

## HRA-I PLUS

Autonomous air conditioning unit with recovery  
passive heat recovery efficiency > 90% active heat recovery  
heating, cooling and air exchange with compressor and BLDC fans



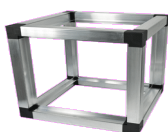
- **ALL IN ONE**-The HRA units are units capable of autonomously integrating the heating, cooling and ventilation requirements of the rooms served. The unit is complete with every component for its operation and ready for use.
- **RECOVERY SECTION**-High efficiency polypropylene exchanger > 90%.
- **VENTILATION**-Brushless plug-fun fans with electronic motor and modulating control. Very high efficiency and low noise levels.  
Compliant with Erp2018 regulations;
- **ACTIVE THERMODYNAMIC RECOVERY**- The inverter refrigeration unit allows the recovery of energy from the expelled air, through a dedicated circuit. The thermodynamic recovery allows to supply higher energy to the environment than that subtracted from the ventilation with very high efficiencies.
- **FILTRATION**- 80% ePM1 filter with low pressure drop, easily removable.
- **STRUCTURE**-Self-supporting structure made of double sandwich panel, with painted finish on the outside and galvanized on the inside of the unit. High density internal insulation with excellent thermal and acoustic characteristics.
- **ADJUSTMENT**-Electric panel on board the unit with microprocessor and dedicated regulation. Fan management, machine internal temperature display, timed dirty filter management, heat pump management according to heat and refrigerator needs, air flow management both in ventilation and with active heat pump. Remote graphic interface and WIFI connection through APP;



## GENERAL FEATURES

### STRUCTURE

High strength structure with frame self-supporting in sheet metal  
Choice of materials with high Characteristics of thermal and acoustic insulation



### FANS

The unit is equipped with centrifugal fans with low electronic motor constant consumption and flow rate



### RECOVERER

High efficiency countercurrent cross flow polypropylene heat exchanger.



### BLDC COMPRESSOR

High efficiency rotary compressor with BLDC motor and control Driver;



### FILTRATION

Upstream of the recuperator they are present  
two filters with PM1 filtration class 80%;  
Removal can take place without the aid of any tools



### MICROPROCESSOR

System management entrusted to electronics advanced but easy to manage. Remote control with WIFI card and management with APP for the main functions of the unit;

## TECHNICAL FEATURES

The HRA-I PLUS is an active recovery unit for space heating, cooling and air renewal.

The unit consists of a monobloc including every component for correct operation: fans, refrigeration circuit with high efficiency compressors, air filtration sections and high efficiency counter-current heat recovery unit.

HRA can work as a passive heat recovery unit and as a thermodynamic active heat recovery unit and is particularly suitable for residential premises, it is supplied plug-and-play for a quick and simplified installation.

<b>ALL IN ONE:</b>	Complete unit capable of exchanging the air and integrating the cooling thermal demands of the served environments. The unit is complete with every component for its operation and ready for use.
<b>RECOVERY SECTION:</b>	High efficiency countercurrent cross flow polypropylene exchanger. Low freezing temperatures and operation down to -25 ° C. Very high exchange efficiency
<b>VENTILATION:</b>	Forward curved centrifugal fans with directly brushless motor directly coupled with constant flow function;
<b>ACTIVE THERMODYNAMIC RECOVERY:</b>	The unit allows the passive and active recovery of the energy of the expelled air. Thanks to its refrigeration circuit, the thermodynamic recovery allows to supply energy to the environment in a higher quantity than that subtracted from ventilation.
<b>FILTRATION:</b>	Upstream of the recuperator there is an ePM1 filter on the supply air and an ePM1 filter on the exhaust air at low pressure drops.
<b>STRUCTURE:</b>	Self-supporting frame in sheet metal Sandwich panels in galvanized sheet, painted externally, with interposed polystyrene insulation, internal infill panels in thick galvanized sheet.
<b>REFRIGERANT CIRCUIT:</b>	Made of brazed copper complete with: High efficiency BLDC compressor, filter drier, finned coils, electronic expansion valve and safety devices.
<b>ADJUSTMENT:</b>	Electrical panel on board the unit with microprocessor and dedicated regulation. Fan management, visualization and temperature setpoint, timed dirty filter management. Defrost algorithm management optimized for operation with low external temperatures; Panel with graphic interface and WIFI with connection up to 15 m from the unit;

## UNIT CONFIGURATION

	-1-	-2-	-3-	-4-
HRA-I PLUS	50/15	R.	H.	Y

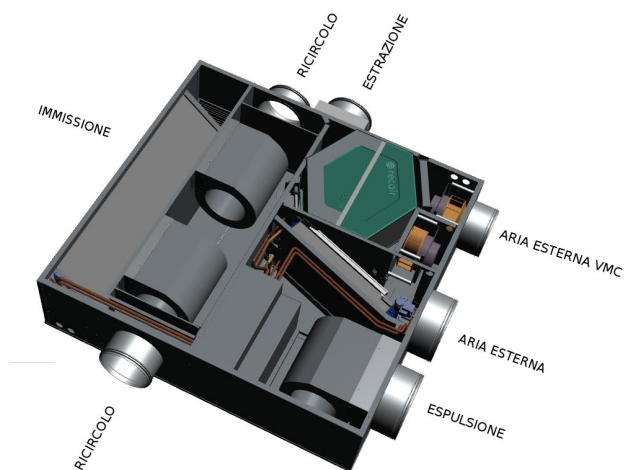
**(1) Defines the flow of fresh air**  
300/450 m model<sup>3</sup>/ h with recirculation

**3) Type of installation**  
H: Horizontal

**2) Configuration**  
A: With integrated recirculation management

**4) Electronic type**  
Y: Electronics Y version (INVERTER unit)

### CONFIGURATION HRA-I PLUS 50/15



## COMPOSITION OF THE UNIT

<b>HRA-I PLUS 50/15 H</b>	
<b>REFRIGERANT CIRCUIT</b>	
BLDC high efficiency horizontal rotary compressor	●
Copper tube coils with aluminum fins	●
4-way reversing valve	●
Electronic expansion valve	●
Filter drier	●
Battery and compressor discharge probes	●
<b>AEREAULIC CIRCUIT</b>	
High efficiency polypropylene heat recovery unit	●
Forward blade fans with EC motor	●
PM1 filter 80%	●
Coarse recirculation filter	●
Radial fans with EC motor for VMC	●
<b>ELECTRICAL CIRCUIT</b>	
Compressor driver	●
MCU control board	●
Air quality sensor	●
Humidity sensor	●

● = Installed as standard

/ = not available

## TECHNICAL DATA

Size	50/15	
Type of fans		Centrifugal with forward blades and radial with backward blades with Brushless motor
N ° Fans		4
Nominal air flow rate for fresh air	m <sup>3</sup> / h	0/150
Nominal recirculation air flow	m <sup>3</sup> / h	300/450
Total air flow rate	m <sup>3</sup> / h	462
Useful pressure	Pa	100
Compressor type		Rotary BLDC
Refrigerant gas		R410A
Passive heat recovery		Polypropylene in countercurrent
Minimum winter recovery efficiency 1	%	86.7
Filters		2x PM1 80% + 1 Coarse
Max power absorbed fans	kW	0.38
Max Power absorbed compressors	kW	1.4
Supply voltage	V / ph / Hz	220/1/50
Max Total absorbed power	kW	1.78
Max total absorbed current	TO	9.8
IP protection degree	IP	20
Sound pressure 2	dB (A)	41

(1) External air -5 / 80% RH - Internal air 20 ° / 50% RH - Nominal flow rate

(2) Sound pressure at 3m in free field according to 3744

### TECHNICAL DATA WINTER OPERATION

Size	50/15	
<b>ACTIVE RECOVERY</b>		
Total heat output 1	kW	3.71
Useful thermal power excluding ventilation	kW	2.50
Passive Recovery 1	kW	1.06
Thermal potential 1	kW	2.65
Absorbed potential	kW	0.88
COP		4.2

(1) External air -5 ° / 80% RH - Internal air 20 ° / 50% RH - Nominal flow rate

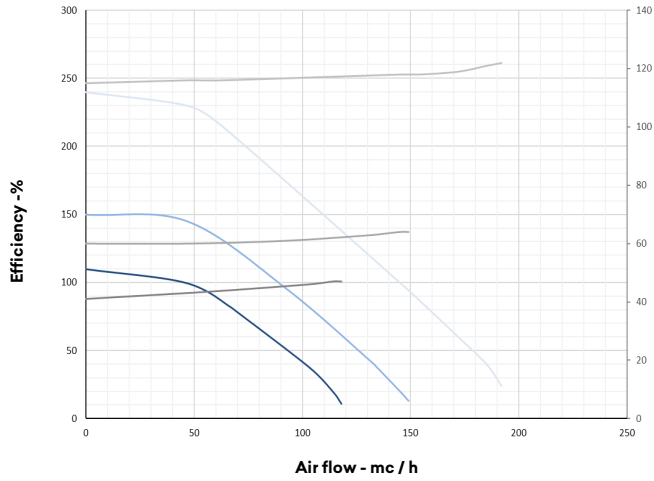
### TECHNICAL DATA SUMMER OPERATION

Size	50/15	
Total cooling capacity 1	kW	2.61
Useful cooling capacity excluding ventilation	kW	1.68
Passive Recovery 1	kW	0.31
Cooling capacity 1	kW	2.3
Absorbed potential	kW	0.75
EER		3.48

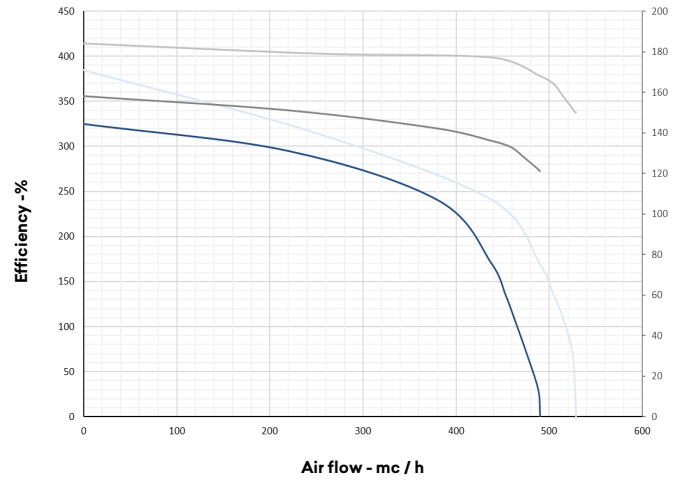
(1) External air 35 ° / 50% RH - Internal air 27 ° / 60% RH - Nominal flow rate

## CURVES HRA-I PLUS 50/15

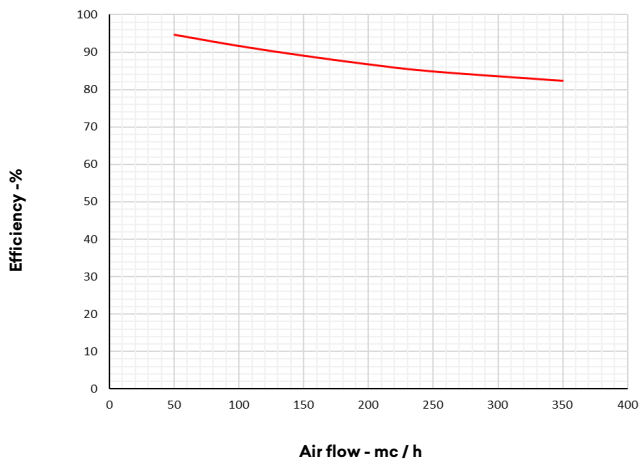
VMC AERAULIC PERFORMANCE



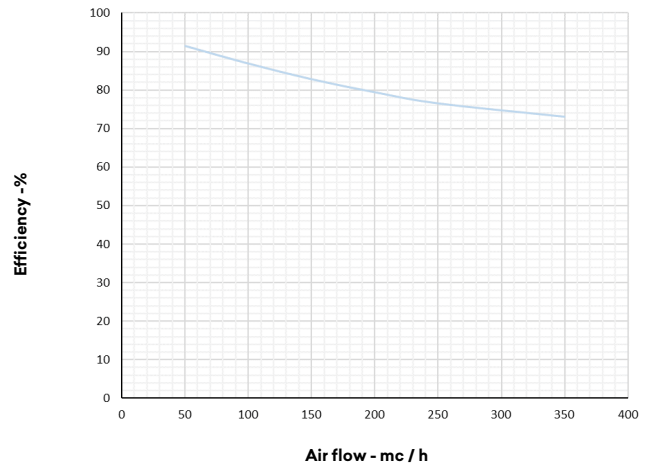
AERAULIC PERFORMANCE INTEGRATION



WINTER RECOVERY EFFICIENCY (1)

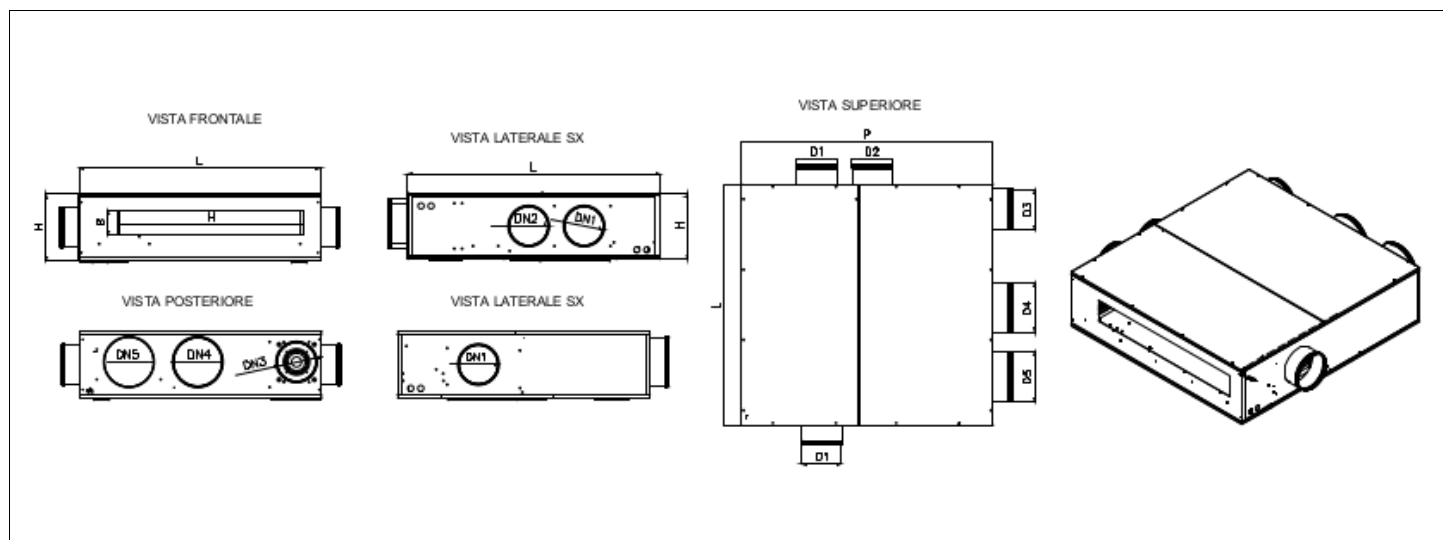


SUMMER RECOVERY EFFICIENCY (2)



- 1) - External air temperature -5 ° relative humidity 80%. ambient temperature 20 ° C; relative humidity 50%,
- 2) - External air temperature 35 °, relative humidity 50%. ambient temperature 27 ° C; relative humidity

## DIMENSIONAL DATA AND OPERATING SPACES VERSIONS 50/25




Template	HRA-I PLUS	50/15
Width L	mm	960
Depth P	mm	1000
Height H.	mm	260
Entry bxh	Mm	700x140
DN 1 - 2 - 3 - 3	mm	160
DN 4 - 5	mm	200
Condensation	OR	16
Weight	kg	75



## TENDER SPECIFICATIONS

### HRA-I PLUS 50/15 unit

	<p>Ventilation and dehumidification unit with static and thermodynamic heat recovery and high efficiency recirculation and air conditioning functions, compact dimensions for ceiling or floor installation;</p> <p>Specific unit for ventilation in single residential buildings and collective apartments with low energy requirements in combination with systems requiring ventilation and air treatment in the rooms.</p> <p><b><u>CONSTRUCTION FEATURES</u></b></p> <p>Side structure in double panels in galvanized internally and externally with internal insulation thickness 10 mm;</p> <p>Compact dimensions for simplified installation with easily accessible bottom panel for maintenance and inspection.</p> <p>Circular inlets with sealing gasket for connection to the air ducts</p> <p>Quick filter inspection, without tools and double drain for condensate evacuation;</p> <p>Recirculation function with dedicated fans for managing the recirculation flow rate in the phases in which a high ventilation flow rate is not required;</p> <p>Refrigeration circuit with high efficiency bldc rotary compressor, horizontal heat exchange coils, lamination device and safety devices.</p> <p>Electric panel, excluded from the air flow with management cards and control terminal blocks</p> <p>backward curved radial type centrifugal fans for VMC with EC motors with electronic speed control and low consumption static heat exchanger in polypropylene with counter-current flows for very high sensible heat recovery efficiencies with integrated bypass, low loss Pm1 class filters external air loading and stale and coarse air on the recirculation;</p> <p>Electrical panel on board the unit with microprocessor and dedicated regulation. Fan management, temperature display, timed dirty filter management, air quality sensor management with flow modulation, humidity sensor management for dehumidification model;</p> <p>Control panel with WIFI and APP for wall installation with box for 503 built-in support or wall mounting, length 15 m.</p>
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## OPERATING LIMITS

Size		14/20/30 HY	50/15 HY
WARM UP		Internal Air	Outdoor Air
	°C	10/25	-20 / 20
COOLING		Internal Air	Outdoor Air
	°C	18/28	20/38

## UNIT ORDER CODES

Template	Description	Code
HRA-I PLUS 50/15	Ventilation unit with heat recovery with recirculation and inverter-integrated air source heat pump with backup electric heater.	<b>VRVA50004II</b>

## ACCESSORIES ORDERING CODES

### Remote control panel

Template	Everyone
Description	SMART TOUCH wall-mounted control panel with thermostat and probe for temperature, relative humidity and ambient air quality. Black color / White color.
Code	ECA031II / ECB031II

### Remote control panel

Template	Everyone
Description	SMART TOUCH wall-mounted control panel with thermostat and temperature, relative humidity and air quality probe in the room with integrated WiFi module, InnovAPP. Black color / White color
Code	ECA032II / ECB032II

### Active filters

Template	Everyone
Description	Activated carbon filter
Code	GR1131II

### Replacement filters

Template	Everyone
Description	Kit of 2 ePM1 80% replacement filters
Code	GR1223II

### Recirculation filters

Template	Everyone
Description	Kit 2 ISO Coarse filters for recirculation
Code	GR1132II

### Recirculation filters

Template	Everyone
Description	Kit 2 + 2 recirculation and renewal filters ePM1 80%
Code	GR1133II

**Delivery grille**

Template	Everyone
Description	Delivery grille in aluminum with double row of adjustable fins, white color. Dimensions: 450x225 mm
Code	GR1119II

**Suction grille**

Template	Everyone
Description	Suction grille with extractable aluminum filter, white color. Dimensions 450x 225 mm
Code	GR1120II

**Universal isolated plenum box**

Template	Everyone
Description	Insulated plenum box with unit connection flange and two circular inlets DN 160mm. Dimensions 850x175x175mm
Code	GR1116II

**Universal isolated plenum box**

Template	Everyone
Description	Insulated plenum for supply / return with 2 DN 160mm inlets, 1 DN160 plug and grid connection. Dimensions: 450x175x175 mm
Code	GR1118II

**Universal isolated plenum box**

Template	Everyone
Description	Insulated plenum box with unit connection flange and with pre-cut for outlets DN75 or DN90 2 + 12 + 2 corrugated pipes. Dimensions: 850x175x175 mm
Code	GR1122II

**Universal isolated plenum box**

Template	Everyone
Description	Insulated plenum box with flange and unit connection and four circular inlets DN125 mm. Dimensions: 850x175x175 mm
Code	GR1123II

**Universal isolated plenum box**

Template	Everyone
Description	Insulated plenum with single external air intake DN200
Code	GR1124II

## **CE marking**

The CE marking (present on each machine) certifies compliance with the following Community standards:

- Low Voltage Directive 2014/35 / EC
- Electromagnetic Compatibility Directive 2014/30 / EC



The data contained in this technical catalog can be changed by the manufacturer without prior notice.