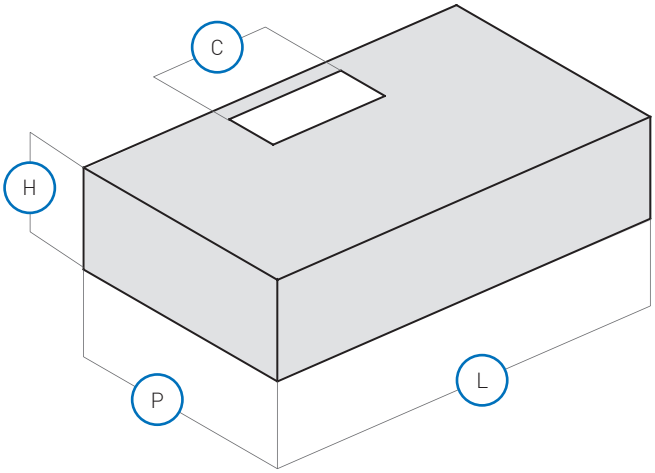
Construction

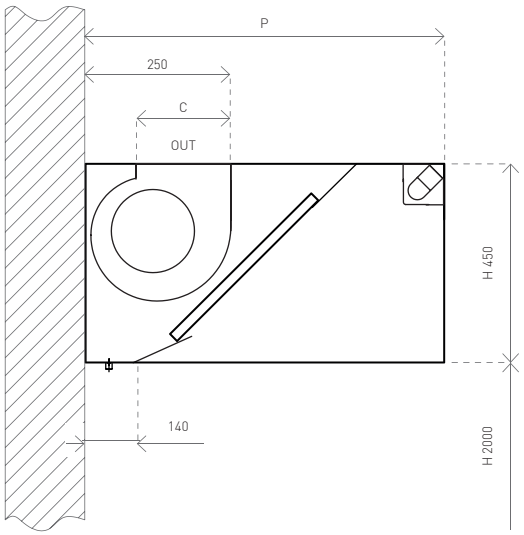
Suitable for installation in kitchen environments where multiple hoods of the same shape are present. The distinctive feature of the cubic series hoods lies in the quality of workmanship and the robustness of the assembly.

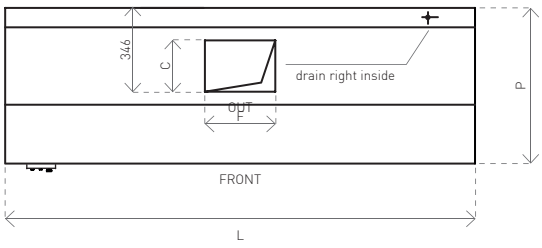
FEATURES

INCLUDED

ON REQUEST







EXTRACTION HOODS

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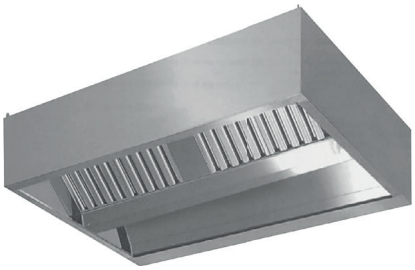
DIMENSIONS

Model	L mm	P mm	H mm	Filters N°	Max indicative flow Mc/h	Lights W	Wt. Kg	Motor power W	F x C mm
AKPM 9/10	1000	900	450	2	1000-240	1 x 8,4	43	1x200	232 x 208
AKPM 9/12	1200	900	450	2	1000-240	1 x 8,4	46	1x200	232 x 208
AKPM 9/14	1400	900	450	3	1000-240	1 x 8,4	49	1x200	232 x 208
AKPM 9/16	1600	900	450	3	1000-240	1 x 8,4	53	1x200	232 x 208
AKPM 9/18	1800	900	450	4	1000-240	1 x 8,4	59	1x200	232 x 208
AKPM 9/20	2000	900	450	4	2000-300	1 x 16,8	62	1x420	298 x 262
AKPM 9/22	2200	900	450	5	2000-300	1 x 16,8	64	1x420	298 x 262
AKPM 9/24	2400	900	450	5	2000-300	1 x 16,8	66	1x420	298 x 262
AKPM 9/26	2600	900	450	5	2000-300	1 x 16,8	69	1x420	298 x 262
AKPM 9/28	2800	900	450	5	2000-300	2 x 16,8	70	1x420	298 x 262
AKPM 9/30	3000	900	450	6	2000-300	2 x 16,8	72	1x420	298 x 262
AKPM 11/10	1000	1100	450	2	1000-240	1 x 8,4	47	1x200	232 x 208
AKPM 11/12	1200	1100	450	2	1000-240	1 x 8,4	50	1x200	232 x 208
AKPM 11/14	1400	1100	450	3	1000-240	1 x 8,4	53	1x200	232 x 208
AKPM 11/16	1600	1100	450	3	1000-240	1 x 8,4	57	1x200	232 x 208
AKPM 11/18	1800	1100	450	4	1000-240	1 x 8,4	63	1x200	232 x 208
AKPM 11/20	2000	1100	450	4	2000-300	1 x 16,8	66	1x420	298 x 262
AKPM 11/22	2200	1100	450	5	2000-300	1 x 16,8	68	1x420	298 x 262
AKPM 11/24	2400	1100	450	5	2000-300	1 x 16,8	70	1x420	298 x 262
AKPM 11/26	2600	1100	450	5	2000-300	1 x 16,8	73	1x420	298 x 262
AKPM 11/28	2800	1100	450	5	2000-300	2 x 16,8	74	1x420	298 x 262
AKPM 11/30	3000	1100	450	6	2000-300	2 x 16,8	76	1x420	298 x 262
AKPM 14/10	1000	1400	450	2	1000-240	1 x 8,4	51	1x200	232 x 208
AKPM 14/12	1200	1400	450	2	1000-240	1 x 8,4	54	1x200	232 x 208
AKPM 14/14	1400	1400	450	3	1000-240	1 x 8,4	57	1x200	232 x 208
AKPM 14/16	1600	1400	450	3	1000-240	1 x 8,4	61	1x200	232 x 208
AKPM 14/18	1800	1400	450	4	1000-240	1 x 8,4	67	1x200	232 x 208
AKPM 14/20	2000	1400	450	4	2000-300	1 x 16,8	70	1x420	298 x 262
AKPM 14/22	2200	1400	450	5	2000-300	1 x 16,8	72	1x420	298 x 262
AKPM 14/24	2400	1400	450	5	2000-300	1 x 16,8	74	1x420	298 x 262
AKPM 14/26	2600	1400	450	5	2000-300	1 x 16,8	77	1x420	298 x 262
AKPM 14/28	2800	1400	450	5	2000-300	2 x 16,8	78	1x420	298 x 262
AKPM 14/30	3000	1400	450	6	2000-300	2 x 16,8	80	1x420	298 x 262

AKC

Central cubic hood



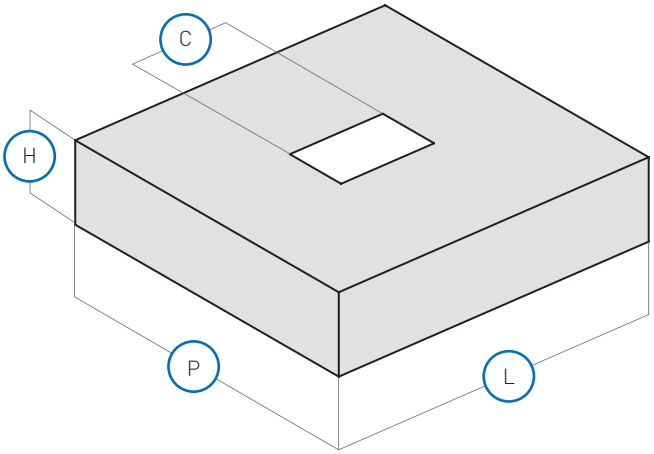
Product AKC

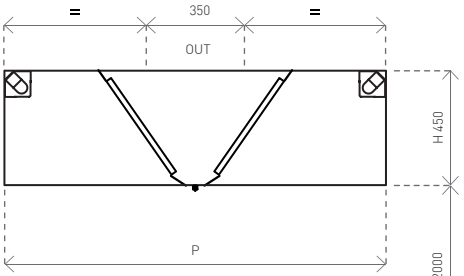
Construction Suitable for installation in kitchen environments where multiple hoods of the same shape are present. The distinctive feature of the cubic series hoods lies in the quality of workmanship and the robustness of the assembly.

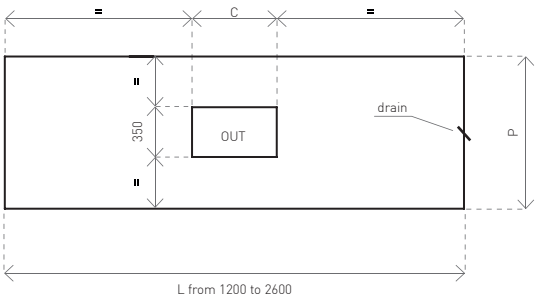
FEATURES

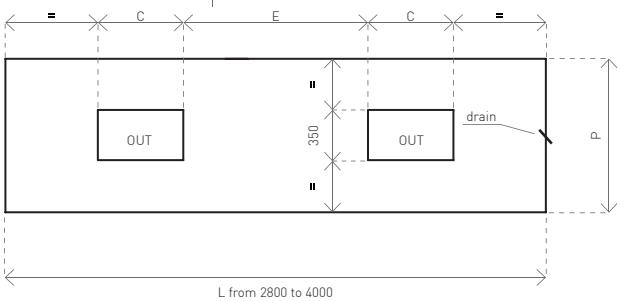
INCLUDED

ON REQUEST









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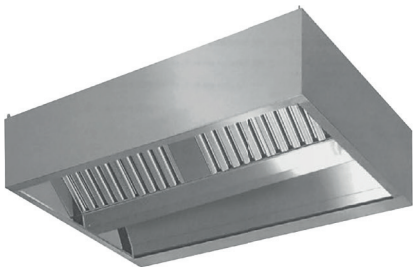
DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
AKC 12/12	1200	1200	450	400	–	4	1600	2 x 8,4	62
AKC 12/14	1400	1200	450	500	–	6	1850	2 x 16,8	66
AKC 12/16	1600	1200	450	500	–	6	2100	2 x 16,8	70
AKC 12/18	1800	1200	450	600	–	8	2350	2 x 16,8	71
AKC 12/20	2000	1200	450	600	–	8	2600	4 x 8,4	72
AKC 12/22	2200	1200	450	700	–	8	2900	4 x 8,4	82
AKC 12/24	2400	1200	450	700	–	8	3150	4 x 8,4	91
AKC 12/26	2600	1200	450	700	–	10	3400	4 x 8,4	95
AKC 12/28	2800	1200	450	400	1000	10	3650	4 x 16,8	99
AKC 12/30	3000	1200	450	400	1100	12	3900	4 x 16,8	102
AKC 12/32	3200	1200	450	500	1100	12	4150	4 x 16,8	106
AKC 12/34	3400	1200	450	600	1100	14	4450	4 x 16,8	111
AKC 12/36	3600	1200	450	600	1200	14	4700	4 x 16,8 / 2 x 8,4	115
AKC 12/38	3800	1200	450	700	1200	16	4950	4 x 16,8 / 2 x 8,4	119
AKC 12/40	4000	1200	450	700	1300	16	5200	4 x 16,8 / 2 x 8,4	122
AKC 15/12	1200	1500	450	400	–	4	1950	2 x 8,4	62
AKC 15/14	1400	1500	450	500	–	6	2300	2 x 16,8	66
AKC 15/16	1600	1500	450	500	–	6	2600	2 x 16,8	70
AKC 15/18	1800	1500	450	600	–	8	2950	2 x 16,8	71
AKC 15/20	2000	1500	450	600	–	8	3250	4 x 8,4	72
AKC 15/22	2200	1500	450	700	–	8	3600	4 x 8,4	82
AKC 15/24	2400	1500	450	700	–	8	3900	4 x 8,4	91
AKC 15/26	2600	1500	450	700	–	10	4250	4 x 8,4	95
AKC 15/28	2800	1500	450	400	1000	10	4550	4 x 16,8	99
AKC 15/30	3000	1500	450	400	1100	12	4900	4 x 16,8	102
AKC 15/32	3200	1500	450	500	1100	12	5200	4 x 16,8	106
AKC 15/34	3400	1500	450	600	1100	14	5550	4 x 16,8	111
AKC 15/36	3600	1500	450	600	1200	14	5850	4 x 16,8 / 2 x 8,4	115
AKC 15/38	3800	1500	450	700	1200	16	6200	4 x 16,8 / 2 x 8,4	119
AKC 15/40	4000	1500	450	700	1300	16	6500	4 x 16,8 / 2 x 8,4	122
AKC 18/16	1600	1800	450	500	–	6	3150	2 x 16,8	74
AKC 18/18	1800	1800	450	600	–	8	3500	2 x 16,8	77
AKC 18/20	2000	1800	450	600	–	8	3900	4 x 8,4	79
AKC 18/22	2200	1800	450	700	–	8	4300	4 x 8,4	87
AKC 18/24	2400	1800	450	700	–	8	4700	4 x 8,4	94
AKC 18/26	2600	1800	450	700	–	10	5100	4 x 8,4	99
AKC 18/28	2800	1800	450	400	1000	10	5450	4 x 16,8	104
AKC 18/30	3000	1800	450	400	1100	12	5850	4 x 16,8	107
AKC 18/32	3200	1800	450	500	1100	12	6250	4 x 16,8	110
AKC 18/34	3400	1800	450	600	1100	14	6650	4 x 16,8	115
AKC 18/36	3600	1800	450	600	1200	14	7000	4 x 16,8 / 2 x 8,4	120
AKC 18/38	3800	1800	450	700	1200	16	7400	4 x 16,8 / 2 x 8,4	124
AKC 18/40	4000	1800	450	700	1300	16	7800	4 x 16,8 / 2 x 8,4	127
AKC 22/16	1600	2200	450	500	–	6	3850	2 x 16,8	81
AKC 22/18	1800	2200	450	600	–	8	4300	2 x 16,8	85
AKC 22/20	2000	2200	450	600	–	8	4800	4 x 8,4	88
AKC 22/22	2200	2200	450	700	–	8	5250	4 x 8,4	92
AKC 22/24	2400	2200	450	700	–	8	5750	4 x 8,4	96
AKC 22/26	2600	2200	450	700	–	10	6200	4 x 8,4	104
AKC 22/28	2800	2200	450	400	1000	10	6700	4 x 16,8	111
AKC 22/30	3000	2200	450	400	1100	12	7150	4 x 16,8	112
AKC 22/32	3200	2200	450	500	1100	12	7650	4 x 16,8	114
AKC 22/34	3400	2200	450	600	1100	14	8100	4 x 16,8	119
AKC 22/36	3600	2200	450	600	1200	14	8600	4 x 16,8 / 2 x 8,4	123
AKC 22/38	3800	2200	450	700	1200	16	9095	4 x 16,8 / 2 x 8,4	128
AKC 22/40	4000	2200	450	700	1300	16	9550	4 x 16,8 / 2 x 8,4	132

AKCM

Central cubic hood with motor



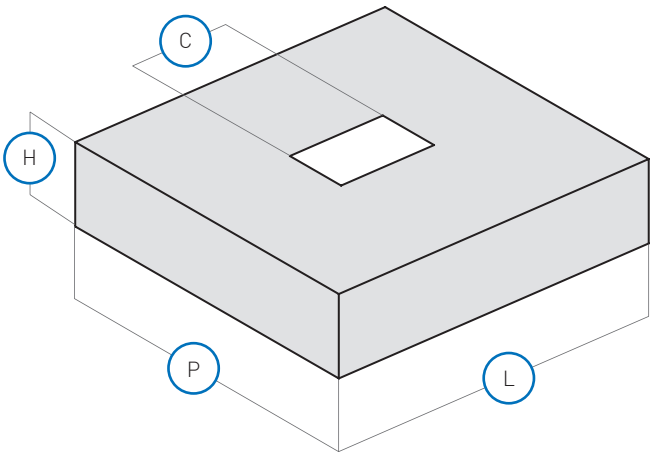
Product AKCM

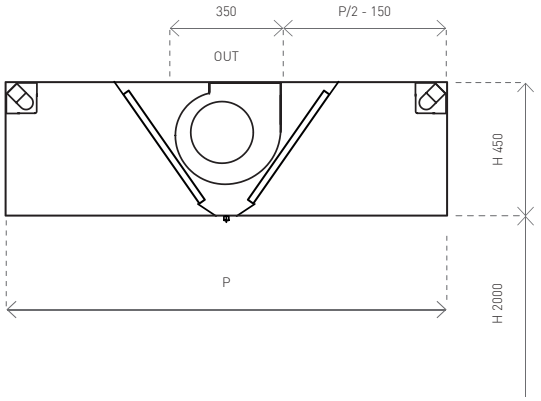
Construction Suitable for installation in kitchen environments where multiple hoods of the same shape are present. The distinctive feature of the cubic series hoods lies in the quality of workmanship and the robustness of the assembly.

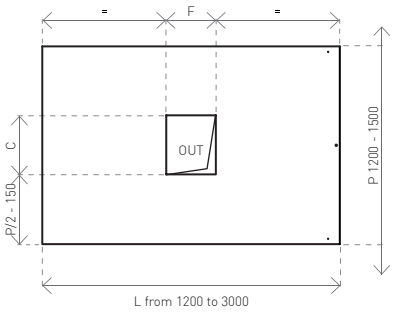
FEATURES

INCLUDED

ON REQUEST







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DIMENSIONS

Model	L mm	P mm	H mm	Filters N°	Max indicative flow Mc/h	Lights W	Wt. Kg	Motor power W	F x C mm
AKCMM 12/12	1200	1200	450	4	1000-240	2 x 8,4	72	1x200	232 x 208
AKCMM 12/14	1400	1200	450	6	1000-240	2 x 16,8	76	1x200	232 x 208
AKCMM 12/16	1600	1200	450	6	1000-240	2 x 16,8	80	1x200	232 x 208
AKCMM 12/18	1800	1200	450	8	2000-300	2 x 16,8	81	1x420	298 x 262
AKCMM 12/20	2000	1200	450	8	2000-300	4 x 8,4	82	1x420	298 x 262
AKCMM 12/22	2200	1200	450	8	2000-300	4 x 8,4	92	1x420	298 x 262
AKCMM 12/24	2400	1200	450	8	2000-300	4 x 8,4	101	1x420	298 x 262
AKCMM 12/26	2600	1200	450	10	2000-300	4 x 8,4	105	1x420	298 x 262
AKCMM 12/28	2800	1200	450	10	2000-300	4 x 16,8	109	1x420	298 x 262
AKCMM 12/30	3000	1200	450	12	2000-300	4 x 16,8	112	1x420	298 x 262
AKCMM 15/12	1200	1500	450	4	1000-240	2 x 8,4	75	1x200	232 x 208
AKCMM 15/14	1400	1500	450	6	1000-240	2 x 16,8	79	1x200	232 x 208
AKCMM 15/16	1600	1500	450	6	1000-240	2 x 16,8	83	1x200	232 x 208
AKCMM 15/18	1800	1500	450	8	2000-300	2 x 16,8	84	1x420	298 x 262
AKCMM 15/20	2000	1500	450	8	2000-300	4 x 8,4	85	1x420	298 x 262
AKCMM 15/22	2200	1500	450	8	2000-300	4 x 8,4	95	1x420	298 x 262
AKCMM 15/24	2400	1500	450	8	2000-300	4 x 8,4	104	1x420	298 x 262
AKCMM 15/26	2600	1500	450	10	2000-300	4 x 8,4	108	1x420	298 x 262
AKCMM 15/28	2800	1500	450	10	2000-300	4 x 16,8	112	1x420	298 x 262
AKCMM 15/30	3000	1500	450	10	2000-300	4 x 16,8	115	1x420	298 x 262

AKPI

Wall-mounted induction hood

Product AKPI

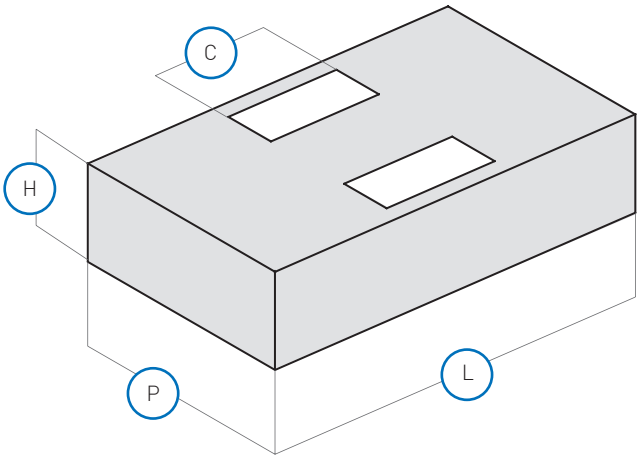
Construction

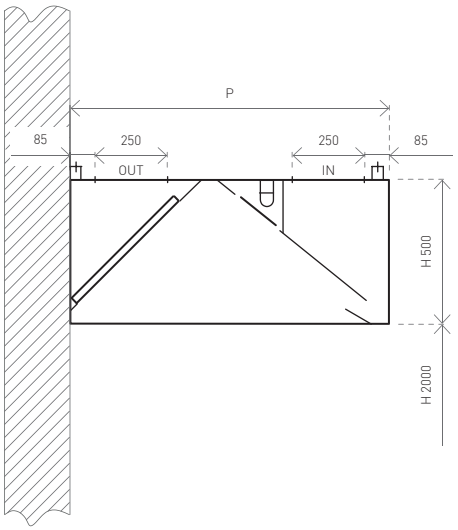
System with partial compensation of extracted air through direct supply inside the hood.
Particularly recommended where the quantities of air to be extracted are substantial. The hood, with its effect, reduces the air intake from adjacent rooms and decreases noise, promoting energy savings.

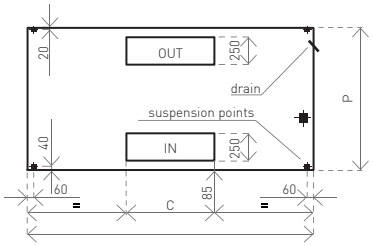
FEATURES

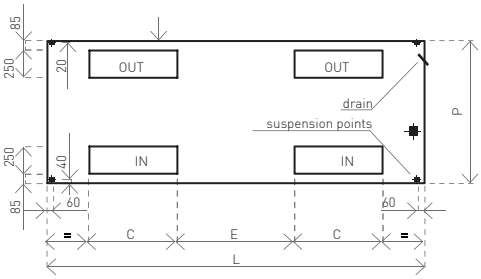
INCLUDED

ON REQUEST









EXTRACTION HOODS

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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
AKPI 11/10	1000	1100	500	250	–	2	1200	1 x 8,4	80
AKPI 11/12	1200	1100	500	400	–	3	1450	1 x 8,4	91
AKPI 11/14	1400	1100	500	500	–	3	1700	1 x 16,8	102
AKPI 11/16	1600	1100	500	500	–	4	1950	1 x 16,8	112
AKPI 11/18	1800	1100	500	600	–	4	2150	1 x 16,8	122
AKPI 11/20	2000	1100	500	600	–	5	2400	2 x 8,4	131
AKPI 11/22	2200	1100	500	700	–	5	2650	2 x 8,4	143
AKPI 11/24	2400	1100	500	700	–	6	2900	2 x 8,4	155
AKPI 11/26	2600	1100	500	700	–	6	3100	2 x 8,4	166
AKPI 11/28	2800	1100	500	400	1000	7	3350	2 x 16,8	177
AKPI 11/30	3000	1100	500	400	1100	7	3600	2 x 16,8	188
AKPI 11/32	3200	1100	500	500	1100	8	3850	2 x 16,8	198
AKPI 11/34	3400	1100	500	600	1100	8	4050	2 x 16,8	209
AKPI 11/36	3600	1100	500	600	1200	9	4300	2 x 16,8 / 1 x 8,4	220
AKPI 11/38	3800	1100	500	700	1200	9	4550	2 x 16,8 / 1 x 8,4	231
AKPI 11/40	4000	1100	500	700	1300	10	4800	2 x 16,8 / 1 x 8,4	241
AKPI 13/10	1000	1300	500	250	–	2	1450	1 x 8,4	83
AKPI 13/12	1200	1300	500	400	–	3	1700	1 x 8,4	94
AKPI 13/14	1400	1300	500	500	–	3	2000	1 x 16,8	105
AKPI 13/16	1600	1300	500	500	–	4	2250	1 x 16,8	115
AKPI 13/18	1800	1300	500	600	–	4	2550	1 x 16,8	125
AKPI 13/20	2000	1300	500	600	–	5	2850	2 x 8,4	134
AKPI 13/22	2200	1300	500	700	–	5	3100	2 x 8,4	146
AKPI 13/24	2400	1300	500	700	–	6	3400	2 x 8,4	158
AKPI 13/26	2600	1300	500	700	–	6	3700	2 x 8,4	169
AKPI 13/28	2800	1300	500	400	1000	7	3950	2 x 16,8	180
AKPI 13/30	3000	1300	500	400	1100	7	4250	2 x 16,8	191
AKPI 13/32	3200	1300	500	500	1100	8	4500	2 x 16,8	201
AKPI 13/34	3400	1300	500	600	1100	8	4800	2 x 16,8	212
AKPI 13/36	3600	1300	500	600	1200	9	5100	2 x 16,8 / 1 x 8,4	223
AKPI 13/38	3800	1300	500	700	1200	9	5350	2 x 16,8 / 1 x 8,4	234
AKPI 13/40	4000	1300	500	700	1300	10	5650	2 x 16,8 / 1 x 8,4	244
AKPI 15/10	1000	1500	500	250	–	2	1650	1 x 8,4	86
AKPI 15/12	1200	1500	500	400	–	3	1950	1 x 8,4	97
AKPI 15/14	1400	1500	500	500	–	3	2300	1 x 16,8	108
AKPI 15/16	1600	1500	500	500	–	4	2600	1 x 16,8	118
AKPI 15/18	1800	1500	500	600	–	4	2950	1 x 16,8	128
AKPI 15/20	2000	1500	500	600	–	5	3250	2 x 8,4	137
AKPI 15/22	2200	1500	500	700	–	5	3600	2 x 8,4	150
AKPI 15/24	2400	1500	500	700	–	6	3900	2 x 8,4	162
AKPI 15/26	2600	1500	500	700	–	6	4250	2 x 8,4	173
AKPI 15/28	2800	1500	500	400	1000	7	4550	2 x 16,8	183
AKPI 15/30	3000	1500	500	400	1100	7	4900	2 x 16,8	194
AKPI 15/32	3200	1500	500	500	1100	8	5200	2 x 16,8	204
AKPI 15/34	3400	1500	500	600	1100	8	5550	2 x 16,8	215
AKPI 15/36	3600	1500	500	600	1200	9	5850	2 x 16,8 / 1 x 8,4	226
AKPI 15/38	3800	1500	500	700	1200	9	6200	2 x 16,8 / 1 x 8,4	237
AKPI 15/40	4000	1500	500	700	1300	10	6200	2 x 16,8 / 1 x 8,4	247

AKCI

Cubic central induction hood

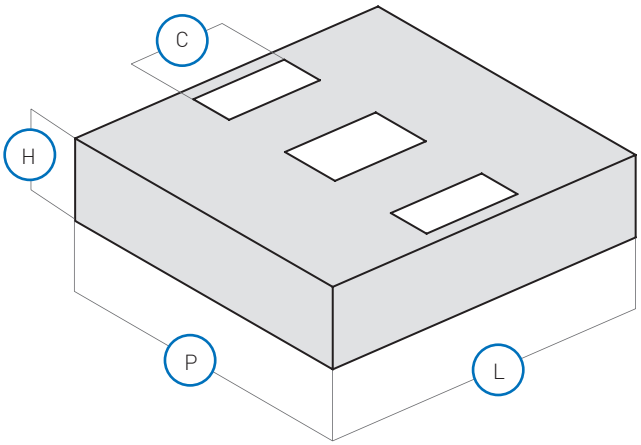
Product AKCI

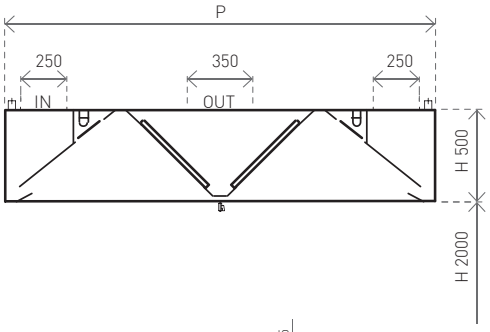
Construction System with partial compensation of extracted air through direct supply inside the hood. Particularly recommended where the quantities of air to be extracted are substantial. The hood, with its effect, reduces the air intake from adjacent rooms and decreases noise, promoting energy savings.

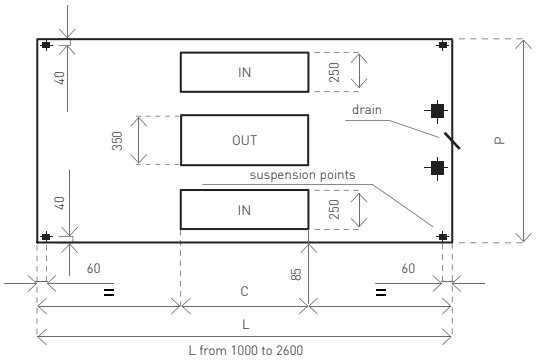
FEATURES

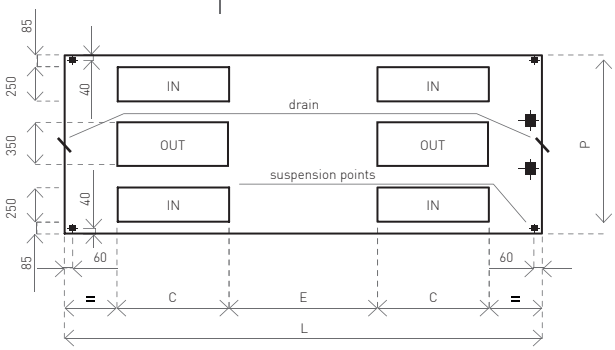
INCLUDED

ON REQUEST









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DIMENSIONS

Model	L	P	H	C	E	Filters	Max indicative flow Mc/h	Lights	Wt.
	mm	mm	mm	mm	mm	N°		W	Kg
AKCI 18/16	1600	1800	500	500	–	8	3150	2 x 16,8	133
AKCI 18/18	1800	1800	500	600	–	8	3500	2 x 16,8	146
AKCI 18/20	2000	1800	500	600	–	10	3900	4 x 8,4	159
AKCI 18/22	2200	1800	500	700	–	10	4300	4 x 8,4	172
AKCI 18/24	2400	1800	500	700	–	12	4700	4 x 8,4	185
AKCI 18/26	2600	1800	500	700	–	12	5100	4 x 8,4	198
AKCI 18/28	2800	1800	500	400	1000	14	5500	4 x 16,8	211
AKCI 18/30	3000	1800	500	400	1100	14	5850	4 x 16,8	224
AKCI 18/32	3200	1800	500	500	1100	16	6250	4 x 16,8	237
AKCI 18/34	3400	1800	500	600	1100	16	6650	4 x 16,8	250
AKCI 18/36	3600	1800	500	600	1200	18	7000	4 x 16,8 / 2 x 8,4	263
AKCI 18/38	3800	1800	500	700	1200	18	7400	4 x 16,8 / 2 x 8,4	276
AKCI 18/40	4000	1800	500	700	1300	20	7800	4 x 16,8 / 2 x 8,4	289
AKCI 22/16	1600	2200	500	500	–	8	3850	2 x 16,8	138
AKCI 22/18	1800	2200	500	600	–	8	4300	2 x 16,8	151
AKCI 22/20	2000	2200	500	600	–	10	4800	4 x 8,4	164
AKCI 22/22	2200	2200	500	700	–	10	5250	4 x 8,4	177
AKCI 22/24	2400	2200	500	700	–	12	5750	4 x 8,4	190
AKCI 22/26	2600	2200	500	700	–	12	6200	4 x 8,4	203
AKCI 22/28	2800	2200	500	400	1000	14	6700	4 x 16,8	216
AKCI 22/30	3000	2200	500	400	1100	14	7150	4 x 16,8	229
AKCI 22/32	3200	2200	500	500	1100	16	7650	4 x 16,8	242
AKCI 22/34	3400	2200	500	600	1100	16	8100	4 x 16,8	255
AKCI 22/36	3600	2200	500	600	1200	18	8600	4 x 16,8 / 2 x 8,4	268
AKCI 22/38	3800	2200	500	700	1200	18	9095	4 x 16,8 / 2 x 8,4	281
AKCI 22/40	4000	2200	500	700	1300	20	9550	4 x 16,8 / 2 x 8,4	294

ACF

Cubic hood for ovens

Product ACF

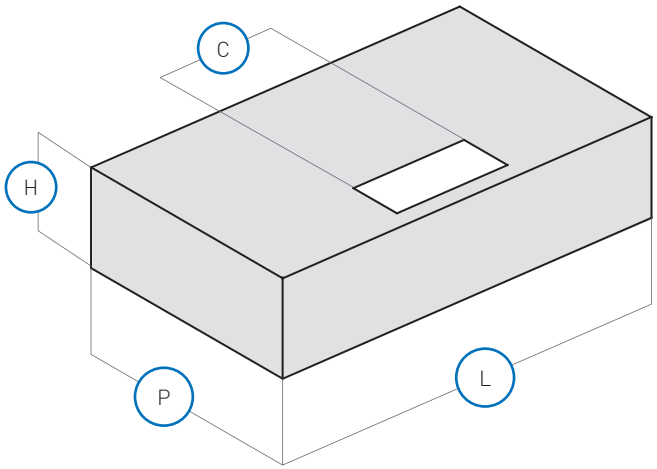
Construction Construction designed for installation on ovens and equipment with high steam production concentrated on the front. Cubic design, combinable with hoods of the same shape.

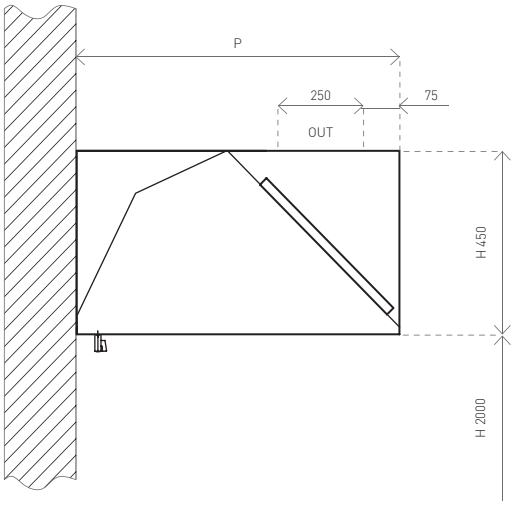
FEATURES

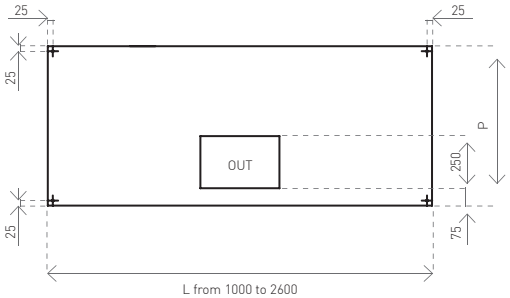
304 SB TIG

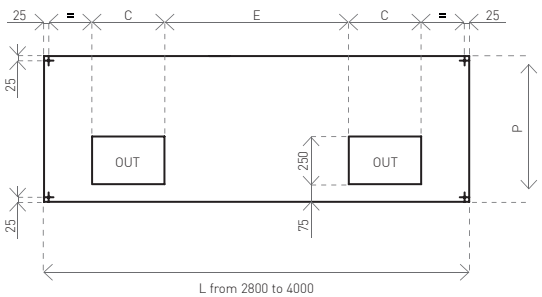
INCLUDED

ON REQUEST









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DIMENSIONS

Model	L mm	P mm	H mm	C mm	E mm	Filters N°	Max indicative flow Mc/h	Wt. Kg
ACF 10/10	1000	1000	450	250	–	2	1100	47
ACF 10/12	1200	1000	450	400	–	2	1300	53
ACF 10/14	1400	1000	450	500	–	2	1550	59
ACF 10/16	1600	1000	450	500	–	3	1750	64
ACF 10/18	1800	1000	450	600	–	3	1950	70
ACF 10/20	2000	1000	450	600	–	4	2200	74
ACF 10/22	2200	1000	450	700	–	4	2400	79
ACF 10/24	2400	1000	450	700	–	5	2600	84
ACF 10/26	2600	1000	450	700	–	5	2850	90
ACF 10/28	2800	1000	450	400	1000	5	3050	95
ACF 10/30	3000	1000	450	400	1100	5	3250	99
ACF 12/10	1000	1200	450	250	–	2	1300	48
ACF 12/12	1200	1200	450	400	–	2	1600	54
ACF 12/14	1400	1200	450	500	–	2	1850	60
ACF 12/16	1600	1200	450	500	–	3	2100	65
ACF 12/18	1800	1200	450	600	–	3	2350	71
ACF 12/20	2000	1200	450	600	–	4	2600	76
ACF 12/22	2200	1200	450	700	–	4	2900	81
ACF 12/24	2400	1200	450	700	–	5	3150	86
ACF 12/26	2600	1200	450	700	–	5	3400	92
ACF 12/28	2800	1200	450	400	1000	5	3650	97
ACF 12/30	3000	1200	450	400	1100	5	3900	102
ACF 14/10	1000	1400	450	250	–	2	1550	50
ACF 14/12	1200	1400	450	400	–	2	1850	56
ACF 14/14	1400	1400	450	500	–	2	2150	62
ACF 14/16	1600	1400	450	500	–	3	2450	68
ACF 14/18	1800	1400	450	600	–	3	2750	74
ACF 14/20	2000	1400	450	600	–	4	3050	80
ACF 14/22	2200	1400	450	700	–	4	3350	86
ACF 14/24	2400	1400	450	700	–	5	3650	91
ACF 14/26	2600	1400	450	700	–	5	3950	97
ACF 14/28	2800	1400	450	400	1000	5	4250	102
ACF 14/30	3000	1400	450	400	1100	5	4550	107

ACL

Cubic hood for dishwashers

Product ACL

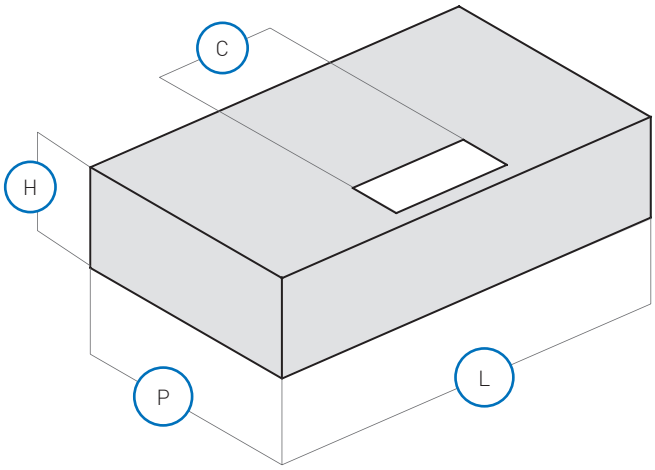
Construction Construction designed for specific installation on dishwashing machines. Laminar extraction concentrated on the front. Cubic design, combinable with hoods of the same shape.

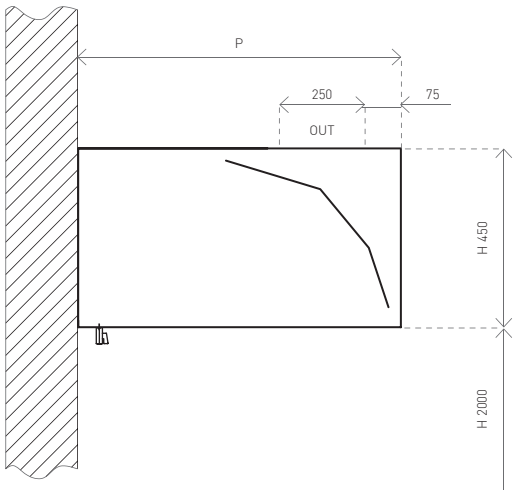
FEATURES

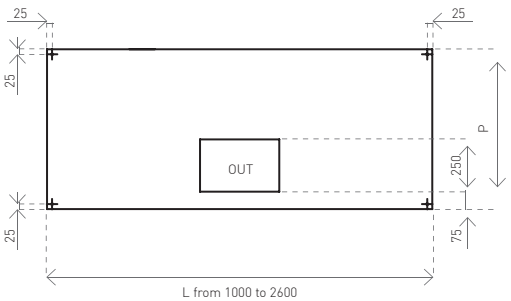
304 SB TIG

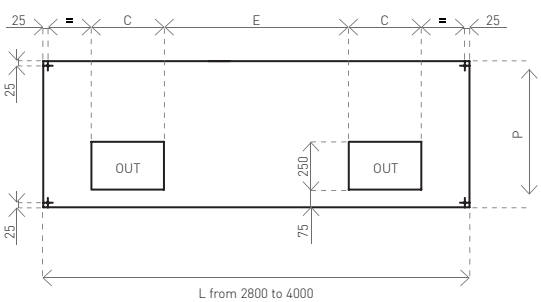
INCLUDED

ON REQUEST









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DIMENSIONS

Model	L mm	P mm	H mm	C mm	E mm	Max flow rate indicative Mc/h	Wt. Kg
ACL 10/10	1000	1000	450	250	–	1100	34
ACL 10/12	1200	1000	450	400	–	1300	39
ACL 10/14	1400	1000	450	500	–	1550	44
ACL 10/16	1600	1000	450	500	–	1750	48
ACL 10/18	1800	1000	450	600	–	1950	51
ACL 10/20	2000	1000	450	600	–	2200	54
ACL 10/22	2200	1000	450	700	–	2400	60
ACL 10/24	2400	1000	450	700	–	2600	65
ACL 10/26	2600	1000	450	700	–	2850	69
ACL 10/28	2800	1000	450	400	1000	3050	73
ACL 10/30	3000	1000	450	400	1100	3250	77
ACL 12/10	1000	1200	450	250	–	1300	39
ACL 12/12	1200	1200	450	400	–	1600	44
ACL 12/14	1400	1200	450	500	–	1850	49
ACL 12/16	1600	1200	450	500	–	2100	53
ACL 12/18	1800	1200	450	600	–	2350	57
ACL 12/20	2000	1200	450	600	–	2600	61
ACL 12/22	2200	1200	450	700	–	2900	66
ACL 12/24	2400	1200	450	700	–	3150	70
ACL 12/26	2600	1200	450	700	–	3400	74
ACL 12/28	2800	1200	450	400	1000	3650	78
ACL 12/30	3000	1200	450	400	1100	3900	82

LEGEND

- AISI 304 labyrinth filter and removable panels
- grease drain
- wiring with flame-retardant cable, free length 1 m
- lighting
- LED protection cover
- perimeter wooden packaging
- wall mounting brackets
- ceiling suspension accessories
- motor speed controller
- made of AISI 304 stainless steel
- Scotch-Brite finish®
- lower channel sealed by welding
- anti-cut folds on contact edges
- assembly by spot welding
- stator fan rotating
- untreated air supply system from the inside
- three-flow system
- washing system
- AISI 304 DIN 18869-5 flame-arresting labyrinth filters
- washing management panel

ACCESSORIES

Ventilation

Comfort and performance
at maximum efficiency
energy

RVIT

Inverter

Product RVIT

Programming

Keypad: Built-in keypad as standard, remote keypad optional.

Display: 7-segment LED display.

PC: OptiTools Studio

RATED INPUT VALUES

Power supply:

- 100-115 V ± 10%
- 200-240 V ± 10%
- 380-480 V ± 10%.

Frequency: 48-62 Hz

Power factor: > 0,98.

Phase imbalance: max. 3%.

Input current: < rated current.

Power cycles: 120 cycles/hour well spaced.

RATED OUTPUT VALUES

Output power:

- 110 V 1 Ph Input: 0.5-1.5 HP (230 V 3 Ph Output)
- 230 V 1 Ph Input: 0,37-4 kW (0,5-5 HP)
- 230 V 3 Ph Input: 0,37-11 kW (0,5-15 HP)
- 400 V 3 Ph Input: 0,75-22 kW
- 460 V 3 Ph Input: 1-30 HP.

Overload capacity:

- 150% for 60 seconds
- 175% for 2.5 seconds.

Output frequency: 0-500 Hz, resolution 0.1 Hz.

Typical efficiency: > 98%.

ENVIRONMENTAL CONDITIONS

Storage temperature: from -40 to +60 °C.

Operating: from -10 to +50 °C.

Altitude:

- from 0 to 1000 m without derating
- up to 2000 m max (UL approval)
- up to 4000 m max (non-UL).

Maximum humidity: 95%, non-condensing.

Vibration: compliant with EN61800-5-1.

TECHNICAL CHARACTERISTICS AND DIMENSIONS

Degree protection	Size	Dimensions (mm)			Wt.	Assembly
		Height	Width	Depth	kg	
IP20	1	173	83	123	1	4 x M5
	2	221	110	150	1,7	4 x M5
	3	261	131	175	3,2	4 x M5
	4	420	171	212	9,1	4 x M8
IP66	1	232	161	179	3,1	4 x M4
	2	257	188	187	4,1	4 x M4
	3	310	210,5	252	7,6	4 x M4

DESIGN STANDARDS

Compliant with the Low Voltage Directive	Speed variation devices, EMC compliance
Compliant with the EMC Directive	2004/108/EC 4
	Cat. C1 according to EN61800-3:200
Compliant with the Machinery Directive	2006/42/EC
Standards compliance	CE, UL, C-Tick
Protection degrees	IP20, IP66

CONTROL SPECIFICATIONS

Control type	Open loop Vector Speed Control
	PM motor Vector Control
	BLDC motor control
	Synchronous reluctance motor control
PWM Frequency	4–32 kHz effective
Stop Mode	Ramp: adjustable from 0.1 to 600 seconds
	Free deceleration
Braking	Motor Flux Braking
	Integrated Braking Unit (not for size 1)
Frequency skip	One selectable point

FIELDBUS

CANopen	125–1000 kbps
Modbus RTU	9.6–115.2 kbps selectable

I/O SPECIFICATIONS

Power supply	100 – 115 V ± 10%
	200 – 240 V ± 10%
	380 – 480 V ± 10%
Programmable inputs	4 total of which: 2 digital, 2 selectable analogue/digital
Digital inputs	8–30 Volt DC, internal or external power supply
	Response time < 4 ms
Analogue inputs	Resolution: 12 bits
	Response time: < 4 ms
	Accuracy: ± 2% full scale
	Scaling and Offset adjustment
Programmable outputs	2 Total of which 1 analogue/digital
Output relay	Maximum voltage: 250 VAC, 30 VDC
	Maximum Current: 6A AC, 5A DC
Analogue outputs	From 0 to 10 Volt

CONTROL CHARACTERISTICS

Fire Mode	Bidirectional
	Speed regulation selection (fixed / PI / Analogue / Fieldbus)
PI Control	Internal PI control
	Standby / Sleep Mode

RVIT

Inverter

MAINTENANCE AND DIAGNOSTICS

Error log	Storage of last 4 alarms
Data log	Alarm storage for Diagnostics
	– Output Current
	– Inverter temperature
	– DC Bus Voltage
Display	Operating hours control

Potentiometer RV0RK

For electronic motors

Product RV0RK

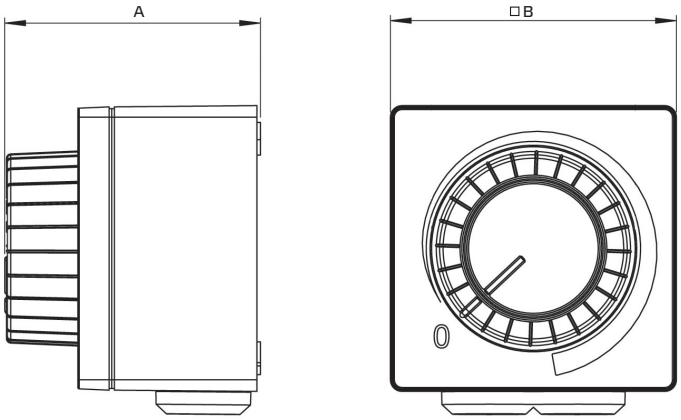
Programming

ENVIRONMENTAL CONDITIONS
RV0RK Potentiometer
Resistance 10 kΩ
Wall or recessed mounting
Max ambient temperature 50 °C
Switching contact: 1A / 250V AC - 2.5A / 12V DC
VDE
Protection class IP 44

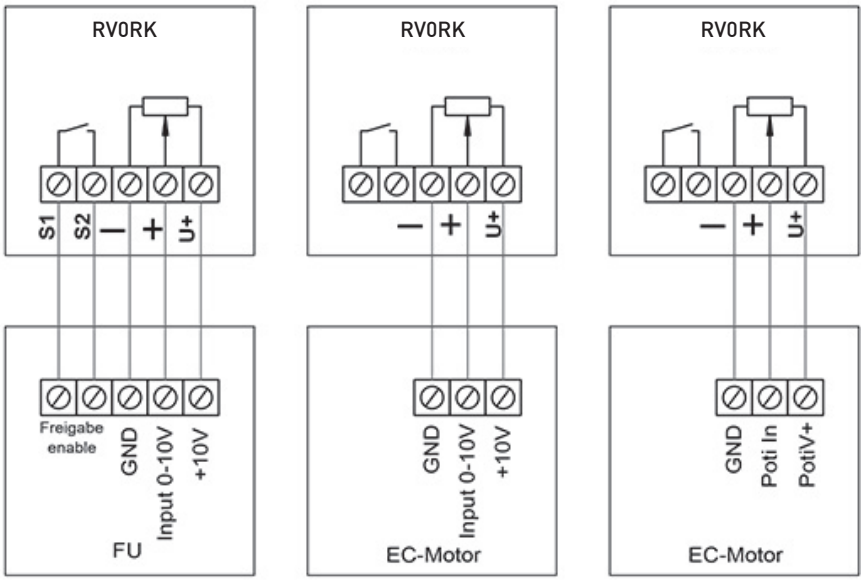
TECHNICAL CHARACTERISTICS AND DIMENSIONS

Type	A mm	B mm	C mm	D mm	Wt. Kg
RV0RK	74	83	66,5	66,5	0,2

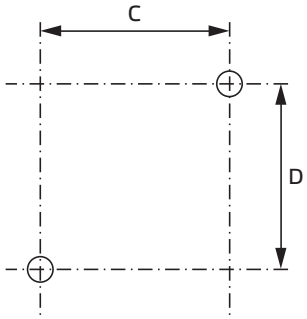
All images are only indicative of the product type and may differ from the actual article.



WIRING DIAGRAM



MOUNTING HOLE DIMENSIONS

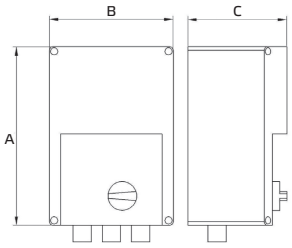


Transformer TEM

For single-phase motors

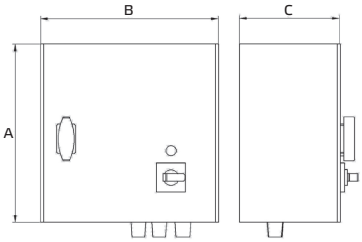
Product TEM 1 Transformer

Detail Plastic housing



Product TEM 2 Transformer

Detail Metal housing



FEATURES
- 230V 50/60 Hz
- With motor protection
- With contact for gas solenoid valve
- Wall mounting
- Maximum ambient temperature 35°C
- Protection class IP 54

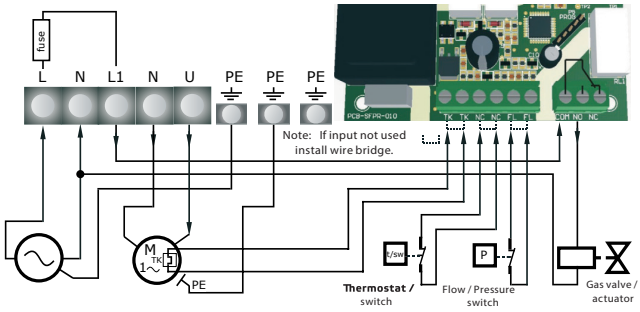
TECHNICAL CHARACTERISTICS AND DIMENSIONS

Type	Imax A	Fuse A	A mm	B mm	C mm	D mm	E mm	Wt. Kg
TEM 035G	3,5	5,0	305	200	140	183	236	5,1
TEM 050G	5,0	8,0	305	200	140	183	236	5,7
TEM 075G	7,5	12,5	305	200	140	183	236	7,9
TEM 100G	10,0	16,0	325	300	185	255	255	12,6
TEM 130G	13,0	18,0	325	300	185	255	255	15,2

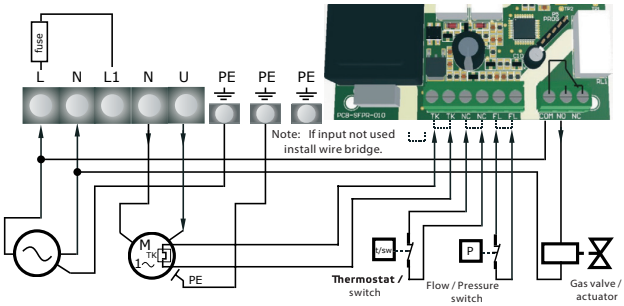
Type	Output voltage U_A V				
	1	2	3	4	5
TEM 035G	110	140	170	200	230
TEM 050G	110	140	170	200	230
TEM 075G	110	140	170	200	230
TEM 100G	110	140	170	200	230
TEM 130G	110	140	170	200	230

WIRING DIAGRAMS

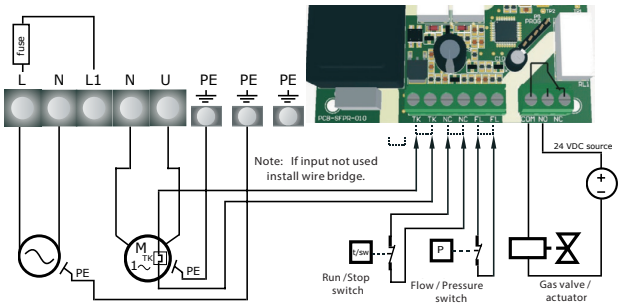
1a.
230 VAC valve/actuator powered from terminals with internal protection fuse



1b.
230 VAC valve/actuator powered from terminals without separate internal protection fuse



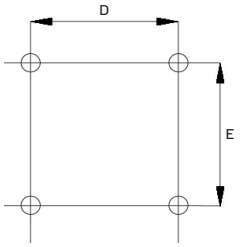
1c.
Valve/actuator powered by an external 24 VDC power supply



WIRING AND CONNECTIONS

L, N	Supply voltage 230VAC ± 10 % - 50 / 60 Hz
PE	Earth terminal
Outputs	
L1, N	Unregulated output, 230 VAC / 2 A
N, U	Regulated output to motor (0 / 110 / 140 / 170 / 200 / 230 VAC ± 5 %)
PE	Earth terminal
COM, NO, NC	Changeover relay contacts, (230 VAC / 2 A)
Inputs	
TK, TK	Thermal contacts
NC, NC	Limit switch contact, normally closed
FL, FL	Cable gland clamping range
Connections	Cable cross-section: depends on the items

MOUNTING



Single-phase speed controller

Product SINGLE-PHASE SPEED CONTROLLER

Protection degree IP54

Switch Two-pole

PRICELIST

Model	Power supply		Max motor power	Fuse for protection	Speed control
	V	Hz	kW	Amp	%
REM 10A	230	50	1,5	10	100-50

C2V - C3V

Speed selector

Product C2V - C3V

Description C2V: 2-line three-phase switch for dual-winding dual-speed motors.
C3V: 3-line single-phase switch for single-phase 3-speed motors

PRICELIST

Model	Description
C2V	2-speed selector
C3V	3-speed selector

Differential pressure switch

Differential pressure gauge for signaling dirty filter

Ventilation
Comfort and performance at maximum efficiency energy

Product DIFFERENTIAL PRESSURE SWITCH
Calibration range 30-500 Pa
Protection degree IP65

PRICELIST

Code	Calibration range Pa
PRST00RECA0020	30-500

Rain guard roof

Rain guard roof for fan casings

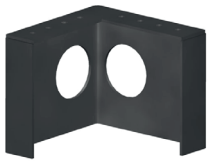
Product RAIN GUARD ROOF

PRICELIST

Fan casing model	Dimensions mm
CADN 1	700 x 700
CADN 2 - CPA 1 - CPA 2	850 x 850
CADN 3 - CPA 3 - CPA 4 - CPR 1	1000 x 1000
CPA 5 - CPA 6 - CPR2 - CPR 3	1350 x 1200

Support feet

Set of 4 support feet



Product SUPPORT FEET

PRICELIST

Model	Height mm
SET OF 4 FEET	100

Anti-vibration joint

Flanged anti-vibration joint

Product FLANGED ANTI-VIBRATION JOINT

PRICELIST

Code	Casing model fan	Impellers	Dimensions mm
DBGA210230	CADN 1 - CPAN 1	7/7	210 x 230
DBGA265230	CADN 2	9/7	265 x 230
DBGA265300	CADN 2 - CPAN 2	9/9	265 x 300
DBGA290270	CADN 2	10/8	290 x 330
DBGA290330	CADN 2 - CPAN 3	10/10	340 x 310
DBGA340310	CADN 3	12/9	390 x 350
DBGA340400	CADN 3 - CPAN 4	12/12	390 x 350
DBGA400470	CPAN 5	15/15	480 x 420
DBGA480560	CPAN 6	18/18	495 x 550

Exhaust connector

Exhaust connector with anti-volatile mesh and 20 mm stamped flange

Ventilation
Comfort and performance at maximum efficiency energy

Product EXHAUST DUCT CONNECTOR

PRICELIST

Code	Casing model fan	Impellers	Dimensions mm
TRCAD100000000	CADN 1 - CPAN 1	7/7	230 x 210
TRCADN20907000	CADN2	9/7	250 x 265
TRCADN20909000	CADN 2 - CPAN 2	9/9	300 x 265
TRCADN21009000	CADN 2	10/8	270 x 290
TRCADN21010000	CADN 2 - CPAN 3	10/10	330 x 290
TRCADN31209000	CADN 3	12/9	310 x 340
TRCADN31212000	CADN 3 - CPAN 4	12/12	400 x 340
TRCPA500000000	CPAN 5	15/15	475 x 405
TRCPA600000000	CPAN 6	18/18	560 x 480

Ductable filter holder connector

Ductable filter holder spigot with 20 mm stamped flange

Product DUCTABLE FILTER HOLDER CONNECTOR

PRICELIST

Code	Fan casing model	Dimensions mm mm	F12 Filter Dimensions mm
DBTR016	CADN 1	440 x 440 x 250	400 x 400 x 48
DBTR026	CADN 2	540 x 540 x 250	500 x 500 x 48
DBTR025	CADN 2 - CPAN 1 - CPAN 2	540 x 540 x 250	500 x 500 x 98
DBTR021	CADN 3 - CPAN 3 - CPAN 4	690 x 690 x 250	592 x 592 x 98
DBTR010	CPAN 5	840 x 840 x 250	(4x) 400 x 400 x 98
DBTR024	CPAN 6	940 x 940 x 250	(4x) 400 x 400 x 98

All images are only indicative of the product type and may differ from the actual article.

Terms of sale

The general terms and conditions of sale indicated below are considered valid and accepted regardless of the clauses and particular conditions specified in the customer's order, unless otherwise agreed by the company in writing.

Price and payment terms

1. Unless otherwise specified, our price lists are purely indicative and may be modified in relation to any increases in labor costs, raw materials and other cost elements that may occur between the date of contract completion and the date of goods shipment.
2. The prices indicated are net of VAT, packaging and transport costs and any other charges, including tax, not expressly borne by contract or by law, TEKNOWOOL AIR.
3. For orders below 150 euros net taxable goods value, payment must be made in cash, cash on delivery or advance bank transfer.
4. All payments shall be made by the customer at the current and future headquarters of TEKNOWOOL AIR, against issuance of invoice or other accounting document.

   The issuance of bank receipts and the release of promissory notes shall not change the place of payment, which shall remain the headquarters of TEKNOWOOL AIR.
5. Late payment entitles TEKNOWOOL AIR, without the need for formal notice of default, to charge the Customer default interest at the conventional rate equal to that of the highest "Prime Rate" applied on the day of actual payment by the regional banks of interest (BIN), increased by 5%. In such case, TEKNOWOOL AIR the right to withdraw from the contract without any compensation by simple notice via registered letter, with the obligation for the customer to immediately return any products already delivered.
6. Set-offs are not permitted. Any deferred payments may not be delayed or suspended even in cases of disputes, complaints or delays of TEKNOWOOL AIR.
7. The company TEKNOWOOL AIR reserves the right to suspend and/or cancel pending orders whenever there are uncertainties regarding the buyer's solvency, unless delivery is made subject to advance payment or the provision of suitable guarantees.

Delivery

8. Delivery, unless otherwise agreed, shall be made ex-works by TEKNOWOOL AIR, packaging excluded. Even in the case of delivery to destination, the delivery is considered completed at TEKNOWOOL AIR.
9. Transport risks are always borne by the customer.
10. Delivery is considered completed from the day following the notice of goods ready for transport.
11. Delivery dates are purely indicative and are not binding. It is the right of TEKNOWOOL AIR postpone delivery without this constituting grounds for contract termination or a source of compensation for damages.
12. We reserve the right to partially fulfill received orders and to proceed with separate invoicing of individual deliveries made.
13. TEKNOWOOL AIR, due to force majeure, including strikes, production plant failures and other causes attributable to third parties, reserves the right to reduce supply quantities, defer the delivery deadline or terminate the contract, without the customer being entitled to any compensation for damages.

Complaints and warranties

14. The buyer must verify within 7 days of delivery the correspondence of the supply to the product ordered. After this period, no complaints may be raised regarding the non-correspondence of the delivered product to what was ordered.
15. All complaints concerning delivered and sold products must be received by TEKNOWOOL AIR, in writing within seven days of delivery, by registered letter with return receipt, under penalty of forfeiture. Complaints may under no circumstances justify late or non-payment. Shortages and damages must be reported to the carrier at the time of delivery.
16. It is expressly agreed that the warranty of the company TEKNOWOOL AIR shall consist of the repair of the supplied product or its possible replacement, services that replace in all respects the warranties provided by law, which are expressly excluded together with the consequent rights to contract termination, damage

compensation or price reduction.

17. TEKNOWOOL AIR warrants its products against manufacturing defects in accordance with the applicable European standard. The warranty is limited to the replacement or repair of products found to be originally defective; the cost of labor, travel and accommodation expenses for any technical staff deployment by TEKNOWOOL AIR, are borne by the customer. Parts to be repaired or replaced shall be sent carriage paid TEKNOWOOL AIR. Parts to be repaired or replaced shall be delivered to the customer carriage forward.
18. TEKNOWOOL AIR reserves the right to modify technical and dimensional data without prior notice.

Competent court

19. The Court of Padova has exclusive jurisdiction over any dispute arising from or connected to this contract.

TEKNOWOOL® AIR
ADVANCED AIR TREATMENT SOLUTIONS

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