

DATASHEET

rev. 01 - 18/10/2022

Horizontal heat recovery unit with dehumidifier, integration and ventilation unit with cooling circuit, and water coil

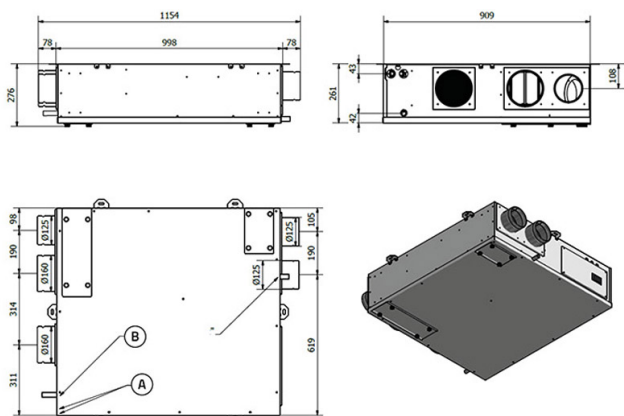
ACC200009 - ACC200010



TECHNICAL SPECIFICATIONS:

- Counter-flow heat recovery unit with >90% efficiency
- Flow rate 150 m³/h with 100 Pa of useful pressure in ventilation mode
- Dehumidification and integration with direct expansion refrigerant circuit
- Flow rate 300 m³/h with 100 Pa of useful pressure in ventilation + recirculation mode
- Flow rate 300 m³/h with 195 Pa of useful pressure in recirculation only mode
- Recovery unit by-pass damper (for free-cooling/free-heating) and integrated recirculation damper
- EC centrifugal fans, backward curved blades, low consumption
- F7 filters (ePM1 70%) with low pressure drop, both for extraction and renewal air
- Self-supporting structure in pre-painted sheet metal; thermal/acoustic insulation in expanded polyethylene thickness 10 mm
- Alphanumeric display on the machine
- Remote LCD display, with integrated temperature and humidity probes. Unit can be operated via remote contacts, remote display or via ModBus protocol on RS485

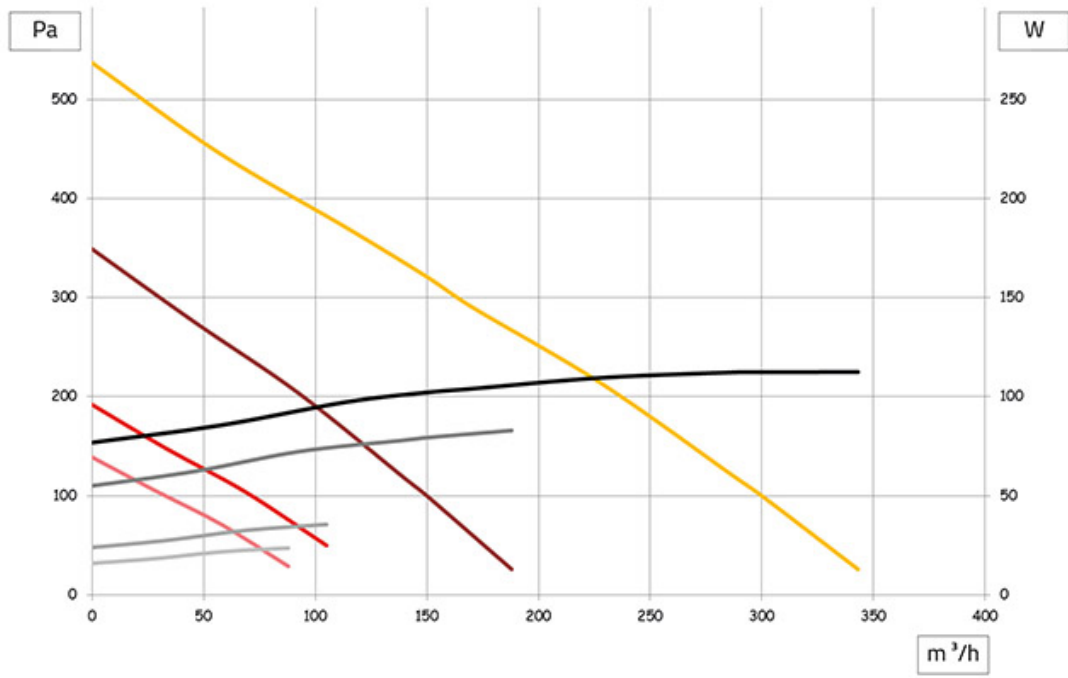
DIMENSIONS MOD.150



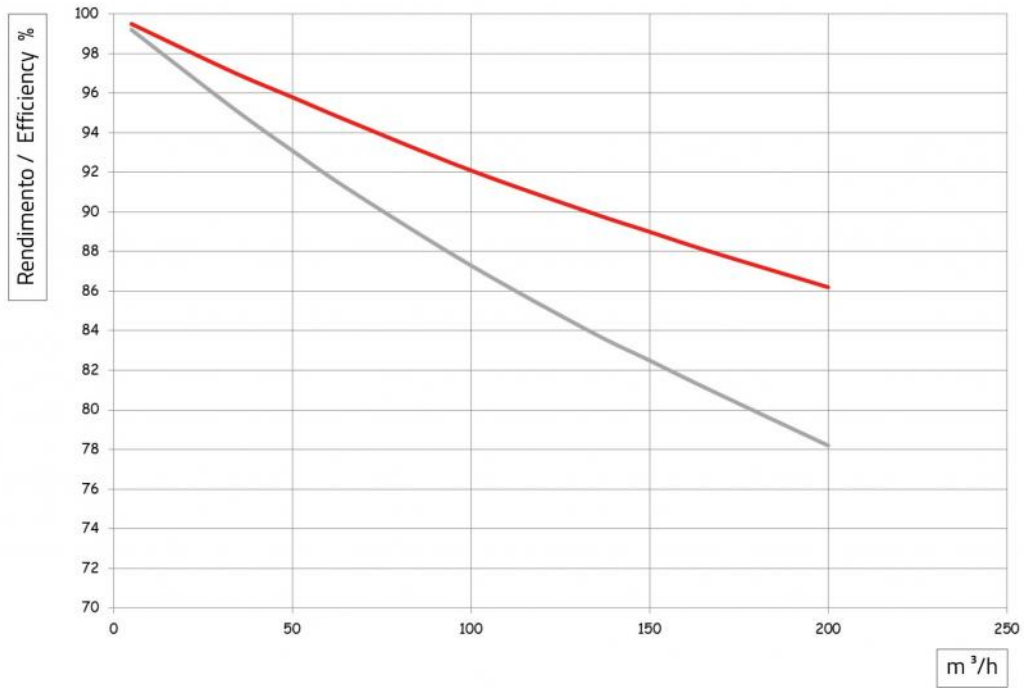
[A] Water coupling 1/2"

[B] Condensate drain 1/2"

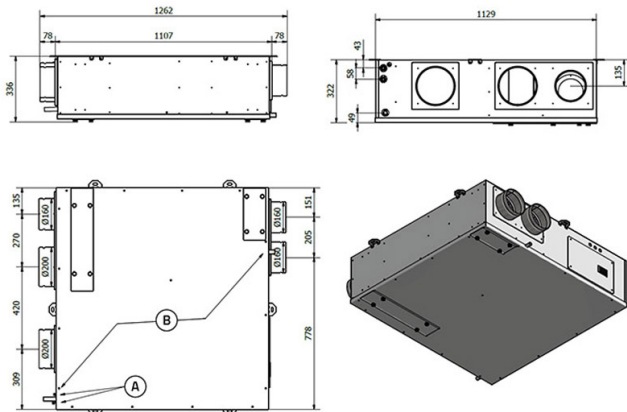
PERFORMANCE MOD. 150



THERMAL EFFICIENCY MOD. 150

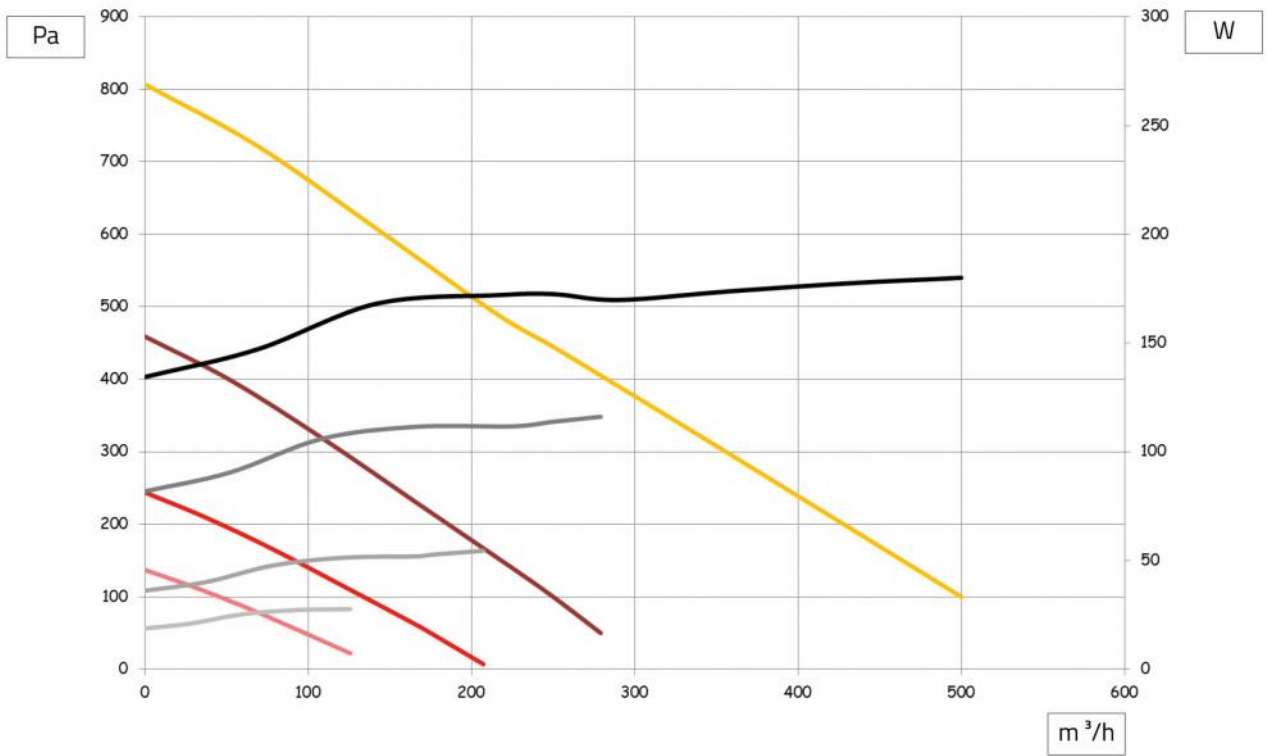


DIMENSIONS MOD.250

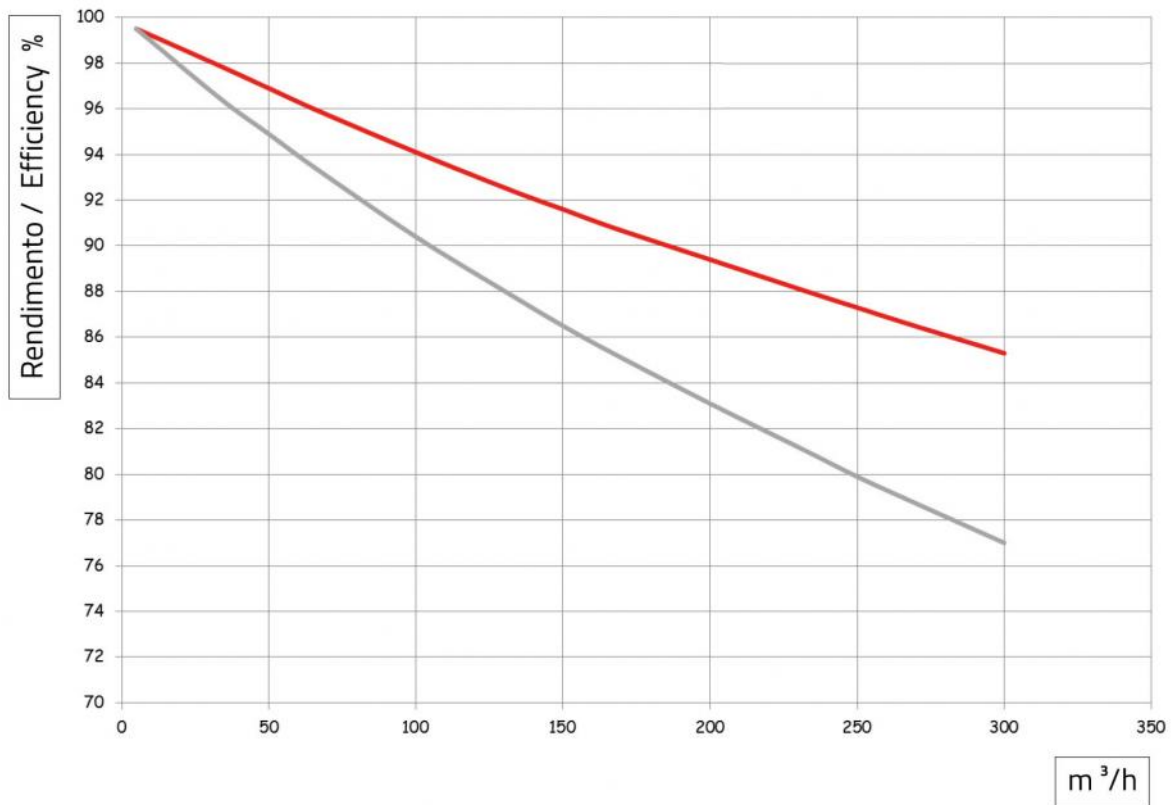


[A] Water coupling 1/2"
[B] Condensate drain 1/2"

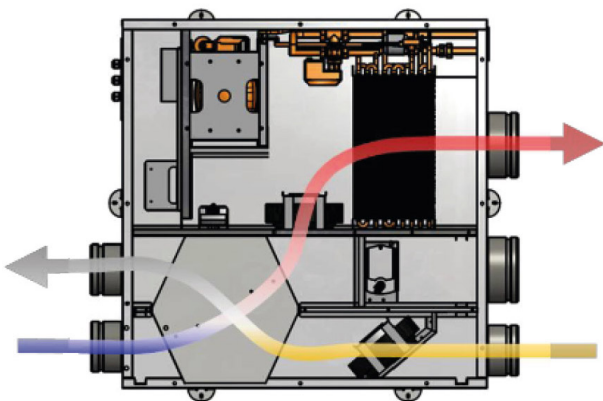
PERFORMANCE MOD. 250



THERMAL EFFICIENCY MOD. 250



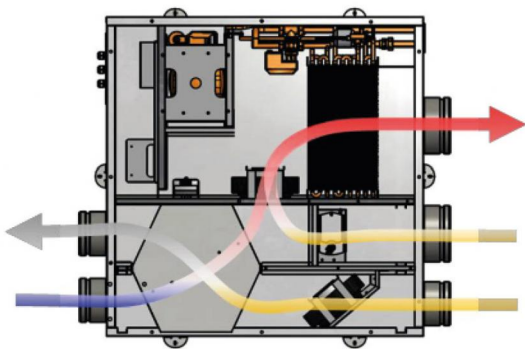
VENTILATION MODE



VENTILATION

| VENTILATION MODE | MODEL 150/300 | MODELLO 250/500 |
|---|---------------|-----------------|
| Intake air flow rate [m ³ /h] | 150 | 250 |
| Recirculated air [m ³ /h] | 0 | |
| Available delivery head [Pa] | 100 | |
| Expulsion air flow rate [m ³ /h] | 150 | 250 |
| Available expulsion head [Pa] | 100 | |
| Fan setting speed [%] | 78 | 70 |
| Electrical power consumption [kW] | 0,079 | 0,12 |
| Current [A] | 0,64 | 0,94 |

DEHUMIDIFICATION/INTEGRATION (ventilation+recirculation)



| DEHUMIDIFICATION/INTEGRATION (ventilation+recirculation) | MODEL 150/300 | MODELLO 250/500 |
|--|---------------|-----------------|
| Intake air flow rate [m ³ /h] | 300 | 500 |
| Recirculated air [m ³ /h] | 150 | 250 |
| Available delivery head [Pa] | 100 | |
| Expulsion air flow rate [m ³ /h] | 150 | 250 |
| Available expulsion head [Pa] | 100 | |
| Fan setting speed [%] | 95/78 | 90/70 |

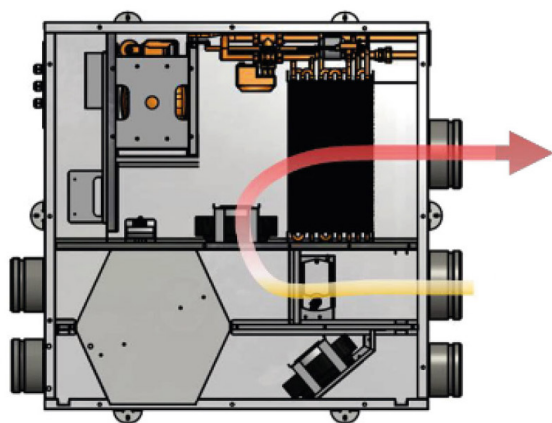
COOLING AND DEHUMIDIFICATION

| COOLING AND DEHUMIDIFICATION | MODEL 150/300 | MODELLO 250/500 |
|-----------------------------------|------------------|-----------------|
| Ambient air | 26°C e 60% U.R. | |
| Outside air | 30°C and 60% U.R | |
| Cooling capacity [kW] | 0,17 + 1,85 | 0,27 + 3,25 |
| Refrigerant (R290) [gr] | 55 | 120 |
| Water temperature [°C] | 15 | |
| Water flow rate [l/h] | 240 | 400 |
| Load loss [kPa] | 5 | 20 |
| Electrical power consumption [kW] | 0,11 + 0,22 | 0,18 + 0,39 |
| Current [A] | 0,92 + 1,3 | 1,5 + 2,0 |

HEATING

| HEATING | MODEL 150/300 | MODELLO 250/500 |
|---|-----------------|-----------------|
| Ambient air | 20°C e 50% U.R. | |
| Outside air | -5°C e 80% U.R | |
| Heating capacity [kW] | 1,13 + 1,39 | 1,85 + 2,33 |
| Water temperature [°C] | 35 | |
| Water flow rate [l/h] | 240 | 400 |
| Load loss [kPa] | 5 | 20 |
| Power consumption (ventilation+compressor) [kW] | 0,11 + 0,22 | 0,18 + 0,39 |
| Current (ventilation+compressor) [A] | 0,92 + 1,3 | 1,5 + 2,0 |

DEHUMIDIFICATION/INTEGRATION (only recirculation)



| DEHUMIDIFICATION/INTEGRATION (only recirculation) | MODEL 150/300 | MODELLO 250/500 |
|---|---------------|-----------------|
| Intake air flow rate [m ³ /h] | 300 | 500 |
| Recirculated air [m ³ /h] | 300 | 500 |
| Available delivery head [Pa] | 195 | 215 |
| Expulsion air flow rate [m ³ /h] | 0 | |
| Available expulsion head [Pa] | 100 | |
| Fan setting speed [%] | 95/0 | 90/0 |

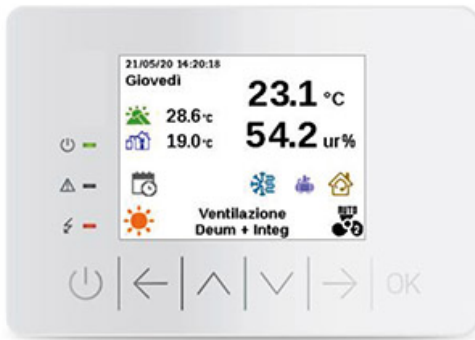
COOLING AND DEHUMIDIFICATION

| COOLING AND DEHUMIDIFICATION | MODEL 150/300 | MODELLO 250/500 |
|---|-----------------|-----------------|
| Ambient air | 26°C e 60% U.R. | |
| Outside air | 30°C e 60% U.R. | |
| Cooling power [kW] (refrigerant circuit only) | 1,71 | 2,77 |
| Refrigerant (R290) [gr] | 55 | 120 |
| Water temperature [°C] | 15 | |
| Water flow rate [l/h] | 240 | 400 |
| Load loss [kPa] | 5 | 20 |
| Condensing capacity [l/h] | 0,96 | 1,54 |

HEATING

| HEATING | MODEL 150/300 | MODELLO 250/500 |
|---|-----------------|-----------------|
| Ambient air | 20°C e 50% U.R. | |
| Outside air | -5°C e 80% U.R. | |
| Heating capacity (cooling circuit only) [kW] | 1,16 | 2,14 |
| Water temperature [°C] | 35 | |
| Water flow rate [l/h] | 240 | 400 |
| Load loss [kPa] | 5 | 20 |
| Power consumption (ventilation+compressor) [kW] | 0,075 + 0,22 | 0,12 + 0,39 |
| Current (ventilation+compressor) [A] | 0,64 + 1,3 | 1,0 + 2,0 |

LCD REMOTE DISPLAY

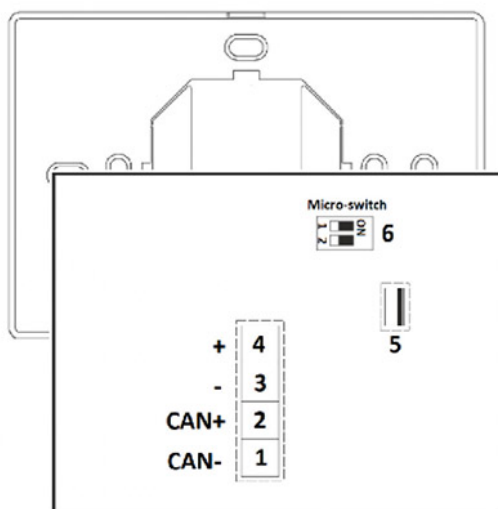


16-Colour LCD screen with 320x240 pixels, with 6-key touch keypad.

The terminal also incorporates a temperature and humidity sensor, the readings from this sensor are transmitted directly via the CAN bus, thus simplifying wiring.

- Power supply: 24 VAC/12... 30 VDC
- Max power supply length: 10m
- T sensor: built-in
- Temperature of use: 10°C to 55°C
- ur sensor: built-in
- Humidity of use: From 5 to 95%
- Warning buzzer: built-in
- Protection class IP30

CONNECTION DIAGRAM DISPLAY



[1] CAN port reference

[2] Reference + CAN port

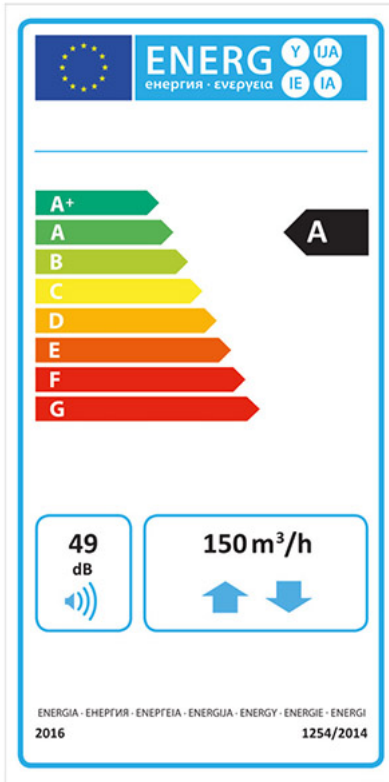
[3] Device power supply (24 VAC/12... 30 VDC); if the device is powered by direct current, connect the negative terminal.

[4] Device power supply (24 VAC/12... 30 VDC); if the device is powered by direct current, connect the positive terminal.

[5] USB port, for the programming of the device.

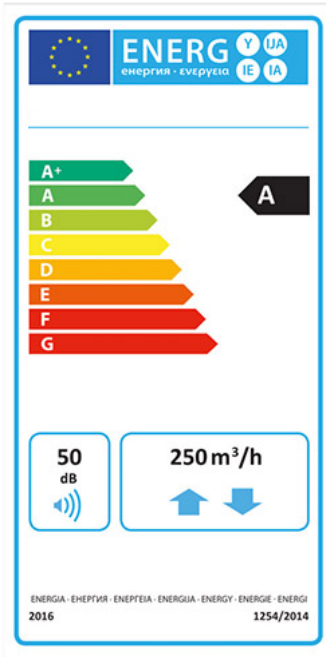
[6] Micro switch for inserting the heating element of termination of the CAN port.

ENERGY RATING MOD. 150



| SPECIFICATIONS | DATA |
|---|--|
| Specific energy consumption in kWh/(m ² .a) for each climate zone and SEC class | Cold climate: -74.8 kWh/m ² .a; Mild climate -36,7 kWh/m ² .a; Warm climate: -12.2 kWh/m ² .a |
| Energy rating | A |
| Product type | Bidirectional UVR |
| Type of drive | Variable speed |
| Heat recovery system | Counter-current heat recovery unit |
| Thermal efficiency of the heat recovery [%] | 86,8 |
| Maximum flow rate [m ³ /h] | 150 |
| Electrical power input at maximum flow rate [W] | 82 |
| Sound power level [db(A)] | 49 |
| Reference flow rate [m ³ /s] | 0,029 |
| Pressure difference [Pa] | 50 |
| Specific power consumption (W/[m ³ /h]) | 0,37 |
| Type of control | Centralised environmental control |
| Control coefficient | 0,85 |
| Leakage rate [%] | internal: 3.7 - external: 5.9 - recirculation: not applicable |
| Mix rate [%] | not applicable |
| Location and description of the visual warning sign for the filters | Alarm displayed on the on-board control unit and on the dedicated remote display, as well as signalling via Modbus and with configurable alarm contact |
| Installation for new air delivery | not applicable |
| Sensitivity of air flow to pressure changes at + 20 Pa and -20 Pa [%] | not applicable |
| Indoor/Outdoor air seal [m3/h] | not applicable |
| Specific annual electricity consumption (AEC) for a dwelling measuring 100m ² (kWh electricity /a) | Cold climate: 914.7 kWh elect./a; Mild climate: 377.7 kWh elect./a; Warm climate: 332.7 kWh elect./a |
| Specific annual heat savings for a dwelling measuring 100m ² (kWh of primary energy /a) | Cold climate: 8776.2 kWh prim./a; Mild climate: 4486.2 kWh prim./a; Warm climate: 2028.6 kWh prim./a |

ENERGY RATING MOD. 250



| SPECIFICATIONS | DATA |
|---|--|
| Specific energy consumption in kWh/(m ² .a) for each climate zone and SEC class | Cold climate: -74.8 kWh/m ² .a; Mild climate -37,2 kWh/m ² .a; Warm climate: -13.1 kWh/m ² .a |
| Energy rating | A |
| Product type | Bidirectional UVR |
| Type of drive | Variable speed |
| Heat recovery system | Counter-current heat recovery unit |
| Thermal efficiency of the heat recovery [%] | 84,7 |
| Maximum flow rate [m ³ /h] | 250 |
| Electrical power input at maximum flow rate [W] | 117 |
| Sound power level [db(A)] | 50 |
| Reference flow rate [m ³ /s] | 0,049 |
| Pressure difference [Pa] | 50 |
| Specific power consumption (W/[m ³ /h]) | 0,32 |
| Type of control | Centralised environmental control |
| Control coefficient | 0,85 |
| Leakage rate [%] | internal: 4.0 - external: 6.1 - recirculation: not applicable |
| Mix rate [%] | not applicable |
| Location and description of the visual warning sign for the filters | Alarm displayed on the on-board control unit and on the dedicated remote display, as well as signalling via Modbus and with configurable alarm contact |
| Installation for new air delivery | not applicable |
| Sensitivity of air flow to pressure changes at + 20 Pa and -20 Pa [%] | not applicable |
| Indoor/Outdoor air seal [m3/h] | not applicable |
| Specific annual electricity consumption (AEC) for a dwelling measuring 100m ² (kWh electricity /a) | Cold climate: 869.6 kWh elect./a; Mild climate: 332.6 kWh elect./a; Warm climate: 287.6 kWh elect./a |
| Specific annual heat savings for a dwelling measuring 100m ² (kWh of primary energy /a) | Cold climate: 8887.4 kWh prim./a; Mild climate: 4543.0 kWh prim./a; Warm climate: 2054.3 kWh prim./a |

ITEMS

| CODE | DESCRIPTION |
|-----------|--|
| ACC200009 | HEAT RECOVERY UNIT W/DEHUMIDIFY UNIT, INTEGRATION AND VENTILATION WUTH REFRIGERANT CIRCUIT AND WATER COIL, REFRIGERATION CIRCUIT INTEGRATION AND VENTILATION AND WATER COIL- 150/300 |
| ACC200010 | HEAT RECOVERY UNIT W/DEHUMIDIFY UNIT, INTEGRATION AND VENTILATION WUTH REFRIGERANT CIRCUIT AND WATER COIL, REFRIGERATION CIRCUIT INTEGRATION AND VENTILATION AND WATER COIL- 250/500 |