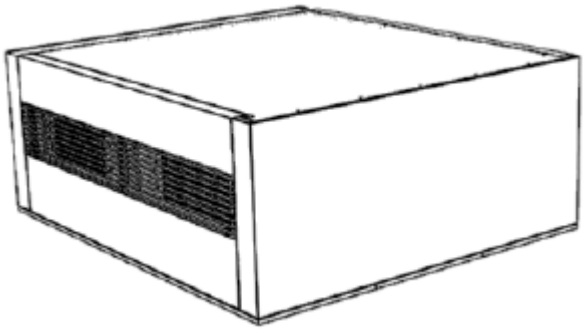
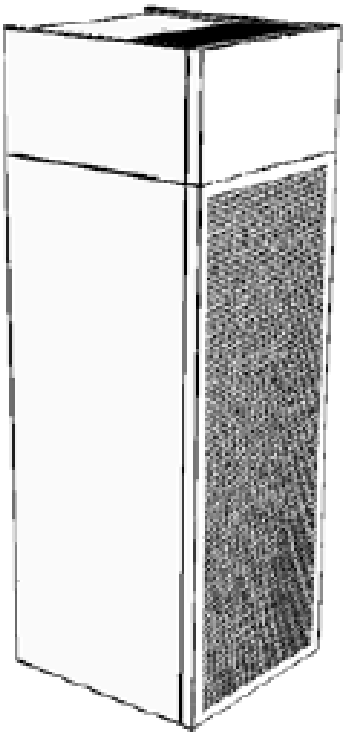
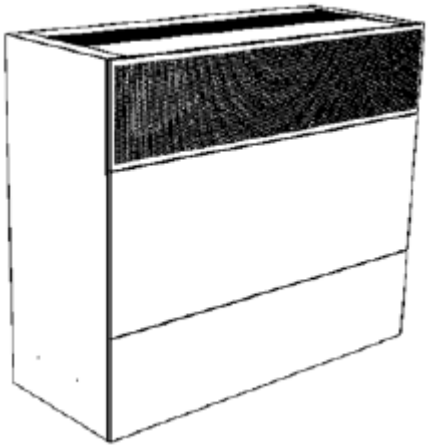
HRC+

Decentralized high-efficiency heat recovery unit for commercial applications, schools, offices.



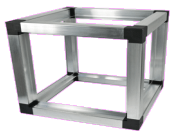




GENERAL FEATURES

STRUCTURE

High-strength structure with self-supporting sheet metal frame and polyethylene insulation inside

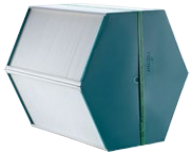


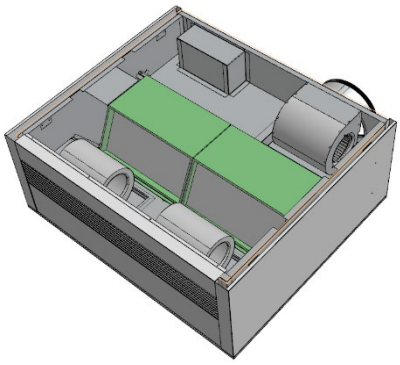
FANS

The unit is equipped with EC centrifugal fans with high-efficiency Brushless motor

RECUPERATOR

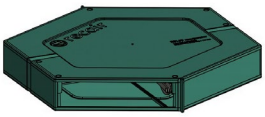
Polypropylene cross-flow counterflow heat exchanger with very high efficiency





FILTRATION

Upstream of the recuperator are two filters with filtration class ePM1 Removal can be done without the use of any tools



BYPASS

The units are equipped with recuperator bypasses, which allow the fresh air intake function from outside when ideal conditions exist

CONTROL

The unit provides operation through Remote Control and APP; Air quality, humidity and temperature sensor

CONSTRUCTION FEATURES

HRC+ is a ventilation unit complete with heat recovery unit dedicated to air exchange without energy waste.
The unit is particularly suitable for individual rooms where ducted systems are not possible:

FRAME:

Self-supporting sheet metal frame with polyethylene insulated interior.

HEAT EXCHANGER:

High-efficiency polypropylene cross-flow countercurrent exchanger.
Low freezing temperatures and operation down to -25°C.
Very high exchange efficiency.

FANS:

Brushless forward-bladed centrifugal fans with electronic motor and modulating control.
Very high efficiency and low noise levels.

FILTERS:

Filters ePM1 70 % with low pressure drop.
Easily removed by removing the lower outer panels.

FREE COOLING:

Free cooling realized inside the unit with wide air passage and damper with motorized actuator.

ELECTRICAL BOX:

VERSION I
Switchboard complete with management board 4 fan speeds, antifreeze, automatic bypass, temperature probes, management of post-heating coils and automatic dirty filter signaling.
On-board control panel for HV and V units, remote for H unit, required for unit operation with capacitive touch, built-in air quality temperature and humidity sensors;
for mounting on 503 box or wall;
WiFi chip for management through remote APP.

EFFICIENCY:

Due to its special construction features and components, it is able to achieve recovery efficiencies greater than 90 %.
In the winter and summer seasons, there is a significant energy recovery of the fresh air fed into the room.

FUNCTIONALITY COMMANDS

The composition of the unit's electronics is defined below:

I VERSION

BOARDS ON BOARD

REMOTE PANEL WITH AIR QUALITY, HUMIDITY AND TEMPERATURE

REMOTE PANEL FOR SMART TOUCH WALL CONTROL	REMOTE PANEL FOR SMART TOUCH WALL CONTROL	REMOTE PANEL FOR SMART TOUCH WALL CONTROL WIFI	REMOTE PANEL FOR SMART TOUCH WALL CONTROL WIFI
			

EXTERNAL CONTROLS

ON OFF

UNIT CONFIGURATION

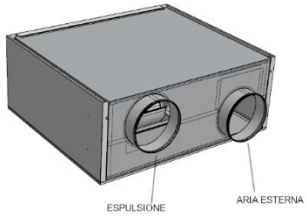
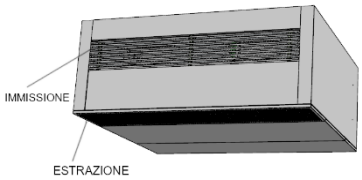
	-1-	-2-	-3-
HRC+	60	H	I

1) Defines the maximum flow rate
Models from: 620m³/h and 1150m³/h

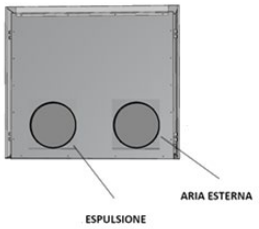
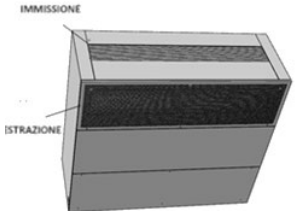
2) Type of installation
H: horizontal
HV: vertical under window
V: vertical

3) Type of control
I: electronics I

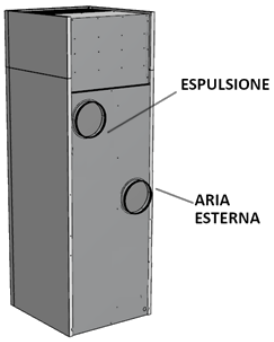
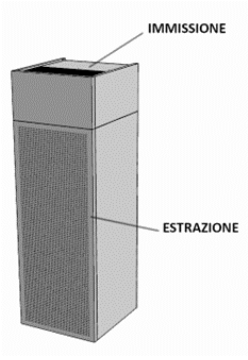
HORIZONTAL (H)

	
REAR VIEW	FRONT VIEW

VERTICAL UNDER WINDOW (HV)

	
REAR VIEW	FRONT VIEW

VERTICAL CABINET (V)

	
REAR VIEW	FRONT VIEW

HRC+ H / H X / HV / HV X 60

GENERAL TECHNICAL DATA

Size	H / H X / HV / HV X 60

Ventilatori

Fan Type		Forward-bladed centrifugal fans - directly coupled electronic motor - 0/10 V signal
Number Fans	Nr	2+1
Air flow rate V1/V2/V3	m³/h	165 / 355 / 620
Useful pressure	Pa	15

Sensitive heat exchanger (Data referred to UNI EN 13141-7 Indoor temp. 20° - Indoor humidity 28% - Outdoor temp. 7° - Outdoor humidity 72%)

Exchanger type		Countercurrent plates - polypropylene material
Number of Exchangers	Nr	2
Recovery efficiency EN13141-7	%	86,1
Recovery efficiency EN305	%	91,8

Enthalpy heat exchanger (Data referred to UNI EN 13141-7 Indoor temp. 20° - Indoor humidity 28% - Outdoor temp. 7° - Outdoor humidity 72%)

Exchanger type		Countercurrent plates - polypropylene material
Number of Exchangers	Nr	2
Air flow rate V3/V2/V1	m³/h	600
Recovery efficiency EN13141-7	%	74,0 % Sensibile / 60,0 % Entalpico

Filters

Type of filters		Pleated filters
Filtration class		ePM1 70

Acoustic data (Data referred to UNI EN 3741 and UNI EN 3744)

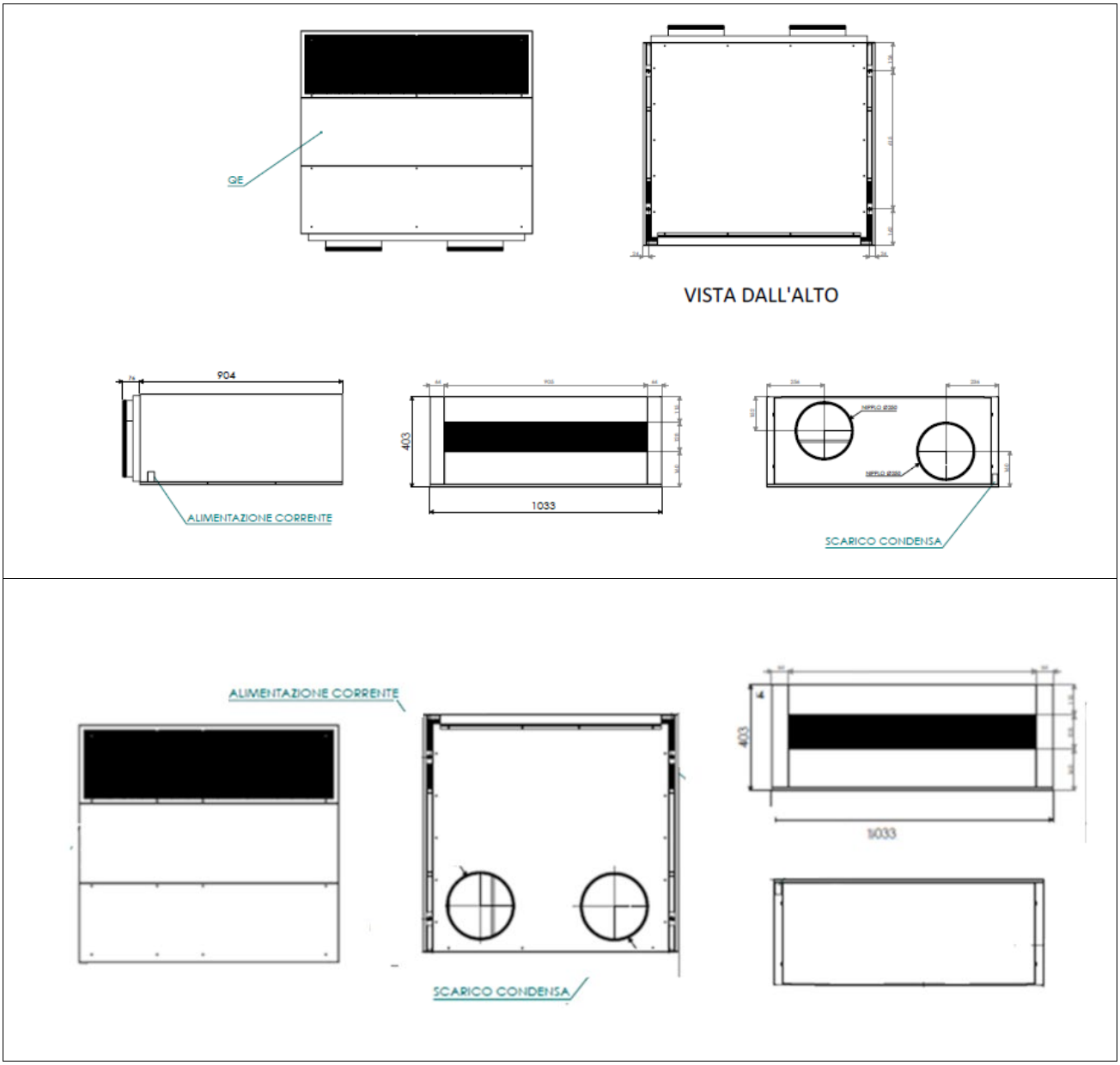
Sound power Lw transmitted by the structure	dB(A)	59

Sound pressure at 3 m V1	dB(A)	41
Sound pressure at 3 m V2	dB(A)	36
Sound pressure at 3 m V3	dB(A)	33

Electrical Data

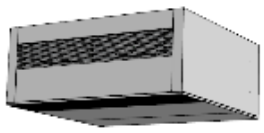
Supply voltage	V	230 / 1 / 50 Hz.
Absorbed current	A	3,5
Maximum power consumption	W	340
Max power consumption with electrical resistance	kW	1,34
Current consumption with electrical resistance	A	7,8
Power consumption V3 With 15pa pressure and clean filters		165
Degree of protection	IP	X0

DIMENSIONALITY AND FUNCTIONAL SPACES HRC+ H / H X / HV / HV X 60



		HRC+ 60 H / H X	HRC+ 60 V / V X
Width A	mm	1033	1033
Depth B	mm	904	403
Height C	mm	403 feet	904+50 feet
Diameter DN	Ø	200	200
Weight	Kg	71	72
Condense	Ø	20	20

Item specifications



High-flow heat recovery ventilation unit for decentralized applications;

Specific unit for ventilation in environments with a need for ventilation and air treatment, such as commercial environments, offices, schools, and small service industries.

CONSTRUCTION FEATURES

Self-supporting galvanized sheet metal structure with polyethylene insulation inside;

Heat exchangers and countercurrent cross flows with maximum tightness and no leakage of traditional heat exchangers;

Compact size for simplified ceiling (H) or wall (HV) installation with bottom and front panels easily accessible for maintenance and inspection;

Circular inlets for air ducts to the outside with gratings, installation template provided;

Rapid filter inspection and condensate evacuation drain;

Switchboard with management boards and power cables and remote panel prepared;

Forward-bladed centrifugal type fans with EC motors with electronic flow control and low power consumption;

Filters class ePm1 low pressure drop outdoor air and stale air;

On-board electrical panel with microprocessor and dedicated control. Fan management, temperature display, timed dirty filter management, freecooling management and antifreeze function;
Possibility in on-board installation of electric preheating coil and hydronic postheating coils for integration or replacement of existing radiators;

Remote control panel with WIFI and APP to be purchased separately.

Ecodesign data

Model identifier		**HRC+ H / H X / HV / HV X 60**
Declared type		UVNR
Type of drive installed		Variable speed
Heat recovery system		To recover
Thermal efficiency of heat recovery	%	86.1
Rated flow rate	m³/s	0,172
SPF int	W / (m³/s)	634
Frontal speed	m/s	1.19
External pressure rating (Dps, ext)	Pa	15
Internal pressure drop (Dps, int)	Pa	194
Internal pressure drop to components extraneous to ventilation (Dps, int)	Pa	/
Static efficiency of fans as for UE 327/2011	%	31
Declared maximum percentages of leakage	%	2,5 ext / 2.9 int
Energy classification of filters		F7/F7
Position and description of the signal related to the filter		Displayed on control panel and unit manual.
Sound power level	Lwa	55
Internet address disassembly instructions		

HRC+ H / HX / V / V X 120

GENERAL TECHNICAL DATA

Size	H / HX / V / V X 120

Ventilatori

Type of Fans		Forward-bladed centrifugal fans - directly coupled electronic motor - 0/10 V signal
Number Fans	Nr	3+2
Air flow rate V1/V2/V3	m³/h	255 / 750 / 1150
Useful pressure	Pa	15

Sensitive heat exchanger (Data referred to UNI EN 13141-7 Indoor temp. 20° - Indoor humidity 28% - Outdoor temp. 7° - Outdoor humidity 72%)

Exchanger type		Countercurrent plates - polypropylene material
Number of Exchangers	Nr	2
Recovery efficiency EN13141-7	%	84,9
Recovery efficiency EN305	%	90,4

Enthalpy heat exchanger (Data referred to UNI EN 13141-7 Indoor temp. 20° - Indoor humidity 28% - Outdoor temp. 7° - Outdoor humidity 72%)

Exchanger type		Countercurrent plates - polypropylene material
Number of Exchangers	Nr	2
Air flow rate V3/V2/V1	m³/h	1050
Recovery efficiency EN13141-7	%	74,0 % Sensitive / 60,0 % Enthalpy

Filter

Type of filters		Pleated filters
Filtration class		ePM1 70

Acoustic data (Data referred to UNI EN 3741 and UNI EN 3744)

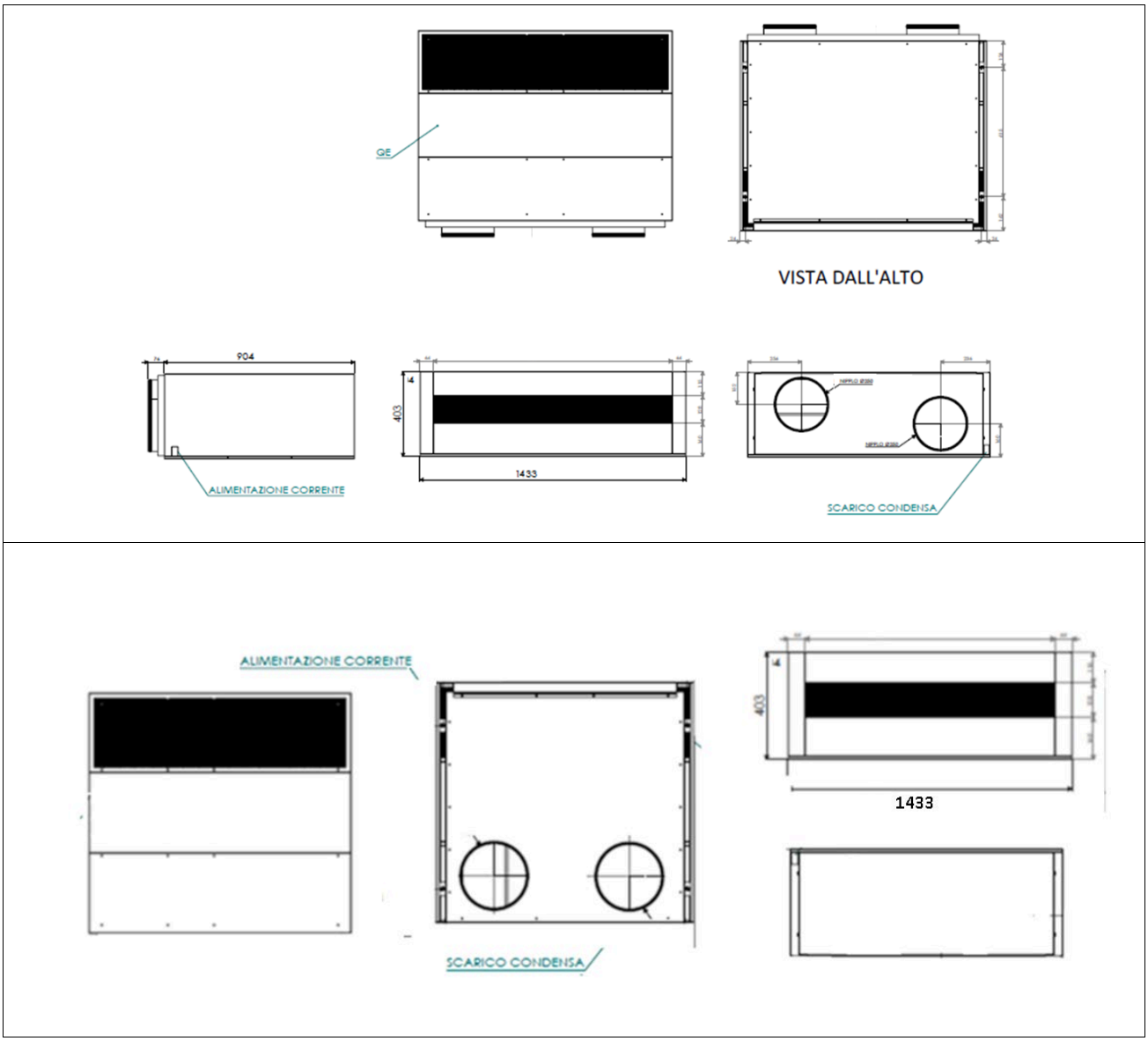
Sound power Lw transmitted by the structure	dB(A)	62

Sound pressure at 3 m V1	dB(A)	43
Sound pressure at 3 m V2	dB(A)	37
Sound pressure at 3 m V3	dB(A)	34

Electrical Data

Supply voltage	V	230 / 1 / 50 Hz.
Absorbed current	A	4,8
Maximum power consumption	W	620
Max power consumption with electrical resistance	kW	2,12
Current consumption with electrical resistance	A	11,3
Power consumption V3 With 15pa pressure and clean filters		355
Degree of protection	IP	X0

DIMENSIONALITY AND FUNCTIONAL SPACES HRC+ H / HX / V / V X 120



		HRC+ 120 H / H X	HRC+ 120 V / V X
Width A	mm	1433	1433
Depth B	mm	904	403
Height C	mm	403 feet	904+50 feet
Diameter DN	Ø	250	250
Weight	Kg	88	89
Condense	Ø	20	20

Item specifications

High-flow heat recovery ventilation units for decentralized applications;

Specific unit for ventilation in environments with a need for ventilation and air treatment, such as commercial environments, offices, schools and small service industries.

CONSTRUCTION FEATURES

Self-supporting galvanized sheet metal structure with polyethylene insulation inside;

Heat exchangers and countercurrent cross flows with maximum tightness and no leakage of traditional heat exchangers;

Compact size for simplified ceiling (H) or wall (HV) installation with bottom and front panels easily accessible for maintenance and inspection;

Circular inlets for air ducts to the outside with grilles, installation template provided;

Rapid filter inspection and condensate evacuation drain;

Switchboard with management boards and power cables and remote panel prepared;

Forward-bladed centrifugal type fans with EC motors with electronic flow control and low power consumption;

Filters class ePm1 low pressure drop outdoor air and stale air;

On-board electrical panel with microprocessor and dedicated control. Fan management, temperature display, timed dirty filter management, freecooling management and antifreeze function;

Possibility in on-board installation of electric preheating coil and hydronic postheating coils for integration or replacement of existing radiators;

Remote control panel with WIFI and APP to be purchased separately.

Ecodesign data

Model identifier		**HRC+ H / HX / V / V X 120**
Declared type		UVNR
Type of drive installed		Variable speed
Heat recovery system		To recover
Thermal efficiency of heat recovery	%	85,3
Rated flow rate	m³/s	0,313
SPF int	W / (m3/s)	651
Frontal speed	M/s	1.21
External pressure rating (Dps, ext)	Pa	15
Internal pressure drop (Dps, int)	Pa	199
Internal pressure drop to components extraneous to ventilation (Dps, int)	Pa	/
Static efficiency of fans as per EU 327/2011	%	37
Declared maximum percentages of leakage	%	2,1 ext / 2.5 int
Energy classification of filters		F7/F7
Position and description of the signal related to the filter		Displayed on control panel and unit manual.
Sound power level	Lwa	57
Internet address disassembly instructions		

HRC+ V 70

GENERAL TECHNICAL DATA

Size	V 70

Fans

Fan Type		Centrifugal backward-bladed fans - directly coupled electronic motor - 0/10 V signal
Number Fans	Nr	2
Air flow rate V3/V2/V1	m³/h	650 / 390 / 190
Useful pressure	Pa	15

Heat exchanger (Data referred to UNI EN 13141-7 Indoor temp. 20° - Indoor humidity 28% - Outdoor temp. 7° - Outdoor humidity 72%)

Exchanger type		Countercurrent plates - polypropylene material
Number of Exchangers	Nr	1
Recovery efficiency EN13141-7	%	85,9
Recovery efficiency EN305	%	91,3

Filter

Type of filters		Pleated filters
Filtration class		ePM1 70

Acoustic data (Data referred to UNI EN 3741 and UNI EN 3744)

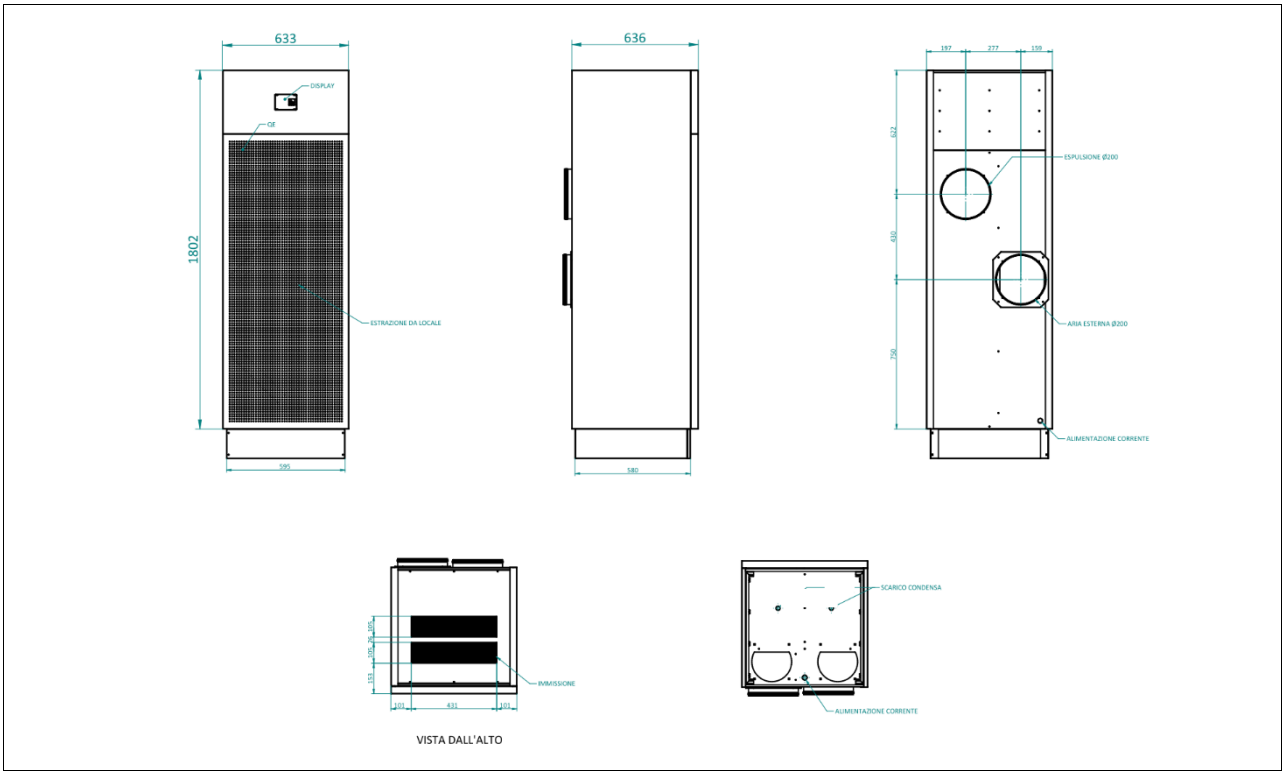
Sound power Lw transmitted by the structure	dB(A)	60

Sound pressure at 3 m V3	dB(A)	41
Sound pressure at 3 m V2	dB(A)	35
Sound pressure at 3 m V1	dB(A)	32

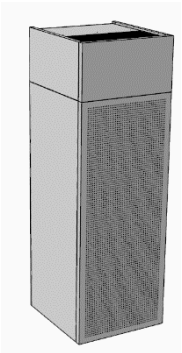
Electrical Data

Supply voltage	V	230 / 1 / 50 Hz.
Absorbed current	A	3,6
Maximum power consumption	W	360
Max power consumption with electrical resistance	kW	1,36
Current consumption with electrical resistance	A	7,9
Power consumption V3 With 15pa pressure and clean filters		330
Degree of protection	IP	X0

DIMENSIONALITY AND FUNCTIONAL SPACES HRC+ V 70



		HRC+ V 70
Width A	**mm**	**633**
Depth B	**mm**	**636**
Height C	**mm**	**1802+150 feet**
Diameter DN	**Ø**	**200**
Weight	**Kg**	**86**
Condense	**Ø**	**20**



High-flow heat recovery ventilation units for decentralized applications;

Specific unit for ventilation in environments with a need for ventilation and air treatment, such as commercial environments, offices, schools and small service industries.

CONSTRUCTION FEATURES

Self-supporting galvanized sheet metal structure with polyethylene insulation inside;

Heat exchangers and countercurrent cross flows with maximum tightness and no leakage of traditional heat exchangers;

Compact wall size on standard 600x600 mm with front panels easily accessible for maintenance and inspection;

Circular inlets for air ducts to the outside with grilles, installation template provided;

Rapid filter inspection and condensate evacuation drain;

Switchboard with management boards and power cables and remote panel prepared;

Backward-bladed centrifugal type fans with EC motors with electronic flow control and low power consumption

Filters class ePm1 low pressure drop outdoor air and stale air;

On-board electrical panel with microprocessor and dedicated control. Fan management, temperature display, timed dirty filter management, freecooling management and antifreeze function;

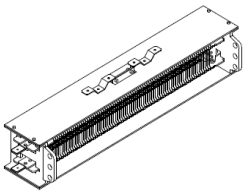
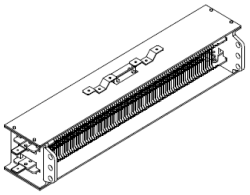
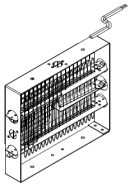
Possibility in on-board installation of electric preheating coil and hydronic postheating coils for integration or replacement of existing radiators;

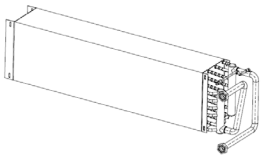
Remote control panel with WIFI and APP to be purchased separately.

Ecodesign data

Model identifier		**HRC+ V 70**
Declared type		UVNR
Type of drive installed		Variable speed
Heat recovery system		To recover
Thermal efficiency of heat recovery	%	85,9
Rated flow rate	m³/s	0,18
SPF int	W / (m³/s)	628
Frontal speed	m/s	1.18
External pressure rating (Dps, ext)	Pa	15
Internal pressure drop (Dps, int)	Pa	175
Internal pressure drop to components extraneous to ventilation (Dps, int)	Pa	/
Static efficiency of fans as per EU 327/2011	%	48
Declared maximum percentages of leakage	%	2,5 ext / 2.9 int
Energy classification of filters		F7/F7
Position and description of the signal related to the filter		Displayed on control panel and unit manual.
Sound power level	Lwa	55
Internet address disassembly instructions		

ACCESSORY LIST

Ordered and installed on the machine at the time of ordering				
Electric heater for automatic management according to outdoor air temperature.				
Model		RES1	RES2	RES3
Compatible unit model		HRC+ H / H X / HV / HV X 60	HRC+ H / HX / HV / HV X 120	HRC+ V 70
Electrical power rating	kW	1 (0,5 x 2)	1,5 (0,5 x 3)	1 (0,5 x 1)
Power supply	/	230 V / 1 / 50 230 V / 1 / 50		

WATER HEATING COIL (FOR POST-HEATING OPERATION)				
Pre/post water-heating units consist of galvanized sheet metal frame and a heat exchange coil composed of copper pipes and aluminum fins. They are fitted with circular flanges that facilitate installation to the duct. They are equipped with threaded connections including valves for air venting and coil discharge.				
Model		BAC		
Compatible drive model		HRC+ H / H X / HV / HV X 60	HRC+ V 70	HRC+ H / H X / HV / HV X 120
Rated heat output (1)	kW	3.38	4.17	6.16
Nominal water flow rate (1)	m³/h	0.3	0.37	0.54
Water-side pressure drop (1)	Kpa	1	5	5
Discharge temperature (1)	°C	50	50	50
Air-side pressure drop	Pa	14	27	33
Water connections	Ø	3-4”	3-4”	3-4”

* (1) Yields and technical data with rated flow rates and temperatures: - Water IN / OUT - 50°C / 40°C - Air IN 20°C

COMMAND FOR -I- VERSIONS

EQA649II / EQB649II		
SMART TOUCH wall control panel with thermostat and temperature, relative humidity and room air quality. Black or white color		

COMMAND FOR -I- VERSIONS

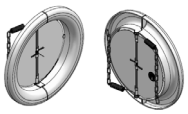
ERA649II / ERB649II		
SMART TOUCH wall control panel with thermostat and temperature, relative humidity and room air quality probe with built-in WiFi module, InnovApp. Black or white color		

REPLACEMENT FILTERS	
Kit consisting of filters for unit maintenance; Filters are easily removed through dedicated inspectable ports;	

UVC - Ordered and installed on board the machine when ordering		
The UVC germicidal action system provides UVC lamp and power supply wired and installed inside the unit to be selected at the order stage; The lamp provides a UVC wavelength of 254nm; Lamp life is estimated at 10,000 hours of operation.		
Model		UVR1
Compatible drive model		Ducted models
Electrical power rating	Watt	36
Power supply	/	230 V / 1 / 50
Wave length	nm	254
Bulb length	mm	350

Replacement UV lamp	
Kit consisting of a bulb for the UVC system placed inside the unit.	

REPLACEMENT FILTERS	
Kit consisting of filters for unit maintenance; Filters are easily removed through dedicated inspectable ports.	

EXTERNAL GRIDS 200mm	
Kit consisting of two external grids for 200 mm diameter external wall holes;	

EXTERNAL GRIDS 250mm	
Kit consisting of two external grids for 250 mm diameter external wall holes;	

SILENCERS DIAM 200mm	
Kit consisting of 2 silencers 480 mm length for noise abatement from outside to be placed on the air outlet	

SILENCERS DIAM 250mm	
Kit consisting of 2 silencers 480 mm length for noise abatement from outside to be placed on the air outlet	

PRODUCT CODING

H models with sensitive exchanger

Model	Description	Code
HRC+ H 60	Recuperatore di calore sensibile decentralizzato ad alta portata per installazione orizzontale Dn 200 mm	VRVP60OC1II
HRC+ H 120	Recuperatore di calore entalpico decentralizzato ad alta portata per installazione orizzontale Dn 250 mm	VRVPX2OC1II

H X models with enthalpy exchanger

Model	Description	Code
HRC+ H X 60	Recuperatore di calore entalpico decentralizzato ad alta portata per installazione orizzontale Dn 200 mm	VRVP60HC1II
HRC+ H X 120	Recuperatore di calore entalpico decentralizzato ad alta portata per installazione orizzontale Dn 250 mm	VRVPX2HC1II

HV models with sensitive exchanger, controller included

Model	Description	Code
HRC+ HV 60	Recuperatore di calore sensibile decentralizzato ad alta portata per installazione verticale Dn 200 mm	VRVP60VC1II
HRC+ HV 120	Recuperatore di calore entalpico decentralizzato ad alta portata per installazione verticale Dn 250 mm	VRVPX2VC1II

HV X models with enthalpy exchanger, controller included

Model	Description	Code
HRC+ HV X 60	Recuperatore di calore entalpico decentralizzato ad alta portata per installazione verticale Dn 200 mm	VRVP60WC1II
HRC+ HV X 120	Recuperatore di calore entalpico decentralizzato ad alta portata per installazione verticale Dn 250 mm	VRVPX2WC1II

V models with sensible exchanger, controller included

Model	Description	Code
HRC+ V 70	Recuperatore di calore sensibile decentralizzato ad alta portata per installazione verticale Dn 200 mm	VRVP70VC1II

CODING ACCESSORIES

Smart Touch series wall control controls

Compatible model	All the versions	
Description	SMART TOUCH wall control panel with thermostat and temperature, relative humidity and room air quality probe. Black color	SMART TOUCH wall control panel with thermostat and temperature, relative humidity and room air quality probe. White color
Code	EQA649II	EQB649II

Smart Touch series wall control controls with WiFi module

Compatible model	All the versions	
Description	SMART TOUCH wall control panel with thermostat and temperature, relative humidity and room air quality probe with built-in WiFi module, InnovAPP. Black color	SMART TOUCH wall control panel with thermostat and temperature, relative humidity and room air quality probe with built-in WiFi module, InnovAPP. White color
Code	ERA649II	ERB649II

UV-C device for air sterilization

Description	UV-C germicidal lamp with power supply and fixings. Lamp life is estimated at 10000 hours of operation
Compatible model	All
Code	AHRA0651II

Replacement UV-C lamp

Description	Replacement UV-C lamp
Compatible model	All
Code	AHRA0652II

Post-heating heating elements

Compatible model	HRC+ 60	HRC+ 120	HRC+ 70
Description	Electric heater for automatic management according to outdoor air temperature.		
Code	AHRA0721II	AHRA0722II	AHRA0723II

Hydronic post heating batteries

Compatible model	HRC+ 60	HRC+ 120	HRC+ 70
Description	Water heating coil consisting of galvanized sheet metal frame and a heat exchange coil composed of copper pipes and aluminum fins. Equipped with threaded connections including valves for air venting and coil discharge. Connections 3/4"		
Code	AHRA0731II	AHRA0732II	AHRA0733II

Replacement filters

Compatible model	HRC+ H / HV 60	HRC+ H / H X / HV 120	HRC+ V 70
Description	Kit No. 4 replacement filters for unit maintenance	Kit No. 8 replacement filters for unit maintenance	Kit No. 2 replacement filters for unit maintenance
Code	AHRC0042II	AHRC0044II	AHRP0911II

Silencers Diameter 200

Description	DN 200 mm silencers, for outdoor noise abatement to be placed on the air outlet, Length 480 mm
Compatible model	HRC+ 60-70
Code	AHRC0038II

Silencers Diameter 250

Description	DN 250 mm silencers, for outdoor noise abatement to be placed on the air outlet, Length 480 mm
Compatible model	HRC+ 120
Code	AHRC0039II

External grids Diameter 200

Description	External grids for wall holes DN 200 mm
Compatible model	HRC+ 60-70
Code	STE020150II

External grids Diameter 250

Description	External grids for wall holes DN 250 mm
Compatible model	HRC+ 120
Code	STE025180II

CE Marking

The CE marking (found on each machine) certifies compliance with the following EU standards:

- Low Voltage Directive 2014/35/EC
- Electromagnetic Compatibility Directive 2014/30/EC
- Ecodesign 2009/125/EC

Rev. 02_2024

The data in this technical catalog may be changed by the manufacturer without notice.	