

# RECLIMA Unità monoblocco di rinnovo con recupero termodinamico

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## Description

Active ventilation unit with thermodynamic heat recovery, specifically designed for ventilation and air treatment applications in residential, commercial and light tertiary environments.

## Characteristics

The frame and structure are made of self-supporting sheet steel. In exposed versions, the external casing is painted in RAL 9003 finish. Each unit is provided with thermal and acoustic insulation made of polyethylene and EPDM.

The unit allows active heat recovery from exhaust air through its heat pump refrigerant circuit. Thermodynamic heat recovery enables the delivery of thermal energy to the indoor environment in quantities greater than the energy extracted from the exhaust air stream.

The fans installed in the heat recovery unit are brushless type with directly coupled electronic motor (horizontal ceiling-mounted version) or plug-fan type (vertical wall-mounted version). Fan speed control is mainly managed through the air quality sensor installed inside the unit.

The fans are characterized by very high efficiency and low noise levels, even at maximum speed. The fans used in the horizontal ceiling-mounted version are brushless fans with electronic motor and constant airflow control; this feature allows the unit to maintain constant balancing between the two airflows over time, thus maximizing overall unit efficiency.

ePM1 80% filters with low pressure drop. Easily removable in both horizontal and vertical installations without the use of tools.

## Models

- RECLIMA-OV: exposed horizontal version.
- RECLIMA-VV: exposed vertical version.
- RECLIMA-OI: concealed horizontal version.
- RECLIMA-VI: concealed vertical version.

## Control Electronics – Exposed Versions

On-board electrical control panel with microprocessor and dedicated control logic. Main functions include fan speed management, temperature setpoint display and adjustment, timed dirty filter alarm management, and optimized defrost control through a dedicated algorithm for low outdoor temperatures.

The exposed versions include:

- on-board graphical interface;
- Wi-Fi control;
- remote control.

## Control Electronics – Concealed Versions

On-board electrical control panel with microprocessor and dedicated control logic. Main functions include fan speed management, temperature setpoint display and adjustment, timed dirty filter alarm management, and optimized defrost control through a dedicated algorithm for low outdoor temperatures.

The concealed versions include:

- on-board control panel (purchase of the remote panel with Wi-Fi or MODBUS RTU is mandatory for connection up to 10 m from the unit).

Technical Characteristics  
– Exposed Version

(1) B: booster  
V3: maximum speed.  
V2: medium speed.  
V1: low speed.

(2) Fresh air supply and return air intake are directly connected to the room. (3) Heating capacity at nominal airflow rate. Outdoor air temperature -5°C, relative humidity 80%. Room temperature 20°C; relative humidity 50%; nominal airflow rate.

(4) Cooling capacity at nominal airflow rate. Outdoor air temperature 35°C, relative humidity 50%. Room temperature 27°C; relative humidity 60%; nominal airflow rate.

(5) Sound pressure level at nominal airflow rate in free field at a distance of 3 m according to UNI EN 3744.

| Models                                          |                    | RECLIMA-OV                                                                        | RECLIMA-VV                                       |
|-------------------------------------------------|--------------------|-----------------------------------------------------------------------------------|--------------------------------------------------|
| Installation Type                               |                    | Exposed Horizontal Version                                                        | Exposed Vertical Version                         |
| Fan Type                                        |                    | Forward-curved centrifugal fans with brushless motor and constant airflow control | Backward-curved radial fans with brushless motor |
| Nr. Funs                                        | Nr.                | 2                                                                                 |                                                  |
| Airflow Rate (1)                                | m³/h<br>B/V3/V2/V1 | 460 / 400 / 240 / 140                                                             | 380 / 320 / 190 / 130                            |
| Available Static Pressure (2)                   | Pa                 | -                                                                                 | -                                                |
| Recovery Efficiency                             |                    | Termodinamico                                                                     |                                                  |
| Compressor Type                                 |                    | Rotary Inverter DC                                                                |                                                  |
| Refrigerant Type                                |                    | R410a                                                                             |                                                  |
| Filter Type                                     |                    | Flat Filters + Prefilter                                                          |                                                  |
| Filtration Class                                |                    | ePM1 80% + COARSE                                                                 |                                                  |
| Electrical data                                 |                    |                                                                                   |                                                  |
| Maximum Fan Power Consumption                   | kW                 | 0,12                                                                              | 0,1                                              |
| Maximum Compressor Power Consumption            | kW                 | 1,15                                                                              | 0,95                                             |
| Power Supply                                    | V / ph / Hz        | 230 / 1 / 50                                                                      |                                                  |
| Maximum Total Power Consumption                 | kW                 | 1,27                                                                              | 1,05                                             |
| Maximum Total Current Draw                      | A                  | 5,8                                                                               | 4,8                                              |
| Sound Pressure Level (5)                        | dB(A)              | 43                                                                                | 41                                               |
| Heating Performance                             |                    |                                                                                   |                                                  |
| Total Heating Capacity (3)                      | kW                 | 3,62                                                                              | 3,1                                              |
| Net Heating Capacity Excluding Ventilation Load | kW                 | 0,22                                                                              | 0,38                                             |
| Total Power Consumption (3)                     | kW                 | 0,84                                                                              | 0,71                                             |
| Total COP                                       |                    | 4,3                                                                               | 4,4                                              |
| Cooling Performance                             |                    |                                                                                   |                                                  |
| Total Cooling Capacity (4)                      | kW                 | 2,77                                                                              | 2,41                                             |
| Net Cooling Capacity Excluding Ventilation Load | kW                 | 0,71                                                                              | 0,76                                             |

|                                  |    |          |          |
|----------------------------------|----|----------|----------|
| Total Power Consumption<br>(4)   | kW | 0,91     | 0,73     |
| Total EER                        |    | 3,0      | 3,3      |
| Operating Limits                 |    |          |          |
| Heating – Indoor Air<br>Min/Max  | °C | 10 / 25  | 10 / 25  |
| Heating – Outdoor Air<br>Min/Max | °C | -15 / 20 | -15 / 20 |
| Cooling – Indoor Air<br>Min/Max  | °C | 18 / 28  | 18 / 28  |
| Cooling – Outdoor Air<br>Min/Max | °C | 15 / 38  | 15 / 38  |

Technical Characteristics – Concealed Version

(1) B: booster  
V3: maximum speed  
V2: medium speed  
V1: low speed.

(3) Heating capacity at nominal airflow rate.  
Outdoor air temperature -5°C, relative humidity 80%.  
Room temperature 20°C; relative humidity 50%; nominal airflow rate.

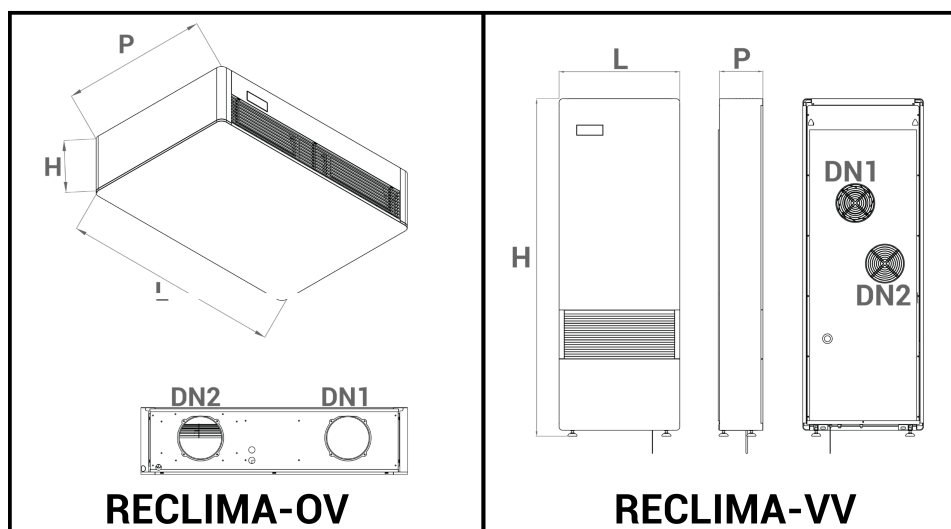
(4) Cooling capacity at nominal airflow rate.  
Outdoor air temperature 35°C, relative humidity 50%.  
Room temperature 27°C; relative humidity 60%; nominal airflow rate.

(5) Sound pressure level at nominal airflow rate in free field at a distance of 3 m according to UNI EN 3744.

| Models                                          |                    | RECLIMA-OI                                                                        | RECLIMA-VI                                       |
|-------------------------------------------------|--------------------|-----------------------------------------------------------------------------------|--------------------------------------------------|
| Installation Type                               |                    | Concealed Horizontal Version                                                      | Concealed Vertical Version                       |
| Fan Type                                        |                    | Forward-curved centrifugal fans with brushless motor and constant airflow control | Backward-curved radial fans with brushless motor |
| Nr. Funs                                        | Nr.                | 2                                                                                 |                                                  |
| Airflow Rate (1)                                | m³/h<br>B/V3/V2/V1 | 460 / 400 / 240 / 140                                                             | 380 / 320 / 190 / 130                            |
| Available Pressure                              | Pa                 | 130                                                                               | 60 / 110                                         |
| Recovery Efficiency                             |                    | Termodinamico                                                                     |                                                  |
| Compressor Type                                 |                    | Rotary inverter DC                                                                |                                                  |
| Refrigerant Type                                |                    | R410a                                                                             |                                                  |
| Filter Type                                     |                    | Flat Filters + Prefilter                                                          |                                                  |
| Filtration Class                                |                    | ePM1 80% + COARSE                                                                 |                                                  |
| Electrical data                                 |                    |                                                                                   |                                                  |
| Maximum Fan Power Consumption                   | kW                 | 0,24                                                                              | 0,15                                             |
| Maximum Compressor Power Consumption            | kW                 | 1,15                                                                              | 0,95                                             |
| Power Supply                                    | V / ph / Hz        | 230 / 1 / 50                                                                      |                                                  |
| Maximum Total Power Consumption                 | kW                 | 1,37                                                                              | 1,15                                             |
| Maximum Total Current Draw                      | A                  | 6.1                                                                               | 5                                                |
| Sound Pressure Level (5)                        | dB(A)              | 45 / 47                                                                           | 43 / 46                                          |
| Heating Performance                             |                    |                                                                                   |                                                  |
| Total Heating Capacity (3)                      | kW                 | 3,62                                                                              | 3,1                                              |
| Net Heating Capacity Excluding Ventilation Load | kW                 | 0,22                                                                              | 0,38                                             |
| Total Power Consumption (3)                     | kW                 | 0,84                                                                              | 0,71                                             |
| Total COP                                       |                    | 4,3                                                                               | 4,4                                              |
| Cooling Performance                             |                    |                                                                                   |                                                  |
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| Net Cooling Capacity Excluding Ventilation Load | kW                 | 0,71                                                                              | 0,76                                             |

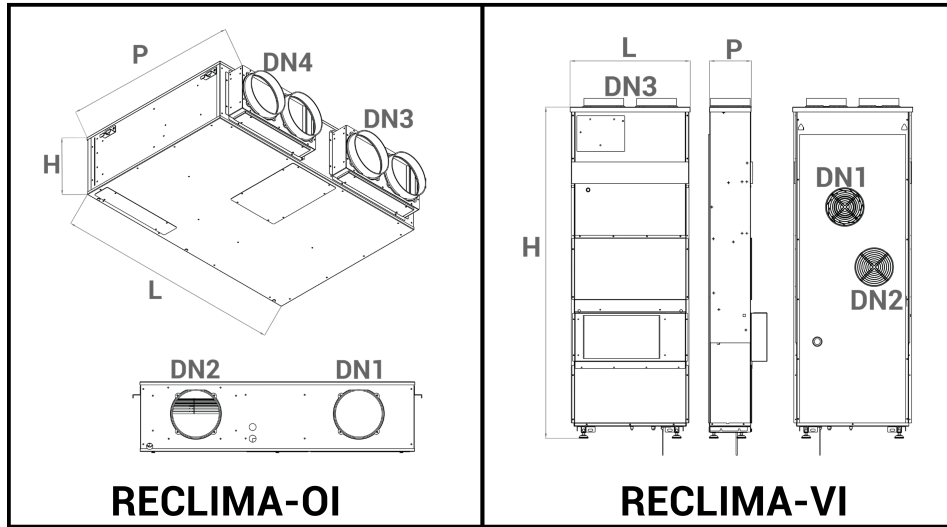
|                               |    |          |          |
|-------------------------------|----|----------|----------|
| Total Power Consumption (4)   | kW | 0,91     | 0,73     |
| Total EER                     |    | 3,0      | 3,3      |
| Operating Limits              |    |          |          |
| Heating – Indoor Air Min/Max  | °C | 10 / 25  | 10 / 25  |
| Heating – Outdoor Air Min/Max | °C | -15 / 20 | -15 / 20 |
| Cooling – Indoor Air Min/Max  | °C | 18 / 28  | 18 / 28  |
| Cooling – Outdoor Air Min/Max | °C | 15 / 38  | 15 / 38  |

## Dimensions – Exposed Versions



| Models     | L    | P   | H    | DN1 | DN2 | DN3 | DN4 | Condensate Drain |
|------------|------|-----|------|-----|-----|-----|-----|------------------|
|            | mm   | mm  | mm   | mm  | mm  | mm  | mm  | mm               |
| RECLIMA-OV | 1010 | 690 | 255  | 162 | 162 | -   | -   | 20               |
| RECLIMA-VV | 500  | 185 | 1398 | 162 | 162 | -   | -   | 20               |

## Dimensions – Concealed Versions



| Models     | L   | P   | H    | DN1 | DN2 | DN3     | DN4     | Condensate Drain |
|------------|-----|-----|------|-----|-----|---------|---------|------------------|
|            | mm  | mm  | mm   | mm  | mm  | mm      | mm      | mm               |
| RECLIMA-OI | 950 | 710 | 245  | 162 | 162 | 2 x 162 | 2 x 162 | 20               |
| RECLIMA-VI | 490 | 175 | 1430 | 162 | 162 | 2 x 162 | -       | 20               |

## Price List – Exposed Version

| Models     | Unit Version | Eur      | Remote Controller                   | Replacement Filters |                 | Germicidal Lamp | KL-RECLIMA – Replacement Germicidal Lamp |
|------------|--------------|----------|-------------------------------------|---------------------|-----------------|-----------------|------------------------------------------|
|            |              |          |                                     | EVFREC - ePM1       | EVFREC - COARSE | UVR             |                                          |
| RECLIMA-OV | Horizontal   | 6.187,75 | comando Wi-Fi e telecomando incluso | 97,76               | 40,96           | 364,62          | 243,08                                   |
| RECLIMA-VV | Vertical     | 5.395,20 | comando Wi-Fi e telecomando incluso | 97,76               | 40,96           | 364,62          | 243,08                                   |

## Price List – Recessed Version

| Models     | Unit Version | Eur      | Remote Controller |           | Replacement Filters |                 | Germicidal Lamp | KL-RECLIMA – Replacement Germicidal Lamp |
|------------|--------------|----------|-------------------|-----------|---------------------|-----------------|-----------------|------------------------------------------|
|            |              |          | EVCNT-WIFI        | EVCNT-BMS | EVFREC - ePM1       | EVFREC - COARSE | UVR             |                                          |
| RECLIMA-OI | Horizontal   | 5.821,55 | 288,40            | 342,16    | 97,76               | 40,96           | 364,62          | 243,08                                   |
| RECLIMA-VI | Vertical     | 5.078,62 | 288,40            | 342,16    | 97,76               | 40,96           | 364,62          | 243,08                                   |