

HRA-1 PLUS



The compact aggregate with heat pump for heating, cooling and air renewal in nZEB homes



CONSTANT-VOLUME FANS

Constant-volume centrifugal fan that automatically adapts to the head loss of the channels.



DC INVERTER COMPRESSOR



7-IN-1

A single unit for heating, cooling, controlled mechanical ventilation, air purification, combined passive + thermodynamic heat recovery, dehumidification, free cooling.

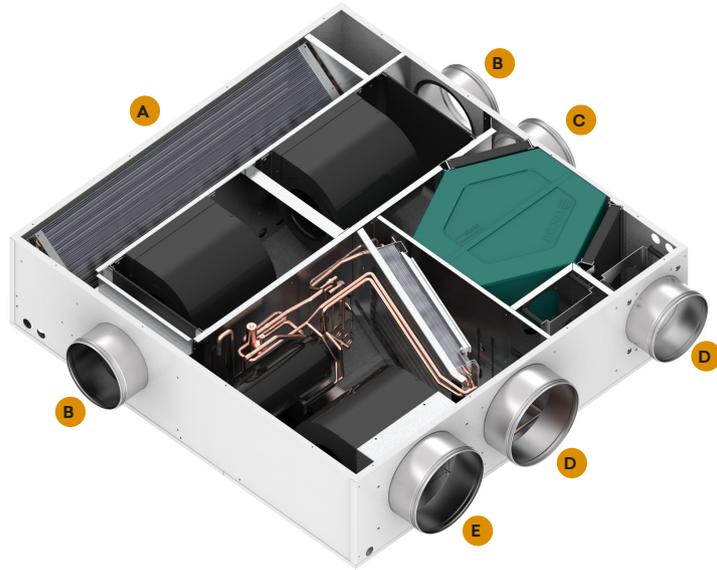


AIR QUALITY

Through the CO₂, VOC and humidity sensors, the unit automatically adjusts its operation.

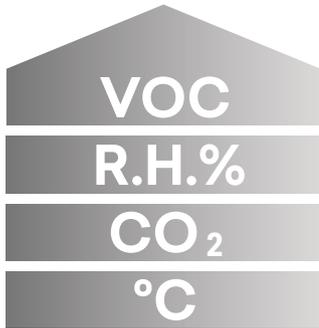
SEVEN FUNCTIONS IN A SINGLE UNIT

1. Controlled mechanical ventilation
2. Air purification
3. Combined passive + active thermodynamic heat recovery
4. Heating
5. Cooling
6. Dehumidification
7. Free Cooling



- A. Total air delivery
- B. Indoor air recirculation
- C. Stale air extraction
- D. Outdoor air intake
- E. Total air expulsion

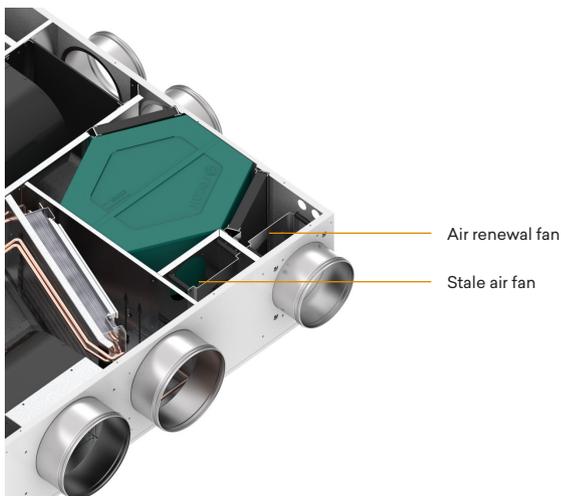
INTEGRATED AIR QUALITY, HUMIDITY AND TEMPERATURE SENSORS



**SIMPLE AND ADVANCED CONTROL UNITS
INTEGRATED WI-FI**

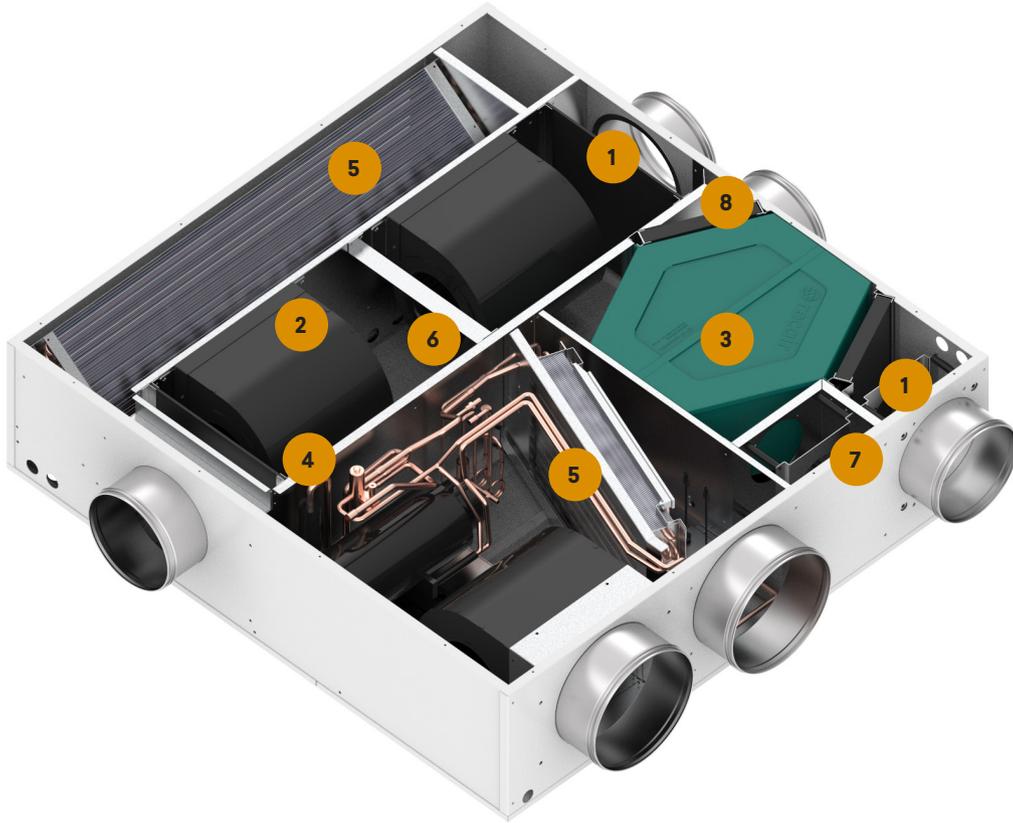


**RENEWAL AND EXTRACTION FLOW RATE CALIBRATION
GUARANTEED BY THE DEDICATED PLUG FANS**



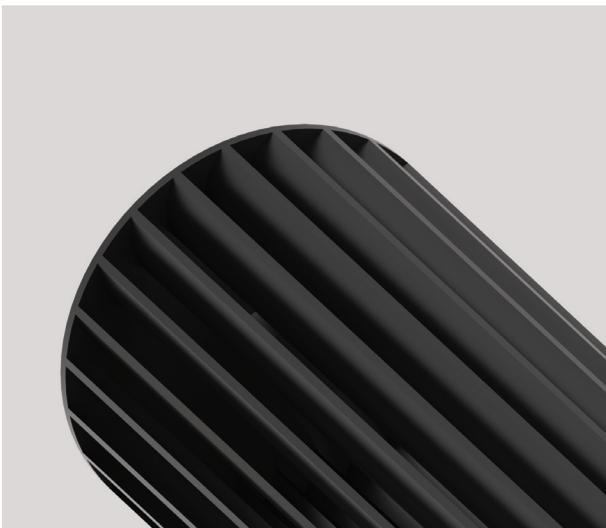
EXTREMELY SLIM





1. **AIR FILTERS** - Filters for incoming, outgoing and recirculation air. Filtration class PM1 80%. The filters can be removed without the aid of tools.
2. **FANS** - The unit is equipped with constant-volume centrifugal fans with DC motor and radial fans with DC motor with aerofoil blades for air renewal.
3. **PASSIVE HEAT EXCHANGER** - Polypropylene static enthalpy counterflow heat exchanger with extremely high efficiency.
4. **INVERTER COMPRESSOR** - Hermetic compressor and R410a refrigerant, inserted in an acoustically isolated technical room separated from the air flows.
5. **INTERNAL AND EXTERNAL HEAT EXCHANGER** - The internal heat exchanger transfers thermal or cooling energy to the incoming air. The external unit recovers the energy of the air being expelled.
6. **ELECTRICAL PANEL** - Electrical panel excluded from the air flow, with electronic control and adjustment board.
7. **RADIAL FANS** - The unit is equipped with PLUG FANS with dedicated DC inverter motors for extracting stale air and introducing the renewal air.
8. **AIR QUALITY (VOC + CO₂), HUMIDITY AND TEMPERATURE SENSORS** - The renewal volume varies automatically in relation to the internal conditions in order to guarantee optimal comfort and energy saving.

CONSTANT-VOLUME DC INVERTER FANS



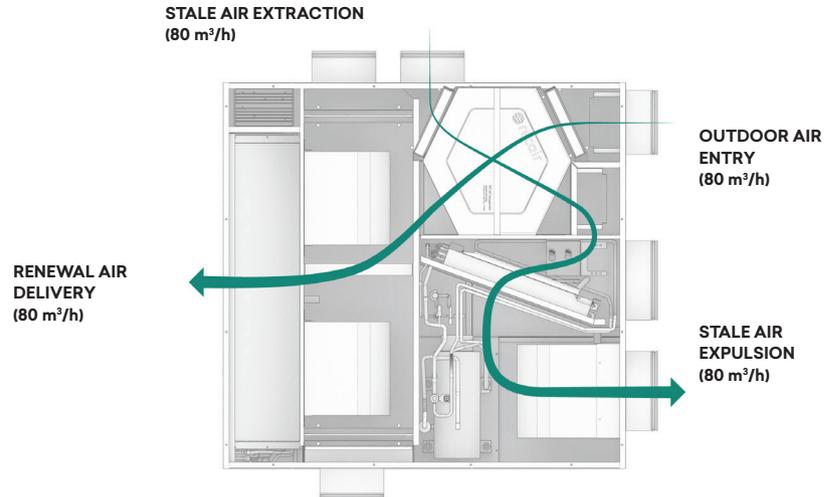
HORIZONTAL DC INVERTER COMPRESSOR





AIR RENEWAL FUNCTION ONLY

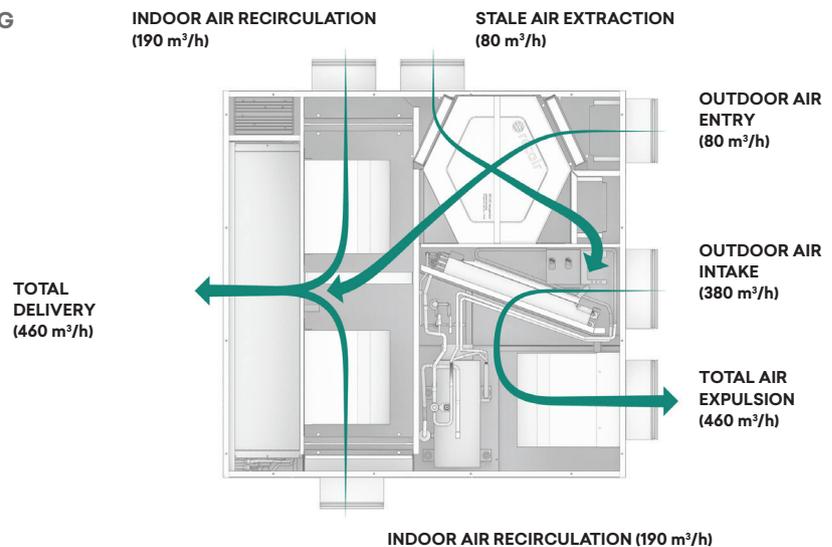
Both in heating and in cooling mode, when the desired room temperature has been reached, HRA-i PLUS remains active for guaranteeing the correct air quality by recovering the heat of the extracted air in an extremely efficient way, thanks to the double recovery stage, static + thermodynamic, and introducing filtered outdoor air.



AIR RENEWAL AND HEATING OR COOLING FUNCTION ONLY

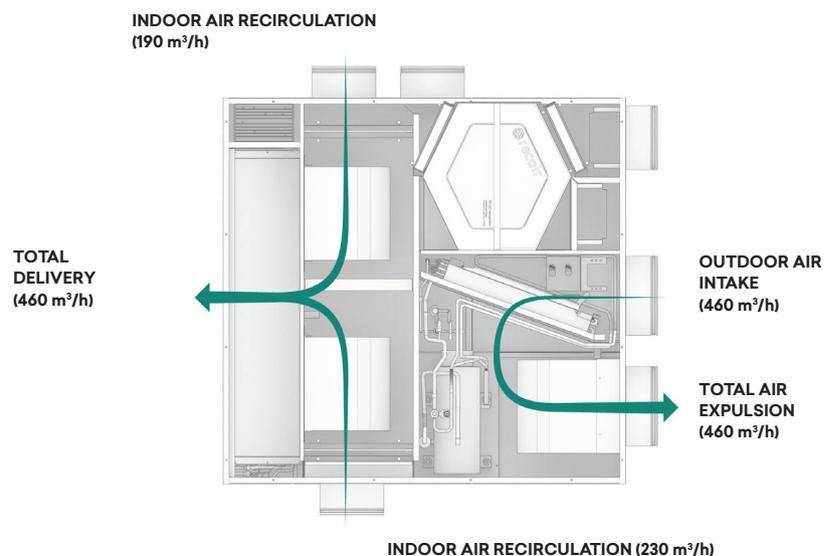
When the desired room temperature has not been reached, the heat pump generates the necessary power thanks to the inverter compressor.

In order for it to be adequately distributed, the generated heat uses the renewal air volume together with the recirculation air volume, which are adequately filtered and brought to the right temperature.



HEATING OR COOLING FUNCTION ONLY

HRA-i PLUS constantly monitors the room temperature, humidity and air quality (VOC and CO₂). It activates automatically for satisfying all the comfort parameters in the most convenient way energy-wise. For example, if the room air quality is satisfied, the unit only works with the recirculation air, reducing consumption.

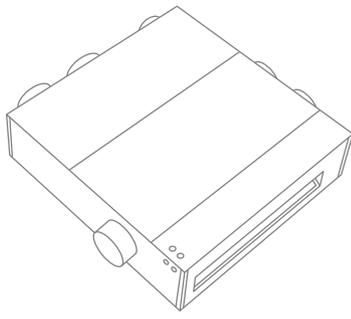


HRV

HRA-I PLUS

Ventilation unit with heat recovery with recirculation and air-source integrated inverter heat pump.

- m³/h
 Maximum flow rate 462 m³/h
- H
 Horizontal built-in installation
- DC Inverter Compressor



Width 960 mm	Height 260 mm	Depth 1000 mm

COMN09O03II	HRA-I PLUS 50/08	Nominal air renewal flow rate: 80 m ³ /h Nominal recirculation air flow rate: 382 m ³ /h Total heat capacity: 3.65 kW Total cooling capacity: 2.57 kW
COMN12O03II	HRA-I PLUS 50/15	Nominal air renewal flow rate: 145 m ³ /h Nominal air renewal flow rate: 317 m ³ /h Total heat capacity: 3.71 kW Total cooling capacity: 2.82 kW

Note: to ensure correct operation, the ECA031 or ECB031 or ECA032 or ECB032 wall-mounted control panels must be used.



	ACCESSORY DESCRIPTION	COMBINABLE PRODUCTS	CODE
WALL-MOUNTED CONTROL PANELS			
CONTROL PANELS			
	Smart-touch electronic wall-mounted control panel with thermostat, room probe and integrated Wi-Fi module (supplied with 8 m connecting cable), BLACK version	All	ECA031II
	Smart-touch electronic wall-mounted control panel with thermostat, room probe and integrated Wi-Fi module (supplied with 8 m connecting cable), WHITE version	All	ECB031II
	Smart-touch electronic wall-mounted control panel with thermostat, room probe and integrated Modbus port (supplied with 8 m connecting cable), BLACK version	All	ECA032II
	Smart touch electronic wall-mounted control panel with thermostat and room probe with integrated Modbus port (supplied with 8 m connection cable) WHITE version	All	ECB032II
SPECIFIC AERAULIC COMPONENTS			
MANIFOLDS			
	Isolated plenum for delivery/recovery, horizontal or vertical, with DN 160 mm opening and grille mount. Dimensions: 450x175x175 mm	All	GR1118II
	Isolated plenum with flange for connecting the unit and two round openings DN 160 mm. Dimensions: 850x175x175 mm	All	GR1116II
	Isolated plenum with flange for connecting the unit and pre-cut elements for the departure of the DN75 or DN90 corrugated pipes 2+12+2. Dimensions: 850x175x175 mm	All	GR1122II
	Isolated plenum with flange for connecting the unit and four round openings DN 125 mm. Dimensions: 850x175x175 mm	All	GR1123II
	Isolated plenum with single outdoor air intake DN200	All	GR1124II
ROOM GRILLE			
	Aluminium delivery grille with double row of orientable fins, white version. Dimensions: 450x225 mm	All	GR1119II
	Intake grille with removable aluminium filter, white version. Dimensions: 450x225 mm	All	GR1120II
FILTERS			
	HRA-i PLUS 50/08 and 50/15 activated carbon filters	All	GR1131II
	Kit with 2 recirculation filters HRA-i PLUS 50/08 and 50/15	All	GR1132II
	Kit with 2+2 ePM1 80% recirculation and renewal filters	All	GR1133II
SERVICES			
INITIAL START-UP			
	Initial start-up not included (NET AMOUNT)	All	
	Configuration and initial start-up of the MVHR unit with BUTLER Web server (NET AMOUNT)	All	

Note: for the rest of the aeraulic accessories, refer to the base price list, MVHR aeraulic distribution.

TECHNICAL DATA

TECHNICAL DATA		HRA-I PLUS	
Size		50/08	50/15
AIR FLOW RATE			
Nominal fresh air flow rate	m ³ /h	80	145
Nominal recirculation air flow rate	m ³ /h	382	317
Total nominal air flow rate	m ³ /h	462	462
Static pressure available	Pa	100	100
HEATING PERFORMANCE (AT -5°C; AT 20°C)			
Recovery efficiency (1)	%	89.6	86.7
Total heat capacity(1)	kW	3.65	3.71
Space heating capacity without fresh air load (1)	kW	2.96	2.47
Static recovery heat output (1)	kW	0.61	1.06
Thermodynamic recovery heat capacity (1)	kW	3.04	2.65
Total input power (1)	kW	0.84	0.90
Total COP (1)		4.34	4.12
COOLING PERFORMANCE (AT 35°C; AT 27°C)			
Recovery efficiency (2)	%	85.9	79.3
Dehumidification capacity (2)	l/h	1.0	1.1
Total cooling capacity (2)	kW	2.57	2.71
Space cooling capacity without fresh air load (2)	kW	1.95	1.68
Static recovery cooling power (2)	kW	0.17	0.31
Thermodynamic recovery cooling capacity (2)	kW	2.40	2.41
Total input power (2)	kW	0.72	0.75
Total EER (2)		3.56	3.48
GENERAL CHARACTERISTICS			
Fan		Constant-volume centrifugal / Radial with aerofoil blades	
Number of fans	No.	4	
Static heat recovery device		Counter-flow plates - polypropylene	
Summer by-pass		yes	
Compressor		DC rotary inverter	
Filters		Flat filters - 2 x ePM1 80%	
Sound pressure (3)	dB(A)	39.5	39.9
REFRIGERATOR FITTINGS			
Refrigerant		R410a	



ELECTRICAL DATA

Max fans power input	kW	0.31	0.38
Max power input compressors	kW	1.4	1.4
Max total input power	kW	1.71	1.78
Max current absorbed	A	9.5	9.8
Power Supply	V/ph/Hz	230/1/50	

DIMENSIONS

Width	mm	960	960
Height	mm	260	260
Depth	mm	1000	1000
Air delivery dimensions	mm	740x110	740x110
Indoor air ricirculation fittings	mm	DN 160x2	DN 160x2
Stale and fresh air fittings	mm	DN 160x2	DN 160x2
Outdooe air fittings	mm	DN 200x2	DN 200x2
Condensate discharge outlet	mm	16	16
Weight	kg	75	75

OPERATING LIMITS

Heating - Indoor air min/max	°C	10/25
Heating - Outdoor air min/max	°C	-20/20
Cooling - Indoor air min/max	°C	18/28
Cooling - Outdoor air min/max	°C	15/38

(1) Outdoor air temperature -5°C, 80% relative humidity. Room temperature 20°C; relative humidity 50%, nominal air flow

(2) Outdoor air temperature 35°, 50% relative humidity. Room temperature 27°C; relative humidity 60%, nominal air flow

(3) Free-field sound pressure at a distance of 3 m as per UNI EN3744