

2.0 RINNOVA

Fresh air unit heat pump and thermodynamic energy recovery
DC Inverter compressor and BLDC fans



- **ALL IN ONE** - The units are units capable of autonomously integrating the ventilation requests of the rooms served.
The unit is complete with every component for its operation and ready for use.
- **VENTILATION** - Brushless plug-fan fans in the vertical versions, centrifugal fans with constant flow in the horizontal versions with electronic motor and modulating control. Very high efficiency and low noise levels.
- **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 rooms than that subtracted from the ventilation with very high efficiencies.
- **FILTRATION** - 80% ePM1 filter with low pressure drop, easily removable.
- **STRUCTURE ADJUSTMENT**- Electrical panel on board the unit with microprocessor and dedicated regulation. Fan management, temperature display, timed dirty filter management, heat pump management according to thermal and refrigerator needs, air flow management with integrated air quality probe. 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



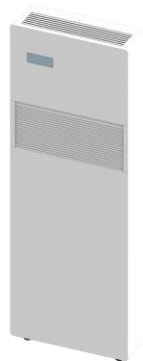
FANS

The unit is equipped with EC fans with electronic motor



UV LAMP

UVC lamp positioned inside the unit to carry out a sanitizing action inside the unit and on the unit inlet air.



BLDC COMPRESSOR

High efficiency rotary compressor with BLDC motor and control Driver;



FILTRATION

There are two filters with ePM1 80% filtration class and a coarse pre-filter on the outside air;



MICROPROCESSOR

System management entrusted to electronics evolved but easy to manage. Integrated or remote control with WIFI card and management with APP for the main functions of the unit;

TECHNICAL FEATURES

The 2.0 RINNOVA units are designed for the air renewal of environments.

The ease of installation through two 160mm diameter holes and the high fresh air flow, allows the application in situations such as residential buildings, schools, clinics, offices and all contexts where air exchange is necessary;

The thermodynamic recovery allows to have an integration with respect to the environmental climatic conditions, helping the air conditioning system to satisfy the internal comfort; Furthermore, the air introduced is always at a temperature close to or better than the ambient one, thus guaranteeing a higher perceived comfort; 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.

ALL IN ONE: 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.

UV LAMP AND VOC SENSOR: The unit is equipped with a UV lamp (accessory) which allows to carry out a germicidal action on the air introduced from the outside through the effect of UVC; The lamp is activated automatically according to the ambient air quality,

VENTILATION: Fans with directly coupled brushless motor; The fans work in various modes controlled mainly by the air quality sensor located inside the unit;

ACTIVE THERMODYNAMIC RECOVERY: The unit allows the 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 the ventilation for 90% of the unit's operation;

FILTRATION: There are 2 ePM1 filters on the extracted and injected air; The filter on the supply air is placed after the coil to completely filter any impurities of the input air. On the outside air there is a Coarse pre-filter that protects the cleanliness of the unit;

STRUCTURE: Self-supporting frame in sheet metal
Self-supporting sheet metal structure, painted externally (in the visible versions), with thermal and acoustic insulation in polyethylene and Epdm;

REFRIGERANT CIRCUIT: Made of brazed copper complete with: High efficiency BLDC compressor, filter drier, finned coils, electronic expansion valve, reversing valve and safety devices.

ADJUSTMENT: Electrical panel on board the unit with microprocessor and dedicated regulation. Fans management with air quality probe, display and temperature setpoint, timed dirty filter management.
Panel with graphic interface and WIFI on the machine and remote control included in the visible versions;
Remote panel to be purchased optionally with WIFI or MODBUS RTU for connection up to 8 meters from the unit for the recessed versions;

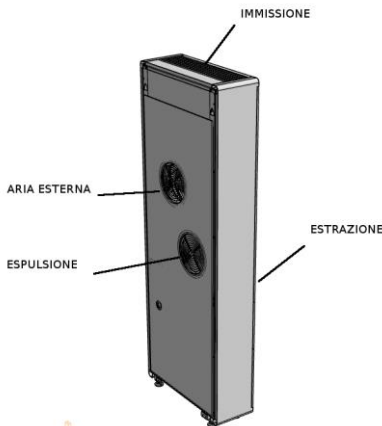
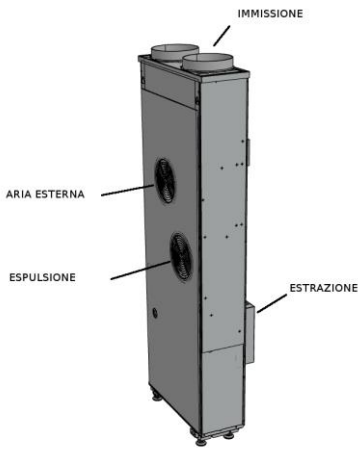
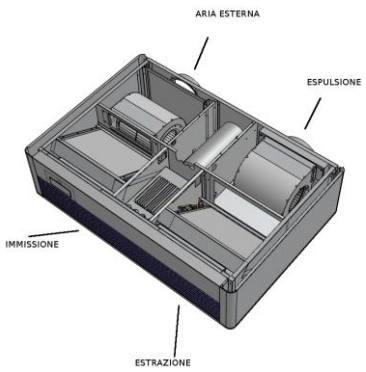
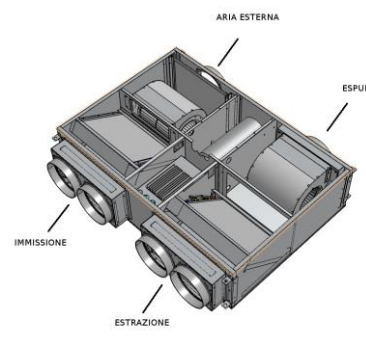
UNIT CONFIGURATION

	-1-
2.0 RENEW	40

(1) Defines the total flow and the fresh air flow

30 - up to 320 m³ / h

40 - up to 400 m³ / h

CONFIGURATION VERSIONS V		CONFIGURATIONS VERSIONS H
 <p>Diagram showing a vertical unit with labels: IMMISSIONE (top), ARIA ESTERNA (left), ESPULSIONE (left), and ESTRAZIONE (right).</p>	 <p>Diagram showing a vertical unit with labels: IMMISSIONE (top), ARIA ESTERNA (left), ESPULSIONE (left), and ESTRAZIONE (right).</p>	 <p>Diagram showing a horizontal unit with labels: ARIA ESTERNA (top), ESPULSIONE (right), IMMISSIONE (left), and ESTRAZIONE (bottom).</p>
		Horizontal view versions
		 <p>Diagram showing a horizontal unit with labels: ARIA ESTERNA (top), ESPULSIONE (right), IMMISSIONE (left), and ESTRAZIONE (bottom).</p>
Vertical View Versions	Vertical Recessed Versions	Horizontal recessed versions

PERFORMANCE UNIT

GENERAL TECHNICAL DATA

Size		30 Vericale view	30 Vertical built-in	40 Horizontal View	40 Horizontal built-in
Type of fans		Backward curved radial with Brushless motor		Forward curved blades with Brushless motor With constant flow function	
N ° Fans		2			
Air flow BO / V3 / V2 / V1	m³ / h	380/320/190/130	380/320/190/130	460/400/240/140	460/400/240/140
Useful pressure	Pa	/	60/110	/	130
Compressor type		Rotary BLDC			
Refrigerant gas		R410A			
Filters		2x ePM1 80% + Coarse PRE-filter			
Max power absorbed fans	kW	0.1	0.15	0.12	0.24
Max Power absorbed compressors	kW	0.95	0.95	1.15	1.15
Supply voltage	V / ph / Hz	220/1/50	220/1/50	220/1/50	
Max Total absorbed power	kW	1.05	1.15	1.27	1.37
Max total absorbed current	TO	4.8	5	5.8	6.1
Sound pressure 2	dB (A)	41	43/46	43	45/47

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

(2) Sound pressure at nominal flow rate V3 at 3m in free field according to 3744

TECHNICAL DATA WINTER OPERATION

Size		30 Vertical view	30 Vertical built-in	40 Horizontal View	40 Horizontal built-in
WINTER					
Thermal potential 1	kW	3.1	3.1	3.62	3.62
Absorbed potential	kW	0.71	0.71	0.84	0.84
Total COP		4.4	4.4	4.3	4.3

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

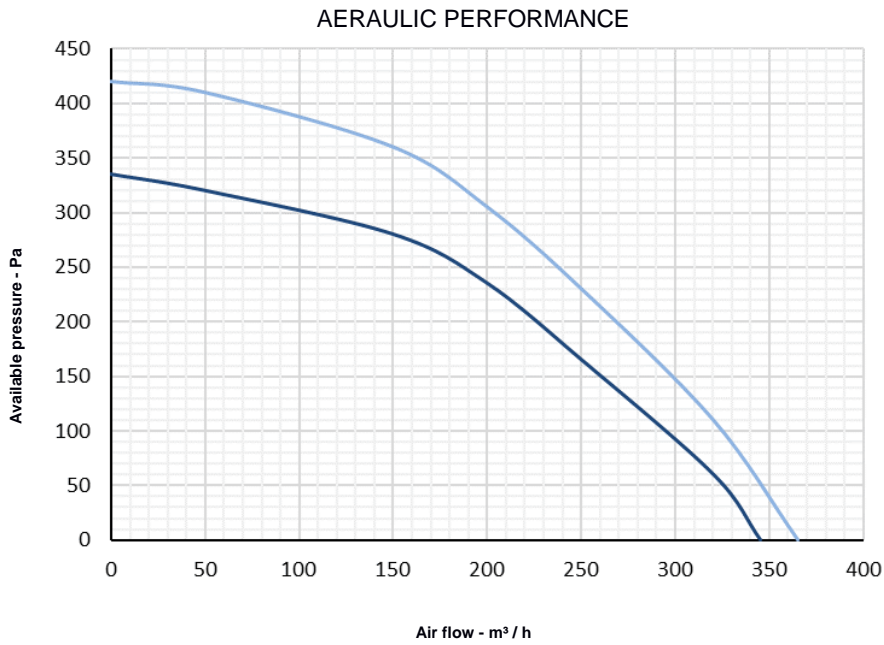
TECHNICAL DATA SUMMER OPERATION

Size		30 Vertical view	30 Vertical built-in	40 Horizontal View	40 Horizontal built-in
Cooling capacity 1	kW	2.41	2.41	2.77	2.77
Absorbed potential	kW	0.73	0.73	0.91	0.91
Total EER		3.3	3.3	3.0	3.0

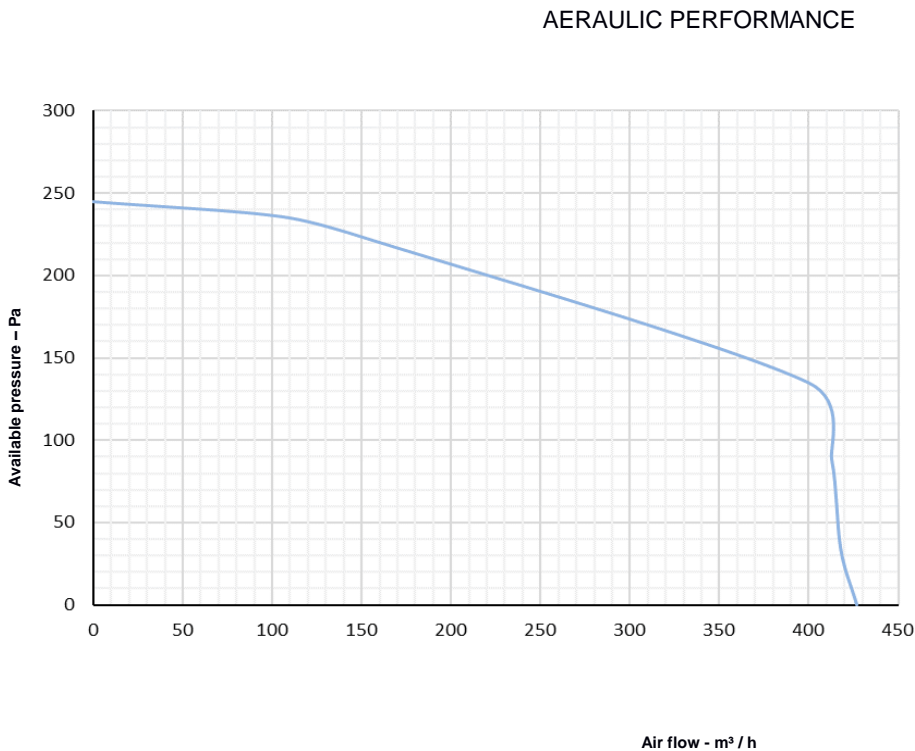
(1) External air 35 ° / 50% RH - Internal air 27 ° / 60% RH - Nominal flow rate

AERAULIC CURVES BUILT-IN VERSIONS

AERAULIC CURVES VERTICAL BUILT-IN VERSIONS (Radial fans with backward blades)



AERAULIC CURVES HORIZONTAL BUILT-IN VERSIONS (Constant flow fans)

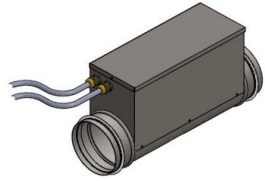



ACCESSORIES

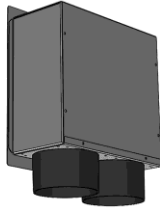
REMOTE CONTROLS (built-in versions mandatory)

<p>ECA031II</p> <p>Black remote panel for mounting on box 502-503 or on the wall; Speed, temperature and operating modes control; Maximum connection length 8m with supplied cable; Integrated WIFI for unit management with dedicated APP;</p>		
<p>ECB031II</p> <p>White remotable panel for mounting on box 502-503 or on the wall; Speed, temperature and operating modes control; Maximum connection length 8m with supplied cable; Integrated WIFI for unit management with dedicated APP;</p>		
<p>ECA032II</p> <p>Black remote panel for mounting on box 502-503 or on the wall; Speed, temperature and operating modes control; Maximum connection length 8m with supplied cable; Integrated modbus card for management through BMS systems or external commands;</p>		
<p>ECB032II</p> <p>White remotable panel for mounting on box 502-503 or on the wall; Speed, temperature and operating modes control; Maximum connection length 8m with supplied cable; Integrated modbus card for management through BMS systems or external commands;</p>		

AERAILIC ACCESSORIES

BER - ELECTRIC HEATING BATTERY COMPLETE WITH REGULATION (FOR POST-HEATING OPERATION)		
<p>The circular section electric post-heating units consist of a galvanized sheet metal frame with armored resistance. They are fitted with circular flanges that facilitate installation on the duct. The side electrical box already complete with cable gland allows access to the components inside:</p> <ul style="list-style-type: none"> - Automatic reset thermal protector; - Manual reset thermal protector; - Throttle; -Adjustable thermostat -35 +35 - Terminal block. <p>The thermostat mounted on the coil allows direct regulation of the supply air temperature</p>		
Template		BER2
Compatible unit model		Channeled models
Nominal electrical power	kW	1
Supply	/	230 V / 1/50
Absorption	TO	4.5
Diameter	OR	160

UVC		
<p>The UVC system, with germicidal action, foresees UVC lamp and power supply wired and installed inside the unit to be selected when ordering; The lamp has a UVC wavelength of 254nm; The life of the lamp is estimated at 10,000 hours of operation;</p>		
Template		UVR1
Compatible unit model		Channeled models
Nominal electrical power	Watt	36
Supply	/	230 V / 1/50
Wave Length	margin no	254
Bulb Length	mm	350

PLENUM FOR DUCTABLE UNITS	
<p>Plenum made of galvanized sheet with internal insulation, complete with 2 inlets DN160mm and 1 plug; It can be used as a single supply or return diffuser, using two pipes; Or it can be used as a double diffuser using a single pipe and therefore having the air distribution in two separate rooms;</p> <p>Dimensions 410x175x175</p>	

AIR DELIVERY GRILLE

Made with a double adjustable row of fins to distribute the air effectively;
Screwless fixing;
Painted RAL9016

External dimensions 450x250



AIR INTAKE GRILLE

Made with a single group of fixed bar fins, and coarse filter to avoid dirt in the channels up to the entrance to the unit;
The filter can be easily inspected by removing the fixed bars;
Painted RAL9016

External dimensions 450x250



FILTRATION

Spare filters EPM1 80%

Kit consisting of two EPM1 80% filters for unit maintenance;
The filters are easily removable;



Replacement prefilter

Kit consisting of spare coarse prefilter for unit maintenance;
The filters are easily removable;



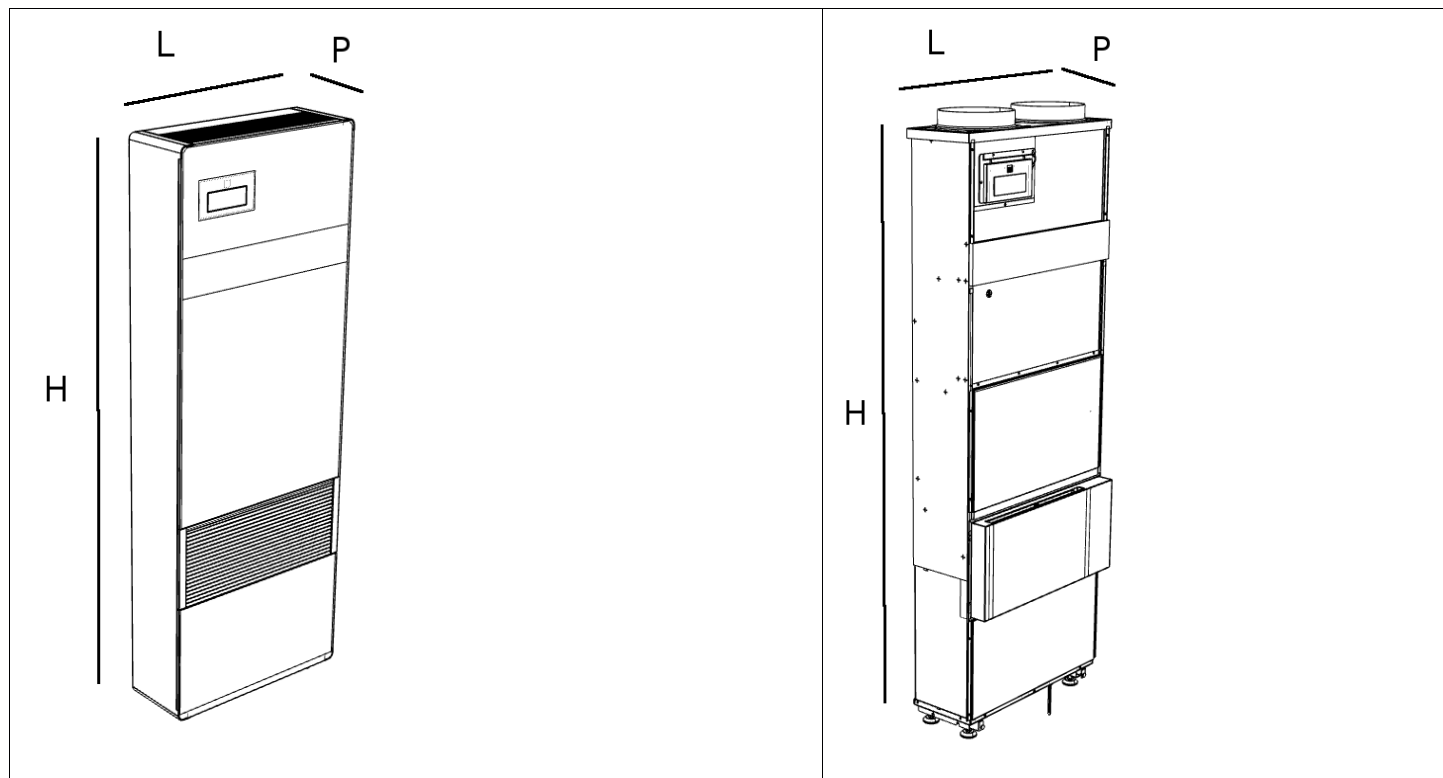
Replacement UV lamp

Kit consisting of a bulb for the UVC system placed inside the unit;



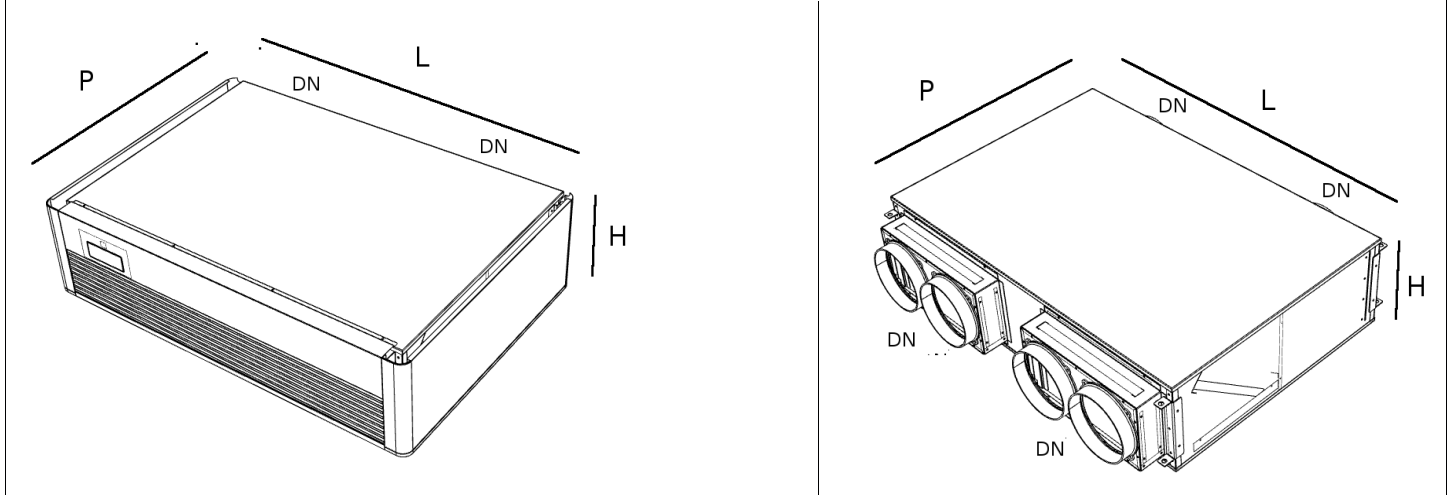
DIMENSIONAL DATA

VERTICAL VERSIONS



Template	HRA +	2.0 RENEW 30 VM Vertical on sight	2.0 RENEW 30 VN Vertical recessed
Width L	mm	500	490
Depth P	mm	1398	1430
Height H.	mm	185	175
DN External air / expulsion	mm	162	162
DN Air delivery	Mm	/	2 x 160
Condensation	OR	20	20
Weight	kg	53	51

HORIZONTAL VERSIONS




Template	HRA +	2.0 RENEW 40 HM Vertical on sight	2.0 RENEW 40 HN horizontal recessed
Width L	mm	1010	950
Depth P	mm	690	245
Height H.	mm	255	710
DN External air / expulsion	mm	162	162
DN Air delivery / air return	Mm	2 x 160	2 x 160
Condensation	OR	20	20
Weight	kg	74	72

OPERATING LIMITS


Size	All models		
HEATING		Internal Air	Outdoor Air
	° C	10/25 °	-15 / 20
COOLING		Internal Air	Outdoor Air
	° C	18/28	20/38

SPECIFICATION ITEMS


EXPOSED VERTICAL VERSIONS

	<p>Active ventilation unit with thermodynamic heat recovery;</p> <p>Specific unit for ventilation in environments with the need for ventilation and air treatment, such as residential, commercial, small service sectors;</p> <p><u>CONSTRUCTION FEATURES</u></p> <p>self-supporting structure in galvanized sheet with RAL9003 painted aesthetic finishes;</p> <p>Heat exchangers and flows with maximum seal and absence of leakage of traditional heat exchangers;</p> <p>Compact dimensions for simplified floor or wall installation with front panel easily accessible for maintenance and inspection.</p> <p>Circular inlets for the air ducts to the outside with grids, template and accessories supplied;</p> <p>Quick filter inspection and condensate drain condensate evacuation;</p> <p>Refrigeration circuit with high efficiency bldc rotary compressor, heat exchange coils, lamination organ and safety devices.</p> <p>Electrical panel with management cards and control terminal blocks</p> <p>backward curved centrifugal fans with EC motors with electronic speed control and low consumption</p> <p>ePm1 class filters with low pressure drop for external air and stale air and pre-filter for external air;</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 rate modulation;</p> <p>Control panel with WIFI and APP integrated inside the unit and with infrared remote control supplied;</p>
---	--


RECESSED VERTICAL VERSION

	<p>Active ventilation unit with thermodynamic heat recovery;</p> <p>Specific unit for ventilation in environments with the need for ventilation and air treatment, such as residential, commercial, small service sectors;</p> <p><u>CONSTRUCTION FEATURES</u></p> <p>self-supporting structure in galvanized sheet;</p> <p>Heat exchangers and flows with maximum seal and absence of leakage of traditional heat exchangers;</p> <p>Compact dimensions for simplified floor or wall installation with front panel easily accessible for maintenance and inspection.</p> <p>Circular inlets for the air ducts to the outside with grids, template and accessories supplied;</p> <p>Double circular inlet for channeling the supply air;</p> <p>Quick filter inspection and drain for condensate evacuation;</p> <p>Refrigeration circuit with high efficiency bldc rotary compressor, heat exchange coils, lamination organ and safety devices.</p> <p>Electrical panel with management cards and control terminal blocks</p> <p>backward curved centrifugal fans with EC motors with electronic speed control and low consumption</p> <p>Double setting for ducts: Low useful head / High useful head</p> <p>ePM1 class filters with low pressure drop for external air and stale air and pre-filter for external air;</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 rate modulation;</p> <p>Control panel with WIFI and APP for wall installation with box for built-in support 503 or wall fixing, length 10m</p>
---	--

EXPOSED VERTICAL VERSIONS

	<p>Active ventilation unit with thermodynamic heat recovery;</p> <p>Specific unit for ventilation in environments with the need for ventilation and air treatment, such as residential, commercial, small service sectors;</p> <p><u>CONSTRUCTION FEATURES</u></p> <p>self-supporting structure in galvanized sheet with RAL9003 painted aesthetic finishes;</p> <p>Heat exchangers and flows with maximum seal and absence of leakage of traditional heat exchangers;</p> <p>Compact dimensions for simplified ceiling installation with easily accessible lower panel for maintenance and inspection.</p> <p>Circular inlets for the air ducts to the outside with grids, template and accessories supplied;</p> <p>Quick filter inspection and drain for condensate evacuation;</p> <p>Refrigeration circuit with high efficiency bldc rotary compressor, heat exchange coils, lamination organ and safety devices.</p> <p>Electrical panel with management cards and control terminal blocks</p> <p>forward curved centrifugal fans with EC motors with electronic flow control and low consumption</p> <p>ePM1 class filters with low pressure drop for external air and stale air and pre-filter for external air;</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 rate modulation;</p> <p>Control panel with WIFI and APP integrated inside the unit and with infrared remote control supplied;</p>
--	---

RECESSED VERTICAL VERSION

	<p>Active ventilation unit with thermodynamic heat recovery;</p> <p>Specific unit for ventilation in environments with the need for ventilation and air treatment, such as residential, commercial, small service sectors;</p> <p><u>CONSTRUCTION FEATURES</u></p> <p>self-supporting structure in galvanized sheet;</p> <p>Heat exchangers and flows with maximum seal and absence of leakage of traditional heat exchangers;</p> <p>Compact dimensions for simplified ceiling installation with easily accessible lower panels for maintenance and inspection.</p> <p>Circular inlets for the air ducts to the outside with grids, template and accessories supplied;</p> <p>Double circular inlet for the ducting of supply and return air;</p> <p>Quick filter inspection and drain for condensate evacuation;</p> <p>Refrigeration circuit with high efficiency bldc rotary compressor, heat exchange coils, lamination organ and safety devices.</p> <p>Electrical panel with management cards and control terminal blocks</p> <p>forward curved centrifugal fans with EC motors with electronic flow control and low consumption</p> <p>ePm1 class filters with low pressure drop for external air and stale air and pre-filter for external air;</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 rate modulation;</p> <p>Control panel with WIFI and APP for wall installation with box for built-in support 503 or wall fixing, length 10mt</p>
--	---

UNIT ORDER CODES

Vertical version models

Template	Description	Code
2.0 RENEW Vertical 30	Compact heat exchanger with heat pump for vertical installation	COMV12VC3II
2.0 RENEW Vertical Recessed 30	Compact heat exchanger with heat pump for vertical recessed installation	COMV12DC3II

Horizontal versions models

Template	Description	Code
2.0 RENEW CEILING 40	Compact heat exchanger with heat pump for horizontal view installation	COMS13VC3II
2.0 RENEW DUCT 40	Compact heat exchanger with heat pump for horizontal recessed installation	COMS13DC3II

ACCESSORIES ORDERING CODES

REMOTE COMMANDS

WIFI remote control panel BLACK

Template	All models
Description	Smart touch electronic wall control panel with thermostat and room probe with integrated Wi-Fi module (supplied with 8 m connection cable). Black colour.
Code	ECA031II

WHITE WIFI remote control panel

Template	All models
Description	Smart touch electronic wall control panel with thermostat and room probe with integrated Wi-Fi module (supplied with 8 m connection cable). White color
Code	ECB031II

MODBUS BLACK remote control panel

Template	All models
Description	Smart touch electronic wall control panel with thermostat and ambient probe with integrated Modbus port (supplied with 8 m connection cable). Black colour
Code	ECA032II

MODBUS WHITE remote control panel

Template	All models
Description	Smart touch electronic wall control panel with thermostat and ambient probe with integrated Modbus port (supplied with 8 m connection cable). White color.
Code	ECB032II

AERAILIC ACCESSORIES

UV lamp

Template	All models
Description	UVC - Germicidal lamp with UV-C rays with power supply and fixings. Lamp life is estimated at 10,000 hours of operation.
Power supply voltage	230 V
Code	GB1094II

EPP insulated universal plenum box

Template	Built-in versions
Description	Insulated plenum for supply / return with 2 DN160 mm inlets, 1 DN160 plug and grid connection.
Power supply voltage	230 V
Code	GR1118II

Suction grille

Template	Built-in versions
Description	Suction grille with extractable aluminum filter, white color.
Code	GR1120II

Double row delivery grille

Template	Built-in versions
Description	Delivery grilles in aluminum with double row of adjustable fins.
Code	GR1119II

FILTRATION

Replacement filter kit ePM1 (2 Filters)

Template	2.0 RENEW Vertical / 2.0 RENEW Vertical Recessed	2.0 RENEW Ceiling / 2.0 RENEW Duct
Description	Kit 2 filters and PM1 80% fresh air delivery and extraction	Kit 2 filters and PM1 80% fresh air delivery and extraction
Code	GR1134II	GR1137II

Coarse replacement prefilter

Template	2.0 RENEW Vertical / 2.0 RENEW Vertical Recessed	2.0 RENEW Ceiling / 2.0 RENEW Duct
Description	Coarse filter kit for external air intake	Coarse filter kit for external air intake
Code	GR1135II	GR1138II

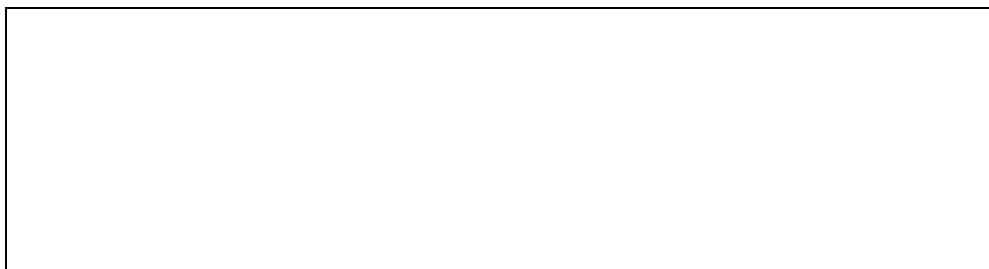
Replacement UV lamp

Template	All models
Description	Replacement UV-C lamp
Code	GB1095II

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 catalogue may be changed by the manufacturer without prior notice.

Technical data sheet – 2.0 RINNOVA – Rev.1 – 03-2021