# ELFORoom$^2$

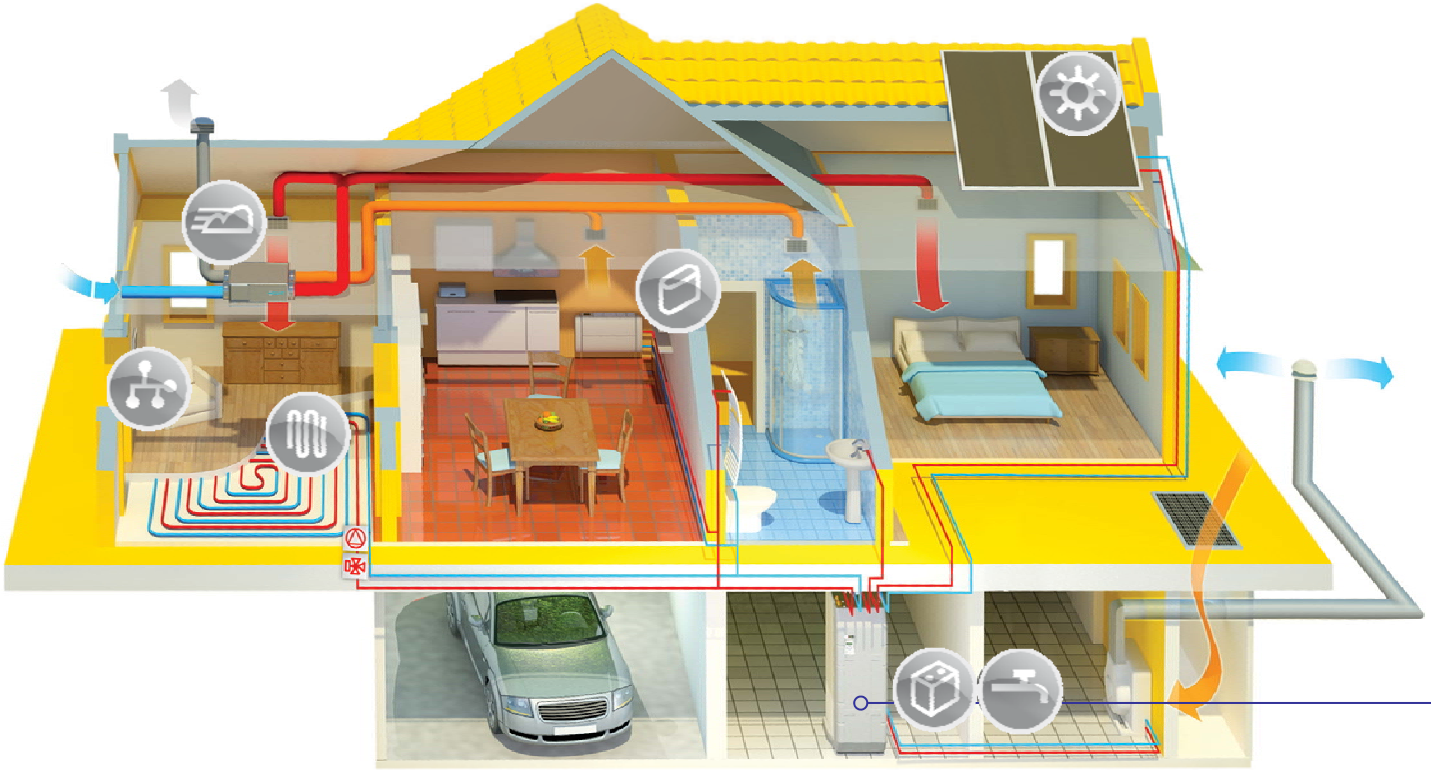
**WATER TERMINAL
FOR VERTICAL AND HORIZONTAL
CASED OR UNCASED INSTALLATION**

- **HOMOGENOUS TEMPERATURES AT ALL TIMES**
  Eliminates the stratifications of the air temperature thanks to the continuous modulation of the fan speed
- **REDUCED CONSUMPTIONS**
  The exclusive motor enables strong reductions in consumption
- **MAXIMUM SILENCE**
  The continuous fan operating allows the unit to operate always privileging automatically the lower fan speeds in favour of the silence
- **PURIFIES THE AIR WHILE CONDITIONING**
  The continuous air movement enables its constant filtration which improves the air quality of the room
- **SATISFIES ALL INSTALLATIONS**
  Available in the cased and uncased, both vertical and horizontal version

Heating capacity (W45/A20) from **0,9** to **3,5 kW**
Cooling capacity (W7/A27) from **0,8** to **3,3 kW**

# **ELFO**System **GAIA** Edition

**ELFO**Room² is part of **Elfo**System and
**GAIA is the heart of ELFOS**ystem
that **Clivet** has designed for residential installations.

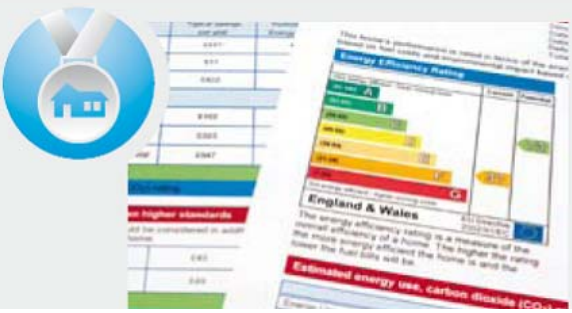


## A system that looks toward the future

- It does not use fossil fuels
- It uses renewable energy from 75 up to 100%
- Substantially contributes toward reaching the European targets of 20-20-20 by 2020 (reduction of $CO_2$ emissions, primary energy and use of renewable energy)

## Qualifying proposal

- Specialized solution with high value added
- Single annual cycle system for total comfort
- Increases the building's energy efficiency by at least 2 classes

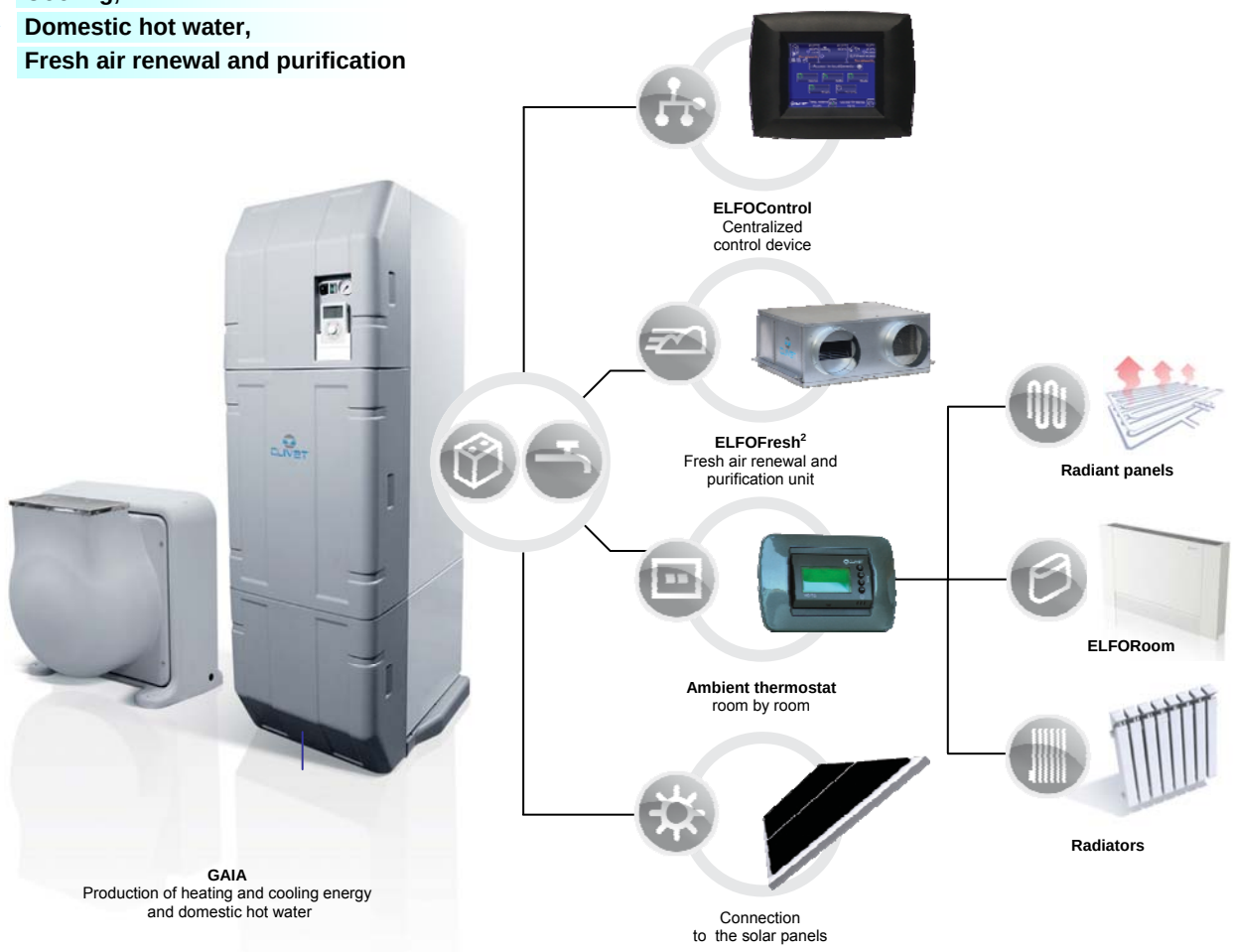


# **ELFO**System **GAIA** Edition

## A single smart system

with all the elements that generate **year-round comfort:**

- **Heating,**
- **Cooling,**
- **Domestic hot water,**
- **Fresh air renewal and purification**




## Simple to install

- Industrialized solution that permits a quick and high quality installation
- Excludes installation and adjustment errors
- Wirings and connections are clear and preconfigured

## Economically convenient

- Thanks to its high energy efficiency, it increases the value of the property, with an average return on investment in 3-4 years.
- 60% reduction of the space in the heating room
- Complies with the minimum requirements for existing financial incentives

# ELFOSystem GAIA Edition
## is based on the following elements:

## Production

**High efficiency heat pump for the heat/cool and domestic hot water production**

- Packaged unit for the comfort by using renewable energy
- Integrated system for the recovery of the solar Energy from thermal correctors
- Integrated production of domestic hot water
- System with the best seasonal efficiency on the market
- Water production up to 60°C, operating with outdoor air temperature down to –22°C
- Air and water version

GAIA Aria 31

**ENERGY EXCHANGER**
Draws the energy contained in the air

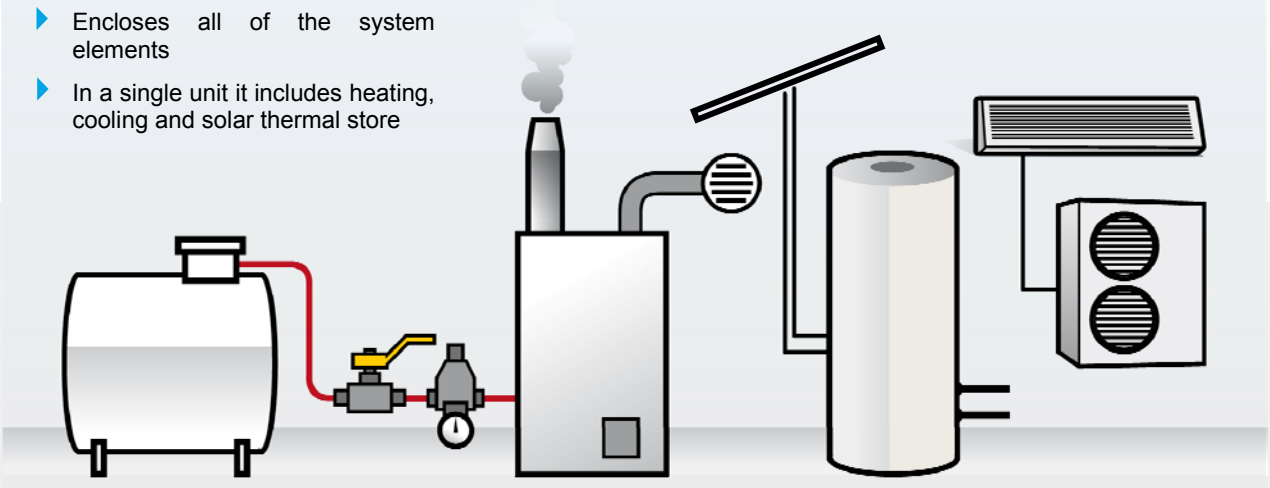
**GAIA**
Contains all system elements

## PREASSEMBLED UNIT

In comparison to a traditional combustion system, Gaia Aria offers three essential advantages:

- It does not require a gas feed , flues and explosion security systems
- Encloses all of the system elements
- In a single unit it includes heating, cooling and solar thermal store

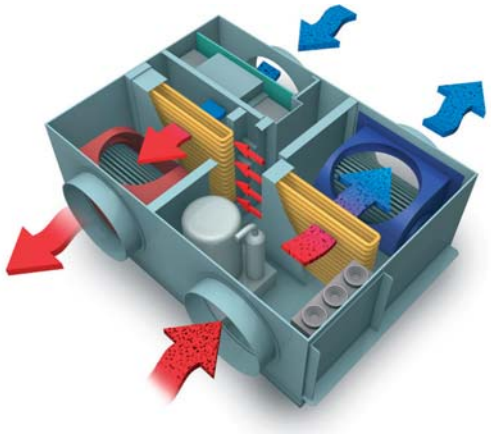
**TRADITIONAL SYSTEM**



The installation time is DRASTICALLY REDUCED to the best advantage of a QUALITY AND SAFETY RESULT.

# **ELFO**System **GAIA** Edition

## is based on the following elements:



## Fresh air
## ELFOFresh$^2$

**Room ventilation and purification system with energy recovery**

- Summer and winter active thermodynamic recovery
- Fulfill up to 80% of the building thermal load
- Electronic filtering: PM10, bacteria, pollen
- Summer dehumidification ideal in combination with the radiant cooling
- Free cooling

## Control
## ELFOControl

**Advanced control system to manage operations of the entire system.**

- High seasonal efficiency thanks to the control of the whole system
- Optimization of units efficiency and operation
- Comfort improvement (temperature, humidity, air quality, domestic hot water)
- Simply to use and complete system management

## Distribution
## ELFODistribution

**Heat-diffusion systems with “room-by-room” temperature regulation**

- Temperature and humidity thermostats room by room
- Dedicated hydronic terminal units
  - design and reduced sizes
  - continuous speed modulation
  - homogeneous temperature
  - reduced consumptions
- Management of radiant systems and radiators

# ELFORoom²

## The room terminal which generates the highest comfort

ELFORoom² is an ingenious synthesis of design and technology which enables very high standards of comfort to be reached, which are better than any other emission system (radiators, fan coils, radiant).
It is the **ideal solution when renovating**: ELFORoom² can be installed to substitute radiators and **thanks to its low** operating **temperatures** it enables a consistent savings in management costs and an improved air quality by continuous filtration. As well as heating, ELFORoom² allows rooms to be cooled and dehumidified during summer months using a simple technique, insulating the system's ducting and enabling condensation to be adequately discharged.
This is a valid alternative for new housing: due to the low heating loads required in each room, ELFORoom2 allows set-up costs which are more advantageous when compared to radiant heating systems as well as the room temperatures being rapidly reached thanks to the lower thermal inertia.

## One single terminal for all seasons

With one single terminal it is possible to **heat** in winter, while in summer the rooms can be **cooled** and **dehumidified**. With one single terminal the **well-being** can be obtained **all year round**. It reaches the required temperature faster and does not take time to heat rooms.

## Homogenous temperature

ELFORoom² homogenous temperature, thanks to the continuous fan operating and gradual variations of its speed, it guarantees a constant air movement. Thus, a perfect temperature homogeneity is achieved, avoiding stratification phenomena. The sense of well-being is further improved thanks to the low air speed, which results as being imperceptible to those in the room, enabling very high standards of comfort to be obtained.

## Silence

ELFORoom² is equipped with a tangential fan which is activated by a special motor whose continuous operating enables to operate at a very low speed at all times, making it very silent. It uses the high fan speeds only for reaching the room-comfort temperature more quickly. The evolved control system which ELFORoom² is equipped with, allows a continuous adaptation of the fan RPM to the requested heating needs.

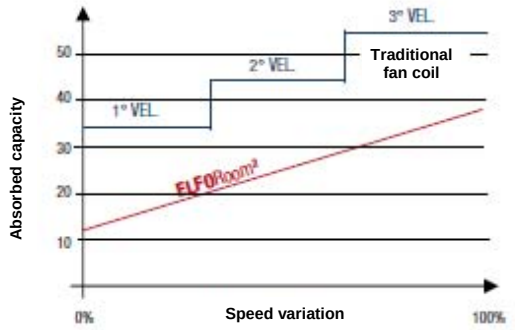
## Air purification

ELFORoom² couples a complete and flexible temperature management with the air quality care. The continuous air movement allows a **constant air purification** and **extraction of the dust**. The filter access system has been specially designed to guarantee **ease and speed in cleaning operations** which can be carried out directly by the user.

# ELFORoom²

## Reduced consumption

The **exclusive electric motor** of the ELFORoom² fan guarantees reduced consumption thanks to the fan modulation. The high efficiency of its innovative technological solution markedly limits the energy needed for its correct operating, reducing the used capacity and the management costs when compared with traditional fan coils.



## It adapts elegantly to any type of room

Its sober design and the reduced sizes make ELFORoom² the room terminal which fits with any type of furniture. The solidity of the structure, made entirely of metal, makes it indestructible and comparable to a radiator.

### Reduced thickness

A thickness of only 13 cm makes it extremely suitable for residential settings when compared to traditional fan coils which usually have a thickness of 22 cm .

### Easy to clean

The flat surfaces and the materials make the external hood easy and quick to clean. The air filter cleaning is easy thanks to the return front grill opening through a finger pressure.

### Satisfies all installations

**ELFORoom²** is a room terminal which allows the **installation in all the architectural settings,** it is available both the cased and uncased vertical wall version, and the cased and uncased horizontal ceiling version.
A **complete range of accessories**, such as, for instance, the plinths for floor installation, the return and supply plenum, the formwork for uncased installation and other accessories make ELFORoom² complete for satisfying a lot of installations.

**Vertical cased** installation

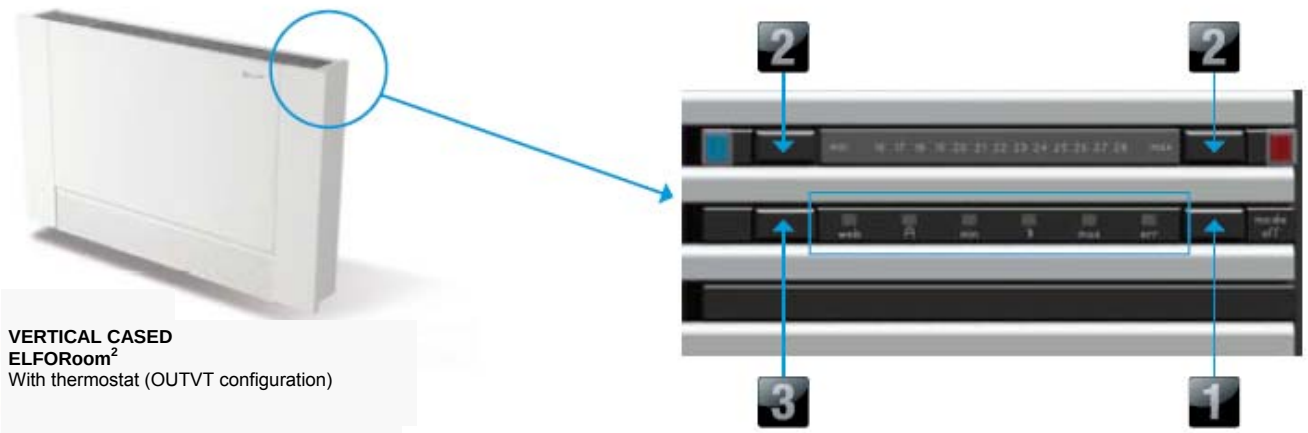
**Vertical uncased** installation

**Horizontal cased** installation

**Horizontal uncased** installation

# ELFORoom²

## Vertical cased installation with built-in thermostat




**VERTICAL CASED**
**ELFORoom²**
With thermostat (OUTVT configuration)

## Control functions

**1 The OFF mode button is a multifunction button**

By holding it down for 5 seconds the unit is switched off and on, pressing it down with just one click, it moves the selection of various options from left to right;

**Automatic:**

The AUTO function (A) automatically controls the fan speed depending on the heating requirement. The unit is set in AUTO mode as standard;

**Minimum speed:**

This control forces the fan to operate at minimum speed;

**Night mode:** The night mode limits the fan to the minimum speed and the set-point is reduced by 1°C and a further degree after 2 hours from the switching on;

**Maximum speed:**

This control forces the fan to operate at maximum speed.

If the water temperature is less higher than 18°C in summer and lower than 30°C in winter, the fan is not activated and a red or blue light will flash on the thermostat. If the reference temperatures are not reached within 10 minutes from the terminal switching on, it is automatically set in stand-by mode. The unit re-start automatically occurs after 45 minutes from the block or manually by moving from the summer to the winter mode or vice versa (button 3);

**2 The temperature control buttons:**

the set-point can be set between 16°C and 28°C using the buttons 2

**3 The button for choosing the winter/summer mode:**

The function is set standard in the manual mode. Holding down the button 3 for 15 seconds until the blue and red LEDs simultaneously switch-on, the automatic winter/summer mode is set. Follow the reverse procedure to return to manual control until the LEDs switching off.

## Maintenance frequency and ELFOControl connection signalling

When all the keypad LEDs are simultaneously switched on, it is signalled the maintenance frequency. After 600 operating hours, ELFORoom² signals the need to clean the filters. It is possible to reset the unit by pressing for 5 seconds the button 1 MODE OFF. When the LED WEB is switched on, it is signalled the connection of ELFORoom² to ELFOControl, the advanced control system which manages the whole ELFOSystem.

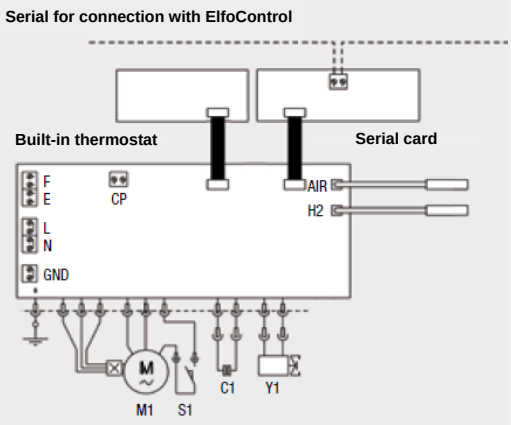
## Wiring diagram

The built-in control card (CTR) is complete with a thermostat and a serial card. The vertical cased versions with OUTVT configuration, are completely autonomous and have the following connections:

- **M1**: fan motor;
- **S1**: grill microswitch (it switches off the fan if the grill is open);
- **C1**: condenser;
- **Y1**: water solenoid valve (optional)
- **AIR**: room air probe
- **H2**: coil water probe
- **N-L**: power supply (phase/neutral)
- **GND**: earth
- **CP**: presence sensor input not supplied by CLIVET, if closed it reduces or increases the set-point by 2.5°C.

If ELFOControl is not in the system, the following free contacts are available (max 1A) for the activation request by the generator.

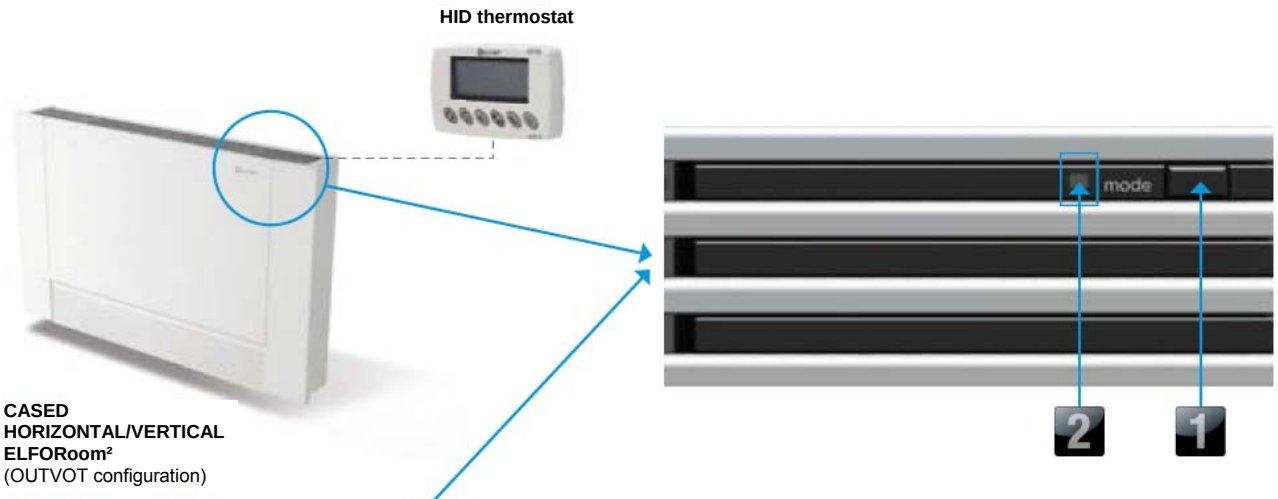
- **F**: consent control for chiller or heat pump;
- **E**: consent control for a boiler;



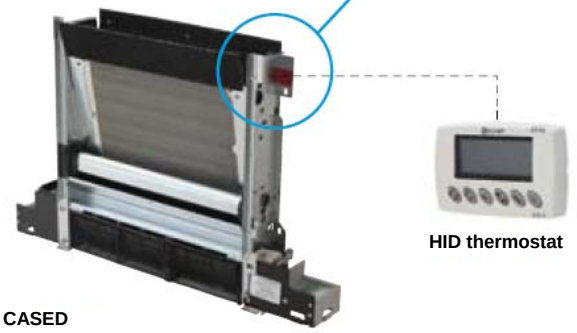
# ELFORoom²

## vertical/horizontal cased without thermostat
## vertical/horizontal uncased without thermostat

The following units are supplied with an electronic card installed on the side which enables the fan and any other accessories to be controlled and they are pre-set for the connection to the HID-T2, HID-T3 or HID-Ti2 wall thermostats. The HID thermostat detects the room temperature and enables the required temperature, fan speed, etc. to be set (in the following pages of this bulletin are described their characteristics ). **The HID wall thermostat can control from 1 to 9 ELFORoom² units in Master-Slave configuration (mini-networks).** The units, despite being controlled by the wall thermostat, have a built-in keypad with an on/off control and a signalling LED.




**CASED HORIZONTAL/VERTICAL ELFORoom²**
(OUTVOT configuration)




**CASED HORIZONTAL/VERTICAL ELFORoom²**
(INVOT configuration)

## Control functions

1 **The ON/OFF mode button:**
pressing it down for 5 seconds it switches off and on the unit.

2 **Maintenance frequency signalling:**
it signals the maintenance frequency.
After 600 operating hours, ELFORoom² signals the need to clean the air filters. It is possible to reset the unit by pressing for 5 seconds the button 1 MODE OFF.

## Wiring diagram

The built-in control card (CTR1) is complete with a keypad and a serial card. The cased and uncased versions with OUTVOT and INVOT configuration, require an HID wall thermostat and have the following connections:

- **M1**: fan motor;
- **S1**: grill microswitch (it switches off the fan if the grill is open);
- **C1**: condenser;
- **Y1**: water solenoid valve (optional)
- **H2**: coil water probe
- **N-L**: power supply (phase/neutral)
- **GND**: earth

If ELFOControl is not in the system, the following free contacts are available (max 1A) for the activation request by the generator.

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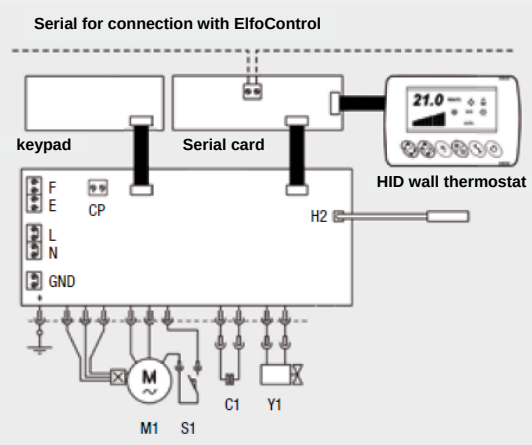


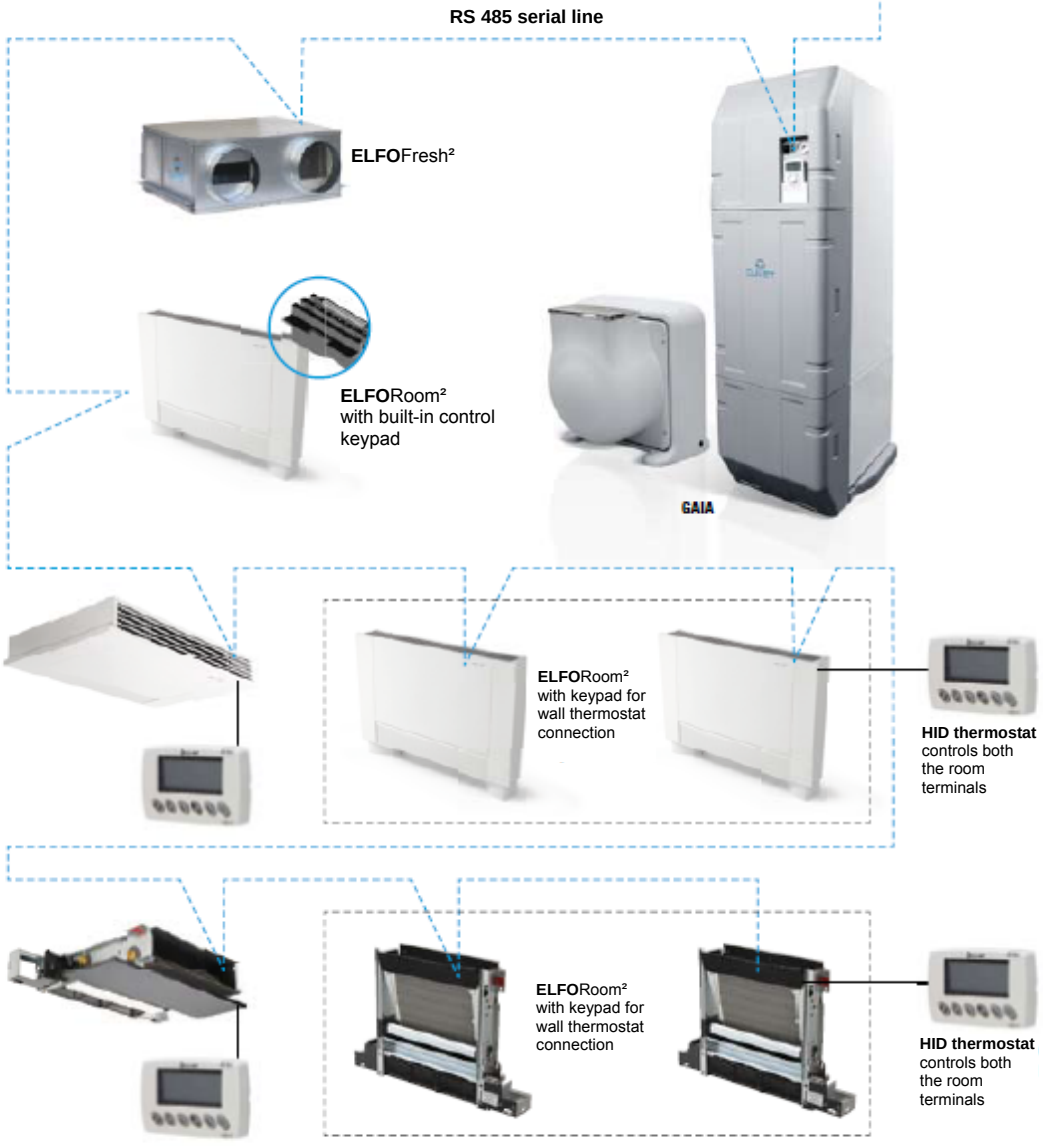
# ELFORoom²

## ELFOControl: the centralized Clivet control

ELFOControl is the innovative control panel which Clivet has developed to manage the comfort of the residential settings. It optimises the functions of all the ELFOSystem elements connected to it (ELFOEnergy heat pump, ELFOFresh², heat distribution system) to obtain the maximum comfort and the energy savings.

**ELFO**Room² provides the RS485 serial connection and can be connected to ELFOControl.

### Esempio di possibili installazioni



# ELFORoom²

**WATER TERMINAL
FOR VERTICAL AND HORIZONTAL
CASED OR UNCASED INSTALLATION**

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## UNIT TECHNICAL CHARACTERISTICS

**STRUCTURE**
Load-bearing structure made of highly resistant electro-zinc coated sheet parts.

**PANELLING**
Unit external panelling with painted sheet, RAL 9010 (white) matt finish lacquered sheeting with plastic parts (self-extinguishing UL V0). Where necessary the panelling is removable to enable the access to the interior parts.

**AIR EXCHANGER**
Heat exchange coil made of copper ducting and aluminium fins with fluted surface. Threaded eurokonus 3/4 type fittings which guarantee seal without adding further elements (hemp, washers, teflon, liquid seals, etc.) thanks to an o-ring washer placed directly in the female fitting which is able to create a seal by fitting with the specific offset in the male fitting.
The coil is equipped with a sensor for the detection of the water temperature which enables the fan to be activated only if the water is lower than 20°C in cool and higher than 30°C in heat.

**FAN**
Tangential fan made of synthetic material with staggered blades (high-level of silence) assembled on vibration-proof EPDM supports.

**ELECTRIC MOTOR**
Single-phase resin packed motor assembled on vibration-proof EPDM supports with a HALL effect sensor and variable speed at phase cutting.

**REVERSIBLE SUPPLY AIR GRILL**
Grey-lacquered aluminium grill with epoxy powder-coating. It is possible to rotate the supply grill to deviate the air-flow towards the room or the wall.

**RETRUN AIR GRILL**
White-lacquered electro-zinc coated sheet with epoxy-powder coating (RAL9010) with fast uncoupling device for filter cleaning and micro safety switch.

**FILTRATION**
NAN honeycomb mesh air filter made of neutral multi-layered polypropylene material (efficiency rate A, gravimetric method 48%)

**TANK**
Shock-proof PVC tank which can be dismantled for periodical cleaning operations.

**ELECTRICAL PANEL**
The electrical panel, includes an electronic control, which is situated inside the unit and the access is guaranteed by a removable panel.
The cased ELFORoom² unit with built-in thermostat makes the terminal completely independent as much as it allows the fan speed selection, the ON/OFF, the required temperature control and the heat or cool mode selection.
The cased and uncased ELFORoom² unit for installation with a wall thermostat (HID) is equipped with a simplified keypad with only one button for the terminal switching off (ON/OFF) and a LED for the alarms and dirty filters signalling.
The wall thermostats (HID) which can be connected to the terminals may be:
- HID-T2 - room wall thermostat with temperature probe;
- HID-Ti2 - uncased room wall thermostat with temperature probe;
- HID-T3 - room wall thermostat with temperature and humidity probe;
All the ELFORoom² versions offer:
- two outlets for the control of a heat pump or boiler;
- serial card for a network connection for integration with ELFOControl or with an HID wall thermostat which manages up to 9 units;

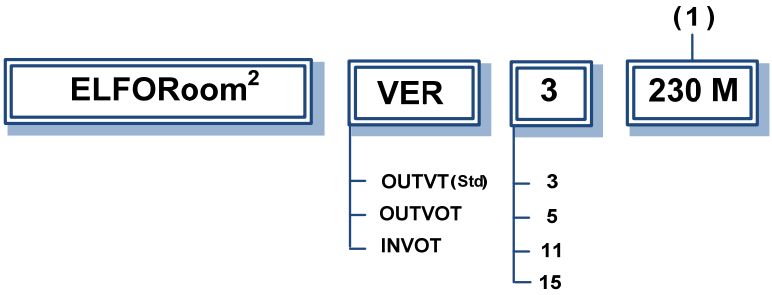
**CONNECTIONS**
The standard unit is supplied with 3/4" EUROKONUS fittings and 3/4" flat fittings and 14 mm condensate discharge. The exchange coil can be rotated in order for the hydraulic fittings to be moved to the left or the right of the terminal.

**ACCESSORIES**
Standard accessories separately supplied or available in-store:
KCCDX - Motor connection kit for unit with right-side fittings
KV3BX - 3-way valve kit with electrothermal head and balancing
KPDX - Plinth kit
BACKVX - Aesthetic panel for the rear closure
FXPPX - Floor fixing bracket kit
PMSTX - Telescopic upper supply plenum kit
KASPX - Return plenum kit
PR90MX - supply plenum kit at 90°
GMX - Wall supply grill kit
GRA1X - Wall return grill kit
CSFIX - Formwork for uncased installation
PCIX - Uncased closure panel
HID-T2X - HID-T2 Thermostat (external only temperature)
HID-TI2X - HID-Ti2 Thermostat (uncased only temperature)
HID-T3X - HID-T3 Thermostat (external only temperature and humidity )

**CONFIGURATIONS BY REQUEST**
ELFORoom² configurations available only by request and not managed in stock.

1) 4-tube exchange coil;
2) Panel color;
3) UV germicidal lamp kit;
4) Fan control kit with autotransformer;
5) Simplified built-in electronic control kit;

**UNIT CONFIGURATIONS** necessary for the complete supply with the following variations.




**VERSIONS:**

**OUTVT -** Vertical cased with built-in thermostat (standard)

**OUTVOT -** Vertical/Horizontal cased without thermostat (for connection with HID wall thermostat)

**INVOT -** Vertical/horizontal uncased without thermostat (for connection with HID wall thermostat)

**(1) VOLTAGE**
Voltage 230/1/50Hz (230M)

## GENERAL TECHNICAL SPECIFICATIONS

| SIZES | | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|---|
| **COOLING** | | | | | | |
| Cooling capacity | 1 | W | 828 | 1758 | 2634 | 3333 |
| Sensible capacity | 1 | W | 620 | 1265 | 1964 | 2647 |
| Total capacity input | 1 | W | 17 | 38 | 41 | 42 |
| **HEATING** | | | | | | |
| Heating capacity | 2 | W | 940 | 1980 | 2720 | 3460 |
| **INTERNAL EXCHANGER** | | | | | | |
| Water content | | l | 0.47 | 0.80 | 1.13 | 1.46 |
| Nominal water flow-rate | 1 | l/s | 0.039 | 0.084 | 0.125 | 0.16 |
| Pressure drop | 1 | kPa | 7.2 | 8.4 | 22.5 | 18.6 |
| **AIR HANDLING SECTION FANS (EXTRACT)** | | | | | | |
| Type of fans | 3 | | TGZ | TGZ | TGZ | TGZ |
| Air flow | 4 | l/s | 45 | 88,8 | 128 | 160 |
| **CONNECTIONS** | | | | | | |
| Water fittings | | | Eurokonus 3/4 | Eurokonus 3/4 | Eurokonus 3/4 | Eurokonus 3/4 |
| Condensate discharge | | mm | 14 | 14 | 14 | 14 |
| **POWER SUPPLY** | | | | | | |
| Standard power supply | | V | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 |
| **DIMENSIONS** | | | | | | |
| Length | | mm | 737 | 937 | 1137 | 1337 |
| Depth | | mm | 129 | 129 | 129 | 129 |
| Height without plinths | | mm | 579 | 579 | 579 | 579 |
| **STANDARD UNIT WEIGHTS** | | | | | | |
| Net weight | | kg | 17 | 20 | 23 | 26 |

(1) Ambient air 27°C/19.5 W.B.
Inlet water 7°C and outlet water 12°C
(2) Ambient air 20°C D.B.
Inlet water 45°C and outlet 45°C
(3) TGZ = tangential
(4) Air flow at max speed measured with clean filters

**Voltage: 230/1/50**

## ELECTRICAL DATA

| SIZE | | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|---|
| **F.L.A. FULL LOAD CURRENT AT MAX ADMISSIBLE CONDITIONS** | | | | | | |
| F.L.A. - Fan | | A | 0.11 | 0.15 | 0.17 | 0.18 |
| **F.L.I. FULL LOAD POWER INPUT AT MAX ADMISSIBLE CONDITION** | | | | | | |
| F.L.I. - Fan | | W | 17 | 30 | 37 | 41 |

## SOUND LEVELS

**FAN SPEED: high speed**

| SIZE | Sound Power Level (dB) Octave band (Hz) | | | | | | | | Sound pressure level | Sound power level |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB(A) | dB(A) |
| **3** | 51 | 51 | 47 | 49 | 48 | 43 | 37 | 27 | 43 | 52 |
| **5** | 45 | 45 | 48 | 50 | 51 | 45 | 38 | 28 | 45 | 53 |
| **11** | 51 | 51 | 48 | 49 | 50 | 45 | 38 | 28 | 44 | 53 |
| **15** | 47 | 47 | 49 | 48 | 51 | 44 | 37 | 28 | 44 | 53 |

**FAN SPEED: Medium speed**

| SIZE | Sound Power Level (dB) Octave band (Hz) | | | | | | | | Sound pressure level | Sound power level |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB(A) | dB(A) |
| **3** | 50 | 50 | 45 | 43 | 41 | 35 | 28 | 24 | 37 | 45 |
| **5** | 45 | 45 | 45 | 45 | 42 | 36 | 29 | 24 | 38 | 46 |
| **11** | 49 | 49 | 44 | 46 | 43 | 37 | 30 | 24 | 39 | 47 |
| **15** | 38 | 38 | 43 | 43 | 40 | 34 | 27 | 25 | 36 | 44 |

**FAN SPEED: Low speed**

| SIZE | Sound Power Level (dB) Octave band (Hz) | | | | | | | | Sound pressure level | Sound power level |
|---|---|---|---|---|---|---|---|---|---|---|
| | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dB(A) | dB(A) |
| **3** | 49 | 49 | 34 | 33 | 27 | 22 | 22 | 23 | 28 | 36 |
| **5** | 45 | 45 | 39 | 39 | 22 | 27 | 23 | 23 | 31 | 40 |
| **11** | 46 | 46 | 39 | 41 | 35 | 28 | 23 | 23 | 32 | 41 |
| **15** | 35 | 35 | 38 | 35 | 34 | 22 | 19 | 22 | 29 | 37 |

The values have been detected in a closed ambient with a volume of 100 $m^3$ and a reverberation time of 0.5 seconds.

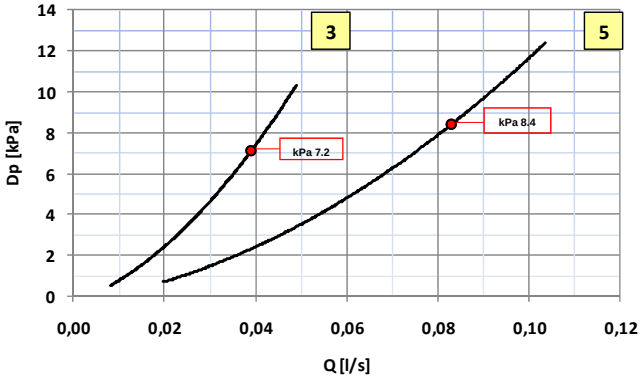
As the air flow is continuous and changes automatically between the maximum and the minimum limits, a precise operating point of the unit cannot be defined.
Therefore are highlighted some indicative sound levels that have been measured **at medium speed.**

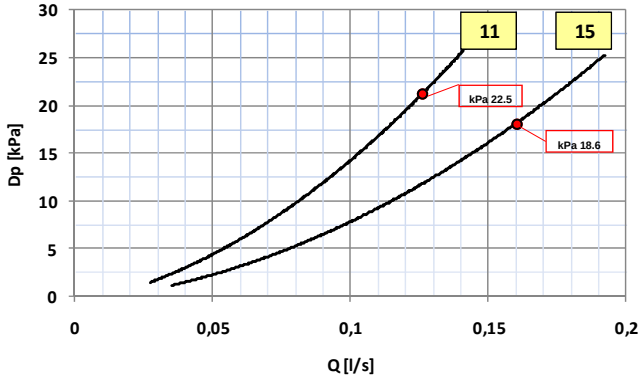
## OPERATING LIMITS

| SIZE | | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|---|
| Max inlet water temperature | 1 | °C | 80 | 80 | 80 | 80 |
| Min inlet water temperature | 1 | °C | 4 | 4 | 4 | 4 |
| Max. pressure water side | | bar | 10 | 10 | 10 | 10 |
| Min inlet air temperature (D.B.) | | °C | 5 | 5 | 5 | 5 |
| Max inlet air temperature (D.B.) | | °C | 40 | 40 | 40 | 40 |

(1) The electronics via the water temperature safety probe checks the inlet water temperature and stops the fan start-up during the cooling operating if the inlet water temperature is higher than 20°C and in heating if the inlet water temperature is lower than 30°C .

## PRESSURE DROPS WATER SIDE




DP = PRESSURE DROPS
Q = WATER FLOW-RATE

**PERFORMANCES IN COOLING**

| SIZE | Ta (°C) DB/WB | EXCHANGER INLET/OUTLET WATER TEMPERATURE (°C) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 5/10 | | 7/12 | | 10/15 | | 13/18 | | 15/20 | |
| | | kWf | kWs | kWf | kWs | kWf | kWs | kWf | kWs | kWf | kWs |
| 3 | 22 / 15.4 | 0.59 | 0.51 | 0.44 | 0.44 | 0.32 | 0.32 | 0.22 | 0.22 | 0.14 | 0.14 |
| | 24 / 17 | 0.79 | 0.59 | 0.57 | 0.5 | 0.41 | 0.41 | 0.29 | 0.29 | 0.22 | 0.22 |
| | 26 / 18.6 | 0.98 | 0.67 | 0.79 | 0.58 | 0.50 | 0.47 | 0.37 | 0.37 | 0.28 | 0.28 |
| | 27 / 19.5 | 1.03 | 0.71 | 0.83 | 0.65 | 0.54 | 0.51 | 0.52 | 0.42 | 0.32 | 0.32 |
| | 28 / 20.3 | 1.19 | 0.75 | 1.00 | 0.67 | 0.752 | 0.56 | 0.46 | 0.46 | 0.37 | 0.37 |
| | 30 / 21.9 | 1.37 | 0.81 | 1.22 | 0.75 | 0.95 | 0.63 | 0.55 | 0.47 | 0.47 | 0.47 |
| 5 | 22 / 15.4 | 1.25 | 1.09 | 0.94 | 0.94 | 0.65 | 0.65 | 0.42 | 0.42 | 0.27 | 0.27 |
| | 24 / 17 | 1.67 | 1.20 | 1.20 | 1.06 | 0.86 | 0.86 | 0.57 | 0.57 | 0.42 | 0.42 |
| | 26 / 18.6 | 2.09 | 1.38 | 1.67 | 1.17 | 1.06 | 0.99 | 0.78 | 0.78 | 0.57 | 0.57 |
| | 27 / 19.5 | 2.18 | 1.47 | 1.76 | 1.26 | 1.15 | 1.08 | 0.88 | 0.88 | 0.68 | 0.68 |
| | 28 / 20.3 | 2.55 | 1.56 | 2.14 | 1.36 | 1.54 | 1.20 | 0.98 | 0.98 | 0.79 | 0.79 |
| | 30 / 21.9 | 2.92 | 1.69 | 2.58 | 1.54 | 2.01 | 1.27 | 1.16 | 1.00 | 0.99 | 0.99 |
| 11 | 22 / 15.4 | 1.95 | 1.60 | 1.43 | 1.43 | 1.04 | 1.04 | 0.60 | 0.60 | 0.38 | 0.38 |
| | 24 / 17 | 2.48 | 1.84 | 1.91 | 1.69 | 1.31 | 1.31 | 0.92 | 0.92 | 0.60 | 0.60 |
| | 26 / 18.6 | 3.08 | 2.10 | 2.52 | 1.83 | 1.65 | 1.54 | 1.19 | 1.19 | 0.93 | 0.93 |
| | 27 / 19.5 | 3.16 | 2.22 | 2.63 | 1.96 | 1.78 | 1.69 | 1.32 | 1.32 | 1.07 | 1.07 |
| | 28 / 20.3 | 3.61 | 2.29 | 3.15 | 2.08 | 2.32 | 1.69 | 1.45 | 1.45 | 1.20 | 1.20 |
| | 30 / 21.9 | 4.24 | 2.53 | 3.77 | 2.32 | 2.91 | 1.89 | 1.80 | 1.56 | 1.46 | 1.46 |
| 15 | 22 / 15.4 | 2.42 | 2.13 | 1.80 | 1.80 | 1.20 | 1.20 | 0.75 | 0.75 | 0.47 | 0.47 |
| | 24 / 17 | 3.14 | 2.47 | 2.38 | 2.12 | 1.65 | 1.65 | 1.03 | 1.03 | 0.75 | 0.75 |
| | 26 / 18.6 | 3.92 | 2.81 | 3.18 | 2.47 | 2.03 | 1.93 | 1.50 | 1.50 | 1.10 | 1.10 |
| | 27 / 19.5 | 4.04 | 2.97 | 3.33 | 2.65 | 2.21 | 2.12 | 1.67 | 1.67 | 1.33 | 1.33 |
| | 28 / 20.3 | 4.61 | 3.07 | 4.01 | 2.81 | 2.94 | 2.33 | 1.84 | 1.84 | 1.51 | 1.51 |
| | 30 / 21.9 | 5.42 | 3.38 | 4.81 | 3.12 | 3.7 | 2.59 | 2.24 | 1.96 | 1.85 | 1.85 |

Ta = inlet air temperature
D.B. = Dry bulb
W.B. = Web bulb
kWf = Cooling capacity in kW
kWs = Sensible cooling capacity in kW
Thermal gradient on water = 5°C

**Performances refer to the maximum air flow.**

## PERFORMANCES IN HEATING

| SIZE | Ta (°C) | EXCHANGER INLET/OUTLET WATER TEMPERATURE (°C) | | | | |
|---|---|---|---|---|---|---|
| | | 35/30 | 40/35 | 45/40 | 50/45 | 60/55 |
| | | kWt | kWt | kWt | kWt | kWt |
| 3 | 10 | 0.95 | 1.16 | 1.38 | 1.59 | 2.01 |
| | 15 | 0.73 | 0.94 | 1.15 | 1.36 | 1.78 |
| | 18 | 0.60 | 0.81 | 1.02 | 1.23 | 1.65 |
| | 20 | 0.51 | 0.73 | 0.94 | 1.14 | 1.56 |
| | 22 | 0.42 | 0.64 | 0.85 | 1.06 | 1.47 |
| | 25 | 0.28 | 0.51 | 0.72 | 0.93 | 1.34 |
| 5 | 10 | 1.99 | 2.46 | 2.91 | 3.37 | 4.28 |
| | 15 | 1.53 | 1.99 | 2.44 | 2.89 | 3.80 |
| | 18 | 1.25 | 1.71 | 2.16 | 2.61 | 3.51 |
| | 20 | 1.06 | 1.52 | 1.98 | 2.43 | 2.32 |
| | 22 | 0.87 | 1.34 | 1.79 | 2.24 | 3.13 |
| | 25 | 0.57 | 1.06 | 1.52 | 1.97 | 2.86 |
| 11 | 10 | 2.74 | 3.36 | 3.99 | 4.61 | 5.85 |
| | 15 | 2.10 | 2.73 | 3.35 | 3.97 | 5.20 |
| | 18 | 1.73 | 2.35 | 2.97 | 3.59 | 4.81 |
| | 20 | 1.47 | 2.10 | 2.72 | 3.33 | 4.56 |
| | 22 | 1.22 | 1.85 | 2.47 | 3.08 | 4.31 |
| | 25 | 0.83 | 1.47 | 2.09 | 2.71 | 3.93 |
| 15 | 10 | 3.50 | 4.29 | 5.09 | 5.88 | 7.46 |
| | 15 | 2.68 | 3.48 | 4.27 | 5.05 | 6.62 |
| | 18 | 2.20 | 3.00 | 3.78 | 4.57 | 6.13 |
| | 20 | 1.88 | 2.68 | 3.46 | 4.24 | 5.80 |
| | 22 | 1.55 | 2.36 | 3.14 | 3.92 | 5.48 |
| | 25 | 1.05 | 1.88 | 2.67 | 3.45 | 4.99 |

Data obtained with nominal water flow-rate
Ta = inlet air temperature
kWt = supplied heating capacity (kW)
Thermal gradient on water = 5°C

**Performances referred to the maximum air flow.**

## PERFORMANCES IN STATIC HEATING

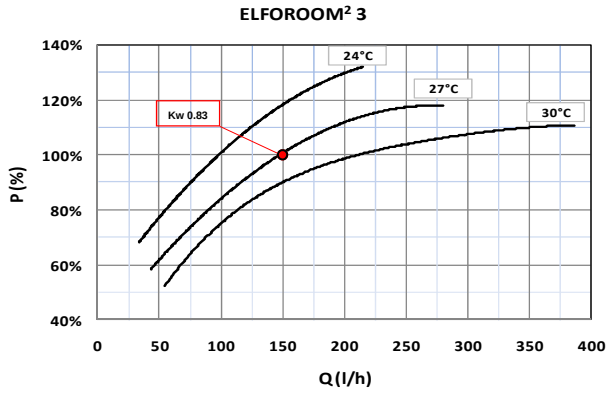
| SIZE | Twi (°C) | HEATING |
|---|---|---|
| | | Pt |
| | | kW |
| 3 | 35 | 0.097 |
| | 40 | 0.129 |
| | 45 | 0.161 |
| | 50 | 0.193 |
| | 60 | 0.258 |
| 5 | 35 | 0.113 |
| | 40 | 0.152 |
| | 45 | 0.189 |
| | 50 | 0.227 |
| | 60 | 0.303 |
| 11 | 35 | 0.134 |
| | 40 | 0.179 |
| | 45 | 0.224 |
| | 50 | 0.268 |
| | 60 | 0.358 |
| 15 | 35 | 0.169 |
| | 40 | 0.225 |
| | 45 | 0.282 |
| | 50 | 0.338 |
| | 60 | 0.450 |

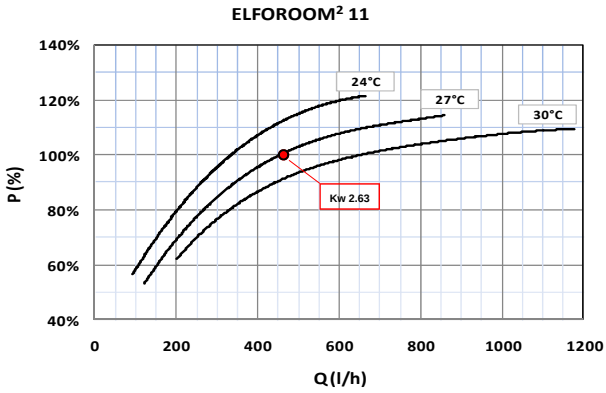
Data obtained with nominal water flow-rate

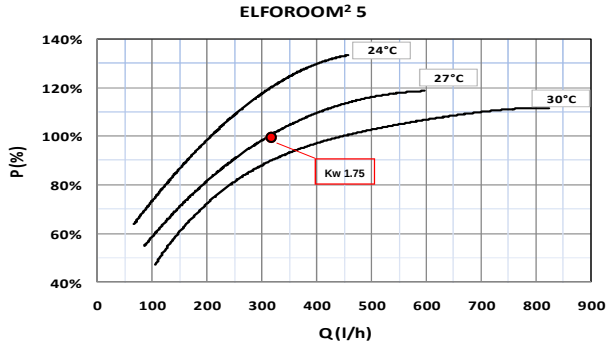
Twi = inlet water temperature (°C)
Ta = ambient air temperature 20°C
Pt = supplied heating capacity (kW)

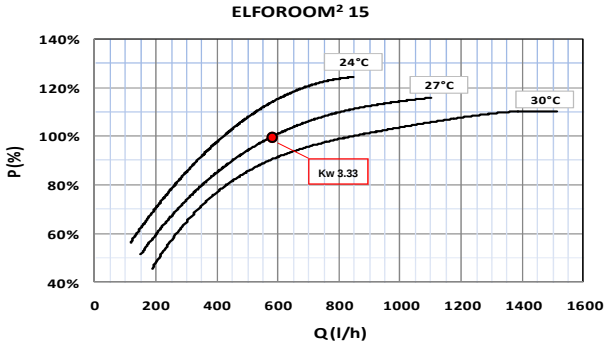
NOTE:
The performances of the static heating were taken with water running through the terminal and the fan is off .

## CORRECTIVE COEFFICIENTS OF THE COOLING CAPACITY BASED ON THE WATER FLOW-RATE



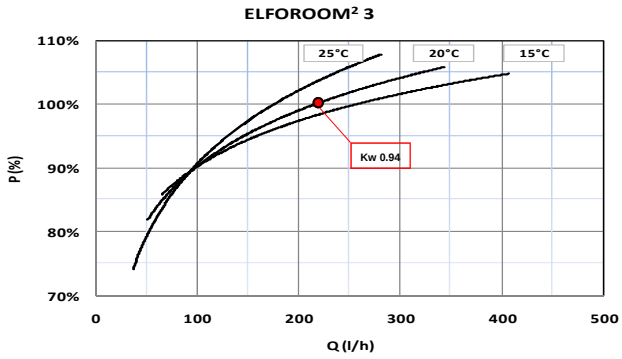



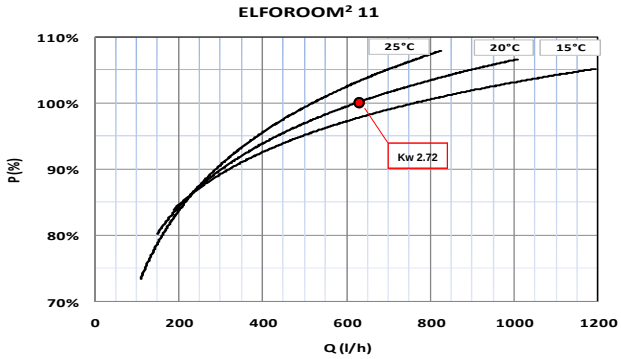



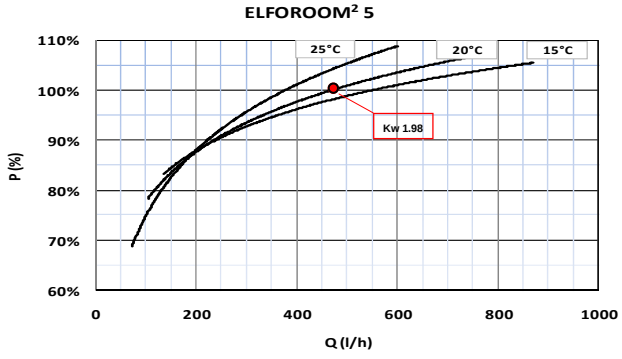



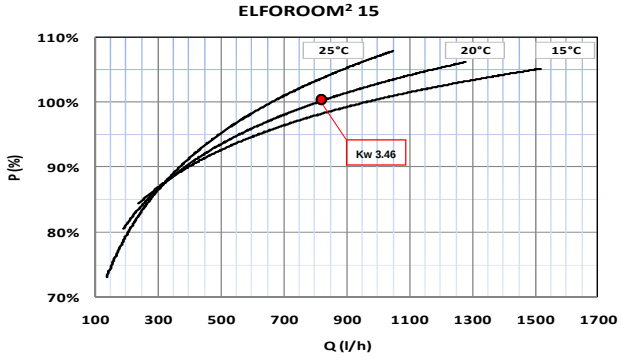

Data referred to the following conditions :
Max fan speed
kW = supplied capacity (kW)
(P) performance percentages as regards the unit nominal capacity
(Q) water flow-rate
Ambient air at 27°C D.B. / 19,5 W.B.
Inlet water 7° and outlet water 12°C

## CORRECTIVE COEFFICIENTS OF THE HEATING CAPACITY BASED ON THE WATER FLOW-RATE



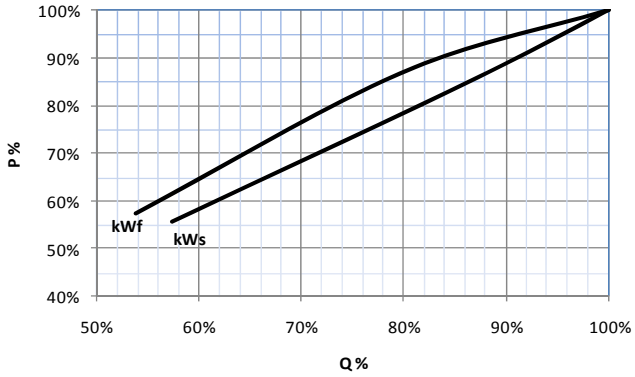



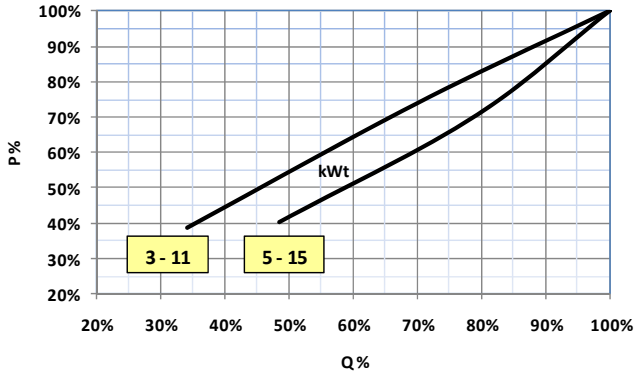

Data referred to the following conditions :
Max fan speed
kW = supplied capacity (kW)
(P) performance percentages as regards the unit nominal capacity
(Q) water flow-rate
Ambient air at 20°C D.B.
Inlet water 45°C

## INTAKE CORRECTIVE COEFFICIENTS BASED ON THE AIR FLOW

### COOLING




### HEATING




KWF = COOLING CAPACITY IN KW
KWS = SENSIBLE COOLING CAPACITY IN KW
KWT = SUPPLIED HEATING CAPACITY (KW)
(P) PERCENTAGE PERFORMANCES AS REGARDS THE UNIT NOMINAL CAPACITY
(Q) AIR FLOW

## ACCESSORIES

### KCCDX - MOTOR CONNECTION KIT FOR UNIT WITH RIGHT-SIDE FITTINGS

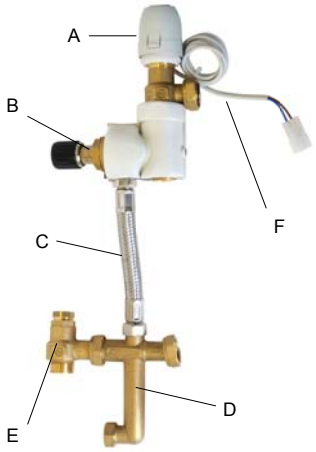
It is necessary to use the connection cable KIT when the exchange coil is rotated from the standard left side to the right. This enables the electric motor of the fan to be powered.

Accessory separately supplied

### KV3VBX - 3-WAY VALVE KIT WITH ELECTROTHERMAL HEAD AND BALANCING (2 PIPE VERSION)
### KV3VB4X - 3-WAY VALVE KIT WITH ELECTROTHERMAL HEAD AND BALANCING (4 PIPE VERSION)

The KIT is made up of a valve with an electrothermal head, a lockshield and a by-pass valve with an over-pressure valve. The first of these allows the terminal to be automatically excluded from the system using the built-in control, the lockshield is used to balance the system pressure drops while the by-pass valve allows to maintain a balanced system even with the valve closed.

A) ELECTROTHERMAL HEAD
B) BYPASS VALVE
C) HOSE
D) BRASS OUTLET UNION
E) LOCKSHIELD
F) CABLES FOR THE CONNECTION TO THE CONTROL CARD




Accessory separately supplied

**Diagram of shut-off valve pressure drop with electrothermal head totally open**

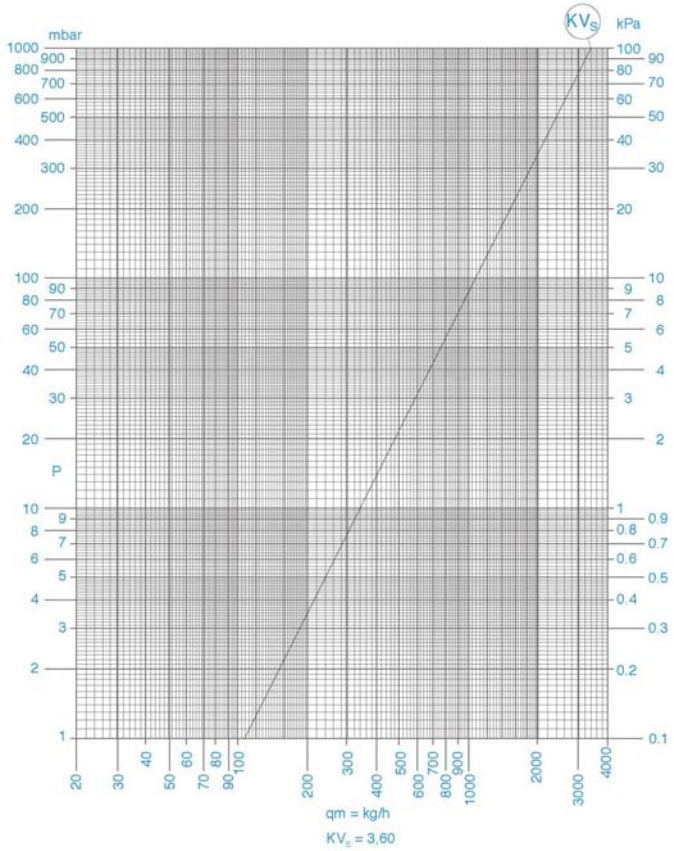
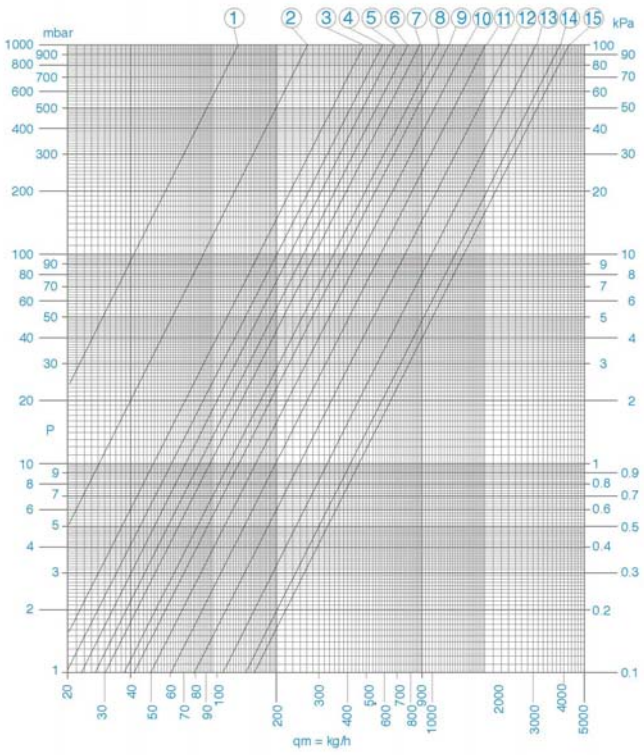



**Diagram of lockshield pressure drops based on the control**

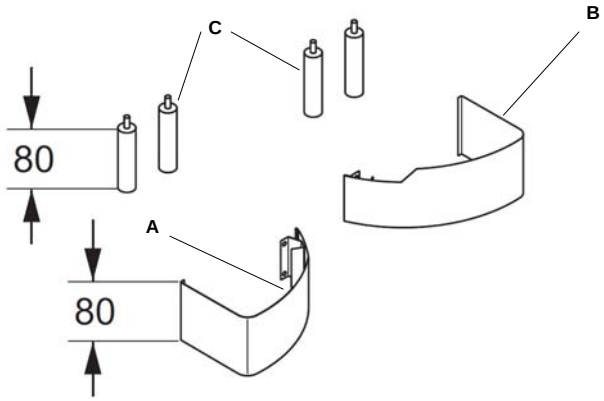



| POS. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 10 | 11 | 12 | 13 | 14 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ADJ | 1/4 | 2 | 2 1/4 | 2 1/2 | 2 3/4 | 3 | 3 1/4 | 3 3/4 | 4 | 4 1/2 | 5 | 6 | 8 | T.A. |
| Kv | 0.13 | 0.28 | 0.49 | 0.62 | 0.70 | 0.82 | 0.95 | 1,33 | 1,57 | 1,95 | 2,47 | 3,34 | 4,18 | 4,52 |

## (KPDX) - PLINTH KIT

The KIT is made up of two plinths and 4 screw-in cylinders which are screwed onto the lower sides of the terminal frame. This accessory enables all the wall installations to be placed at floor-level and is available in a RAL 9010 white colouring.

A) RIGHT PLINTH AESTHETIC COVERING
B) LEFT PLINTH AESTHETIC COVERING
C) ROUND FOR ALUMINIUM PLINTH

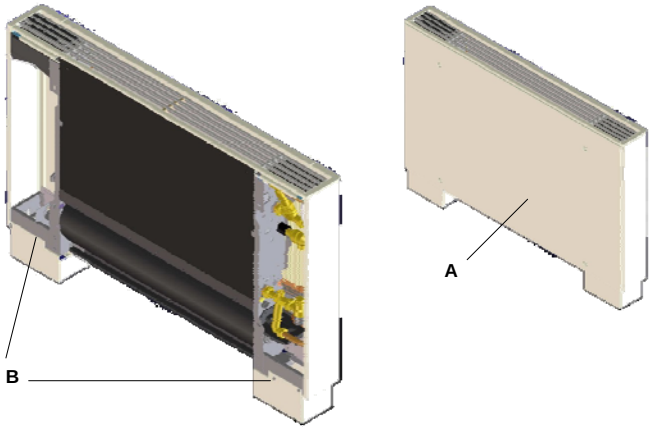



Accessory separately supplied

## (BACKVX) - AESTHETIC PANEL FOR REAR CLOSURE

The lacquered rear closure panel accessory is available in RAL 9010 white colouring and is used to cover the rear part of the unit when it is positioned in front of a window or in any case with the rear visible.

A) PANEL FOR REAR CLOSURE
B) JOINTS FOR THE PANEL FIXING AND FIXING HOLES



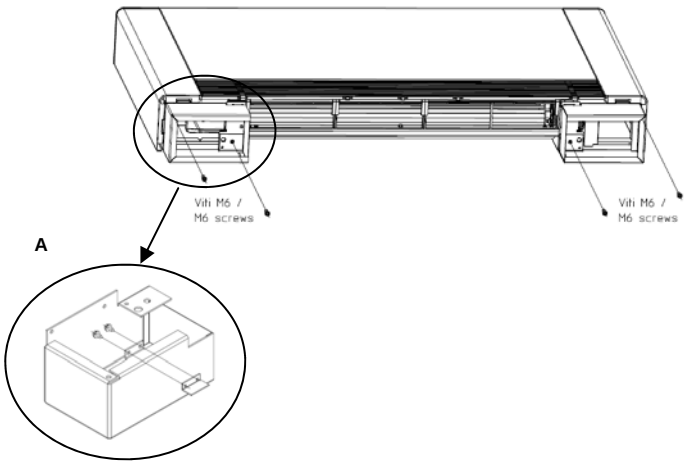

Accessory separately supplied

## (FXPPX) - FLOOR FIXING BRACKET KIT

The KIT is used to fix the unit to the floor in case of window installation or in any case in all the applications where it is not possible wall fixing.

It is prepared for the connection to the rear closure panel KIT as it allows to hidden the hydraulic ducting and the required electrical connections.

A) FLOOR FIXING SUPPORTS ;



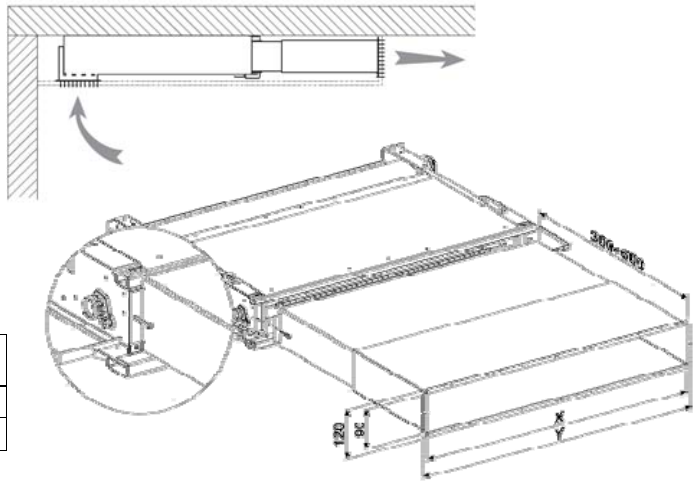

Accessory separately supplied

## (PMSTX) - TELESCOPIC UPPER SUPPLY PLENUM KIT

The supply plenum KIT is used for the uncased versions and enables the outlet air to be ducted from the unit and to be connected to the supply grill KIT.

It is made of a zinc-plated sheet structure which is fixed to the unit load-bearing structure with screws.

It enables the plenum to be extended to a maximum of 600 mm from the unit outlet, as the tangential fan has an available pressure sufficient to overcome the pressure drops in 600 mm of duct.




| SIZE | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| X | mm | 305 | 505 | 705 | 905 |
| Y | mm | 335 | 535 | 735 | 935 |

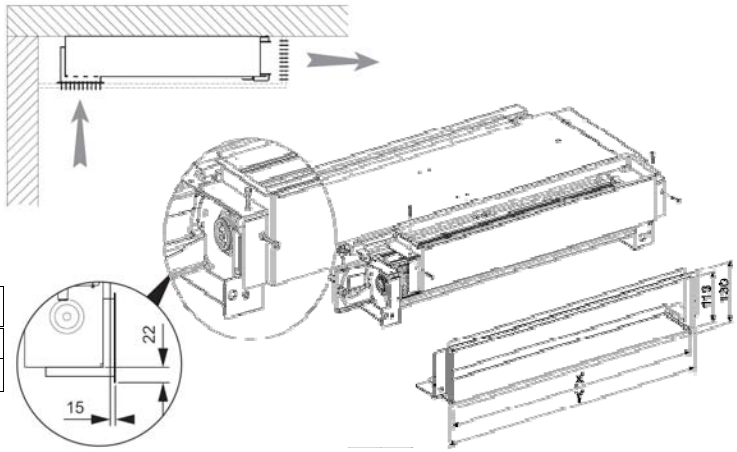
Accessory separately supplied

## (KASPX) - RETURN PLENUM KIT

The return plenum kit is used in the uncased versions and allows to duct the return ambient air.

It is made up of an angular zinc-plated sheet frame which is fixed to the unit with screws next to the tangential fan and is already prepared for the connection to the return grill KIT.

The KIT enables air to be extracted from the frontal part of the unit. The dimension of the accessory is 15 mm in comparison with the unit profile.

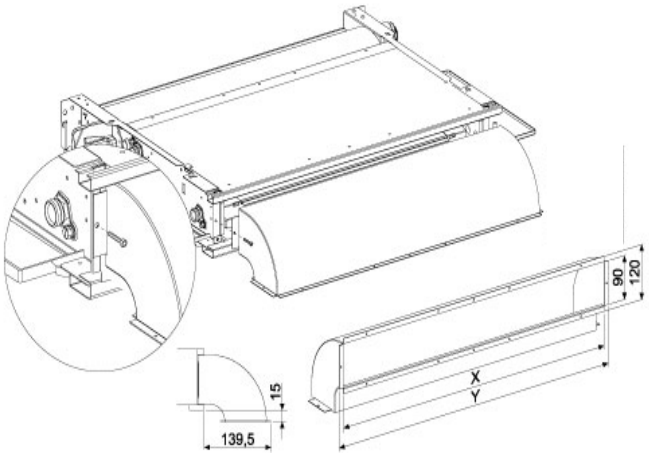



| SIZE | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| X | mm | 305 | 505 | 705 | 905 |
| Y | mm | 335 | 535 | 735 | 935 |

Accessory separately supplied

## (PR90MX) - 90° SUPPLY PLENUM KIT

The 90° supply plenum KIT is used in the uncased versions to duct the air from the unit to the supply grill in the ceiling installations.
It is made up of a zinc-plated and insulated sheet, with a 90°C bend for the treated air inlet in the room.
It is fixed to the unit by some screws on the unit outlet profile and is already prepared for the connection to the supply grill KIT. The dimension of the accessory is 15 mm in comparison with the unit profile.




| SIZE | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| X | mm | 305 | 505 | 705 | 905 |
| Y | mm | 335 | 535 | 735 | 935 |

Accessory separately supplied

## (GMX) - WALL SUPPLY GRILL KIT

Supply grill KIT with double airfoil profile for wall installation and used in the cased versions.

The accessory is available in aluminium for a perfect integration with the wall installation and the fins can be directed for a better air distribution in the room. It is equipped with holes for the connection to the different telescopic supply plenum (PMSTX) and the 90°C plenum (PR90MX) KITS

| Sizes | mm | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| Height | mm | 98 | 98 | 98 | 98 |
| Length | mm | 304 | 504 | 704 | 904 |
| Depth | mm | 45 | 45 | 45 | 45 |

Accessory separately supplied

## (GRA1X) - WALL RETURN GRILL KIT

Return grill KIT with airfoil profile for wall installation and used in the uncased unit versions.

The accessory is available in aluminium for a perfect integration with the wall installation and it is equipped with holes for the connection to the return plenum KIT (KASPX ).

| Sizes | mm | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| Height | mm | 120 | 120 | 120 | 120 |
| Length | mm | 304 | 504 | 704 | 904 |
| Depth | mm | 30 | 30 | 30 | 30 |

Accessory separately supplied

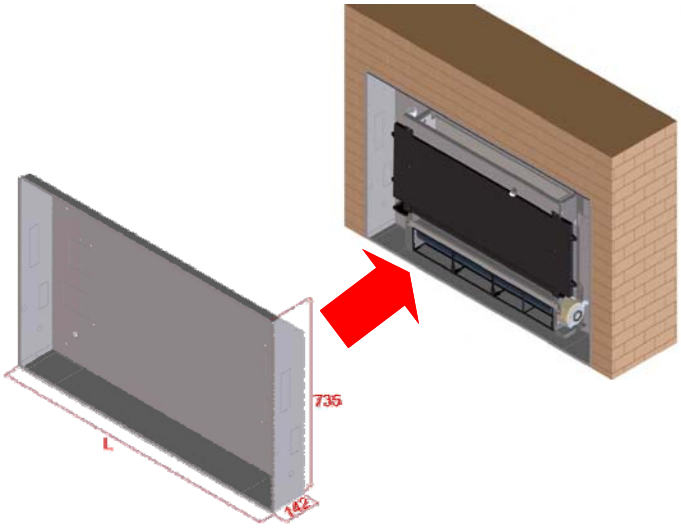
## (CSFIX) - FORMWORK FOR UNCASED INSTALLATION

The formwork KIT is used for the installation of the wall uncased unit and allows the functional clearances for its housing to be prepared during the building phase.

The upper part of the formwork is insulated to avoid any condensation forming.
All the panel is already pre-sheared and holed to aid the positioning and the insertion of the hydraulic ducting and of the power supply cables.

| Sizes | mm | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| Height | mm | 735 | 735 | 735 | 735 |
| Length | mm | 740 | 940 | 1140 | 1340 |
| Depth | mm | 142 | 142 | 142 | 142 |

Accessory separately supplied




## (PCIX) - UNCASED CLOSURE PANEL

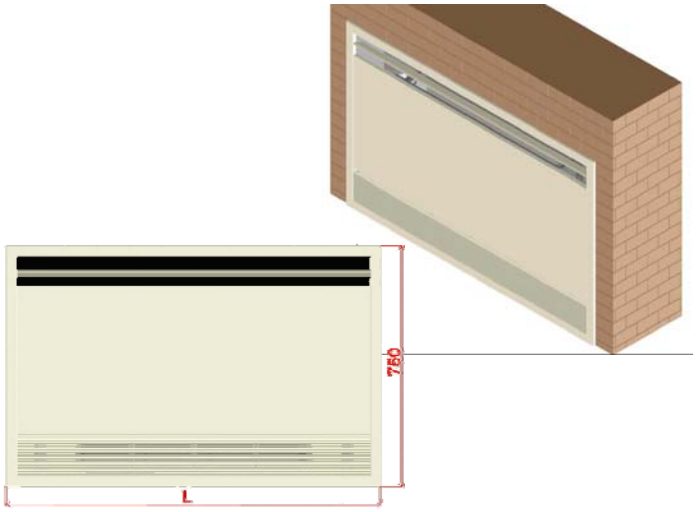
The uncased closure panel is used when the "Formwork kit" (CSFIX) installation has been completed.

It is equipped with supply and return grills for ambient air distribution and is made of zinc-plated sheet, lacquered RAL 9010 white.

The air filters are placed in the inner unit and can be inspected by opening the return grill of the front cover panel .

| Sizes | mm | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| Height | mm | 750 | 750 | 750 | 750 |
| Length | mm | 770 | 970 | 1170 | 1370 |
| Depth | mm | 26 | 26 | 26 | 26 |

Accessory separately supplied



## (HID-T2X) - HID-T2 ELECTRONIC AMBIENT CONTROL ONLY WALL INSTALLATION TEMPERATURE

The room thermostat allows the following functions:

- Setting of the desired temperature;
- Setpoint of the temperature control from 16°C to 28°C;
- 3-speed manual or automatic selection (MIN - MED - MAX);
- On/Off , Summer / Winter , manual / automatic changeover;
- Economic operating selection;
- Setting of the unit operating parameters;
- Alarm signalling with specific code for each type of error;

Dimensions: 184X82X27 mm
The thermostat is connected to the unit via a shielded twisted pair at a maximum distance of 15 m.

Accessory separately supplied

## (HID-Ti2X) - HID-T2 ELECTRONIC AMBIENT CONTROL ONLY UNCASED INSTALLATION TEMPERATURE

The room thermostat allows the following functions:

- Setting of the desired temperature;
- Setpoint of the temperature control from 16°C to 28°C;
- manual or automatic selection (MIN - MAX);
- On/Off , Summer / Winter , manual / automatic changeover;
- Economic operating selection;
- Setting of the unit operating parameters;
- Alarm signalling with specific code for each type of error;

The thermostat is connected to the unit via a shielded twisted pair at a maximum distance of 15 m; it is prepared for the housing in the uncased boxes 503 and to receive the covering aesthetic plates of the main civil series.

Accessory separately supplied

## (HID-T3X) - HID-T3 ELECTRONIC AMBIENT CONTROL WALL INSTALLATION TEMPERATURE AND HUMIDITY

The room thermostat allows the following functions:

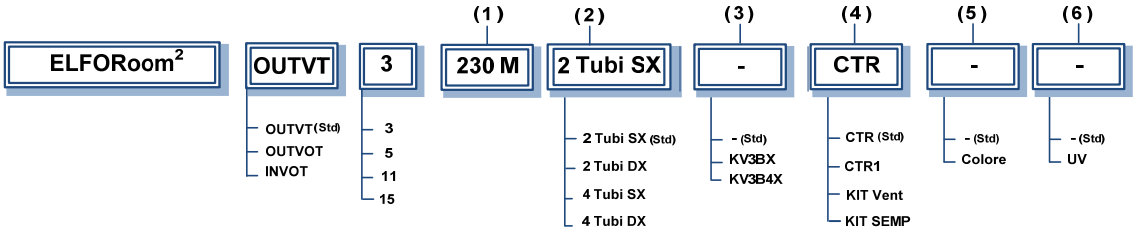
- Setting of the desired temperature;
- Setpoint of the temperature control from 16°C to 28°C;
- manual or automatic selection (MIN - MAX);
- On/Off , Summer / Winter , manual / automatic changeover;
- Economic operating selection;
- Setting of the unit operating parameters;
- Management of humidity probe;
- Humidity display;
- Alarm signalling with specific code for each type of error;

Dimensions: 184X82X27 mm
The thermostat is connected to the unit via a shielded twisted pair at a maximum distance of 15 m.

Accessory separately supplied

## CONFIGURATIONS BY REQUEST

The following ELFORoom² configurations are available only by request and they are managed in stock. It is possible to supply the units with all the options identified in this way in the reported selection string .




**VERSIONS:**
OUTVT - Vertical cased with built-in thermostat (standard)
OUTVOT - Vertical/Horizontal cased without thermostat (for connection with HID wall thermostat)
INVOT - Vertical/horizontal uncased without thermostat (for connection with HID wall thermostat)

**1 –VOLTAGE:**
230 M - Voltage 230/1/50Hz

**2 - HEAT EXCHANGE COIL :**
2 Pipes SX - Coil with 2-pipe water fittings SX (standard)
2 Pipes DX - Coil with 2-pipe water fittings DX
4 Pipes SX - Coil with 4-pipe water fittings SX
4 Pipes DX - Coil with 4-pipe water fittings DX

**3 - VALVE Kit**
KV3BX—3-way valve kit with electrothermal HEAD and balancing for 2 pipes system
KV3B4X—3-way valve kit with electrothermal HEAD and balancing for 4 pipes system

**4 - ELECTRONIC CONTROL**
CTR - electronic control with built-in thermostat (standard for OUTVT versions)
CTR1 - electronic control without built-in thermostat (per versioni OUTVOT e INVOT)
KIT Vent - Fan control KIT with auto-transformer
KIT SEMP - Simplified built-in control KIT

**5 - COLOUR** (SEE NOTE 1)*

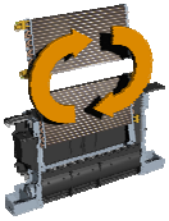
**6 - AIR DISINFECTION DEVICE WITH GERMICIDAL UV LAMP : not required** (standard)

## 4-PIPE HEAT EXCHANGE COIL

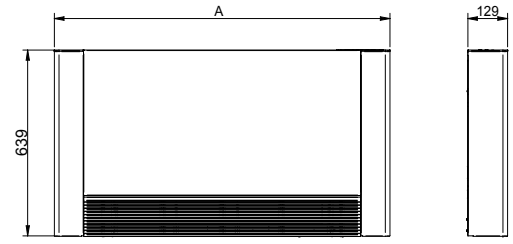
ELFORoom² is available in a version with a 4-pipe heat coil with standard fittings on the left-side but the room terminal can also be also ordered directly with right-side fittings and if necessary it is possible to rotate the coil.

The unit is configured in this way in comparison with the 2-pipe versions and changes some internal parts and sizes:

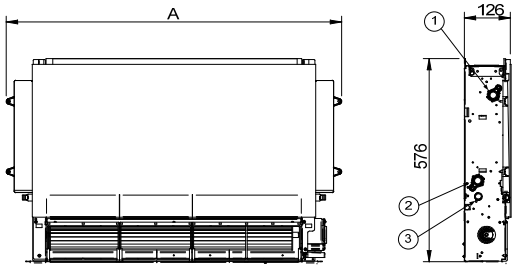
1) Unit higher by 6 cm;
2) Three-way hydraulic group;
3) Built-in electronic control.



## DIMENSIONS




| 4-PIPE CASED ELFORoom² | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| A | mm | 737 | 937 | 1137 | 1337 |
| Depth | mm | 129 | 129 | 129 | 129 |
| Height | mm | 639 | 639 | 639 | 639 |
| Net weight | kg | 17 | 20 | 23 | 26 |



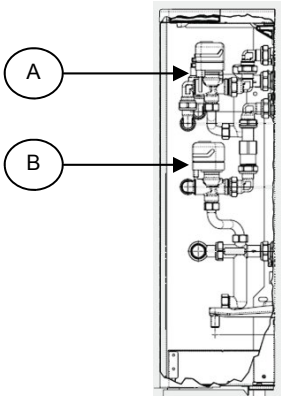

| 4-PIPE UNCASED ELFORoom² | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|
| A | mm | 479 | 679 | 879 | 1079 |
| Depth | mm | 126 | 126 | 126 | 126 |
| Height | mm | 636 | 636 | 636 | 636 |
| Net weight | kg | 9 | 12 | 15 | 18 |

(1) EUROKONUS 3/4 EXCHANGER WATER INLET
(2) EUROKONUS 3/4 EXCHANGER WATER OUTLET
(3) Ø 14 MM CONDENSATE DISCHARGE PIPE

## 3-WAY VALVE HYDRAULIC GROUP

The 3-way hydraulic group changes in comparison to the standard 2-pipe configuration because made up of two electrovalves that manage the heating (1) or cooling (2) modes.

A) Valve in heat
B) Valve in cool




*Note 1*:*
*For the cased versions the panel standard colour is white RAL9010.*
*To modify the colour and the RAL9010 scale the cost of the special colouring will be from time to time estimated and communicated by our Sales Department according to the requested quantities.*

**PERFORMANCES IN HEATING WITH 4-PIPE COIL**

| SIZE | Ta (°C) | EXCHANGER INLET AND OUTLET WATER TEMPERATURE (°C) | | | | |
|---|---|---|---|---|---|---|
| | | 35/30 | 40/35 | 45/40 | 50/45 | 60/55 |
| | | kWt | kWt | kWt | kWt | kWt |
| 3 | 10 | 0.43 | 0.54 | 0.74 | 0.91 | 1.08 |
| | 15 | 0.32 | 0.42 | 0.57 | 0.76 | 0.92 |
| | 18 | 0.25 | 0.36 | 0.46 | 0.66 | 0.83 |
| | 20 | 0.21 | 0.32 | 0.41 | 0.6 | 0.77 |
| | 22 | 0.17 | 0.27 | 0.38 | 0.53 | 0.71 |
| | 25 | 0.11 | 0.21 | 0.32 | 0.41 | 0.61 |
| 5 | 10 | 0.98 | 1.27 | 1.55 | 1.83 | 2.11 |
| | 15 | 0.7 | 1 | 1.28 | 1.56 | 1.83 |
| | 18 | 0.5 | 0.83 | 1.12 | 1.39 | 1.67 |
| | 20 | 0.37 | 0.72 | 1.01 | 1.29 | 1.56 |
| | 22 | 0.3 | 0.6 | 0.9 | 1.18 | 1.45 |
| | 25 | 0.2 | 0.37 | 0.73 | 1.02 | 1.29 |
| 11 | 10 | 1.21 | 1.66 | 2.07 | 2.46 | 2.85 |
| | 15 | 0.7 | 1.26 | 1.68 | 2.08 | 2.47 |
| | 18 | 0.56 | 0.99 | 1.45 | 1.85 | 2.24 |
| | 20 | 0.46 | 0.7 | 1.29 | 1.7 | 2.09 |
| | 22 | 0.37 | 0.61 | 1.13 | 1.55 | 1.94 |
| | 25 | 0.25 | 0.47 | 0.86 | 1.32 | 1.71 |
| 15 | 10 | 1.61 | 2.09 | 2.56 | 3.02 | 3.48 |
| | 15 | 1.11 | 1.64 | 2.11 | 2.57 | 3.03 |
| | 18 | 0.69 | 1.35 | 1.84 | 2.3 | 2.76 |
| | 20 | 0.58 | 1.16 | 1.66 | 2.12 | 2.58 |
| | 22 | 0.47 | 0.95 | 1.47 | 1.94 | 2.4 |
| | 25 | 0.31 | 0.58 | 1.19 | 1.67 | 2.13 |

Ta = inlet air temperature
kWt = supplied heat capacity (kW)
Thermal gradient on water = 5°C

## *CTR - 4– PIPE SYSTEM OUTVT VERTICAL CASED VERSION WITH BUILT-IN THERMOSTAT*

The built-in electronic control makes the room terminal completely autonomous and has all the control modes previously described for the 2-pipe unit. The electronic card which controls the room terminal is different from the 2-pipe versions in that it is equipped with a control probe for the second electrothermal valve (probe H4). The other functions remain the same as the 2-pipe card.

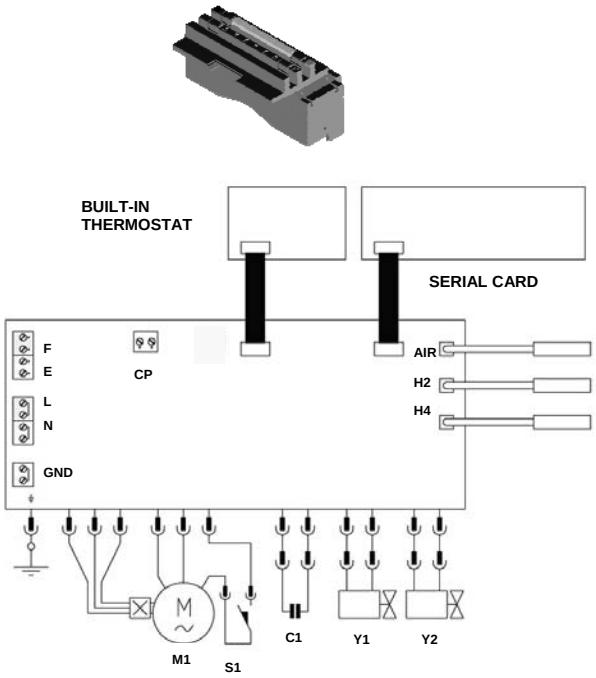
The control card and the autonomous built-in keypad, installed in the cased or uncased versions, make the terminal completely autonomous and have the following connections :

- **M1**: fan motor;
- **S1**: grill microswitch (switches off the fan and opens the grill);
- **C1**: condenser;
- **Y1**: water electrovalve in heating
- **Y2**: water electrovalve in cooling
- **AIR**: ambient air probe
- **H2**: water probe in coil
- **H4**: 4-pipe water probe
- **N-L:** power supply (phase/neutral)
- **GND**: earth

- **CP**: sensor presence input not supplied by CLIVET, if closed reduces or increases the set-point by 2.5°C.

If ELFOControl is not present in the system, the following free contacts are available (max 1A) to request the activation from the generator.

- **F**: starting control for chiller or heat pump;
- **E**: starting control for a boiler.




## *CTR1 - 4-PIPE SYSTEM OUTVOT / INVOT VERTICAL/HORIZONTAL CASED AND UNCASED VERSION WITHOUT THERMOSTAT.*

The built-in electronic control needs a connection with the HID wall thermostat and has all all the control modes previously described for the 2-pipe unit. The electronic card which controls the room terminal is different from the 2-pipe versions in that it is equipped with a control probe for the second electrothermal valve (probe H4). The other functions remain the same as the 2-pipe card.

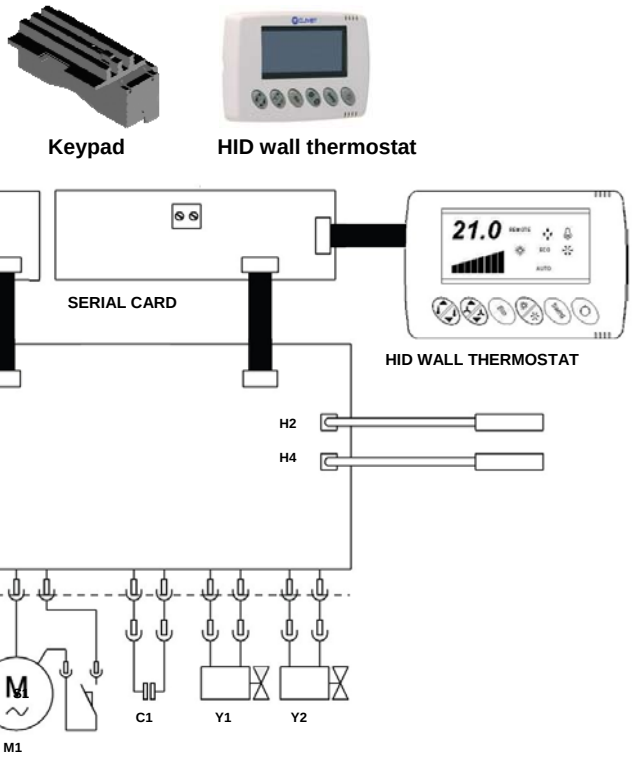
The control card and the built-in keypad, installed in the uncased or cased versions, need the HID wall thermostat, and have the following connections:

- **M1**: fan motor;
- **S1**: grill microswitch (switches off the fan and opens the grill);
- **C1**: condenser;
- **Y1**: water electrovalve in heating
- **Y2**: water electrovalve in cooling
- **H2**: water probe in coil
- **H4**: 4-pipe water probe
- **N-L:** power supply (phase/neutral)
- **GND**: earth

- **CP**: sensor presence input not supplied by CLIVET, if closed reduces or increases the set-point by 2.5°C.

If ELFOControl is not present in the system, the following free contacts are available (max 1A) to request the activation from the generator.

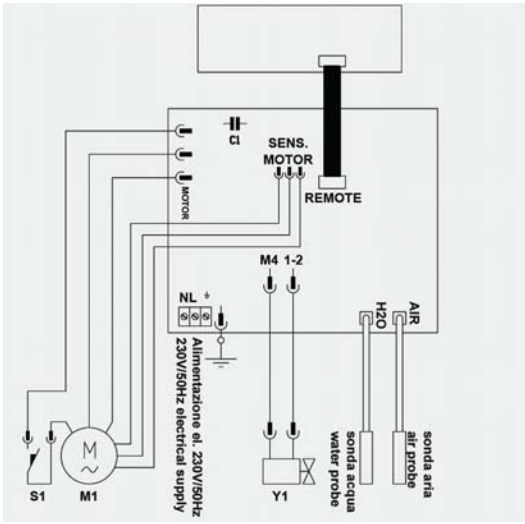
- **F**: starting control for chiller or heat pump;
- **E**: starting control for a boiler.



## KIT SEMP - SIMPLIFIED BUILT-IN ELECTRONIC CONTROL

The simplified built-in electronic control KIT, for 2 pipe system, makes the room terminal completely autonomous, it enables the speed, the switching on and off of the terminal to be selected and furthermore, it has a 230V output to control an electrovalve.

It includes a thermostat which can be set from 5°C to 30°C, a summer/winter selector switch and the winter minimum temperature function and is not equipped with the modbus RS485 serial card. For this reason it is not possible to integrate it into the ELFOControl systems or into mini networks (one single HID thermostat up to 9 units in cascade).

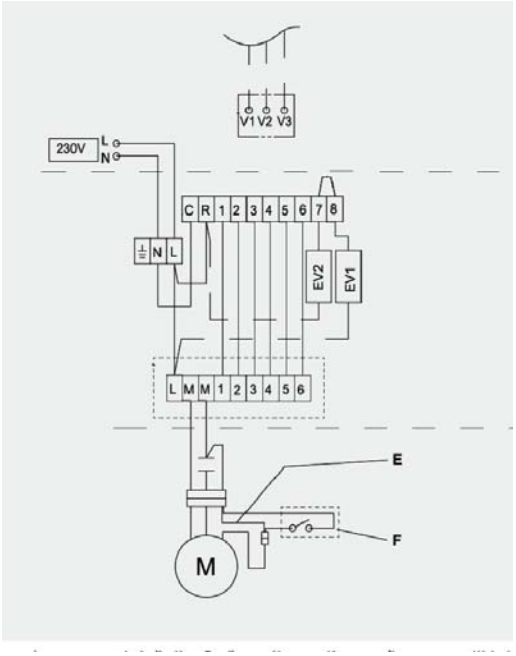



***N - L** = 230V - 50 Hz power supply*
***Y1** = on/off output for 230V electrovalve with max. charge of 1A*
***C1** = condenser*
***M1** = motofan*
***S1** = safety microswitch of the fan grill*
***H2O** = water temperature detection probe*
***AIR** = ambient detection probe*

## FAN KIT - FAN CONTROL WITH WALL THERMOSTAT AND AUTOTRASFORMER

The remote fan control KIT is housed inside the terminal and enables the minimum, medium and maximum fan speed to be managed by an existing electromechanical wall thermostat of any model.

The control has a simplified management and it is not equipped with the modbus RS485 serial card; for this reason it is not possible to integrate it into the ELFOControl systems or in the mini networks (one single HID thermostat up to 9 units in cascade).




| SIZE | V1 | V2 | V3 |
|---|---|---|---|
| ELFORoom² 3 | 2 | 5 | 6 |
| ELFORoom² 5 | 1 | 3 | 5 |
| ELFORoom² 11 | 1 | 2 | 4 |
| ELFORoom² 15 | 1 | 2 | 3 |

*V1 = MAXIMUM SPEED (WHITE WIRE)*
*V2 = MEDIUM SPEED (PINK WIRE)*
*V3 = MINIMUM SPEED (RED WIRE)*

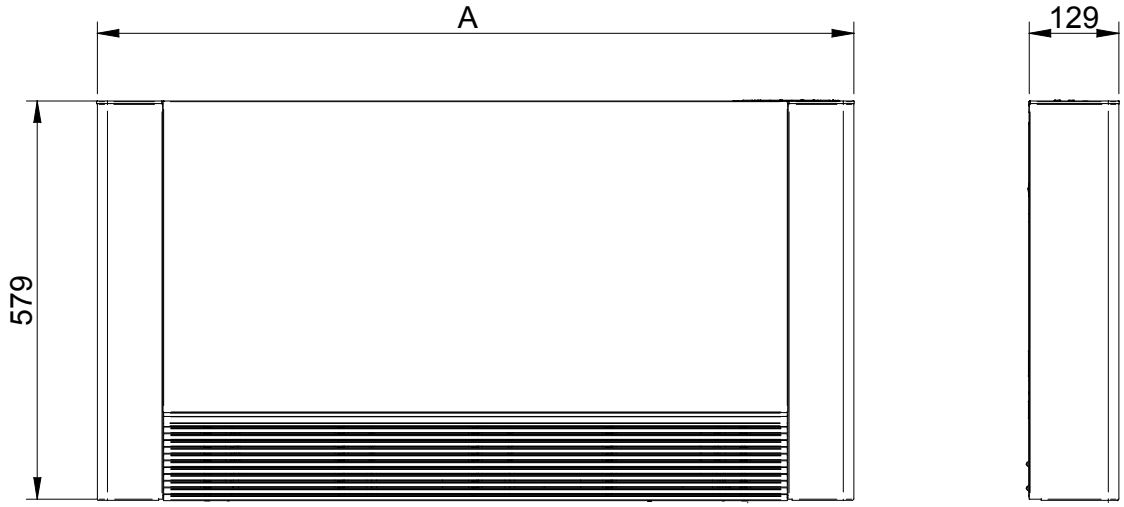
## UV GERMICIDAL LAMP KIT

The UV germicidal lamp KIT is particularly suited for hospital and surgery settings where deep cleaning and air sterilisation is required in addition to the filtration usually carried out by the honeycomb filters installed in all the units.

The KIT is complete with an installation support, a lamp complete with a feeder pre-cabled for the electrical connection and is applicable to all the ELFORoom² range.

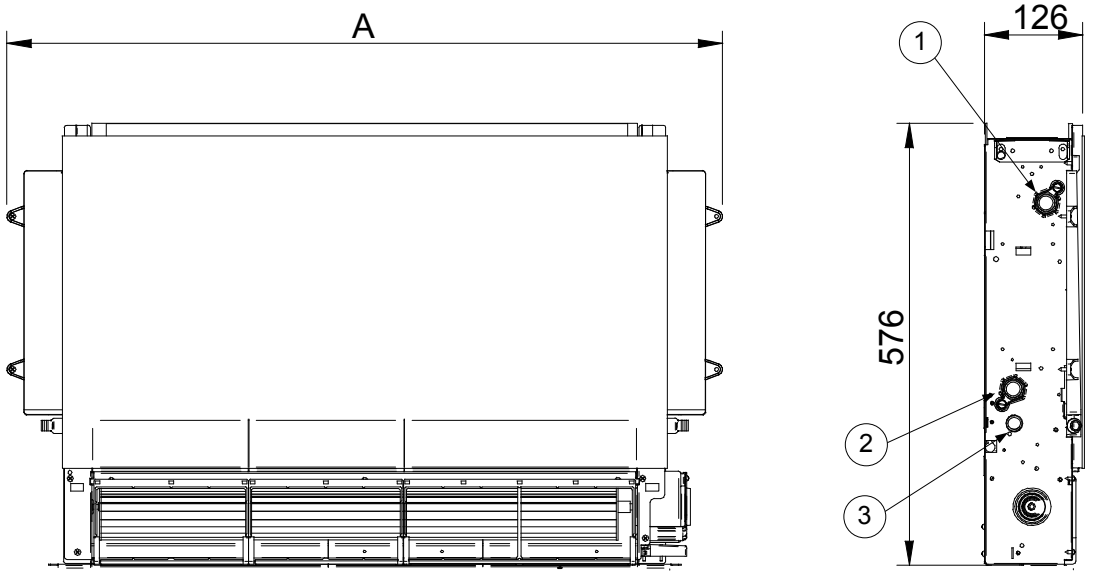
## DIMENSIONS

### Cased version




| SIZE | | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|---|
| A | | mm | 737 | 937 | 1137 | 1337 |
| Depth | | mm | 129 | 129 | 129 | 129 |
| Height | | mm | 579 | 579 | 579 | 579 |
| Net weight | | kg | 17 | 20 | 23 | 26 |

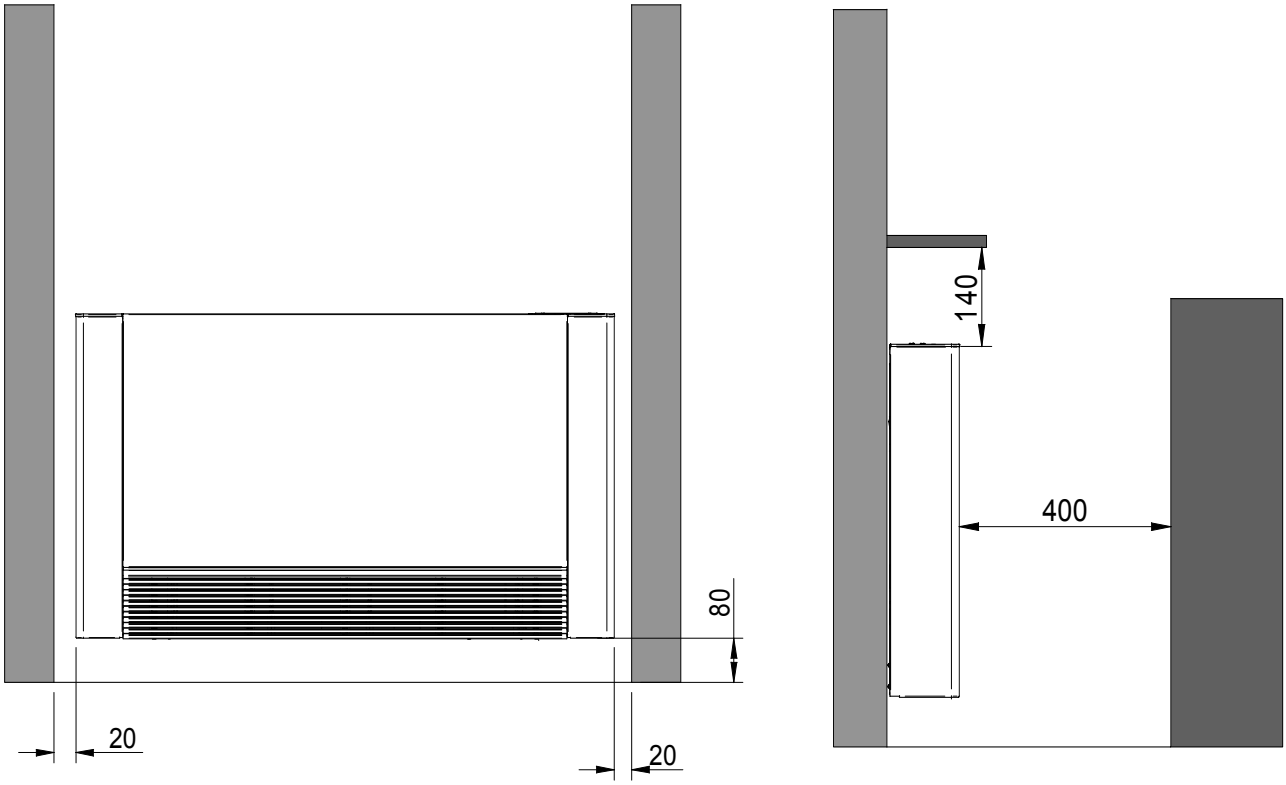
### Uncased version



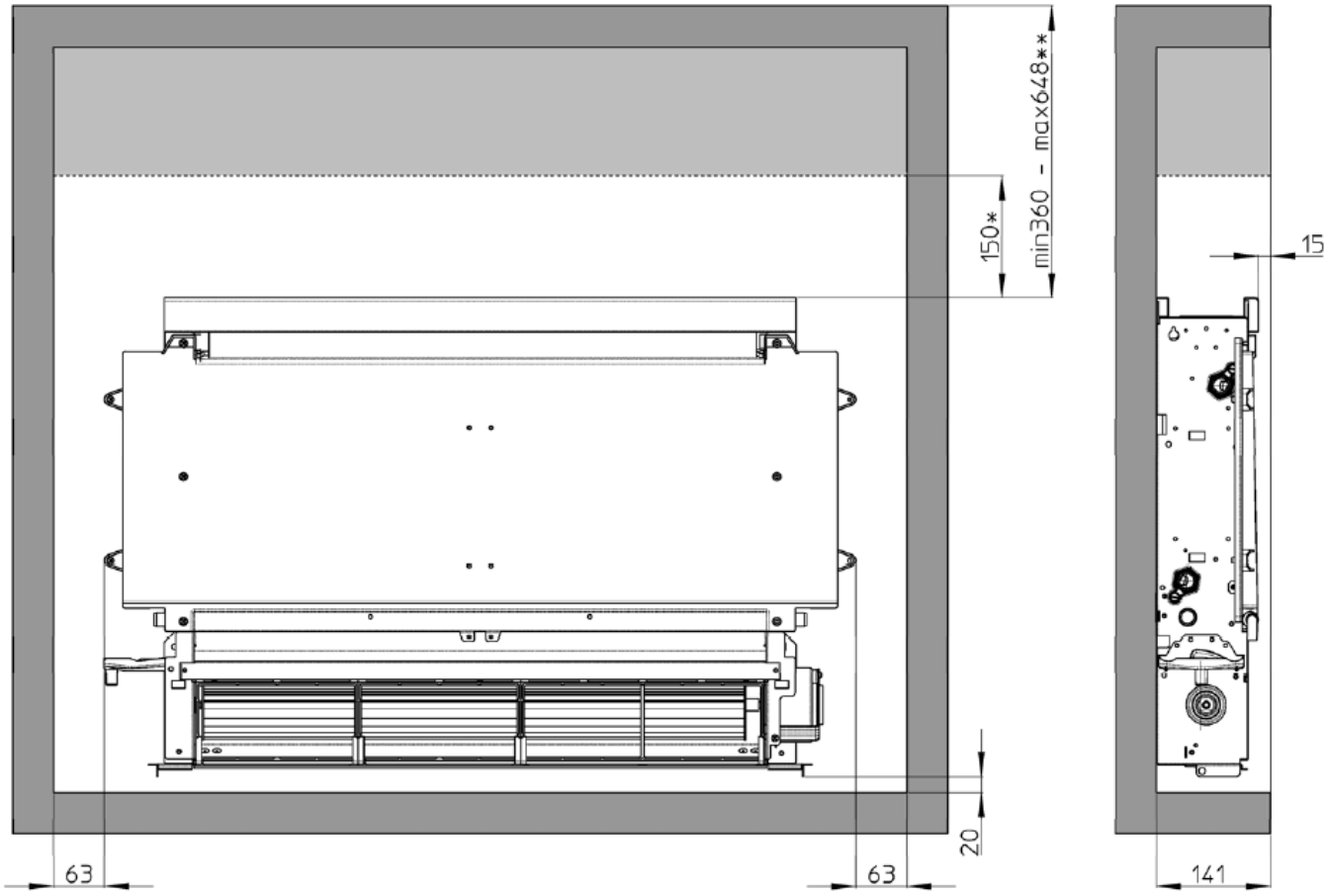

| SIZE | | | 3 | 5 | 11 | 15 |
|---|---|---|---|---|---|---|
| A | | mm | 479 | 679 | 879 | 1079 |
| Depth | | mm | 126 | 126 | 126 | 126 |
| Height | | mm | 576 | 576 | 576 | 576 |
| Net weight | | kg | 9 | 12 | 15 | 18 |

(1) EUROKONUS 3/4 EXCHANGER WATER INLET
(2) EUROKONUS 3/4 EXCHANGER WATER OUTLET
(3) Ø 14 MM CONDENSATE DISCHARGE PIPE

## CASED UNIT CLEARANCES




## UNCASED UNIT CLEARANCES




MIN. DISTANCES TO RESPECT FOR THE CORRECT OPERATING AND THE ROUTINE MAINTENANCE.

# SPECIFICATIONS

## DESCRIPTION OF AUTONOMOUS VERTICAL CASED ELFORoom² SPECIFICATIONS

Supply and installation of fancoil with built-in autonomous control system. It is made of a copper aluminium exchange coil with expanded finned package at high-efficiency, electro-zinc plated stainless steel sheet weight-bearing structure, shock-proof PVC drain pan and sound-proofing rear panel. The tangential fan group in synthetic material with staggered fins (high-level of silence) with a continuous modulating single-phase motor assembled on vibration-proof EPDM supports, lacquered aluminium flap-opening return grill with extractable propylene net air filter with efficiency, rate A, gravimetric method 48%, complete stainless steel sheet hood, lacquered in furnace with RAL9010 epoxy-powder, upper grill with moveable fins and digital control panel for the control setting, complete with temperature room thermostat (winter/summer) and LED to indicate the set functions. 3/4” eurokonus left and right water fittings.

## DESCRIPTION OF VERTICAL/HORIZONTAL CASED ELFORoom² SPECIFICATIONS FOR REMOTE INSTALLATION

Supply and installation of cased fancoil with control system for connection to a wall thermostat, complete with copper aluminium exchange coil with expanded finned package at high-efficiency, electro-zinc plated stainless steel sheet weight-bearing structure, shock-proof PVC drain pan and sound-proofing rear panel. The tangential fan group in synthetic material with staggered fins (high-level of silence) with a continuous modulating single-phase motor assembled on vibration-proof EPDM supports, lacquered aluminium flap-opening return grill with extractable synthetic fine weave net air filter, complete stainless steel sheet hood, lacquered in furnace with RAL9010 epoxy-powder, upper grill with moveable fins and control panel complete with ON/OFF key and dirty filter and alarm signalling LED. 3/4” eurokonus left and right water fittings.

## DESCRIPTION OF VERTICAL/HORIZONTAL UNCASED ELFORoom² SPECIFICATIONS FOR REMOTE INSTALLATION

Supply and installation of uncased fancoil with control system for connection to a wall thermostat, complete with copper aluminium exchange coil with expanded finned package at high-efficiency, electro-zinc plated stainless steel sheet weight-bearing structure, shock-proof PVC drain pan and sound-proofing rear panel. The tangential fan group in synthetic material with staggered fins (high-level of silence) with a continuous modulating single-phase motor assembled on vibration-proof EPDM supports and extractable synthetic fine weave net air filter. 3/4” eurokonus left and right water fittings.

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