



indoor air quality and energy saving

## TECHNICAL DATA



UNIT	CONTROL	ENERGETIC CLASS
HRE-RES 1	CTR08-PH	B
	EVO(D)-PH	A
	EVO(D)-PH + probe	A
HRE-RES 2	CTR08-PH	B
	EVO(D)-PH	B
	EVO(D)-PH + probe	B
HRE-RES 1 ENT	CTR08-PH	B
	EVO(D)-PH	B
	EVO(D)-PH + probe	A
HRE-RES 2 ENT	CTR08-PH	C
	EVO(D)-PH	B
	EVO(D)-PH + probe	B



# HRE-RES

AVAILABLE THE ENTHALPIC VERSION

AVAILABLE THE MIRRORED VERSION



HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS



## HRE-RES

High efficiency double flow heat recovery ventilation unit in two sizes for residential buildings. Enthalpic version are available.

## EQUIPPED

it is equipped with an aluminum counterflow heat exchanger (Eurovent certified) and it reaches an efficiency value for the heat exchange in class 2 which is equal to  $\eta_t = 85,5\%$  for HRE-RES 1 and  $\eta_t = 83\%$  for HRE-RES 2 (UNI EN 13141 -7). The unit includes the By-pass, which permits to take advantage of the climatic conditions outside the building for automatic free cooling (or free heating).

## STRUCTURE

The HRE RES is realized with a self-supporting casing made by panels, thickness 25 mm, sandwiched on injected polyurethane foam insulation. The casing and the internal parts are realized in Aluzinc<sup>®</sup>, material with a high resistance to corrosion and an outside attractive appearance. The attention of the design and realization of the HRE RES have led to reach class 2 regarding the air tightness (internal and external losses of less than 5% of the maximum air flow). The use of appropriate plastic caps makes easy the filters replacement (ePM2,5 70% (F7) for fresh air and ePM10 50% (M5) for exhaust air). The HRE RES can be installed on the floor or under the ceiling, with ambient temperature between 0° C and 45° C.

## CONTROLS

The HRE RES is supplied with control system and easy connection to the power supply. It's also available the versions with simplified CTR08-PH control, the version with EVO-PH control and the version with EVOD-PH-IP control ready for integration in home automation systems (Modbus protocol with Ethernet connection or, upon request, with the addition of the RS485 connection). The new version of our control systems allows the user to shift from one control system to another very quickly and easily by replacing the remote panel even after the installation.

The CTR08-PH control allows the user to select three levels of fan speed or the possibility to stop them. It automatically manages the By/pass and prevents the heat exchanger freezing by programming the fan speed or, if specifically required, the electric pre-heater resistance (optional item to install inside the unit). The control advises the user if filters need to be replaced (the filter clogging is monitored by a pair of differential pressure sensors) or any other fault.

The EVO-PH control has a colored backlit touch screen interface, it gives an intuitive operating status of the unit and it allows programming the fan speed. This control has a weekly time schedule for automatic unit control, it can be controlled by an external switch to activate the booster and it can automatically adjust the air flow when connected to an air quality sensor. It supports post-air treatment accessories and it advises the user if filters need to be replaced (the filter clogging is monitored by a pair of differential pressure sensors) or if there is any other fault showing where it comes from. If the unit includes the optional COP Kit or CAV Kit (installed in the duct) you can program the heat recovery unit either as constant pressure or as constant flow.

The EVOD-PH-IP control has the same characteristics of the EVO-PH version with the addition of the Modbus communication protocol and it allows full control of the unit by the Home Automation software system. If the unit is in a Home Automation network, the webserver lets the user interact with it throughout a device connected to an Internet browser.

For a more complete view of the characteristics of the control panels, please read the specific manuals.



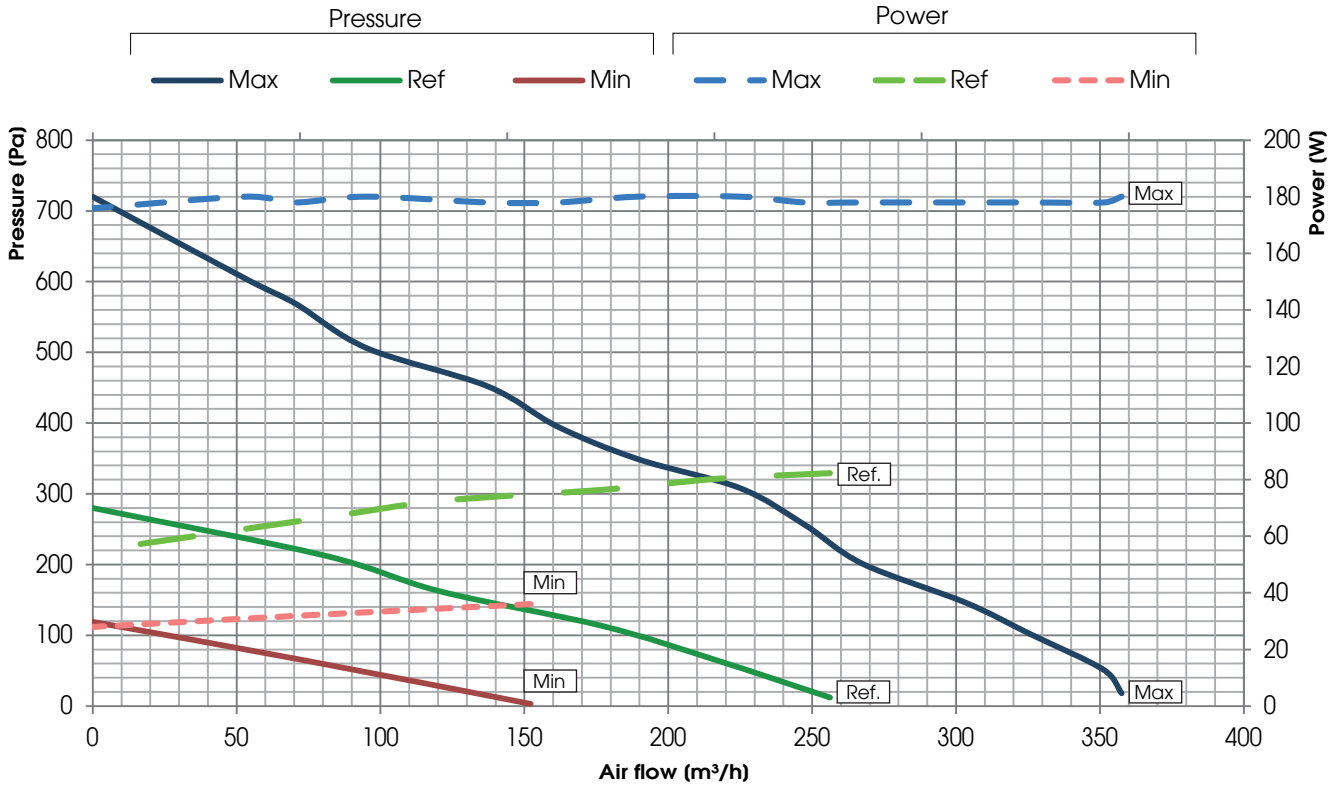
Counterflow heat exchanger made of aluminum manufactured by RECUTECH  
RECUTECH participates in the Eurovent Certification Program



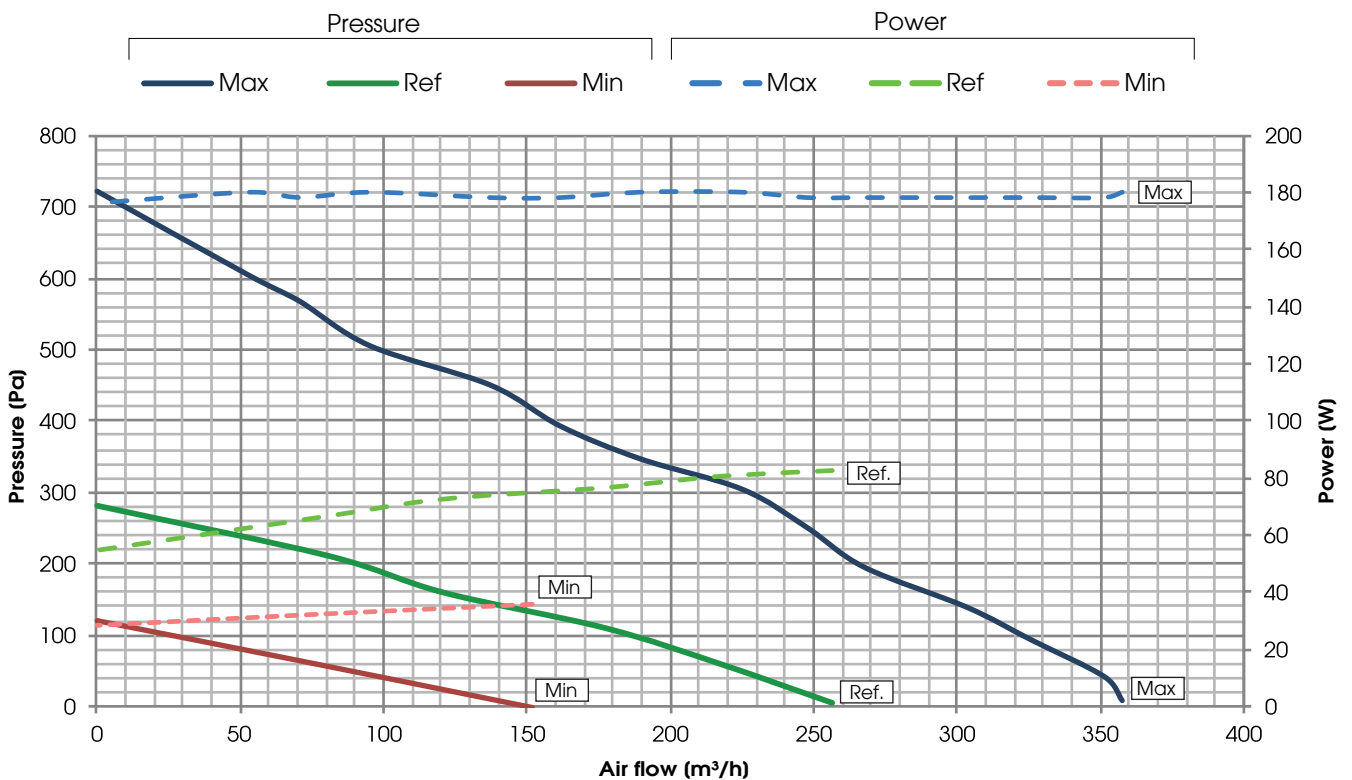
## PERFORMANCES (UNI EN 13141-7)

The unit must be ducted properly: UTEK authorizes the use only according to its performance diagram shown into this catalogue  
The declared performances are with CLEAN filters, and guaranteed ONLY with the original filters UTEK low pressure drop.

### HRE-RES 1



### HRE-RES 1 ENT

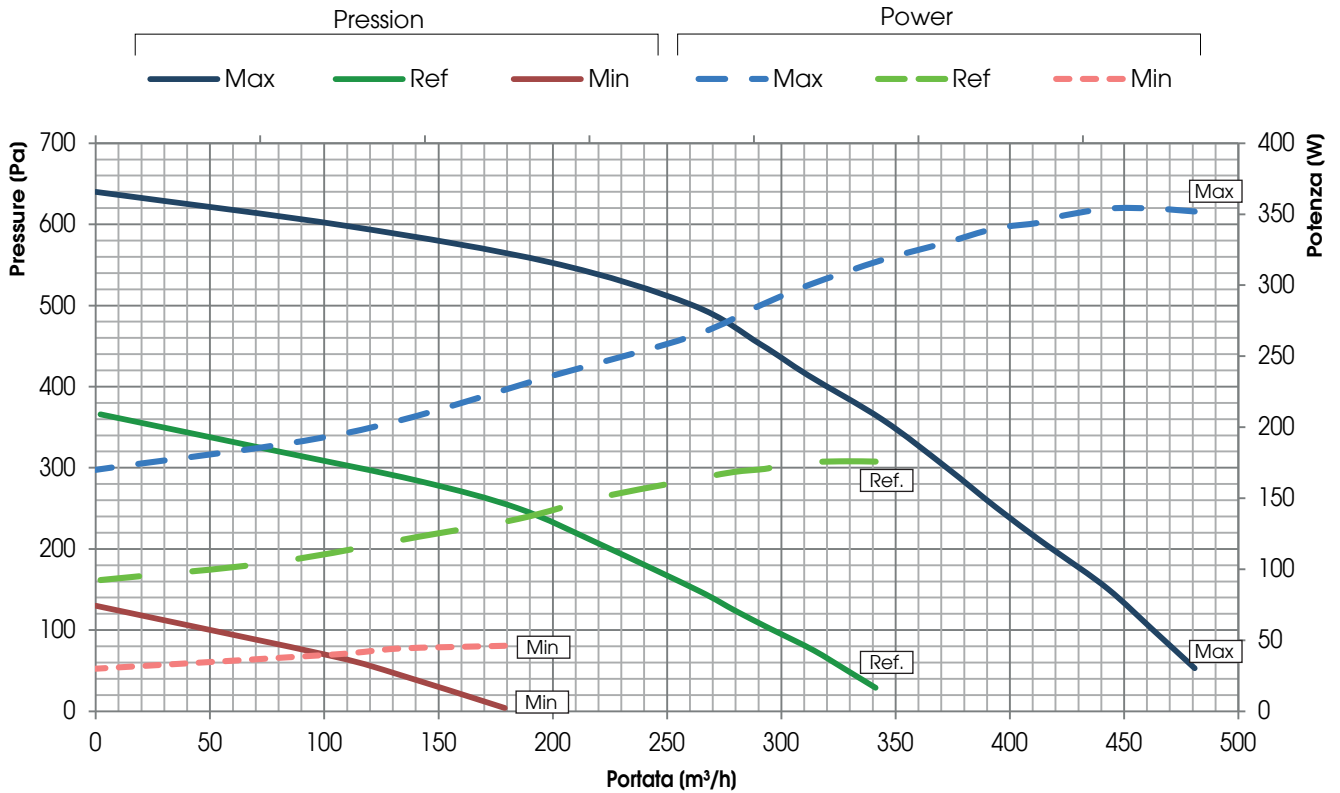




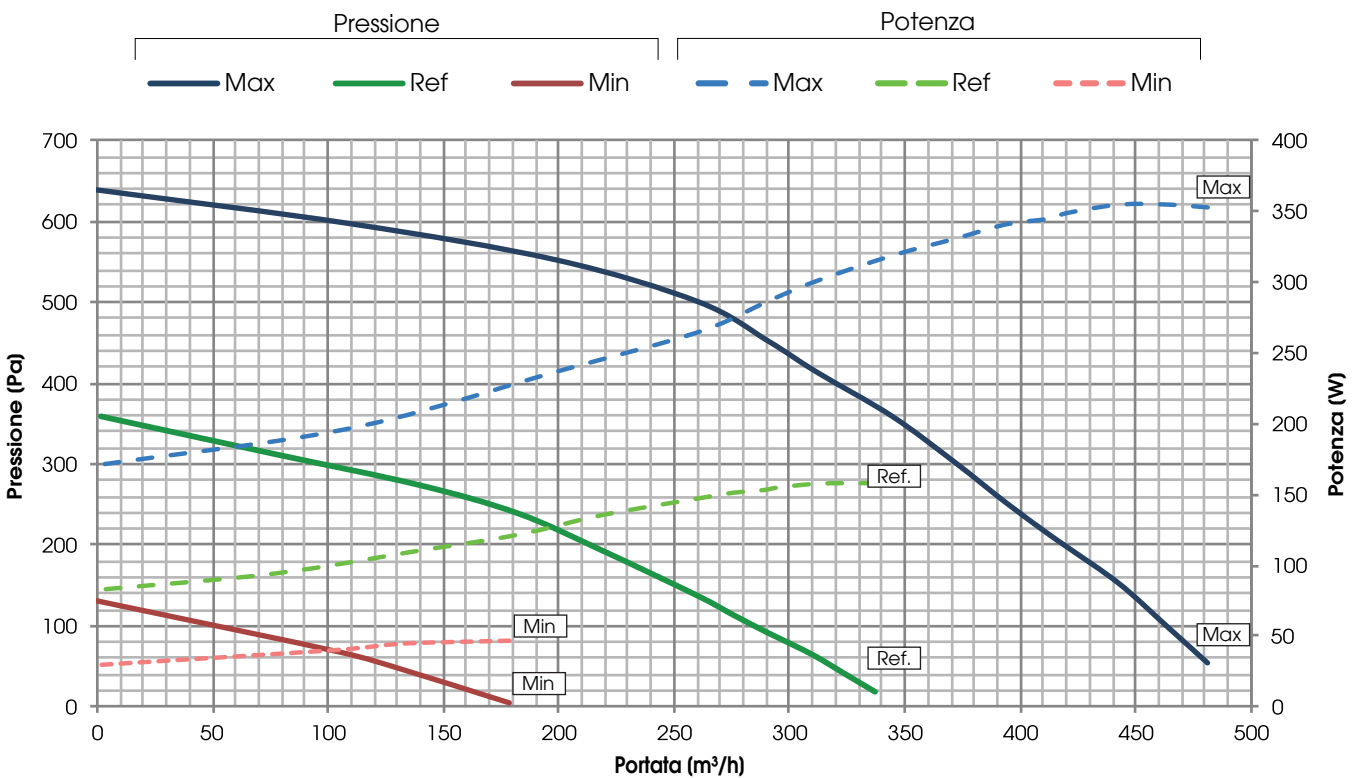
## PERFORMANCES (UNI EN 13141-7)

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The declared performances are with CLEAN filters, and guaranteed ONLY with the original filters UTEK low pressure drop.

### HRE-RES 2



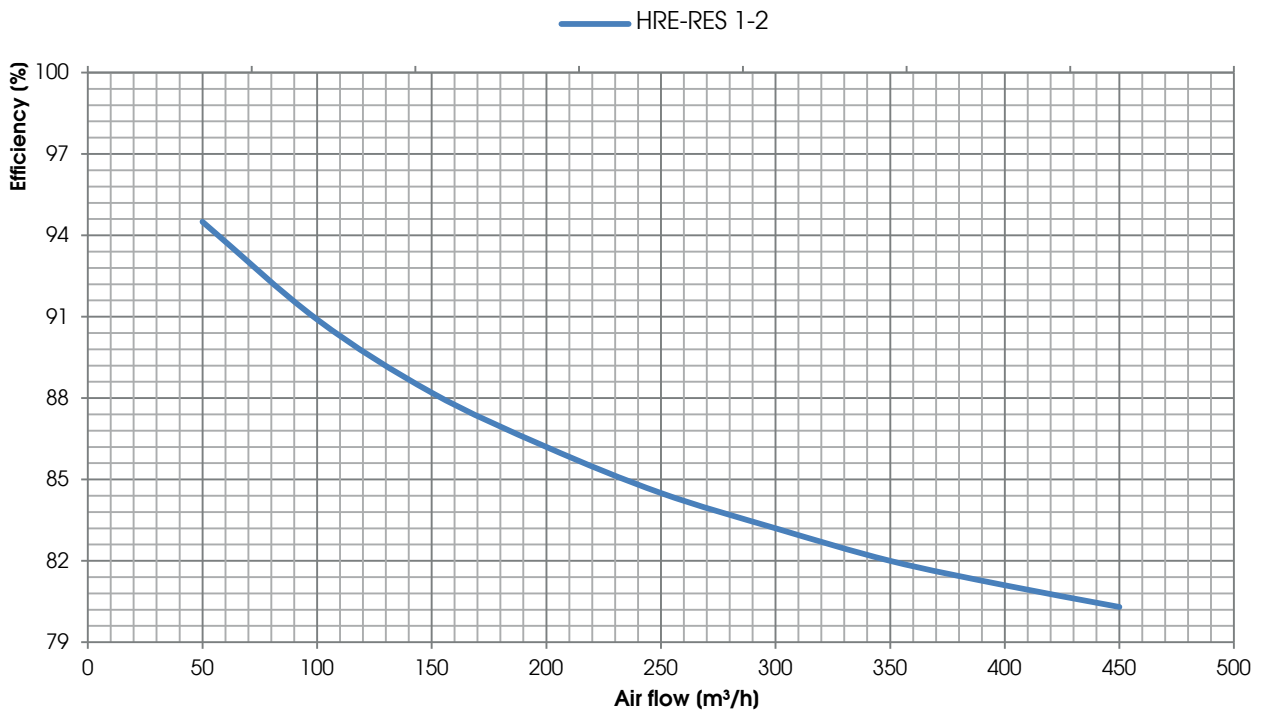
### HRE-RES 2 ENT



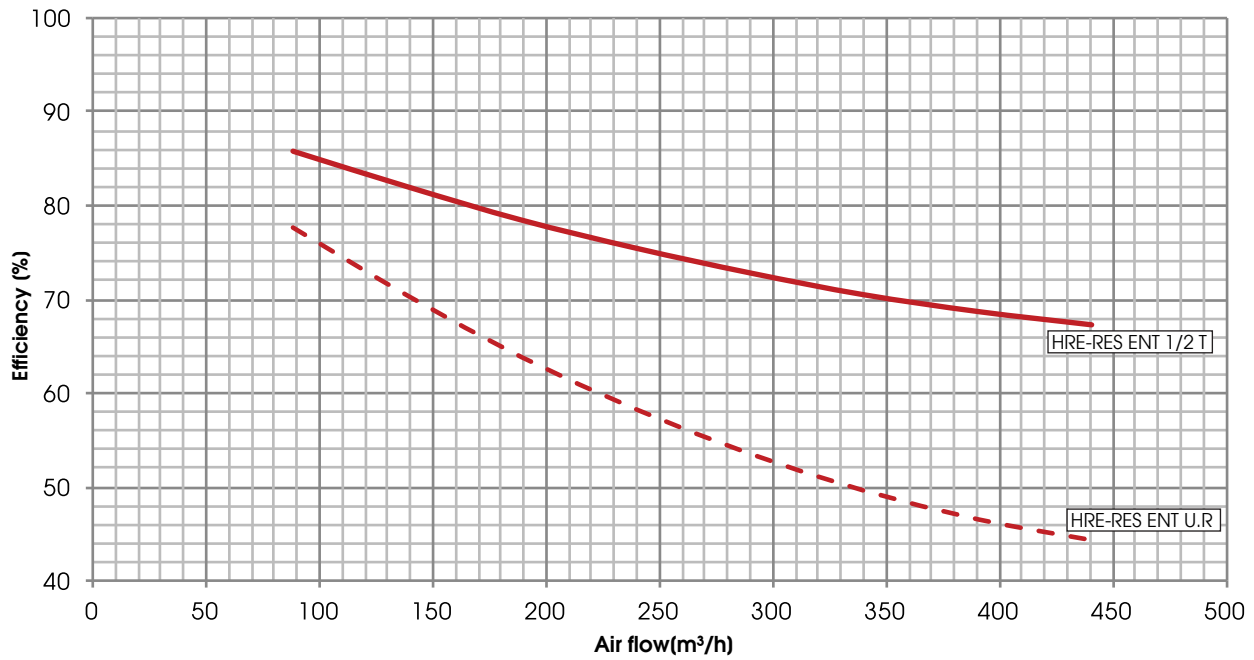


### HEAT RECOVERY PERFORMANCE (sensible efficiency)

Values referred to the following conditions (UNI EN 13141-7): T<sub>bs</sub> external air 7°C; U.R. external 72%; T<sub>bs</sub> environment 20°C; U.R. environment 28%



--- HRE-RES ENTHALPIC 1 and 2 / U.R. = recovery of latent heat  
— HRE-RES ENTHALPIC 1 and 2 / T = recovery of sensitive heat





### TEST LEAKAGE HRE-RES 1/ENT according UNI EN 13141-7

LEAKAGE	TEST CONDITIONS	CLASS
OUTDOOR	Positive pression 250 Pa	A1
OUTDOOR	Negative pression 250 Pa	A1
INDOOR	Pressure difference 100 Pa	A2

### TEST LEAKAGE HRE-RES 2/ENT according UNI EN 13141-7

LEAKAGE	TEST CONDITIONS	CLASS
OUTDOOR	Positive pression 250 Pa	A1
OUTDOOR	Negative pression 250 Pa	A1
INDOOR	Pressure difference 100 Pa	A2

### NOISE LEVEL

L<sub>w</sub> Sound power level taken in accordance to UNI EN ISO 3747 - CLASS 3

Unit HRE-RES 1/ENT	NOISE FROM THE CASE (dB)							L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	59,8	69,2	62,9	54,7	49,8	43,7	47,7	64,2
REF	61,3	69,2	61,9	51,3	46,6	42,1	45,8	63,4

Unit HRE-RES 1/ENT	NOISE IN THE DUCTS (dB)							L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	59,2	67,8	66,1	57,9	60,0	55,2	59,2	67,7
REF	58,8	67,9	64,3	57,9	59,4	54,5	58,3	66,8

Unit HRE-RES 2/ENT	NOISE FROM THE CASE (dB)							L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	65,4	72,4	68,8	59,2	53,3	47,8	49,9	68,7
REF	59,6	70,6	59,2	51,8	44,4	37,4	43,5	63,5

Unit HRE-RES 2/ENT	NOISE IN THE DUCTS (dB)							L <sub>w</sub> dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	68,3	75,7	72,2	68,2	66,7	63,2	67,0	75,1
REF	60,8	72,3	63,3	59,1	58,6	54,1	58,2	67,8

### ELECTRICAL DATA

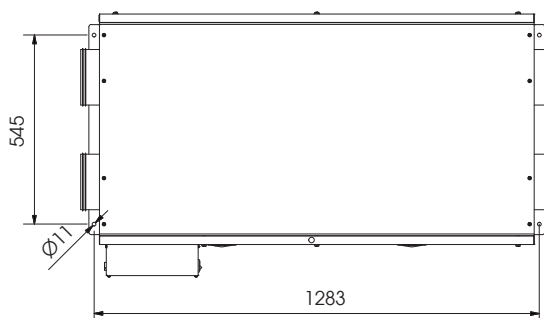
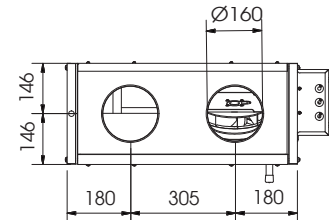
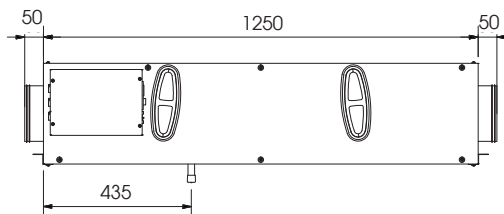
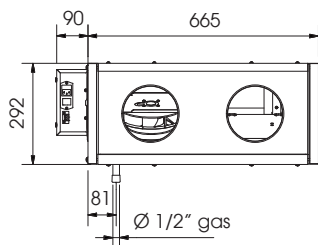
MATCHING	FANS				UNIT HRE-RES	
	Power* (W)	Supply	Current max. (A)	Insulation class	Supply	Current max. (A)
HRE-RES 1/ENT	2 x 85	230 V, 50/60 Hz 1F	2 x 0,75	IP 54	230 V, 50 Hz 1F	1,6
HRE-RES 2/ENT	2 x 170	230 V, 50/60 Hz 1F	2 x 1,65	IP 54	230 V, 50 Hz 1F	3,5

(\*) Fan data, it's referred to the global absorbed power graph of the machine in the working point

### DIMENSIONS (mm) WEIGHT (kg)

NOTE: same case for HRE-RES 1 and HRE-RES 2

Weight: 62 kg

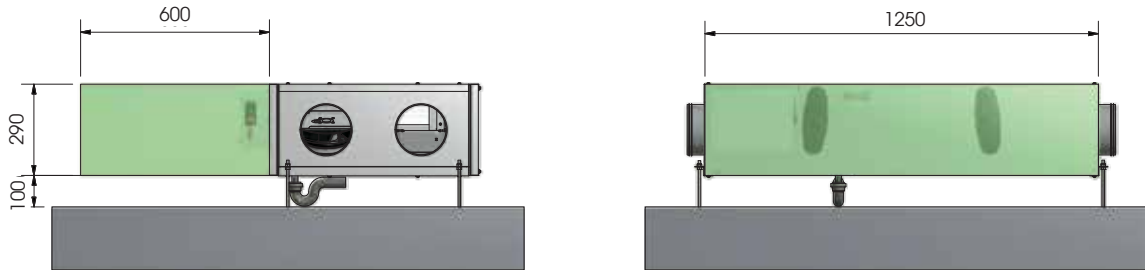




## INSTALLATION HRE-RES

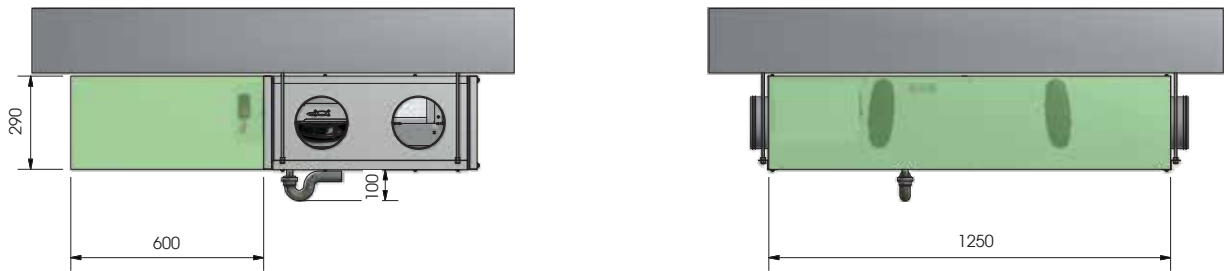
### FLOOR INSTALLATION

■ Minimum required space for maintenance (mm)

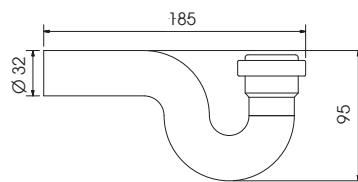


### CEILING INSTALLATION

■ Minimum required space for maintenance (mm)



### STANDARD SIPHON (mm)



A	Manufacturer's name	C.L.A. S.r.l			
B	Manufacturer's model identifier	HIRE-RES 1 BP EVO-PH SH	HIRE-RES 1 BP CTR08-PH SH	HIRE-RES 2 BP EVO-PH SH	HIRE-RES 2 BP CTR08-PH SH
C	Specific energy consumption (SEC) (kWh/m <sup>2</sup> .a)	-71,3	-69,7	-64,6	-62,4
	AVERAGE WARM	-34,1	-32,8	-28,2	-26,3
D	SEC class	A	B	B	B
	Declared typology	UVR - UVB	UVR - UVB	UVR - UVB	UVR - UVB
E	Type of drive installed	Variable speed	Variable speed	Variable speed	Variable speed
F	Type of heat recovery system	Recuperative	Recuperative	Recuperative	Recuperative
G	Thermal efficiency of heat recovery (%)	84,7	84,7	82,5	82,5
H	Maximum flow rate (m <sup>3</sup> /s)	0,091	0,091	0,129	0,129
I	Electrical power input at maximum flow rate (W)	178	178	354	354
J	Sound power level (Lwa)(dB)	63	63	64	64
K	Reference flow rate (m <sup>3</sup> /s)	0,064	0,064	0,092	0,092
L	Reference pressure difference (Pa)	50	50	50	50
M	SPI (W/m <sup>3</sup> /h)	0,354	0,354	0,533	0,533
N	Control factor CLTR	0,95	1	0,95	1
	Control typology	Clock control (no DCV)	Manual control (no DCV)	Clock control (no DCV)	Manual control (no DCV)
O	Declared maximum internal / external leakage rates (%)	6.6 / 3.1	6.6 / 3.1	4.5 / 2.1	4.5 / 2.1
P	Mixing rate of non-ducted bidirectional ventilation units (%)	-	-	-	-
Q	Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	Filter warning is signaled on the display of the control system; the flashing writing "DirtyFilters" will appear. "To preserve the energy efficiency of the NRVU, it's recommended to replace the filters when signaled." Positioned near the filters inspection			
R	For unidirectional ventilation systems, instructions to install regulated supply/exhaust grilles in the façade for natural air supply/extraction	-			
S	Internet address for pre-/dis-assembly instructions	www.ufek.it			
T	For non-ducted units only: the airflow sensitivity to pressure variations at + 20 Pa and - 20 Pa	-			
U	For non-ducted units only: the indoor/outdoor air tightness	-			
V	The annual electricity consumption (AEC) (kWh/a)	450	490	650	710
W	The annual heating saved (AHS) for each type of climate (kWh/a)	2010 (WARM)	2000 (WARM)	1980 (WARM)	1960 (WARM)
		8710 (COLD)	8660 (COLD)	8550 (COLD)	8500 (COLD)
		4450 (AVERAGE)	4430 (AVERAGE)	4370 (AVERAGE)	4340 (AVERAGE)



A	Manufacturer's name	C.L.A. S.r.l			
B	Manufacturer's model identifier	HIRE-RES 1 ENT BP EVO-PH SH	HIRE-RES 1 ENT BP CTR08-PH SH	HIRE-RES 2 ENT BP EVO-PH SH	HIRE-RES 2 ENT BP CTR08-PH SH
C	Specific energy consumption (SEC) (kWh/m <sup>2</sup> .a)	-65,9	-64,1	-59,3	-56,9
	AVERAGE	-31,3	-29,8	-26,0	-24,1
	WARM	-8,8	-7,5	-4,3	-2,6
	SEC class	B	B	B	C
D	Declared typology	UVR - UVB			
E	Type of drive installed	Variable speed			
F	Type of heat recovery system	Recuperative			
G	Thermal efficiency of heat recovery (%)	76,4			
H	Maximum flow rate (m <sup>3</sup> /s)	0,089			
I	Electrical power input at maximum flow rate (W)	178			
I	Sound power level (L <sub>wa</sub> )(dB)	63	63	64	64
	Reference flow rate (m <sup>3</sup> /s)	0,063			
L	Reference pressure difference (Pa)	50			
M	SPI (W/m <sup>3</sup> /h)	0,359			
N	Control factor CLTR	0,95			
	Control typology	Clock control (no DCV)	Manual control (no DCV)	Clock control (no DCV)	Manual control (no DCV)
O	Declared maximum internal / external leakage rates (%)	6.7 / 3.1			
P	Mixing rate of non-ducted bidirectional ventilation units (%)	-			
Q	Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	Filter warning is signaled on the display of the control system: the flashing writing "DirtyFilters" will appear. To preserve the energy efficiency of the NIRVU, it's recommended to replace the filters when signaled. - Positioned near the filters inspection			
R	For unidirectional ventilation systems, instructions to install regulated supply/exhaust grilles in the façade for natural air supply/extraction	-			
S	Internet address for pre-/dis-assembly instructions	www.ufek.it			
T	For non-ducted units only: the airflow sensitivity to pressure variations at + 20 Pa and - 20 Pa	-			
U	For non-ducted units only: the indoor/outdoor air tightness	-			
V	The annual electricity consumption (AEC) (kWh/a)	450	494	602	662
W	The annual heating saved (AHS) for each type of climate (kWh/a)	1890 (WARM)	1880 (WARM)	1830 (WARM)	1810 (WARM)
		8190 (COLD)	8110 (COLD)	7900 (COLD)	7810 (COLD)
		4190 (AVERAGE)	4150 (AVERAGE)	4040 (AVERAGE)	3990 (AVERAGE)

CLA & UTEK reserves the right to at any time the necessary changes to improve products without prior notice .

Dear Customer

Thanks for your attention to the product UTEK , designed and manufactured to ensure the real values to the User : Quality, Safety and Savings on working.



Made in Italy

**COMPANY WITH  
QUALITY SYSTEM  
CERTIFIED BY DNV GL**  
ISO 9001



the Dealer

HRE-RES\_2016\_2\_EN



HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS