





People and technology
The evolution of air conditioning.

Galletti Group: a new approach to the market



A single partner offering diversified competences

The Galletti Group is the brainchild of a small pool of successful managers from the air conditioning industry. Today it is made up of seven different companies which have specific competences in their respective target sectors and operate in close synergism so that they can present themselves as a single partner.

Vision

To become a key partner in the various HRVAC sectors, proposing integrated package of products designed on the basis of the customers' specific requirements, maximizing efficiency and energy savings.

Mission

Design and manufacture, internally at our facilities, products with high quality standards and a high level of reliability, integrating them with high value-added pre-sales and after-sales services. Professionalism and passion are the qualities that have always distinguished our daily work.



Within the Group, it is the company which specializes in comfort applications. It boasts over 100 years of history and today presents itself on the market as a leading manufacturer in the realm of hydronic indoor units, chillers and heat pumps for the residential and tertiary sectors.



A company that proposes solutions with a high technological content, present in the industrial and commercial air conditioning sector with a range of systems for data-processing centres and telecommunications and in the comfort sector with a range of highly customized units.



It has been operating for decades in the field of air handling and offers a wide array of AHUs and heat recuperators for civil and industrial air conditioning.



Service company specialized in energy audits. It is capable of offering complete, all-around packages in terms of services and products in the geothermal, photovoltaic and biomass sectors.



Thanks to its solid know-how in the dehumidification sector, the company is specialized in the production of dehumidifiers combinable with residential radiant systems, industrial dehumidifiers and dehumidifiers for swimming pools.



A company specialized in commercial and industrial refrigeration systems and which offers highly customized units for air conditioning and refrigeration in the transport sector.



Company providing maintenance and technical support services and after-sales support for the products of the various Group companies

Specific competences in every sector

AIR CONDITIONING

COMFORT



AUTONOMOUS RESIDENTIAL



CENTRALIZED RESIDENTIAL



SERVICE SECTOR



RAILWAY AND MARITIME

TECHNICAL



DATA CENTRE



TELECOMMUNICATION SHELTERS



CLEANROOMS

REFRIGERATION



COMMERCIAL FOR REFRIGERATED DISPLAY CASES BT
-18 | -22 °C



COMMERCIAL FOR REFRIGERATED DISPLAY CASES TN
0 | +6 °C

PROCESS



INDUSTRIAL PROCESSES COOLING

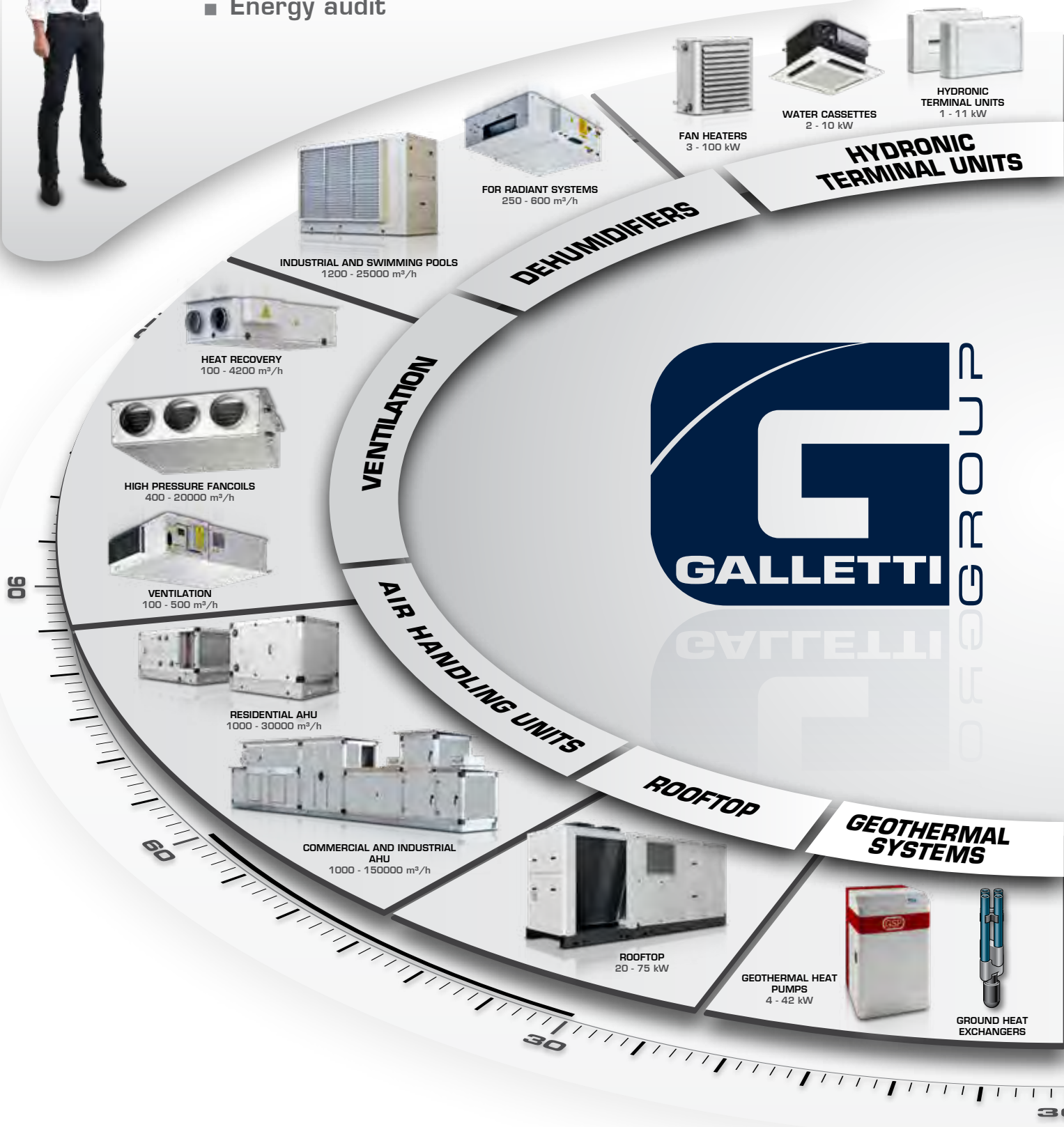


PROCESSES WITH SIMULTANEOUS OPPOSITE THERMAL LOADS



CONSULTING SERVICES:

- System integration with renewable energy sources
- Logic management for system components
- Choice of integrated solution
- Plant design assistance
- Energy audit



GALLETTI

G R O U P

PRODUCT AND SERVICE 360°

AFTER-SALES SERVICES:

- Maintenance
- Spare part management and sales
- Remote control systems
- Plant start-up
- Diagnostics



DATA CENTER AND TELECOM AIR CONDITIONING



CRAC UNITS
3 - 240 kW



RACK COOLERS
3 - 52 kW



AIR CONDITIONERS FOR TELECOM
SHELTERS
4 - 38 kW

COMMERCIAL REFRIGERATION



MULTICOMPRESSOR PLANTS
3 - 300 kW



CONDENSING UNITS
1 - 85 kW

SOFTWARE & HARDWARE



SOFTWARE
AND HARDWARE



ELECTRONIC
CONTROLS

CHILLER AND HEAT PUMPS



AIR-WATER
4 - 1200 kW



CONDENSERLESS UNITS
40 - 480 kW



WATER-WATER
5 - 1400 kW



FREE-COOLING
50 - 1200 kW

AIR-WATER AND WATER-WATER
MULTIPURPOSE UNITS
4 - 420 kW

30

270

300

330

The evolution of air conditioning

1906

Establishment

Ugo Galletti opened a small iron works factory and workshop for repairing agricultural equipment in Castel Maggiore, a town located near Bologna.

1960

The boom years

Galletti ceased being a subcontractor and entered the heating market with its own brand.

1930

Growth

Galletti became an enterprise with more than 100 employees, working sheet metal as a subcontractor.

1970

Fresh air

A new range of products for air conditioning. After the heating sector, Galletti achieved great success in the air-conditioning market with its Polar Warm fan coil unit.



1990

Together

The Galletti Group was founded with the goal of employing specific expertise to cover all the sectors of HVACR (heating, ventilation, air conditioning and refrigeration).

2014

The Group

Today the group comprises of seven companies in the HVACR sector and eight production facilities, with a total of more than 450 employees.



2006

The centennial

The company celebrated its 100th year, and under the leadership of its CEO Luca Galletti, it confirmed its position as a leader in the market for hydronic indoor units and chillers.

Today

New goals.

For more than 30 years Galletti has been specialized in the manufacture of hydronic indoor units, chillers, and heat pumps, with specific expertise whose importance is recognized in the comfort air conditioning sector. The company's extensive experience, gained since the 1970s with more than 2,000,000 fan coil units sold, allows it to meet the new market demands while ensuring the highest level of quality and reliability. A network of qualified agencies, distributors and service centers guarantee support for the entire life of the product.

Three strategic processes

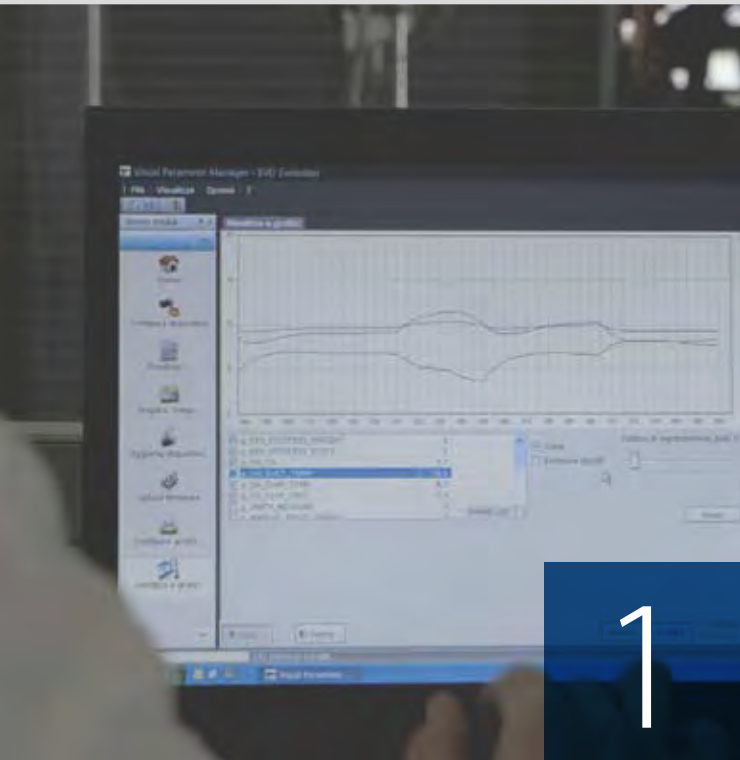
The great strength of Galletti, as well as of all the other Group companies, is that of continuing to maintain internally **the 3 strategic processes** which are the pillars of every new solution.

Research and development

The market requires products that are increasingly on the cutting edge for quality, performance, and energy efficiency. In order to satisfy this demand, Galletti has been relying for decades on a modern in-house R&D department. This department is a vital part of the company; it works in close cooperation with Production and Quality Control to guarantee a product that has been studied in the smallest detail.

The constant desire to improve the product is matched by the need to refine the research and development techniques.

The company possesses a calorimetric chamber for the hydronic indoor units and a climatic chamber for the chillers, and it is one of the few companies in Italy to possess a reverberation chamber for measuring true sound levels.



Design

That which is developed, conceived, and analyzed in the R&D Department then takes shape in the Engineering Department, which handles the mechanical and electrical design of the hydronic indoor units, chillers, and heat pumps.

The Engineering Department's dedicated team handles the development of software and hardware solutions; unlike their competitors, this activity allows the company to make proposals to the market that are open to its customers' requirements.





Vertical production

The automated sheet metal work centre is a cutting-edge production unit made up of a system which integrates an automatic magazine, a robot for bending small parts and punch and bending stations.

This latest generation system represents a clear example of what the concept of “verticalization” means for Galletti: galletti’s important expertise, together with its considerable production flexibility, are the result of not only experience, but also of the ability to internalize strategic processes such as working sheet metal.

To this must be added the management of two other important types of processing: the in-house production of heat exchangers and the in-house development of adjustment hardware and software.

The approach of developing, designing, and producing in-house semi-finished products, components, and finished products strengthens Galletti’s ability to be flexible regarding its customers’ requirements and gives Galletti a large competitive advantage over the other players in the market.

Galletti can boast a unique achievement:
a completely integrated work centre.





Chiller unit and heat pump rentals: an additional service for Galletti customers Galletti

Galletti's comprehensive range of products and services Galletti has been further expanded with a new service that meets the new needs of HVAC professionals.

In recent years there has been strong growth in the use and consequent demand for Chiller unit and Heat Pump RENTALS. This approach was developed to maintain comfort conditions or solve technical problems in specific applications where, due to the limited duration of the required service, the type of system, or the production activity carried out, the traditional purchase of a unit is not the best option.

Being able to quickly replace a unit and thus guarantee continuity of service and being able to air-condition a room for a limited period of time are requirements that prove to be increasingly appreciated year after year.

GallettiGalletti, thanks to its leadership role in the field of air conditioning for the service industry and in the field of refrigeration in the context of processes, is now adding a new chiller unit and heat pump rental service to its already extensive range of products and services.

Thanks to our partnership with a leading national company providing rental solutions for sectors such as trucks, cranes, worksite logistics, and earthmoving, Galletti Galletti offers the most suitable rental units for specific applications, such as:



Hotels and the hospitality industry:

units for handling emergency situations and ensuring guests' comfort



The winemaking industry:

units for covering cooling requirements during the winemaking process that do not normally last beyond 2 months



The large-scale retail sector



Non-permanent trade shows and events:

units for air-conditioning tensile structures, industrial buildings, and facilities that host summer or winter events



Production processes:

units designed for industrial applications that require a temporary solution due to an unexpected breakdown



Greenhouses:

or other needs related to plant cultivation in a controlled environment

The units offered by Galletti Galletti through the rental service represent the state of the art in terms of efficiency, quiet operation, performance, and sturdiness, ensuring that the customer will have a suitable solution providing optimum levels of comfort that meets their needs, including installation and testing of the units carried out by Galletti specialized Galletti technicians and careful checks when the units are returned.

Therefore, professionals in the industry can now easily find quality, reliability, and professionalism – the qualities that have made the Galletti Galletti brand famous worldwide – even using this new rental service.



On-line configuration software

Galletti has developed on its www.galletti.com web-area the new ON-LINE integrated platform for product selection, configuration and the making of the economic offer.

The software, whose use is easy and intuitive, allows the identification of the desired products by calculating their performances based on real working conditions and their configuration helping the user in choosing options and accessories. It also allows to obtain a detailed report which includes performances, dimensional drawings, tender specifications and the economic offer.



Product selection:

- » Filters to make the identification of the requested product easier
- » Performance calculation and saving of results
- » Performance comparison between products belonging to different series



Configuration and project history

- » Wizard configuration of accessories and options for chillers, heat pumps and hydronic units
- » Creation of a project which collects all products of interest
- » Complete management of the storaged history projects



Report:

- » Generation of a detailed list report in pdf format
- » Choice of the sections to be included in the print:
 - Products performances
 - Dimensional drawings
 - Tender specifications



Galletti started out on the road to certification in 1994, the year in which the company entered the Eurovent program for fan coils, later followed by chillers and heat pumps.

The certification process continued up to 2000, when Galletti obtained certification of its quality system to standard UNI EN ISO 9002:1994; it subsequently obtained certification to UNI EN ISO 9001:2000.

A continuous improvement of company processes characterized the years to come, culminating in compliance with Directive 2014 / 68 / UE (PED), the upgrading of its occupational health and safety system according to OHSAS 18001:2007, and, finally in the updating to the new standard UNI EN ISO 9001:2008.

Since 2012 Galletti has been in compliance with European Regulation no. 303/2008 which makes F-GAS certification mandatory for companies that manufacture stationary refrigeration, air conditioning, and heat pump equipment containing fluorinated refrigerant gases. This certification ensures that operators are refrigeration technicians with specific expertise in protecting the environment, such as the reduction of refrigerant gases emissions into the atmosphere.





Galletti has always considered service to be of fundamental importance in order to provide an all-around range of offerings to its customers. For this reason it created GH Service as the Group's specialized service provider.

GH Service is at the customer's disposal from the design stage to the after-sales period; it operates through an extensive network of more than 200 service centres, which provide support to the numerous sales agents and distributors in Italy and around the world.

Galletti after-sales service is equipped and competent to service all types of air conditioning units, whether designed for the comfort or tertiary sectors, for processing machinery or technological environments, air handling units or highly customized units, its primary aim being customer satisfaction.

Continual interaction with all Galletti Group companies enables GH Service to be always up to date about equipment innovations, so it can guarantee its customers not only technologically advanced, high quality products but also a rapid, efficient and professional after-sales service.

The company's internal and outsourced staff are highly qualified, have long-time technical experience and are kept constantly up to date through specific refresher training courses. Its specialized technicians are in possession of all necessary certifications for operating on refrigeration cycle units and are equipped with cutting-edge tools.

GH Service is able to provide its customers various services and opportunities meeting a multitude of demands while providing highly customized services.

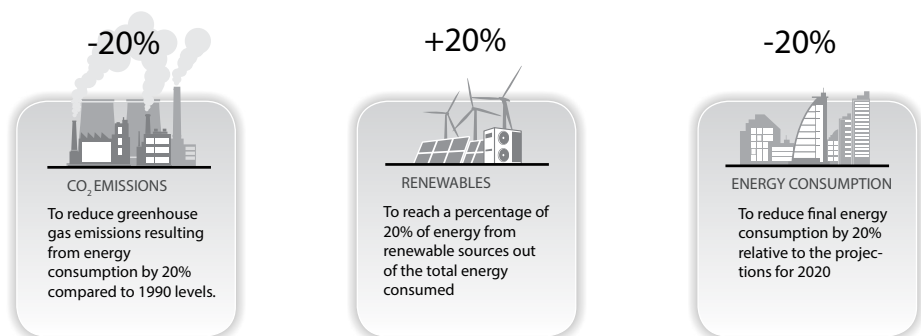
- » System startup
- » Trouble shooting
- » Management and sales of spare parts
- » Routine and special maintenance
- » Telephone customer support systems
- » Assembly of units at worksite
- » Disposal of obsolete units
- » Guaranteed sale of used units
- » All-inclusive rental

In a market where simply selling a product is no longer enough, Galletti, thanks to GH Service, presents itself as a single partner able to provide a comprehensive range of products and services.



Directive 2009/125/EC and 2010/30/CE

The first time horizon the European Union is setting its sights on in respect of climate and energy is 2020: it has identified new binding targets for Member States:



To achieve these goals, the EU has adopted the ErP directive 2009/125/CE (Energy-related Products), which regulates the eco-design requirements for all energy-using products and directive 2010/30 / EC on energy labeling. There are three main European regulations that lay down the rules for the application of Directives 2009/125/EC and 2010/30/EC:

- » 813/2013;
- » 811/2013;
- » 2281/2016.

The seasonal energy efficiency of heating space η_s is calculated as the seasonal efficiency coefficient SCOP divided by the conversion coefficient CC, corrected for the contributions in relation to the temperature controls (F1) and for the water/water heat pump units for the consumption of one or more groundwater pumps (F2).

The coefficient for conversion of electricity into primary energy was considered equal to $CC = 2.5$.

$$\eta_s = SCOP / CC - F(1) - F(2)$$

The calculation for the seasonal energy efficiency of cooling space $\eta_{s,c}$, which derives from SEER seasonal efficiency, is the same.

$$\eta_{s,c} = SEER / CC - F(1) - F(2)$$

Regulation 813/2013 applies to heat pumps with a rated capacity of less than 400 kW. For this range of capacities, minimum requirements for sound power level and seasonal energy efficiency are defined.



Directive 2009/125/EC and 2010/30/CE

The latter index must not be less than the following values:

SCOP ⁽¹⁾	Air-water	Water-water
Combined heat pumps and heat pumps	2,83	2,95
Low temperature heat pumps	3,20	3,33

Regulation 811/2013 applies to heat pumps with a heating capacity of less than 70 kW. Manufacturers are required to highlight the energy label on the unit and to specify the energy efficiency class on all technical and commercial materials.

Regulation 2281/2016 applies to chillers with cooling capacity up to 2000 kW and reversible heat pumps with cooling capacity between 400 and 2000 kW.

For this range of capacities, minimum requirements for seasonal energy efficiency are defined; in fact, since January 1, 2018, the manufacturer cannot place units on the market with SEER values less than the following values:

SEER ⁽¹⁾	Air-water	Water-water
Chiller with $PC < 400$ kW	3,80	5,10
Chiller and reversible heat pumps with $400 \leq PC < 1500$ kW	4,10	5,88
Chiller and reversible heat pumps with $1500 \leq PC < 2000$ kW	4,10	6,33

Scope of Regulations 813/2013 and 2281/2016

	Applied regulation
Chiller with $0 \leq PC < 2000$ kW	2281/2016
Reversible heat pumps with $PC < 400$ kW	813/2013
Reversible heat pumps with $400 \leq PC < 2000$ kW	2281/2016

The ErP directive involves and strongly influences the design of all our products Galletti, further stimulating the continuous pursuit of excellence, in terms of performance and reduction of the environmental impact.

Compliance with the regulation is not a classification of merit or an efficiency class, but rather an indispensable requirement for CE marking, without which the product cannot be placed on the EC market.

(1) Bin profile according to UNI EN 14825



Climatic Chamber

Great precision for great capacities

The climatic chamber at the Bentivoglio Galletti plant represents the company's commitment to invest in the accuracy of its claimed performance, due to the possibility of testing the units under actual operating conditions. The tests can be conducted on either chillers and heat pumps or multi-purpose units and free-cooling units up to a rated cooling capacity of 600 kW, representing a benchmark for R&D Department activities and an important technological milestone for the company.



A cutting-edge system

Thanks to the three independent test circuits and the more than 100 sensors positioned between the testing room and the rest of the system, this chamber is the ideal instrument for monitoring the thermal, electrical, and acoustic performance of the chiller units.

The advanced hydraulic system allows the units' condensation heat to be dissipated with the assistance of three 5000-liter storage systems and a water-water cooling unit manufactured by Galletti connected to a dry cooler. The actual behavior of the system in the heating mode is simulated thanks to the addition of a further storage tank to mitigate the negative effects of the defrosting periods.

Test conditions can vary within a very wide temperature and humidity range (-20 - 55 °C ambient temperature; 20 - 95 % relative humidity), and the unit can be tested by simulating partial-load operation with or without the presence of glycol in the system. The latter can be recycled and used again in subsequent tests.





Climatic chamber

Accuracy of the measurements

The structure of the chamber and all of its components have been designed and selected in order to achieve the best possible measurement accuracy and in accordance with the main reference standards.

The probes used for temperature regulation have class A accuracy, while the sensors used for the measurements on the unit being tested have a degree of accuracy of 1/10 DIN, which is able to keep the measurement error within ± 0.03 °C.

In addition, each test circuit is equipped with different capacity flow meters to guarantee the correct measurement of the flow rate for units of different capacity.

The chamber has an internal volume of about 800 m³, and has been designed to guarantee dimensions and air speeds (< 1.5 m/s) that make it possible to meet the requirements of Standard UNI 9614 for the measurement of noise emissions, while monitoring the ambient air and produced water temperatures.



Viewed tests and performance reports

An automatic system supervision and control software program developed in the LabVIEW environment makes it possible to reach the stability conditions defined by Standards EN 14511 and EN 14825 under the desired test conditions. The acquisition system then begins recording the data, and at the end of the procedure a summary report is prepared that can be sent to the customer by e-mail. The entire test procedure can be viewed on site or remotely using a video camera.

In this manner, a customer that would like to carry out a viewed test can monitor the unit's main operating data under the actual design conditions, such as:

- Power delivered
- Temperature of water produced
- Water pressure drop
- Water flow
- Electricity consumption and time efficiency



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FC - Hydronic indoor units



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FC - HYDRONIC INDOOR UNITS

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Hydraulic indoor units



Vast range with over 1000 options!

It's 1961 and Galletti with its Jolly copper radiating plate enters the air conditioning world! More than half a century has gone by since then, there have been changes in the types of system and their intended use, markets and consumer demands grow and Galletti is still among the leaders in this sector.

The target is to come up with the most comprehensive range of solutions for indoor hydronic units with technologies and designs that, abreast with engineering evolution, have upgraded with the precise intention of combining reliability and innovation.

Today the offerings are completed with fan coil units with centrifugal or tangential fan, hybrid units specifically designed for residential applications, cassette units with axial-centrifugal fan, medium- and high-head ducted units and - in homage to tradition - convection heating models.



Energy savings with inverter-controlled BLDC motors

In the air conditioning sector there is by now a well-established trend toward the offering of solutions that combine performance and low energy consumption.

In line with its objective of continual innovation Galletti offers solutions with brushless motors which guarantee:

- » comfort of use thanks to the complete modulation of the air flow
- » about 50% operating costs saving compared to the conventional motors
- » the temperature setpoint in the air conditioned rooms is reached quickly
- » the power delivered is constantly adjusted according to the actual load conditions
- » exceptionally quiet operation at low speed, as in night-time mode



Quiet operation

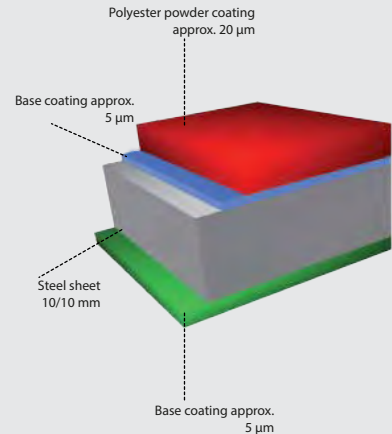
The design of all the ventilation components of Galletti indoor units is developed exclusively by the company's engineering staff, backed by research and development facilities and over 50 years of specific know-how.

More specifically, the most recent studies on materials and aerodynamic profiles have led to the development of special fans and scrolls conceived to ensure performances in terms of quiet operation that are among the best in Europe and Eurovent certified, combined with a correct distribution of air, which assures maximum interior comfort in any operating mode.



Design and materials

On its hydronic indoor units Galletti uses cabinets with an exclusive design, ideal for both residential and commercial settings. The quality of the materials used for their construction assures that they fully retain their characteristics over time. The plastic parts are made of UV-stabilized ABS to maintain their colour intact over time. The steel parts consist of 10/10 mm sheet with a double layer of paint, UV resistance class RUV 3 according to standard EN 10169-2.



Efficient climate control

Galletti offers a wide range of on board or wall mounted controllers comprising more than 20 options according adjustment degree and comfort required. Design and technology are combined in the latest-generation LED or LCD controllers: EVO, LED503 e MYCOMFORT, which represent the state of the art in intelligent control of an indoor unit connected to a chiller or heat pump. Management systems, master/slave options, auto adaptive adjustment of chiller/water pump, control of room humidity are only some of the salient features of qualified and reliable offerings.

Pressure-independent regulating valves (optional)



They can be combined with ON/OFF or MODULATING servomotors, guaranteeing a dynamic balancing of the system and preset regulation (thereby avoiding any calculation required by traditional balancing). They also offer a multitude of advantages, including:

- Efficient energy transfer and minimal pumping costs due to the absence of overflow in partial load conditions as a result of the precise pressure-independent flow control.
- Lower investment in the choice of pumps and reduced energy consumption since the required pressure head is lower than that of traditional configurations. Thanks to integrated piezometric connections, the solution to problems and the pumping optimization process can be achieved more quickly and easily.
- the costly commissioning of the system is no longer required to regulate the flow rate to the indoor units under rated conditions.
- The reduced movements of the modulating actuator, thanks to the integrated differential pressure regulator, guarantee a longer service life of the actuator itself and prevent the ambient temperature from being affected by the system's pressure fluctuations.
- The stability of the ambient temperature makes it possible to achieve a lower average temperature with the same level of comfort.
- Less complaints from system operators, because the flow rate, due to the correct functioning of the valve, never deviates from the design values.
- The installation of balancing valves in the distribution network is no longer required.

AVAILABLE FOR: ESTRO; ESTROi; ESTROgt; DUCTIMAX; DUCTIMAXi; ACQVARIA; UTN; UTNi



JONIX

JONIX Non-Thermal Plasma Generators

JONIX generators are exposed to the air flow, coming into contact with it by means of the outer electrode and the dielectric, transforming the gas into plasma.

Through the action of the electric field created by the generators, the electrons tend to accumulate on the surface of the dielectric, generating micro-discharges in the air, which in turn produce new charged particles.

The dielectric material prevents the development of discharges between the two electrodes that would damage the power supply circuit.

Non-Thermal Plasma (NTP) is considered to be the safest process for oxidizing and breaking down pollutants and for reducing of bacteria, mold, viruses, and odors. Applications in the medical field are growing, with considerable advantages over analogous systems:

- » low power consumption, minimal operating costs
- » in comparison to ozonation systems it is compatible with the presence of the operators
- » in comparison to UV systems its oxidation capacity is not affected by the crossing air flow speed
- » in comparison to systems containing electrostatic filters or photocatalytic filters, the sanitizing effect also takes place at a distance from the plasma source



Galletti's DUCTIMAX, PWN and UTN series ducted units use NTP Jonix technology to sanitize the flowing air, to carry out the microbial decontamination of the internal surfaces of the units, filters, and condensing coils, and to prevent the development of legionella in the condensate collection tanks.

The devices are sized according to their intended use, the air flow rate, and of the category of pollutants to be treated.

They are installed inside special plenums inserted on the air intake or outlet.

Indoor air quality

Air pollution in closed spaces represents a serious public health problem, with significant social and economic implications. Although the pollutants are present in concentrations that do not result in acute effects, they are the cause of negative effects on people's health and well-being, especially if connected with a long exposure period.

The international organizations WHO, Istituto Superiore della Sanità (National Institute of Health), ASHRAE, the Scientific Committee on Health and Environmental Risks (SCHER), and the European Commission in Science and Technology on Indoor Air Quality have stated that it is necessary to reduce the sources of contamination and reduce the concentrations of the pollutants included on the shared European list: Benzene, formaldehyde, carbon monoxide, nitrogen dioxide, naphthalene, volatile organic compounds, toluene, etc.

Operating principle of Non-Thermal Plasma (NTP) technology

The ionization of the air is a natural phenomenon that occurs spontaneously whenever a molecule is subject to the action of an energy process in which the total amount of energy is greater than that of the molecule itself. In practice when we add energy to a molecule, an electron is "removed" from the molecule's outermost orbit, and the resulting electric imbalance causes the molecule (atom) to assume a positive electric charge.

The electron "freed" from the outer orbit immediately attaches to another atom, which then assumes a negative electric charge. Each atom has a well-established probability of becoming a negative and positive atom depending on the saturation of its outer shell. In nature ions are produced by solar radiation; by the friction of the wind on the earth's surface; by storms, rain, and other weather events; by the absorption of cosmic rays; and by the collisions of particles possessing kinetic energy.

NTP technology artificially ionizes the air by means of what is known as "Cold Plasma".

The system is based essentially on the production of ionized gas, rich in highly "active" ionic species, which has a high chemical oxidation power, acting on:

- » proteins and unsaturated lipids of the cell membrane
- » peptidoglycans of the cell wall
- » enzymes, nucleic acids, and spores present in the cytoplasm

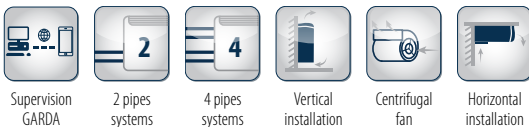


Functions and applications of the JONIX air sanitizing devices with NTP technology

- » Large scale retailing
- » Food processing industrial processes
- » Food preservation
- » Residential comfort
- » Service sector comfort
- Social welfare
- Hospital healthcare

Fan coil units with centrifugal fan

ESTRO 1 - 11 kW



PLUS

- » 3 - 6 speed motor
- » ABS centrifugal fans
- » Can be integrated into GARDA supervision system
- » Heat exchanger up to 4 rows
- » Reversible water connections
- » Steel cabinet / ABS
- » Incorporable ioniser

The most complete range of fan coil units on the market featuring the Galletti technology, quality level and reliability.

The ESTRO series is undoubtedly the line of fan coil units with the most complete range of models and accessories that are able to meet the needs of professionals in the field.

The range consists of 20 models in 9 versions.

For the ESTRO project we selected top quality materials which, together with the great care and attention dedicated to the assembly of the main constructive components, make the ESTRO fan coil units highly reliable from a performance standpoint while minimising noise levels.

The conception underlying the ESTRO series construction makes it possible to combine models for vertical and horizontal installation: models for surface mounting on walls, floors/ceilings and recess mounting in walls/ceilings plus low body model for floor installation.

In its recess-mounted ductable version, ESTRO has a number of accessories that permit quick and economical installation with flexible ducts directly coupled with air diffusion grilles.

ESTRO can be combined with a range of on-board or wall-mounted control panels consisting of 20 options, depending on the level of comfort and adjustment required.

An innovative air ionization system ensures the sanitization of the indoor unit and the deodorization of the ambient air.



AVAILABLE VERSIONS



ESTRO FL

Version with cabinet, suitable for wall mounting. Vertical air flow, filter on the air intake securely attached to the cabinet with quarter-turn screws.

ESTRO FL is available in 20 models.



ESTRO FA

Wall mounted with cabinet. The inclined front air flow makes the ESTRO FA version especially suited for installation in recesses up to a depth of 150 mm.

ESTRO FA is available in 19 models.



ESTRO CL

Wall mounted with cabinet, vertical air flow. Designed with a range of pastel shades, it combines well with traditional furnishings and all architectures in which the warm colours and elegant shapes make ESTRO CL a perfect interior design accessory. Steel sheet panel colour: RAL 9001. ABS parts colour: PANTONE "warm gray 2 U"

ESTRO CL is available in 20 models.



ESTRO FU

Version with cabinet, suitable for floor and ceiling mounting. The cabinet has air outlet grilles and air intake grilles with built-in filter.

ESTRO FU is available in 20 models.



ESTRO FP

Version with cabinet, suitable for ceiling mounting. The air intake is located behind the air outlet grilles. This version is especially suitable if combining with external air intake louvers.

ESTRO FP is available in 20 models.



ESTRO FB

Low-cabinet version, suitable for floor and ceiling mounting. The cabinet has air outlet grilles and air intake grilles with built-in filter. Rearranging the internal components has made it possible to reduce its height to just 438 mm.

ESTRO FB is available in 9 models.



ESTRO FC

Model for vertical and horizontal recess mounting, air intake in line with the outlet, thermally insulated galvanised sheet steel body. Plenum and connectors complete the air intake and the air flow into the room.

ESTRO FC is available in 20 models.



ESTRO FF

Model for vertical and horizontal recess mounting, front air intake, thermally insulated galvanised sheet steel body. The front air intake allows horizontal or floor recessed installation with direct intake from the false-ceiling.

ESTRO FF is available in 20 models.



ESTRO FBC

Low-cabinet version for vertical and horizontal recess mounting, front air intake with air filter, thermally insulated galvanised sheet steel body. Rearranging the strategic components has made it possible to reduce its height to just 412 mm.

ESTRO FBC is available in 9 models.

Hydraulic indoor units ESTRO

MAIN COMPONENTS

Cabinet

Composed of a painted steel sheet panel, side panels, air outlet grille (swinging by 180°) and back suction grille built from ABS.

Round shapes and colours that can satisfy all interior decorating needs, in line with architectural requirements.



Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels. FU, FB, FC, FF and FBC versions have a double drip tray for collecting condensate.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Electric motor

It is mounted on vibration dampers, with permanently activated capacitor and thermal protection of the windings, and is directly coupled with the fans. It is available as either a 3- or 6-speed version in order to meet all the specific needs of performance, quietness, and power consumption.

Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.



Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations. On FU version the air filters are fitted onto the air inlet grille.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11
EF03		L	0	M	0	1	E	0	0	0	0	A

EF Product type ESTRO; 03 Size

To verify the compatibility of the options, use the selection software or the price list.

CONFIGURATOR

1 Version

- A A - Wall mounted with cabinet
- B B - Wall installation with low-body cabinet
- C C - Recessed installation
- F F - Recessed installation
- G BC - Low-body recessed installation
- L L - Wall mounted with cabinet
- O CLASSIC - Wall installation with cabinet
- P P - Ceiling installation with cabinet
- U U - Wall and ceiling installation with cabinet

2 Motor

- 0 3-speed motor
- G Electric fan with GreenTech BLDC motor
- I BLDC motor
- P 6 speed motor

3 Main coil hydraulic side

- L Water connections on the left side
- M Water connections on the left side - 4 rows
- R Water connections on the right
- S Water connections on the right side - 4 rows

4 Additional coil hydraulic side / heating element

- 0 Absent
- E RE - Electrical heating elements
- L Water connections on the left side
- R Water connections on the right

5 Valve

- 0 Absent
- 1 VKS - 3 ways valve - 230 V - ON/OFF - complete hydraulic kit
- 2 KV - 2 ways valve - 230 V - ON/OFF
- 3 VKMS - 3 ways valve - 24 V - MODULATING - complete hydraulic kit
- 4 KVM - 2 ways valve - 24 V - MODULATING
- 5 VKS24 - 3 way valve - 24 V - ON/OFF - complete hydraulic kit
- 6 KV24 - 2 way valve - 24 V - ON/OFF
- A VKSND - 3 way valve - 230 V - ON/OFF - hydraulic kit on coil side
- B VKMSND - 3 ways valve - 24 V - MODULATING - hydraulic kit on coil side
- C VKS24ND - 3 ways valve - 24 V - ON/OFF - hydraulic kit on coil side
- H VPIK - 2-way valve - pressure independent - 230 V - ON/OFF
- I VPIKM - 2-way valve - pressure independent - 24 V - MODULATING

6 Control panel

- 0 Absent
 - 1 CB - On-board speed selector
 - 2 TB - Speed selector and thermostat
 - 3 TIB - Speed selector, thermostat and S/W selecting switch
 - 4 TED 2T - microprocessor control for 2 pipes
 - 5 TED 4T - microprocessor control for 4 pipes
 - 6 TED 10 - microprocessor control for BLDC
 - A MCBE - My comfort base
 - B MCME - My comfort medium
 - C MCLE - My comfort large
 - D LED 503
 - E EVOBOARD - Circuit board
 - F EVO BOARD+EVO DISP - (Circuit board + display)
- ### 7 Probes
- 0 Absent
 - 1 SA - Remote air probe for MYCOMFORT, LED503 and EVO
 - 2 SW - Water probe for MYCOMFORT, LED503 and EVO
 - 3 SU - Humidity probe for MYCOMFORT and EVO
 - 4 SA+SW - Remote air and water probes for MYCOMFORT, LED503 and EVO
 - 6 SA+SU+SW - Remote air, water, humidity probes for MYCOMFORT and EVO
 - A TC - Thermostat for minimum water temperature
 - B SA - Remote air probe for TED
 - C SW - Water probe for TED
 - D SA + SW - Air and water probes for TED

8 Accessories

- 0 Absent
- 4 BV - Auxiliary drip tray
- 5 BH - Auxiliary drip tray
- 6 GIVK - Insulating shell
- B Air deionization
- C Air deionization with control panel

9 Filter

- 0 Standard filter air

10 Release

- 0 0
- A A

CONTROL PANELS

Electromechanical control panels

CB	On-board speed switch
CD	Recess wall-mounted speed switch
TB	On-board speed thermostat and switch
TC	Thermostat for minimum water temperature in heating mode (42 °C)

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
KBESTE	MY COMFORT on-board installation kit for ESTRO
KL	LED503 on-board controller installation kit for ESTRO
LED503	Recessed wall-mounted electronic display controller LED 503

MCBE	MYCOMFORT BASE electronic controller with display
MCLE	Microprocessor control with display MY COMFORT LARGE
MCME	MYCOMFORT MEDIUM electronic controller with display
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

KB A	On-board ESTRO FA installation kit suitable for TED controller
KB L DX	On-board ESTRO FL/FU/FB installation kit on the right side suitable for TED controller
KB L SX	On-board ESTRO FL/FU/FB installation kit on the left side suitable for TED controller
TED 2T	Electronic controller for AC fan control and one ON/OFF 230 V valve
TED 4T	Electronic controller for AC fan control and two ON/OFF 230 V valves
TED SWA	Water temperature sensor for TED controls

ACCESSORIES

Power interface and regulating louver controllers

CSB	On-board controller for opening and closing the motor-driven regulating louver
CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver
KP	Power interface for connecting in parallel up to 4 fan coil units to the one controller

Additional heat exchanger for 4-pipe systems

DF	1-row additional heat exchanger for 4-pipe systems (not suitable for ESTRO "M" models)
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Auxiliary water drip trays, insulating shell, condensate drainage pump

BH	Auxiliary water drip tray for horizontal installation fan coil units
BV	Auxiliary water drip tray for vertical installation fan coil units
GIVKL	Insulating shell for VKS valve, water connections on the left
GIVKR	Insulating shell for VKS valve, water connections on the right
KSC	Condensate drainage pump kit

Base and enclosure elements

D	Support elements for ESTRO FC
ZA	Pair of support covering elements with front grille for ESTRO FA
ZAG	Pair of support covering elements for ESTRO FA
ZC	Pair of support covering elements for ESTRO CL
ZCG	Pair of support covering elements for ESTRO CL
ZL	Pair of support covering elements for ESTRO FL
ZLG	Pair of support covering elements with front grille for ESTRO FL

Rear covering panels

PH	Rear painted panel for horizontal installation with cabinet
PV	Rear painted panel for vertical installation with cabinet

Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
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Air inlet and outlet grilles

GE	Aluminium external air intake grille with subframe
GEF	Aluminium external air intake grille with subframe and air filter
GM	Aluminium air outlet grille with 2-row fins and subframe
RGC	Plenum with circular collars for air outlet grille

Plenum and connectors

RA90	Angular inlet connector
RAD	Straight inlet connector
RADC	Air inlet plenum with circular collars
RM90	Angular outlet connector
RM90C	Angular outlet insulated connector
RMCD	Straight outlet insulated connector
RMCD C	Air outlet plenum with circular collars
RMD	Straight outlet connector

External air intake louvers

S	Manual external air intake louver
SM	Motor-driven louver, with motor on the right with transformer
SM	Motor-driven louver, with motor on the left with transformer
SMC	Motor driven louver, with motor on the right, with transformer
SMC	Motor driven louver, with motor on the left, with transformer
Valves	
KV	2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger
KV24	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger
KV24DF	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
KVDF	2-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
KVM	2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger
KVMDf	2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
VKDF	3-way valve, ON/OFF actuator, 230 V power supply, complete hydraulic kit for additional heat exchanger
VKDF24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
VKDF24ND	3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger
VKDFND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for additional heat exchanger
VKMDf	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
VKMDfND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger
VKMS	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
VKMSND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
VKS	3-way valve, ON/OFF actuator, 1230 V power supply, complete hydraulic kit for main heat exchanger
VKS24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
VKS24ND	3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
VKSND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for main heat exchanger

Hydraulic indoor units ESTRO

2 PIPES - RATED TECHNICAL DATA

ESTRO			1			2			3			4		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	0,75	0,90	1,12	1,02	1,21	1,50	1,24	1,48	1,69	1,34	1,66	1,91
Sensible cooling capacity	(1)(E)	kW	0,57	0,68	0,84	0,77	0,94	1,16	0,93	1,10	1,25	0,98	1,20	1,37
FCEER class	(E)		E											
Water flow	(2)	l/h	129	155	193	176	208	258	214	255	291	231	286	329
Water pressure drop	(2)(E)	kPa	4	5	7	7	9	13	8	11	14	7	10	13
Heating capacity	(3)(E)	kW	0,95	1,11	1,32	1,21	1,48	1,82	1,45	1,72	1,84	1,50	1,81	2,15
FCCOP class	(E)		E											
Water flow	(3)	l/h	164	191	227	208	255	313	250	296	317	258	312	370
Water pressure drop	(3)(E)	kPa	5	6	8	8	11	15	9	12	14	6	9	12
Rated air flow		m ³ /h	127	189	231	167	233	319	210	271	344	214	271	344
Power input	(E)	W	18	21	32	21	28	37	25	36	53	24	36	53
Total sound power level	(4)(E)	dB(A)	30	32	40	37	42	47	38	44	49	40	44	50

ESTRO			4M			5			6			6M		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,48	1,81	2,19	1,57	1,99	2,36	1,73	2,34	2,87	1,90	2,60	3,23
Sensible cooling capacity	(1)(E)	kW	1,04	1,28	1,55	1,15	1,53	1,82	1,23	1,66	2,05	1,30	1,79	2,24
FCEER class	(E)		D			E			D			D		
Water flow	(2)	l/h	255	312	377	270	343	406	298	403	494	327	448	556
Water pressure drop	(2)(E)	kPa	10	14	20	8	12	16	6	9	13	7	12	17
Heating capacity	(3)(E)	kW	1,53	1,88	2,29	1,74	2,26	2,70	1,76	2,37	2,94	1,94	2,68	3,37
FCCOP class	(E)		E											
Water flow	(3)	l/h	263	324	394	300	389	465	303	408	506	334	461	580
Water pressure drop	(3)(E)	kPa	9	12	17	8	12	17	5	8	11	6	10	15
Rated air flow		m ³ /h	211	271	344	267	341	442	293	341	442	241	341	442
Power input	(E)	W	24	36	53	29	44	57	29	43	56	29	43	56
Total sound power level	(4)(E)	dB(A)	41	45	51	35	43	48	36	42	48	35	43	49

ESTRO			7			7M			8			8M		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,94	2,58	3,45	2,44	3,33	4,48	2,47	3,21	4,23	2,74	3,64	4,86
Sensible cooling capacity	(1)(E)	kW	1,41	1,99	2,69	1,69	2,31	3,12	1,76	2,39	3,05	1,90	2,53	3,40
FCEER class	(E)		E			D			D			D		
Water flow	(2)	l/h	334	444	594	420	573	771	425	553	728	472	627	837
Water pressure drop	(2)(E)	kPa	4	7	12	6	11	18	5	8	12	7	12	20
Heating capacity	(3)(E)	kW	2,39	3,13	4,05	2,51	3,40	4,57	2,47	3,24	4,24	2,80	3,70	4,95
FCCOP class	(E)		E											
Water flow	(3)	l/h	412	539	697	432	585	787	425	558	730	482	637	852
Water pressure drop	(3)(E)	kPa	5	8	13	5	9	15	4	6	10	6	10	17
Rated air flow		m ³ /h	331	450	640	320	450	640	420	497	706	361	497	706
Power input	(E)	W	40	50	65	37	61	98	38	61	98	38	61	98
Total sound power level	(4)(E)	dB(A)	35	43	52	36	44	53	35	43	53	36	44	54

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

2 PIPES - RATED TECHNICAL DATA

ESTRO			9			9M			95			10		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	2,95	3,59	4,41	3,47	4,30	5,30	3,37	4,12	5,15	3,88	5,14	6,53
Sensible cooling capacity	(1)(E)	kW	2,27	2,85	3,55	2,42	3,00	3,72	2,29	2,93	3,72	2,75	3,70	4,73
FCEER class	(E)		D			D			D			E		
Water flow	(2)	l/h	508	618	759	598	740	913	580	709	887	668	885	1124
Water pressure drop	(2)(E)	kPa	7	10	14	11	16	24	10	14	21	5	9	12
Heating capacity	(3)(E)	kW	3,31	4,08	4,98	3,53	4,37	5,39	3,52	4,32	5,49	3,97	5,17	6,49
FCCOP class	(E)		E											
Water flow	(3)	l/h	570	703	858	608	753	928	606	744	945	684	890	1118
Water pressure drop	(3)(E)	kPa	7	10	14	10	14	20	8	12	18	4	7	10
Rated air flow		m ³ /h	527	605	785	470	605	785	601	615	814	661	771	1011
Power input	(E)	W	47	68	98	47	68	98	52	73	107	86	127	182
Total sound power level	(4)(E)	dB(A)	43	49	56	44	50	57	44	51	58	47	54	61

ESTRO			10M			11			11M			12		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	4,32	5,69	7,20	4,00	6,07	7,78	4,55	6,81	8,74	6,76	8,53	10,7
Sensible cooling capacity	(1)(E)	kW	2,98	3,93	4,99	2,94	4,46	5,72	3,18	4,78	6,15	4,91	6,22	7,76
FCEER class	(E)		E											
Water flow	(2)	l/h	744	980	1240	689	1045	1340	784	1173	1505	1164	1469	1841
Water pressure drop	(2)(E)	kPa	8	14	21	6	13	20	9	19	29	14	22	32
Heating capacity	(3)(E)	kW	4,28	5,56	6,96	4,39	6,53	8,37	4,75	7,02	9,00	7,45	9,29	12,2
FCCOP class	(E)		E											
Water flow	(3)	l/h	737	957	1199	756	1124	1441	818	1209	1550	1283	1600	2101
Water pressure drop	(3)(E)	kPa	7	11	16	6	12	18	8	16	25	14	20	33
Rated air flow		m ³ /h	570	771	1011	682	1022	1393	642	1022	1393	1154	1317	1850
Power input	(E)	W	86	127	182	109	169	244	109	169	244	210	240	310
Total sound power level	(4)(E)	dB(A)	48	55	62	49	60	67	50	61	68	60	64	71

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 45°C / 40°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

Hydraulic indoor units ESTRO

4 PIPES - RATED TECHNICAL DATA

ESTRO			1			2			3			4		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	0,74	0,88	1,10	0,97	1,11	1,42	1,22	1,44	1,64	1,24	1,52	1,74
Sensible cooling capacity	(1)(E)	kW	0,56	0,67	0,83	0,73	0,87	1,10	0,91	1,07	1,22	0,96	1,18	1,41
FCEER class	(E)		E											
Water flow	(2)	l/h	127	152	189	167	191	245	210	248	282	214	262	300
Water pressure drop	(2)(E)	kPa	4	5	7	6	8	12	8	11	14	7	10	13
Heating capacity	(3)(E)	kW	1,18	1,31	1,49	1,31	1,49	1,66	1,36	1,56	1,76	1,36	1,56	1,76
FCCOP class	(E)		E											
Water flow	(3)	l/h	102	113	128	113	128	143	117	134	152	117	134	152
Water pressure drop	(3)(E)	kPa	2	3	4	3	4	4	4	5	7	4	5	6
Rated air flow		m ³ /h	146	184	226	174	225	307	205	261	330	205	261	327
Power input	(E)	W	18	21	32	21	28	37	25	36	53	24	36	53
Total sound power level	(4)(E)	dB(A)	30	32	40	33	39	45	40	44	49	38	44	50

ESTRO			5			6			7		
Speed			min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,55	1,96	2,32	1,70	2,29	2,81	1,92	2,54	3,36
Sensible cooling capacity	(1)(E)	kW	1,14	1,50	1,79	1,21	1,62	2,01	1,40	1,96	2,61
FCEER class	(E)		E			D			E		
Water flow	(2)	l/h	267	338	400	293	394	484	331	437	579
Water pressure drop	(2)(E)	kPa	8	12	16	5	8	11	4	7	12
Heating capacity	(3)(E)	kW	1,78	2,18	2,53	1,88	2,31	2,68	2,82	3,47	4,20
FCCOP class	(E)		E								
Water flow	(3)	l/h	153	188	218	162	199	231	243	299	362
Water pressure drop	(3)(E)	kPa	2	3	3	2	3	4	8	12	16
Rated air flow		m ³ /h	238	334	432	237	332	431	316	444	628
Power input	(E)	W	29	44	57	29	43	56	37	61	98
Total sound power level	(4)(E)	dB(A)	34	43	48	33	41	47	36	45	53

ESTRO			8			9			95		
Speed			min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	2,44	3,17	4,16	3,06	3,74	4,57	3,49	4,27	5,31
Sensible cooling capacity	(1)(E)	kW	1,74	2,36	2,99	2,23	2,80	3,47	2,38	3,01	3,78
FCEER class	(E)		D								
Water flow	(2)	l/h	420	546	716	527	644	787	601	735	914
Water pressure drop	(2)(E)	kPa	5	7	12	7	10	14	10	14	20
FCCOP class	(3)(E)		E								
Heating capacity	(E)	kW	2,73	3,22	3,82	3,55	4,07	4,64	3,70	4,20	4,84
Water flow	(3)	l/h	235	277	329	306	350	400	319	362	417
Water pressure drop	(3)(E)	kPa	8	10	14	5	6	8	7	9	12
Rated air flow		m ³ /h	356	490	690	460	593	763	478	603	792
Power input	(E)	W	38	61	98	47	68	98	52	73	107
Total sound power level	(4)(E)	dB(A)	39	46	56	48	53	58	46	52	59

ESTRO			10			11			12		
Speed			min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	3,84	5,10	6,46	3,96	5,99	7,64	6,70	8,44	10,5
Sensible cooling capacity	(1)(E)	kW	2,73	3,67	4,67	2,91	4,40	5,61	4,86	6,15	7,63
FCEER class	(E)		E								
Water flow	(2)	l/h	661	878	1112	682	1031	1316	1154	1453	1806
Water pressure drop	(2)(E)	kPa	5	8	12	5	10	16	14	21	30
FCCOP class	(3)(E)		E								
Heating capacity	(E)	kW	5,02	6,02	6,97	4,85	6,29	7,35	6,93	8,01	9,52
Water flow	(3)	l/h	432	518	600	418	542	633	597	690	820
Water pressure drop	(3)(E)	kPa	14	19	24	14	22	29	24	31	42
Rated air flow		m ³ /h	565	765	998	636	1007	1362	999	1300	1814
Power input	(E)	W	86	127	182	109	169	244	210	240	310
Total sound power level	(4)(E)	dB(A)	46	54	60	48	58	66	63	64	71

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

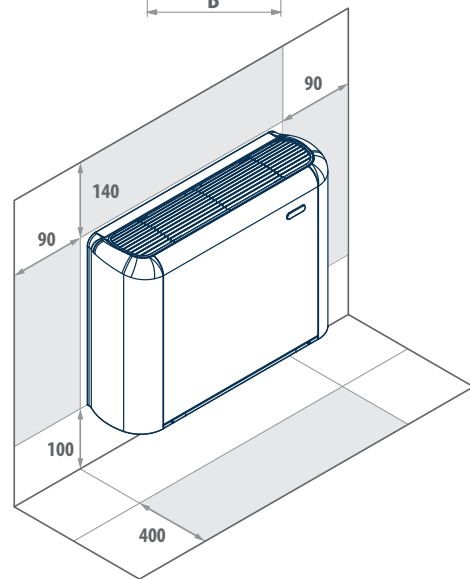
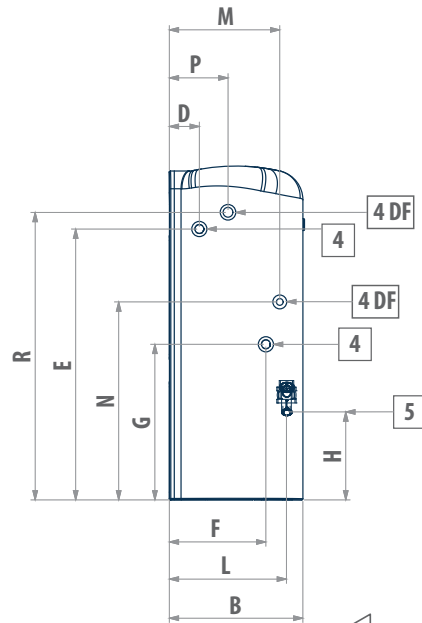
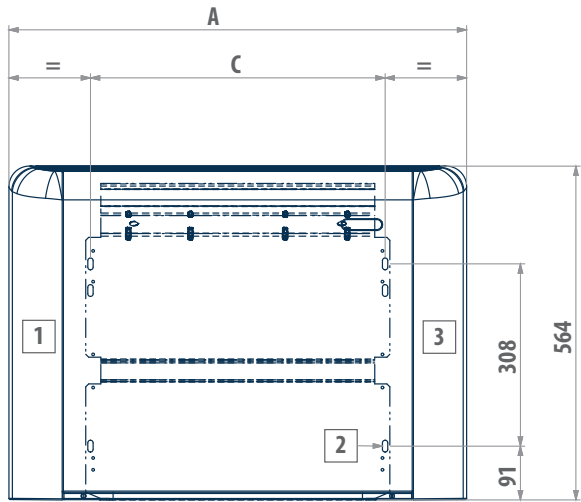
(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

DIMENSIONAL DRAWINGS

ESTRO FL - CL

LEGEND

1	Usable space for plumbing connections
2	Slots for installation on the wall
3	Usable space for electrical connections
4	Standard heat exchanger water connections
4DF	DF 1-row additional heat exchanger water connections
5	Condensate drainage

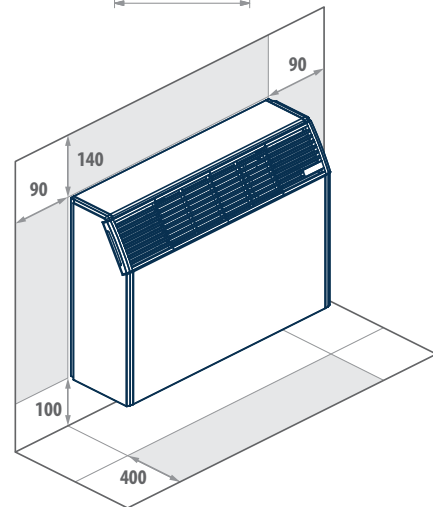
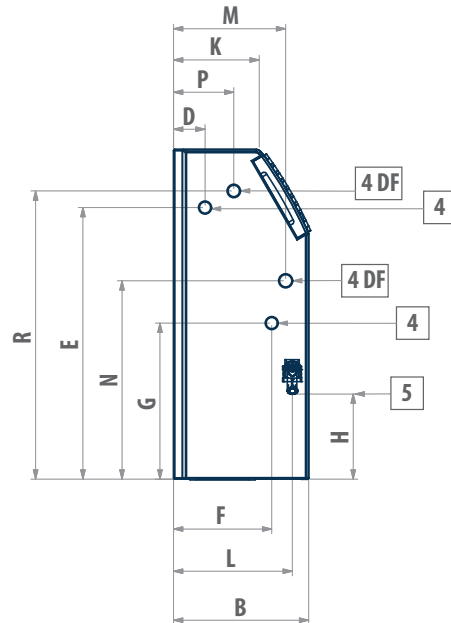
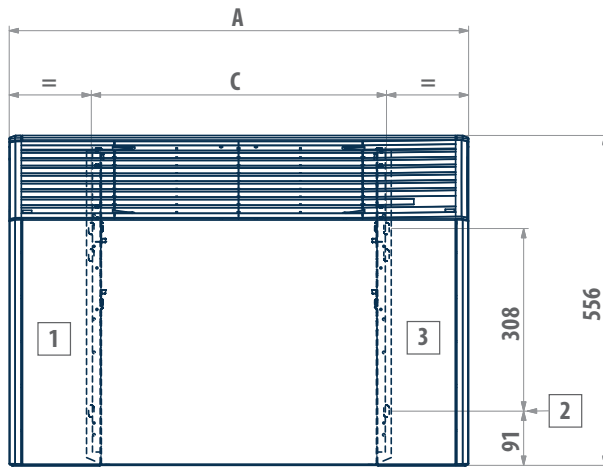
ESTRO	1	2	3	4	4M	5	6	6M	7	7M	8	8M	9	9M	95	10	10M	11	11M	12	
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-
Inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	x	-	-	x	x	-	
GreenTech inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	-	-	

x = available

ESTRO	A	B	C	D	E	F	G	H	L	M	N	P	R	4	4DF	5	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	"	mm	kg
1 - 2 - 3 - 4 - 4M	774	226	498	51	458	163	263	149	198	187	335	99	486	1/2	1/2	16	21
5 - 6 - 6M	984	226	708	51	458	163	263	149	198	187	335	99	486	1/2	1/2	16	27
7 - 7M - 8 - 8M - 9 - 9M	1194	226	918	51	458	163	263	149	198	187	335	99	486	1/2	1/2	16	33
95	1194	251	918	48	497	185	259	155	220	195	348	120	478	3/4	1/2	16	34
10 - 10M - 11 - 11M	1404	251	1128	48	497	185	259	155	220	195	348	120	478	3/4	1/2	16	43
12	1614	251	1338	48	497	185	259	155	220	195	348	120	478	3/4	1/2	16	53

DIMENSIONAL DRAWINGS

ESTRO FA



LEGEND

1	Usable space for plumbing connections
2	Slots for installation on the wall
3	Usable space for electrical connections
4	Standard heat exchanger water connections
4DF	DF 1-row DF additional heat exchanger water connections
5	Condensate drainage

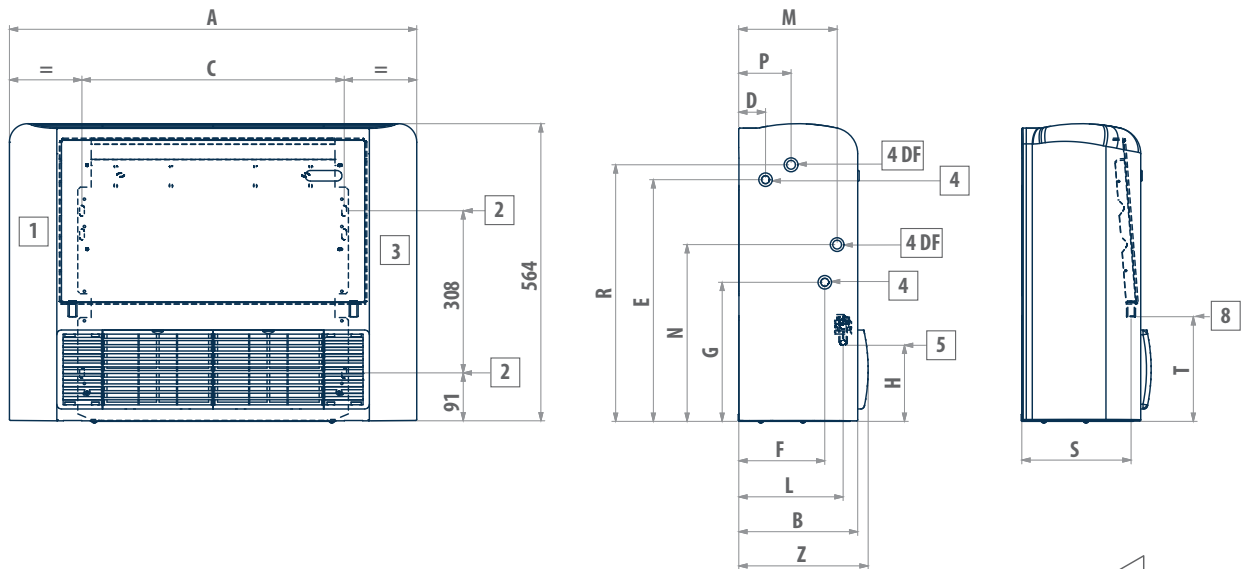
ESTRO FA	1	2	3	4	4M	5	6	6M	7	7M	8	8M	9	9M	10	10M	11	11M	12	
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-
Inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	x	x	-	-
GreenTech inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	-	-

x = available

ESTRO	A	B	C	D	E	F	G	H	K	L	M	N	P	R	4	4DF	5	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	"	mm	kg
1 - 2 - 3 - 4 - 4M	774	228	498	53	458	166	263	149	145	198	187	335	99	486	1/2	1/2	16	22
5 - 6 - 6M	984	228	708	53	458	166	263	149	145	198	187	335	99	486	1/2	1/2	16	26
7 - 7M - 8 - 8M - 9 - 9M	1194	228	918	53	458	166	263	149	145	198	187	335	99	486	1/2	1/2	16	32
10 - 10M - 11 - 11M	1404	253	1128	50	497	188	259	155	170	220	195	348	120	478	3/4	1/2	16	42
12	1614	253	1338	50	497	188	259	155	170	220	195	348	120	478	3/4	1/2	16	50

DIMENSIONAL DRAWINGS

ESTRO FU



LEGEND

1	Usable space for plumbing connections
2	Slots for installation on the wall
3	Usable space for electrical connections
4	Standard heat exchanger water connections
4DF	DF 1-row DF additional heat exchanger water connections
5	Condensate drainage vertical installation
8	Condensate drainage horizontal installation

ESTRO FU	1	2	3	4	4M	5	6	6M	7	7M	8	8M	9	9M	95	10	10M	11	11M	12	
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-
Inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	x	-	-	x	x	-	-
GreenTech inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	-	-	-

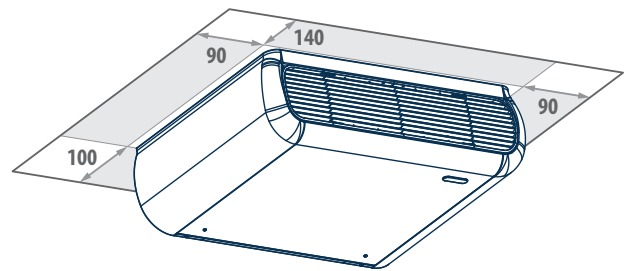
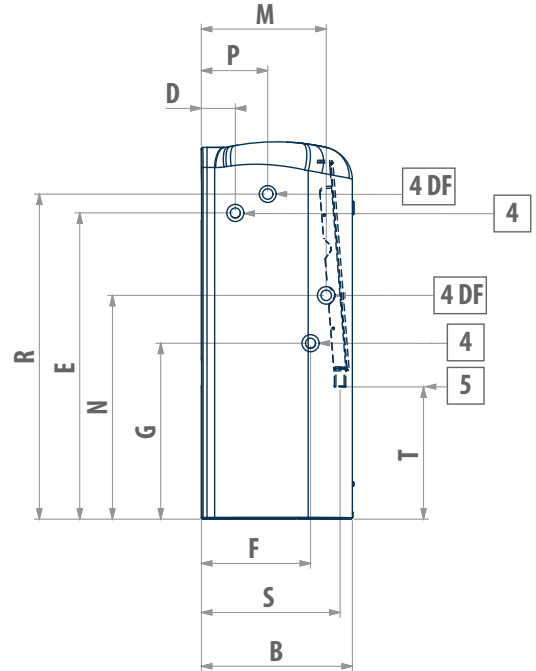
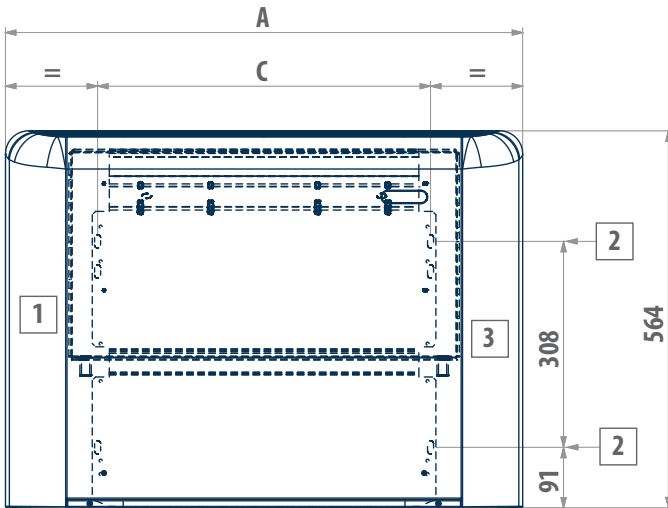
x = available

ESTRO FU	A	B	C	D	E	F	G	H	L	M	N	P	R	S	T	Z	4	
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	kg
1 - 2 - 3 - 4 - 4M	774	226	498	51	458	163	263	149	198	187	335	99	486	208	198	246	1/2	22
5 - 6 - 6M	984	226	708	51	458	163	263	149	198	187	335	99	486	208	198	246	1/2	29
7 - 7M - 8 - 8M - 9 - 9M	1194	226	918	51	458	163	263	149	198	187	335	99	486	208	198	246	1/2	35
95	1194	251	918	48	497	185	259	155	220	195	348	120	478	234	208	271	3/4	36
10 - 10M - 11 - 11M	1404	251	1128	48	497	185	259	155	220	195	348	120	478	234	208	271	3/4	45
12	1614	251	1338	48	497	185	259	155	220	195	348	120	478	234	208	271	3/4	55

Hydraulic indoor units ESTRO

DIMENSIONAL DRAWINGS

ESTRO FP



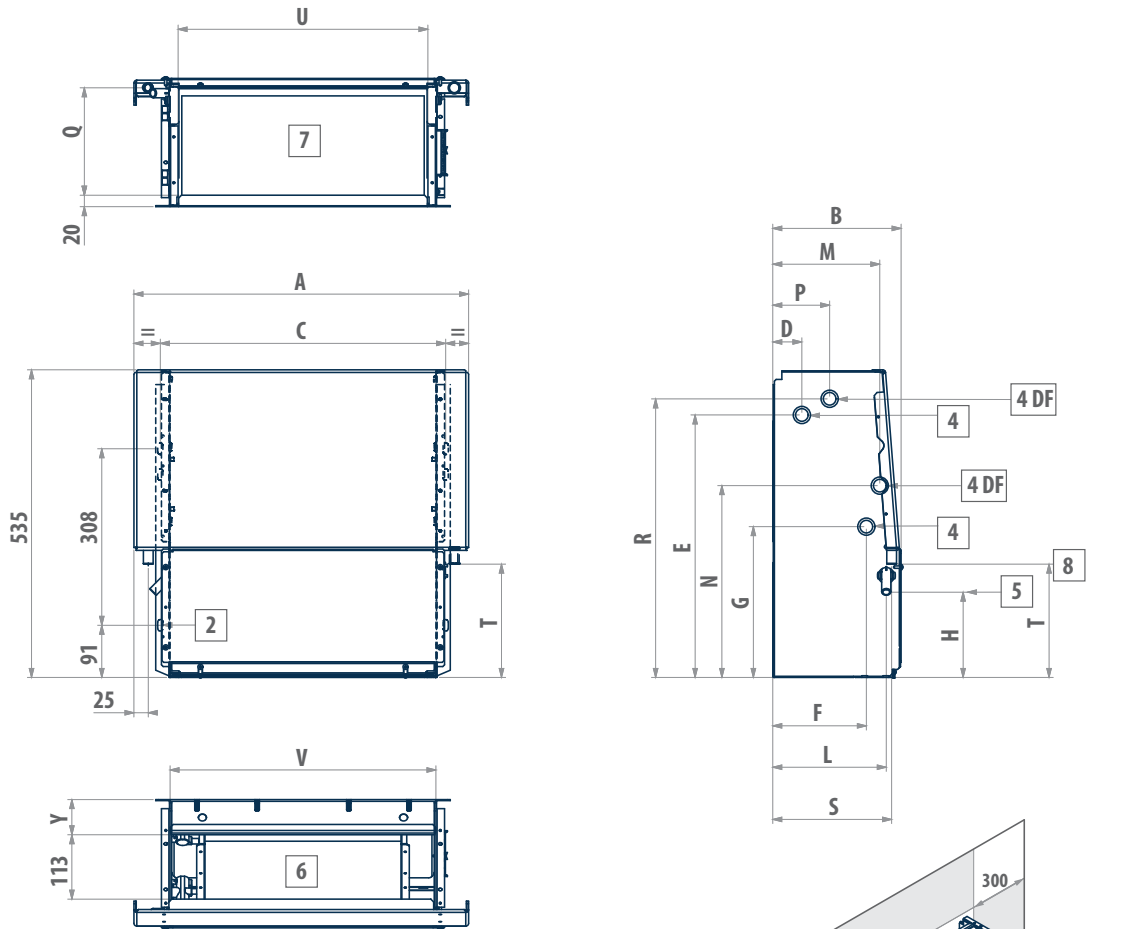
LEGEND

1	Usable space for plumbing connections
2	Slots for installation on the wall
3	Usable space for electrical connections
4	Standard heat exchanger water connections
4DF	DF 1-row DF additional heat exchanger water connections
5	Condensate drainage

ESTRO FP	1	2	3	4	4M	5	6	6M	7	7M	8	8M	9	9M	95	10	10M	11	11M	12	
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-
Inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	x	-	-	x	x	-	-
GreenTech inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	-	-	-

x = available

ESTRO	A	B	C	D	E	F	G	M	N	P	R	S	T	4	4DF	5	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	"	mm	kg
1 - 2 - 3 - 4 - 4M	774	226	498	51	458	163	263	187	335	99	486	208	198	1/2	1/2	16	22
5 - 6 - 6M	984	226	708	51	458	163	263	187	335	99	486	208	198	1/2	1/2	16	29
7 - 7M - 8 - 8M - 9 - 9M	1194	226	918	51	458	163	263	187	335	99	486	208	198	1/2	1/2	16	35
95	1194	251	918	48	497	185	259	195	348	120	478	234	208	3/4	1/2	16	36
10 - 10M - 11 - 11M	1404	251	1128	48	497	185	259	195	348	120	478	234	208	3/4	1/2	16	45
12	1614	251	1338	48	497	185	259	195	348	120	478	234	208	3/4	1/2	16	55

DIMENSIONAL DRAWINGS
ESTRO FC

LEGEND

2	Slots for installation on the wall
4	Standard heat exchanger water connections
4DF	DF 1-row DF additional heat exchanger water connections
5	Condensate drainage vertical installation
6	Air outlet
7	Air intake
8	Condensate drainage horizontal installation

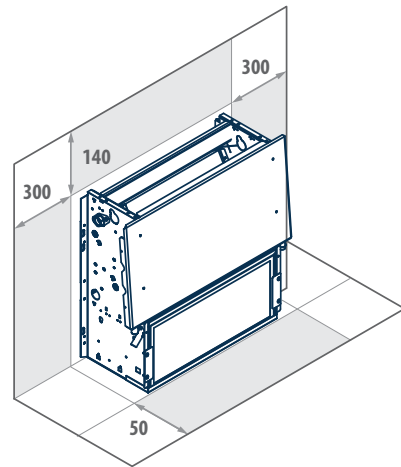
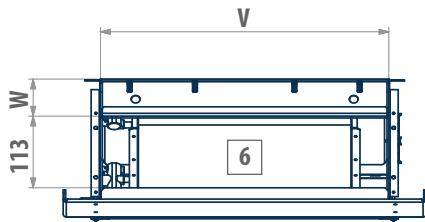
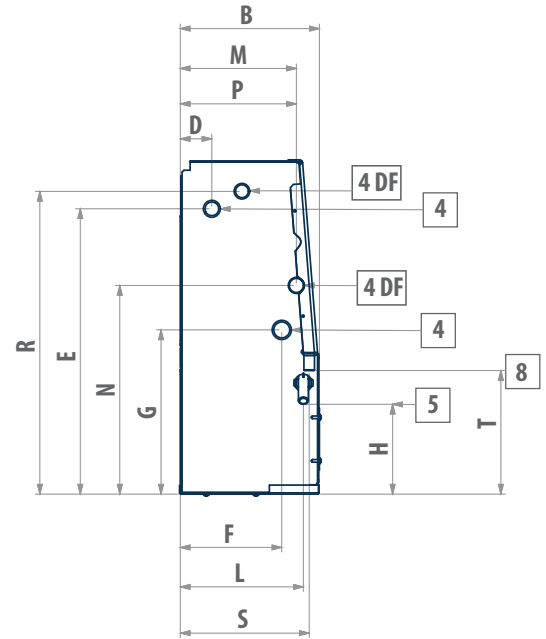
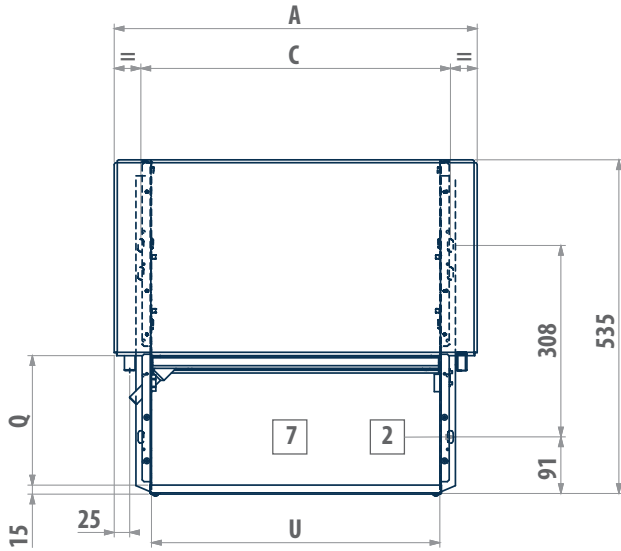
ESTRO FC	1	2	3	4	4M	5	6	6M	7	7M	8	8M	9	9M	95	10	10M	11	11M	12	
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-
Inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	x	-	-	x	x	x	x
GreenTech inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	-	-	x

x = available

ESTRO	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	U	V	Yb	4	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	kg
1 - 2 - 3 - 4 - 4M	584	224	498	51	458	163	263	149	198	187	335	99	189	486	208	198	436	464	61	1/2	18
5 - 6 - 6M	794	224	708	51	458	163	263	149	198	187	335	99	189	486	208	198	646	674	61	1/2	23
7 - 7M - 8 - 8M - 9 - 9M	1004	224	918	51	458	163	263	149	198	187	335	99	189	486	208	198	856	884	61	1/2	27
95	1004	249	918	48	497	185	259	155	220	195	348	120	215	478	234	208	856	884	67	3/4	27
10 - 10M - 11 - 11M	1214	249	1128	48	497	185	259	155	220	195	348	120	215	478	234	208	1066	1094	67	3/4	37
12	1424	249	1338	48	497	185	259	155	220	195	348	120	215	478	234	208	1276	1304	67	3/4	43

DIMENSIONAL DRAWINGS

ESTRO FF



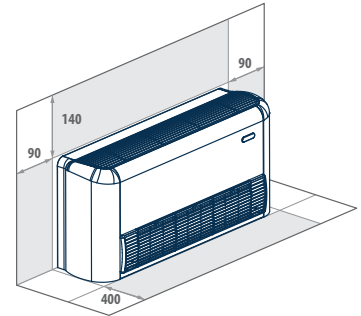
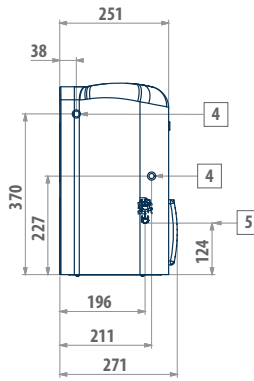
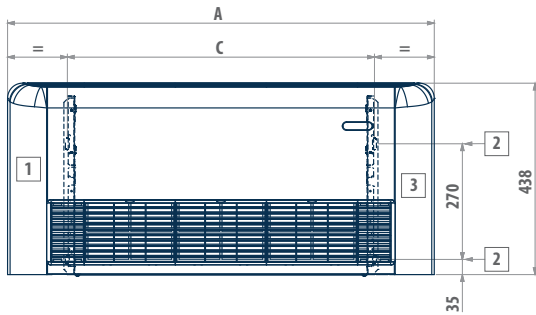
LEGEND

2	Slots for installation on the wall
4	Standard heat exchanger water connections
4DF	DF 1-row DF additional heat exchanger water connections
5	Condensate drainage vertical installation
6	Air outlet
7	Air intake
8	Condensate drainage horizontal installation

ESTRO FF	1	2	3	4	4M	5	6	6M	7	7M	8	8M	9	9M	95	10	10M	11	11M	12	
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x	x	x	x	x	x	x	-	-	-	-	-	-
Inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	x	x	-
GreenTech inverter-controlled motor	x	-	x	x	x	x	x	x	x	-	x	-	x	x	-	-	-	-	-	-	-

x = available

ESTRO	A	B	C	D	E	F	G	H	L	M	N	P	Q	R	S	T	U	V	W	4	kg
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	"	
1 - 2 - 3 - 4 - 4M	584	224	498	51	458	163	263	149	198	187	335	99	189	486	208	198	436	464	61	1/2	18
5 - 6 - 6M	794	224	708	51	458	163	263	149	198	187	335	99	189	486	208	198	646	674	61	1/2	23
7 - 7M - 8 - 8M - 9 - 9M	1004	224	918	51	458	163	263	149	198	187	335	99	189	486	208	198	856	884	61	1/2	27
95	1004	249	918	48	497	185	259	155	220	195	348	120	215	478	234	208	856	884	67	3/4	27
10 - 10M - 11 - 11M	1214	249	1128	48	497	185	259	155	220	195	348	120	215	478	234	208	1066	1094	67	3/4	37
12	1424	249	1338	48	497	185	259	155	220	195	348	120	215	478	234	208	1276	1304	67	3/4	43

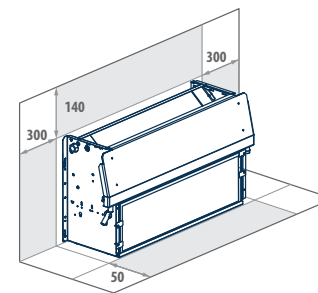
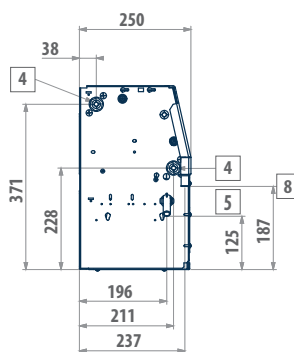
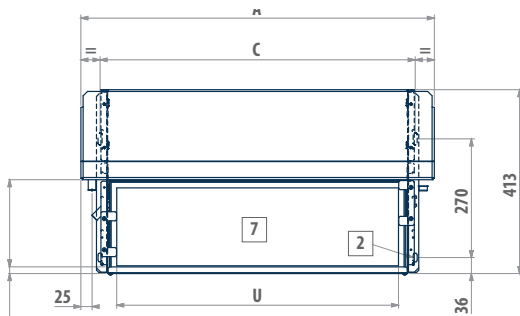
DIMENSIONAL DRAWINGS
ESTRO FB

LEGEND

- | | |
|---|---|
| 1 | Usable space for plumbing connections |
| 2 | Slots for installation on the wall |
| 3 | Usable space for electrical connections |
| 4 | Standard heat exchanger water connections |
| 5 | Condensate drainage |

ESTRO FB	1	2	3	4	5	6	7	8	9
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x
Inverter-controlled motor	x	-	x	x	x	x	x	x	x

x = available

ESTRO	A mm	C mm	4 "	5 mm	 kg
1 - 2 - 3 - 4	774	498	1/2	16	19
5 - 6	984	708	1/2	16	28
7 - 8 - 9	1194	918	1/2	16	29

ESTRO FBC

LEGEND

- | | |
|---|---|
| 2 | Slots for installation on the wall |
| 4 | Standard heat exchanger water connections |
| 5 | Condensate drainage vertical installation |
| 6 | Air outlet |
| 7 | Air intake |
| 8 | Condensate drainage horizontal installation |

ESTRO FBC	1	2	3	4	5	6	7	8	9
ON/OFF motor (3 speed)	x	x	x	x	x	x	x	x	x
ON/OFF motor (6 speed)	x	-	x	x	x	x	x	x	x
Inverter-controlled motor	x	-	x	x	x	x	x	x	x

x = available

ESTRO FBC	A mm	C mm	U mm	V mm	4 "	5 mm	 kg	 kg
1	584	498	423	464	1/2	16	14.5	16
2 - 3 - 4	584	498	423	464	1/2	16	15.5	16
5	794	708	633	674	1/2	16	19	20
6	794	708	633	674	1/2	16	20	20
7 - 8	1004	918	843	884	1/2	16	24	25
9	1004	918	843	884	1/2	16	24.5	25

Fan coil units with centrifugal fan and BLDC motor

ESTRO i 1 - 9 kW



Energy savings and comfort in a single solution

The continual innovation that characterizes the design of ESTRO has resulted in fan assemblies with inverter-controlled permanent magnet BLDC motors.

The use of this type of motor makes it possible to achieve a major reduction in power consumption, better perceived comfort in terms of temperature and humidity. Analyses and verifications have shown a reduction in consumption of no less than 70% with integrated operation compared to traditional AC motors, with a corresponding reduction in CO₂ emissions.

The DC Inverter technology allows to continuously adjust the air flow to the actual needs of the environment by considerably reducing the fluctuations in room temperature that are typical of step-by-step adjustments. The continuous modulation of air flow brings about an adjustment in the delivered heating capacity, so that the interior is brought quickly to the set conditions and the noise levels are exceptionally low while they are being maintained.

ESTRO i fan coil units MYCOMFORT LARGE and EVO microprocessor control panels, which, thanks to the analogue outputs and refined adjustment logics, perfectly control the operation of the BLDC motors and modulating valves.

PLUS

- » Inverter-controlled BLDC motor
- » Low energy consumption
- » Modulating operation
- » Extremely quiet operation
- » Can be integrated with GARDA
- » Heat exchanger up to 4 rows
- » Incorporable ioniser



AVAILABLE VERSIONS

ESTRO FL i	Wall mounted with cabinet
ESTRO FA i	Wall recess mounted with cabinet
ESTRO CL i	Wall mounted with cabinet
ESTRO FU i	Floor and ceiling mounted with cabinet
ESTRO FP i	Ceiling mounted with cabinet
ESTRO FB i	Floor and ceiling mounted with low cabinet

ESTRO FC i	Vertical / horizontal recess mounted with rear air intake
ESTRO FF i	Vertical / horizontal recess mounted with front air intake
ESTRO FBC i	Vertical / horizontal recess mounted with low cabinet and front air intake

MAIN COMPONENTS

Cabinet

Composed of a painted steel sheet panel, side panels, air outlet grille (swinging by 180°) and back suction grille built from ABS.

Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels. FUI – FBi – FCI – FFi and FBCi versions are suitable for either vertical or horizontal installation thanks to the dual condensate collection and drainage system.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.



Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.

BLDC electric motor

Permanent magnet motor The unit is equipped with an inverter board to control the motor, that makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V).



Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations. On FUI and FBi versions the air filters are fitted onto the air inlet grille.

ACCESSORIES

Electronic microprocessor control panels with display

DIST MY COMFORT controller spacer for wall mounting

EVOBOARD Circuit board for EVO control

EVODISP User interface with display for EVO controller

KBE MY COMFORT on-board installation kit

MCLE Microprocessor control with display MY COMFORT LARGE

MCSUE Humidity sensor for MY COMFORT (medium e large), EVO

MCSWE Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

KB A On-board ESTRO FA installation kit suitable for TED controller

KB L DX On-board ESTRO FL/FU/FB installation kit on the right side suitable for TED controller

KB L SX On-board ESTRO FL/FU/FB installation kit on the left side suitable for TED controller

TED 10 Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V

TED SWA Water temperature sensor for TED controls

Power interface and regulating louver controllers

CSB On-board controller for opening and closing the motor-driven regulating louver

CSD Recess mounted controller for opening and closing the SM motor-driven regulating louver

Additional heat exchanger for 4-pipe systems

DF 1-row additional heat exchanger for 4-pipe systems (not suitable for ESTRO "M" models)

Auxiliary water drip trays, insulating shell, condensate drainage pump

BH Auxiliary water drip tray for horizontal installation fan coil units

BV Auxiliary water drip tray for vertical installation fan coil units

GIVKL Insulating shell for VKS valve, water connections on the left

GIVKR Insulating shell for VKS valve, water connections on the right

KSC Condensate drainage pump kit

Base and enclosure elements

ZA Pair of support covering elements with front grille for ESTRO FA

ZAG Pair of support covering elements for ESTRO FA

ZC Pair of support covering elements for ESTRO CL

ZCG Pair of support covering elements for ESTRO CL

ZL Pair of support covering elements for ESTRO FL

ZLG Pair of support covering elements with front grille for ESTRO FL

Rear covering panels

PH Rear painted panel for horizontal installation with cabinet

PV Rear painted panel for vertical installation with cabinet

Air inlet and outlet grilles

GE Aluminium external air intake grille with subframe

GEF Aluminium external air intake grille with subframe and air filter

GM Aluminium air outlet grille with 2-row fins and subframe

RGC Plenum with circular collars for air outlet grille

Plenum and connectors

RA90 Angular inlet connector

RAD Straight inlet connector

RADC Air inlet plenum with circular collars

RM90 Angular outlet connector

RM90C Angular outlet insulated connector

RMCD Straight outlet insulated connector

RMCD C Air outlet plenum with circular collars

RMD Straight outlet connector

External air intake louvers

SM Motor-driven louver, with motor on the right with transformer

SM Motor-driven louver, with motor on the left with transformer

SM Motorized air intake louver

SMC Motor driven louver, with motor on the right, with transformer

SMC Motor driven louver, with motor on the left, with transformer

Valves

KV 2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger

KVM 2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger

2 PIPES - RATED TECHNICAL DATA

ESTRO i			1			3			4			4M		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,90	5,10	6,40	5,10	6,60	8,10	5,10	6,60	8,10	5,20	6,90	8,40
Total cooling capacity	(1)(E)	kW	0,77	0,91	1,14	1,25	1,51	1,72	1,35	1,69	1,94	1,49	1,84	2,22
Sensible cooling capacity	(1)(E)	kW	0,59	0,69	0,86	0,94	1,13	1,28	1,04	1,30	1,49	1,05	1,31	1,58
FCEER class	(E)		B											
Water flow	(2)	l/h	133	157	196	215	260	296	232	291	334	257	317	382
Water pressure drop	(2)(E)	kPa	4	5	7	8	11	14	7	10	13	10	14	20
Heating capacity	(3)(E)	kW	0,95	1,11	1,32	1,45	1,72	1,84	1,50	1,81	2,15	1,53	1,88	2,29
FCCOP class	(E)		C			B			B			C		
Water flow	(3)	l/h	164	191	227	250	296	317	258	312	370	263	324	394
Water pressure drop	(3)(E)	kPa	5	6	8	9	12	14	6	9	12	9	12	17
Rated air flow		m ³ /h	149	189	231	211	271	344	211	271	344	211	271	344
Power input	(E)	W	6	8	9	7	9	19	7	9	19	9	12	24
Total sound power level	(4)(E)	dB(A)	30	32	40	38	44	49	40	44	50	41	45	51

ESTRO i			5			6			6M			7		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,70	5,50	7,20	3,70	5,50	7,20	3,80	5,00	7,30	3,60	5,30	7,80
Total cooling capacity	(1)(E)	kW	1,59	2,02	2,40	1,75	2,37	2,91	1,92	2,63	3,27	1,97	2,62	3,49
Sensible cooling capacity	(1)(E)	kW	1,17	1,56	1,86	1,25	1,69	2,09	1,32	1,82	2,28	1,44	2,03	2,73
FCEER class	(E)		A			A			A			C		
Water flow	(2)	l/h	274	348	413	301	408	501	331	453	563	339	451	601
Water pressure drop	(2)(E)	kPa	8	12	16	5	8	11	7	12	17	4	7	12
Heating capacity	(3)(E)	kW	1,74	2,26	2,70	1,76	2,37	2,94	1,74	2,41	3,03	2,39	3,13	4,05
FCCOP class	(E)		A			A			B			C		
Water flow	(3)	l/h	300	389	465	303	408	506	300	415	522	412	539	697
Water pressure drop	(3)(E)	kPa	8	12	17	5	8	11	6	10	15	5	8	13
Rated air flow		m ³ /h	241	341	442	241	341	442	241	341	442	320	450	640
Power input	(E)	W	6	8	16	6	8	16	6	8	16	10	17	34
Total sound power level	(4)(E)	dB(A)	35	43	48	36	42	48	35	43	49	35	46	52

ESTRO i			8			9			9M			95		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,10	5,90	8,80	5,00	6,50	8,70	5,00	6,70	8,90	4,60	6,00	8,10
Total cooling capacity	(1)(E)	kW	2,50	3,26	4,30	2,99	3,64	4,48	3,51	4,35	5,37	3,41	4,17	5,22
Sensible cooling capacity	(1)(E)	kW	1,79	2,44	3,12	2,31	2,90	3,62	2,46	3,05	3,79	2,47	3,11	3,95
FCEER class	(E)		A			B			A			A		
Water flow	(2)	l/h	430	561	740	515	627	771	604	749	925	587	718	899
Water pressure drop	(2)(E)	kPa	5	8	12	7	10	14	11	16	24	10	14	21
Heating capacity	(3)(E)	kW	2,47	3,24	4,24	3,36	4,11	4,88	3,53	4,37	5,39	3,52	4,32	5,49
FCCOP class	(E)		B											
Water flow	(3)	l/h	425	558	730	579	708	840	608	753	928	606	744	945
Water pressure drop	(3)(E)	kPa	4	6	10	7	9	13	10	14	20	8	12	18
Rated air flow		m ³ /h	361	497	706	470	605	785	470	605	785	488	615	814
Power input	(E)	W	10	13	27	15	20	41	17	23	47	13	16	37
Total sound power level	(4)(E)	dB(A)	35	43	53	43	49	56	44	50	57	44	51	58

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 45°C / 40°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the ESTRO i inverter units are the same of the ESTRO ON/OFF version. They are reported from page 35

2 PIPES - RATED TECHNICAL DATA

ESTRO i			11			11M		
Speed			min	med	max	min	med	max
Control voltage	(E)	V	3,60	6,10	8,40	3,60	6,20	8,60
Total cooling capacity	(1)(E)	kW	4,11	6,24	8,02	4,65	6,94	8,89
Sensible cooling capacity	(1)(E)	kW	3,05	4,63	5,96	3,28	4,91	6,30
FCEER class	(E)		B			A		
Water flow	(2)	l/h	708	1075	1381	801	1195	1531
Water pressure drop	(2)(E)	kPa	6	13	20	9	19	29
Heating capacity	(3)(E)	kW	4,39	6,53	8,37	4,75	7,02	9,00
FCCOP class	(E)		B					
Water flow	(3)	l/h	756	1124	1441	818	1209	1550
Water pressure drop	(3)(E)	kPa	6	12	18	8	16	25
Rated air flow		m ³ /h	642	1022	1393	642	1022	1393
Power input	(E)	W	17	50	114	13	38	87
Total sound power level	(4)(E)	dB(A)	49	60	67	50	61	68

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the ESTRO i inverter units are the same of the ESTRO ON/OFF version. They are reported from page 35

4 PIPES - RATED TECHNICAL DATA

ESTRO i			1			3			4			5		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,90	5,10	6,40	5,10	6,60	8,10	5,10	6,60	8,10	3,70	5,50	7,20
Total cooling capacity	(1)(E)	kW	0,75	0,89	1,12	1,23	1,47	1,67	1,25	1,55	1,77	1,57	1,99	2,37
Sensible cooling capacity	(1)(E)	kW	0,57	0,68	0,85	0,92	1,10	1,25	0,97	1,21	1,44	1,16	1,53	1,84
FCEER class	(E)		C			B			B			A		
Water flow	(2)	l/h	129	153	193	212	253	288	215	267	305	270	343	408
Water pressure drop	(2)(E)	kPa	4	5	7	8	11	14	7	10	13	8	12	16
Heating capacity	(3)(E)	kW	1,18	1,31	1,49	1,36	1,56	1,76	1,36	1,56	1,76	1,78	2,18	2,53
FCCOP class	(E)		B			B			B			A		
Water flow	(3)	l/h	102	113	128	117	134	152	117	134	152	153	188	218
Water pressure drop	(3)(E)	kPa	2	3	4	4	5	7	4	5	6	2	3	3
Rated air flow		m ³ /h	146	184	226	205	261	330	205	261	327	238	334	432
Power input	(E)	W	7	8	9	7	8	18	7	8	18	6	8	15
Total sound power level	(4)(E)	dB(A)	29	32	40	40	44	49	38	44	50	34	43	48

ESTRO i			6			7			8		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,70	5,50	7,20	3,60	5,30	7,80	4,10	5,90	8,80
Total cooling capacity	(1)(E)	kW	1,72	2,32	2,86	1,95	2,59	3,44	2,47	3,22	4,24
Sensible cooling capacity	(1)(E)	kW	1,23	1,65	2,06	1,43	2,01	2,69	1,77	2,41	3,07
FCEER class	(E)		A								
Water flow	(2)	l/h	296	400	492	336	446	592	425	554	730
Water pressure drop	(2)(E)	kPa	5	8	11	4	7	12	5	7	12
Heating capacity	(3)(E)	kW	1,88	2,31	2,68	2,82	3,47	4,20	2,73	3,22	3,82
FCCOP class	(E)		B			B			A		
Water flow	(3)	l/h	162	199	231	243	299	362	235	277	329
Water pressure drop	(3)(E)	kPa	2	3	4	8	12	16	8	10	14
Rated air flow		m ³ /h	237	332	431	316	444	628	356	490	690
Power input	(E)	W	6	11	17	9	12	17	9	13	25
Total sound power level	(4)(E)	dB(A)	33	41	47	36	45	53	39	46	56

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 65°C / 55°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data

NOTE: The dimensional drawings of the ESTRO i inverter units are the same of the ESTRO ON/OFF version. They are reported from page 35

4 PIPES - RATED TECHNICAL DATA

ESTRO i			9			95			11		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	5,00	6,50	8,70	4,60	6,00	8,10	3,60	6,10	8,40
Total cooling capacity	(1)(E)	kW	3,10	3,79	4,64	3,53	4,32	5,39	3,76	5,67	7,20
Sensible cooling capacity	(1)(E)	kW	2,27	2,85	3,54	2,42	3,06	3,86	3,00	4,52	5,73
FCEER class	(E)		B			A			B		
Water flow	(2)	l/h	534	653	799	608	744	928	647	976	1240
Water pressure drop	(2)(E)	kPa	7	10	14	10	14	20	5	10	16
Heating capacity	(3)(E)	kW	3,55	4,07	4,64	3,70	4,20	4,84	4,85	6,29	7,35
FCCOP class	(E)		B								
Water flow	(3)	l/h	306	350	400	319	362	417	418	542	633
Water pressure drop	(3)(E)	kPa	7	8	11	7	9	12	14	22	29
Rated air flow		m ³ /h	460	593	763	478	603	792	636	1007	1362
Power input	(E)	W	19	25	48	13	16	34	18	51	116
Total sound power level	(4)(E)	dB(A)	48	53	58	46	52	59	48	58	66

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

NOTE: The dimensional drawings of the ESTRO i inverter units are the same of the ESTRO ON/OFF version. They are reported from page 35

Electric fan with GreenTech BLDC motor



ESTRO GT 1 - 6 kW



PLUS

- » GreenTech Technology
- » Inverter-controlled BLDC motor
- » Low energy consumption
- » Modulating operation
- » Extremely quiet operation
- » Can be integrated into GARDA
- » Incorporable ioniser

The maximum expression of technology at the service of the hotel industry

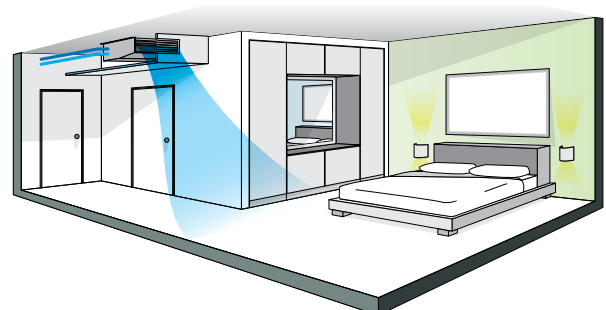
Galletti's extensive experience in the manufacture of fan coil units and development of refined control logics was combined with the know-how of EBM-PAPST in the construction of fan drive assemblies in order to create ESTRO GT.

The ESTRO GT design was developed specifically for the hotel industry, where fan coil units represent the most convenient solution for air conditioning rooms given that they are efficient, reliable, quiet and simple to maintain. With ESTRO GT it's almost like adding another star!

ESTRO GT uses fan drive assemblies with GreenTech technology, which means BLDC motors directly integrated with the fan assembly and inverter and 70% reductions in electricity consumption compared to traditional AC motors. The low electricity consumption is the ideal solution for installations in hotels, where the fan coil unit is running 80% of the time on average.

The extremely low noise levels and the possibility of continuous modulation of the fan speed fully satisfy guests' needs in terms of flexibility of use and quiet operation. ESTRO GT fan coil units use MYCOMFORT LARGE and EVO microprocessor control panels, which, thanks to the analogue outputs and refined adjustment logics, perfectly control the operation of the BLDC motors and modulating valves.

A wide range of accessories completes the offerings for recessed ceiling installation.



Thanks to the high efficiency and reliability guaranteed GreenTech technology, ESTRO GT reduces operating and maintenance costs while maintaining a top level of comfort and minimal noise.

AVAILABLE VERSIONS

- ESTRO FL GT** Wall mounted with cabinet
- ESTRO FA GT** Wall recess mounted with cabinet
- ESTRO CL GT** Wall mounted with cabinet
- ESTRO FU GT** Floor and ceiling mounted with cabinet

- ESTRO FP GT** Ceiling mounted with cabinet
- ESTRO FC GT** Vertical / horizontal recess mounted with rear air intake
- ESTRO FF GT** Vertical / horizontal recess mounted with front air intake

MAIN COMPONENTS

Cabinet

Composed of a painted steel sheet panel, side panels, air outlet grille (swinging by 180°) and back suction grille built from ABS.

Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels. FU – FC – FF versions are suitable for either vertical or horizontal installation thanks to the dual condensate collection and drainage system.

Heat exchanger

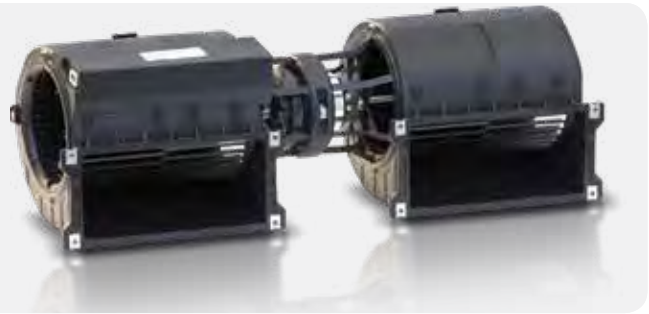
High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations. On FU version the air filters are fitted onto the airinlet grille.

BLDC GreenTech electrical fan

ESTRO GT uses the exclusive GreenTech technology of EBM-PAPST Permanent magnet BLDC motor with inverter integrated in the fan assembly, protection rating IP44, insulation class F and ball bearings. Polypropylene (PP) volute. Centrifugal fan with forward-curved blades made of glass-filled polyamide PA 6.



ACCESSORIES

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVO DISP	User interface with display for EVO controller
KBESTE	MY COMFORT on-board installation kit for ESTRO
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

KB A	On-board ESTRO FA installation kit suitable for TED controller
KB L DX	On-board ESTRO FL/FU/FB installation kit on the right side suitable for TED controller
KB L SX	On-board ESTRO FL/FU/FB installation kit on the left side suitable for TED controller
TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
TED SWA	Water temperature sensor for TED controls

Power interface and regulating louver controllers

CSB	On-board controller for opening and closing the motor-driven regulating louver
CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver

Additional heat exchanger for 4-pipe systems

DF	1-row additional heat exchanger for 4-pipe systems (not suitable for ESTRO "M" models)
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Auxiliary water drip trays, insulating shell, condensate drainage pump

BH	Auxiliary water drip tray for horizontal installation fan coil units
BV	Auxiliary water drip tray for vertical installation fan coil units
GIVK	Insulating shell for VKS valve
KSC	Condensate drainage pump kit

Base and enclosure elements

D	Support elements for ESTRO FC
ZA	Pair of support covering elements with front grille for ESTRO FA
ZAG	Pair of support covering elements for ESTRO FA
ZC	Pair of support covering elements for ESTRO CL
ZCG	Pair of support covering elements for ESTRO CL
ZL	Pair of support covering elements for ESTRO FL
ZLG	Pair of support covering elements with front grille for ESTRO FL

Rear covering panels

PH	Rear painted panel for horizontal installation with cabinet
PV	Rear painted panel for vertical installation with cabinet

Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
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Air inlet and outlet grilles

GE	Aluminium external air intake grille with subframe
GEF	Aluminium external air intake grille with subframe and air filter
GM	Aluminium air outlet grille with 2-row fins and subframe
RGC	Plenum with circular collars for air outlet grille

Plenum and connectors

RA90	Angular inlet connector
RAD	Straight inlet connector

RADC	Air inlet plenum with circular collars
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RM90	Angular outlet connector
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RM90C	Angular outlet insulated connector
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RMCD	Straight outlet insulated connector
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RMCD C	Air outlet plenum with circular collars
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RMD	Straight outlet connector
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External air intake louvers

SM	Motor-driven louver, with motor on the right with transformer
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SM	Motor-driven louver, with motor on the left with transformer
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SM	Motorized air intake louver
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SMC	Motor driven louver, with motor on the right, with transformer
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SMC	Motor driven louver, with motor on the left, with transformer
------------	---

Valves

KV	2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger
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KV24	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger
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KV24DF	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
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KVDF	2-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
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KVM	2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger
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KVMDF	2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
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VKDF	3-way valve, ON/OFF actuator, 230 V power supply, complete hydraulic kit for additional heat exchanger
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VKDF24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
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VKDF24ND	3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger
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VKDFND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for additional heat exchanger
---------------	---

VKMFDF	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
---------------	---

VKMFND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger
---------------	--

VKMS	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
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VKMSND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
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VKS	3-way valve, ON/OFF actuator, 1230 V power supply, complete hydraulic kit for main heat exchanger
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VKS24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
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VKS24ND	3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
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VKSND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for main heat exchanger
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2 PIPES - RATED TECHNICAL DATA

ESTRO GT			1			3			4			4M		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,10	2,50	3,00	2,80	3,70	5,10	2,80	3,70	5,10	2,80	3,70	5,10
Total cooling capacity	(1)(E)	kW	0,77	0,91	1,14	1,25	1,51	1,72	1,35	1,69	1,94	1,49	1,84	2,22
Sensible cooling capacity	(1)(E)	kW	0,59	0,69	0,86	0,94	1,13	1,28	0,99	1,23	1,40	1,05	1,31	1,58
FCEER class	(E)		B			B			B			A		
Water flow	(2)	l/h	132	158	197	216	261	299	234	292	337	258	317	384
Water pressure drop	(2)(E)	kPa	4	5	7	8	11	14	6	9	12	10	14	20
Heating capacity	(3)(E)	kW	0,95	1,11	1,32	1,45	1,72	1,84	1,50	1,81	2,15	1,53	1,88	2,29
FCCOP class	(E)		B											
Water flow	(3)	l/h	166	194	229	252	300	320	260	315	373	265	328	397
Water pressure drop	(3)(E)	kPa	5	6	8	9	12	14	6	9	12	9	12	17
Rated air flow		m ³ /h	149	189	231	211	271	344	211	271	344	211	271	344
Power input	(E)	W	5	6	8	7	10	16	7	10	16	7	10	16
Total sound power level	(4)(E)	dB(A)	30	32	40	38	44	49	40	44	50	41	45	51

ESTRO GT			5			6			6M			7		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,50	3,90	5,40	2,50	3,90	5,40	2,50	3,90	5,40	2,50	3,60	5,70
Total cooling capacity	(1)(E)	kW	1,59	2,02	2,41	1,75	2,37	2,91	1,92	2,63	3,29	1,97	2,62	3,49
Sensible cooling capacity	(1)(E)	kW	1,17	1,56	1,87	1,25	1,69	2,09	1,32	1,82	2,29	1,44	2,03	2,73
FCEER class	(E)		A											
Water flow	(2)	l/h	275	348	415	302	408	503	331	452	565	340	451	602
Water pressure drop	(2)(E)	kPa	8	12	16	5	8	11	7	12	17	4	7	12
Heating capacity	(3)(E)	kW	1,74	2,26	2,70	1,76	2,37	2,94	1,94	2,68	3,37	2,39	3,13	4,05
FCCOP class	(E)		A											
Water flow	(3)	l/h	302	393	469	301	408	506	338	466	586	415	545	704
Water pressure drop	(3)(E)	kPa	8	12	17	5	8	11	6	10	15	5	8	13
Rated air flow		m ³ /h	241	341	442	241	341	442	241	341	442	320	450	640
Power input	(E)	W	5	9	14	5	9	16	5	9	14	6	9	19
Total sound power level	(4)(E)	dB(A)	35	43	48	36	42	48	35	43	49	35	43	52

ESTRO GT			8			9			9M		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,80	4,10	6,50	3,80	5,30	7,60	3,80	5,30	7,60
Total cooling capacity	(1)(E)	kW	2,50	3,26	4,31	2,99	3,64	4,48	3,51	4,35	5,37
Sensible cooling capacity	(1)(E)	kW	1,79	2,44	3,13	2,22	2,80	3,50	2,46	3,05	3,79
FCEER class	(E)		A								
Water flow	(2)	l/h	431	561	743	515	628	774	605	750	927
Water pressure drop	(2)(E)	kPa	5	8	12	7	10	14	11	16	24
Heating capacity	(3)(E)	kW	2,47	3,24	4,24	3,31	4,08	4,98	3,53	4,37	5,39
FCCOP class	(E)		A								
Water flow	(3)	l/h	430	563	736	575	709	866	613	759	937
Water pressure drop	(3)(E)	kPa	4	6	13	7	10	14	10	14	20
Rated air flow		m ³ /h	361	497	706	470	605	785	470	605	785
Power input	(E)	W	7	11	24	10	17	32	10	17	32
Total sound power level	(4)(E)	dB(A)	35	43	53	43	49	56	44	50	57

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 45°C / 40°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data

NOTE: The dimensional drawings of the ESTRO GT inverter units are the same of the ESTRO ON/OFF version. They are reported from page 35

4 PIPES - RATED TECHNICAL DATA

ESTRO GT			1			3			4			5		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,10	2,50	3,00	2,80	3,70	5,10	2,80	3,70	5,10	2,50	3,90	5,40
Total cooling capacity	(1)(E)	kW	0,76	0,89	1,12	1,23	1,47	1,68	1,25	1,55	1,78	1,57	1,99	2,37
Sensible cooling capacity	(1)(E)	kW	0,58	0,68	0,85	0,92	1,10	1,26	0,97	1,21	1,45	1,16	1,53	1,84
FCEER class	(E)		B			B			B			A		
Water flow	(2)	l/h	130	155	194	212	254	291	216	267	307	272	343	409
Water pressure drop	(2)(E)	kPa	4	5	7	8	11	14	7	10	13	8	12	16
Heating capacity	(3)(E)	kW	1,18	1,31	1,49	1,36	1,56	1,76	1,36	1,56	1,76	1,78	2,18	2,53
FCCOP class	(E)		B			B			B			A		
Water flow	(3)	l/h	103	115	130	120	137	154	119	136	154	156	191	222
Water pressure drop	(3)(E)	kPa	2	3	4	4	5	7	5	5	6	2	3	3
Rated air flow		m ³ /h	146	184	226	205	261	330	205	261	327	238	334	432
Power input	(E)	W	5	6	8	7	10	14	7	10	14	5	8	13
Total sound power level	(4)(E)	dB(A)	28	32	40	38	44	49	38	44	50	34	43	48

ESTRO GT			6			7			8			9		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,50	3,90	5,40	2,50	3,60	5,70	2,80	4,10	6,50	3,80	5,30	7,60
Total cooling capacity	(1)(E)	kW	1,72	2,32	2,86	1,95	2,59	3,44	2,47	3,22	4,24	3,10	3,79	4,73
Sensible cooling capacity	(1)(E)	kW	1,23	1,65	2,06	1,43	2,01	2,69	1,77	2,41	3,07	2,27	2,85	3,54
FCEER class	(E)		A											
Water flow	(2)	l/h	297	400	493	336	447	594	425	554	730	535	654	802
Water pressure drop	(2)(E)	kPa	5	8	11	4	7	12	5	7	12	7	10	14
Heating capacity	(3)(E)	kW	1,88	2,31	2,68	2,82	3,47	4,20	2,73	3,22	3,82	3,55	4,07	4,64
FCCOP class	(E)		A											
Water flow	(3)	l/h	165	202	234	247	304	368	238	281	334	311	357	406
Water pressure drop	(3)(E)	kPa	2	3	4	8	12	16	8	10	14	5	6	8
Rated air flow		m ³ /h	237	332	431	316	444	628	356	490	690	460	593	763
Power input	(E)	W	5	8	13	6	9	18	6	11	23	10	16	30
Total sound power level	(4)(E)	dB(A)	33	41	47	34	43	51	37	46	56	48	53	59

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 65°C / 55°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data

NOTE: The dimensional drawings of the ESTRO GT inverter units are the same of the ESTRO ON/OFF version. They are reported from page 35

Design fan coil unit with a minimum depth of 10 cm only and BLDC motor

ART-U 1 - 4 kW



BLDC motor



Tangential fan



Supervision GARDA



2 pipes systems



Vertical installation



Design-driven innovation

From the extensive experience of Galletti in the development and design of fan coil units, and in confirmation of its continuous search for innovation, ART-U was created, a perfect combination of performance and design. ART-U is a unique product that, on the one hand is able to meet the increasingly stringent demands for energy efficiency, while on the other hand it reflects, for the first time, the latest trends in furnishings and interior design. With its width, which in some places is only 10 cm, and thanks to its unique lines, it was designed to be an absolutely all-purpose product that adapts perfectly to rigorous and essential environments as well as to warmer and more sophisticated spaces. The achievement of extremely high aesthetic standards has not weakened the usual construction integrity of Galletti products: striving for innovation has, in fact, also focused on the components and the use of new materials. With ART-U the state of the art has been redefined also in terms of technical performance, thanks to the use of computational fluid dynamics simulations for the optimisation of the heat exchange inside the indoor unit combined with the use of permanent magnet electric motors.

It is the only innovative product that combines design, reduced width, and energy efficiency.

PLUS

- » A cabinet with an innovative design and width up to only 10 cm
- » Inverter-controlled BLDC motor
- » Low energy consumption
- » Complete customization of the front panel



ART-U has received its first major international award: the prestigious Archiproduct Design Award 2019. ART-U won over the jury with its outstanding combination of performance and minimalist design.

ART-U Canvas: now it's up to you

Thanks to ART-U Canvas, a new level in indoor air conditioning is being achieved. A product that was already a unique offering in its field is now being further enhanced: ART-U is a versatile platform thanks to the complete customisation of the front panel. The fan coil panel becomes a veritable painter's canvas, ready to be customized by the interior architect. On ART-U Canvas any solid colour, image, or photograph can be reproduced. With ART-U Canvas there are no limits to creativity; now it's up to you to choose the perfect version of ART-U to blend in stylistically with the space to be air-conditioned.

AVAILABLE VERSIONS



ART-U Canvas

Front panel with fully customisable graphics with solid colours, images, and photographs.



ART-U Colour

Aluminium front panel available in the following colours white RAL9010, red RAL3020, and black RAL9005.



ART-U Grey

Front panel made of brushed natural aluminium.

ART-U CANVAS

ART-U becomes a platform that can be customised according to the suggestions of the interior architect. The front panel colour can be selected from over 3000 colour variations offered by the RAL and PANTONE colour charts.



A further degree of freedom is provided by the possibility of reproducing geometric textures and wallpaper graphics to camouflage the fan coil in the space where it is installed.

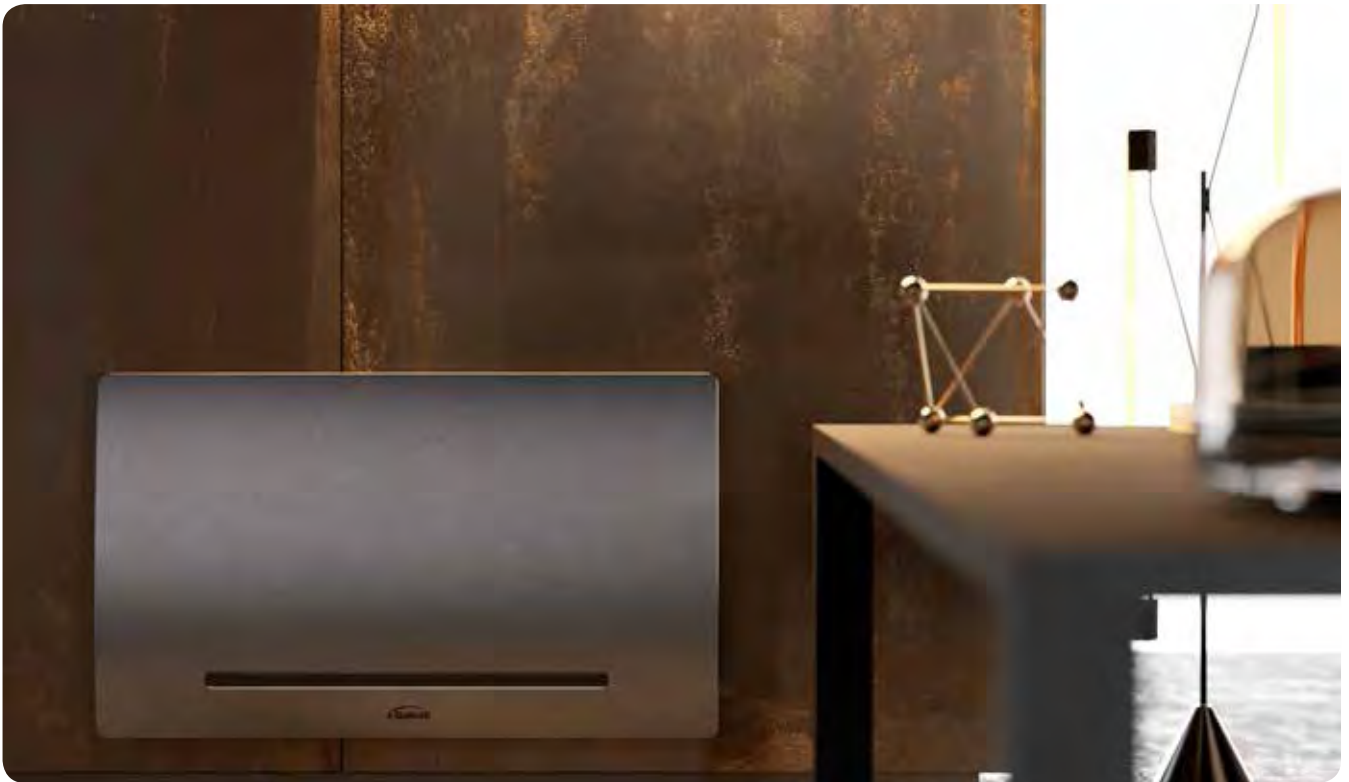


With ART-U Canvas there are no limits to creativity. The possibility of customising the panel with images and photographs makes this fan coil a true furnishing accessory.



Fan coil ART-U

AVAILABLE VERSIONS



ART-U Grey

The use of a natural brushed aluminium front panel combined with black side panels enhances the absolute elegance of this unique fan coil and its reduced width. This product, with its simple, clean, and essential lines, adapts perfectly to spaces where furnishings follow the latest trends and where a high level of design is required for each item.



ART-U White

The neutrality of the white ensures maximum integration with the space in an adaptive context, allowing the fan coil unit to almost disappear into the wall.

AVAILABLE VERSIONS



ART-U Red

Thanks to the refined and elegant lines of this product, even a strong and decisive colour like red actually further enhances the unique personality of ART-U and turns it into a true furnishing classic.



ART-U Black

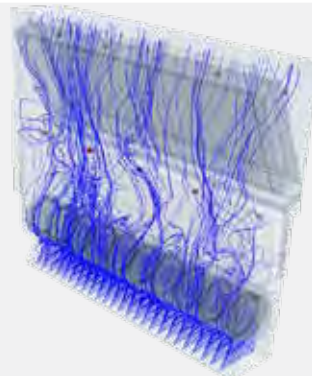
The unique black colour solution allows the fan coil to blend into the surrounding space, providing a touch of absolute elegance.

Fan coil ART-U

COMPUTATIONAL FLUID DYNAMICS SIMULATIONS

In CFD simulations the following was considered: a computational domain discretized by means of a polyhedral computation grid (mesh) consisting of 12 million cells that best reproduces the whirling movement of the air inside the hydronic indoor unit. The research also focused on improving the air distribution along the longitudinal axis of the fan unit.

The study of the air motion field has allowed the reduction of fluid recirculation downstream from the fan, preventing unwanted pressure drop inside the fan coil. The end benefit obtained from CFD simulations is an improvement in heat exchange, with a consequent reduction in power consumption and noise emissions with the same components and under the same operating conditions.



ACCESSORIES

EVO-2-TOUCH

The new EVO-2-TOUCH controller can also be installed directly on the unit and guarantees maximum temperature and humidity comfort combined with the ergonomics of its touch screen. The tap and swipe functions make the control experience similar to that of your smartphone.

The various screens are designed to make human-machine communication intuitive. Each page contains a few essential items of information that allow the consultation of the unit's main operating parameters and enable the initial control configuration according to system requirements.

The external frame of the interface is available in four different chrome plating options and is made with double aluminium foil and a polyethylene core.



DISC-COVER

The minimalist style of the DISC-COVER is in harmony with the elegant and essential lines of ART-U. Available in three different colours: white RAL9010, black RAL9005, and red RAL3020. It adapts perfectly to the style of the space to be air-conditioned, whether it be severe and formal or ironic. Its shape was purposely designed to make installation quick and easy even during cleaning and maintenance operations. The magnet coupling system allows its position to be adjusted according to the installation height and the position of the pipes.



ACCESSORIES

DSC	Disc-Cover ART_U	V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
EVO-2-TOUCH	2.8" touch screen user interface for EVO control	VKDF	3-way valve, ON/OFF actuator, 230 V power supply, complete hydraulic kit for additional heat exchanger
EVOBOARD	Circuit board for EVO control	VKDF24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
EVOBOARD	EVO control circuit board ART-U	VKDF24ND	3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger
EVODISP	User interface with display for EVO controller	VKDFND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for additional heat exchanger
EVODISP	User interface for ART-U EVO control with display	VKMDF	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
KBEVS	EVO on-board installation Kit for ART-U	VKMDFND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger
MCLE	Microprocessor control with display MY COMFORT LARGE	VKMS	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO	VKMSND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers	VKS	3-way valve, ON/OFF actuator, 1230 V power supply, complete hydraulic kit for main heat exchanger
KBTES	On-board ART-U installation kit suitable for TED controller	VKS24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V	VKS24ND	3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
TED SWA	Water temperature sensor for TED controls	VKSND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for main heat exchanger
GIVK	Insulating shell for VKS valve		
KV24	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger		
KV24DF	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger		
KVDF	2-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit on water connection side for main and additional heat exchanger		
KVMDF	2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger		
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger		

MAIN COMPONENTS
Cabinet with a refined design

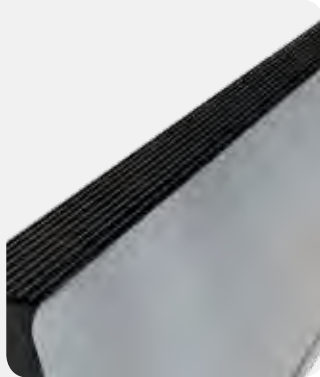
The elegant front panel consists of two sheets of aluminium with a polyethylene core and possibly a polyester-based surface coating. It is a light but very resistant material, created for covering façades in the building sector. The side panels are made of UV-stabilized ABS to maintain the colour over time. The polyethylene core acts as a flexible filler and thermal insulation while the aluminium provides structural strength and aesthetics.


Conveyors

Made of high-density polystyrene and ABS. They are designed to optimise the air flow inside the hydronic indoor unit allowing optimal distribution of the air flow in the coil and low noise in every operating mode.

Upper grille

Consisting of adjustable fins made of anodised aluminium, available in the version for on-board or wall-mounted control. The ABS combs support the grilles and prevent them from being bent, thus always guaranteeing the user's safety.


Front grille

Designed to stabilize the operation of the tangential fan unit and is equipped with a stainless steel filter.


Electric motor

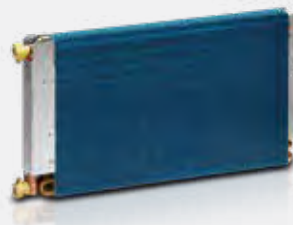
Permanent magnet BLDC motor with inverter integrated in the ventilation unit. An IP44, protection rating is guaranteed; therefore, dust inside is avoided and resistance to water spray is guaranteed. The manufacturer's certification makes it suitable also for outdoor applications.


Tangential fans

Tangential fan, statically and dynamically balanced to reduce its noise during operation. The plastic material used for the blades guarantees, in comparison with metal fans, a reduction in vibrations and an absence of bending along the rotation axis. The blades are alternated with intermediate reinforcement disks in order to increase their sturdiness.

Heat exchangers

With a high efficiency turbocoil-type heat exchanger, and made with copper tubing and aluminium fins, it is equipped with brass manifolds and a vent valve. The hydrophilic treatment is applied to the fins as a standard treatment, to increase their efficiency during cooling and at the same time a greater resistance to aggressive atmospheres.


Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

RATED TECHNICAL DATA

ART-U			10				20				30			
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	5,50	7,00	10,0	2,00	5,50	7,00	10,0	2,00	5,50	7,00	10,0
Total cooling capacity	(1)	kW	0,31	0,71	0,84	1,08	0,58	1,15	1,41	1,76	0,66	1,63	1,97	2,44
Sensible cooling capacity	(1)	kW	0,29	0,49	0,62	0,91	0,68	0,98	1,26	1,36	1,04	1,43	1,82	1,78
FCEER class			C				C				B			
Water flow	(1)	l/h	53	122	145	185	100	198	242	303	113	280	339	418
Water pressure drop	(1)	kPa	1	4	5	8	2	6	9	13	2	12	17	24
Heating capacity	(2)	kW	0,29	0,82	1,05	1,40	0,59	1,33	1,60	1,98	0,67	1,78	2,15	2,65
FCCOP class			C											
Water flow	(2)	l/h	51	143	183	243	169	238	303	345	117	310	374	461
Water pressure drop	(2)	kPa	1	4	6	11	2	7	10	14	2	12	17	24
Rated air flow		m ³ /h	40	148	207	312	82	224	287	389	91	302	392	529
Power input		W	4	7	9	14	4	10	12	17	5	11	15	24
Total sound power level	(3)	dB(A)	28	41	46	54	28	41	47	54	28	42	47	54

ART-U			40				50			
Speed			1	2	3	4	1	2	3	4
Control voltage		V	2,00	5,50	7,00	10,0	2,00	5,50	7,00	10,0
Total cooling capacity	(1)	kW	0,76	1,84	2,37	3,12	0,92	2,32	2,89	3,69
Sensible cooling capacity	(1)	kW	1,42	1,95	2,39	2,33	1,72	2,15	2,77	2,77
FCEER class			B							
Water flow	(1)	l/h	131	315	406	535	157	398	496	634
Water pressure drop	(1)	kPa	2	12	18	29	3	13	19	29
Heating capacity	(2)	kW	0,74	1,99	2,49	3,21	0,95	2,56	3,16	4,02
FCCOP class			C				B			
Water flow	(2)	l/h	128	347	433	559	165	446	550	698
Water pressure drop	(2)	kPa	2	11	17	26	2	13	19	28
Rated air flow		m ³ /h	104	363	496	724	129	439	587	831
Power input		W	5	12	17	27	5	12	18	30
Total sound power level	(3)	dB(A)	31	42	47	54	32	42	47	54

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 45°C / 40°C, air temperature 20°C

(3) Sound power measured according to standards ISO 3741 and ISO 3742

Power supply 230-1-50 (V-ph-Hz)

DIMENSIONAL DRAWINGS

ART-U

The technical drawings show the following dimensions and features:

- Top View:** Shows overall length (L) and width (A). Key dimensions include 48, 27, 155, 125, 212, 175, 17, 23, 43, 78, 609, 175, 17, 23, 78, and 43.
- Side View:** Shows height dimensions of 528, 275, 233, 102, 111, 121, and 136. It also indicates 'IN' and 'OUT' ports with callouts 1 and 2.
- Perspective View:** Shows a depth of 400 mm and a height of 100 mm. The top edge has a 90 mm depth and a 140 mm height.

LEGEND

1	Water connections standard heat exchanger \varnothing 1/2"
2	Condensate discharge diameter for vertical installation \varnothing 17 mm

ART-U	A mm	L mm	 kg
10	616	711	12
20	772	867	14
30	941	1036	17
40	1173	1268	19
50	1307	1402	21

Fan coil unit with design cabinet, 17 cm in depth

FLAT S 1 - 3 kW



The solution tailored to design requirements of residential applications

Galletti's FLAT series now becomes SLIM. In fact, with a depth of only 17 cm, FLAT S ensures a compact size that makes it easy to integrate in any context, thus responding to the new design trends in the residential sector (and beyond).

The FLAT S mini series means innovation also in terms of engineering: it combines a guarantee of excellent low-noise performance with the advantage of an exclusive design that fits well with both residential and commercial settings.

The stylishly designed cabinet (colour RAL9010) is compact and manufactured from steel sheet and UV-stabilised ABS. The upper grille includes a flap and adjustable louvers fitted with a microswitch that automatically shuts down the unit when the flap itself is closed.

The adoption of UV-stabilized ABS in the parts making up the cabinet and antistatic ABS in the fan assembly (volute and centrifugal fan) guarantee that the product will maintain the same aesthetics and noise levels throughout its lifetime.



PLUS

- » Cabinet with a refined design, depth 17 cm
- » Microswitch on air flap
- » Use of UV-stabilized ABS
- » Can be integrated into GARDA
- » Reversible water connections
- » 3-speed motor
- » ABS centrifugal fans



MAIN COMPONENTS

Cabinet

Design cabinet, RAL9010 colour, only 17 cm in depth, front panel made of sheet steel. Side panels and an upper grille with covers on either side manufactured from UV-stabilised ABS to maintain the colour intact over time. The upper grille consists of a flap and adjustable louvers. The flap features a microswitch that automatically shuts down the unit when the flap itself is closed.



Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.

Electric motor

It is mounted on vibration dampers, with permanently activated capacitor and thermal protection of the windings, and is directly coupled with the fans. It is available as either at 3- or (on request) 6-speed version in order to meet all the specific needs of performance, quietness, and power consumption.


Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11
FLATS13		L	0	M	0	1	E	0	0	0	0	A

To verify the compatibility of the options, use the selection software or the price list.

CONFIGURATOR

- | | |
|--|--|
| <p>1 Version
L - Wall mounted with cabinet</p> <p>2 Motor
0 3-speed motor
I BLDC motor</p> <p>3 Main coil hydraulic side
L Water connections on the left side
R Water connections on the right</p> <p>4 Additional coil hydraulic side / heating element
0 Absent
L Water connections on the left side
R Water connections on the right</p> <p>5 Valve
0 Absent
1 VKS - 3 ways valve - 230 V - ON/OFF - complete hydraulic kit
2 KV - 2 ways valve - 230 V - ON/OFF
3 VKMS - 3 ways valve - 24 V - MODULATING - complete hydraulic kit
4 KVM - 2 ways valve - 24 V - MODULATING
5 VKS24 - 3 way valve - 24 V - ON/OFF - complete hydraulic kit
6 KV24 - 2 way valve - 24 V - ON/OFF
A VKSND - 3 way valve - 230 V - ON/OFF - hydraulic kit on coil side
B VKMSND - 3 ways valve - 24 V - MODULATING - hydraulic kit on coil side
C VKS24ND - 3 ways valve - 24 V - ON/OFF - hydraulic kit on coil side</p> <p>6 Control panel
0 Absent
1 CB - On-board speed selector
2 TB - Speed selector and thermostat
3 TIB - Speed selector, thermostat and S/W selecting switch</p> | <p>4 TED 2T - microprocessor control for 2 pipes
5 TED 4T - microprocessor control for 4 pipes
6 TED 10 - microprocessor control for BLDC
A MCBE - My comfort base
B MCME - My comfort medium
C MCLE - My comfort large
E EVOBOARD - Circuit board</p> <p>7 Probes
0 Absent
1 SA - Remote air probe for MYCOMFORT, LED503 and EVO
2 SW - Water probe for MYCOMFORT, LED503 and EVO
3 SU - Humidity probe for MYCOMFORT and EVO
4 SA+SW - Remote air and water probes for MYCOMFORT, LED503 and EVO
5 SA+SU - Remote air and humidity probes for MYCOMFORT and EVO
6 SA+SU+SW - Remote air, water, humidity probes for MYCOMFORT and EVO
A TC - Thermostat for minimum water temperature
B SA - Remote air probe for TED
C SW - Water probe for TED
D SA + SW - Air and water probes for TED</p> <p>8 Accessories
0 Absent
4 BV - Auxiliary drip tray
6 GIVK - Insulating shell</p> <p>9 Filter
0 Standard filter air</p> <p>10 Release
0
A A</p> |
|--|--|

ACCESSORIES

Electromechanical control panels		Auxiliary water drip trays, insulating shell, condensate drainage pump	
CB	On-board speed switch	BVK	Auxiliary water drip tray for vertical installation fan coil units
CD	Recess wall-mounted speed switch	GIVKL	Insulating shell for VKS valve, water connections on the left
TC	Thermostat for minimum water temperature in heating mode (42 °C)	GIVKR	Insulating shell for VKS valve, water connections on the right
TIB	On-board speed switch, thermostat and summer/winter selecting switch	Base and enclosure elements	
Electronic microprocessor control panels with display		ZLS	Pair of base and enclosure elements for FLAT S
COB	Finishing plate for LED 503 controller, RAL9005 black	Rear covering panels	
COG	Finishing plate for LED 503 controller, RAL7031 grey	PV	Rear painted panel for vertical installation with cabinet
COW	Finishing plate for LED 503 controller, RAL9003 white	Valves	
DIST	MY COMFORT controller spacer for wall mounting	KV	2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger
EVOBOARD	Circuit board for EVO control	KV24DF	2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger
EVODISP	User interface with display for EVO controller	V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
KBFLAE	MY COMFORT on-board installation KIT for FLAT	V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
LED503	Recessed wall-mounted electronic display controller LED 503	V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
MCBE	MYCOMFORT BASE electronic controller with display	V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
MCLE	Microprocessor control with display MY COMFORT LARGE	VKDF24	3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger
MCME	MYCOMFORT MEDIUM electronic controller with display	VKMS	3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main heat exchanger
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO	VKMSND	3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers	VKSND	3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for main heat exchanger
Electronic microprocessor control panels			
KB F	On-board FLAT/FLAT S installation kit suitable for TED controller		
TED 2T	Electronic controller for AC fan control and one ON/OFF 230 V valve		
TED 4T	Electronic controller for AC fan control and two ON/OFF 230 V valves		
TED SWA	Water temperature sensor for TED controls		
Power interface and regulating lower controllers			
KP	Power interface for connecting in parallel up to 4 fun coil units to the one controller		
Additional heat exchanger for 4-pipe systems			
DF	1-row additional coil for 4 pipes system		

2 PIPES - RATED TECHNICAL DATA

FLAT S			13			23			33			43		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	0,85	0,96	1,22	1,08	1,33	1,72	1,40	1,74	2,29	1,75	2,12	2,75
Sensible cooling capacity	(1)(E)	kW	0,60	0,68	0,87	0,74	0,91	1,19	1,00	1,24	1,65	1,25	1,52	1,99
FCEER class	(E)		D											
Water flow	(2)	l/h	148	168	213	186	230	300	243	303	399	303	368	477
Water pressure drop	(2)(E)	kPa	3	3	5	5	7	11	3	5	7	5	7	10
Heating capacity	(3)(E)	kW	0,89	1,01	1,27	1,00	1,22	1,59	1,52	1,85	2,40	1,85	2,22	2,86
FCCOP class	(E)		D											
Water flow	(3)	l/h	155	176	221	174	211	277	264	321	417	321	386	497
Water pressure drop	(3)(E)	kPa	2	3	4	3	5	8	3	4	7	4	6	9
Rated air flow		m ³ /h	115	135	170	135	170	225	200	250	340	250	310	420
Power input	(E)	W	12	17	23	14	20	27	23	28	37	25	31	42
Total sound power level	(4)(E)	dB(A)	30	35	40	35	40	46	32	38	46	37	42	49

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

4 PIPES - RATED TECHNICAL DATA

FLAT S			13			23			33			43		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	0,85	0,96	1,22	1,08	1,33	1,72	1,40	1,74	2,29	1,75	2,12	2,75
Sensible cooling capacity	(1)(E)	kW	0,60	0,68	0,87	0,74	0,91	1,19	1,00	1,24	1,65	1,25	1,52	1,99
FCEER class	(E)		D											
Water flow	(2)	l/h	148	168	213	186	230	300	243	303	399	303	368	477
Water pressure drop	(2)(E)	kPa	3	3	5	5	7	11	3	5	7	5	7	10
Heating capacity	(3)(E)	kW	1,04	1,15	1,36	1,35	1,56	1,91	1,88	2,16	2,69	2,16	2,45	3,02
FCCOP class	(E)		D											
Water flow	(3)	l/h	91	100	119	118	136	167	165	189	235	189	215	264
Water pressure drop	(3)(E)	kPa	2	2	3	4	5	7	1	2	3	2	2	3
Rated air flow		m ³ /h	115	135	170	135	170	225	200	250	340	250	310	420
Power input	(E)	W	12	17	23	14	20	27	23	28	37	25	31	42
Total sound power level	(4)(E)	dB(A)	30	35	40	35	40	46	32	38	46	37	42	49

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

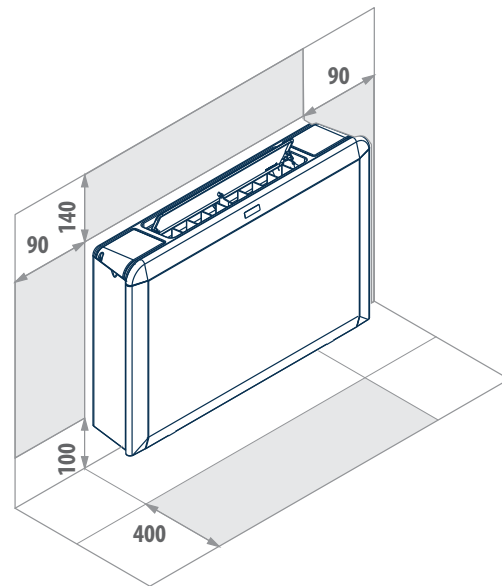
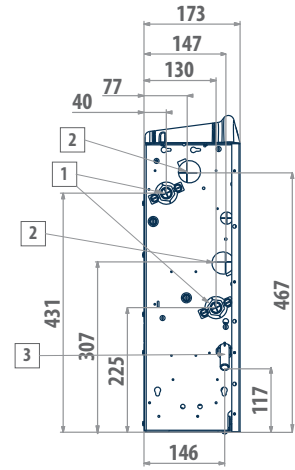
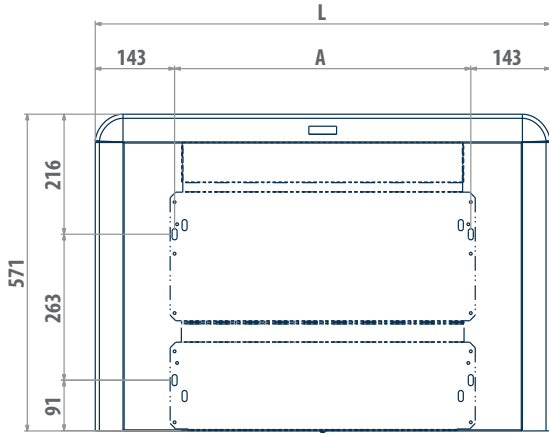
(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

DIMENSIONAL DRAWINGS

FLAT S



LEGEND

- 1 Water connections standard heat exchanger \varnothing 1/2"
 - 2 DF 1-row additional heat exchanger water connections \varnothing 1/2"
 - 3 Condensate discharge diameter for vertical installation \varnothing 16 mm
- Condensate discharge diameter for horizontal installation \varnothing 17 mm**

FLAT S	A mm	L mm	 kg
13	534	820	17
23	704	990	21
33 - 43	874	1160	23

Fan coil unit with design cabinet, only 17 cm in depth and BLDC motor

FLAT S i 1 - 3 kW



BLDC motor



Supervision
GARDA



2 pipes
systems



4 pipes
systems



Vertical
installation



Centrifugal
fan

PLUS

- » Cabinet with a refined design, depth 17 cm
- » Low energy consumption
- » Modulating operation
- » Microswitch on exit air flap
- » Can be integrated into GARDA
- » Reversible water connections
- » Inverter-controlled BLDC motor
- » ABS centrifugal fans

The solution tailored to design requirements of residential applications

Galletti's FLAT series now becomes SLIM. In fact, with a depth of only 17 cm, FLAT S ensures a compact size that makes it easy to integrate in any context, thus responding to the new design trends in the residential sector (and beyond).

The FLAT S mini series means innovation also in terms of engineering: it combines a guarantee of excellent low-noise performance with the advantage of an exclusive design that fits well with both residential and commercial settings.

The Galletti FLAT S i indoor hydronic units are equipped with a permanent magnet (brushless) electric motor, controlled by an inverter, which enables continuous adjustment in the number of fan revolutions.

In addition to the important reduction in electricity consumption compared to AC motors, the use of inverter BLDC technology makes it possible to continually adjust the operation of the unit to the actual thermo-hygrometric load of the interior, with a clear benefit in terms of comfort and reducing noise.

Its use is particularly effective in the frequent cases of operation under partial load conditions, the situation that occurs most frequently, when the adjustment logic allows greatly reduced motor rotation speeds with exceptional reductions in electricity consumption and noise emissions.

The operation of the unit with brushless motor is managed by EVO, MYCOMFORT LARGE or TED microprocessor control panel, using an analogue output (0-10 V) which is connected to the inverter.



AVAILABLE VERSIONS



Suspended wall installation, with cabinet, with vertical air flow
2 and 4 pipes system

MAIN COMPONENTS

Cabinet

Design cabinet, RAL9010 colour, only 17 cm in depth, front panel made of sheet steel. Side panels and an upper grille with covers on either side manufactured from UV-stabilised ABS to maintain the colour intact over time. The upper grille consists of a flap and adjustable louvers. The flap features a microswitch that automatically shuts down the unit when the flap itself is closed.



Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.

Electric motor

The unit is equipped with an inverter board to control the motor, which can be used separately or installed on the motor itself. This system makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V) even when the maximum rotation speed must be controlled to reduce noise levels.



Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

ACCESSORIES

Electronic microprocessor control panels with display

DIST MY COMFORT controller spacer for wall mounting

EVOBOARD Circuit board for EVO control

EVO DISP User interface with display for EVO controller

KBFLAE MY COMFORT on-board installation KIT for FLAT

MCLE Microprocessor control with display MY COMFORT LARGE

MCSUE Humidity sensor for MY COMFORT (medium e large), EVO

MCSWE Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

KB F On-board FLAT/FLAT S installation kit suitable for TED controller

TED 10 Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V

TED SWA Water temperature sensor for TED controls

Additional heat exchanger for 4-pipe systems

DF 1-row additional coil for 4 pipes system

Auxiliary water drip trays, insulating shell, condensate drainage pump

BV Auxiliary water drip tray for vertical installation fan coil units

GIVKL Insulating shell for VKS valve, water connections on the left

GIVKR Insulating shell for VKS valve, water connections on the right

Base and enclosure elements

ZLS Pair of base and enclosure elements for FLAT S

Rear covering panels

PV Rear painted panel for vertical installation with cabinet

Valves

KV 2-way valve, ON/OFF actuator, hydraulic kit on water connection side for main heat exchanger

KV24 2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger

KV24DF 2-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger

KVDF 2-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit on water connection side for main and additional heat exchanger

KVM 2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main heat exchanger

KVMDF 2-way valve, MODULATING actuator, 24 V power supply, hydraulic kit on water connection side for main and additional heat exchanger

VKDF 3-way valve, ON/OFF actuator, 230 V power supply, complete hydraulic kit for additional heat exchanger

VKDF24 3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger

VKDF24ND 3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger

VKDFND 3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for additional heat exchanger

VKMFDF 3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for additional heat exchanger

VKMFND 3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for additional heat exchanger

VKMS 3-way valve, MODULATING actuator, 24 V power supply, complete hydraulic kit for main heat exchanger

VKMSND 3-way valve, MODULATING actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger

VKS 3-way valve, ON/OFF actuator, 1230 V power supply, complete hydraulic kit for main heat exchanger

VKS24 3-way valve, ON/OFF actuator, 24 V power supply, complete hydraulic kit for main heat exchanger

VKS24ND 3-way valve, ON/OFF actuator, 24 V power supply, hydraulic kit without holder, for main heat exchanger

VKSND 3-way valve, ON/OFF actuator, 230 V power supply, hydraulic kit without holder, for main heat exchanger

2 PIPES - RATED TECHNICAL DATA

FLAT S i			13			23			43		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,80	5,80	7,70	4,50	5,80	7,90	5,10	6,30	8,00
Total cooling capacity	(1)(E)	kW	0,85	0,97	1,23	1,08	1,33	1,74	1,75	2,12	2,75
Sensible cooling capacity	(1)(E)	kW	0,60	0,69	0,88	0,74	0,92	1,21	1,26	1,54	2,01
FCEER class	(E)		B								
Water flow	(2)	l/h	148	168	213	186	230	300	303	368	477
Water pressure drop	(2)(E)	kPa	3	3	5	5	7	11	5	7	10
Heating capacity	(3)(E)	kW	0,89	1,01	1,27	1,00	1,22	1,59	1,85	2,22	2,86
FCCOP class	(E)		C			B			B		
Water flow	(3)	l/h	155	176	221	174	211	277	321	386	497
Water pressure drop	(3)(E)	kPa	2	3	4	3	5	8	4	6	9
Rated air flow		m ³ /h	115	135	170	135	170	225	250	310	420
Power input	(E)	W	7	8	10	7	8	11	10	12	21
Total sound power level	(4)(E)	dB(A)	30	35	40	35	40	46	37	42	49

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

4 PIPES - RATED TECHNICAL DATA

FLAT S i			13			23			43		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,80	5,80	7,70	4,50	5,80	7,90	5,10	6,30	8,00
Total cooling capacity	(1)(E)	kW	0,85	0,97	1,23	1,08	1,33	1,74	1,75	2,12	2,75
Sensible cooling capacity	(1)(E)	kW	0,60	0,69	0,88	0,74	0,92	1,21	1,26	1,54	2,01
FCEER class	(E)		B								
Water flow	(2)	l/h	148	168	213	186	230	300	303	368	477
Water pressure drop	(2)(E)	kPa	3	3	5	5	7	11	5	7	10
Heating capacity	(3)(E)	kW	1,04	1,15	1,36	1,35	1,56	1,91	2,16	2,45	3,02
FCCOP class	(E)		C			B			B		
Water flow	(3)	l/h	91	100	119	118	136	167	189	215	264
Water pressure drop	(3)(E)	kPa	2	2	3	4	5	7	2	2	3
Rated air flow		m ³ /h	115	135	170	135	170	225	250	310	420
Power input	(E)	W	7	8	10	7	8	11	10	12	21
Total sound power level	(4)(E)	dB(A)	30	35	40	35	40	46	37	42	49

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

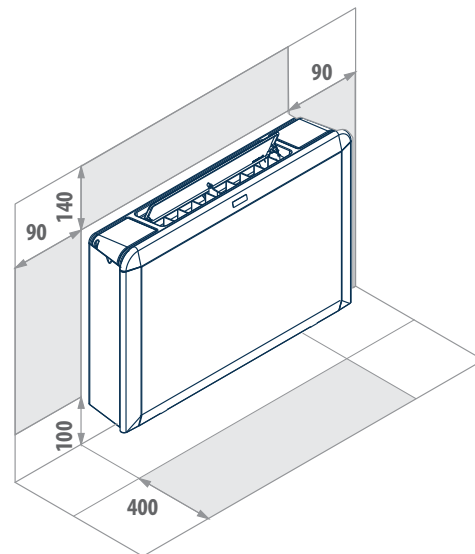
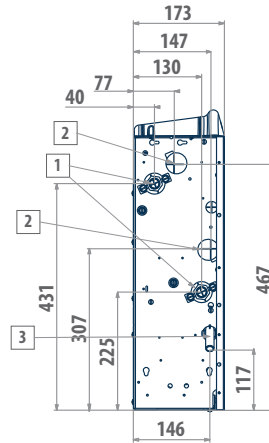
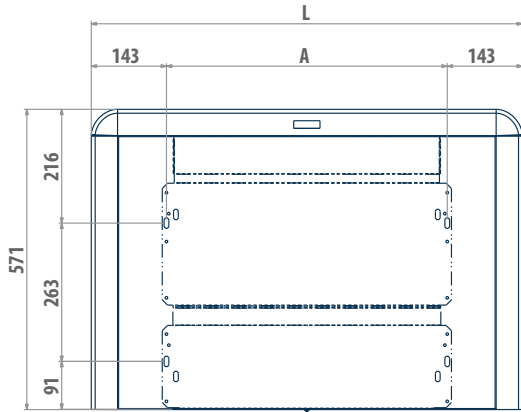
(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

DIMENSIONAL DRAWINGS

FLAT Si



LEGEND

- 1 Water connections standard heat exchanger \varnothing 1/2"
 - 2 DF 1-row additional heat exchanger water connections \varnothing 1/2"
 - 3 Condensate discharge diameter for vertical installation \varnothing 16 mm
- Condensate discharge diameter for horizontal installation \varnothing 17 mm**

FLAT Si	A mm	L mm	 kg
13	534	820	17
23	704	990	21
43	874	1160	23

Design fan coil units with centrifugal fan

FLAT 2 - 5 kW



Supervision GARDA 2 pipes systems 4 pipes systems Vertical installation Centrifugal fan Horizontal installation

Galletti FLAT: performance and design in a single indoor unit

FLAT Galletti has been engineered to offer performance and design features placing it at the top of its category. The uniqueness of FLAT lies both in the use of extremely high quality materials - which contribute to making this product exceptionally robust - and the assurance of constant performance over time.

FLAT optimizes the distribution of air in the room thanks to the integrated air outlet grille which makes it possible to direct the treated, filtered air in 4 directions. The main flap is equipped with a microswitch which shuts off the fan and the valves when the flap closes. The flap is useful for avoiding dust build-up in periods of non-use.

The adoption of UV-stabilized ABS in the parts making up the cabinet and antistatic ABS in the fan assembly (volute and centrifugal fan) guarantee that the product will maintain the same aesthetics and noise levels throughout its lifetime.

Particular care has been taken in the design of the fan drive assembly, which guarantees exceptionally quiet operation both in version with 3- and 6-speed motors.

The conception underlying its construction makes it possible to combine models for vertical and horizontal installation: 2 different versions enable FLAT to be installed on the floor, wall and ceiling.

PLUS

- » Cabinet with a refined design
- » Microswitch on exit air flap
- » Use of UV-stabilized ABS
- » Reversible water connections
- » 3 - 6 speed motor
- » ABS centrifugal fans
- » Can be integrated into GARDA
- » Incorporable ioniser



MAIN COMPONENTS

Cabinet

RAL9010 colour, front panel made of sheet steel. Side panels and an upper grille with covers on either side manufactured from UV-stabilised ABS to maintain the colour intact over time. The upper grille consists of a flap and adjustable louvers. The flap features a microswitch that automatically shuts down the unit when the flap itself is closed.



Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.

Electric motor

It is mounted on vibration dampers, with permanently activated capacitor and thermal protection of the windings, and is directly coupled with the fans. It is available as either a 3- or 6-speed version in order to meet all the specific needs of performance, quietness, and power consumption.


Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11
FLAT10		L	0	M	0	1	E	0	0	0	0	A

To verify the compatibility of the options, use the selection software or the price list.

CONFIGURATOR
1 Version

L L - Wall mounted with cabinet

2 Motor

- 0 3-speed motor
- I BLDC motor
- P 6 speed motor

3 Main coil hydraulic side

- L Water connections on the left side
- R Water connections on the right

4 Additional coil hydraulic side / heating element

- 0 Absent
- L Water connections on the left side
- R Water connections on the right

5 Valve

- 0 Absent
- 1 VKS - 3 ways valve - 230 V - ON/OFF - complete hydraulic kit
- 2 KV - 2 ways valve - 230 V - ON/OFF
- 3 VKMS - 3 ways valve - 24 V - MODULATING - complete hydraulic kit
- 4 KVM - 2 ways valve - 24 V - MODULATING
- 5 VKS24 - 3 way valve - 24 V - ON/OFF - complete hydraulic kit
- 6 KV24 - 2 way valve - 24 V - ON/OFF
- A VKSND - 3 way valve - 230 V - ON/OFF - hydraulic kit on coil side
- B VKMSND - 3 ways valve - 24 V - MODULATING - hydraulic kit on coil side
- C VKS24ND - 3 ways valve - 24 V - ON/OFF - hydraulic kit on coil side

6 Control panel

- 0 Absent
- 1 CB - On-board speed selector
- 3 TIB - Speed selector, thermostat and S/W selecting switch
- 4 TED 2T - microprocessor control for 2 pipes
- 5 TED 4T - microprocessor control for 4 pipes
- 6 TED 10 - microprocessor control for BLDC

- A MCBE - My comfort base
- B MCME - My comfort medium
- C MCLE - My comfort large
- E EVOBOARD - Circuit board

7 Probes

- 0 Absent
- 1 SA - Remote air probe for MYCOMFORT, LED503 and EVO
- 2 SW - Water probe for MYCOMFORT, LED503 and EVO
- 3 SU - Humidity probe for MYCOMFORT and EVO
- 4 SA+SW - Remote air and water probes for MYCOMFORT, LED503 and EVO
- 5 SA+SU - Remote air and humidity probes for MYCOMFORT and EVO
- 6 SA+SU+SW - Remote air, water, humidity probes for MYCOMFORT and EVO
- A TC - Thermostat for minimum water temperature
- B SA - Remote air probe for TED
- C SW - Water probe for TED
- D SA + SW - Air and water probes for TED

8 Accessories

- 0 Absent
- 4 BV - Auxiliary drip tray
- 5 BH - Auxiliary drip tray
- 6 GIVK - Insulating shell
- B Air deionization
- C Air deionization with control panel

9 Filter

- 0 Standard filter air

10 Release

- 0 0
- A A

11 Release (letter)

- A A

ACCESSORIES
Electromechanical control panels

CB	On-board speed switch
CD	Recess wall-mounted speed switch
CDE	Wall mounted speed selector
TA	Wall-mounted room thermostat
TA2	Electromechanical room thermostat with summer/winter selection
TC	Thermostat for minimum water temperature in heating mode (42 °C)
TIB	On-board speed switch, thermostat and summer/winter selecting switch

Electronic microprocessor control panels with display

COB	Finishing plate for LED 503 controller, RAL9005 black
COG	Finishing plate for LED 503 controller, RAL7031 grey
COW	Finishing plate for LED 503 controller, RAL9003 white
DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
KBFLAE	MY COMFORT on-board installation KIT for FLAT
LED503	Recessed wall-mounted electronic display controller LED 503
MCBE	MYCOMFORT BASE electronic controller with display
MCLE	Microprocessor control with display MY COMFORT LARGE
MCME	MYCOMFORT MEDIUM electronic controller with display
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

KB F	On-board FLAT/FLAT S installation kit suitable for TED controller
TED 2T	Electronic controller for AC fan control and one ON/OFF 230 V valve

TED 4T	Electronic controller for AC fan control and two ON/OFF 230 V valves
TED SWA	Water temperature sensor for TED controls
Power interface and regulating louver controllers	
KP	Power interface for connecting in parallel up to 4 fun coil units to the one controller
Additional heat exchanger for 4-pipe systems	
DF	1-row additional coil for 4 pipes system
Auxiliary water drip trays, insulating shell, condensate drainage pump	
BH	Auxiliary water drip tray for horizontal installation fan coil units
BV	Auxiliary water drip tray for vertical installation fan coil units
GIVKL	Insulating shell for VKS valve, water connections on the left
GIVKR	Insulating shell for VKS valve, water connections on the right
Base and enclosure elements	
ZL	Pair of base and enclosure elements for FLAT L
Rear covering panels	
PH	Rear painted panel for horizontal installation with cabinet
PV	Rear painted panel for vertical installation with cabinet
Valves	
V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

Fan coil FLAT

2 PIPES - RATED TECHNICAL DATA

FLAT			10			20			30			40		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,19	1,34	1,77	1,38	1,71	2,22	1,44	2,01	2,66	1,67	2,29	2,87
Sensible cooling capacity	(1)(E)	kW	0,86	0,96	1,27	1,02	1,27	1,66	1,10	1,53	2,03	1,27	1,75	2,20
FCEER class	(E)		D			E			E			E		
Water flow	(2)	l/h	205	231	305	238	294	382	248	346	458	288	394	494
Water pressure drop	(2)(E)	kPa	6	7	12	6	8	13	3	5	7	4	6	10
Heating capacity	(3)(E)	kW	1,16	1,29	1,71	1,38	1,67	2,17	1,55	2,04	2,72	1,76	2,32	2,89
FCCOP class	(E)		E											
Water flow	(3)	l/h	200	222	294	238	288	374	267	351	468	303	400	498
Water pressure drop	(3)(E)	kPa	4	5	9	6	8	12	2	4	6	3	5	8
Rated air flow		m ³ /h	212	226	305	227	284	378	239	344	467	277	407	520
Power input	(E)	W	19	23	33	25	38	57	28	43	57	29	45	60
Total sound power level	(4)(E)	dB(A)	34	38	44	38	44	50	30	38	44	33	42	48

FLAT			50			60			70		
Speed			min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	2,05	2,56	3,26	2,21	2,92	4,08	2,53	3,30	4,38
Sensible cooling capacity	(1)(E)	kW	1,61	2,00	2,53	1,76	2,33	3,28	2,04	2,69	3,60
FCEER class	(E)		E			E			D		
Water flow	(2)	l/h	353	441	561	381	503	703	436	568	754
Water pressure drop	(2)(E)	kPa	4	5	8	3	5	8	8	13	23
Heating capacity	(3)(E)	kW	2,24	2,67	3,36	2,64	3,36	4,61	2,96	3,76	4,96
FCCOP class	(E)		E								
Water flow	(3)	l/h	386	460	579	455	579	794	510	647	854
Water pressure drop	(3)(E)	kPa	3	4	5	3	5	8	8	14	22
Rated air flow		m ³ /h	338	466	593	365	552	800	418	659	911
Power input	(E)	W	40	56	75	38	58	88	41	65	96
Total sound power level	(4)(E)	dB(A)	36	42	50	42	48	56	43	51	58

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

4 PIPES - RATED TECHNICAL DATA

FLAT			10			20			30			40		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,23	1,39	1,76	1,32	1,64	2,04	1,39	1,95	2,51	1,61	2,22	2,70
Sensible cooling capacity	(1)(E)	kW	0,88	1,00	1,28	0,97	1,22	1,54	1,06	1,48	1,93	1,22	1,70	2,08
FCEER class	(E)		D			E			E			E		
Water flow	(2)	l/h	212	239	303	227	282	351	239	336	432	277	382	465
Water pressure drop	(2)(E)	kPa	5	6	9	5	8	12	2	4	7	3	6	9
Heating capacity	(3)(E)	kW	1,35	1,46	1,76	1,44	1,65	1,96	1,78	2,13	2,59	1,96	2,35	2,74
FCCOP class	(E)		E											
Water flow	(3)	l/h	116	126	152	124	142	169	153	183	223	169	202	236
Water pressure drop	(3)(E)	kPa	3	3	5	3	4	6	6	9	12	7	10	13
Rated air flow		m ³ /h	187	215	289	205	270	359	232	332	451	273	393	502
Power input	(E)	W	19	23	33	25	38	57	28	43	57	29	45	60
Total sound power level	(4)(E)	dB(A)	34	38	44	40	45	50	31	39	45	35	43	49

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

4 PIPES - RATED TECHNICAL DATA

FLAT			50			60			70		
Speed			min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,96	2,46	3,06	2,12	2,82	3,82	2,43	3,18	4,09
Sensible cooling capacity	(1)(E)	kW	1,55	1,92	2,40	1,69	2,24	3,10	1,96	2,59	3,40
FCEER class	(E)		E								
Water flow	(2)	l/h	338	424	527	365	486	658	418	548	704
Water pressure drop	(2)(E)	kPa	3	4	6	6	8	15	5	8	12
Heating capacity	(3)(E)	kW	2,55	2,87	3,36	2,70	3,15	3,91	2,98	3,46	4,16
FCCOP class	(E)		E								
Water flow	(3)	l/h	220	247	289	232	271	337	257	298	358
Water pressure drop	(3)(E)	kPa	4	6	8	5	8	10	3	3	5
Rated air flow		m ³ /h	356	447	569	390	530	768	462	631	873
Power input	(E)	W	40	56	75	38	58	88	41	65	96
Total sound power level	(4)(E)	dB(A)	36	45	50	42	48	56	43	51	58

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 65°C / 55°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

DIMENSIONAL DRAWINGS

FLAT L

LEGEND

1	Water connections standard heat exchanger \varnothing 1/2"
2	DF 1-row additional heat exchanger water connections \varnothing 1/2"
3	Condensate discharge diameter for vertical installation \varnothing 16 mm
\varnothing	Condensate discharge diameter for horizontal installation \varnothing 17 mm

FLAT L	A mm	L mm	kg
10 - 20	534	820	19
30 - 40	704	990	23
50 - 60 - 70	874	1160	28

Design fan coil unit with centrifugal fan and BLDC motor

FLAT i 2 - 5 kW



Technology and design in a single solution

The Galletti FLAT i indoor hydronic units are equipped with a permanent magnet (brushless) electric motor, controlled by an inverter, which enables continuous adjustment in the number of fan revolutions.

In addition to the important reduction in electricity consumption compared to AC motors, the use of inverter BLDC technology makes it possible to continually adjust the operation of the unit to the actual thermo-hygrometric load of the interior, with a clear benefit in terms of comfort and reducing noise.

Its use is particularly effective in the frequent cases of operation under partial load conditions, the situation that occurs most frequently, when the adjustment logic allows greatly reduced motor rotation speeds with exceptional reductions in electricity consumption and noise emissions.

The operation of the unit with brushless motor is managed by EVO, MYCOMFORT LARGE or TED microprocessor control panel, using an analogue output (0-10 V) which is connected to the inverter.

PLUS

- » Inverter-controlled BLDC motor
- » Low energy consumption
- » Modulating operation
- » ABS centrifugal fans
- » Can be integrated into GARDA
- » Cabinet with a refined design in UV-stabilized ABS
- » Microswitch on exit air flap
- » Reversible water connections



AVAILABLE VERSIONS



FLAT Li

Suspended wall installation, with cabinet, with vertical air flow.

MAIN COMPONENTS

Cabinet with a refined design

RAL9010 colour, front panel made of sheet steel. Side panels and an upper grille with covers on either side manufactured from UV-stabilised ABS to maintain the colour intact over time. The upper grille consists of a flap and adjustable louvers. The flap features a microswitch that automatically shuts down the unit when the flap itself is closed.



Structure

Built from galvanised steel sheet of extra thickness, heat and sound insulated by means of Class 1 self-extinguishing panels.

Heat exchanger

High efficiency heat exchanger made with copper piping and aluminium fins, provided with brass manifolds and vent valve. The water connections are reversible at the time of installation. On request it is possible to mount an additional heat exchanger for 4-pipe systems.

Fans

Double suction centrifugal fans, statically and dynamically balanced, manufactured from anti-static ABS, with blades having an airfoil section and offset modules. The fans are housed in a low-noise ABS volute with high-efficiency profile.

BLDC electric motor

The unit is equipped with an inverter board to control the motor, which can be used separately or installed on the motor itself. This system makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V) even when the maximum rotation speed must be controlled to reduce noise levels.



Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

ACCESSORIES

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
KBFLAE	MY COMFORT on-board installation KIT for FLAT
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

KB F	On-board FLAT/FLAT S installation kit suitable for TED controller
TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
TED SWA	Water temperature sensor for TED controls

Additional heat exchanger for 4-pipe systems

DF	1-row additional coil for 4 pipes system
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Auxiliary water drip trays, insulating shell, condensate drainage pump

BH	Auxiliary water drip tray for horizontal installation fan coil units
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BV	Auxiliary water drip tray for vertical installation fan coil units
GIVKL	Insulating shell for VKS valve, water connections on the left
GIVKR	Insulating shell for VKS valve, water connections on the right

Base and enclosure elements

ZL	Pair of base and enclosure elements for FLAT L
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Rear covering panels

PH	Rear painted panel for horizontal installation with cabinet
PV	Rear painted panel for vertical installation with cabinet

Valves

V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

2 PIPES - RATED TECHNICAL DATA

FLAT i			20			40			70		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	5,10	6,90	8,80	4,40	6,50	8,30	4,50	6,30	8,90
Total cooling capacity	(1)(E)	kW	1,39	1,74	2,26	1,46	2,00	2,50	2,56	3,34	4,43
Sensible cooling capacity	(1)(E)	kW	1,03	1,30	1,70	1,12	1,55	1,93	2,07	2,73	3,65
FCEER class	(E)		B								
Water flow	(2)	l/h	239	300	389	251	344	430	441	575	763
Water pressure drop	(2)(E)	kPa	6	8	13	4	6	10	4	6	11
Heating capacity	(3)(E)	kW	1,52	1,84	2,39	1,76	2,32	2,89	2,96	3,76	4,96
FCCOP class	(E)		B								
Water flow	(3)	l/h	262	317	412	303	400	498	510	647	854
Water pressure drop	(3)(E)	kPa	6	8	12	3	5	8	4	7	11
Rated air flow		m ³ /h	216	284	378	283	407	520	482	659	911
Power input	(E)	W	7	11	22	9	15	31	13	21	49
Total sound power level	(4)(E)	dB(A)	38	44	53	33	42	48	43	51	58

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

4 PIPES - RATED TECHNICAL DATA

FLAT i			20			40			70		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	5,10	6,90	8,80	4,40	6,50	8,30	4,50	6,30	8,90
Total cooling capacity	(1)(E)	kW	1,39	1,74	2,26	1,46	2,00	2,50	2,56	3,34	4,43
Sensible cooling capacity	(1)(E)	kW	1,03	1,30	1,70	1,12	1,55	1,93	2,07	2,73	3,65
FCEER class	(E)		C			A			B		
Water flow	(2)	l/h	208	260	324	281	387	472	424	554	713
Water pressure drop	(2)(E)	kPa	5	8	12	3	6	9	4	6	9
Heating capacity	(3)(E)	kW	1,44	1,65	1,96	1,96	2,35	2,74	2,98	3,46	4,16
FCCOP class	(E)		C			B			B		
Water flow	(3)	l/h	124	142	169	169	202	236	257	298	358
Water pressure drop	(3)(E)	kPa	3	4	6	7	10	13	3	3	5
Rated air flow		m ³ /h	205	270	359	273	393	502	462	631	873
Power input	(E)	W	10	16	31	7	12	24	13	21	49
Total sound power level	(4)(E)	dB(A)	40	45	50	35	43	49	43	51	58

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

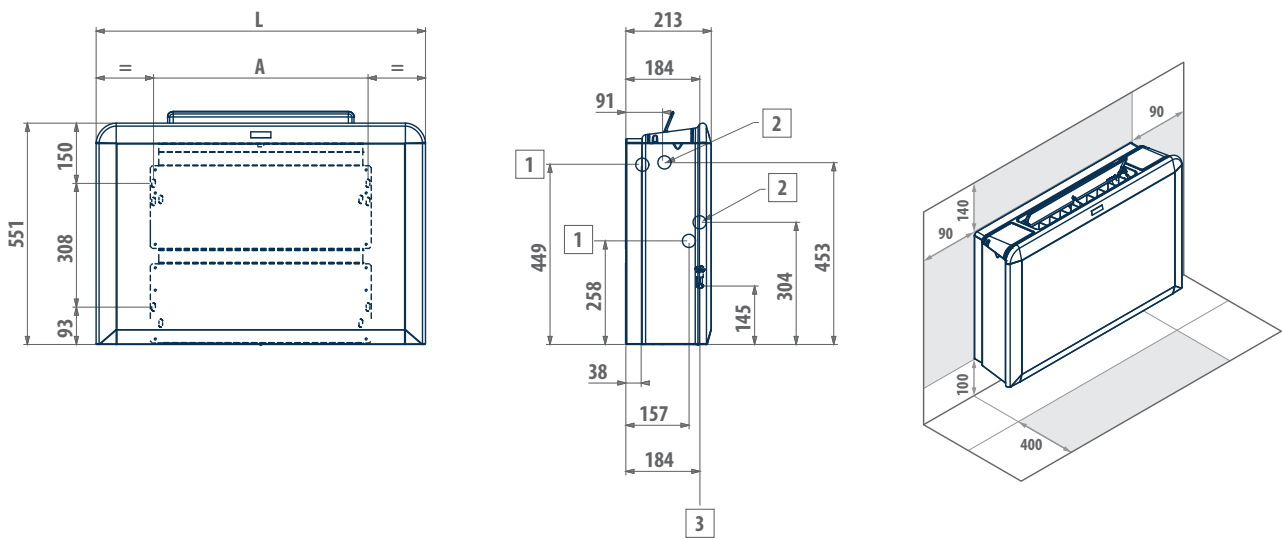
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

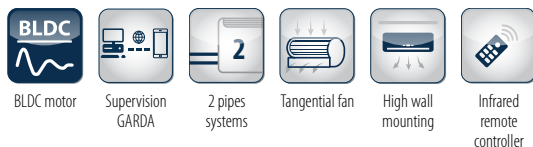
DIMENSIONAL DRAWINGS
FLAT Li

LEGEND

- | | |
|----------|---|
| 1 | Water connections standard heat exchanger \varnothing 1/2" |
| 2 | DF 1-row additional heat exchanger water connections \varnothing 1/2" |
| 3 | Condensate discharge diameter for vertical installation \varnothing 16 mm |
| ø | Condensate discharge diameter for horizontal installation \varnothing 17 mm |

FLAT Li	A mm	L mm	 kg
20	534	820	19
40	704	990	23
70	874	1160	28

High wall-mounted fan coil units

FM 2 - 4 kW



New Galletti hydronic indoor unit which combines quiet operation, a refined design and comfort control

FM stands out for its advanced technological features, including a BLDC motor, incorporated adjustment valve and serial communication.

Automatic control of the fan speed is managed through a proportional, integrative and derivative logic capable of ensuring stability, precision and rapid intervention, respectively.

The serial communication enables the interaction of up to 32 units, thus guaranteeing a global management with automatic adjustment of the parameters on all units coordinated from a single point.

With the WALLPAD accessory it is possible to control the units connected in the system one by one.

FM can be interconnected with a supervision system with Modbus communication.

On the one hand the valve already installed on the unit and the system of hoses permits fast, safe installation, and on the other hand the BLDC fan motor technology and coil providing an optimized heat exchange offer the user a quiet, high-performance, energy efficient indoor unit.

PLUS

- » Electronically controlled BLDC motor
- » Compact dimensions, identical for the whole range
- » Incorporated 2- or 3- way ON OFF valves
- » PID regulation
- » Construction of global addressable networks with an external supervisor



23/33/43 models

These models are characterized by the presence of a 3-way valve installed on the unit which allows it to be integrated into any type of installation, in particular in the presence of ON OFF pumps.

22/32/42 models

The models with a 2-way valve already installed on them can be perfectly adapted to systems which include a modulating circulator or another means for varying the water flow.

MAIN COMPONENTS
Cabinet

The ABS cabinet features attractive design, for every type of environment. The integrated air outlet is equipped with a motor driven flap that can sweep automatically or be positioned manually, and adjustable fins for a uniform distribution of air in the room. The front panel is complete with display to show all the functions of the unit and the room temperature.

Heat exchanger

The finned block heat exchangers consist of copper tubing and aluminium fins. The hydrophilic treatment on the fins assures an optimal heat exchange even in the presence of surface condensation.


Valve assembly

Two- or three-way ON/OFF valves already wired and installed inside the indoor unit. The connection to the system is made with hoses located on the rear of the unit. Without any increase in dimensions or complications in installation, the valve closes on reaching the set point, recirculating the flow of water and preventing it from entering the heat exchanger.

Remote control

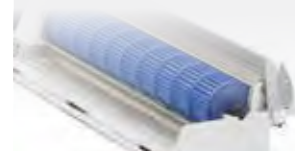
Supplied as a standard feature, the infrared controller can be used to control a single indoor unit or a combined network and to program daily time slots.


BLDC motor

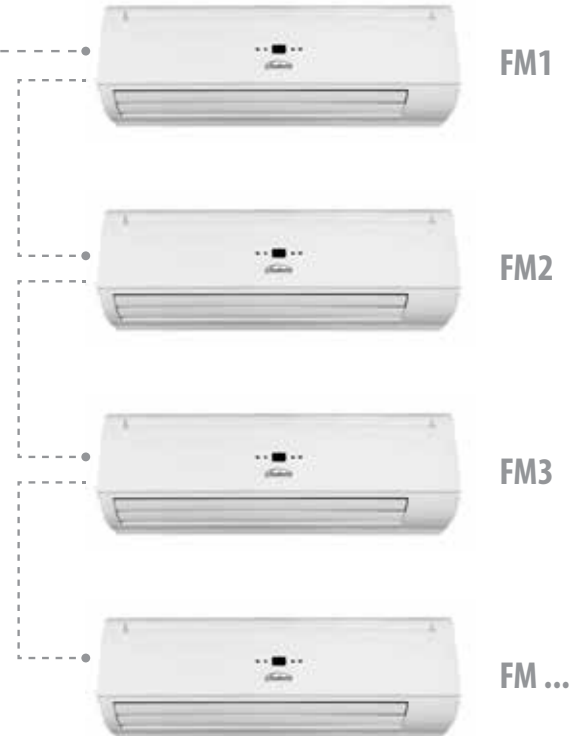
Permanent magnet electronic motor enabling continuous modulation of the fan speed with electricity consumption reduced by more than one half compared to asynchronous motors.

Fan

Low-noise tangential fan.


WALLPAD

The true strong point of this controller is tied to the development of communication networks. By connecting up to 32 units via a network bus and connecting the WALLPAD controller to one of them (Master) it is possible to control their operation. In particular, the user can choose whether to communicate simultaneously with all of the connected units, for example to change the operating mode of the entire system, or dialogue with each individual unit, differentiating the settings between one fan coil and another. The selection of "global" communication or communication with a single indoor unit is made by simply pressing a button.


WALLPAD

ACCESSORIES
Wire remote control
WALLPAD

The wired controller, which may be mounted on the wall, enables advanced control of the hydronic indoor unit. In particular the controller provides the user with detailed information concerning the operating status of the unit at any given time, including temperature, set point, speed, operating mode, flap movement and a lot of other information. It also implements a weekly control of the time slots with an on/off timer.

RATED TECHNICAL DATA

FM			22 / 23			32 / 33			42 / 43		
Speed			min	med	max	min	med	max	min	med	max
Total cooling capacity	(1)(E)	kW	1,11	1,33	1,67	1,32	1,75	2,13	2,66	3,26	3,71
Sensible cooling capacity	(1)(E)	kW	1,00	1,20	1,52	1,14	1,53	1,88	1,94	2,40	2,74
FCEER class			C			B			B		
Water flow	(2)	l/h	191	229	288	227	301	367	458	561	639
Water pressure drop	(2)(E)	kPa	12	19	29	16	28	38	28	40	50
2/3-way valve pressure drop	(2)	kPa	2	3	5	5	6	11	11	17	22
Heating capacity	(3)(E)	kW	1,45	1,76	2,23	1,68	2,14	2,63	3,12	3,86	4,06
FCCOP class			C			C			B		
Water flow	(3)	l/h	250	303	384	289	369	453	537	665	699
Water pressure drop	(3)(E)	kPa	12	19	29	16	28	39	32	46	52
Rated air flow		m ³ /h	290	370	500	370	500	645	570	740	788
Power input	(E)	W	10	13	18	10	15	22	13	20	30
Total sound power level	(4)(E)	dB(A)	35	40	48	40	43	54	46	53	58

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

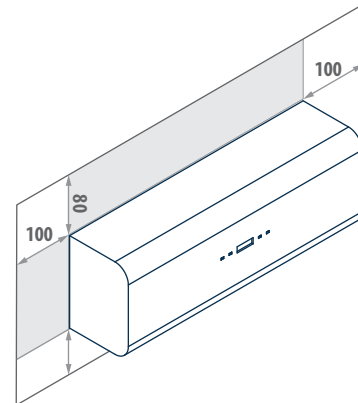
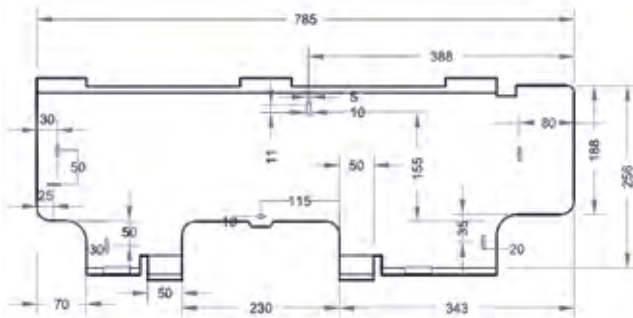
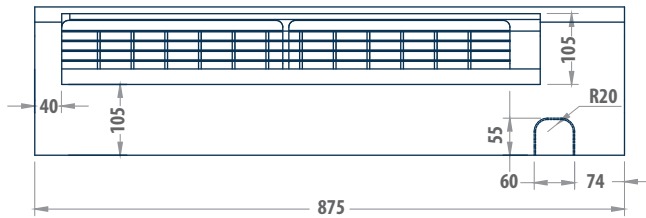
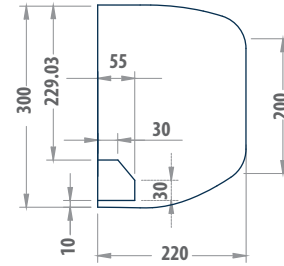
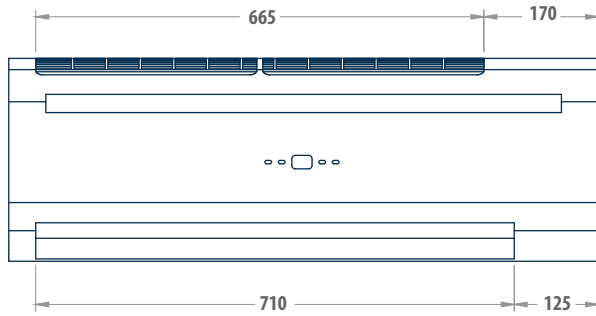
(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 or 220/-1-60 (V-ph-Hz)

DIMENSIONAL DRAWINGS

FM



FM	22 / 23	32 / 33	42 / 43
Water connections	"	1/2	
Condensate discharge	mm	16	
Weight	kg	12	13

Cassette fan coils

IWC 3 - 9 kW



The IWC range combines solidity and efficiency in a single product

IWC by Galletti stands out for the quality of the components and the care taken in assembly and in the details. The fluid-dynamic optimization at the design stage can be seen in the centrifugal fan with backward-curving blades, statically and dynamically balanced for a correct air flow.

The cassette allows the fan speed to be varied among 4 different steps, thus ensuring excellent modulation in the delivery of power and incredibly low noise levels at the operating speeds. It is moreover equipped with a level sensor and condensate drainage pump already integrated in the unit.

These features make IWC a perfect indoor unit in terms of comfort, reliability and durability like only a product made in Italy can be.

The range is completed by a model with an integrated air sanitisation and ionisation system which is capable of assuring the cleanliness and hygiene of both the unit and the air inside the room. Its aesthetic and constructive features make IWC perfect for installation in any interior with a standard modular false ceiling.

PLUS

- » 4-speed fan drive assembly
- » Robust structure and attractive design
- » Possibility of using a sanitisation system
- » Fresh air drawn directly into the intake compartment
- » Possibility of connecting 4-pipe systems in the absence of glycol to a single-heat exchanger unit by means of a 4 x 2 valves kits



AVAILABLE VERSIONS

IWCT

Unit with one heat exchanger and IR remote control

IWC F IWC DF

Unit with one heat exchanger and wired controller
Unit with two heat exchangers and wired controller

MAIN COMPONENTS
Structure

Made from galvanised steel sheet, externally and internally insulated with heat and soundproofing material. The structure houses the main components and is configured for the introduction of air from an external source.

Heat exchanger

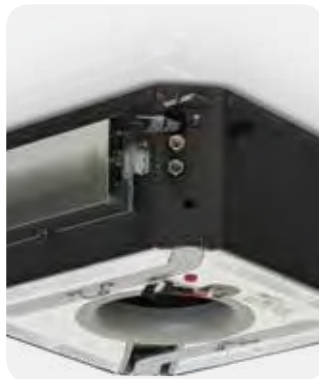
High efficiency heat exchanger made with copper piping and aluminium fins blocked to pipings by mechanical expansion, provided with air vent valves.

Front grille

Complete with filter and adjustable air outlet louvers. Different models of panel based on the type of adjustment selected. Possibility of moving the motorized flap with IR remote control. LED indications of operating status and errors.


Air intake and outlet panel

Colour Ral 9001, with preformed air passages made of high density expanded polystyrene and plastic intake port ensuring effective resistance to mechanical wear.


Fan

Centrifugal fan with backward-curving blades with blade profile designed so as to obtain a stable air flow and extremely quiet, efficient operation even at slow fan speeds.

Electric motor

Asynchronous, mounted on 3 vibration-damping supports and directly coupled to the fan. The motor enables operation at 4 different speeds in order to ensure a more precise adjustment.

CONTROL MODE

IR remote control

The IR control offers the possibility of managing the operation of the indoor unit remotely with utmost convenience.


Standard wired controllers

The cassette is configured to be connected to the wall-mounted controllers included in the Galletti range.

ACCESSORIES
Electronic microprocessor control panels with display

COB	Finishing plate for LED 503 controller, RAL9005 black
COG	Finishing plate for LED 503 controller, RAL7031 grey
COW	Finishing plate for LED 503 controller, RAL9003 white
DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVO DISP	User interface with display for EVO controller
LED503	Recessed wall-mounted electronic display controller LED 503
MCBE	MYCOMFORT BASE electronic controller with display
MCLE	Microprocessor control with display MY COMFORT LARGE
MCME	MYCOMFORT MEDIUM electronic controller with display

MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers
Power interface and regulating louver controllers	
KP	Power interface for connecting in parallel up to 4 fun coil units to the one controller
Valves	
4X2-IWC	Kit 4x2 way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 heat exchanger
V2-IWC	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 or 2 heat exchangers
V3-IWC	3-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 or 2 heat exchangers

RATED TECHNICAL DATA

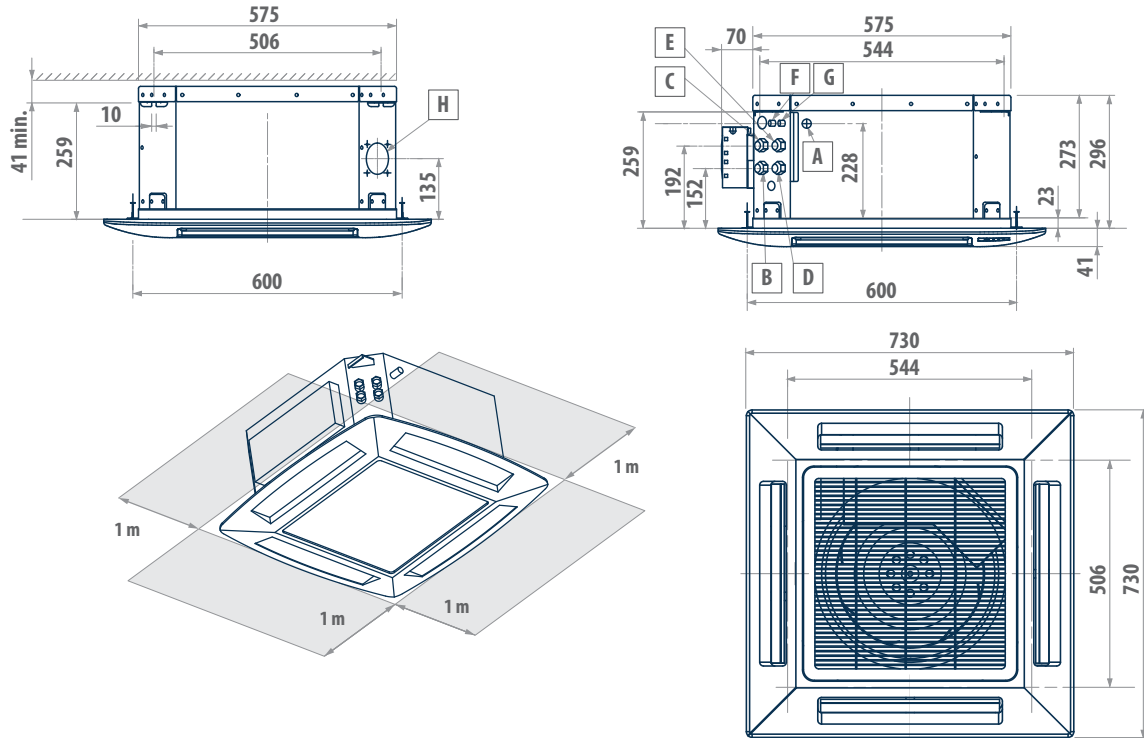
IWC			32				42				52			
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Total cooling capacity	(1)(E)	kW	1,22	2,11	2,30	2,54	1,68	3,44	3,93	4,51	2,44	3,73	4,34	4,96
Sensible cooling capacity	(1)(E)	kW	0,89	1,74	1,95	2,17	1,14	2,57	2,99	3,47	1,81	2,90	3,43	3,94
FCEER class	(E)		E				D				E			
Water flow	(2)	l/h	212	363	396	437	292	592	677	777	423	642	747	854
Water pressure drop	(2)(E)	kPa	3	8	9	11	3	11	14	17	7	14	18	23
Heating capacity	(3)(E)	kW	1,29	2,39	2,63	2,96	1,53	3,63	4,04	4,77	2,83	4,52	5,20	5,69
FCCOP class			E											
Water flow	(3)	l/h	224	412	453	510	267	625	696	821	492	778	895	980
Water pressure drop	(3)(E)	kPa	3	9	11	13	3	12	14	19	9	20	25	29
Rated air flow		m ³ /h	180	400	460	520	200	530	630	750	370	630	760	880
Power input	(E)	W	17	40	50	60	20	60	70	90	26	71	85	98
Total sound power level	(4)(E)	dB(A)	30	41	44	46	32	48	51	55	41	53	57	61

IWC			62				82			
Speed			1	2	3	4	1	2	3	4
Total cooling capacity	(1)(E)	kW	4,12	4,91	5,32	5,88	5,42	6,40	7,88	8,96
Sensible cooling capacity	(1)(E)	kW	3,06	3,61	3,89	4,28	4,03	4,98	5,98	6,70
FCEER class	(E)		E				D			
Water flow	(2)	l/h	721	846	916	1013	944	1102	1357	1543
Water pressure drop	(2)(E)	kPa	16	22	25	30	21	28	41	51
Heating capacity	(3)(E)	kW	4,55	5,38	5,99	6,47	5,20	7,16	7,83	8,42
FCCOP class			E							
Water flow	(3)	l/h	790	926	1031	1114	903	1233	1348	1450
Water pressure drop	(3)(E)	kPa	19	25	31	35	19	33	39	44
Rated air flow		m ³ /h	850	1060	1160	1300	830	1090	1270	1400
Power input	(E)	W	80	90	100	120	80	100	120	140
Total sound power level	(4)(E)	dB(A)	43	48	49	51	37	46	50	53

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 45°C / 40°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

IWC			34				44			
Speed			1	2	3	4	1	2	3	4
Total cooling capacity	(1)	kW	1,10	1,72	1,88	2,05	1,58	2,88	3,28	3,76
Sensible cooling capacity	(1)	kW	0,83	1,51	1,66	1,82	1,10	2,27	2,60	3,00
Total cooling capacity	(2)(E)	kW	1,08	1,68	1,83	1,99	1,56	2,82	3,21	3,67
Sensible cooling capacity	(2)(E)	kW	0,81	1,47	1,61	1,76	1,08	2,21	2,53	2,91
FCEER class	(E)		E							
Water flow	(1)	l/h	189	289	315	343	272	486	553	632
Water pressure drop	(1)(E)	kPa	4	8	9	11	4	11	13	17
Heating capacity DF	(3)(E)	kW	0,96	1,56	1,71	1,93	1,27	2,50	2,74	3,28
FCCOP class DF			E							
Water flow DF	(3)	l/h	85	134	147	166	111	215	236	282
Water pressure drop DF	(3)(E)	kPa	8	20	23	29	5	18	21	28
Rated air flow		m ³ /h	180	400	460	520	200	530	630	750
Power input	(E)	W	17	40	50	60	20	60	70	90
Total sound power level	(4)(E)	dB(A)	30	41	44	46	32	48	51	55

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (3) Water temperature 65°C / 55°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

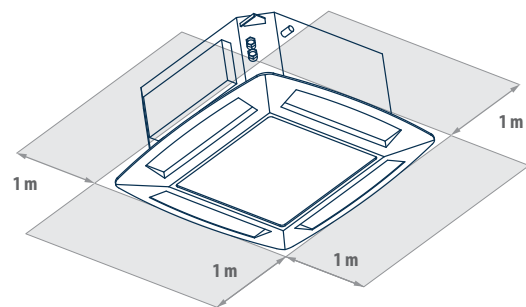
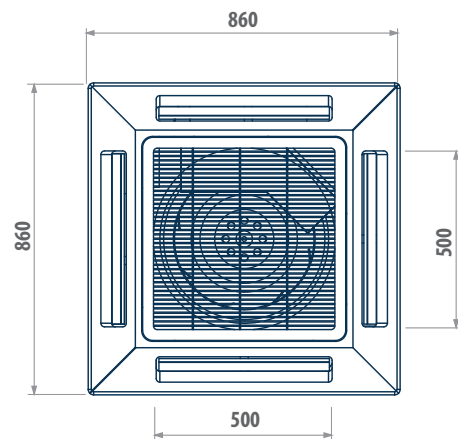
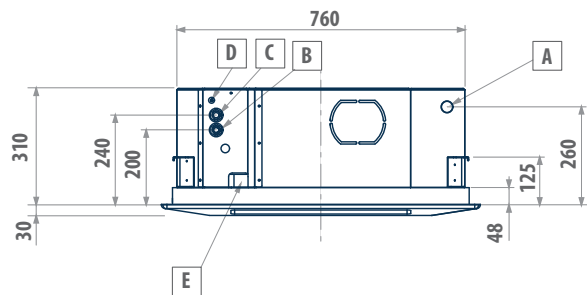
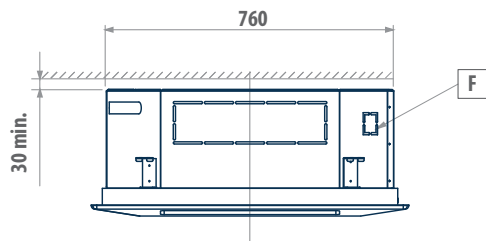
DIMENSIONAL DRAWINGS
IWC 032 - 042 - 052 - 034 - 044

LEGEND

A	Condensate hole: \varnothing external 18 mm
B	Main heat exchanger water inlet \varnothing 1/2" female gas
C	Main heat exchanger water outlet \varnothing 1/2" female gas
D	Additional heat exchanger water inlet \varnothing 1/2" female gas
E	Additional heat exchanger water outlet \varnothing 1/2" female gas
F	Main heat exchanger air vent
G	Additional heat exchanger air vent
H	External air intake \varnothing 70 mm

IWC	kg
32	18 + 2,50
42 - 52	20 + 2,50

DIMENSIONAL DRAWINGS

IWC 062



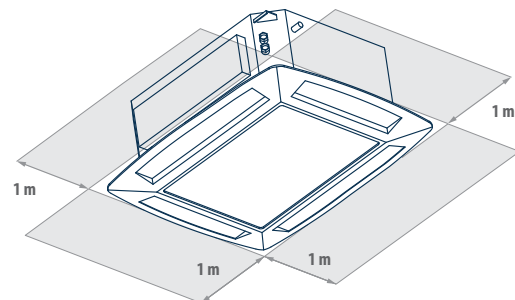
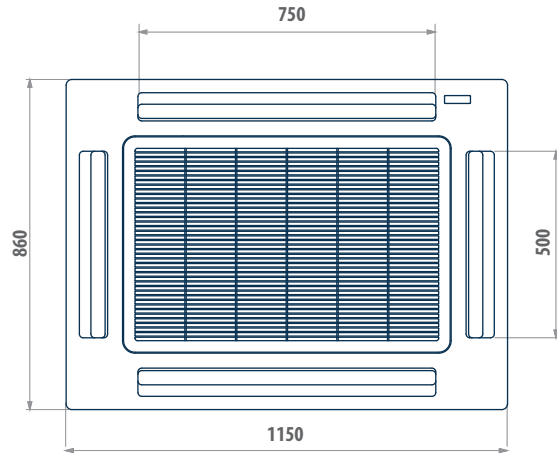
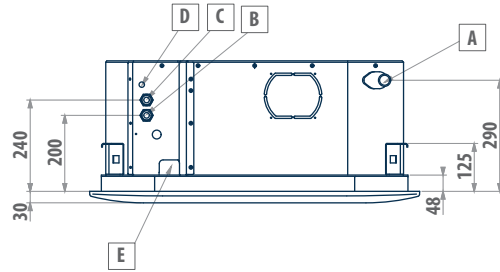
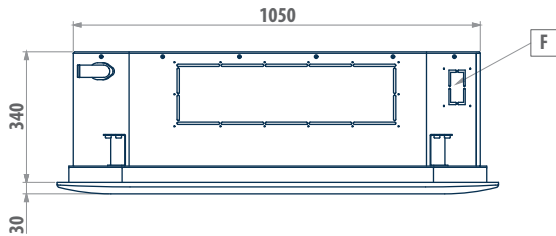
LEGEND

A	Condensate hole: \varnothing external 32 mm
B	Water inlet \varnothing 3/4" female gas
C	Water outlet \varnothing 3/4" female gas
D	Heat exchanger air vent
E	Electrical cable passage
F	Fresh air intake: 60 x 55 mm

IWC	
62	23 + 5 kg

DIMENSIONAL DRAWINGS

IWC 082



LEGEND

A	Condensate hole: \varnothing external 32 mm
B	Water inlet \varnothing 3/4" female gas
C	Water outlet \varnothing 3/4" female gas
D	Heat exchanger air vent
E	Electrical cable passage
F	Fresh air intake: 60 x 55 mm

IWC	
82	kg
29	7

Cassette units ACQVARIA

Cassette fan coils with BLDC motor

ACQVARIA 3 – 10 kW



Available from June 2020



BLDC motor



Supervision
GARDA



2 pipes
systems



4 pipes
systems



Touch screen
device



Recess
ceiling-mount

PLUS

- » GreenTech Technology
- » Permanent magnet BLDC motor insures a precise, continuous control of operation
- » Low energy consumption
- » Fresh air with direct or mixed introduction
- » Condensate drainage pump for height differences of up to 0.9 m
- » Reduced installation and commissioning time

Comfort, low noise, and efficiency in perfect harmony!

The new series of hydronic cassette units ACQVARIA, with inverter-controlled permanent magnet BLDC motor, consists of six models (10-20-30-40-50-60) for 2-pipe systems and four models (10-30-40-60) for 4-pipe systems.

The engineering of the unit makes it possible to develop up to 5 kW in the cooling mode in a standard 600x600 mm modular suspended ceiling and over 10 kW in the 860x860 mm modularity, with exceptionally low noise levels in the phases for maintaining interior comfort.

The well-known advantages of BLDC motors are combined with GreenTech technology (in models 10, 20, and 30), which integrates the inverter directly into the fan drive assembly.

ACQVARIA leverages the entire Galletti, MYCOMFORT, EVO, and TED10 microprocessor controller platform that incorporate sophisticated adjustment logics based on air temperature, air humidity, and water temperature.

These benefits translate into greater accuracy in achieving and maintaining the desired comfort conditions through appropriate modulation of the fan speed as well as the reduction of noise emissions, which adapt to the actual thermal load.

Lastly, electricity consumption is reduced by up to 75% in comparison to conventional fixed-speed AC motors.

The suspended ceiling unit houses all the components, heat exchange coil, fan drive assembly, and condensate collection and drainage system. Its structure is designed for introducing fresh air into the space, mixing it with recovered air, and distributing the treated air from the cassette unit to adjacent rooms.

The design and colour, RAL9003 or RAL9010, of the air intake and diffusion louvre guarantee optimal integration into the suspended ceiling panels. Easy access to the air filter for cleaning operations.

The unit can be supplied complete with valves, including pressure-independent balancing and control valves, the use of which significantly reduces commissioning time.



AVAILABLE VERSIONS

AQBO

Unit with one coil for 2-pipe systems

AQBB

Unit with one coil for 4-pipe systems

MAIN COMPONENTS

Structure

Made of galvanised steel sheet with internal polyurethane foam coating and external closed-cell polyethylene foam to guarantee heat and sound insulation. Fresh air can be introduced into the room directly through the unit due to the provision of connections for neutral or mixed introduction. Accessories are available for connection to ducts. There are systems on the unit for anchoring it to the ceiling. The electrical wiring is housed in a containment box and is easily accessible from the side for easy connection.



Air filter

Honey-comb polypropylene washable air filter, easily removable for maintenance operations.

Heat exchanger

Copper pipe and high efficiency aluminium fins secured to the pipe by mechanical expansion. With at least two rows in the models for 2-pipe systems, it is available in the 2+1 configuration in the models for 4-pipe systems. The coil comes complete with manual air vent valves. On request, valves can be connected to the coil to regulate and balance the operation of the unit.

Fan drive assembly

Inverter-controlled permanent magnet BLDC electric motor (integrated in the GreenTech models) directly connected to a centrifugal fan with backward-curved blades with profile optimised for stable operation at all speeds.

Condensate collection and drainage system

Located under the heat exchanger, the main drip tray is made of polystyrene and is inserted inside the profiles optimised for the distribution of air in the space. The condensate drainage pump is able to raise the condensate up to 0.9 m from the exit point from the unit. The operation of the pump is controlled by a float switch with three levels of action that activate it, stop it and, if the critical level is exceeded, stop the operation of the cassette unit fan and close the water valve. The supply is completed by the auxiliary water drip tray for the collection of condensate from the regulating valves.

Louvre

It is square shaped for the intake and diffusion of air in the space, and it is made of ABS, colour RAL9003 or RAL9010. The air intake louvre can be opened for access to the air filter. Air is diffused in the space through the 4 sides, each of which is equipped with an adjustable fin with suitable thermal insulation.



ACCESSORIES

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
EVO-2-TOUCH	2.8" touch screen user interface for EVO control
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
EYNAVEL	Device for Wi-Fi or Bluetooth communication between EVOBOARD and smartphone
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
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TED SWA	Water temperature sensor for TED controls
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Valves

PIC-AQi	PRESSURE-INDEPENDENT 2-way valves for models with 1 or 2 coils
V2-AQi	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 or 2 heat exchangers
V3-AQi	3-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for model with 1 or 2 heat exchangers

Plenum, air intake modules, air inlet and outlet connectors

BAR	Spigot for introduction of mixed renewal air
PAR	Plenum for introduction of unmixed renewal air
PMAA	Air outlet plenum

RATED TECHNICAL DATA 2 PIPES

ACQVARIA			AQ10B0				AQ20B0				AQ30B0			
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,50	4,50	6,00	2,00	4,00	5,50	8,00	2,00	4,00	6,50	10,0
Total cooling capacity	(1)	kW	1,33	1,93	2,24	2,63	1,49	2,68	3,40	4,39	1,54	2,76	3,95	5,23
Sensible cooling capacity	(1)	kW	0,99	1,51	1,81	2,20	1,03	1,94	2,54	3,41	1,05	1,98	2,96	4,11
FCEER class			A											
Water flow	(1)	l/h	229	331	385	452	256	460	584	754	264	473	678	898
Water pressure drop	(1)	kPa	2	4	5	7	3	5	15	23	3	9	18	29
Heating capacity	(2)	kW	1,49	2,27	2,70	3,25	1,42	2,69	3,48	4,58	1,47	2,77	4,09	5,55
FCCOP class			A				B				B			
Water flow	(2)	l/h	258	395	470	565	248	468	605	797	255	481	711	965
Water pressure drop	(2)	kPa	2	5	6	9	3	8	13	21	3	8	16	27
Rated air flow		m ³ /h	212	361	454	583	187	397	551	796	190	397	650	980
Power input		W	6	6	9	17	6	9	14	37	6	10	21	67
Total sound power level	(3)	dB(A)	28	35	40	46	28	37	44	54	29	38	49	61

ACQVARIA			AQ40B0				AQ50B0				AQ60B0			
Speed			1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,00	5,00	10,0	2,00	3,00	5,00	8,00	2,00	4,00	6,50	10,0
Total cooling capacity	(1)	kW	4,76	5,36	6,39	8,27	5,17	5,92	7,26	9,01	5,26	6,70	8,37	10,5
Sensible cooling capacity	(1)	kW	3,44	3,92	4,75	6,35	3,66	4,24	5,31	6,78	3,69	4,80	6,15	7,97
FCEER class			A				A				B			
Water flow	(1)	l/h	817	921	1097	1420	888	1015	1245	1545	902	1150	1436	1805
Water pressure drop	(1)	kPa	13	16	21	34	10	13	18	27	10	15	22	33
Heating capacity	(2)	kW	5,25	6,00	7,30	9,74	5,43	6,33	7,99	10,2	5,48	7,23	9,35	12,2
FCCOP class			A				B				B			
Water flow	(2)	l/h	912	1043	1269	1692	944	1100	1390	1779	952	1257	1625	2116
Water pressure drop	(2)	kPa	13	16	23	38	9	12	19	29	9	15	23	36
Rated air flow		m ³ /h	821	978	1276	1916	724	864	1143	1554	710	976	1321	1831
Power input		W	15	18	36	150	15	18	36	93	15	25	60	150
Total sound power level	(3)	dB(A)	35	39	45	57	35	39	45	53	36	43	50	58

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 45°C / 40°C, air temperature 20°C

(3) Sound power measured according to standards ISO 3741 and ISO 3742

Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 4 PIPES

ACQVARIA			AQ10BB				AQ30BB				AQ40BB				AQ60BB			
Speed			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Control voltage		V	2,00	3,50	4,50	6,00	2,00	4,00	6,50	10,0	2,00	3,00	5,00	10,0	2,00	4,00	6,50	10,0
Total cooling capacity	(1)	kW	1,24	1,85	2,18	2,60	1,26	2,05	2,80	3,61	4,61	5,34	6,61	9,07	4,70	6,09	7,62	9,50
Sensible cooling capacity	(1)	kW	0,92	1,46	1,79	2,23	0,92	1,62	2,38	3,31	3,34	3,94	5,03	7,29	3,37	4,50	5,82	7,56
FCEER class DF			A				A				A				B			
Water flow		l/h	213	317	374	447	216	352	480	620	792	917	1135	1555	806	1045	1307	1631
Water pressure drop		kPa	2	4	6	8	2	5	9	14	12	15	22	37	11	17	25	37
Heating capacity	(2)	kW	2,03	2,90	3,34	3,86	2,04	3,14	4,06	4,98	7,01	7,96	9,53	12,3	7,15	8,96	10,8	12,9
FCCOP class			A				B				A				B			
Water flow	(2)	l/h	178	254	292	338	178	275	356	435	613	697	834	1078	626	785	947	1133
Water pressure drop	(2)	kPa	3	6	8	11	3	7	11	16	11	14	19	30	12	18	24	33
Rated air flow		m ³ /h	199	254	460	610	195	395	643	982	687	841	841	1823	673	956	1314	1823
Power input		W	6	6	9	17	3	11	49	61	15	14	36	150	15	25	60	150
Total sound power level	(3)	dB(A)	28	35	40	46	29	38	21	67	35	39	45	57	36	43	50	58

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 65°C / 55°C, air temperature 20°C

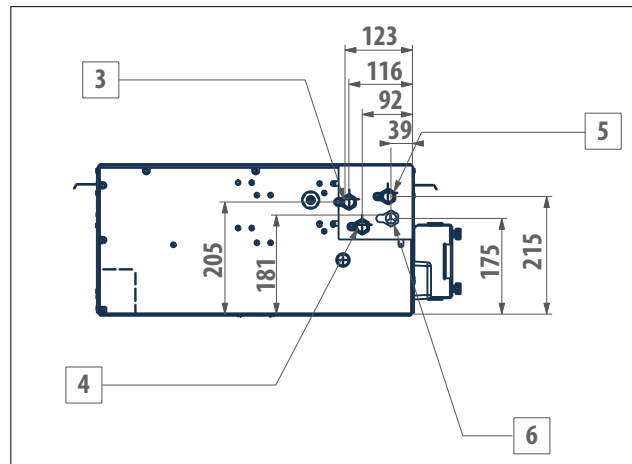
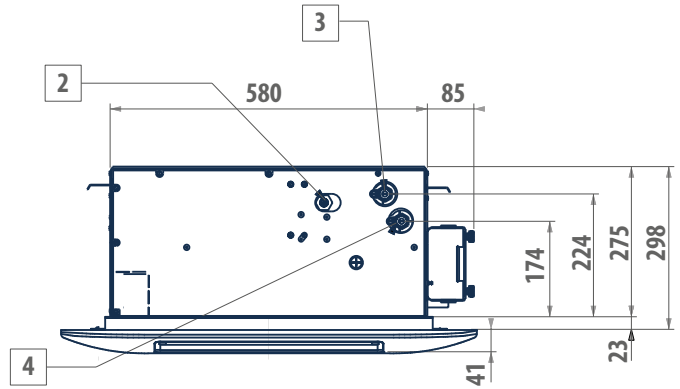
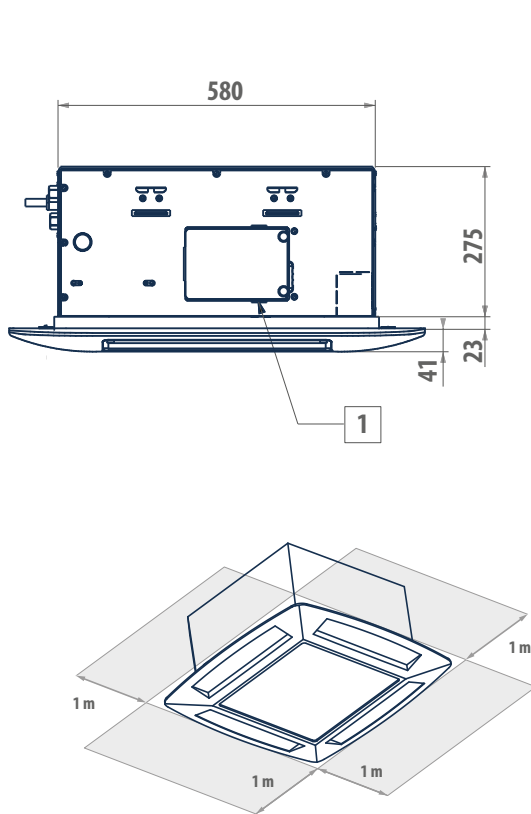
(3) Sound power measured according to standards ISO 3741 and ISO 3742

Power supply 230-1-50 (V-ph-Hz)

Cassette units ACQVARIA

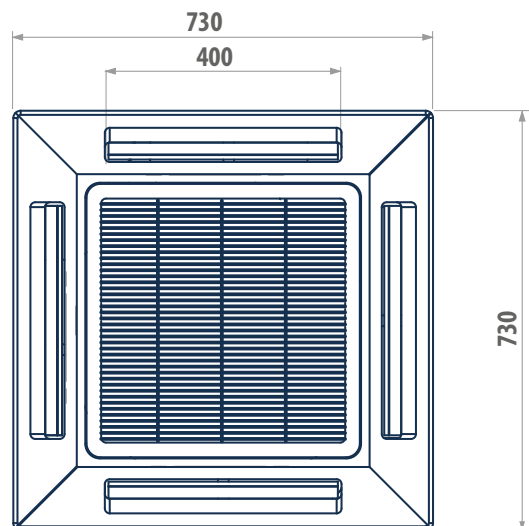
DIMENSIONAL DRAWINGS

ACQVARIA 10, 20, 30 (Size 20 not available for dual coil version)



LEGEND

- | | |
|---|--|
| 1 | Electrical cable passage |
| 2 | Condensate discharge ϕ 10 |
| 3 | Water outlet ϕ 1/2" female gas |
| 4 | Water inlet ϕ 1/2" female gas |
| 5 | Water outlet ϕ 1/2" DF female gas |
| 6 | Water inlet ϕ 1/2" DF female gas |



ACQVARIA

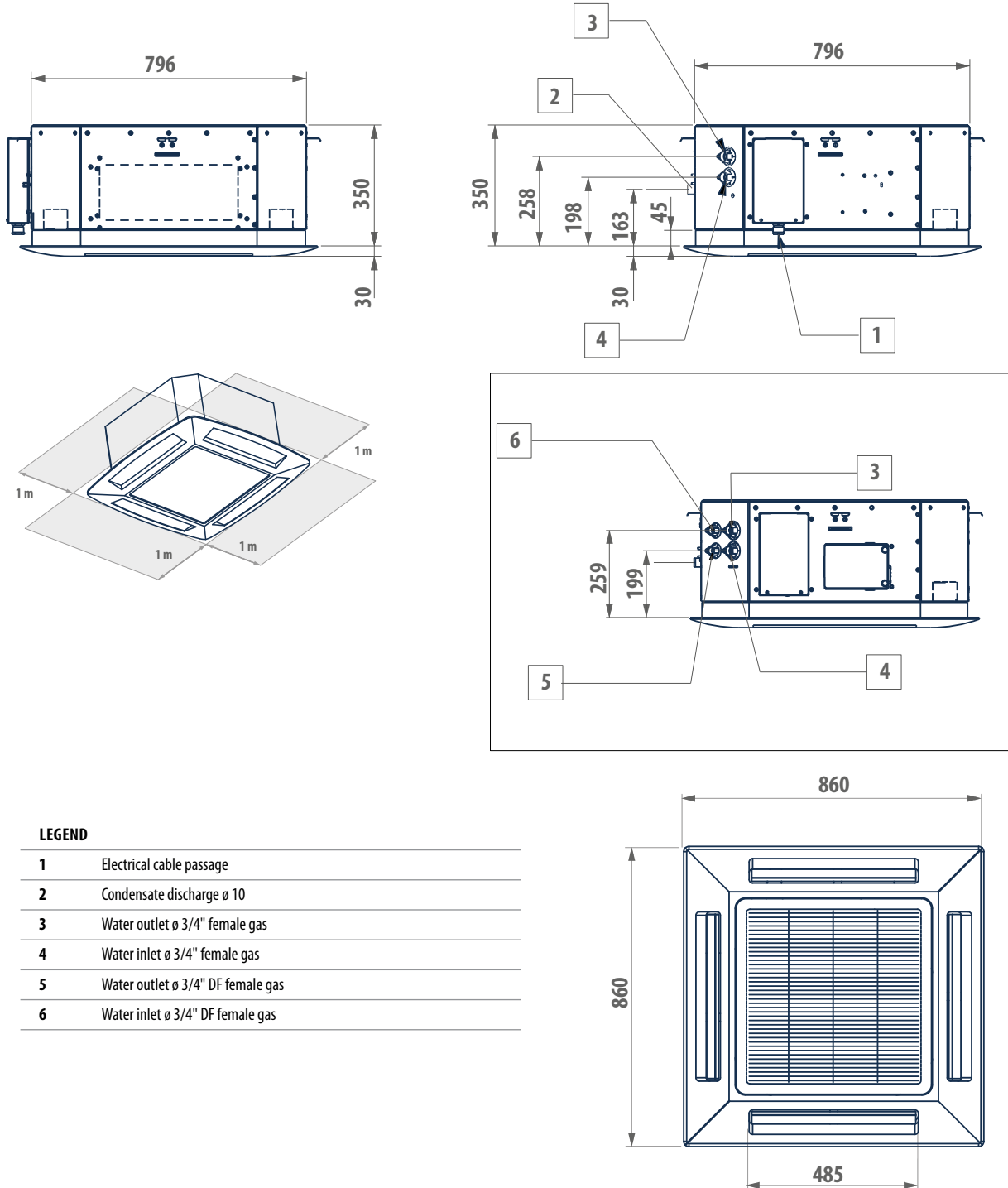


AQ10B0 - AQ20B0
- AQ30B0 - AQ10BB
- AQ30BB

23 + 2,5

DIMENSIONAL DRAWINGS

ACQVARIA 40, 50, 60 (Size 50 not available for dual coil version)



LEGEND

1	Electrical cable passage
2	Condensate discharge \varnothing 10
3	Water outlet \varnothing 3/4" female gas
4	Water inlet \varnothing 3/4" female gas
5	Water outlet \varnothing 3/4" DF female gas
6	Water inlet \varnothing 3/4" DF female gas

ACQVARIA	kg
AQ40B0 - AQ50B0 - AQ60B0	37 + 5
AQ40BB - AQ60BB	37 + 5

Medium available head duct units

DUCTIMAX 2 - 8 kW



Performance and compactness in recessed ceiling installations

The DUCTIMAX ducted unit has been conceived for air conditioning interiors where the installation of high-performance medium head units with reduced overall dimensions is required. The range features 12 models with air flows of from 300 to 1200 m³/h. The heat exchanger enables DUCTIMAX to be used under a whole variety of operating conditions. The weight-bearing structure in fact houses a 3- or 4-row exchanger which can be combined with an additional 1 or 2-rows exchanger (on request) for exceptional performance even with low temperature differentials. The heat exchangers can be optimized for centralized applications such as district cooling. DUCTIMAX is designed for horizontal ceiling installation. The main condensate drip tray is situated inside the structure of the unit and is at a positive pressure relative to the drain outlet to facilitate condensate drainage.

A wide range of wall-mounted controllers is available, including controllers of an electromechanical type and microprocessor controllers with display. The use of MYCOMFORT MEDIUM and MYCOMFORT LARGE or EVO enables DUCTIMAX to be connected to GARDA.

Heating elements complete with safety devices are available to supplement the hydronic system.

The action of the G3 air filter can be combined with an air ionisation system.

PLUS

- » Multi speed motor
- » Heat exchanger up to 4 rows
- » Reversible water connections
- » ABS centrifugal fans
- » Can be integrated into GARDA



The bearing structure allows to combine a large range of accessories in suction and air delivery in order to obtain the optimized unit configuration.

AVAILABLE VERSIONS

DMXXD0LO...A Units for 2 pipes systems
DMXXD0LL...A Unit for 4-pipe systems equipped with an additional 1-row exchanger for the hot water circuit

DMXXD0LM...A Unit for 4-pipe systems equipped with an additional 2-row exchanger for the hot water circuit
(On request)

Available on request air decontamination system installed on special plenum

MAIN COMPONENTS

Structure

Built from galvanised steel sheet, heat and sound insulated by means of Class 1 self-extinguishing panels. Reduced height to facilitate installation in a horizontal position in a false ceiling. The structure incorporates a drip tray and condensate drain outlet.

Heat exchanger

High efficiency 3 and 4 rows heat exchanger made with copper piping and aluminium fins blocked to pipings by mechanical expansion, provided with brass manifolds and air vent valve. The heat exchanger usually comes with water connections mounted on the left, but it can be turned by 180°. High-efficiency heat exchangers optimized for district cooling applications are available on request.

Electric motor

Single-phase asynchronous multi-speed electric motor with permanently connected capacitor and thermal protector, mounted on vibration-damping supports.

Fans

Double suction centrifugal fans made with ABS or aluminium, with statically and dynamically balanced forward-curving blades, directly coupled to the electric motor.

Air filter

Washable air filter, made of acrylic fibre, filtration class G2 or G3, applied on the air intake; may be pulled out from below.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11
DM44		D	I	L	O	1	E	O	O	3	O	A

To verify the compatibility of the options, use the selection software or the price list.

CONFIGURATOR

- | | |
|--|---|
| <p>1 Version
D Ducted version</p> <p>2 Motor
0 3-speed motor
1 7-speed motor
I BLDC motor
P 6 speed motor</p> <p>3 Main coil hydraulic side
L Water connections on the left side
R Water connections on the right</p> <p>4 Additional coil hydraulic side / heating element
0 Absent
E RE - Electrical heating elements
L Water connections on the left side
R Water connections on the right</p> <p>5 Valve
0 Absent
1 VKS - 3 ways valve - 230 V - ON/OFF - complete hydraulic kit
2 KV - 2 ways valve - 230 V - ON/OFF
3 VKMS - 3 ways valve - 24 V - MODULATING - complete hydraulic kit
4 KVM - 2 ways valve - 24 V - MODULATING
5 VKS24 - 3 way valve - 24 V - ON/OFF - complete hydraulic kit
6 KV24 - 2 way valve - 24 V - ON/OFF</p> | <p>6 Control panel
0 Absent
E EVOBOARD - Circuit board</p> <p>7 Probes
0 Absent
1 SA - Remote air probe for MYCOMFORT, LED503 and EVO
2 SW - Water probe for MYCOMFORT, LED503 and EVO
3 SU - Humidity probe for MYCOMFORT and EVO
4 SA+SW - Remote air and water probes for MYCOMFORT, LED503 and EVO
5 SA+SU - Remote air and humidity probes for MYCOMFORT and EVO
6 SA+SU+SW - Remote air, water, humidity probes for MYCOMFORT and EVO
B SA - Remote air probe for TED
C SW - Water probe for TED
D SA + SW - Air and water probes for TED</p> <p>8 Accessories
0 Absent
5 BH - Auxiliary drip tray</p> <p>9 Filter
2 G2 Filter
3 G3 filter</p> <p>10 Release
0 0
A A</p> |
|--|---|

ACCESSORIES

Electromechanical control panels

CD	Recess wall-mounted speed switch
CDE	Wall mounted speed selector
TC	Thermostat for minimum water temperature in heating mode (42 °C)

Electronic microprocessor control panels with display

COB	Finishing plate for LED 503 controller, RAL9005 black
COG	Finishing plate for LED 503 controller, RAL7031 grey
COW	Finishing plate for LED 503 controller, RAL9003 white
DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
LED503	Recessed wall-mounted electronic display controller LED 503
MCBE	MYCOMFORT BASE electronic controller with display
MCLE	Microprocessor control with display MY COMFORT LARGE
MCME	MYCOMFORT MEDIUM electronic controller with display
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

TED 2T	Electronic controller for AC fan control and one ON/OFF 230 V valve
TED 4T	Electronic controller for AC fan control and two ON/OFF 230 V valves
TED SWA	Water temperature sensor for TED controls

Power interface and regulating lower controllers

KP	Power interface for connecting in parallel up to 4 fan coil units to the one controller
----	---

Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
----	---

Air inlet and outlet grilles

GA	Aluminium air intake grille, with frame
GM	Aluminium air outlet grille with 2-row fins and subframe

Valves

V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

Plenum, air intake modules, air inlet and outlet connectors

MAFO	Air intake module with G4 air filter
PAF	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMA	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMAC	Intake and delivery plenum, insulated, with spigot Ø 200 mm
R90	90° uninsulated air inlet/outlet connector
R90C	90° uninsulated air inlet/outlet connector
RD	Straight uninsulated air inlet/outlet connector
RDC	Straight insulated air inlet/outlet connector

Flexible ducts - caps

TFA	Not insulated flexible ducts, Ø 200 mm (6 m length undivisible)
TFM	Insulated flexible ducts, Ø 200 mm (6 m length undivisible)
TP	Plastic cap Ø 200 mm

Air inlet and outlet plenum box

CA	Air Inlet plenum box with double row grille
CAF	Air Inlet plenum box with double row grille 300 x 600 mm and filter G2
CM	Insulated air outlet plenum box with grille

Accessories

KSC	Condensate drainage pump kit
VRC	Auxiliary water drip tray

Duct unit DUCTIMAX

RATED TECHNICAL DATA 2 PIPES

DUCTIMAX			13			14			23			24		
Speed			min (1)	med (4)	max (6)	min (1)	med (4)	max (6)	min (1)	med (5)	max (7)	min (1)	med (5)	max (7)
Rated air flow	(E)	m ³ /h	108	246	276	138	246	276	171	275	341	171	275	341
Available static pressure	(E)	Pa	15	50	63	15	50	63	19	50	77	19	50	77
Power input	(E)	W	24	57	82	24	57	82	34	69	106	34	69	106
Total cooling capacity	(1)(E)	kW	1,10	1,73	1,90	1,16	1,91	2,11	1,27	1,91	2,28	1,37	2,11	2,54
Sensible cooling capacity	(1)(E)	kW	0,75	1,22	1,33	0,78	1,30	1,43	0,89	1,34	1,59	0,93	1,44	1,73
FCEER class	(E)		D											
Water flow	(2)	l/h	189	298	327	200	329	363	219	329	393	236	363	437
Water pressure drop	(2)(E)	kPa	2	5	6	3	7	3	3	7	10	5	10	15
Heating capacity	(3)(E)	kW	1,04	1,71	1,88	1,14	1,98	2,20	1,33	1,98	2,35	1,41	2,20	2,68
FCCOP class	(E)		D											
Water flow	(3)	l/h	179	294	324	196	341	379	229	341	405	243	379	461
Water pressure drop	(3)(E)	kPa	2	4	5	2	6	7	2	5	7	3	7	10
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	26	48	52	26	48	52	36	50	58	36	50	58
Inlet + radiated sound power level	(4)(E)	dB(A)	29	46	50	29	46	50	34	48	56	34	48	56
Outlet sound power level	(4)(E)	dB(A)	27	45	49	27	45	49	32	47	55	32	47	55

DUCTIMAX			33			34			43			44		
Speed			min (1)	med (6)	max (7)	min (1)	med (6)	max (7)	min (1)	med (4)	max (7)	min (1)	med (4)	max (7)
Rated air flow	(E)	m ³ /h	196	360	402	196	360	402	305	532	652	305	532	652
Available static pressure	(E)	Pa	14	50	63	14	50	63	17	50	76	17	50	76
Power input	(E)	W	34	85	106	34	85	106	76	143	192	76	143	192
Total cooling capacity	(1)(E)	kW	1,45	2,29	2,52	1,58	2,70	2,97	1,93	3,18	3,69	2,30	3,79	4,47
Sensible cooling capacity	(1)(E)	kW	1,02	1,69	1,86	1,07	1,85	2,03	1,42	2,39	2,81	1,58	2,61	3,08
FCEER class	(E)		D			D			E			D		
Water flow	(2)	l/h	250	394	434	272	465	511	332	548	635	396	653	770
Water pressure drop	(2)(E)	kPa	2	5	6	3	9	11	3	8	11	6	14	18
Heating capacity	(3)(E)	kW	1,57	2,70	2,96	1,59	2,80	3,10	2,35	3,70	4,31	2,41	3,95	4,68
FCCOP class	(E)		D											
Water flow	(3)	l/h	270	465	510	274	482	534	405	637	742	415	680	806
Water pressure drop	(3)(E)	kPa	2	5	6	2	6	8	4	9	11	5	12	16
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	36	52	58	36	52	58	39	52	60	39	52	60
Inlet + radiated sound power level	(4)(E)	dB(A)	34	50	56	34	50	56	37	50	58	37	50	58
Outlet sound power level	(4)(E)	dB(A)	32	49	55	32	49	55	35	47	56	35	47	56

DUCTIMAX			53			54			63			64		
Speed			min (1)	med (6)	max (7)	min (1)	med (6)	max (7)	min (1)	med (2)	max (3)	min (1)	med (2)	max (3)
Rated air flow	(E)	m ³ /h	337	687	760	337	687	760	1045	1170	1285	1045	1170	1285
Available static pressure	(E)	Pa	12	50	61	12	50	61	40	50	60	26	50	60
Power input	(E)	W	76	167	192	76	167	192	235	280	332	235	280	332
Total cooling capacity	(1)(E)	kW	2,24	4,24	4,65	2,47	4,80	5,25	6,15	6,72	7,22	6,90	7,55	8,12
Sensible cooling capacity	(1)(E)	kW	1,62	3,09	3,39	1,71	3,33	3,64	4,49	4,91	5,28	4,81	5,26	5,66
FCEER class	(E)		D											
Water flow	(2)	l/h	386	730	801	425	827	904	1059	1157	1243	1188	1300	1398
Water pressure drop	(2)(E)	kPa	2	7	8	3	10	12	13	16	18	20	23	26
Heating capacity	(3)(E)	kW	2,57	4,75	5,17	2,65	5,03	5,49	6,64	7,23	7,76	7,15	7,84	8,44
FCCOP class	(E)		D											
Water flow	(3)	l/h	443	818	890	456	866	945	1143	1245	1336	1231	1350	1453
Water pressure drop	(3)(E)	kPa	2	7	8	3	9	11	12	14	16	17	20	22
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	39	55	60	39	55	60	59	62	69	59	62	69
Inlet + radiated sound power level	(4)(E)	dB(A)	37	53	58	37	53	58	57	60	67	57	60	67
Outlet sound power level	(4)(E)	dB(A)	35	51	56	35	51	56	55	58	65	55	58	65

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 4 PIPES

DUCTIMAX			13			14			23			24		
Speed			min (1)	med (4)	max (6)	min (1)	med (4)	max (6)	min (1)	med (5)	max (7)	min (1)	med (5)	max (7)
Rated air flow	(E)	m ³ /h	137	243	270	137	243	270	170	272	336	170	272	336
Available static pressure	(E)	Pa	15	50	63	15	50	63	19	50	77	19	50	77
Power input	(E)	W	24	57	82	24	57	82	34	69	106	34	69	106
Total cooling capacity	(1)(E)	kW	1,09	1,70	1,86	1,16	1,89	2,07	1,26	1,89	2,25	1,36	2,09	2,50
Sensible cooling capacity	(1)(E)	kW	0,75	1,20	1,31	0,78	1,28	1,40	0,88	1,33	1,57	0,92	1,42	1,70
FCEER class	(E)		D											
Water flow	(2)	l/h	188	293	320	200	325	356	217	325	387	234	360	430
Water pressure drop	(2)(E)	kPa	2	5	6	3	7	8	3	6	8	4	8	12
Heating capacity	(3)(E)	kW	1,34	1,93	2,06	1,34	1,93	2,06	1,55	2,06	2,32	1,55	2,06	2,32
FCCOP class	(E)		C			C			D			D		
Water flow	(3)	l/h	115	166	177	115	166	177	133	177	200	133	177	200
Water pressure drop	(3)(E)	kPa	1	2	3	1	2	3	2	3	3	2	3	3
Total sound power level	(4)	dB(A)	26	48	52	26	48	52	36	50	58	36	50	58
Additional coil DF - number of rows			1			1			1			1		
Inlet + radiated sound power level	(4)(E)	dB(A)	29	46	50	29	46	50	34	48	56	34	48	56
Outlet sound power level	(4)(E)	dB(A)	27	45	49	27	45	49	32	47	55	32	47	55

DUCTIMAX			33			34			43			44		
Speed			min (1)	med (6)	max (7)	min (1)	med (6)	max (7)	min (1)	med (4)	max (7)	min (1)	med (4)	max (7)
Rated air flow	(E)	m ³ /h	195	357	398	195	357	398	302	524	642	302	524	642
Available static pressure	(E)	Pa	14	50	63	14	50	63	17	50	75	17	50	75
Power input	(E)	W	34	85	106	34	85	106	76	143	192	76	143	192
Total cooling capacity	(1)(E)	kW	1,44	2,27	2,49	1,57	2,68	2,94	1,90	3,14	3,65	2,28	3,74	4,41
Sensible cooling capacity	(1)(E)	kW	1,01	1,68	1,84	1,07	1,84	2,01	1,41	2,36	2,78	1,56	2,57	3,04
FCEER class	(E)		D			D			E			E		
Water flow	(2)	l/h	248	391	429	270	461	506	327	541	629	393	644	759
Water pressure drop	(2)(E)	kPa	2	5	5	3	7	9	3	8	11	6	13	18
Heating capacity	(3)(E)	kW	2,09	3,09	3,29	2,09	3,09	3,29	2,80	3,82	4,24	2,80	3,82	4,24
FCCOP class	(E)		C			C			D			D		
Water flow	(3)	l/h	180	266	283	180	266	283	241	329	365	241	329	365
Water pressure drop	(3)(E)	kPa	2	3	4	2	3	4	3	5	6	3	5	6
Total sound power level	(4)	dB(A)	36	52	58	36	52	58	39	52	60	39	52	60
Additional coil DF - number of rows			1			1			1			1		
Inlet + radiated sound power level	(4)(E)	dB(A)	34	50	56	34	50	56	37	50	58	37	50	58
Outlet sound power level	(4)(E)	dB(A)	32	49	55	32	49	55	35	47	56	35	47	56

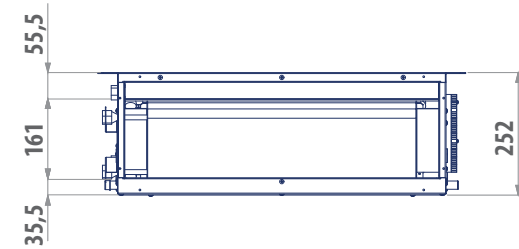
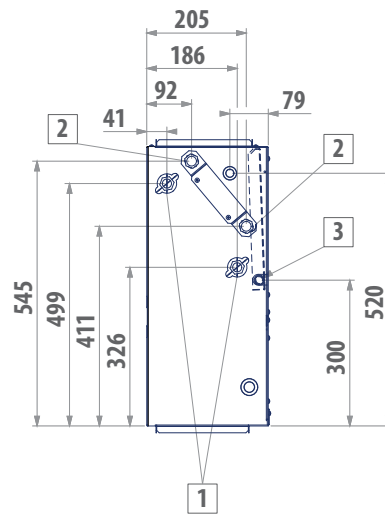
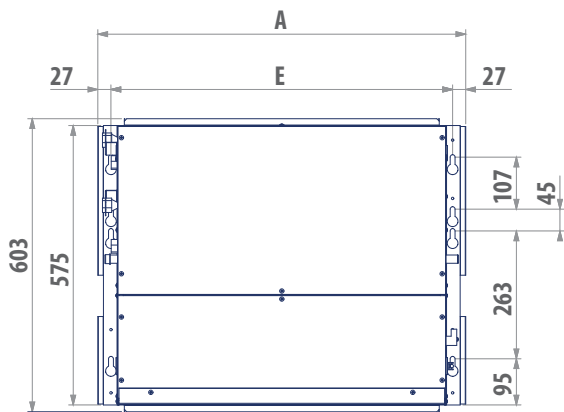
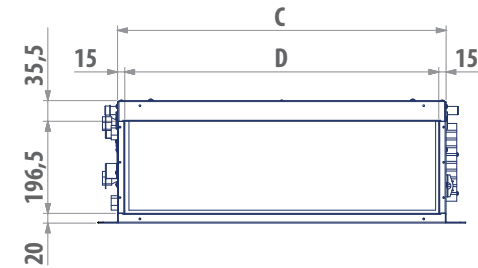
DUCTIMAX			53			54			63			64		
Speed			min (1)	med (6)	max (7)	min (1)	med (6)	max (7)	min (1)	med (2)	max (3)	min (1)	med (2)	max (3)
Rated air flow	(E)	m ³ /h	336	683	755	336	683	755	1045	1170	1285	1045	1170	1285
Available static pressure	(E)	Pa	12	50	61	12	50	61	40	50	60	40	50	60
Power input	(E)	W	76	167	192	76	167	192	235	280	332	235	280	332
Total cooling capacity	(1)(E)	kW	2,24	4,21	4,62	2,46	4,78	5,22	6,11	6,66	7,13	6,86	7,48	8,02
Sensible cooling capacity	(1)(E)	kW	1,62	3,08	3,37	1,71	3,31	3,62	4,46	4,87	5,21	4,78	5,21	5,59
FCEER class	(E)		D			D			E			D		
Water flow	(2)	l/h	386	725	796	424	823	899	1052	1147	1228	1181	1288	1381
Water pressure drop	(2)(E)	kPa	2	7	8	3	10	12	13	16	18	19	23	26
Heating capacity	(3)(E)	kW	3,42	5,17	5,45	3,14	4,75	5,01	6,38	6,72	7,00	6,38	6,72	7,00
FCCOP class	(E)		D											
Water flow	(3)	l/h	294	445	469	270	409	431	549	579	603	549	579	603
Water pressure drop	(3)(E)	kPa	6	13	14	6	13	14	19	21	22	19	21	22
Total sound power level	(4)	dB(A)	39	55	60	39	55	60	59	62	69	59	62	69
Additional coil DF - number of rows			1			1			1			1		
Inlet + radiated sound power level	(4)(E)	dB(A)	37	53	58	37	53	58	57	60	67	57	60	67
Outlet sound power level	(4)(E)	dB(A)	35	51	56	35	51	56	55	58	65	55	58	65

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 - (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 - (3) Water temperature 65°C / 55°C, air temperature 20°C
 - (4) Sound power measured according to standards ISO 3741 and ISO 3742
 - (E) EUROVENT certified data
- Power supply 230-1-50 (V-ph-Hz)

Duct unit DUCTIMAX

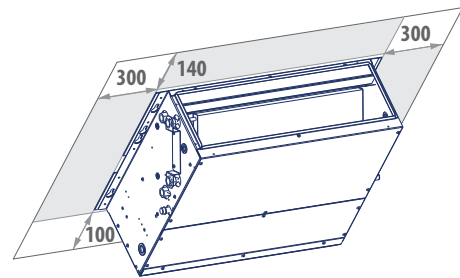
DIMENSIONAL DRAWINGS

DUCTIMAX 1-4



LEGEND

- | | |
|---|---|
| 1 | Water connections standard heat exchanger \varnothing 1/2" female gas |
| 2 | Water connections additional heat exchanger \varnothing 1/2" female gas |
| 3 | Condensate discharge |

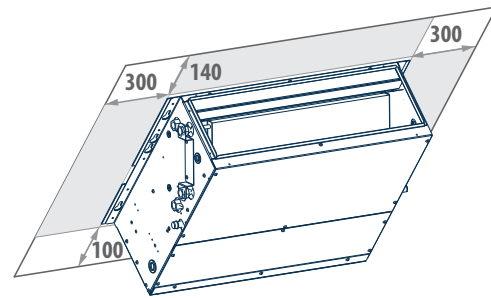
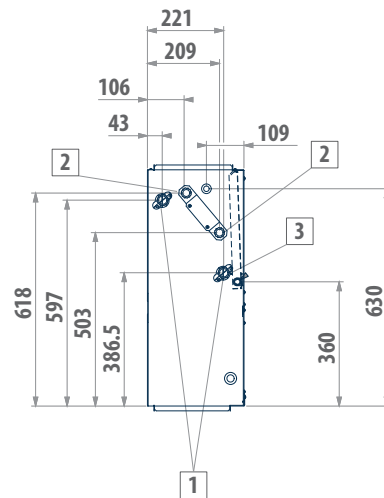
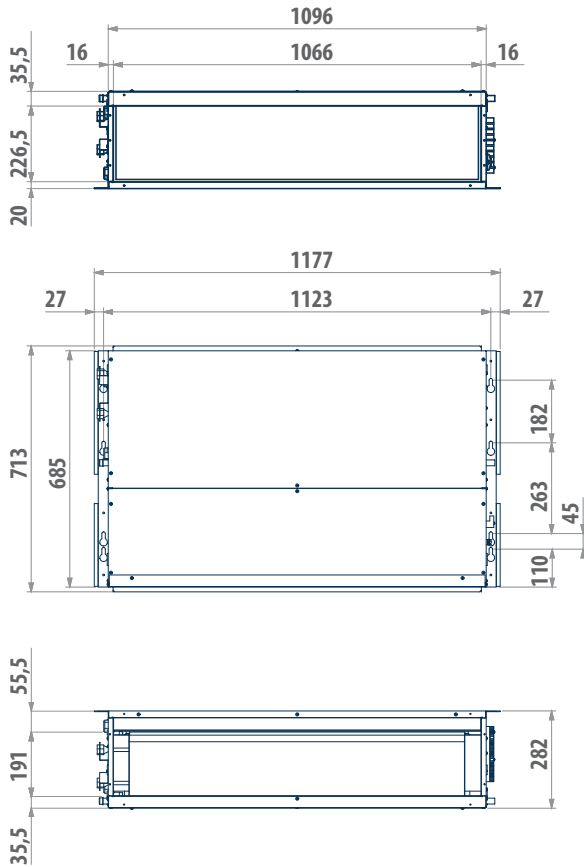


DUCTIMAX	13	14	23	24	33	34	43	44
ON/OFF motor	x	x	x	x	x	x	x	x
Inverter-controlled motor	x	x	x	x	x	x	x	x

x = available

DUCTIMAX	A	C	D	E	1	3	kg
	mm	mm	mm	mm	"	mm	kg
13 - 14	757	677	648	703	1/2	17	19
23 - 24	757	677	648	703	1/2	17	20
33 - 34	967	887	858	913	1/2	17	25
43 - 44	967	887	858	913	1/2	17	28

DIMENSIONAL DRAWINGS

DUCTIMAX 5-6

LEGEND

- | | |
|---|---|
| 1 | Water connections standard heat exchanger \varnothing 3/4" female gas |
| 2 | Water connections additional heat exchanger \varnothing 1/2" female gas |
| 3 | Condensate discharge |

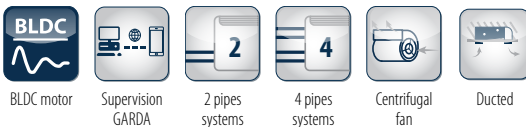
DUCTIMAX	53	54	63	64
ON/OFF motor	X	X	X	X
Inverter-controlled motor	X	X	X	X

x = available

DUCTIMAX	1	2	kg	3 mm
53 - 54	3/4	1/2	33	17
63 - 64	3/4	1/2	39	17

Medium available head duct units with BLDC motor

DUCTIMAX i 2 - 8 kW



Modulation and efficiency in a recess ceiling-mounted unit

The range is completed by DUCTIMAX i, which uses inverter BLDC technology in the electric motors. To the features of DUCTIMAX it adds the benefits of brushless technology, including a reduction in electricity consumption and consequent reduction in CO₂ emissions, increase in operating flexibility thanks to the modulation of air flow and increase in the level of comfort in terms of temperature, humidity and noise levels.

The range is made up of 12 models with air flows from 300 to 1200 m³/h.

Continuous modulation of the air flow and the use of high-efficiency heat exchangers enables operation also with small air-water temperature differences.

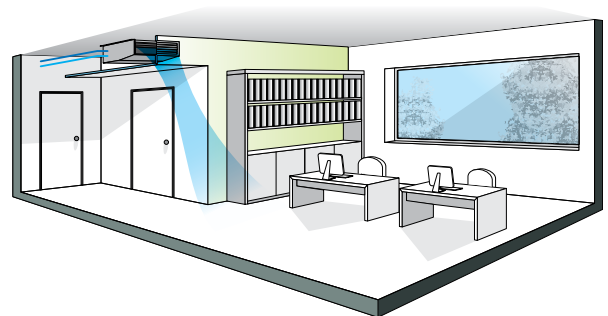
The heat exchangers can also be optimized in the circuit for centralized applications such as district cooling.

Operation is controlled from wall-mounted microprocessor control panels with display, such as the MYCOMFORT LARGE and EVO models which also enable DUCTIMAX i to be connected to GARDA.

The action of the G3 air filter can be combined with an air ionisation system available as an accessory.

PLUS

- » Permanent magnet BLDC motor
- » Low electricity consumption
- » Easy setup of ventilation section
- » Heat exchanger up to 4 rows
- » Compact dimensions
- » Reversible water connections
- » Can be integrated into GARDA
- » Wide range of available accessories



Besides assuring a big advantage in terms of energy efficiency, the inverter-controlled BLDC motor enables flexibility of installation and reduces the time needed to set up the ventilation section, thanks to the continuous modulation of air flow.

AVAILABLE VERSIONS

DMXXDILO...A Units for 2 pipes systems

DMXXDILL...A Unit for 4-pipe systems equipped with an additional 1-row exchanger for the hot water circuit

D M X X - DILM...A - Unit for 4-pipe systems equipped with an additional 2-row exchanger for the hot water circuit (**On request**)

Available on request air decontamination system installed on special plenum

MAIN COMPONENTS

Structure

Built from galvanised steel sheet, heat and sound insulated by means of Class 1 self-extinguishing panels. Reduced height to facilitate installation in a horizontal position in a false ceiling. The structure incorporates a drip tray and condensate drain outlet.

The main condensate drip tray is situated inside the structure of the unit and is at a positive pressure relative to the drain outlet to facilitate condensate drainage.

Fans

Double suction centrifugal fans made with ABS or aluminium, with statically and dynamically balanced forward-curving blades, directly coupled to the electric motor.



BLDC electric motor

Permanent magnet motor The unit is equipped with an inverter board to control the motor, that makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V).



Heat exchanger

High efficiency 3 and 4 rows heat exchanger made with copper piping and aluminium fins blocked to pipings by mechanical expansion, provided with brass manifolds and air vent valve. The heat exchanger usually comes with water connections mounted on the left, but it can be turned by 180°. High-efficiency heat exchangers optimized for district cooling applications are available on request.

Air filter

Washable air filter, made of acrylic fibre, filtration class G2 or G3, applied on the air intake; may be pulled out from below.

ACCESSORIES

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
TED SWA	Water temperature sensor for TED controls

Auxiliary water drip trays, insulating shell, condensate drainage pump

KSC	Condensate drainage pump kit
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Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
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Air inlet and outlet grilles

GA	Aluminium air intake grille, with frame
GM	Aluminium air outlet grille with 2-row fins and subframe

Valves

V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
--------------	---

V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
---------------	---

Plenum, air intake modules, air inlet and outlet connectors

MAFO	Air intake module with G4 air filter
PAF	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMA	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMAC	Intake and delivery plenum, insulated, with spigot Ø 200 mm
R90	90° uninsulated air inlet/outlet connector
R90C	90° uninsulated air inlet/outlet connector
RD	Straight uninsulated air inlet/outlet connector
RDC	Straight insulated air inlet/outlet connector

Flexible ducts - caps

TFA	Not insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TFM	Insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TP	Plastic cap Ø 200 mm

Air inlet and outlet plenum box

CA	Air Inlet plenum box with double row grille
CAF	Air Inlet plenum box with double row grille 300 x 600 mm and filter G2
CM	Insulated air outlet plenum box with grille

Accessories

VRC	Auxiliary water drip tray
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Duct unit DUCTIMAX i

RATED TECHNICAL DATA 2 PIPES

DUCTIMAX i			13			14			23			24		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,90	7,30	8,50	3,90	7,30	8,50	4,10	6,60	8,00	4,10	6,60	8,00
Rated air flow	(E)	m ³ /h	138	246	276	138	246	276	171	275	341	171	275	341
Available static pressure	(E)	Pa	15	50	63	15	50	63	19	50	77	19	50	77
Power input	(E)	W	5	26	35	5	26	35	12	28	43	12	28	43
Total cooling capacity	(1)(E)	kW	1,11	1,76	1,95	1,17	1,94	2,16	1,29	1,95	2,35	1,39	2,15	2,61
Sensible cooling capacity	(1)(E)	kW	0,76	1,25	1,38	0,79	1,33	1,48	0,91	1,38	1,66	0,95	1,48	1,80
FCEER class	(E)		A			A			B			A		
Water flow	(2)	l/h	191	303	336	201	334	372	222	336	405	239	370	449
Water pressure drop	(2)(E)	kPa	2	5	6	3	7	3	3	7	10	5	10	15
Heating capacity	(3)(E)	kW	1,10	1,81	1,99	1,14	1,98	2,20	1,33	1,98	2,35	1,41	2,20	2,68
FCCOP class	(E)		A											
Water flow	(3)	l/h	189	312	343	196	341	379	229	341	405	243	379	461
Water pressure drop	(3)(E)	kPa	2	4	5	2	6	7	2	5	7	3	7	10
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	26	48	52	26	48	52	36	50	58	36	50	58
Inlet + radiated sound power level	(4)(E)	dB(A)	29	46	50	29	46	50	34	48	56	34	48	56
Outlet sound power level	(4)(E)	dB(A)	27	45	49	27	45	49	32	47	55	32	47	55

DUCTIMAX i			33			34			43			44		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,10	7,30	8,30	4,10	7,30	8,30	4,00	6,80	8,60	4,00	6,80	8,60
Rated air flow	(E)	m ³ /h	196	360	402	196	360	402	305	532	652	305	532	652
Available static pressure	(E)	Pa	14	50	63	14	50	63	17	50	76	17	50	76
Power input	(E)	W	13	38	46	13	34	46	18	47	82	18	47	82
Total cooling capacity	(1)(E)	kW	1,47	2,34	2,58	1,60	2,75	3,03	1,99	3,27	3,80	2,36	3,88	4,58
Sensible cooling capacity	(1)(E)	kW	1,04	1,74	1,92	1,09	1,90	2,09	1,48	2,48	2,92	1,64	2,70	3,19
FCEER class	(E)		B			A			B			A		
Water flow	(2)	l/h	253	403	444	276	474	522	343	563	654	406	668	789
Water pressure drop	(2)(E)	kPa	2	5	6	3	9	11	3	8	11	6	14	18
Heating capacity	(3)(E)	kW	1,57	2,70	2,96	1,59	2,80	3,10	2,35	3,70	4,31	2,41	3,95	4,68
FCCOP class	(E)		A											
Water flow	(3)	l/h	270	465	510	274	482	534	405	637	742	415	680	806
Water pressure drop	(3)(E)	kPa	2	5	6	2	6	8	4	9	11	5	12	16
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	36	52	58	36	52	58	39	52	60	39	52	60
Inlet + radiated sound power level	(4)(E)	dB(A)	39	50	56	34	50	56	37	50	58	37	50	58
Outlet sound power level	(4)(E)	dB(A)	32	49	55	32	49	55	35	47	56	35	47	56

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 86

RATED TECHNICAL DATA 2 PIPES

DUCTIMAX i			53			54			63			64		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,20	7,90	8,70	4,20	7,90	8,70	7,40	8,20	8,90	7,40	8,20	8,90
Rated air flow	(E)	m ³ /h	337	687	760	337	687	760	1045	1170	1285	1045	1170	1285
Available static pressure	(E)	Pa	12	50	61	12	50	61	40	50	60	40	50	60
Power input	(E)	W	18	62	77	18	62	77	119	153	189	119	153	189
Total cooling capacity	(1)(E)	kW	2,30	4,35	4,76	2,53	4,91	5,36	6,26	6,85	7,36	7,01	7,68	8,26
Sensible cooling capacity	(1)(E)	kW	1,68	3,20	3,50	1,77	3,44	3,75	4,60	5,04	5,42	4,92	5,39	5,80
FCEER class	(E)		A			A			C			C		
Water flow	(2)	l/h	396	749	820	436	846	923	1078	1180	1267	1207	1322	1422
Water pressure drop	(2)(E)	kPa	2	7	8	3	10	12	13	16	18	20	23	26
Heating capacity	(3)(E)	kW	2,57	4,75	5,17	2,65	5,03	5,49	6,64	7,23	7,76	7,15	7,84	8,44
FCCOP class	(E)		A			A			C			C		
Water flow	(3)	l/h	443	818	890	456	866	945	1143	1245	1336	1231	1350	1453
Water pressure drop	(3)(E)	kPa	2	7	8	3	9	11	12	14	16	17	20	22
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	39	55	60	39	55	60	59	62	69	59	62	69
Inlet + radiated sound power level	(4)(E)	dB(A)	37	53	58	37	53	58	57	60	67	57	60	67
Outlet sound power level	(4)(E)	dB(A)	35	51	56	35	51	56	55	58	65	55	58	65

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 45°C / 40°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 86

RATED TECHNICAL DATA 4 PIPES

DUCTIMAX i			13			14			23			24		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,90	7,30	8,50	3,90	7,30	8,50	4,10	6,60	8,00	4,10	6,60	8,00
Rated air flow	(E)	m ³ /h	137	243	270	137	243	270	170	181	224	170	272	336
Available static pressure	(E)	Pa	15	50	63	15	50	63	19	50	77	19	50	77
Power input	(E)	W	6	26	38	6	26	34	12	27	42	12	27	42
Total cooling capacity	(1)(E)	kW	1,11	1,76	1,95	1,17	1,94	2,16	1,29	1,95	2,35	1,39	2,15	2,61
Sensible cooling capacity	(1)(E)	kW	0,76	1,25	1,38	0,79	1,33	1,48	0,91	1,38	1,66	0,95	1,48	1,80
FCEER class	(E)		A			A			B			A		
Water flow	(2)	l/h	189	298	329	201	331	365	220	332	400	238	367	443
Water pressure drop	(2)(E)	kPa	2	5	6	3	7	8	3	6	8	4	8	12
Heating capacity	(3)(E)	kW	1,34	1,93	2,06	1,34	1,93	2,06	1,20	1,60	1,80	1,55	2,06	2,32
FCCOP class	(E)		A			A			B			A		
Water flow	(3)	l/h	115	166	177	115	166	177	103	138	155	133	177	200
Water pressure drop	(3)(E)	kPa	1	2	3	1	2	3	2	3	3	2	3	3
Additional coil DF - number of rows			3+1			4+1			3+1			4+1		
Total sound power level	(4)	dB(A)	26	48	52	26	48	52	36	50	58	36	50	58
Inlet + radiated sound power level	(4)(E)	dB(A)	29	46	50	29	46	50	34	48	56	34	48	56
Outlet sound power level	(4)(E)	dB(A)	30	45	49	27	45	49	32	47	55	32	47	55

DUCTIMAX i			33			34			43			44		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,10	7,30	8,30	4,10	7,30	8,30	4,00	6,80	8,60	4,00	6,80	8,60
Rated air flow	(E)	m ³ /h	195	357	398	195	357	398	302	524	642	302	524	642
Available static pressure	(E)	Pa	14	50	63	14	50	63	17	50	75	17	50	75
Power input	(E)	W	13	34	45	13	34	45	18	47	79	18	47	79
Total cooling capacity	(1)(E)	kW	1,47	2,34	2,58	1,60	2,75	3,03	1,99	3,27	3,80	2,36	3,88	4,58
Sensible cooling capacity	(1)(E)	kW	1,04	1,74	1,92	1,09	1,90	2,09	1,48	2,48	2,92	1,64	2,70	3,19
FCEER class	(E)		B			A			B			A		
Water flow	(2)	l/h	251	400	441	274	470	518	338	556	647	403	660	778
Water pressure drop	(2)(E)	kPa	2	5	5	3	7	9	3	8	11	6	13	18
Heating capacity	(3)(E)	kW	2,09	3,09	3,29	2,09	3,09	3,29	2,80	3,82	4,24	2,80	3,82	4,24
FCCOP class	(E)		A											
Water flow	(3)	l/h	180	266	283	180	266	283	241	329	365	241	329	365
Water pressure drop	(3)(E)	kPa	2	3	4	2	3	4	3	5	6	3	5	6
Additional coil DF - number of rows			3+1			4+1			3+1			4+1		
Total sound power level	(4)	dB(A)	36	52	58	36	52	58	39	52	60	39	52	60
Inlet + radiated sound power level	(4)(E)	dB(A)	34	50	56	34	50	56	37	50	58	37	50	58
Outlet sound power level	(4)(E)	dB(A)	32	49	55	32	49	55	35	47	56	35	47	56

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 96

RATED TECHNICAL DATA 4 PIPES

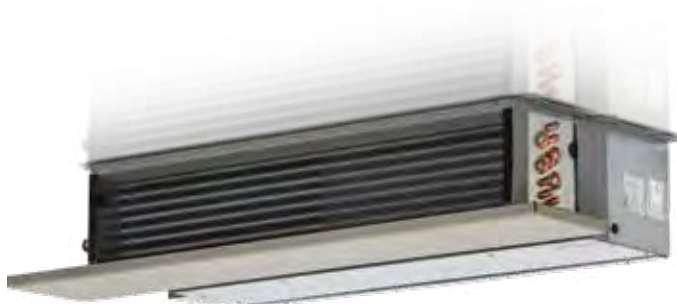
DUCTIMAX i			53			54			63			64		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,20	7,90	8,70	4,20	7,90	8,70	7,40	8,20	8,90	7,40	8,20	8,90
Rated air flow	(E)	m ³ /h	336	683	755	336	683	755	1045	1170	1285	1045	1170	1285
Available static pressure	(E)	Pa	12	50	61	12	50	61	40	50	60	40	50	60
Power input	(E)	W	18	61	77	18	61	77	118	150	184	118	150	184
Total cooling capacity	(1)(E)	kW	2,30	4,35	4,76	2,53	4,91	5,36	6,26	6,85	7,36	7,01	7,68	8,26
Sensible cooling capacity	(1)(E)	kW	1,68	3,20	3,50	1,77	3,44	3,75	4,60	5,04	5,42	4,92	5,39	5,80
FCEER class	(E)		A			A			C			C		
Water flow	(2)	l/h	396	744	815	434	842	918	1071	1169	1254	1200	1310	1407
Water pressure drop	(2)(E)	kPa	2	7	8	3	10	12	13	16	18	19	23	26
Heating capacity	(3)(E)	kW	3,42	5,17	5,45	3,42	5,17	5,45	6,38	6,72	7,00	6,38	6,72	7,00
FCCOP class	(E)		A			A			C			C		
Water flow	(3)	l/h	294	445	469	294	445	469	549	579	603	549	579	603
Water pressure drop	(3)(E)	kPa	6	13	14	6	13	14	19	21	22	19	21	22
Additional coil DF - number of rows			3+1			4+1			3+1			4+1		
Total sound power level	(4)	dB(A)	39	55	60	39	55	60	59	62	69	59	62	69
Inlet + radiated sound power level	(4)(E)	dB(A)	37	53	58	37	53	58	57	60	67	57	60	67
Outlet sound power level	(4)(E)	dB(A)	35	51	56	35	51	56	55	58	65	55	58	65

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 65°C / 55°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 96

Medium available head duct units

PWN 3 - 10 kW



Versatile and quiet, designed for recess ceiling mounting

The range of PWN duct units is designed for air conditioning systems in interiors requiring the installation of particularly versatile, low-noise, medium-head (up to 80Pa) units.

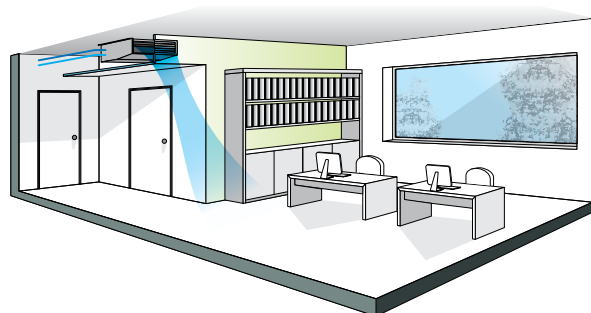
PWN ducted units are available in 9 different models with flow rates ranging from 400 to 1200 m³/h and cooling capacities from 2.6 to 10.3 kW.

The PWN units are built with a galvanized sheet steel weight-bearing structure, duly insulated, and all models are equipped with a 7-speed electric motor which ensures great flexibility during installation. The heat exchanger is available in 3-, 4- or 6-row versions. The latter is particularly recommended for heat pump systems, in which the outlet water temperature is lower. The exchanger is normally mounted with connections on the left side (the wiring box is present on the same side), but it can be rotated by 180° on the installation site. By installing the accessory external module (additional MDF exchanger) it is possible to connect PWN in 4-pipe systems. PWN units can find a place in commercial buildings, hotel rooms and meeting rooms. They have been conceived with a particular construction enabling the basic model to be expanded by installing a series of accessories so as to adapt PWN to the needs of any horizontal recess ceiling-mount application.



PLUS

- » Standard 7 speed motors
- » Heat exchanger up to 6 rows
- » Available head up to 80 Pa
- » Reduced height across the entire range (240 mm)
- » Amply sized condensate drip tray
- » Wide range of available accessories
- » Can be integrated into GARDA
- » Available on request air decontamination system installed on special plenum



MAIN COMPONENTS

Structure

Built from galvanized sheet steel, designed for horizontal installation, insulated with class 1 self-extinguishing panels, complete with slots for rapid fixing.

Heat exchanger

High efficiency 3, 4 and 6 rows heat exchanger made with copper piping and aluminium fins blocked to pipings by mechanical expansion, provided with brass manifolds and air vent valve. The water connections are reversible.

Fans

Double suction centrifugal fans made with ABS or aluminium, with statically and dynamically balanced forward-curved blades, directly coupled to the electric motor.



Electric motor

Seven-speed electrical motor, mounted on vibration damping couplings, directly connected to the fans, with permanently activated capacitor and winding thermal protection.

Water drip tray

Extended beyond the dimensions of the unit, it can collect condensate both from the heat exchanger and any regulating valves.


Air filter

Washable air filter, made of acrylic fibre, mounted on a galvanised sheet frame protected by a net, easily removable for maintenance operations. Class G3 air filter available as an optional accessory.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11
PN23		D	1	L	0	2	0	0	0	3	0	A

To verify the compatibility of the options, use the selection software or the price list.

CONFIGURATOR

- | | |
|--|--|
| <p>1 Version
D Ducted version</p> <p>2 Motor
1 7-speed motor
I BLDC motor</p> <p>3 Main coil hydraulic side
L Water connections on the left side
R Water connections on the right</p> <p>4 Additional coil hydraulic side / heating element
0 Absent</p> <p>5 Valve
0 Absent
1 VKS - 3 ways valve - 230 V - ON/OFF - complete hydraulic kit
2 KV - 2 ways valve - 230 V - ON/OFF
3 VKMS - 3 ways valve - 24 V - MODULATING - complete hydraulic kit
4 KVM - 2 ways valve - 24 V - MODULATING
5 VKS24 - 3 way valve - 24 V - ON/OFF - complete hydraulic kit
6 KV24 - 2 way valve - 24 V - ON/OFF</p> <p>6 Control panel
0 Absent</p> | <p>E EVOBOARD - Circuit board</p> <p>7 Probes
0 Absent
1 SA - Remote air probe for MYCOMFORT, LED503 and EVO
2 SW - Water probe for MYCOMFORT, LED503 and EVO
3 SU - Humidity probe for MYCOMFORT and EVO
4 SA+SW - Remote air and water probes for MYCOMFORT, LED503 and EVO
5 SA+SU - Remote air and humidity probes for MYCOMFORT and EVO
6 SA+SU+SW - Remote air, water, humidity probes for MYCOMFORT and EVO
B SA - Remote air probe for TED
C SW - Water probe for TED
D SA + SW - Air and water probes for TED</p> <p>8 Accessories
0 Absent</p> <p>9 Filter
2 G2 Filter
3 G3 filter</p> <p>10 Release
0 0
A A</p> |
|--|--|

ACCESSORIES

Electromechanical control panels	
CD	Recess wall-mounted speed switch
CDE	Wall mounted speed selector
TC	Thermostat for minimum water temperature in heating mode (42 °C)
Electronic microprocessor control panels with display	
COB	Finishing plate for LED 503 controller, RAL9005 black
COG	Finishing plate for LED 503 controller, RAL7031 grey
COW	Finishing plate for LED 503 controller, RAL9003 white
DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
LED503	Recessed wall-mounted electronic display controller LED 503
MCBE	MYCOMFORT BASE electronic controller with display
MCLE	Microprocessor control with display MY COMFORT LARGE
MCME	MYCOMFORT MEDIUM electronic controller with display
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers
Electronic microprocessor control panels	
TED 2T	Electronic controller for AC fan control and one ON/OFF 230 V valve
TED 4T	Electronic controller for AC fan control and two ON/OFF 230 V valves
TED SWA	Water temperature sensor for TED controls
Power interface and regulating louver controllers	
CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver
KP	Power interface for connecting in parallel up to 4 fun coil units to the one controller
Additional heat exchanger for 4-pipe systems	
MDF	Additional heat exchanger module for hot water operation.
Auxiliary water drip trays, insulating shell, condensate drainage pump	
KSC	Condensate drainage pump kit
Electrical heating elements	
RE	Heating element with installation kit, relay box and safety devices
Air inlet and outlet grilles	
GA	Aluminium air intake grille, with frame
GM	Aluminium air outlet grille with 2-row fins and subframe
External air intake louvers	
SM	Motorized air intake louver
Valves	
V2VDF+STD	2-way valves, ON/OFF or MUDULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
Plenum, air intake modules, air inlet and outlet connectors	
PAF	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMA	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMAC	Intake and delivery plenum, insulated, with spigot Ø 200 mm
R90	90° uninsulated air inlet/outlet connector
R90C	90° uninsulated air inlet/outlet connector
RD	Straight uninsulated air inlet/outlet connector
RDC	Straight insulated air inlet/outlet connector
Flexible ducts - caps	
TFA	Not insulated flexible ducts, Ø 200 mm (6 m lenght indivisibile)
TFM	Insulated flexible ducts, Ø 200 mm (6 m lenght indivisibile)
TP	Plastic cap Ø 200 mm
Air inlet and outlet plenum box	
CA	Air Inlet plenum box with double row grille
CAF	Air Inlet plenum box with double row grille 300 x 600 mm and filter G2
CM	Insulated air outlet plenum box with grille
Silencers	
SIL	Plenum silencer for air intake/outlet
Accessories	
FG3	G3-class air filter

Ducted unit PWN

RATED TECHNICAL DATA 2 PIPES

PWN			13			14			16		
Speed			min	med	max	min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	184	297	371	184	297	371	184	297	371
Available static pressure	(E)	Pa	19	50	72	19	50	70	19	50	70
Power input	(E)	W	34	69	106	34	69	106	34	69	106
Total cooling capacity	(1)(E)	kW	1,33	1,91	2,32	1,49	2,31	2,82	1,67	2,53	3,13
Sensible cooling capacity	(1)(E)	kW	0,93	1,37	1,65	1,01	1,57	1,90	1,09	1,68	2,07
FCEER class	(E)		D			D			C		
Water flow	(2)	l/h	229	329	400	257	398	486	288	436	539
Water pressure drop	(2)(E)	kPa	3	6	9	4	8	12	3	7	10
Heating capacity	(3)(E)	kW	1,39	2,11	2,54	1,48	2,29	2,80	1,53	2,42	3,00
FCCOP class	(E)					C					
Water flow	(3)	l/h	239	363	437	255	394	482	263	417	517
Water pressure drop	(3)(E)	kPa	2	5	6	3	7	9	2	5	7
Standard coil - number of rows			3			4			6		
Total sound power level	(4)	dB(A)	36	50	58	36	50	58	38	50	58
Inlet + radiated sound power level	(4)(E)	dB(A)	36	46	55	36	46	55	36	46	55
Outlet sound power level	(4)(E)	dB(A)	33	47	55	33	47	55	33	47	55

PWN			23			24			26		
Speed			min	med	max	min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	283	576	722	331	576	722	331	576	722
Available static pressure	(E)	Pa	10	50	79	10	50	79	16	50	79
Power input	(E)	W	76	143	192	76	143	192	76	143	192
Total cooling capacity	(1)(E)	kW	2,17	3,70	4,47	2,52	3,78	4,74	2,80	4,62	5,69
Sensible cooling capacity	(1)(E)	kW	1,56	2,60	3,12	1,73	2,70	3,33	1,86	3,10	3,82
FCEER class	(E)					D					
Water flow	(2)	l/h	374	637	770	434	651	816	482	796	980
Water pressure drop	(2)(E)	kPa	4	9	13	3	4	8	3	8	12
Heating capacity	(3)(E)	kW	2,14	3,93	4,70	2,81	4,25	5,15	2,71	4,53	5,56
FCCOP class	(E)		D			D			C		
Water flow	(3)	l/h	369	677	809	484	732	887	467	780	957
Water pressure drop	(3)(E)	kPa	3	8	11	2	4	6	3	7	9
Standard coil - number of rows			3			4			6		
Total sound power level	(4)	dB(A)	39	52	60	39	52	60	39	52	60
Inlet + radiated sound power level	(4)(E)	dB(A)	37	49	57	37	49	57	37	49	57
Outlet sound power level	(4)(E)	dB(A)	34	49	57	34	49	57	34	49	57

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 2 PIPES

PWN			33			34			36		
Speed			min	med	max	min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	572	715	905	572	715	905	572	715	905
Available static pressure	(E)	Pa	32	50	80	32	50	80	32	50	80
Power input	(E)	W	155	193	294	155	193	294	155	193	294
Total cooling capacity	(1)(E)	kW	3,83	4,69	5,71	4,26	5,28	6,48	4,94	6,15	7,65
Sensible cooling capacity	(1)(E)	kW	2,67	3,25	3,90	2,92	3,60	4,39	3,25	4,05	5,02
FCEER class	(E)		E			D			D		
Water flow	(2)	l/h	660	808	983	734	909	1116	851	1059	1317
Water pressure drop	(2)(E)	kPa	7	10	14	6	9	13	8	11	17
Heating capacity	(3)(E)	kW	4,11	4,95	5,95	4,42	5,39	6,57	4,69	5,80	7,18
FCCOP class	(E)					D					
Water flow	(3)	l/h	708	852	1025	761	928	1131	808	999	1236
Water pressure drop	(3)(E)	kPa	6	8	11	5	8	11	6	8	12
Standard coil - number of rows			3			4			6		
Total sound power level	(4)	dB(A)	53	59	69	53	59	69	53	64	69
Inlet + radiated sound power level	(4)(E)	dB(A)	50	55	65	50	55	65	50	63	65
Outlet sound power level	(4)(E)	dB(A)	50	56	66	50	56	66	50	59	66

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

Ducted unit PWN

RATED TECHNICAL DATA 4 PIPES

PWN			13			14			16		
Speed			min	med	max	min	med	max	min	med	max
Rated air flow MDF	(E)	m ³ /h	180	291	363	180	291	363	180	291	363
Available static pressure	(E)	m ³ /h	19	50	78	19	50	76	19	50	78
Power input MDF	(E)	W	34	69	106	34	69	106	34	69	106
Total cooling capacity MDF	(1)(E)	kW	1,26	1,94	2,39	1,46	2,34	2,87	1,62	2,56	3,17
Sensible cooling capacity MDF	(1)(E)	kW	0,92	1,41	1,73	1,01	1,61	1,97	1,08	1,72	2,13
FCEER class MDF	(E)		D			D			C		
Water flow MDF	(1)	l/h	226	322	393	253	391	475	276	429	527
Water pressure drop MDF	(1)(E)	kPa	2	5	7	4	8	12	3	6	9
Heating capacity MDF	(2)(E)	kW	1,71	2,30	2,60	1,71	2,30	2,60	1,71	2,30	2,60
Classe FCCOP MDF	(E)					C					
Water flow MDF	(2)	l/h	147	198	224	147	198	224	147	198	224
Water pressure drop MDF	(2)(E)	kPa	1	2	2	1	2	2	1	2	2
Additional coil MDF - number of rows			2			2			2		
Total sound power level MDF		dB(A)	38	50	58	39	51	58	39	50	58
Inlet + radiated sound power level MDF	(E)	dB(A)	36	49	55	36	49	55	36	46	55
Outlet sound power level MDF	(E)	dB(A)	33	47	55	33	47	55	33	47	55

PWN			23			24			26		
Speed			min	med	max	min	med	max	min	med	max
Rated air flow MDF	(E)	m ³ /h	326	566	706	326	566	706	326	566	706
Available static pressure	(E)	m ³ /h	17	50	70	11	50	78	11	50	71
Power input MDF	(E)	W	76	143	192	76	143	192	76	143	192
Total cooling capacity MDF	(1)(E)	kW	2,21	3,78	4,57	2,31	3,85	4,83	2,68	4,68	5,76
Sensible cooling capacity MDF	(1)(E)	kW	1,61	2,70	3,25	1,67	2,79	3,45	1,84	3,19	3,92
FCEER class MDF	(E)					D					
Water flow MDF	(1)	l/h	370	627	754	429	639	799	477	782	959
Water pressure drop MDF	(1)(E)	kPa	3	9	13	3	5	8	3	8	12
Heating capacity MDF	(2)(E)	kW	3,11	4,37	4,92	3,14	4,37	4,92	3,14	4,37	4,92
Classe FCCOP MDF	(E)					D					
Water flow MDF	(2)	l/h	268	376	424	270	376	424	270	376	424
Water pressure drop MDF	(2)(E)	kPa	5	9	11	5	9	12	5	9	11
Additional coil MDF - number of rows			2			2			2		
Total sound power level MDF		dB(A)	42	54	60	37	53	60	37	47	60
Inlet + radiated sound power level MDF	(E)	dB(A)	38	53	57	34	51	57	34	51	57
Outlet sound power level MDF	(E)	dB(A)	39	49	57	34	49	57	34	49	57

PWN			33			34			36		
Speed			min	med	max	min	med	max	min	med	max
Rated air flow MDF	(E)	m ³ /h	556	690	867	556	690	867	556	690	867
Available static pressure	(E)	m ³ /h	32	50	79	32	50	79	32	50	79
Power input MDF	(E)	W	155	193	294	155	193	294	155	193	294
Total cooling capacity MDF	(1)(E)	kW	3,87	4,73	5,77	4,29	5,29	6,52	4,95	6,13	7,63
Sensible cooling capacity MDF	(1)(E)	kW	2,75	3,33	4,04	2,99	3,67	4,51	3,31	4,09	5,10
FCEER class MDF	(E)		E			D			D		
Water flow MDF	(1)	l/h	641	782	944	713	878	1073	827	1023	1262
Water pressure drop MDF	(1)(E)	kPa	6	9	13	6	9	12	7	11	15
Heating capacity MDF	(2)(E)	kW	6,41	7,55	8,95	6,41	7,55	8,95	5,75	6,77	8,03
Classe FCCOP MDF	(E)					D					
Water flow MDF	(2)	l/h	552	650	771	552	650	771	495	583	691
Water pressure drop MDF	(2)(E)	kPa	2	3	4	2	3	4	2	3	4
Additional coil MDF - number of rows			2			2			2		
Total sound power level MDF		dB(A)	53	63	69	53	58	69	53	61	69
Inlet + radiated sound power level MDF	(E)	dB(A)	50	62	65	50	55	65	50	58	65
Outlet sound power level MDF	(E)	dB(A)	50	56	66	50	56	66	50	56	66

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

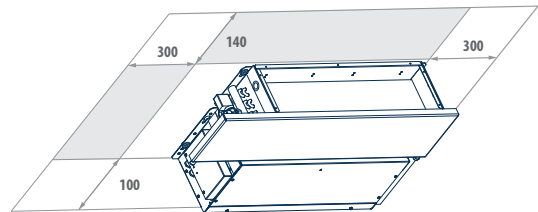
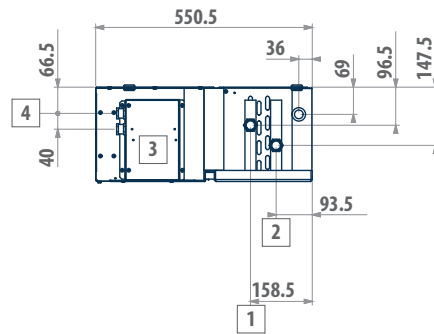
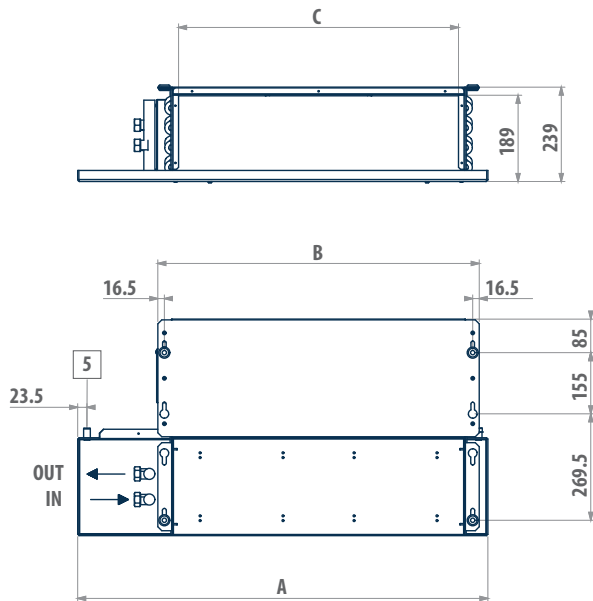
(2) Water temperature 65°C / 55°C, air temperature 20°C

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

DIMENSIONAL DRAWINGS

PWN



LEGEND

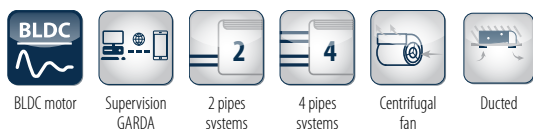
1	Water outlet \varnothing 3/4" female gas
2	Water inlet \varnothing 3/4" female gas
3	Electric box
4	Power supply cable holder
5	Condensate discharge \varnothing 17 mm

PWN	A mm	B mm	C mm	1 "	2 "	5 mm	 kg
13 - 14 - 16	1039	814	709	3/4	3/4	17	26 - 27 - 29
23 - 24 - 26	1389	1164	1059	3/4	3/4	17	35 - 37 - 39
33 - 34 - 36	1739	1514	1409	3/4	3/4	17	47 - 49 - 53

Models 33, 34 and 36 available ON/OFF version only

Medium available head duct units with BLDC motor

PWN i 2 - 6 kW



PLUS

- » BLDC inverter motors
- » Reduced height across the entire range (240 mm)
- » Available head up to 80 Pa
- » Heat exchanger up to 6 rows
- » Amply sized condensate drip tray
- » Wide range of available accessories
- » Can be integrated into GARDA networks

Efficiency and versatility for recess ceiling mounted units

The range of PWN i duct units is designed for air conditioning systems in interiors requiring the installation of particularly versatile, low-noise, medium-head (up to 80Pa) units. Unlike the models equipped with traditional motors of the ON-OFF type, PWN i units feature fan assemblies with inverter-controlled permanent magnet BLDC motors. Adopting this type of motor makes it possible to obtain considerable reductions in electricity consumption and CO₂ emissions, as well as a considerable reduction in noise for enhanced comfort.

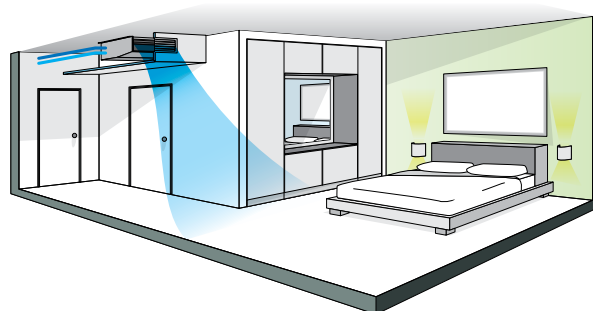
The DC Inverter technology allows to continuously adjust the air flow to the actual needs of the environment by considerably reducing the fluctuations in room temperature. By virtue of the continuous modulation of the air flow, once the right temperature and humidity conditions have been reached the fan speed is considerably reduced, resulting in decidedly low noise levels.

The heat exchanger is available in 3-, 4- or 6-row versions. The latter is particularly recommended for heat pump systems, in which the outlet water temperature is lower. The exchanger is normally mounted with connections on the left side (the wiring box is present on the same side), but it can be rotated by 180° on the installation site. By installing the accessory external module (additional MDF exchanger) it is possible to connect PWN i in 4-pipe systems.

PWN i units can find a place in commercial buildings, hotel rooms and meeting rooms. They have been conceived with a particular construction enabling the basic model to be expanded by installing a series of accessories so as to adapt PWN i to the needs of any horizontal recess ceiling-mount application.

The flexibility of the inverter control makes it possible to reduce the rotation speed to minimal values which almost completely eliminate the noise emissions of false-ceiling installations.

Available on request air decontamination system installed on special plenum.



MAIN COMPONENTS

Structure

Built from galvanized sheet steel, designed for horizontal installation, insulated with class 1 self-extinguishing panels, complete with slots for rapid fixing.

Heat exchanger

High efficiency 3, 4 and 6 rows heat exchanger made with copper piping and aluminium fins blocked to pipings by mechanical expansion, provided with brass manifolds and air vent valve. The water connections are reversible.

Fans

Double suction centrifugal fans made with ABS or aluminium, with statically and dynamically balanced forward-curving blades, directly coupled to the electric motor.



BLDC electric motor

Permanent magnet motor. The unit is equipped with an inverter board to control the motor, that makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V).

Water drip tray

Extended beyond the dimensions of the unit, it can collect condensate both from the heat exchanger and any regulating valves.



Air filter

Washable air filter, made of acrylic fibre, mounted on a galvanised sheet frame protected by a net, easily removable for maintenance operations. Class G3 air filter available as an optional accessory.

ACCESSORIES

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
TED SWA	Water temperature sensor for TED controls

Power interface and regulating louver controllers

CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver
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Additional heat exchanger for 4-pipe systems

MDF	Additional heat exchanger module for hot water operation.
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Auxiliary water drip trays, insulating shell, condensate drainage pump

KSC	Condensate drainage pump kit
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Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
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Air inlet and outlet grilles

GA	Aluminium air intake grille, with frame
GM	Aluminium air outlet grille with 2-row fins and subframe

External air intake louvers

SM	Motorized air intake louver
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Valves

V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
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V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
---------------	--

V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
--------------	---

V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
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Plenum, air intake modules, air inlet and outlet connectors

PAF	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMA	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMAC	Intake and delivery plenum, insulated, with spigot Ø 200 mm
R90	90° uninsulated air inlet/outlet connector
R90C	90° insulated air inlet/outlet connector
RD	Straight uninsulated air inlet/outlet connector
RDC	Straight insulated air inlet/outlet connector

Flexible ducts - caps

TFA	Not insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TFM	Insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TP	Plastic cap Ø 200 mm

Air inlet and outlet plenum box

CA	Air Inlet plenum box with double row grille
CAF	Air Inlet plenum box with double row grille 300 x 600 mm and filter G2
CM	Insulated air outlet plenum box with grille

Silencers

SIL	Plenum silencer for air intake/outlet
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Accessories

FG3	G3-class air filter
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Duct unit PWN i

RATED TECHNICAL DATA 2 PIPES

PWN i			13			14			16		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,10	6,30	8,60	4,10	6,30	8,60	4,10	6,30	8,60
Rated air flow	(E)	m ³ /h	184	297	371	184	297	371	184	297	371
Available static pressure	(E)	Pa	19	50	72	19	50	70	19	50	70
Power input	(E)	W	34	69	106	34	69	106	34	69	106
Total cooling capacity	(1)(E)	kW	1,33	1,91	2,32	1,49	2,31	2,82	1,67	2,53	3,13
Sensible cooling capacity	(1)(E)	kW	0,93	1,37	1,65	1,01	1,57	1,90	1,09	1,68	2,07
FCEER class	(E)		D			D			C		
Water flow	(2)	l/h	229	329	400	257	398	486	288	436	539
Water pressure drop	(2)(E)	kPa	3	6	9	4	8	12	3	7	10
Heating capacity	(3)(E)	kW	1,39	2,11	2,54	1,48	2,29	2,80	1,53	2,42	3,00
FCCOP class	(E)					A					
Water flow	(3)	l/h	239	363	437	255	394	482	263	417	517
Water pressure drop	(3)(E)	kPa	2	5	6	3	7	9	2	5	7
Standard coil - number of rows			3			4			6		
Total sound power level	(4)	dB(A)	36	50	58	36	50	58	38	50	58
Inlet + radiated sound power level	(4)(E)	dB(A)	36	46	55	36	46	55	36	46	55
Outlet sound power level	(4)(E)	dB(A)	33	47	55	33	47	55	33	47	55

PWN i			23			24			26		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,20	6,60	8,90	4,20	6,60	8,90	4,20	6,60	8,90
Rated air flow	(E)	m ³ /h	283	576	722	331	576	722	331	576	722
Available static pressure	(E)	Pa	10	50	79	10	50	79	16	50	79
Power input	(E)	W	76	143	192	76	143	192	76	143	192
Total cooling capacity	(1)(E)	kW	2,17	3,70	4,47	2,52	3,78	4,74	2,80	4,62	5,69
Sensible cooling capacity	(1)(E)	kW	1,56	2,60	3,12	1,73	2,70	3,33	1,86	3,10	3,82
FCEER class	(E)					D					
Water flow	(2)	l/h	374	637	770	434	651	816	482	796	980
Water pressure drop	(2)(E)	kPa	4	9	13	3	4	8	3	8	12
Heating capacity	(3)(E)	kW	2,14	3,93	4,70	2,81	4,25	5,15	2,71	4,53	5,56
FCCOP class	(E)					A					
Water flow	(3)	l/h	369	677	809	484	732	887	467	780	957
Water pressure drop	(3)(E)	kPa	3	8	11	2	4	6	3	7	9
Standard coil - number of rows			3			4			6		
Total sound power level	(4)	dB(A)	39	52	60	39	52	60	39	52	60
Inlet + radiated sound power level	(4)(E)	dB(A)	37	49	57	37	49	57	37	49	57
Outlet sound power level	(4)(E)	dB(A)	34	49	57	34	49	57	34	49	57

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the PWN i inverter units are the same of the PWN ON/OFF version. They are reported from page 109

RATED TECHNICAL DATA 4 PIPES

PWN i			13			14			16		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,10	6,30	8,60	4,10	6,30	8,60	4,10	6,30	8,60
Rated air flow MDF	(E)	m ³ /h	180	291	363	180	291	363	180	291	363
Available static pressure	(E)	m ³ /h	19	50	78	19	50	76	19	50	78
Power input MDF	(E)	W	12	27	46	12	27	46	12	27	46
Total cooling capacity MDF	(1)(E)	kW	1,33	1,91	2,34	1,49	2,31	2,82	1,66	2,53	3,12
Sensible cooling capacity MDF	(1)(E)	kW	0,94	1,38	1,68	1,01	1,58	1,92	1,09	1,69	2,08
FCEER class MDF	(E)		A								
Water flow MDF	(2)	l/h	229	329	403	257	398	486	286	436	537
Water pressure drop MDF	(2)(E)	kPa	2	6	8	4	8	12	3	6	9
Heating capacity MDF	(3)(E)	kW	1,71	2,30	2,60	1,71	2,30	2,60	1,71	2,30	2,60
Classe FCCOP MDF	(E)		A								
Water flow MDF	(3)	l/h	147	198	224	147	198	224	147	198	224
Water pressure drop MDF	(3)(E)	kPa	1	2	2	1	2	2	1	2	2
Additional coil MDF - number of rows			2			2			2		
Total sound power level MDF	(4)	dB(A)	38	50	58	39	51	58	39	50	58
Inlet + radiated sound power level MDF	(4)(E)	dB(A)	36	46	55	36	49	55	36	46	55
Outlet sound power level MDF	(4)(E)	dB(A)	33	47	55	33	47	55	33	47	55

PWN i			23			24			26		
Speed			min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,20	6,60	8,90	4,20	6,60	8,90	4,20	6,60	8,90
Rated air flow MDF	(E)	m ³ /h	326	566	706	326	566	706	261	402	540
Available static pressure	(E)	m ³ /h	17	50	78	11	50	78	17	50	78
Power input MDF	(E)	W	18	46	76	18	46	76	18	46	76
Total cooling capacity MDF	(1)(E)	kW	1,92	3,24	3,90	2,55	3,80	4,75	2,83	4,63	5,68
Sensible cooling capacity MDF	(1)(E)	kW	1,60	2,65	3,17	1,76	2,74	3,37	1,90	3,14	3,84
FCEER class MDF	(E)		B			A			A		
Water flow MDF	(2)	l/h	331	558	672	439	654	818	487	797	978
Water pressure drop MDF	(2)(E)	kPa	4	9	13	3	5	8	3	8	12
Heating capacity MDF	(3)(E)	kW	2,91	4,09	4,60	3,12	4,37	4,92	3,12	4,37	4,92
Classe FCCOP MDF	(E)		A								
Water flow MDF	(3)	l/h	251	352	396	269	376	424	269	376	424
Water pressure drop MDF	(3)(E)	kPa	5	9	11	2	3	4	6	8	11
Additional coil MDF - number of rows			2			2			2		
Total sound power level MDF	(4)	dB(A)	42	54	60	37	53	60	37	47	60
Inlet + radiated sound power level MDF	(4)(E)	dB(A)	34	51	57	34	51	57	38	51	57
Outlet sound power level MDF	(4)(E)	dB(A)	34	49	57	34	49	57	34	49	57

- (1) According to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 65°C / 55°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the PWN i inverter units are the same of the PWN ON/OFF version. They are reported from page 109

High-head thermal ventilating units

UTN 3 - 23 kW



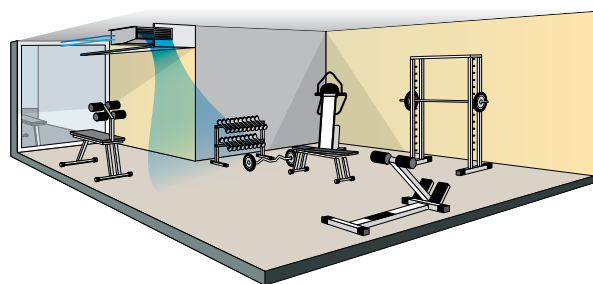
Flexibility of installation to respond to every need

The UTN range of thermal ventilating units has been developed for air conditioning rooms where the use of ducted hydronic indoor units capable of assuring available heads of up to 180 Pa and cooling capacities of 3 to 23 kW is required. The units are characterised by a high flexibility of installation, as they can in fact be positioned either vertically or horizontally and the orientation of the air intake in the rear or front part of the unit itself can be modified by simply moving the inspection panel. All units have a standard configuration for the intake of fresh air and slots for rapidly fixing them to the wall or ceiling. Their reduced height (280 mm up to size 16 and 350 mm for larger sizes) enables them to be accommodated in normal false ceiling and the availability of a wide range of plumbing and ventilation accessories makes it easy to integrate them into air conditioning systems. The units are available in standard and high-efficiency models, depending on the finned block exchanger used, so that they can be better adapted to the needs of the room to be air-conditioned.



PLUS

- » Compact dimensions (height 280 mm up to size 16 and 350 mm for larger sizes)
- » Vertical and horizontal installation
- » Wide range of available accessories for simple integration into the system
- » Available head up to 180 Pa
- » High flexibility of installation
- » Can be integrated into GARDA



Comfort and hygiene

Available on request air decontamination system installed on special plenum.

AVAILABLE VERSIONS

UTXXX0L0...0A Thermal ventilating unit suitable for 2-pipe systems

UTXXX0LL...0A Thermal ventilating unit suitable for 4-pipe systems (2 heat exchangers)

UTXXX0L0...02

The version with double panelling is made with pre-painted sheet steel insulated with class 0 fire-resistant rockwool **(On request)**

MAIN COMPONENTS

Structure

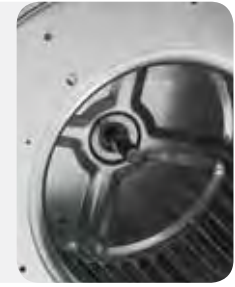
Made of galvanized sheet steel insulated with sound-deadening, heat-insulating, self-extinguishing closed-cell material to reduce noise emissions and prevent the formation of condensate on the outside surface.

Heat exchanger

It is composed of copper tubing and aluminium fins fixed by expansion. Water connections are reversible. An additional exchanger is available for installing the unit in 4-pipe systems.

Fan

The aluminium fans are of the centrifugal type, with double suction and staggered blades to reduce noise emissions. They are statically and dynamically balanced to minimize the stresses transmitted to the motor shaft.



Filter module

The air filter, made of regenerable acrylic fibre, is available as an accessory in filtration classes G2 or G4.



Electric motor

Three-speed electrical motor, mounted on vibration damping couplings, directly connected to the fans, with permanently activated capacitor and winding thermal protection.

Condensate collection and drainage system

It consists of two insulated galvanized sheet steel trays designed for horizontal and vertical installation.

CONFIGURATOR

The models are completely configurable by selecting the version and the options. To the right is shown an example of configuration.

Version	Field	1	2	3	4	5	6	7	8	9	10	11
UT08		D	0	L	0	0	0	0	0	N	0	A

To verify the compatibility of the options, use the selection software or the price list.

CONFIGURATOR

1	Version		7	Probes
A	Ducted version		0	Absent
D	Ducted version		1	SA - Remote air probe for MYCOMFORT, LED503 and EVO
2	Motor		2	SW - Water probe for MYCOMFORT, LED503 and EVO
0	3-speed motor		3	SU - Humidity probe for MYCOMFORT and EVO
I	BLDC motor		4	SA+SW - Remote air and water probes for MYCOMFORT, LED503 and EVO
3	Main coil hydraulic side		5	SA+SU - Remote air and humidity probes for MYCOMFORT and EVO
L	Water connections on the left side		6	SA+SU+SW - Remote air, water, humidity probes for MYCOMFORT and EVO
R	Water connections on the right		B	SA - Remote air probe for TED
4	Additional coil hydraulic side / heating element		C	SW - Water probe for TED
0	Absent		D	SA + SW - Air and water probes for TED
L	Water connections on the left side		8	Accessories
R	Water connections on the right		0	Absent
5	Valve		9	Filter
0	Absent		N	No filter
6	Control panel		10	Release
0	Absent		0	0
E	EVOBOARD - Circuit board		A	A

ACCESSORIES

Electromechanical control panels

CD	Recess wall-mounted speed switch
IPM	Circuit board for connection of UTN 30-30A-40-40A to control panels.
TA2	Electromechanical room thermostat with summer/winter selection
TC	Thermostat for minimum water temperature in heating mode (42 °C)
TD	Wall mounted control with speed selector, thermostat and summer-winter selector
TDC	Wall mounted control with speed selector and thermostat

Electronic microprocessor control panels with display

COB	Finishing plate for LED 503 controller, RAL9005 black
COG	Finishing plate for LED 503 controller, RAL7031 grey
COW	Finishing plate for LED 503 controller, RAL9003 white
DIST	MY COMFORT controller spacer for wall mounting
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
LED503	Recessed wall-mounted electronic display controller LED 503
MCBE	MYCOMFORT BASE electronic controller with display
MCLE	Microprocessor control with display MY COMFORT LARGE
MCME	MYCOMFORT MEDIUM electronic controller with display
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

TED 2T	Electronic controller for AC fan control and one ON/OFF 230 V valve
TED 4T	Electronic controller for AC fan control and two ON/OFF 230 V valves
TED SWA	Water temperature sensor for TED controls

Power interface and regulating louver controllers

CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver
KP	Power interface for connecting in parallel up to 4 fun coil units to the one controller

Auxiliary water drip trays, insulating shell, condensate drainage pump

KSC	Condensate drainage pump kit
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Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
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Air inlet and outlet grilles

GA	Aluminium air intake grille, with frame
GM	Aluminium air outlet grille with 2-row fins and subframe
GR	Air intake grille with subframe
GRF	Air intake grille with subframe and filter
External air intake louvers	
PA90	Motor-driven external air intake louver
Valves	
V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
Plenum, air intake modules, air inlet and outlet connectors	
G90	90° connection for intake/delivery
MAF	Air intake module with G2 air filter
MAFO	Air intake module with G4 air filter
PCOC	Junction panel with rectangular duct
PCOF	Junction panel with flexible circular duct Ø 200
Flexible ducts - caps	
TFA	Not insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TFM	Insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TP	Plastic cap Ø 200 mm
Air inlet and outlet plenum box	
CA	Air Inlet plenum box with double row grille
CAF	Air Inlet plenum box with double row grille 300 x 600 mm and filter G2
CM	Insulated air outlet plenum box with grille
Accessories	
UYBP	Hot water post-heating exchanger kit
VRCH	Auxiliary water drip tray for horizontal installation units
VRCV	Auxiliary water drip tray for vertical installation units

RATED TECHNICAL DATA 2 PIPES

UTN			6A			6D			8A			8D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	343	458	561	348	465	572	532	692	791	534	700	802
Available static pressure	(E)	Pa	28	50	75	28	50	75	30	50	65	29	50	65
Power input	(E)	W	84	122	188	84	122	188	135	185	265	135	185	265
Total cooling capacity	(1)(E)	kW	2,22	2,88	3,39	1,94	2,46	2,84	3,29	4,09	4,50	2,74	3,36	3,65
Sensible cooling capacity	(1)(E)	kW	1,63	2,13	2,52	1,47	1,87	2,16	2,45	3,08	3,41	2,10	2,59	2,83
FCEER class	(E)		E											
Water flow	(2)	l/h	382	496	584	334	424	489	567	704	775	472	579	629
Water pressure drop	(2)(E)	kPa	4	6	9	5	8	11	8	12	14	10	14	17
Heating capacity	(3)(E)	kW	2,47	3,14	3,70	2,19	2,75	3,20	3,55	4,36	4,83	3,04	3,69	4,05
FCCOP class	(E)		D			E			E			E		
Water flow	(3)	l/h	425	541	637	377	474	551	611	751	832	523	635	697
Water pressure drop	(3)(E)	kPa	4	6	8	5	8	10	7	11	13	9	13	15
Standard coil - number of rows			4			3			4			3		
Total sound power level	(4)	dB(A)	48	57	63	48	57	63	54	61	66	54	61	66
Inlet + radiated sound power level	(4)(E)	dB(A)	46	54	61	46	54	61	52	59	64	52	59	64
Outlet sound power level	(4)(E)	dB(A)	45	53	59	45	53	59	51	58	63	51	58	63

UTN			12A			12D			16A			16D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	1000	1107	1203	1019	1134	1238	1198	1371	1581	1207	1384	1606
Available static pressure	(E)	Pa	41	50	59	40	50	59	38	50	66	38	50	67
Power input	(E)	W	345	385	460	345	385	460	290	380	505	290	380	505
Total cooling capacity	(1)(E)	kW	5,54	5,99	6,34	4,98	5,39	5,70	6,67	7,41	8,24	6,03	6,63	7,32
Sensible cooling capacity	(1)(E)	kW	4,11	4,47	4,73	3,66	3,94	4,16	5,23	5,86	6,58	4,84	5,39	6,04
FCEER class	(E)		E											
Water flow	(2)	l/h	954	1031	1092	858	928	982	1149	1276	1419	1038	1142	1261
Water pressure drop	(2)(E)	kPa	15	17	19	18	21	24	11	13	16	17	20	24
Heating capacity	(3)(E)	kW	6,29	6,80	7,26	5,59	6,03	6,42	7,28	8,04	8,93	6,47	7,11	7,88
FCCOP class	(E)		E											
Water flow	(3)	l/h	1083	1171	1250	963	1038	1106	1254	1384	1538	1114	1224	1357
Water pressure drop	(3)(E)	kPa	14	17	18	17	19	22	10	12	14	15	17	21
Standard coil - number of rows			4			3			4			3		
Total sound power level	(4)	dB(A)	61	63	69	59	63	69	62	67	72	62	67	72
Inlet + radiated sound power level	(4)(E)	dB(A)	56	60	66	56	60	66	60	64	70	60	64	70
Outlet sound power level	(4)(E)	dB(A)	59	59	65	55	59	65	58	63	69	58	63	69

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 2 PIPES

UTN			22A			22D			30A			30D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	1436	1819	2222	1483	1898	2376	2074	2604	3174	2092	2641	3207
Available static pressure	(E)	Pa	31	50	75	30	50	78	32	50	74	31	50	74
Power input	(E)	W	370	535	750	370	535	750	870	1090	1300	870	1090	1300
Total cooling capacity	(1)(E)	kW	9,20	11,2	13,1	8,41	10,1	11,8	12,9	15,4	17,7	11,6	13,8	15,9
Sensible cooling capacity	(1)(E)	kW	6,76	8,32	9,85	6,35	7,75	9,22	9,38	11,4	13,5	8,61	10,4	12,2
FCEER class	(E)		E											
Water flow	(2)	l/h	1584	1927	2249	1448	1743	2039	2221	2652	3048	2003	2382	2741
Water pressure drop	(2)(E)	kPa	12	17	22	15	21	29	27	37	48	21	29	37
Heating capacity	(3)(E)	kW	9,73	11,7	13,7	9,06	10,8	12,7	13,7	16,4	19,1	12,7	15,0	17,3
FCCOP class	(E)		E											
Water flow	(3)	l/h	1676	2020	2354	1560	1867	2190	2359	2824	3289	2183	2592	2977
Water pressure drop	(3)(E)	kPa	10	14	19	14	19	25	23	32	41	18	25	31
Standard coil - number of rows			4			3			5			4		
Total sound power level	(4)	dB(A)	60	67	74	60	67	74	69	73	78	69	73	78
Inlet + radiated sound power level	(4)(E)	dB(A)	58	65	72	58	65	72	67	71	76	67	71	76
Outlet sound power level	(4)(E)	dB(A)	57	64	71	57	64	71	66	70	75	66	70	75

UTN			40A			40D		
Speed			min	med	max	min	med	max
Rated air flow	(E)	m ³ /h	3067	3622	4287	3129	3706	4422
Available static pressure	(E)	Pa	36	50	71	35	50	71
Power input	(E)	W	650	820	1150	650	820	1150
Total cooling capacity	(1)(E)	kW	17,3	19,6	22,0	15,4	17,4	19,5
Sensible cooling capacity	(1)(E)	kW	13,3	15,3	17,5	12,1	13,8	15,6
FCEER class	(E)		D			E		
Water flow	(2)	l/h	3082	3505	3979	2761	3128	3551
Water pressure drop	(2)(E)	kPa	16	20	25	17	21	26
Heating capacity	(3)(E)	kW	18,8	21,2	24,0	17,2	19,4	21,8
FCCOP class	(E)		D					
Water flow	(3)	l/h	3263	3693	4177	2986	3364	3799
Water pressure drop	(3)(E)	kPa	18	22	28	18	23	28
Standard coil - number of rows			5			4		
Total sound power level	(4)	dB(A)	70	74	79	70	74	79
Inlet + radiated sound power level	(4)(E)	dB(A)	68	72	77	68	72	77
Outlet sound power level	(4)(E)	dB(A)	67	71	76	67	71	76

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 4 PIPES

UTN			6A			6D			8A			8D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Rated air flow DF	(E)	m ³ /h	346	463	567	342	455	557	531	694	793	529	686	783
Available static pressure DF	(E)	Pa	28	50	75	28	50	75	29	50	65	30	50	65
Power input DF	(E)	W	84	122	188	84	122	188	135	185	265	135	185	265
Total cooling capacity DF	(1)(E)	kW	1,93	2,44	2,82	2,21	2,86	3,37	2,73	3,33	3,61	3,27	4,06	4,46
Sensible cooling capacity DF	(1)(E)	kW	1,46	1,86	2,15	1,62	2,11	2,50	2,09	2,57	2,80	2,43	3,06	3,38
FCEER class DF	(E)		E											
Water flow DF	(2)	l/h	332	420	486	381	492	580	470	573	622	563	699	768
Water pressure drop DF	(2)(E)	kPa	5	8	11	4	6	9	10	14	17	8	12	14
Heating capacity DF	(3)(E)	kW	2,58	3,02	3,34	2,56	2,99	3,31	3,23	3,68	3,91	3,23	3,66	3,89
FCCOP class DF	(E)		D			D			E			E		
Water flow DF	(3)	l/h	222	260	288	220	257	285	278	317	337	278	315	335
Water pressure drop DF	(3)(E)	kPa	3	5	5	3	4	5	5	6	7	5	6	7
Additional coil DF - number of rows			1			1			1			1		
Total sound power level DF	(4)	dB(A)	48	57	63	48	57	63	54	61	66	54	61	66
Inlet + radiated sound power level DF	(4)(E)	dB(A)	46	54	61	46	54	61	52	59	64	52	59	64
Outlet sound power level DF	(4)(E)	dB(A)	45	53	59	45	53	59	51	58	63	51	58	63

UTN			12A			12D			16A			16D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Rated air flow DF	(E)	m ³ /h	1005	1115	1211	985	1088	1182	1192	1362	1576	1184	1349	1550
Available static pressure DF	(E)	Pa	41	50	59	41	50	59	38	50	67	38	50	66
Power input DF	(E)	W	345	385	460	345	385	460	290	380	505	290	380	505
Total cooling capacity DF	(1)(E)	kW	4,93	5,32	5,60	5,47	5,91	6,24	5,97	6,54	7,21	6,60	7,31	8,10
Sensible cooling capacity DF	(1)(E)	kW	3,60	3,89	4,08	4,06	4,40	4,66	4,79	5,31	5,94	5,17	5,77	6,46
FCEER class DF	(E)		E											
Water flow DF	(2)	l/h	849	916	964	942	1018	1075	1028	1126	1242	1137	1259	1395
Water pressure drop DF	(2)(E)	kPa	18	21	23	15	17	19	16	19	23	10	13	15
Heating capacity DF	(3)(E)	kW	5,25	5,51	5,72	5,21	5,45	5,65	7,02	7,47	7,99	6,99	7,44	7,94
FCCOP class DF	(E)		E											
Water flow DF	(3)	l/h	452	474	492	449	469	486	604	643	688	602	641	684
Water pressure drop DF	(3)(E)	kPa	12	13	14	10	11	12	8	9	10	20	22	25
Additional coil DF - number of rows			1			1			1			1		
Total sound power level DF	(4)	dB(A)	59	63	69	61	64	69	62	67	72	62	67	72
Inlet + radiated sound power level DF	(4)(E)	dB(A)	56	60	66	56	60	66	60	64	70	60	64	70
Outlet sound power level DF	(4)(E)	dB(A)	59	62	65	55	59	65	58	63	69	58	63	69

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

RATED TECHNICAL DATA 4 PIPES

UTN			22A			22D			30A			30D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Rated air flow DF	(E)	m ³ /h	1468	1871	2332	1423	1795	2184	2083	2626	3187	2065	2590	3154
Available static pressure DF	(E)	Pa	30	50	78	31	50	74	31	50	74	32	50	74
Power input DF	(E)	W	370	535	750	370	535	750	870	1090	1300	870	1090	1300
Total cooling capacity DF	(1)(E)	kW	8,34	10,0	11,7	9,12	11,0	12,9	11,6	13,8	15,8	12,9	15,3	17,7
Sensible cooling capacity DF	(1)(E)	kW	6,29	7,66	9,07	6,71	8,22	9,68	8,58	10,4	12,2	9,34	11,3	13,4
FCEER class DF	(E)		E											
Water flow DF	(2)	l/h	1436	1722	2010	1570	1903	2216	1996	2371	2728	2216	2633	3041
Water pressure drop DF	(2)(E)	kPa	15	21	28	12	16	22	24	32	41	27	37	48
Heating capacity DF	(3)(E)	kW	10,9	12,6	14,4	10,6	12,3	13,9	14,9	17,2	19,3	14,8	17,0	19,2
FCCOP class DF	(E)		D			D			E			E		
Water flow DF	(3)	l/h	935	1087	1242	916	1059	1194	1281	1478	1662	1273	1466	1652
Water pressure drop DF	(3)(E)	kPa	6	8	10	6	8	10	13	17	21	12	16	20
Additional coil DF - number of rows			2			2			2			2		
Total sound power level DF	(4)	dB(A)	60	67	74	60	67	74	69	73	78	69	73	78
Inlet + radiated sound power level DF	(4)(E)	dB(A)	58	65	72	58	65	72	67	71	76	67	71	76
Outlet sound power level DF	(4)(E)	dB(A)	57	64	71	57	64	71	66	70	75	66	70	75

UTN			40A			40D		
Speed			min	med	max	min	med	max
Rated air flow DF	(E)	m ³ /h	3345	4002	4837	3073	3637	4321
Available static pressure DF	(E)	Pa	35	50	73	36	50	70
Power input DF	(E)	W	19	22	25	16	18	20
Total cooling capacity DF	(1)(E)	kW	18,6	21,2	24,2	15,2	17,2	19,2
Sensible cooling capacity DF	(1)(E)	kW	14,4	16,8	19,5	11,9	13,5	15,3
FCEER class DF	(E)		D			E		
Water flow DF	(2)	l/h	3297	3779	4347	2722	3085	3493
Water pressure drop DF	(2)(E)	kPa	n. a.	23	29	n. a.	21	26
Heating capacity DF	(3)(E)	kW	18,3	20,2	22,2	18,5	20,4	22,6
FCCOP class DF	(E)		D					
Water flow DF	(3)	l/h	1601	1766	1948	1620	1790	1983
Water pressure drop DF	(3)(E)	kPa	9	11	13	9	11	13
Additional coil DF - number of rows			2			2		
Total sound power level DF	(4)	dB(A)	70	74	79	70	74	79
Inlet + radiated sound power level DF	(4)(E)	dB(A)	68	72	77	68	72	77
Outlet sound power level DF	(4)(E)	dB(A)	67	71	76	67	71	76

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

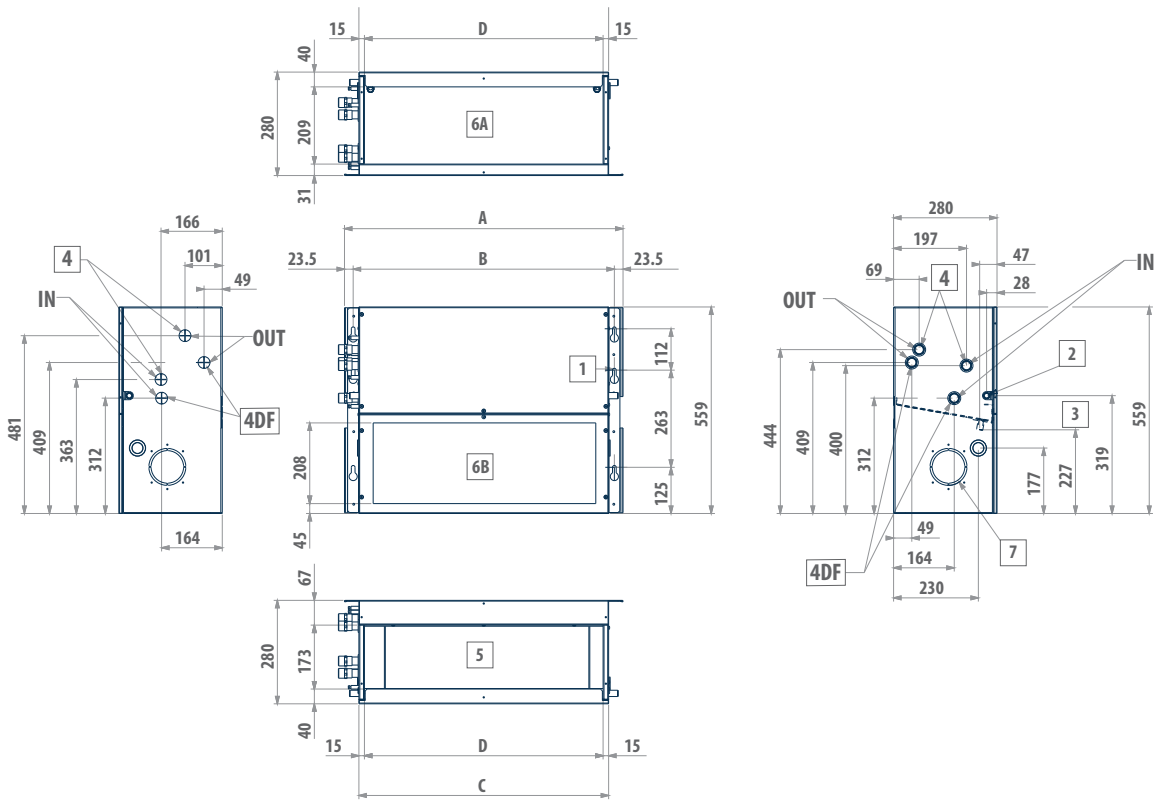
(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

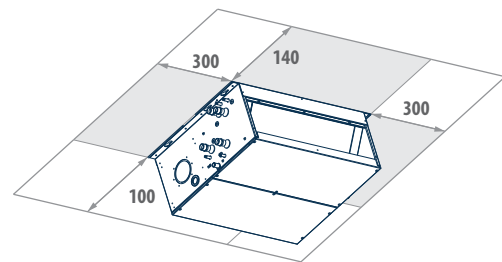
DIMENSIONAL DRAWINGS

UTN 06 - 16



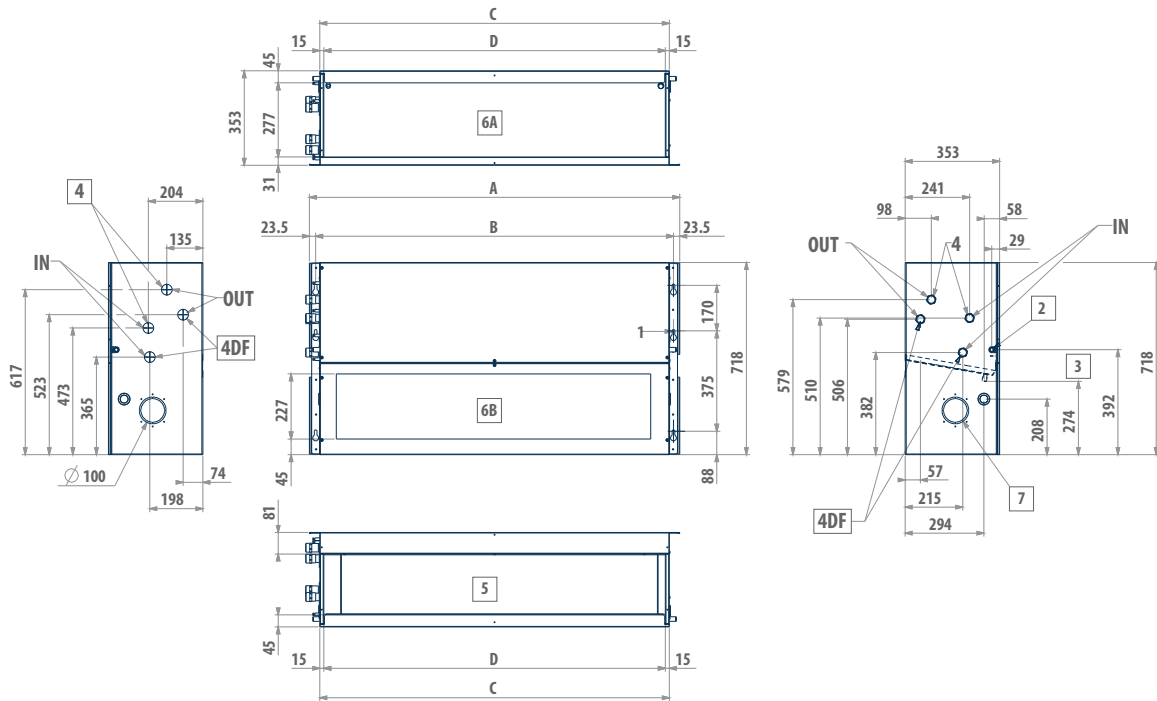
LEGEND

1	No. 6 quick-coupling slots
2	Condensate drainage horizontal installation
3	Condensate drainage vertical installation
4	Water connections on the right
4DF	Water connections additional heat exchanger
5	Air outlet
6	Air intake
6-A	supply condition
6-B	modifiable during installation
7	Circular pre-cut slot (Ø 100 mm) for intake of external air

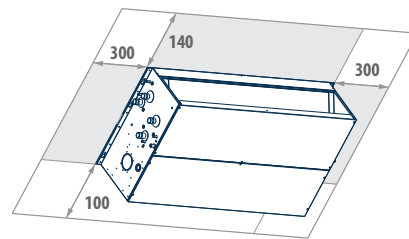


UTN	A mm	B mm	C mm	D mm	4 "	4DF "	2 mm	3 mm	kg
6D - 6A - 8D - 8A	754	707	676	646	3/4	3/4	17	17	33
12D - 12A	964	917	886	856	3/4	3/4	17	17	42
16D - 16A	1174	1127	1096	1066	3/4	3/4	17	17	49

MODELS 6 AND 6A AVAILABLE ON/OFF VERSION ONLY

DIMENSIONAL DRAWINGS
UTN 22 - 40

LEGEND

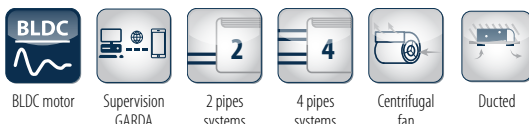
1	No. 6 quick-coupling slots
2	Condensate drainage horizontal installation
3	Condensate drainage vertical installation
4	Water connections on the right
4DF	Water connections additional heat exchanger
5	Air outlet
6	Air intake
6-A	supply condition
6-B	modifiable during installation
7	Circular pre-cut slot (Ø 100 mm) for intake of external air



UTN	A mm	B mm	C mm	D mm	4 "	4DF "	2 mm	3 mm	kg
22D - 22A	1174	1127	1096	1066	1	1	17	17	67
30D - 30A	1384	1337	1306	1276	1	1	17	17	80
40D - 40A	1594	1547	1516	1486	1	1	17	17	90

High-head thermal ventilating units with BLDC motor

UTN i 4 - 18 kW

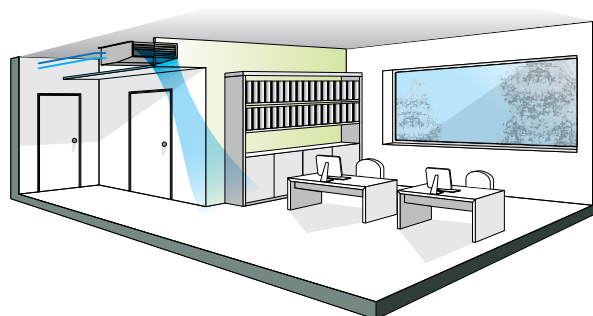


High efficiency and low noise emissions for ducted applications

The thermal ventilating units of the UTN i range with inverter motors and cooling capacities of 4 to 18 kW represent an evolution of the UTN series: keeping in pace with current legislation on energy savings and equipment efficiency and the most recent technological developments in the realm of electric motors, Galletti offers ducted units equipped with inverter-controlled permanent magnet BLDC motors. This solution makes it possible to reduce electricity consumption by up to 70% compared to a traditional asynchronous motor and at the same time offers the possibility of achieving a precise regulation of air flow, thanks to its ability to vary the number of fan revolutions in a continuous and efficient manner. The particular features which characterize the UTN series, namely, the height of 280 mm to enable the units to be accommodated in false ceilings, flexibility of installation and connection to air ducts and wide selection of accessories, are maintained to ensure the same standards of quality. Moreover, the availability of heat exchangers with a large number of rows makes it possible to use a low-temperature thermal carrier fluid in the heating mode, which means further energy savings.

PLUS

- » Permanent magnet BLDC motor
- » Low electricity consumption
- » Easy setup of ventilation section
- » Reduced height across the entire range (280 mm)
- » Vertical and horizontal installation
- » Wide range of available accessories
- » High flexibility of installation



Comfort and quiet operation

Thanks to the possibility of regulating the rotation speed of the motor with high precision, UTN i is well-suited to interiors where keeping noise levels low is a must.

Available on request air decontamination system installed on special plenum.

AVAILABLE VERSIONS

UTXXXI0...0A Thermal ventilating unit suitable for 2-pipe systems

UTXXXI0...0A Thermal ventilating unit suitable for 4-pipe systems (2 heat exchangers)

UTXXXI0...02 The version with double panelling is made with pre-painted sheet steel insulated with class 0 fire-resistant rockwool **(On request)**

MAIN COMPONENTS

Structure

Made of galvanized sheet steel insulated with sound-deadening, heat-insulating, self-extinguishing closed-cell material to reduce noise emissions and prevent the formation of condensate on the outside surface.

Heat exchanger

It is composed of copper tubing and aluminium fins fixed by expansion. Water connections are reversible. An additional exchanger is available for installing the unit in 4-pipe systems.

Fan

The aluminium fans are of the centrifugal type, with double suction and staggered blades to reduce noise emissions. They are statically and dynamically balanced to minimize the stresses transmitted to the motor shaft.



BLDC electric motor

Permanent magnet motor. The unit is equipped with an inverter board to control the motor, that makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V).



Condensate collection and drainage system

It consists of two insulated galvanized sheet steel trays designed for horizontal and vertical installation.

Filter module

The air filter, made of regenerable acrylic fibre, is available as an accessory in filtration classes G2 or G4.

ACCESSORIES

Electronic microprocessor control panels with display

DIST MY COMFORT controller spacer for wall mounting

EVOBOARD Circuit board for EVO control

EVODISP User interface with display for EVO controller

MCLE Microprocessor control with display MY COMFORT LARGE

MCSUE Humidity sensor for MY COMFORT (medium e large), EVO

MCSWE Water sensor for MYCOMFORT, EVO, LED 503 controllers

Electronic microprocessor control panels

TED 10 Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V

TED SWA Water temperature sensor for TED controls

Power interface and regulating louver controllers

CSD Recess mounted controller for opening and closing the SM motor-driven regulating louver

Auxiliary water drip trays, insulating shell, condensate drainage pump

KSC Condensate drainage pump kit

Electrical heating elements

RE Heating element with installation kit, relay box and safety devices

Air inlet and outlet grilles

GM Aluminium air outlet grille with 2-row fins and subframe

GR Air intake grille with subframe

GRF Air intake grille with subframe and filter

External air intake louvers

PA90 Motor-driven external air intake louver

Valves

V2VDF+STD 2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger

V2VSTD 2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

V3VDF 3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger

V3VSTD 2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

Plenum, air intake modules, air inlet and outlet connectors

G90 90° connection for intake/delivery

MAF Air intake module with G2 air filter

MAFO Air intake module with G4 air filter

PCOC Junction panel with rectangular duct

PCOF Junction panel with flexible circular duct Ø 200

Flexible ducts - caps

TFA Not insulated flexible ducts, Ø 200 mm (6 m length undivisible)

TFM Insulated flexible ducts, Ø 200 mm (6 m length undivisible)

TP Plastic cap Ø 200 mm

Air inlet and outlet plenum box

CA Air Inlet plenum box with double row grille

CAF Air Inlet plenum box with double row grille 300 x 600 mm and filter G2

CM Insulated air outlet plenum box with grille

Accessories

UYBP Hot water post-heating exchanger kit

VRCH Auxiliary water drip tray for horizontal installation units

VRVC Auxiliary water drip tray for vertical installation units

Vibration-damping couplings

GA Vibration-damping coupling

GAT Heat-resistant vibration-damping coupling

RATED TECHNICAL DATA 2 PIPES

UTN i			8A			8D			12A			12D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	6,00	7,40	8,90	6,00	7,40	8,90	7,30	8,00	8,80	7,30	9,00	8,80
Rated air flow	(E)	m ³ /h	532	692	791	534	700	802	1000	1107	1203	1019	1134	1238
Available static pressure	(E)	Pa	30	50	65	29	50	65	41	50	59	40	50	59
Power input	(E)	W	40	73	112	40	73	112	102	125	152	102	125	170
Total cooling capacity	(1)(E)	kW	3,38	4,20	4,65	2,83	3,47	3,80	5,78	6,25	6,65	5,22	5,65	6,01
Sensible cooling capacity	(1)(E)	kW	2,54	3,19	3,56	2,19	2,70	2,98	4,35	4,73	5,04	3,90	4,20	4,47
FCEER class	(E)		B			C			C			C		
Water flow	(2)	l/h	582	723	801	487	598	654	995	1076	1145	899	973	1035
Water pressure drop	(2)(E)	kPa	8	12	14	10	14	17	15	17	19	18	21	24
Heating capacity	(3)(E)	kW	3,55	4,36	4,83	3,04	3,69	4,05	6,29	6,80	7,26	5,59	6,03	6,42
FCCOP class			B			B			C			C		
Water flow	(3)	l/h	611	751	832	523	635	697	1083	1171	1250	963	1038	1106
Water pressure drop	(3)(E)	kPa	7	11	13	9	13	15	14	17	18	17	19	22
Standard coil - number of rows			4			3			4			3		
Total sound power level	(4)	dB(A)	54	61	66	54	61	66	61	63	69	59	63	69
Inlet + radiated sound power level	(4)(E)	dB(A)	52	59	64	52	59	64	56	60	66	56	60	66
Outlet sound power level	(4)(E)	dB(A)	51	58	63	51	58	63	59	59	65	55	59	65

UTN i			16A			16D			22A			22D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	6,70	7,70	8,90	6,70	7,70	8,90	6,40	8,10	8,90	6,40	8,20	8,60
Rated air flow	(E)	m ³ /h	1198	1371	1581	1207	1384	1606	1438	1819	2218	1485	1898	2380
Available static pressure	(E)	Pa	38	50	66	38	50	67	31	50	75	30	50	78
Power input	(E)	W	124	170	248	124	170	248	70	160	300	70	160	300
Total cooling capacity	(1)(E)	kW	6,84	7,62	8,49	6,20	6,84	7,57	9,21	11,2	13,0	8,42	10,1	11,9
Sensible cooling capacity	(1)(E)	kW	5,40	6,07	6,83	5,01	5,60	6,29	6,77	8,32	9,83	6,36	7,75	9,23
FCEER class	(E)		C			C			B			C		
Water flow	(2)	l/h	1178	1312	1462	1068	1178	1304	1644	2010	2366	1509	1827	2163
Water pressure drop	(2)(E)	kPa	11	13	16	17	20	24	12	17	22	15	21	29
Heating capacity	(3)(E)	kW	7,28	8,04	8,93	6,47	7,11	7,88	9,73	11,7	13,7	9,06	10,8	12,7
FCCOP class			C			C			B			C		
Water flow	(3)	l/h	1254	1384	1538	1114	1224	1357	1689	2039	2380	1573	1884	2209
Water pressure drop	(3)(E)	kPa	10	12	14	15	17	21	10	14	19	14	19	25
Standard coil - number of rows			4			3			4			3		
Total sound power level	(4)	dB(A)	62	67	72	62	67	72	60	67	74	60	67	74
Inlet + radiated sound power level	(4)(E)	dB(A)	60	64	70	60	64	70	50	65	72	50	65	72
Outlet sound power level	(4)(E)	dB(A)	58	63	69	58	63	69	57	64	71	57	64	71

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the UTN i inverter units are the same of the UTN ON/OFF version. They are reported from page 120

RATED TECHNICAL DATA 2 PIPES

UTN i			30A			30D		
Speed			min	med	max	min	med	max
Control voltage	(E)	V	6,20	7,70	8,40	6,20	7,80	8,40
Rated air flow	(E)	m ³ /h	2073	2604	3175	2092	2641	3206
Available static pressure	(E)	Pa	32	50	74	31	50	74
Power input	(E)	W	190	300	500	190	300	500
Total cooling capacity	(1)(E)	kW	12,9	15,4	17,7	11,4	13,8	15,9
Sensible cooling capacity	(1)(E)	kW	9,37	11,4	13,5	8,61	10,4	12,2
FCEER class	(E)		C					
Water flow	(2)	l/h	2365	2823	3270	2145	2561	2953
Water pressure drop	(2)(E)	kPa	27	37	48	21	29	37
Heating capacity	(3)(E)	kW	13,7	16,4	19,1	12,7	15,1	17,3
FCCOP class			C					
Water flow	(3)	l/h	2389	2852	3311	2203	2617	3008
Water pressure drop	(3)(E)	kPa	23	32	41	18	25	31
Standard coil - number of rows			5			4		
Total sound power level	(4)	dB(A)	69	73	78	69	73	78
Inlet + radiated sound power level	(4)(E)	dB(A)	67	71	76	67	71	76
Outlet sound power level	(4)(E)	dB(A)	66	70	75	66	70	75

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 45°C / 40°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the UTN i inverter units are the same of the UTN ON/OFF version. They are reported from page 120

RATED TECHNICAL DATA 4 PIPES

UTN i			8A			8D			12A			12D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	6,00	7,40	8,90	6,00	7,40	8,90	7,30	8,00	8,80	7,30	9,00	8,80
Rated air flow DF	(E)	m ³ /h	531	694	793	529	686	783	1005	1115	1211	985	1088	1182
Available static pressure DF	(E)	Pa	29	50	65	30	50	65	41	50	59	41	50	59
Power input DF	(E)	W	45	73	112	40	73	112	102	125	152	102	125	152
Total cooling capacity DF	(1)(E)	kW	2,82	3,44	3,76	3,36	4,17	4,61	5,17	5,58	5,91	5,71	6,17	6,55
Sensible cooling capacity DF	(1)(E)	kW	2,18	2,68	2,95	2,52	3,17	3,53	3,84	4,15	4,39	4,30	4,66	4,97
FCEER class DF	(E)		B			C			C			C		
Water flow DF	(2)	l/h	486	592	647	579	718	794	890	961	1018	983	1062	1128
Water pressure drop DF	(2)(E)	kPa	10	14	17	8	12	14	18	21	23	15	17	19
Heating capacity	(3)(E)	kW	3,23	3,68	3,91	3,23	3,66	3,89	5,25	5,51	5,72	5,21	5,45	5,65
FCCOP class DF	(E)		B			B			C			C		
Water flow DF	(3)	l/h	278	317	337	278	315	335	452	474	492	449	469	486
Water pressure drop DF	(3)(E)	kPa	5	6	7	5	6	7	12	13	14	10	11	12
Additional coil DF - number of rows			1			1			1			1		
Total sound power level DF	(4)	dB(A)	54	61	66	54	61	66	59	63	69	61	64	69
Inlet + radiated sound power level DF	(4)(E)	dB(A)	52	59	64	52	59	64	56	60	66	56	60	66
Outlet sound power level DF	(4)(E)	dB(A)	51	58	63	51	58	63	55	59	65	55	59	65

UTN i			16A			16D			22A			22D		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	6,70	7,70	8,90	6,70	7,70	8,90	6,40	8,10	8,90	6,40	8,20	8,60
Rated air flow DF	(E)	m ³ /h	991	1094	1212	1184	1349	1550	1425	1795	2182	1466	1871	2328
Available static pressure DF	(E)	Pa	38	50	61	38	50	66	31	50	75	30	50	78
Power input DF	(E)	W	124	170	248	124	170	248	138	210	305	144	220	352
Total cooling capacity DF	(1)(E)	kW	6,14	6,75	7,46	6,77	7,52	8,35	9,14	11,0	12,9	8,33	10,0	11,7
Sensible cooling capacity DF	(1)(E)	kW	4,96	5,52	6,19	5,34	5,98	6,71	6,71	8,22	9,68	6,29	7,76	9,06
FCEER class DF	(E)		C			C			B			C		
Water flow DF	(2)	l/h	1057	1162	1285	1166	1295	1438	1631	1987	2336	1493	1808	2130
Water pressure drop DF	(2)(E)	kPa	16	19	23	10	13	15	12	16	22	15	21	28
Heating capacity	(3)(E)	kW	7,02	7,47	7,99	7,00	7,44	7,94	11,0	12,3	14,0	11,0	13,0	14,4
FCCOP class DF	(E)		C			C			B			B		
Water flow DF	(3)	l/h	604	643	688	602	641	684	11	12	14	950	1105	13
Water pressure drop DF	(3)(E)	kPa	22	24	27	20	22	25	6	8	10	6	8	10
Additional coil DF - number of rows			1			1			2			2		
Total sound power level DF	(4)	dB(A)	62	67	72	62	67	72	60	67	74	60	67	74
Inlet + radiated sound power level DF	(4)(E)	dB(A)	60	64	70	60	64	70	58	65	72	58	65	72
Outlet sound power level DF	(4)(E)	dB(A)	58	63	69	58	63	69	57	64	71	57	64	71

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the UTN i inverter units are the same of the UTN ON/OFF version. They are reported from page 120

RATED TECHNICAL DATA 4 PIPES

UTN i			30A			30D		
Speed			min	med	max	min	med	max
Control voltage	(E)	V	6,20	7,70	8,40	6,20	7,80	8,40
Rated air flow DF	(E)	m ³ /h	2065	2590	3155	2084	2626	3186
Available static pressure DF	(E)	Pa	32	50	74	31	50	74
Power input DF	(E)	W	221	345	441	223	350	452
Total cooling capacity DF	(1)(E)	kW	12,9	15,3	17,7	11,6	13,8	15,8
Sensible cooling capacity DF	(1)(E)	kW	9,34	11,3	13,4	8,58	10,4	12,1
FCEER class DF	(E)		C			C		
Water flow DF	(2)	l/h	2358	2811	3254	2138	2550	2940
Water pressure drop DF	(2)(E)	kPa	27	37	48	21	28	36
Heating capacity	(3)(E)	kW	15,0	17,0	19,2	15,0	17,0	19,3
FCCOP class DF	(E)		C					
Water flow DF	(3)	l/h	1295	1490	1680	1302	1503	1690
Water pressure drop DF	(3)(E)	kPa	13	16	20	11	17	21
Additional coil DF - number of rows			2			2		
Total sound power level DF	(4)	dB(A)	69	73	78	69	73	78
Inlet + radiated sound power level DF	(4)(E)	dB(A)	67	71	76	67	71	76
Outlet sound power level DF	(4)(E)	dB(A)	66	70	75	66	70	75

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 65°C / 55°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the UTN i inverter units are the same of the UTN ON/OFF version. They are reported from page 120



FH - FAN HEATERS

AREO	p.130
AREOi	p.140
DST	p.144

Air conditioning fan heaters with ON/OFF motor

AREO 8 - 101 kW



Hygrothermal comfort in the industrial and commercial sectors

In line with recent regulatory developments regarding energy efficiency, Galletti is updating its offering of fan heaters for heating and cooling systems to be used in industrial and commercial environments of any volume. The new AREO, which was designed to meet the stringent requirements of the ERP Directive, retains unchanged the distinctive aspects of the original design, that is, extreme reliability and sturdiness.

AREO's cover, which is made of pre-painted steel sheet, possesses an original design with a rounded shape that enhances its aesthetic form.

The AREO range consists of 18 models that, limited to the only heating version, can be either wall mounted (horizontal air flow) or ceiling mounted (vertical air flow). The cooling version is equipped with a new system in order to collect condensation and further insulation inside the cover.

The units are available in 6 sizes with 2-, 3- or 4-row heat exchangers ensuring an efficient performance with hot water supplied by a boiler or heat pump (4-row models).



2 pipes systems



Vertical installation



Horizontal installation (not for AREO C)



Heating



Cooling (only for AREO C)

PLUS

- » Low sound levels
- » Wide operating range (up to 60 °C intake air)
- » Axial fan with blades with an aerodynamic profile (HyBlade® technology)
- » Electric motor, class F, approved for continuous operation
- » Wide operating range (up to 60 °C intake air)



AVAILABLE VERSIONS

Single-phase and three-phase power supply.

AREO P

Fan heaters for hot water heating, with side water connections.

AREO H

Fan heaters for hot water heating, with vertical water connections, for replacement of indoor units installed in existing systems.

AREO S

Fan heaters for steam heating, with vertical water connections.

AREO L

Fan heaters for hot water heating, equipped with air-curtain diffuser, ceiling mounted.

AREO C

Single phase power supplied fan heaters suitable either for heating or cooling mode, equipped with asynchronous electric motor and side water connections, wall mounted.

MAIN COMPONENTS
Fan drive assembly

The motor and fan are a single integrated unit optimized to achieve maximum aeraulic efficiency. In fact, conformity to ErP is guaranteed, even for the versions with single-phase power supply.

Electric motor

Tropicalized motor directly coupled to an external rotor, standard, with the following features:

- equipped with internal thermal protection
- windings in class F
- protection rating IP54
- maintenance-free ball bearings

Axial fan

With blades with an optimized aerodynamic profile (HyBlade® technology), statically balanced, inserted in a housing that enhances aeraulic performance and minimizes noise.


Cabinet

Made of pre-painted steel sheet, complete with ABS corners, and manually adjustable aluminum baffles located on the air outlet for optimum distribution in the room to be heated.


Safety cage

Made of electrogalvanised steel wire, it supports the motor and is fixed to the cabinet by means of vibration-damping supports.

Heat exchanger

Made of copper pipes and aluminium fins of high thermal conductivity to optimize heat exchange.

RVM regulator for ventilation speed adjustment in single phase power supplied models

The speed regulator RVM can vary the effective value on the load by controlling the wave shape caused by a TRIAC. This accessory can be used only coupled to single phase power supplied models, and allows a fan heater manual ventilation speed adjustment depending on different needs. The device is also equipped with special filters in order to suppress noise induced on the supplied line or irradiated from the equipment and a minimum speed manually adjustable trimmer. This accessory is yet included with AREO C cooling series.


ACCESSORIES
Electromechanical control panels

CST	Delta/star switch for installation in electrical box
CSTP	Delta/star switch with box wall mounted
RVM	RVM manual power regulator for monophasic power supply FAN HEATERS

Power interface and regulating louver controllers

CSD	Recess mounted controller for opening and closing the SM motor-driven regulating louver
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Accessories

VA	Auxiliary tray for collecting condensate
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Fixation templates

DFC	Template for column installation
DFO	Adjustable template for wall/column installation

DFP	Template for wall installation
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Protective grill for gyms (ball shield)

R	Protective net for gyms
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Diffusors

DO	Two-row adjustable fin diffuser
LA	Air curtain diffuser

External air intake

PAE	External air intake
PAEM	Manual mixing louver
PAEMM	Motor driven mixer louver, 24 V power supply with spring return

External air intake rain protection grille

GR	Air intake grille with subframe
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Fan heaters AREO

RATED TECHNICAL DATA AREO P - HEATING MODE

AREO P			12	12	13	13	14	14	
Power supply		V-ph-Hz	230 - 1 - 50						
no. of poles			4	6	4	6	4	6	
Motor connctions			Mono	Mono	Mono	Mono	Mono	Mono	
Rated air flow		m ³ /h	1280	1000	1140	900	1040	800	
Heating capacity	(1)	kW	9,77	8,48	12,4	10,7	14,2	11,9	
Water flow	(1)	l/h	863	749	1097	946	1252	1047	
Water pressure drop	(1)	kPa	29	23	22	17	17	12	
Sound power level	(2)	dB(A)	64	59	64	59	65	60	
Power input		W	69	49	69	50	70	51	

AREO P			22	22	23	23	24	24	
Power supply		V-ph-Hz	230 - 1 - 50						
no. of poles			4	6	4	6	4	6	
Motor connctions			Mono	Mono	Mono	Mono	Mono	Mono	
Rated air flow		m ³ /h	3020	2100	2630	1850	2600	1800	
Heating capacity	(1)	kW	19,9	16,2	25,6	20,6	28,9	22,9	
Water flow	(1)	l/h	1754	1432	2256	1820	2555	2022	
Water pressure drop	(1)	kPa	23	16	29	20	19	13	
Sound power level	(2)	dB(A)	76	64	76	65	77	65	
Power input		W	198	110	210	114	212	120	

AREO P			32	32	32	33	33	33
Power supply		V-ph-Hz	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50
no. of poles			4	4	6	4	4	6
Motor connctions			Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	4500	4300	3200	4150	4000	2900
Heating capacity	(1)	kW	35,6	34,7	29,2	39,5	38,6	31,8
Water flow	(1)	l/h	3143	3060	2579	3486	3411	2806
Water pressure drop	(1)	kPa	20	19	14	18	17	12
Sound power level	(2)	dB(A)	76	76	69	76	76	69
Power input		W	320	315	175	340	330	180

AREO P			34	34	34	42	42	42
Power supply		V-ph-Hz	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50
no. of poles			4	4	6	4	4	6
Motor connctions			Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	4050	3900	2800	6900	7100	5600
Heating capacity	(1)	kW	45,1	44,0	35,6	53,4	54,3	47,4
Water flow	(1)	l/h	3980	3886	3145	4718	4793	4185
Water pressure drop	(1)	kPa	29	28	19	37	38	30
Sound power level	(2)	dB(A)	77	77	70	75	73	67
Power input		W	345	340	182	623	650	450

AREO P			43	43	43	44	44	44
Power supply		V-ph-Hz	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50
no. of poles			4	4	6	4	4	6
Motor connctions			Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	6400	6550	5300	6200	6400	5150
Heating capacity	(1)	kW	59,6	60,4	53,2	66,8	68,1	59,5
Water flow	(1)	l/h	5259	5329	4695	5894	6009	5250
Water pressure drop	(1)	kPa	36	37	30	23	24	19
Sound power level	(2)	dB(A)	74	74	68	75	75	69
Power input		W	635	690	465	655	700	470

- (1) Water temperature 85°C / 75°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed

RATED TECHNICAL DATA AREO P - HEATING MODE

AREO P			52	52	52	53	53	53
Power supply		V-ph-Hz	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50
no. of poles			6	4	6	6	4	6
Motor connections			Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	6400	8200	6800	6200	7900	6450
Heating capacity	(1)	kW	48,6	55,9	50,3	60,8	70,2	62,3
Water flow	(1)	l/h	4294	4934	4445	5373	6202	5497
Water pressure drop	(1)	kPa	17	22	18	19	25	20
Sound power level	(2)	dB(A)	69	75	71	69	76	72
Power input		W	370	725	760	374	732	775

AREO P			54	54	54	62	62	62
Power supply		V-ph-Hz	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50
no. of poles			6	4	6	6	6	8
Motor connections			Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	5900	7600	6200	8600	8900	7100
Heating capacity	(1)	kW	66,2	77,4	68,3	85,7	87,5	76,2
Water flow	(1)	l/h	5852	6834	6033	7567	7722	6731
Water pressure drop	(1)	kPa	21	27	22	21	22	17
Sound power level	(2)	dB(A)	71	77	73	70	71	66
Power input		W	380	755	780	555	565	360

AREO P			63	63	63	64	64	64
Power supply		V-ph-Hz	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50
no. of poles			6	6	8	6	6	8
Motor connections			Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	8100	8300	6500	7500	7650	6000
Heating capacity	(1)	kW	99,7	101	86,4	99,6	101	85,8
Water flow	(1)	l/h	8802	8943	7626	8795	8913	7571
Water pressure drop	(1)	kPa	29	30	23	29	29	22
Sound power level	(2)	dB(A)	65	72	67	71	72	67
Power input		W	560	575	380	582	590	390

- (1) Water temperature 85°C / 75°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed

RATED TECHNICAL DATA AREO C - HEATING MODE

AREO C			12	12	13	13	14	14	22	22	23
Power supply		V-ph-Hz	230 - 1 - 50								
no. of poles			4	6	4	6	4	6	4	6	4
Air flow rate max heating		m ³ /h	1280	1000	1140	900	1040	800	3020	2100	2630
Heating capacity	(1)	kW	9,77	8,48	12,4	10,7	14,2	11,9	19,9	16,2	25,6
Water flow	(1)	l/h	863	749	1097	946	1252	1047	1754	1432	2256
Water pressure drop	(1)	kPa	29	23	22	17	17	12	23	16	29
Sound power level	(2)	dB(A)	64	59	64	59	65	60	76	64	76
Power input	(3)	W	67	49	69	50	70	51	198	110	210

AREO C			23	24	24	32	33	34	42	43	44
Power supply		V-ph-Hz	230 - 1 - 50								
no. of poles			6	4	6	4	4	4	4	4	4
Air flow rate max heating		m ³ /h	1850	2600	1800	4500	4150	4050	6900	6400	6200
Heating capacity	(1)	kW	20,6	28,9	22,9	35,6	39,5	45,1	53,4	59,6	66,8
Water flow	(1)	l/h	1820	2555	2022	3143	3486	3980	4718	5259	5894
Water pressure drop	(1)	kPa	20	19	13	20	18	29	37	36	23
Sound power level	(2)	dB(A)	65	77	65	76	76	77	75	74	75
Power input	(3)	W	114	212	120	320	340	345	623	635	655

AREO C			52	53	54	62	63	64
Power supply		V-ph-Hz	230 - 1 - 50					
no. of poles			6	6	6	6	6	6
Air flow rate max heating		m ³ /h	6400	6200	5900	8600	7695	7500
Heating capacity	(1)	kW	48,6	60,8	66,3	85,7	79,3	99,6
Water flow	(1)	l/h	4294	5373	5852	7567	8802	8795
Water pressure drop	(1)	kPa	17	19	21	21	29	29
Sound power level	(2)	dB(A)	69	69	71	70	69	71
Power input	(3)	W	370	374	380	555	560	582

- (1) Water temperature 85°C / 75°C, air temperature 15°C - 100% of the max speed
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed
(3) Measured at 100% of the max speed

RATED TECHNICAL DATA AREO C - COOLING MODE

AREO C			12	12	13	13	14	14	22	22	23
Power supply		V-ph-Hz	230 - 1 - 50								
no. of poles			4	6	4	6	4	6	4	6	4
Air flow rate max cooling		m ³ /h	898	898	808	808	718	718	1602	1602	1411
Heating capacity	(1)	kW	7,87	7,87	10,0	10,0	11,2	11,2	13,4	13,4	17,3
Water flow	(1)	l/h	695	695	884	884	988	988	1184	1184	1527
Water pressure drop	(1)	kPa	18	18	13	13	10	10	9	9	15
Total cooling capacity	(2)	kW	2,30	2,30	2,82	2,82	3,15	3,15	3,61	3,61	5,00
Sensible cooling capacity	(2)	kW	1,81	1,81	2,23	2,23	2,45	2,45	3,08	3,08	3,91
Water flow	(2)	l/h	395	395	482	482	541	541	620	620	860
Water pressure drop	(2)	kPa	9	9	6	6	5	5	4	4	7
Sound power level	(3)	dB(A)	53	54	53	54	54	55	58	59	63
Power input	(4)	W	33	34	33	34	33	34	95	81	95

AREO C			23	24	24	32	33	34	42	43	44
Power supply		V-ph-Hz	230 - 1 - 50								
no. of poles			6	4	6	4	4	4	4	4	4
Air flow rate max cooling		m ³ /h	1411	1373	1373	2485	2292	2237	3738	3467	3359
Heating capacity	(1)	kW	17,3	19,1	19,1	22,9	25,4	29,1	35,1	39,2	43,9
Water flow	(1)	l/h	1527	1686	1686	2024	2242	2569	3098	3460	3875
Water pressure drop	(1)	kPa	15	5	5	5	5	8	7	7	3
Total cooling capacity	(2)	kW	5,00	5,23	5,23	5,72	7,22	9,65	9,72	12,4	13,1
Sensible cooling capacity	(2)	kW	3,91	4,20	4,20	5,23	6,12	7,50	7,85	8,69	10,3
Water flow	(2)	l/h	860	898	898	982	1239	1656	1668	2123	2255
Water pressure drop	(2)	kPa	7	2	2	1	1	4	2	3	1
Sound power level	(3)	dB(A)	60	59	60	63	63	64	62	61	62
Power input	(4)	W	81	95	81	153	153	153	400	400	400

AREO C			52	53	54	62	63	64
Power supply		V-ph-Hz	230 - 1 - 50					
no. of poles			6	6	6	6	6	6
Air flow rate max cooling		m ³ /h	3072	3001	2832	4730	4232	4125
Heating capacity	(1)	kW	31,1	38,6	42,4	55,7	48,0	64,7
Water flow	(1)	l/h	2745	3406	3743	4197	4240	5715
Water pressure drop	(1)	kPa	10	11	11	8	8	8
Total cooling capacity	(2)	kW	8,92	10,5	14,8	14,5	18,9	22,4
Sensible cooling capacity	(2)	kW	7,64	8,50	11,4	12,4	14,3	16,8
Water flow	(2)	l/h	1304	1800	2022	2490	3237	3853
Water pressure drop	(2)	kPa	4	5	6	2	4	4
Sound power level	(3)	dB(A)	53	53	55	57	56	58
Power input	(4)	W	272	272	272	335	335	335

- (1) Water temperature 85°C / 75°C, air temperature 15°C - max speed available in cooling mode
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) - max speed available in cooling mode
 (3) Sound power measured according to standards ISO 3741 - max speed available in cooling mode
 (4) Measured at max speed available in cooling mode
 All data reported in the table above refer to maximum allowed ventilation speed in order to avoid the drag of the condensation drops generated in the heat exchanger.

RATED TECHNICAL DATA AREO H - HEATING MODE

AREO H			13	13	23	23	33	33	33	43
Power supply		V-ph-Hz	230 - 1 - 50	230 - 1 - 50	230 - 1 - 50	230 - 1 - 50	230 - 1 - 50	400 - 3 - 500	400 - 3 - 500	230 - 1 - 50
no. of poles			4	6	4	6	4	4	6	4
Motor connections			Mono	Mono	Mono	Mono	Mono	Delta	Star	Mono
Rated air flow		m ³ /h	1083	855	2499	1758	3943	3800	2755	6080
Heating capacity	(1)	kW	10,2	8,89	21,3	17,3	33,2	32,5	26,9	50,4
Water flow	(1)	l/h	905	785	1882	1529	2935	2871	2376	4454
Water pressure drop	(1)	kPa	13	10	19	13	12	11	8	25
Sound power level	(2)	dB(A)	64	59	76	65	74	76	69	75
Power input		W	69	50	210	114	340	330	180	635

(1) Water temperature 85°C / 75°C, air temperature 15°C - 100% of the max speed

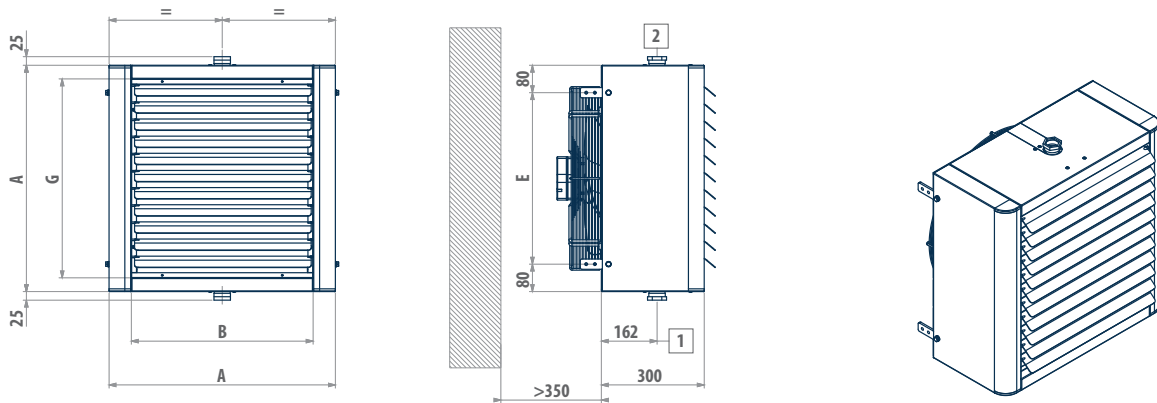
(2) Sound power measured according to standards ISO 3741 - 100% of the max speed

AREO H			43	43	53	53	53	63	63	63
Power supply		V-ph-Hz	400 - 3 - 500	400 - 3 - 500	230 - 1 - 50	400 - 3 - 500	400 - 3 - 500	230 - 1 - 50	400 - 3 - 500	400 - 3 - 500
no. of poles			4	6	6	4	6	6	6	8
Motor connections			Delta	Star	Mono	Delta	Star	Mono	Delta	Star
Rated air flow		m ³ /h	6223	5035	5890	7505	6128	8100	7885	6175
Heating capacity	(1)	kW	51,1	45,2	56,2	64,8	57,5	99,7	80,5	69,2
Water flow	(1)	l/h	4512	3991	4960	5720	5079	8802	7106	6112
Water pressure drop	(1)	kPa	25	20	16	20	16	29	19	15
Sound power level	(2)	dB(A)	77	70	69	76	72	70	71	66
Power input		W	690	465	375	732	775	560	575	380

(1) Water temperature 85°C / 75°C, air temperature 15°C - 100% of the max speed

(2) Sound power measured according to standards ISO 3741 - 100% of the max speed

DIMENSIONAL DRAWINGS

AREO H - AREO S

LEGEND

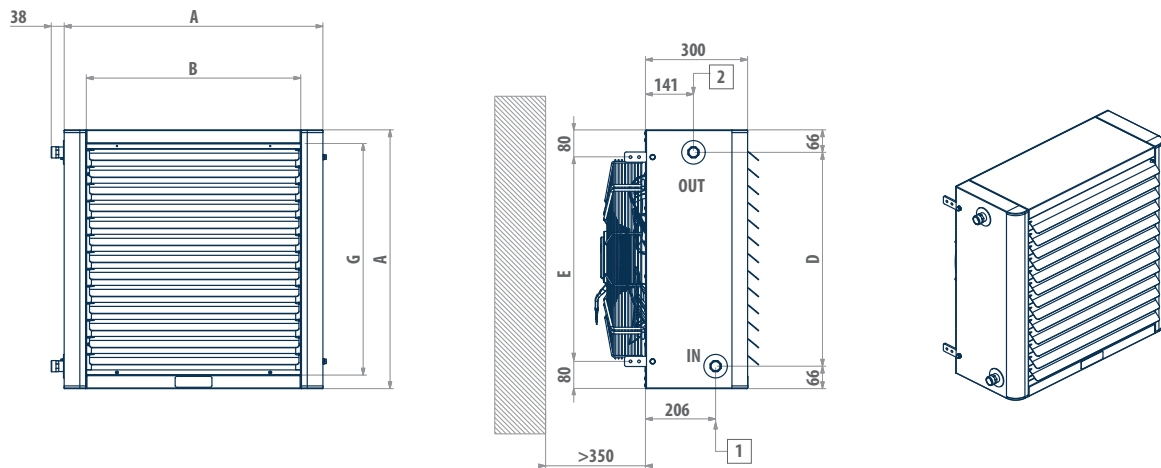
- | | |
|---|------------------------------------|
| 1 | Water inlet connection female gas |
| 2 | Water outlet connection female gas |

AREO H	A	B	E	G	1	2	kg
	mm	mm	mm	mm	"	"	kg
13	460	330	300	380	1 1/4	1 1/4	20
23	560	430	400	480	1 1/4	1 1/4	26
33	660	530	500	580	1 1/4	1 1/4	35
43	760	630	600	680	1 1/4	1 1/4	41
53	860	730	700	780	1 1/4	1 1/4	52
63	960	830	800	880	1 1/4	1 1/4	61

AREO S	A	B	E	G	1	2	kg
	mm	mm	mm	mm	"	"	kg
12	460	330	300	380	1 1/4	1 1/4	20
22	560	430	400	480	1 1/4	1 1/4	26
32	660	530	500	580	1 1/4	1 1/4	35
42	760	630	600	680	1 1/4	1 1/4	41
52	860	730	700	780	1 1/4	1 1/4	52
62	960	830	800	880	1 1/4	1 1/4	61

DIMENSIONAL DRAWINGS

AREO P - AREO L



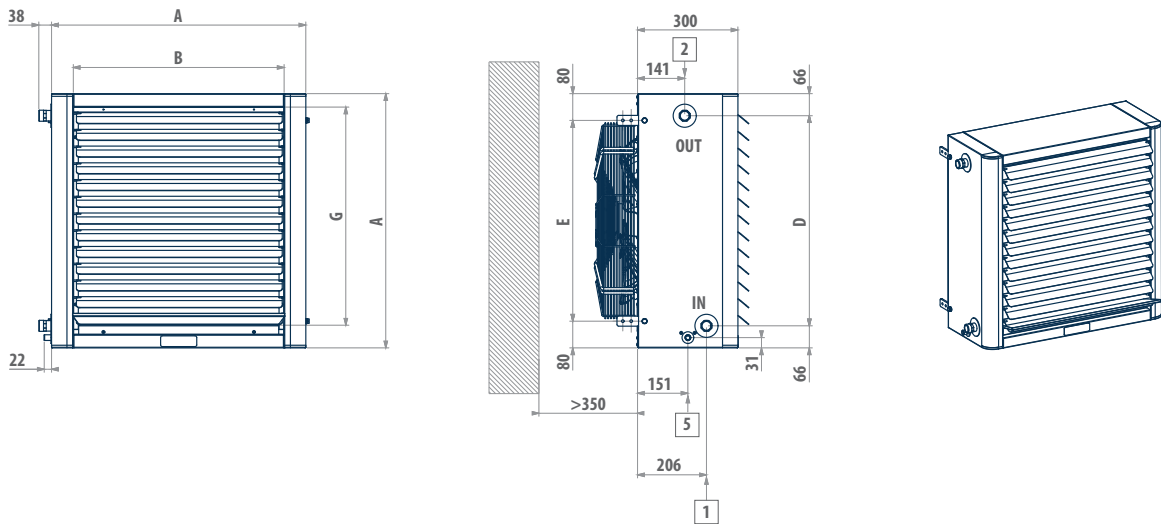
LEGEND

- | | |
|---|----------------------------------|
| 1 | Water inlet connection male gas |
| 2 | Water outlet connection male gas |

AREO P	A	B	D	E	G	1	2	kg
	mm	mm	mm	mm	mm	"	"	
12	460	330	328	300	380	3/4	3/4	20-20-21
13 - 14	460	330	329	300	380	3/4	3/4	20-20-21
22 - 23 - 24	560	430	428	400	480	3/4	3/4	26-26-27
32 - 33 - 34	660	530	528	500	580	1	1	34-35-37
42 - 43 - 44	760	630	628	600	680	1	1	40-41-44
52 - 53 - 54	860	730	728	700	780	1 1/4	1 1/4	50-52-55
62 - 63 - 64	960	830	828	800	880	1 1/4	1 1/4	58-61-64

AREO L	A	B	D	E	G	1	2	kg
	mm	mm	mm	mm	mm	"	"	
32 - 33	660	530	528	500	580	1	1	34-35
42 - 43	760	630	628	600	680	1	1	40-41
52 - 53	860	730	728	700	780	1 1/4	1 1/4	50-52
62 - 63	960	830	828	800	880	1 1/4	1 1/4	58-61

DIMENSIONAL DRAWINGS

AREO C

LEGEND

- | | |
|---|---|
| 1 | Water inlet connection male gas |
| 2 | Water outlet connection male gas |
| 5 | Condensate drainage \varnothing 17 mm |

AREO C	A mm	B mm	D mm	E mm	G mm	1 "	2 "	 kg
12 - 13 - 14	460	330	328	300	380	3/4	3/4	20-20-21
22 - 23 - 24	560	430	428	400	480	3/4	3/4	26-26-27
32 - 33 - 34	660	530	528	500	580	1	1	34-35-37
42 - 43 - 44	760	630	628	600	680	1	1	40-41-44
52 - 53 - 54	860	730	728	700	780	1 1/4	1 1/4	50-52-55
62 - 63 - 64	960	830	828	800	880	1 1/4	1 1/4	58-61-64

Air conditioning fan heaters with BLDC motor

AREO i 11 - 118 kW



BLDC motor



2 pipes systems



Vertical installation



Heating



Cooling

Reliability and energy efficiency at the top of its category

The new AREO i series combines the reliability and sturdiness of the on/off version with the innovation of EBM-PAPST GreenTech® technology. The AREO i series is equipped with brushless inverters (BLDC) integrated with the motor, which guarantees accurate adjustment of the rotation speed and maximum adaptability to real-time thermal load

Innovative GreenTech® technology makes it possible to achieve an exceptional degree of aerodynamic efficiency and a consequent reduction in seasonal power consumption of up to 50% in comparison to the traditional version with AC motor.

The rounded shape of the cabinet gives the product an especially unique design.

The AREO i range consists of 18 models to be wall mounted. AREO i is ideal for both mode heating and cooling due to an innovative system for collecting condensate and additional insulation inside the cabinet.

The range includes 6 different construction sizes that are also available with 4-row heat exchangers to allow proper operation with hot water produced by the heat pump.

PLUS

- » Low sound levels
- » Wide operating range (up to 65 °C intake air)
- » Axial fan with blades with an aerodynamic profile (HyBlade® technology)
- » Electric motor, class F, approved for continuous operation
- » Fan and motor are integrated to provide considerably increased reliability



ACCESSORIES

Electronic microprocessor control panels with display

DIST MY COMFORT controller spacer for wall mounting

MCLF Microprocessor control with display MY COMFORT LARGE

MCSWE Water sensor for MYCOMFORT, EVO, LED 503 controllers

Power interface and regulating louver controllers

CSD Recess mounted controller for opening and closing the SM motor-driven regulating louver

Accessories

VA Auxiliary tray for collecting condensate

Fixation templates

DFC Template for column installation

DFO Adjustable template for wall/column installation

DFP Template for wall installation

Protective grill for gyms (ball shield)

R Protective net for gyms

Diffusors

DO Two-row adjustable fin diffuser

External air intake

PAE External air intake

PAEM Manual mixing louver

PAEMM Motor driven mixer louver, 24 V power supply with spring return

External air intake rain protection grille

GR Air intake grille with subframe

MAIN COMPONENTS
Fan drive assembly

The electric fan and BLDC motor are a single integrated unit optimized to achieve maximum aerodynamic efficiency. In fact, conformity to ERP2017 is guaranteed, even for the versions with single-phase power supply.

Electric motor

Tropicalized motor directly coupled to an external rotor, standard, with the following features:

- equipped with internal thermal protection
- windings in class F
- protection rating IP54
- maintenance-free ball bearings

Axial fan

With blades with an optimized aerodynamic profile (HyBlade® technology), statically balanced, inserted in a housing that enhances aerodynamic performance and minimizes noise.


Microprocessor controller (accessory)

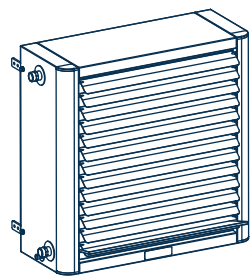
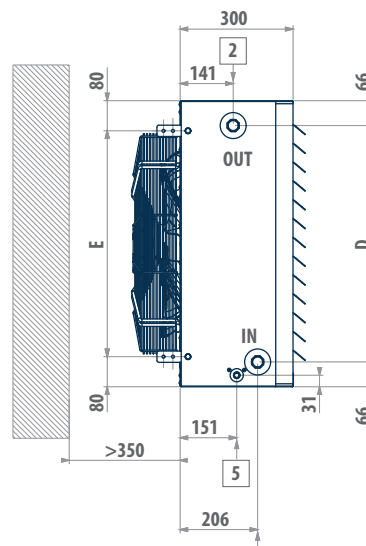
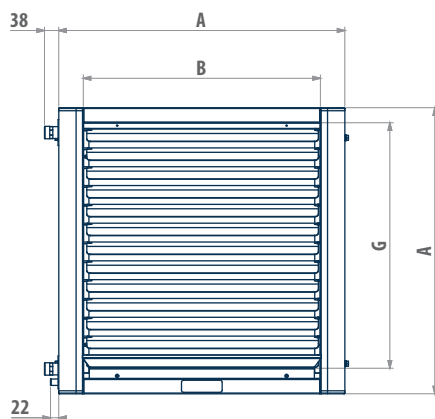
The advanced microprocessor control unit adjusts the fan speed of the brushless motor between 0 and 100%, so that in all partial load conditions the indoor unit will operate at a reduced speed with considerably reduced noise emissions and power consumption.


Cabinet

Pre-painted steel sheet cabinet complete with ABS corner trims, adjustable aluminium louvers (spring-operated) placed on the air outlet which enable an optimal distribution of air within the room to be heated.

Heat exchanger

High conductivity heat exchanger made with copper piping and aluminium fins assuring higher heat exchange than standard iron piping exchangers.

DIMENSIONAL DRAWINGS
AREO i

LEGEND

- 1** Water inlet connection, male gas
- 2** Water outlet connection, male gas
- 3** Condensate discharge Ø 17 mm

AREO i	A	B	D	E	G	1	2	kg
	mm	mm	mm	mm	mm	"	"	
12 - 13 - 14	460	330	328	300	380	3/4	3/4	19-19-20
22 - 23 - 24	560	430	428	400	480	3/4	3/4	25-26-27
32 - 33 - 34	660	530	528	500	580	1	1	33-34-36
42 - 43 - 44	760	630	628	600	680	1	1	39-41-42
52 - 53 - 54	860	730	728	700	780	1 1/4	1 1/4	50-53-54
62 - 63 - 64	960	830	828	800	880	1 1/4	1 1/4	58-61-63

Fan heaters AREO i

RATED TECHNICAL DATA - HEATING MODE

AREO i			12	13	14	22	23	24	32	33	34
Power supply		V-ph-Hz	230-1-50								
Air flow rate max heating		m ³ /h	1626	1375	1250	2700	2350	2300	3100	2850	2770
Heating capacity	(1)	kW	11,2	14,0	16,0	18,7	23,9	26,8	28,7	31,5	35,4
Water flow	(1)	l/h	988	1232	1416	1651	2111	2368	2535	2778	3129
Water pressure drop	(1)	kPa	37	27	21	21	26	17	13	12	19
Sound power level	(2)	dB(A)	68	69	70	71	69	69	64	64	64
Power input	(3)	W	80	79	81	139	132	146	105	108	108

AREO i			42	42	43	43	44	44	52	52	53
Power supply		V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50
Air flow rate max heating		m ³ /h	5800	8200	5400	7800	5350	7749	8800	9500	8450
Heating capacity	(1)	kW	48,5	59,0	53,9	67,0	61,0	76,6	58,2	60,7	73,2
Water flow	(1)	l/h	4279	5210	4756	5913	5386	6763	5138	5358	6457
Water pressure drop	(1)	kPa	31	44	30	44	20	30	24	25	27
Sound power level	(2)	dB(A)	71	81	72	81	72	82	80	80	82
Power input	(3)	W	318	844	334	840	344	850	715	859	766

AREO i			53	54	54	62	62	63	63	64	64
Power supply		V-ph-Hz	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Air flow rate max heating		m ³ /h	9150	8100	8850	7200	11200	6700	10500	6200	9750
Heating capacity	(1)	kW	76,6	80,6	85,0	77,0	100	88,2	118	87,8	118
Water flow	(1)	l/h	6764	7114	7503	6797	8861	7789	10393	7751	10446
Water pressure drop	(1)	kPa	29	29	32	18	28	24	39	23	39
Sound power level	(2)	dB(A)	80	82	81	69	78	70	79	71	79
Power input	(3)	W	876	776	875	248	845	259	864	266	875

- (1) Water temperature 85°C / 75°C, air temperature 15°C - 100% of the max speed
 (2) Sound power measured according to standards ISO 3741 - 100% of the max speed
 (3) Measured at 100% of the max speed

RATED TECHNICAL DATA - COOLING MODE

AREO i		12	13	14	22	23	24	32	33	34
Power supply	V-ph-Hz	230-1-50								
Air flow rate max cooling	m ³ /h	865	936	899	1538	1616	1570	2409	2362	2412
Heating capacity	(1) kW	7,81	11,0	12,9	13,6	19,0	21,0	24,7	28,0	32,4
Water flow	(1) l/h	689	971	1136	1199	1673	1850	2179	2469	2856
Water pressure drop	(1) kPa	20	18	14	12	17	11	10	10	16
Total cooling capacity	(2) kW	2,25	3,17	3,71	3,49	5,50	5,80	5,59	7,06	9,78
Sensible cooling capacity	(2) kW	1,77	2,48	2,89	2,96	4,29	4,63	5,12	5,99	7,42
Water flow	(2) l/h	385	544	637	599	944	996	959	1213	1679
Water pressure drop	(2) kPa	10	9	7	5	9	5	3	4	9
Sound power level	(3) dB(A)	47	54	55	57	59	64	58	59	60
Power input	(4) W	36	44	45	25	46	63	47	57	68

AREO i		42	42	43	43	44	44	52	52	53
Power supply	V-ph-Hz	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50
Air flow rate max cooling	m ³ /h	3346	3399	3492	3278	3421	3282	4644	4536	4492
Heating capacity	(1) kW	35,0	35,3	41,2	39,5	45,7	44,5	40,5	40,0	50,0
Water flow	(1) l/h	3087	3115	3631	3489	4038	3927	3578	3529	4417
Water pressure drop	(1) kPa	18	18	19	18	12	11	12	12	14
Total cooling capacity	(2) kW	9,66	9,77	12,3	11,8	13,1	12,7	10,6	10,4	14,4
Sensible cooling capacity	(2) kW	7,80	7,88	9,43	9,03	10,2	9,93	8,89	8,74	11,3
Water flow	(2) l/h	1658	1675	2109	2020	2240	2172	1825	1790	2462
Water pressure drop	(2) kPa	8	8	10	9	6	6	5	5	7
Sound power level	(3) dB(A)	61	64	63	64	63	63	64	63	64
Power input	(4) W	91	69	118	73	120	76	97	92	105

AREO i		53	54	54	62	62	63	63	64	64
Power supply	V-ph-Hz	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50	230-1-50	400-3-50
Air flow rate max cooling	m ³ /h	4365	4706	4653	6011	5888	6005	5605	5861	5779
Heating capacity	(1) kW	49,1	57,5	57,1	68,8	67,9	82,1	78,3	84,5	83,7
Water flow	(1) l/h	4338	5076	5040	6075	5996	7241	6912	7458	7387
Water pressure drop	(1) kPa	13	16	16	14	14	21	19	22	21
Total cooling capacity	(2) kW	14,1	17,6	17,5	17,3	17,0	24,5	23,3	26,7	26,5
Sensible cooling capacity	(2) kW	11,1	13,3	13,2	14,8	14,6	18,8	17,9	19,8	19,6
Water flow	(2) l/h	2415	3025	2999	2963	2922	4212	3999	4586	4542
Water pressure drop	(2) kPa	7	9	9	6	6	11	10	13	12
Sound power level	(3) dB(A)	64	66	66	64	62	67	62	70	65
Power input	(4) W	96	141	134	157	150	195	152	232	205

(1) Water temperature 85°C / 75°C, air temperature 15°C - max speed available in cooling mode

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) - max speed available in cooling mode

(3) Sound power measured according to standards ISO 3741 - max speed available in cooling mode

(4) Measured at max speed available in cooling mode

All data reported in the table above refer to maximum allowed ventilation speed in order to avoid the drag of the condensation drops generated in the heat exchanger.

Air destratifiers

DST 1700 - 9100 m³/h



Horizontal installation



Axial fan

PLUS

- » Simple installation
- » Overload cut-out and safety thermostat are standard
- » Adjustable louvers
- » HyBlade® axial fans

The solution for eliminating hot air stratification in industrial environments

In industrial environments characterized by high ceilings and heating with hot air systems, the need to maintain a comfortable temperature at the floor level for the personnel results in the inconvenience of concentrating high-temperature air in the upper part of the area. Therefore, the heat remains trapped and unused near the roof and it is destined to be lost outdoors, thus increasing the building's heat loss.

The DST series air destratifiers eliminate this problem, generating a descending vertical air flow that is able to reduce the difference in temperature of the air between the floor and the ceiling up to a maximum of approximately 3 °C. During the summer months the DST air destratifiers can be used to achieve effective ventilation. They are equipped with a fan drive unit consisting of axial fans and asynchronous, single-phase, and three-phase electric motors depending on the size, with external rotor, which guarantees compatibility with the most recent regulations on limiting energy consumption.

The safety thermostat and the magnetothermic motor protection device with manual reset, installed in the unit as standard equipment, together with the convenient mounting brackets and baffles that can be adjusted to direct the air flow, make installation particularly easy without the use of further accessories.



MAIN COMPONENTS

Fan drive assembly

The axial fan, with Hyblade® type airfoil blades made of aluminum and coated with plastic material, possesses the unique characteristics of both materials: sturdiness and quietness are combined with a highly efficient asynchronous electric motor with external rotor.



Fan stop thermostat

It is installed on the unit and allows the temperature to be set at which de-stratifier operation is activated.

Structure

Pre-painted sheet steel structural work equipped with ABS and adjustable aluminum baffles.

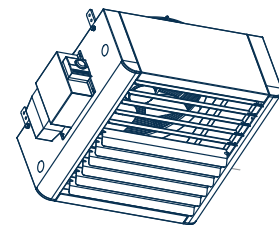
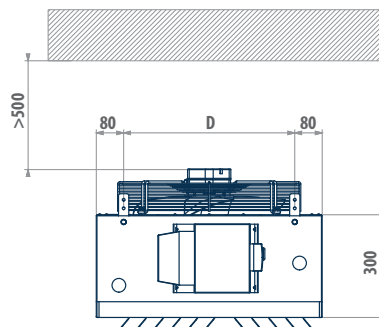
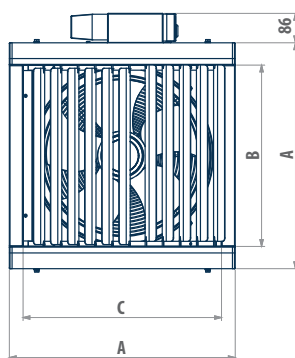
RATED TECHNICAL DATA

DST			14	26	36	46	56	66
Fan speed		rpm	1400	900	900	900	900	750
Rated air flow		m ³ /h	1710	3083	4199	7220	8142	9139
Minimum installation height		m	3,0	3,5	4,5	5,0	7,0	6,5
Maximum installation height		m	5,0	5,5	7,0	7,5	9,0	10,0
Power supply		V-ph-Hz	230 - 1 - 50	230 - 1 - 50	400 - 3 - 50	400 - 3 - 50	400 - 3 - 50	400 - 3 - 50
Power input		W	62	110	160	390	418	320
Absorbed current		A	0,3	0,5	0,3	0,7	0,7	0,6
Sound power level	(1)	dB(A)	65	68	72	76	78	70

(1) Sound power measured according to standards ISO 3741

DIMENSIONAL DRAWINGS

DST



DST	A	B	C	D	E
	mm	mm	mm	mm	mm
14	460	300	350	300	500
26	560	400	450	400	500
36	660	500	550	500	525
46	760	600	650	600	515
56	860	700	750	700	535
66	960	800	850	800	535



CO - CONTROLLERS AND SOFTWARE FOR HYDRONIC INDOOR UNITS

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LED503	p.153
MYCOMFORT	p.154
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EVO DISP	p.157
EVO-2-TOUCH	p.158
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GARDA	p.162



Galletti adjustment



Air-conditioning control is now quick and easy: effective room comfort is efficiently, simply, and intuitively accessible with Galletti control panels, from the simplest electromechanical control for setting the fan speed to microprocessor controls for complete temperature and humidity control.

Both ON/OFF and modulating 2- and 3-way valves are managed according to the temperature and humidity values measured.

The integrated management of the controls is completed with GARDA, supervision software that allows the creation of sophisticated adjustment logics whose goals are to meet the required level of comfort and to achieve energy savings.

Controls that can be integrated into any type of system



The wide range of Galletti controllers offers a multitude of installation options.

No fewer than 7 controls designed for on-board installation guarantee simple and elegant solutions. Specific installation kits allow mounting in the ESTRO, FLAT, 2x1 hydronic indoor units. This gives users control of the temperature at their fingertips and a solution that can be integrated in any type of environment.

There is now an even wider range of wall-mounted controllers: 9 controls with the option to manage, from a single point, more than one indoor unit in the same room.

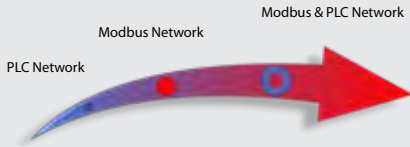
In addition to these, an infrared remote control is also available for high wall-mounted indoor units and cassette fan coil units.

Controls of every level for any need



Galletti's offering is suitable for every need of cost-effectiveness and functionality. With its 9 electromechanical controls and its 5 microprocessor controls, Galletti is a market leader due to the diversity of its range of products. The devices offered in its catalogue are capable of interacting with multiple-speed indoor units or with modulating ventilation managing various different dynamics of thermostatisation and any serial communication.

Serial Communication: different possibilities for different needs



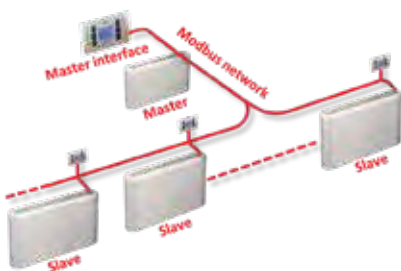
Galletti offer of RS485 serial port microprocessor controls, allows a suitable single terminal management, literally opening the doors to every plant adjustment need. The circulation of information on a bus-type network via Modbus communication protocol, standard in the HVAC field, is completed and combined with Power Line Communication (PLC), enabling a customised and easier interaction between user and plant.



Power Line Communication (PLC) Network

» **Easy installation**

- » Single interface to control multiple units
- » Electrical wires reduction
- » Slave units repeat exactly Master unit instructions
- » Suitable solution for terminal units submitted to the same thermal charge
- » Available with EVO controller



Modbus Network

» **Suitable solution for terminal units submitted to different charges**

- » Each unit is equipped with its own sensors
- » Master unit sets the main parameters
- » Multiple degrees of freedom settable for Slave units
- » Available with MYCOMFORT or EVO controllers



Mixed Network

» **Ideal solution for hotels or places with multiple zones to be conditioned**

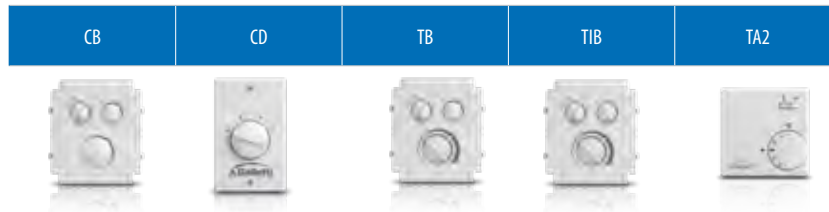
- » Key areas controlled via Modbus protocol and replica of the same instructions via Power Line Communication (PLC)
- » Master unit can be a simple controller or a more complex supervision system
- » Monitoring with decreasing degree of autonomy
- » Contemporary use of Modbus Network and Power Line Communication (PLC) with both advantages
- » Available with EVO controller

Controllers and software for indoor hydronic units

Overview page of controls for hydronic indoor units

The following table can be used to quickly identify the most suitable control panel according to the functionality required.

ELECTROMECHANICAL CONTROLLERS



		CB	CD	TB	TIB	TA2
Installation	On-board	✓	-	✓	✓	-
	Wall	-	✓	-	-	✓
System	2 pipes	✓	✓	✓	✓	✓
	4 pipes	-	-	-	-	-
Adjustment	Air thermostat	-	-	✓	✓	✓
	3 speeds	✓	✓	✓	✓	-
	4 speeds	-	-	-	-	-
	Automatic speeds	-	-	-	-	-
	Variable speed	-	-	-	-	-
	Dehumidification / RH reading	-	-	-	-	-
External sensors	Water sensor	-	-	-	-	-
	Remote air sensor	-	-	-	-	-
	Remote RH sensor	-	-	-	-	-
	Water operating thermostat	✓	✓	✓*	✓*	-
External devices management	ON/OFF valve management	-	-	✓*	✓*	✓
	Modulating valve management	-	-	-	-	-
	Control of heating element	-	-	-	-	-
	Digital outputs	-	-	-	-	-
Ancillary functions	Summer/Winter local	-	-	-	✓	✓
	Summer/Winter water	-	-	-	-	-
	Summer/Winter air (4 pipes)	-	-	-	-	-
	Economy	-	-	-	-	-
	Digital inputs	-	-	-	-	-
	Modbus communication	-	-	-	-	-

✓* options that are not mutually compatible



Overview page of controls for hydronic indoor units

The following table can be used to quickly identify the most suitable control panel according to the functionality required.

MICROPROCESSOR CONTROLLERS

MICROPROCESSOR CONTROLLERS WITH DISPLAY

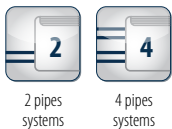


TED2T	TED4T	TED10	MYCOMFORT BASE	MYCOMFORT MEDIUM	MYCOMFORT LARGE	EVO	LED503		
✓	✓	✓	✓	✓	✓	-	✓	On-board	Installation
✓	✓	✓	✓	✓	✓	✓	✓	Wall	
✓	-	✓	✓	✓	✓	✓	✓	2 pipes	System
-	✓	✓	✓	✓	✓	✓	✓*	4 pipes	
✓	✓	✓	✓	✓	✓	✓	✓	Air thermostat	Adjustment
✓	✓	✓	✓	✓	✓	✓	✓	3 speeds	
-	-	-	✓	✓	✓	✓	✓*	4 speeds	
-	-	✓	✓	✓	✓	✓	✓	Automatic speeds	
-	-	✓	-	-	✓	✓	-	Variable speed	
-	-	-	-	✓	✓	✓	-	Dehumidification / RH reading	
✓	✓	✓	✓	✓	✓	✓	✓	Water sensor	External sensors
✓	✓	✓	✓	✓	✓	✓	✓	Remote air sensor	
-	-	-	-	✓	✓	✓	-	Remote RH sensor	
-	-	-	-	-	-	-	-	Water operating thermostat	
✓	✓	✓	✓	✓	✓	✓	✓	ON/OFF valve management	External devices management
-	-	-	-	-	✓	✓	-	Modulating valve management	
-	-	-	✓	✓	✓	✓	✓*	Control of heating element	
-	-	-	-	-	✓	✓	-	Digital outputs	
✓	✓	✓	✓	✓	✓	✓	✓	Summer/Winter local	Ancillary functions
-	-	-	✓	✓	✓	✓	✓	Summer/Winter water	
-	✓	✓	✓	✓	✓	✓	✓	Summer/Winter air (4 pipes)	
-	-	-	✓	✓	✓	✓	-	Economy	
-	-	-	✓	✓	✓	✓	✓	Digital inputs	
-	-	-	-	✓	✓	✓	-	Modbus communication	

✓* options that are not mutually compatible

Simplified electronic controller

TED



A series of three easy and efficient controllers

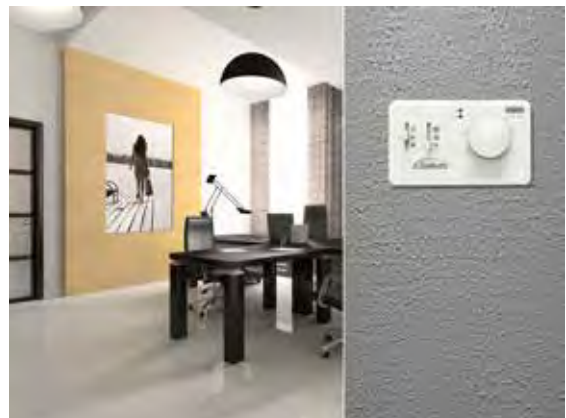
The three versions of the new electronic device TED, are Galletti answer to the demand of a simple and flexible controller suitable to the different plant needs.

The assignment of the operating conditions is intuitive and easy-applicable, and the supplied accessories allow the installation on board in addition to the classical on wall.

The controller is moreover equipped in all versions with dedicated contacts for both air and water probes. In this latter case it is therefore possible to consent ventilation only if water temperature is adequate to the normal operating condition.

PLUS

- » Three versions depending on plant and terminal units
- » Easy application
- » Wall mounted or on-board installation
- » Units supplied with BLDC electric motor supported (only 0-10 V version)



AVAILABLE VERSIONS



TED2T

- It supports terminal units equipped with asynchronous electric motor in 2 pipes plants
- ON/OFF valve supported
- Water consent on the basis of temperature



TED4T

- It supports terminal units equipped with asynchronous electric motor in 4 pipes plants
- Two ON/OFF valves supported
- Seasonal manual or automatic switch (on the basis of air temperature)
- Water consent on the basis of temperature



TED10

- It supports terminal units equipped with BLDC electric motor thanks to its internal 0-10 V signal generator
- Suitable for both 2 or 4 pipes plants
- Manual or automatic speed adjustment mode
- Water consent on the basis of temperature

ACCESSORIES

Electronic microprocessor control panels

KB A On-board ESTRO FA installation kit suitable for TED controller

KB F On-board FLAT/FLAT S installation kit suitable for TED controller

KB L DX On-board ESTRO FL/FU/FB installation kit on the right side suitable for TED controller

KB L SX On-board ESTRO FL/FU/FB installation kit on the left side suitable for TED controller

TED SWA Water temperature sensor for TED controls

Recess wall-mounted control panel

LED503



PLUS

- » Complete management of indoor units for 2- or 4-pipe systems
- » Intuitive use
- » Large LED display for ease of visualization
- » Can be installed in a 503 socket box

Simplicity and elegance for the management of water system indoor units

The proposed microprocessor control panels for Galletti indoor units is completed by the LED503 command with LED display that is designed for recess wall mounting or mounting on the ESTRO series fan coils. LED503 includes an advanced software program developed internally by Galletti's R&D department focusing on ease of use and simplicity of installation and programming.

LED503 makes it possible to control up to 4 fan speeds, automatically or manually, together with the management of 2- or 3-way valves in 2- or 4-pipe air conditioning systems.

Due to the presence of a configurable digital input it can easily be remotely interfaced to centralize specific functions such as seasonal switchover of the operating mode, activation of the economy mode, or simply turning it on or off.

The proportional adjustment algorithm automatically adjusts the fan speed depending on the value of the difference between the ambient temperature and the set setpoint and allows precise adjustment of the room conditions.

The water sensor, which can be installed as an accessory, is used to verify that the temperature of the heat transfer fluid is always at an optimal level and compatible with the active operating mode.

The seasonal switchover can be made automatic depending on the air or water temperature, making this controller the perfect tool for applications in both the residential sector and the commercial or hotel sector.

LED503 can be easily integrated in the room to be air conditioned due to the option to choose between three different frames.

Alternatively it is also possible to use commercial plates of the Idea and Rondò series in the Vimar catalogue.



RAL7031 grey plate



RAL9003 white plate



RAL9005 black plate



LED503 on-board controller installation kit for ESTRO

ACCESSORIES

Electromechanical control panels

IPM Circuit board for connection of UTN 30-30A-40-40A to control panels.

Electronic microprocessor control panels with display

COB Finishing plate for LED 503 controller, RAL9005 black

COG Finishing plate for LED 503 controller, RAL7031 grey

COW

Finishing plate for LED 503 controller, RAL9003 white

KL

LED503 on-board controller installation kit for ESTRO

Power interface and regulating lower controllers

KP

Power interface for connecting in parallel up to 4 fan coil units to the one controller

Electronic microprocessor controller with LCD display

MYCOMFORT



Three different proposals for a customized level of comfort

Climate control becomes fast and simple: interior comfort conditions can be controlled thanks to the new MYCOMFORT control panels, the connection node of Galletti integrated systems.

The microprocessor control panel allows you to set the operating mode of the indoor hydronic units in such a way as to achieve conditions of interior comfort and complete control over the air conditioning system.

The controller features a large-sized liquid crystal display with incorporated keypad for setting and reading environmental parameters and the operating parameters of the indoor unit connected to it.

There is a vast choice of accessories available, which allow either wall mounting or installation on board the indoor unit.



Supervision
GARDA



BUS com-
munication



Management
of external
devices

PLUS

- » Three versions depending on the customer's requirements
- » Large display
- » User-friendly interface
- » Wall mounted or on-board installation
- » Easy connection and startup



AVAILABLE VERSIONS

BASE

Temperature-based control of fan coil (4 fan speeds) unit and regulating valves.

MEDIUM

Control of fan coil unit (4 fan speeds) and valves based on temperature and humidity, connection to GARDA systems, setting up of small networks in slave mode.

LARGE

Control of fan coil unit (4 fan speeds) and regulating valves based on temperature, humidity, weekly timer, connection to GARDA systems, setting up of small networks in master mode, backlit display, control of modulating devices (valves, BLDC motors)

MAIN COMPONENTS AND FEATURES
Shell

The outer shell is made of ABS that has been UV treated to retain the original colour over time. Its pleasant design makes it suitable for high-grade installations in sophisticated environments.


Display

3" are available to the user to clearly view all the data of interest for efficient adjustment. The use of intuitive pictograms to represent all the functions makes it highly user friendly.


Terminal board

MYCOMFORT features quick-connect terminals which enable hassle-free wiring. Programming of the functions and address is simplified as it can be done directly from the keypad and display.


Control and savings

Automatic control of the unit's cooling and heating functions according to air and water temperatures.

Real comfort

MYCOMFORT can control and maintain comfort in terms of both temperature and humidity thanks to the presence of a sensor which measures ambient humidity and enables dehumidification cycles to be carried out by acting on valves, ventilation and the water set-point.

Management of accessories and external devices

This controller allows the management of both ON/OFF and modulating 2- and 3-way valves, and in addition it is possible to manage external devices such as chillers, boilers, and zone valves. It is performed by means of no-voltage ON/OFF contacts, depending on the environmental parameters.

Supervision

This controller can be integrated with the GARDA software monitoring system, by means of the RS485 bus connection, from which it is possible to display all the functions and access to the MYCOMFORT programming menu.

MYCOMFORT FEATURE

	Base	Medium	Large
4-speed fan control	•	•	•
ON/OFF valve control	•	•	•
ON/OFF via external enable signals / digital inputs	•	•	•
External devices/digital outputs ON/OFF			•
Air temperature sensor	•	•	•
Water temperature sensor	•	•	•
Humidity air probe		•	•
BUS/RS485 connection		•	•
Modulating valves/0-10V outputs control		•	•
Inverter fans/0-10V outputs control			•
Weekly clock			•
Backlit display			•

ACCESSORIES

Electronic microprocessor control panels with display		KBFLAE	MY COMFORT on-board installation KIT for FLAT
DIST	MY COMFORT controller spacer for wall mounting	MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
KB2X1E	MY COMFORT on-board installation KIT for 2X1	MCSWE	Water sensor for MYCOMFORT, EVO, LED 503 controllers
KBESTE	MY COMFORT on-board installation kit for ESTRO		

Electronic microprocessor control

EVO



User interface with LCD display

EVO DISP



PLUS

- LCD display with integrated temperature probe
- Low-voltage power supply drawn from the power component
- Wall mounted or ART-U on-board installation
- Designed for a 503 electrical enclosure
- Customisable stand-by mode
- Keypad lock function

LCD display

The control panel connects directly to the circuit board installed on the fan coil unit from which the low-voltage power supply is drawn. The interface is designed to be installed on standard electrical boxes and is designed to house a probe for reading relative humidity. Its real-time clock (RTC) allows the fan coil unit to be managed by setting time bands.



Automatic control of time slots

The user interface makes it possible to set the ON/OFF status of the control and the desired set-point, on an hourly basis, for the different days of the week. If the above-mentioned operating parameters are set on a master unit, they can be replicated on all the connected slaves.



Modulating devices control

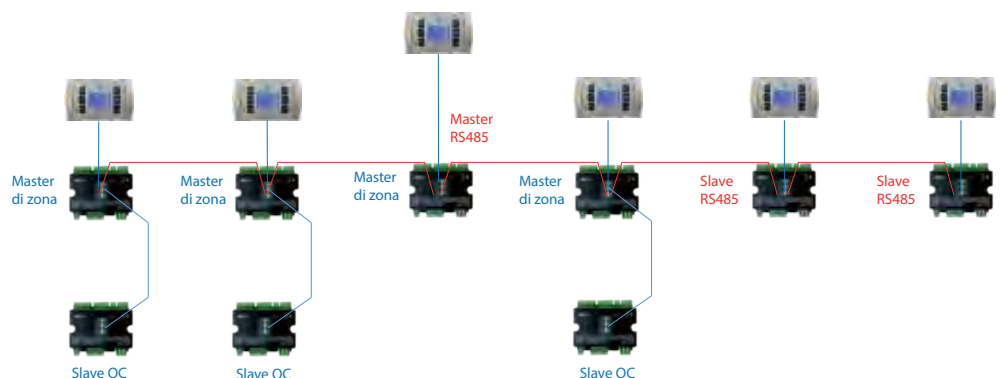
EVO is capable of simultaneously controlling up to two modulating valves and one BLDC fan, making it possible to vary the air flow rate and the water flow rate in the heat exchanger, adapting to the thermal load.

Humidity control

EVO offers the possibility of automatically activating a dehumidification process depending on the relative humidity and a settable setpoint. This function requires a humidity sensor that is available as an accessory.

Serial communication

The controller has serial ports for RS485 communication and power-line communication that allow the development of control networks that are adequate for every need.



Touch screen display interface



EVO-2-TOUCH

Available from July 2020



PLUS

- » 2.8" capacitive touch screen display
- » Integrated temperature probe
- » Low-voltage power supply drawn from the power component
- » Wall mounted or ART-U on-board installation
- » Designed for the main electrical connection boxes
- » User-friendly
- » Aluminium foil and polyethylene frame with various chrome plating options

FEATURES



Intelligent interface

The various screens are designed to make human-machine communication intuitive. Each page contains a few essential items of information that allow the consultation of the unit's main operating parameters and enable the initial control configuration according to system requirements.

Smart touch

Touch screen technology is another element whose goal is to simplify the user experience. The tap and swipe functions make the control experience similar to that of your smartphone.

INSTALLATION

Installation procedures

The touch screen interface can be installed in the ART-U series in combination with the EVO BOARD circuit board, integrating all the advanced functions of EVO with a strongly design-oriented product. The different colour combinations of the frame, combined with the different versions of the cover panel of the ART-U series, allow considerable freedom of customisation. If envisaged to be combined with other series of fan coil units, the preparation for the main standard electrical boxes allows easy mounting on the wall. In this case the clips positioned at both ends of the containment box allow the correct reading of the room temperature by the sensor integrated in the control electronics



COLOUR OPTIONS

Customisable frame

The external frame of the interface is available in four different chrome plating options and is made with double aluminium foil and a polyethylene core. The available colours are white, black, grey, and red, and allow the ideal combination with the versions of the ART-U series. In the case of wall mounting, the various solutions represent a good range of choice for determining the best match with the style of the structure to be air-conditioned.

FEATURES
“Economy”

A typical need in hotel rooms and in other rooms with variable occupancy is the management of air conditioning with reduced operation when the user is not present. This solution, which is often accomplished by means of occupancy sensors or magnetic readers, guarantees considerable energy savings, but requires the possibility to force the fan coil unit to operate in Economy mode in a simple and effective manner. This is all possible with EVO, which has 3 pre-configured digital inputs for ON/OFF, Economy mode, and remote summer/winter switchover.

Lock function

On all the interfaces that can be combined with the EVO BOARD circuit board, it is possible to force the locking of the control functions in order to avoid unwanted changes to the fan coil unit's operating and configuration parameters. This function is activated with a keyboard shortcut or by entering passwords depending on the interface chosen.

Configurable digital output

EVO is equipped with a fully configurable digital output that allows the control to provide important information to external devices, such as the cooling and/or heating demand, the operating mode, and the possible presence of an alarm.


Activation of external dehumidifier/humidifier

This control implements the humidity control function in relation to a settable setpoint. By connecting the appropriate sensor to the control it is possible to not only vary the fan coil unit's adjustment dynamics, but also manage the calls to external devices such as humidifiers and dehumidifiers.

Indoor unit control application for smartphones



Available from July 2020



PLUS

- » Wi-Fi or Bluetooth communication
- » Information always accessible in the cloud
- » Remote access
- » Time band management
- » IOS- and Android-compatible application
- » Can be used with all indoor units governed by EVO

FUNCTIONS AND FEATURES

Navel

It is the device used to enable Wi-Fi or Bluetooth communication between EVO BOARD and the smartphone on which the Galletti application is present. It is to be placed on the side of the fan coil unit and draws power directly from EVO.



Communication

Two possible communication alternatives are available: Wi-Fi or Bluetooth. In the first case information is sent to the cloud and any device using the application can consult or change the settings wherever an internet connection is available. The second mode is the stand-alone mode; it is capable of transforming a smartphone into a remote control for the fan coil unit.

Universal remote control

All the advanced EVO control functions are present in the application, which is therefore able to activate/deactivate dehumidification cycles, activate the minimum temperature function, and activate or deactivate the time bands that define the switching on and off of the devices.



Diagnostic information

The application makes available information about the status of the fan coil unit and some accessories that are currently connected. Among other things, it is possible to evaluate the opening/closing status of the valve, the water supply temperature, and the possible presence of an alarm in the air temperature probe reading.

Compatibility

The possibility of combining the Navel accessory with the EVOBOARD circuit board makes the application suitable for controlling all the indoor units in the catalogue that do not already have the possibility of infrared remote control. Within the application it is possible to create a customised list of indoor units that can be quickly accessed.

ACCESSORIES

EVO-2-TOUCH BOARD 2.8" touch screen user interface for EVO control
Circuit board for EVO control

EVODISP User interface with display for EVO controller
EYNAVEL Device for Wi-Fi or Bluetooth communication between EVOBOARD and smartphone

EVO-LUTION

GALLETTI APP



EVO BOARD



EVO DISP

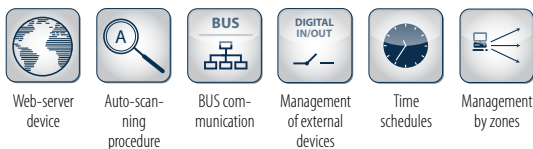


EVO-2-TOUCH



Web server monitoring software for air conditioning systems

GARDA



PLUS

- » Advanced zone management
- » Monitoring of heat pumps and multi-purpose units
- » Management of external devices
- » Programming
- » Indoor unit auto-scanning procedure
- » Multi-platform accessibility

Complete and automatic control of the air conditioning system

Based on many years of experience Galletti in the field of monitoring systems and arising from the need to make information on the operation of a building's air conditioning system easier to use, XXXXX, GARDA the new web-based web server monitoring system, was developed and is now available Galletti.

With GARDA multi-platform access is achieved: the web-responsive structure of the pages facilitates the consulting of information even from mobile devices such as tablets and smartphones without any need for the installation of applications and at the complete disposal of the user 24 hours a day.

The physical architecture of the system is based on a structure consisting of an Ethernet network and a RS485 serial data network, making the system very flexible and adaptable, greatly reducing problems involving signal interference, and allowing a wide range of modifications or expansions to the network. Also the configuration phase is simplified: the auto-scanning procedure of the nodes and of the individual devices makes the software a true turnkey solution.

Galletti guarantees complete compatibility with the indoor units and generation systems listed in the catalog; the expansion card supplied as an accessory allows the control of external devices such as circulators, valves, and other system components.

Intuitive graphics and vertical access to information combined with ease of use and versatility of control ensure excellent usability and efficiency.

Lastly, the advanced programming functions, zone management, and possibility of monitoring the history of the main variables allow advanced management of the system, providing indications for the reduction of operating costs.



ACCESSORIES

Electronic microprocessor control panels with display

EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
EYEVOEXP	Remote power interface
MCLE	Microprocessor control with display MY COMFORT LARGE

MCME MYCOMFORT MEDIUM electronic controller with display

MCSWE Water sensor for MYCOMFORT, EVO, LED 503 controllers

Accessories

EYNODE Network node

MAIN FUNCTIONS

Vertical access to information

Any browser can be used to access increasingly detailed information on subsequent screens. Modifications can be implemented both at the zone level and at the single terminal level. A convenient summary screen provides an overview of the system. The status of the communication between the system and the devices is confirmed by the program.



Advanced control of time schedules

The system allows the programmed shutdown of the devices associated with the different zones and provides for the assignment of the summer and winter set-point hour by hour. In this way it is possible to automatically monitor the energy consumption of the system.



Degree of freedom

The monitoring system allows a choice between 4 different levels of control, defining, on the basis of the requirements, which possibilities of modification to offer the user and which are to be left to the software.



External devices

Due to the expansion device, seven no-voltage contacts are available for controlling system components such as zone valves, circulators, etc.



Data and graphs

The data collected by the monitoring system are presented in graphs that include the information at the zone level and on different time scales. They can be a useful tool for diagnosing critical issues and suggesting optimization ideas.



Auto-scanning procedure

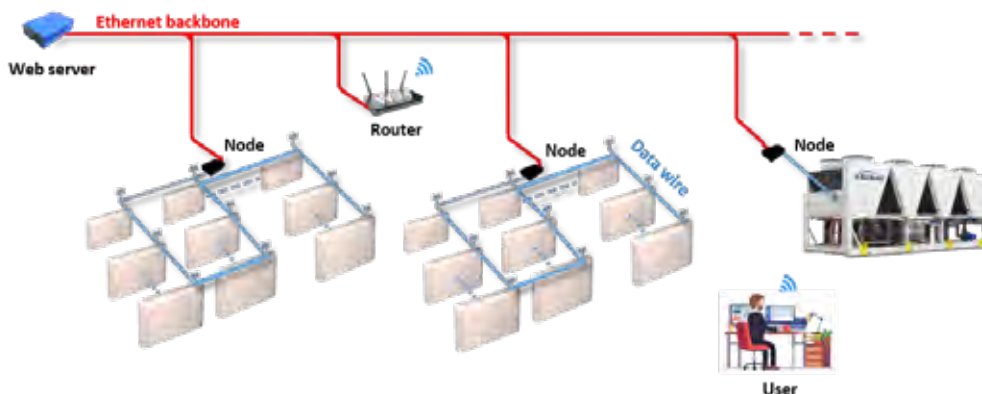
Designed to optimize and streamline the configuration process, the auto-scanning procedure makes it possible to identify the system nodes and the various controls connected to the network.

CONNECTIVITY

GARDA allows control of large networks consisting of indoor units and generation systems, which can be controlled at any time through multiple interfaces.

The network consists of a variable number of nodes acting as intermediaries between the BUS branches on the RS485 network and the Ethernet backbone of the structure to be monitored.

The network router will provide each node with a unique IP address that will be used by the web server device hosting the software, which is also connected to the network. A user who intends to consult the system status or make changes can access the monitoring system from any device, with a browser, that is connected to the local network.





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