EN

OMNIBUS360 BUILDING MANAGEMENT SYSTEM

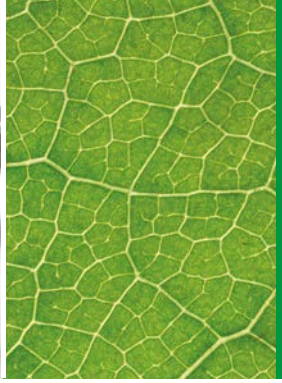
EST INVERTER ENERGY SAVING TECHNOLOGY

# SIGMA
# PRISMA
# LOW BODY
# CONCEALED

EUROPO

INTEGRATED
COMFORT
SYSTEMS

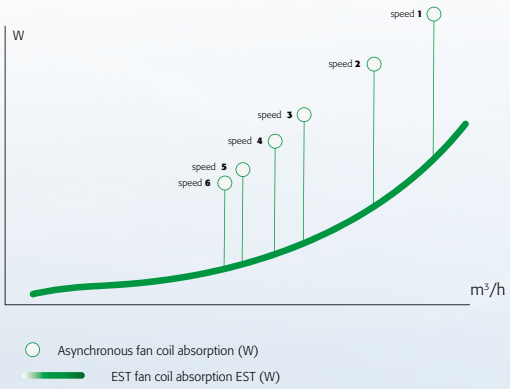
EST INVERTER
ENERGY SAVING TECHNOLOGY



**EST (Energy Saving Technology)** is applied to the EURAPO fan coil units and cassette units. It permits to obtain extremely low electrical absorption and a continuous modulation of the air flow, constantly related to the concrete need of energy in the room.

**EST** technology is composed by a brushless motor combined to a dedicated electronic device (inverter), managed by specific regulators developed by **EURAPO**.

In comparison to the traditional units equipped with asynchronous three-speed-motors, the fan coil and cassette units with brushless motors can obtain a considerable **energy saving**, by reducing the power consumption **up to 70%.**


Thanks to the step-less modulation of the fan speeds it is possible to accurately regulate the air volume in a very precise way, in strict relation to the real need of air conditioning in the room. Oscillations in the temperature and relative humidity are reduced at lowest level: a guarantee for the **highest comfort in the room**.

The possibility to reach very low air volumes makes the units extremely quiet at the lowest motor revolutions.

**EST** technology is designed in particular for offices, hospitals, nursing homes and hotels.

It is available for the **EURAPO** range of fan coil units, cassette units and ducted units.

**The EST technology** consists of a brushless motor combined to a dedicated electronic device (inverter), managed by specific regulators. The controller uses a modulating signal with 0-10Vdc tension in order to regulate the fan speed.

**The brushless electric motor** is composed by a rotor having permanent magnets, whose magnetic fields interact with the ones produced by the stator winding.

The transfer of current is no longer by mechanical commutation (sliding contacts) but by an electronic commutation system: an electronic controller (inverter) powers the motor's stator and generates rotating magnetic fields, that determine the rotor's speed.

For applying the EST technology also to the ducted units, the inverter is provided with DIP SWITCHES that can be also set on site, during start-up of the unit. This high flexibility grants the proper configuration for every kind of installation, by personalization of the Dip Switches accordingly to the pressure drop in the system.
Brushless motors develop much less heat than the traditional brushed motors and they have much lower mechanical resistance than the standard asynchronous ones. They offer several advantages, like as higher efficiency, longer lifetime, less need of maintenance. The absence of brushes eliminates also the main source of electromagnetic noise.
By giving a 0-10Vdc signal to the inverter, an electronic regulator intervenes by simply managing the fan speed and the rotor's torque in a continuous way, adapting with extreme precision the air volume to the real and punctual requirements in the room.
For managing all units equipped with brushless motors, EURAPO developed a new microprocessor control, available both built-in the unit (EDCL) and for remote installation on the wall (EDCR).
Also the OMNIBUS digital system has been implemented in order to be combined to the EST technology: the new cards for fan coil units (OBV10) and for cassette units (OBU10) can be connected to the new OMNIBUS consoles, designed for managing fan coil and cassette units with brushless motors. The consoles are available for on-wall installation (ODC236), fitted in the fan coil unit or for built-in the wall installation, on 503 modules (ODC235 white colour and ODC245 black colour).
OMNIBUS regulators give the possibility to fully control the fan speed (0-100%) and/or to manually select three fan steps (high, med and low speed): it is actually possible to set in every moment and very easily the three different levels of motor's rotation, in order to fulfil specific thermal or acoustical requirements.

## FEATURES

- 0-10Vdc control signal
- Low mechanical resistance and low overheating
- Wide range of fan speed regulation, especially at the lowest revolutions
- Continuous regulation of the fan speeds (0-100%)
- Possibility to manually set the desired three fan steps (by using OMNIBUS regulators)
- Available for Sphera, Sigma, Prisma, Low Body, Concealed fancoil units, UCS600 and UCS900 cassette units, EBH and EDS ducted units

## ADVANTAGES

- Energy saving: electrical absorption reduced up to 70%
- Higher efficiency: possibility to adapt the air volume and the capacities accordingly to the real room loads
- Higher comfort: reduced oscillation of the temperature and relative humidity in the room
- Extremely quiet functioning of the unit, thanks to the operation at low revolutions
- Reduced wearing and higher reliability
- Longer expected lifetime of the motor

FAN COIL

# SIGMA

FANCOIL UNIT

**Fancoil unit with housing,**
**for heating and cooling applications,**
**2 and 4 pipes, capacity from 0,62 kW a 13,26 kW.**

Sigma fancoil unit is compatible with every kind of environment. It is versatile in the different applications, discreet in the lines, reliable in the performances.
This fancoil designed by Eurapo, holds in high regard the harmony and linearity of units and is compatible with every kind of environment thanks to its configuration variety: it can be installed on the floor, thanks to firm feet and with frontal suction, or mounted on the ceiling in both configurations.

The Sigma housing, with upper air outlet, is manufactured with sheet steel and painted with oven dried epoxy powders, available in all RAL colours. Access doors and grilles are made of heat-resistant ABS and can be turned into all four directions, in white colour.
Important part: the filter is totally retractable and easily accessible; it is particularly strong and wear and tear resistant. It needs short time for routine maintenance.
In order to make Sigma fancoil more complete, Eurapo offers a large range of kit accessories, from the simple electromechanical regulations and on/off valves to the advanced systems with modulating valves and digital Bus management.
Sigma units are also available for **District Cooling** applications: the water coils are designed with a reduced number of circuits, suitable for functioning with high water temperature difference.

# PRISMA

**Fancoil unit with housing,
for heating and cooling applications,
(only PV and PV/AF),
2 and 4 pipes, capacity from 0,62 kW to 3,95 kW.**

Prisma fancoil unit has an original shape. The housing itself is a piece of furniture, it is made of painted metal sheet with side flaps and grilles made of ABS, which are adjustable in all four directions.
This fancoil is designed by Eurapo to be compatible with every kind of environment, thanks to its configuration variety: it can be easily installed on the floor, thanks to firm feet, or mounted on the ceiling. In both configurations the air intake can be located on the bottom or front side.

The Prisma housing, with upper air outlet, is manufactured with sheet steel and painted with oven dried epoxy powders, available in all RAL colours.
Access doors and grilles are made of heat-resistant ABS and can be turned into all four directions, in white colour.
One important component is the filter, which is totally retractable but easily accessible; it is particularly strong and wear resistant and needs very short time for routine maintenance.
In order to make Prisma fancoil more complete, Eurapo offers a large range of accessories, from the simple electromechanical regulations and on/off valves to the advanced systems with modulating valves and digital Bus management.

# LOW BODY



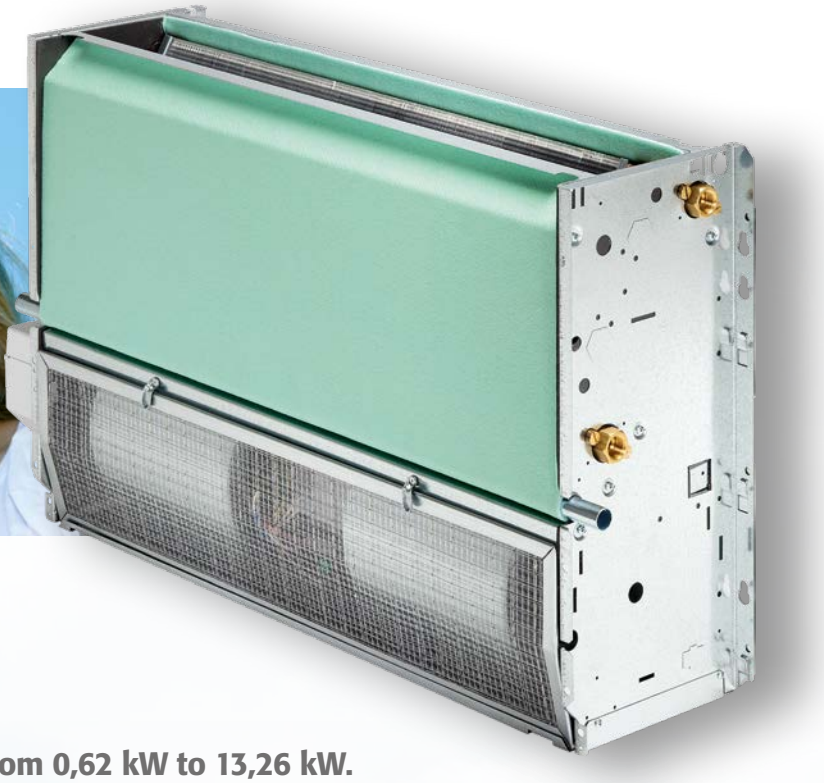
**Fancoil with reduced height,**
**for heating and cooling operation,**
**for 2 and 4 pipe system, capacity from 0,48 kW to 3,75 kW.**

The LOW BODY fancoils are characterized by a very reduced height (only 427 mm) and they have been designed for installation in small niches.
The LOW BODY units present an upper air outlet and a frontal air intake; they can be installed on the floor, on the wall, or concealed.

The low body fancoils are available in 5 sizes and they are always equipped with an auxiliary drain pan.

The inner frame is made of galvanized steel, the housing is manufactured with sheet steel painted with oven dried epoxy powders in all RAL colours available (standard colour is RAL9003), access doors and grilles are made of white colour heat-resistant ABS and can be turned into all four directions.
To complete all models Eurapo offers a wide range of accessories.

# CONCEALED UNIT



**Fancoil without casing,**
**for heating and cooling operations,**
**for 2 and 4 pipe system, capacity from 0,62 kW to 13,26 kW.**

The concealed fancoil is a unit which can be used for ductwork installations: it has very good performances also with medium/long ducts; it is silent and can be equipped with a wide range of dedicated accessories.
The concealed fancoil is available for vertical installation on the wall (with bottom air intake) or on the floor (with frontal air intake) and horizontal on the ceiling (with back or bottom air intake).

This fancoil is the ideal solution for the needs of small spaces and limited sizes that nowadays influences the choice of furniture in homes or offices.

Available in 10 sizes, the concealed model is supplied equipped with an electric box containing the terminal board and auxiliary drain pan. The frame is made of galvanized steel and the inner sides are completely lined by an insulating self-extinguishing material.
To complete this model Eurapo offers a wide range of accessories.
The concealed fancoils are also available for **District Cooling** applications: the water coils are designed with a reduced number of circuits, suitable for functioning with high water temperature difference.

OMNIBUS 360
BUILDING MANAGEMENT SYSTEM

# **OPower**, the technology

## TECHNOLOGICAL INTELLIGENCE AT THE HEART OF AN ADVANCED SYSTEM

The mind of the system is located in the OPower card, an exceptionally versatile hardware installed on board of the water terminal units. OPower is able to receive and process a large amount of input and output data. It is equipped with a very performing microprocessor and 3 independent MODBUS lines. It can be easily programmed and configured according to the user requests and on the basis of the type of system where the unit is installed.


### OPower can measure the following input values:

- room temperature;
- water temperature;
- air outlet temperature;
- Economy/Occupancy contact status;
- failure status;
- window contact status.

### OPower can manage the following outputs:

- opening/closing of modulating water valves;
- fan operation in "thermostated" or "continuous" mode;
- integration of a radiant system with a hydronic terminal unit;
- control of a primary electric heater;
- activation of the water circulation pump;
- control of other OPower cards in slave mode.

# FLEXIBILITY AT THE SERVICE OF ALL-INCLUSIVE SYSTEMS

The flexibility of Omnibus 360 is based on a specific combination of inputs and outputs. It not only ensures comfort and energy saving, but favours also all-inclusive system architectures: management of stand-alone units by use of analogue and digital consoles, centralized management of small systems with digital regulation and management of large remote systems according to advanced home automation criteria.


# MANAGEMENT OF EC BRUSHLESS MOTORS (EST TECHNOLOGY)

EST INVERTER
ENERGY SAVING TECHNOLOGY

A dedicated OPower card is designed for running EC brushless motors. By setting a specific voltage for each fan speed (Low-Med-High), it allows to modulate the fan in automatic (0-10V) or manual mode.

# SIGMA

mod. SH

mod. SH/AF

mod. SV

mod. SV/AF

# PRISMA

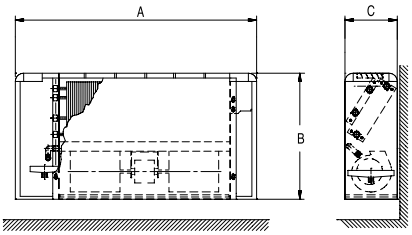
mod. PH

mod. PH/AF

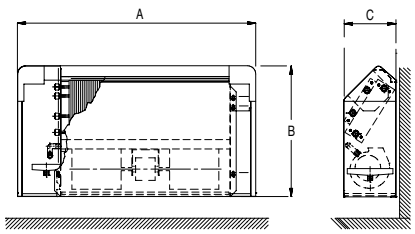
mod. PV

mod. PV/AF

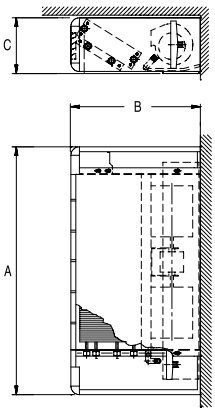
mod. SV



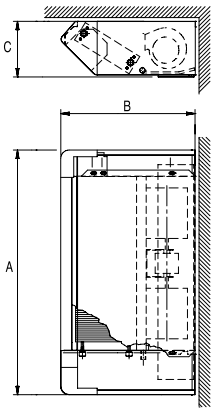

mod. PV




mod. SH/AF




mod. PH/AF




**Dimensions (mm) and weight for SV - SV/AF - SH - SH/AF**

| | 110 | 112 | 114 | 216 | 218 | 220 | 222 | 224 | 226 | 228.1 | 328 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **EST** | - | 512 | 514 | 516 | - | 520 | 522 | 524 | - | - | 528 |
| **A** | 648 | 773 | 898 | 1023 | 1148 | 1273 | 1273 | 1523 | 1523 | 1773 | 1773 |
| **B** | 538 | 538 | 538 | 538 | 538 | 614 | 614 | 614 | 614 | 614 | 614 |
| **SV - SH** | | | | | | | | | | | |
| **C** | 224 | 224 | 224 | 224 | 224 | 254 | 254 | 254 | 254 | 254 | 254 |
| **Kg** | 18 | 20 | 23 | 28 | 31 | 41 | 44 | 52 | 52 | 58 | 58 |
| **SV/AF - SH/AF** | | | | | | | | | | | |
| **C** | 233 | 233 | 233 | 233 | 233 | 263 | 263 | 263 | 263 | 263 | 263 |
| **Kg** | 19 | 21 | 24 | 30 | 32 | 43 | 46 | 54 | 54 | 61 | 61 |

***Hydraulic connection 1/2" G F***

**Dimensions (mm) and weight for PV - PV/AF - PH - PH/AF**

| | 110 | 112 | 114 | 216 | 218 |
|---|---|---|---|---|---|
| **EST** | - | 512 | 514 | 516 | - |
| **A** | 648 | 773 | 898 | 1023 | 1148 |
| **B** | 560 | 560 | 560 | 560 | 560 |
| **PV - PH** | | | | | |
| **C** | 226 | 226 | 226 | 226 | 226 |
| **Kg** | 17 | 20 | 23 | 27 | 31 |
| **PV/AF - PH/AF** | | | | | |
| **C** | 235 | 235 | 235 | 235 | 235 |
| **Kg** | 18 | 21 | 24 | 28 | 32 |

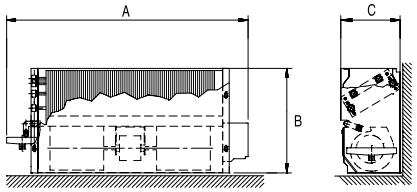
***Hydraulic connection 1/2" G F***

# LOW BODY

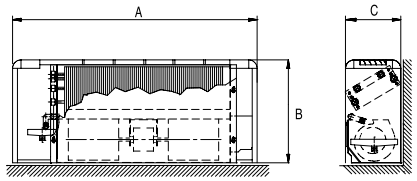
mod. SVR

mod. CVR

mod. CVR




mod. SVR




**Dimensions (mm) and weight CVR**

| | 110 | 112 | 114 | 216 | 218 |
|---|---|---|---|---|---|
| **EST** | - | 512 | 514 | 516 | - |
| **A** | 555 | 680 | 805 | 930 | 1055 |
| **B** | 395 | 395 | 395 | 395 | 395 |
| **C** | 230 | 230 | 230 | 230 | 230 |
| **Kg** | 9 | 11 | 14 | 16 | 19 |

***Hydraulic connection 1/2" G F***

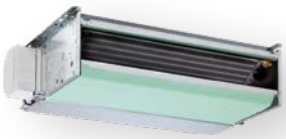
**Dimensions (mm) and weight SVR**

| | 110 | 112 | 114 | 216 | 218 |
|---|---|---|---|---|---|
| **EST** | - | 512 | 514 | 516 | - |
| **A** | 648 | 773 | 898 | 1023 | 1148 |
| **B** | 430 | 430 | 430 | 430 | 430 |
| **C** | 254 | 254 | 254 | 254 | 254 |
| **Kg** | 15 | 17 | 22 | 23 | 26 |

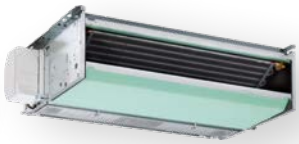
***Hydraulic connection 1/2" G F***

# CONCEALED

mod. CH



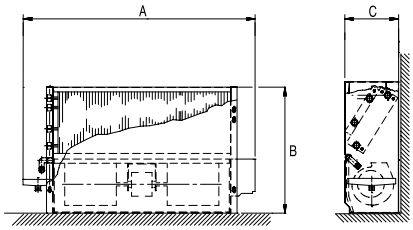
mod. CH/AF



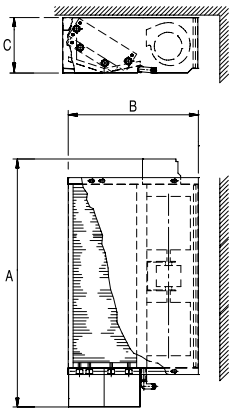
mod. CV

mod. CV/AF

mod. CV/AF




mod. CH




**Dimensions (mm) and weight for CV - CV/AF - CH - CH/AF**

| | 110 | 112 | 114 | 216 | 218 | 220 | 222 | 224 | 226 | 228.1 | 328 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **EST** | - | 512 | 514 | 516 | - | 520 | 522 | 524 | - | | 528 |
| **CV - CV/AF** | | | | | | | | | | | |
| **A** | 555 | 680 | 805 | 930 | 1055 | 1180 | 1180 | 1430 | 1430 | 1680 | 1680 |
| **CH - CH/AF** | | | | | | | | | | | |
| **A** | 574 | 699 | 824 | 949 | 1074 | 1199 | 1199 | 1449 | 1449 | 1699 | 1699 |
| **CV - CV/AF - CH - CH/AF** | | | | | | | | | | | |
| **B** | 505 | 505 | 505 | 505 | 505 | 581 | 581 | 581 | 581 | 581 | 581 |
| **C** | 215 | 215 | 215 | 215 | 215 | 245 | 245 | 245 | 245 | 245 | 245 |
| **Kg** | 10 | 13 | 16 | 19 | 22 | 29 | 31 | 38 | 38 | 42 | 42 |

***Hydraulic connection 1/2" G F***

# GENERAL FEATURES

The **inner frame** is completely lined with self-extinguishing thermal insulation material. The sides have a special structure near the coil connections in order to avoid the pipes deformation while connecting the unit to the system (antitorsion structure).

The **insulation** is placed over all the critical parts of the unit to avoid any condensate risk. The insulated condensate tray can be taken apart independently of the other components. All the units are always provided with an auxiliary drain pan to be fixed under the water connections.
***ATTENTION:*** *all the models are suitable for heating and cooling operations, except PH and PH/AF models, suitable only for heating*

The **coil** consists of aluminium fin packs and mechanically expanded copper tubes; each header is provided with a very handy air valve. Testing pressure 30 bar, operating pressure 16 bar. 2 and 3 row coils are available for all models, 4 row coils for all models except PRISMA and LOW BODY.
For 4 pipes installations, an additional 1-row coil for heating mode can be added (see Accessories). Sizes 216÷328 and 516÷528 are also available with **District Cooling** coils, designed with a reduced number of circuits, suitable for functioning with high water temperature difference.

**Standard water connections are on the right side of the unit,** facing the air outlet; however the coils can be easily removed and reversed on site. All water connections are ½" G (female threaded).

The **fan deck** consists of a centrifugal fan, one (110÷114 and 512-514 sizes), two (216÷228.1 and 516÷528) or three (size 328) aluminium impellers, directly splined to the motor shaft, and galvanized steel scrolls; it can easily be removed, independently of the inner frame, making control, maintenance and replacement very simple. Each fan assembly is dynamically balanced to achieve excellent sound performances.

The asyncronous **motor** is single phase, with permanently connected capacitor and thermal protection of the windings. It is provided with 6 speeds, 3 of them factory wired as standard; the others can easily be used when there are special plant requirements. In **EST** version, the motor is combined to an inverter and it is managed by a modulating signal 0-10Vdc.

The **electric panel** is contained inside a box made of insulating material and fixed on the left side of the inner frame; it can easily be removed and shifted from the left to the right side when the coil connections are reversed. For concealed and horizontal units remote controllers can be provided (on request).

The **housing** is manufactured with sheet steel and painted with oven dried epoxy powders. Standard colour is RAL 9003 (white) for SIGMA, PRISMA and LOW BODY series.
**On request, other colours can be provided.**
Vertical models, with upper air outlet and bottom air intake (SV-PV-CV) or frontal (SV/AF-PV/AF-CV/AF-SVR-CVR) can be installed on the wall or on the floor (with a set of feet for SV and PV).
Horizontal models, for ceiling installation, have a frontal air outlet and a rear (SH-PH-CH) or bottom (SH/AF-PH/AF-CH/AF) air intake.

The standard **grilles** are independent and can be turned into all 4 directions without any tool. They are in self-extinguishing ABS.

**Access doors** are in the same colour and material of the grilles.

The **air filter** consists of a metal frame enclosing the filter element (a polypropylene net). In order to have better fancoil performances, **it is suggested to keep the filter properly clean**, by washing it with soap and water and drying in open-air.

# ACCESSORIES

## BA1/BA41

**BA1** Additional 1 row coil for hot water, for 4-pipes systems. It can be added to units with a 2 or 3 row coils.

**BA41** Additional 1 row coil for hot water, for 4-pipes systems. It can be added to units with a 4 row coils. The thickness is of 60 mm and it is available for CONCEALED series.

## KRE

Electric heater supplied with safety thermostat and power relay. Not available with 4 row coils. For PRISMA and LOW BODY series, it is available only with 2 row coils.

## Valves

EURAPO is able to offer several kinds of valves (ON/OFF, modulating and pressure independent valves) in order to have the best solution for any need regarding the water flow regulation.

## PM

Air delivery plenum made of galvanized steel sheet, provided with circular or rectangular spigots for the connection to the air duct.

## CP

Set of painted steel feet (same colour as the casing), or with the frontal grille (ZL).

## PC

The condensate pump is necessary when the natural water discharge is not allowed.

# CONTROLS

## Round Analog

Interface for remote installation, suitable for the selection of the main functions of the unit. It allows to set the ON/Off status, the room temperature setpoint, the fan speed and the Summer/Winter changeover.

## Round Inside

Interface for built-in installation, with an ergonomic design. It allows to set the ON/Off status, the room temperature setpoint, the fan speed and the Summer/Winter changeover.

Simplified interface for remote installation, which permits to set the On/Off status and the room temperature setpoint. It is particularly suitable for installations where a simplified user interface is required, such as naval cabins and hotel rooms.

## Round Display

Digital remote interface with 3.5-inch backlit screen, which allows to set the functions of the unit (setpoint, fan speed, status, etc.). It permits to visualize and modify the setting of the main parameters of the system.

## Round Touch

Digital interface with backlit touch screen (4.3 inches), which allows to set the functions of the unit, to visualize and modify the setting of the main parameters of the system and in addition can set also daily and weekly programs.

## Round Master

Supervisor for medium-size systems with a 7-inch screen and capacitive touch. It allows to manage up to 100 OPower cards connected to the network via the MODBUS RTU serial bus. With Round Master it is possible to configure complex scenarios and set up seasonal system programming.

## Round Clima

Mobile application for the remote management of the system. It is compatible with Android and iOS operating systems.
It is available only in presence of one of the OSuper devices: Round Manager, Round Master.

## EDCL-EDCR

Remote microprocessor control, built-in the unit or "on wall" installation, designed for water terminal units equipped with Brushless motors (EST Inverter Technology). It permits to control the type of ventilation, the fan speeds, Summer/Winter switch and room temperature thermostat.

*Visit our website www.eurapo.it for the complete range of accessories and controls.*

# TECHNICAL DATA (3 rows - EST)

EST INVERTER
ENERGY SAVING TECHNOLOGY

| | | | | 512 | 514 | 516 | 520 | 522 | 524 | 528 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Cooling** Air temperature 27 °C d.b., 19 °C w.b. Water temperature 7/12 °C | Total cooling capacity [kW] | EUROVENT CERTIFIED PERFORMANCE | MAX | 1,98 | 2,56 | 3,81 | 5,05 | 5,81 | 7,47 | 9,18 |
| | | | MED | 1,43 | 1,81 | 2,53 | 3,86 | 4,42 | 5,64 | 6,94 |
| | | | MIN | 0,74 | 0,93 | 1,51 | 2,72 | 3,05 | 4,07 | 4,89 |
| | Sensible cooling capacity [kW] | EUROVENT CERTIFIED PERFORMANCE | MAX | 1,65 | 2,12 | 3,14 | 3,79 | 4,32 | 6,09 | 7,51 |
| | | | MED | 1,16 | 1,48 | 2,01 | 2,78 | 3,16 | 4,42 | 5,50 |
| | | | MIN | 0,54 | 0,78 | 1,21 | 1,92 | 2,11 | 3,13 | 3,74 |
| | Water flow [l/h] | | MAX | 341 | 441 | 656 | 869 | 1000 | 1286 | 1580 |
| | | | MED | 246 | 312 | 435 | 664 | 761 | 971 | 1194 |
| | | | MIN | 127 | 160 | 260 | 468 | 525 | 701 | 842 |
| | Pressure drop [kPa] | EUROVENT CERTIFIED PERFORMANCE | MAX | 9,6 | 9,2 | 14,6 | 16,9 | 36,2 | 16,8 | 31,3 |
| | | | MED | 5,4 | 4,8 | 8,5 | 10,6 | 22,0 | 10,0 | 18,5 |
| | | | MIN | 1,7 | 1,6 | 3,9 | 5,6 | 11,1 | 5,5 | 9,7 |
| **Heating 2 pipes** Air temperature 20 °C Water inlet temperature 45/40 °C | Heating capacity [kW] | EUROVENT CERTIFIED PERFORMANCE | MAX | 2,05 | 3,04 | 4,40 | 5,76 | 6,53 | 8,43 | 10,40 |
| | | | MED | 1,47 | 2,18 | 3,05 | 4,44 | 4,84 | 6,22 | 7,67 |
| | | | MIN | 0,78 | 1,15 | 1,87 | 3,11 | 3,37 | 4,50 | 5,38 |
| | Water flow [l/h] | | MAX | 353 | 523 | 757 | 991 | 1124 | 1451 | 1790 |
| | | | MED | 253 | 375 | 525 | 757 | 833 | 1071 | 1320 |
| | | | MIN | 134 | 198 | 322 | 535 | 580 | 775 | 926 |
| | Pressure drop [kPa] | EUROVENT CERTIFIED PERFORMANCE | MAX | 10,8 | 10,3 | 17,3 | 21,8 | 40,0 | 17,2 | 43,5 |
| | | | MED | 6,0 | 5,5 | 8,6 | 13,0 | 23,5 | 9,8 | 24,3 |
| | | | MIN | 2,0 | 2,0 | 4,2 | 6,6 | 11,5 | 5,3 | 12,1 |
| **Heating 4 pipes** Air temperature 20 °C Water temperature 65/55 °C | Heating capacity [kW] | EUROVENT CERTIFIED PERFORMANCE | MAX | 1,63 | 2,39 | 3,20 | 5,00 | 5,55 | 6,46 | 7,90 |
| | | | MED | 1,21 | 1,76 | 2,40 | 4,12 | 4,35 | 5,19 | 6,30 |
| | | | MIN | 0,77 | 1,09 | 1,77 | 3,22 | 3,29 | 4,09 | 4,94 |
| | Water flow [l/h] | | MAX | 158 | 206 | 275 | 430 | 478 | 556 | 680 |
| | | | MED | 118 | 151 | 207 | 355 | 374 | 447 | 542 |
| | | | MIN | 75 | 94 | 152 | 277 | 283 | 352 | 425 |
| | Pressure drop [kPa] | EUROVENT CERTIFIED PERFORMANCE | MAX | 4,7 | 9,3 | 20,2 | 23,3 | 21,5 | 36,0 | 46,2 |
| | | | MED | 2,8 | 5,4 | 14,2 | 15,9 | 14,0 | 24,2 | 30,7 |
| | | | MIN | 1,2 | 2,4 | 7,3 | 9,8 | 7,7 | 15,4 | 19,5 |
| **Further data** | Air volume [m³/h] | | MAX | 456 | 574 | 792 | 1082 | 1304 | 1567 | 1995 |
| | | | MED | 298 | 373 | 489 | 757 | 904 | 1080 | 1370 |
| | | | MIN | 138 | 170 | 287 | 504 | 568 | 715 | 876 |
| | Sound power level [dB(A)] | EUROVENT CERTIFIED PERFORMANCE | MAX | 55,0 | 59,0 | 60,0 | 57,0 | 62,0 | 63,0 | 69,0 |
| | | | MED | 44,0 | 48,0 | 47,0 | 48,0 | 51,0 | 53,0 | 59,0 |
| | | | MIN | 29,0 | 29,0 | 33,0 | 37,0 | 39,0 | 43,0 | 48,0 |
| | Sound pressure level [dB(A)] (1) | | MAX | 45,6 | 49,6 | 50,6 | 47,6 | 52,6 | 53,6 | 59,6 |
| | | | MED | 34,6 | 38,6 | 37,6 | 38,6 | 41,6 | 43,6 | 49,6 |
| | | | MIN | 20,5 | 20,5 | 23,6 | 27,6 | 29,6 | 33,6 | 38,6 |
| | Power input [W] (2) | EUROVENT CERTIFIED PERFORMANCE | MAX | 31 | 54 | 42 | 46 | 76 | 89 | 168 |
| | Absorbed current [A] (2) | | MAX | 0,35 | 0,44 | 0,42 | 0,42 | 0,68 | 0,83 | 1,42 |
| | Water content [l] | | | 0,79 | 1,05 | 1,31 | 2,20 | 2,20 | 2,84 | 3,47 |

(1) Sound pressure level, in a 100 m³ room, 1.5 m distance and reverberating time of 0.3 s.
(2) Electrical supply: 230-1-50/60 [V-ph-Hz].

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com Eurapo take part in EUROVENT certification program. Above mentioned models are in the FC section of the website.

NOTE
Performances of LOW BODY models are about 11% lower than the standard ones in heating operation and 12,3% lower in cooling operation. For greater accuracy please use the EURAPO selection software.

To obtain capacities for 2 or 4 row coils or for **District Cooling** solutions, or for conditions different from standard ones, please use the selection software or contact EURAPO staff.

The printed data could be modified without any notice.

# TECHNICAL DATA (3 rows - asynchronous)

| | | | | 110 | 112 | 114 | 216 | 218 | 220 | 222 | 224 | 226 | 228.1 | 328 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Cooling** Air temperature 27 °C d.b., 19 °C w.b. Water temperature 7/12 °C | Total cooling capacity [kW] | MAX | 1,11 | 1,59 | 2,14 | 3,30 | 3,50 | 4,44 | 5,07 | 6,43 | 7,25 | 8,86 | 9,73 |
| | | MED | 0,95 | 1,31 | 1,88 | 2,67 | 2,99 | 3,68 | 4,39 | 5,75 | 6,67 | 7,97 | 8,75 |
| | | MIN | 0,76 | 1,07 | 1,57 | 2,20 | 2,46 | 2,94 | 3,84 | 4,62 | 5,50 | 6,30 | 6,36 |
| | Sensible cooling capacity [kW] | MAX | 0,93 | 1,25 | 1,90 | 2,46 | 3,06 | 3,53 | 4,42 | 5,06 | 5,70 | 7,13 | 8,04 |
| | | MED | 0,78 | 0,99 | 1,64 | 1,95 | 2,51 | 2,84 | 3,74 | 4,44 | 5,18 | 6,33 | 7,15 |
| | | MIN | 0,61 | 0,79 | 1,33 | 1,56 | 2,00 | 2,20 | 3,20 | 3,45 | 4,15 | 4,90 | 5,03 |
| | Water flow [ [l/h] | MAX | 191 | 274 | 368 | 568 | 602 | 764 | 873 | 1107 | 1248 | 1515 | 1675 |
| | | MED | 164 | 225 | 324 | 460 | 515 | 633 | 756 | 990 | 1148 | 1360 | 1506 |
| | | MIN | 131 | 184 | 270 | 379 | 423 | 506 | 661 | 795 | 947 | 1077 | 1095 |
| | Pressure drop [kPa] | MAX | 3,4 | 7,1 | 5,8 | 14,8 | 13,6 | 24,1 | 28,4 | 18,8 | 21,0 | 27,2 | 74,6 |
| | | MED | 2,8 | 5,0 | 4,6 | 12,5 | 9,8 | 17,4 | 21,8 | 15,5 | 18,1 | 22,4 | 61,5 |
| | | MIN | 2,0 | 3,4 | 3,3 | 8,5 | 6,7 | 11,6 | 17,2 | 10,5 | 12,8 | 15,4 | 30,8 |
| **Heating 2 pipes** Air temperature 20 °C Water inlet temperature 45/40 °C | Heating capacity [kW] | MAX | 1,37 | 1,83 | 2,60 | 3,46 | 4,17 | 4,80 | 6,04 | 6,60 | 7,86 | 9,96 | 10,54 |
| | | MED | 1,13 | 1,46 | 2,07 | 2,90 | 3,51 | 3,89 | 5,11 | 5,84 | 7,17 | 8,86 | 9,64 |
| | | MIN | 0,87 | 1,14 | 1,70 | 2,31 | 2,83 | 3,01 | 4,41 | 4,58 | 5,76 | 6,65 | 6,73 |
| | Water flow [l/h] | MAX | 236 | 315 | 448 | 596 | 718 | 826 | 1040 | 1136 | 1353 | 1692 | 1814 |
| | | MED | 194 | 251 | 356 | 499 | 604 | 670 | 880 | 1005 | 1234 | 1505 | 1659 |
| | | MIN | 150 | 196 | 293 | 398 | 487 | 518 | 759 | 788 | 991 | 1132 | 1158 |
| | Pressure drop [kPa] | MAX | 4,9 | 6,0 | 6,5 | 14,7 | 16,0 | 23,4 | 27,7 | 18,9 | 25,3 | 29,8 | 82,4 |
| | | MED | 4,6 | 6,0 | 5,1 | 10,5 | 11,7 | 16,3 | 21,1 | 15,3 | 21,6 | 24,0 | 67,7 |
| | | MIN | 3,0 | 4,1 | 4,0 | 6,9 | 8,1 | 10,8 | 16,4 | 10,3 | 14,9 | 14,3 | 29,7 |
| **Heating 4 pipes** Air temperature 20 °C Water temperature 65/55 °C | Heating capacity [kW] | MAX | 0,91 | 1,31 | 1,93 | 2,79 | 3,20 | 4,33 | 4,92 | 6,16 | 6,30 | 7,97 | 8,00 |
| | | MED | 0,83 | 1,13 | 1,85 | 2,40 | 2,81 | 3,67 | 4,33 | 5,55 | 5,98 | 7,38 | 7,43 |
| | | MIN | 0,71 | 0,95 | 1,51 | 2,06 | 2,38 | 2,99 | 3,84 | 4,55 | 5,03 | 6,04 | 5,83 |
| | Water flow [l/h] | MAX | 78 | 113 | 166 | 240 | 275 | 373 | 423 | 530 | 542 | 663 | 688 |
| | | MED | 71 | 97 | 159 | 207 | 242 | 316 | 373 | 478 | 515 | 616 | 639 |
| | | MIN | 61 | 82 | 130 | 177 | 205 | 257 | 330 | 392 | 433 | 506 | 502 |
| | Pressure drop [kPa] | MAX | 1,3 | 3,4 | 6,7 | 14,7 | 7,1 | 10,3 | 11,7 | 33,0 | 31,7 | 29,8 | 46,5 |
| | | MED | 1,1 | 2,6 | 5,8 | 10,5 | 5,7 | 7,7 | 9,5 | 23,0 | 28,9 | 26,0 | 40,6 |
| | | MIN | 0,9 | 1,8 | 5,2 | 9,4 | 4,0 | 5,4 | 7,7 | 16,3 | 21,4 | 18,1 | 24,7 |
| **Further data** | Air volume [m³/h] | MAX | 243 | 317 | 432 | 606 | 754 | 961 | 1115 | 1307 | 1507 | 1814 | 2010 |
| | | MED | 181 | 253 | 352 | 488 | 616 | 776 | 928 | 1106 | 1318 | 1530 | 1687 |
| | | MIN | 136 | 185 | 279 | 377 | 486 | 594 | 742 | 779 | 986 | 1080 | 1107 |
| | Sound power level [dB(A)] | MAX | 48,0 | 50,0 | 54,0 | 53,0 | 55,0 | 54,0 | 60,0 | 60,0 | 63,0 | 64,0 | 67,0 |
| | | MED | 42,0 | 45,0 | 49,0 | 47,0 | 50,0 | 48,0 | 56,0 | 55,0 | 60,0 | 61,0 | 63,0 |
| | | MIN | 36,0 | 38,0 | 42,0 | 40,0 | 43,0 | 40,0 | 50,0 | 47,0 | 53,0 | 53,0 | 52,0 |
| | Sound pressure level [dB(A)] (1) | MAX | 38,6 | 40,6 | 44,6 | 43,6 | 45,6 | 44,6 | 50,6 | 50,6 | 53,6 | 55,0 | 57,6 |
| | | MED | 32,6 | 35,6 | 39,6 | 37,6 | 40,6 | 38,6 | 46,6 | 45,6 | 50,6 | 52,0 | 53,6 |
| | | MIN | 26,6 | 28,6 | 32,6 | 30,6 | 33,6 | 30,6 | 40,6 | 37,6 | 43,6 | 44,0 | 42,6 |
| | Power input [W] (2) | MAX | 46 | 48 | 57 | 61 | 76 | 90 | 117 | 140 | 162 | 213 | 213 |
| | Absorbed current [A] (2) | MAX | 0,21 | 0,21 | 0,25 | 0,27 | 0,33 | 0,39 | 0,52 | 0,64 | 0,71 | 0,95 | 0,95 |
| | Water content [l] | | 0,53 | 0,79 | 1,05 | 1,31 | 1,57 | 2,20 | 2,20 | 2,84 | 2,84 | 3,47 | 3,47 |

(1) Sound pressure level, in a 100 m³ room, 1.5 m distance and reverberating time of 0.3 s.
(2) Electrical supply: 230-1-50/60 [V-ph-Hz].

Eurapo take part in EUROVENT certification program. Above mentioned models are in the FC section of the website.

NOTE
Performances of LOW BODY models are about 11% lower than the standard ones in heating operation and 12,3% lower in cooling operation. For greater accuracy please use the EURAPO selection software.

To obtain capacities for 2 or 4 row coils or for **District Cooling** solutions, or for conditions different from standard ones, please use the selection software or contact EURAPO staff.

The printed data could be modified without any notice.

Eurapo Srl
Via A. Malignani, 12
33170 Pordenone - Italy
T +39 0434 572552
F +39 0434 28667
info@eurapo.it
www.eurapo.it

ISO 9001 Certified company
Cert. n. 731005773

carecom.it

www.eurovent-certification.com
www.certiflash.com

As programs and technologies are always improving, description, data and drawings must be intended as merely indicative and can be modified without any notice.

6DC0106 - EN07.21