**HRA-i PLUS COMPACT AGGREGATE SPECIFICATION TEXT**

**HRA-i PLUS compact aggregate**

Supply and installation of an air-air heat pump for thermal comfort and controlled mechanical ventilation with combined ultra-high performance static and thermodynamic heat recovery with horizontal inverter compressor.

Unit for installation in suspended ceilings with reduced height at 260 mm.

Unit complete with the following functions: heating, cooling, controlled mechanical ventilation, air purification, combined passive + thermodynamic heat recovery, dehumidification, free cooling.

The unit is complete in every component for its operation and is ready for use.

Highly resistant structure with self-supporting frame made of galvanised sheet metal sandwich panels, coated externally with a RAL9003 finish, with polystyrene insulating layer in between and internal filler panels made of high-thickness galvanised sheet metal.

Lower panels easily accessible for maintenance and inspection of the inlet air filter, extraction air filter and recirculation air filters.

Differentiated air flows based on the operating status: air flow dedicated solely to the renewal and extraction function, renewal + recirculation air flow for preserving the thermal and air quality conditions, recirculation only air flow for preserving the internal thermal conditions.

Air outlet for stale air expulsion DN160, external air intake for air renewal DN160, two air intakes for recirculation of the internal air DN160, external air intake for the heat pump’s external heat exchanger DN200, air expulsion outlet DN200, renewal + recirculation air room delivery pipe with rectangular cross-section 740x110 mm.

Electrical panel excluded from the air flow with electronic control board and connecting terminal block.

Automatic variation of the air flow rate depending on the internal conditions measured by the humidity, temperature and air quality sensors with combined measurement of the VOC and CO2 levels.

Continuous modulation of the power supplied by the DC inverter compressor depending on the environmental conditions. Automatic free-cooling function.

Static counter-flow polypropylene heat exchanger guaranteeing extremely high efficiency of the sensible heat recovery.

Cooling circuit made of brazed copper complete with: High-efficiency DC inverter compressor, dehydrator filter, finned batteries, 4-way valve, electronic expansion valve and safety devices.

The unit is equipped with two centrifugal fans for internal air delivery, one centrifugal fan for the intake of outdoor air and for expelling air, and two radial fans for extracting stale air and introducing renewal air, having the following characteristics:

- centrifugal fan unit with impeller with low-noise single DC inverter motor, mounted on EPDM vibration-damping supports, and integrated adjustment device for automatically guaranteeing a constant flow with the varying of the plant’s ducts;

- radial fan unit with aerofoil blades, plug-fan type, with impeller having an extremely silent single DC inverter motor, mounted on EPDM vibration-damping supports.

Class ePM1 80% filters with low head loss.

Remote wall-mounted smart touch panel with ModBus serial port or with Wi-Fi module for managing the unit remotely via the dedicated app.

**HRA-i PLUS 50/08**

Total air flow rate 462 m3/h

Nominal air renewal flow rate 80 m3/h

Available pressure head 100 Pa

Winter efficiency of the passive heat recovery unit 89.6%

Total power delivered in heating mode 3.65 kW (outdoor air –5°C/R.H. 80%, indoor air 20°C/R.H. 50%)

Total power absorbed in heating mode 0.84 kW (outdoor air –5°C/R.H. 80%, indoor air 20°C/R.H. 50%)

Total power delivered in cooling mode 2.57 kW (outdoor air 35°C/R.H. 50%, indoor air 27°C/R.H. 60%)

Total power delivered in cooling mode 0.72 kW (outdoor air 35°C/R.H. 50%, indoor air 27°C/R.H. 60%)

Free-field sound pressure 39.5 dB(A) at a distance of 3 metres as per the UNI EN3744 standard

Dimensions: 960 x 1000 x 260 mm

Weight: 75 kg

**HRA-i PLUS 50/15**

Total air flow rate 462 m3/h

Nominal air renewal flow rate 145 m3/h

Available pressure head 100 Pa

Winter efficiency of the passive heat recovery unit 86.7%

Total power delivered in heating mode 3.71 kW (outdoor air –5°C/R.H. 80%, indoor air 20°C/R.H. 50%)

Total power absorbed in heating mode 0.90 kW (outdoor air –5°C/R.H. 80%, indoor air 20°C/R.H. 50%)

Total power delivered in cooling mode 2.82 kW (outdoor air 35°C/R.H. 50%, indoor air 27°C/R.H. 60%)

Total power delivered in cooling mode 0.75 kW (outdoor air 35°C/R.H. 50%, indoor air 27°C/R.H. 60%)

Free-field sound pressure 39.9 dB(A) at a distance of 3 metres as per the UNI EN3744 standard

Dimensions: 960 x 1000 x 260 mm

Weight: 75 kg

**Accessories**:

* ECA031II - SMART TOUCH wall-mounted control panel with thermostat and room probe with integrated Wi-Fi module. BLACK finish.
* ECB031II - SMART TOUCH wall-mounted control panel with thermostat and room probe with integrated Wi-Fi module. WHITE finish.
* ECA032II - SMART TOUCH wall-mounted control panel with thermostat and room probe with ModBUS serial port. BLACK finish.
* ECB032II - SMART TOUCH wall-mounted control panel with thermostat and room probe with ModBUS serial port. WHITE finish.
* GR1118II - Isolated plenum for delivery/recovery, horizontal or vertical, with DN 160 mm opening and grille mount. Dimensions: 450x175x175 mm.
* GR1116II - Isolated plenum with flange for connecting the unit and two round openings DN 160 mm. Dimensions: 850x175x175 mm.
* GR1122II - Isolated plenum with flange for connecting the unit and pre-cut elements for the DN75 or DN90 corrugated pipes stubs 2+12+2. Dimensions: 850x175x175 mm.
* GR1123II - Isolated plenum with flange for connecting the unit and four round openings DN 125 mm. Dimensions: 850x175x175 mm.
* GR1124II - Isolated plenum with single outdoor air intake DN200.
* GR1119II - Aluminium delivery grille with double row of orientable fins, white version. Dimensions: 450x225 mm.
* GR1120II - Intake grille with removable aluminium filter, white version. Dimensions: 450x225 mm.
* Activated carbon filters.
* Kit with 2 spare ePM1 80% filters.