



indoor air quality and energy saving

TECHNICAL DATA



UNIT	CONTROL	ENERGETIC CLASS	
FLAT-V 1	CTRS	B	A+
	EVO(D)-PH	A	A
	EVO(D)-PH + probe	A	B
FLAT-V 2	CTRS	B	C
	EVO(D)-PH	A	D
	EVO(D)-PH + probe	A	E

FLAT-V



HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS



FLAT-V

High efficiency heat recovery ventilation unit with double flow for residential buildings. There are 2 sizes.

EQUIPPED

The FLAT-V 1 unit is equipped with a PVC counter-current heat exchanger while the size 2 with an aluminum exchanger (Eurovent®certified). Backward curved centrifugal fans. The standard partial by-pass allows you to take advantage of favorable climatic conditions outside the building for free cooling (or free heating).

STRUCTURE

The FLAT is realized with a self-supporting casing made by panels, thickness 22 mm, sandwiched on injected polyurethane foam insulation. The casing and the internal parts are realized in zinc magnesium, material with a high resistance to corrosion and an outside attractive appearance. A panel with a hinged opening makes it easy to access the filters ePM1 55% (ex F7) and ePM10 50% (ex G4). FLAT-V is designed to be installed inside buildings with an ambient temperature between 0 °C and 45 °C and can be installed on the wall.

CONTROLS

The FLAT is supplied with control system and easy connection to the power supply. It's also available the versions with simplified CTR-S 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 CTR-S control allows the user to select three levels of fan speed or the possibility to stop them. It automatically manages the bypass 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 (dirty control with hour counter, factory setting); filters G4 renewal / G4 recovery and by-pass made by fans unbalance (recommended a ventilation grid).

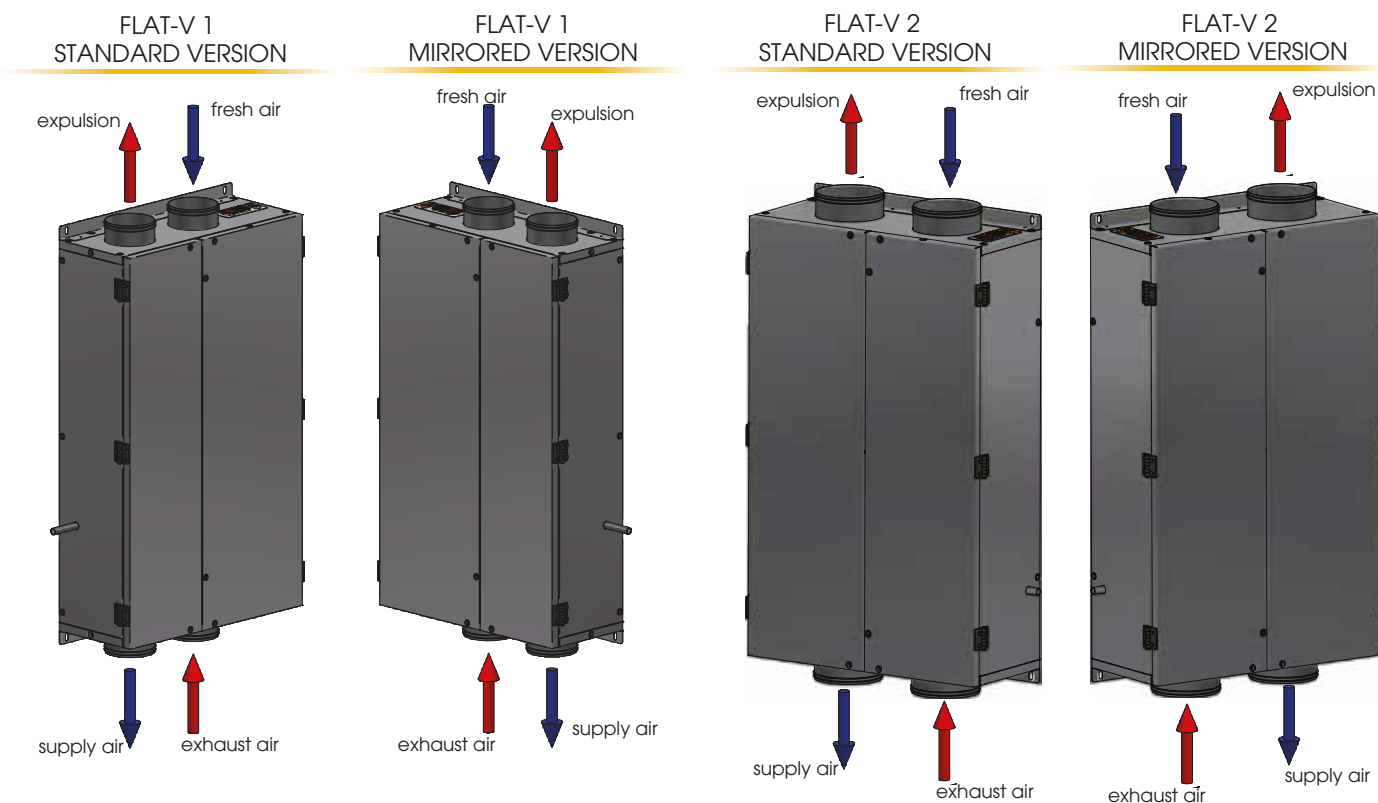
The EVO-PH control has a colorful touch screen interface, it gives an intuitive operating status of the unit and it allows programming the fan speed. This control has a weekly time schedule for automatic fans, it can be controlled by an external switch to activate the booster and it can automatically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



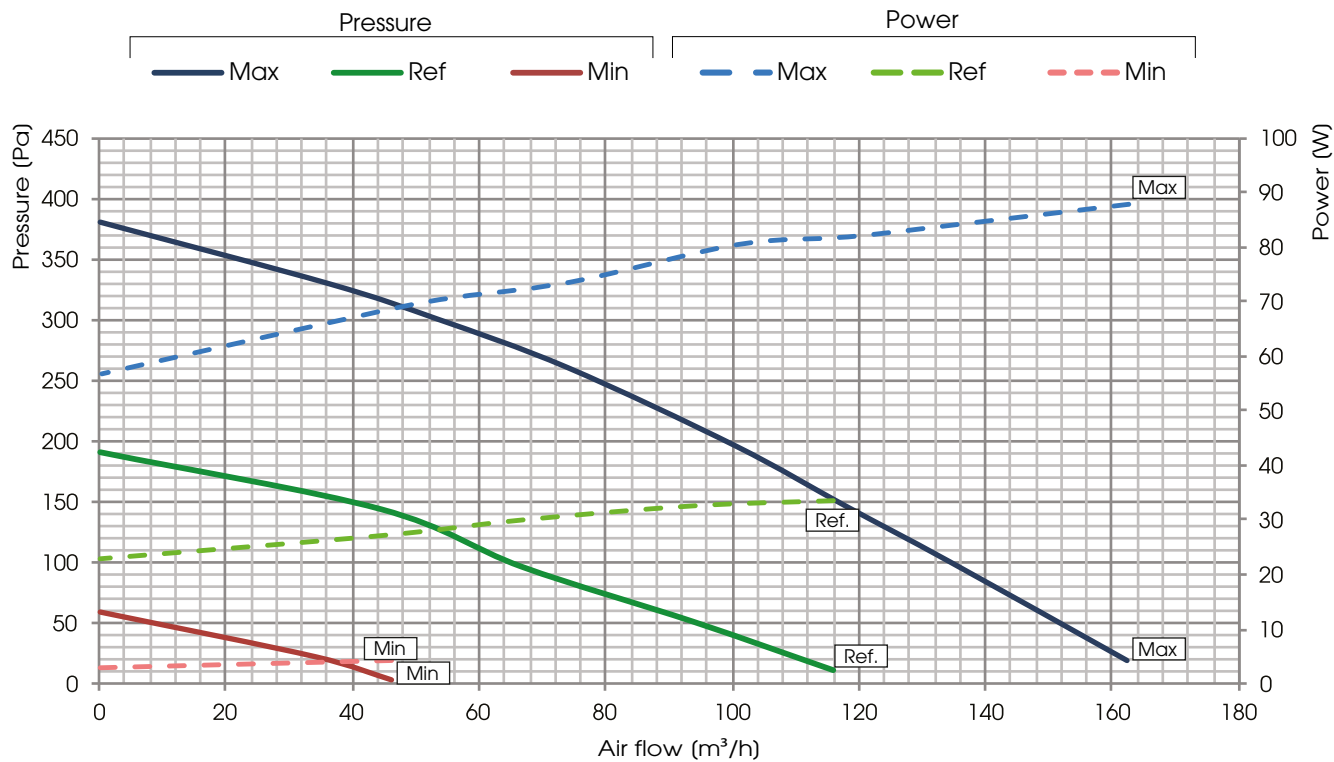
NOTE: FLAT-V 1 STANDARD the condensate drain is on the left side of the unit; FLAT V 2 STANDARD the condensate drain is on the right side of the unit



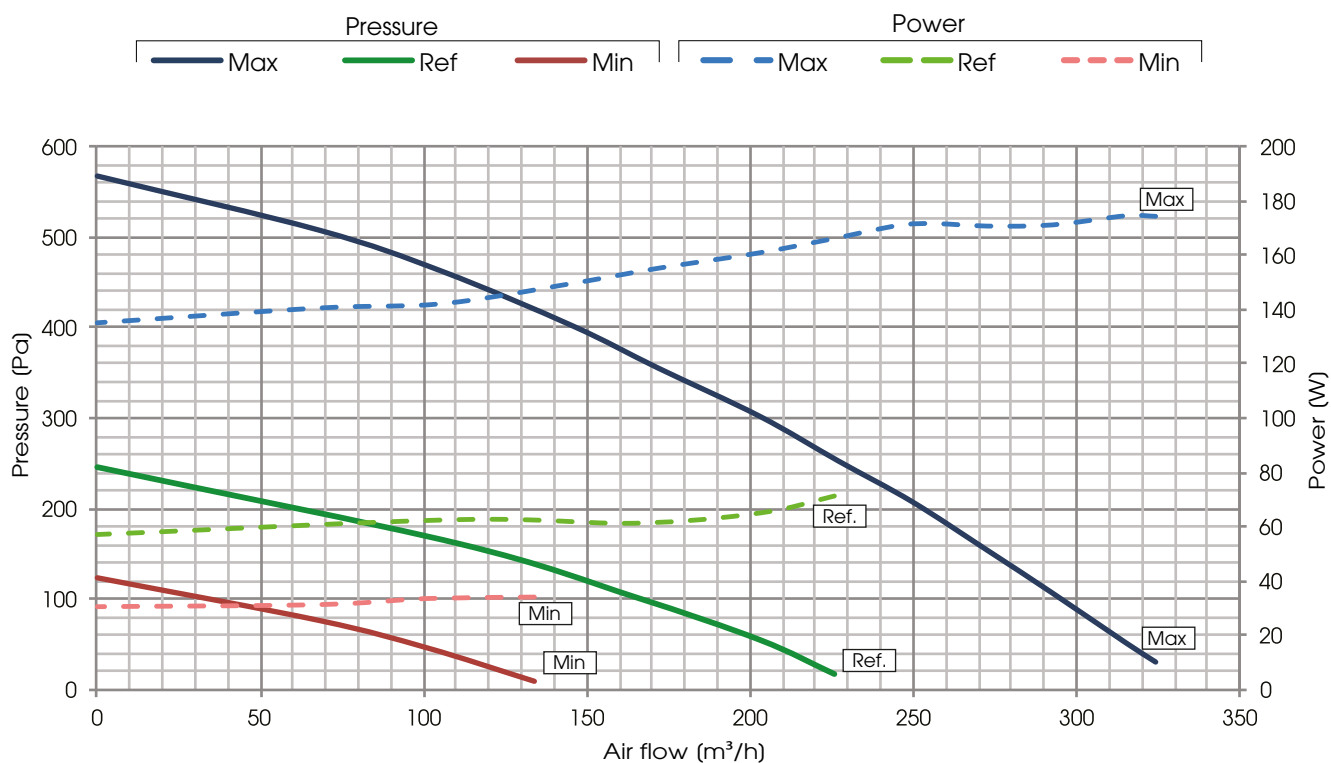
PERFORMANCES (UNI EN 13141-7)

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.

FLAT-V 1



FLAT-V 2



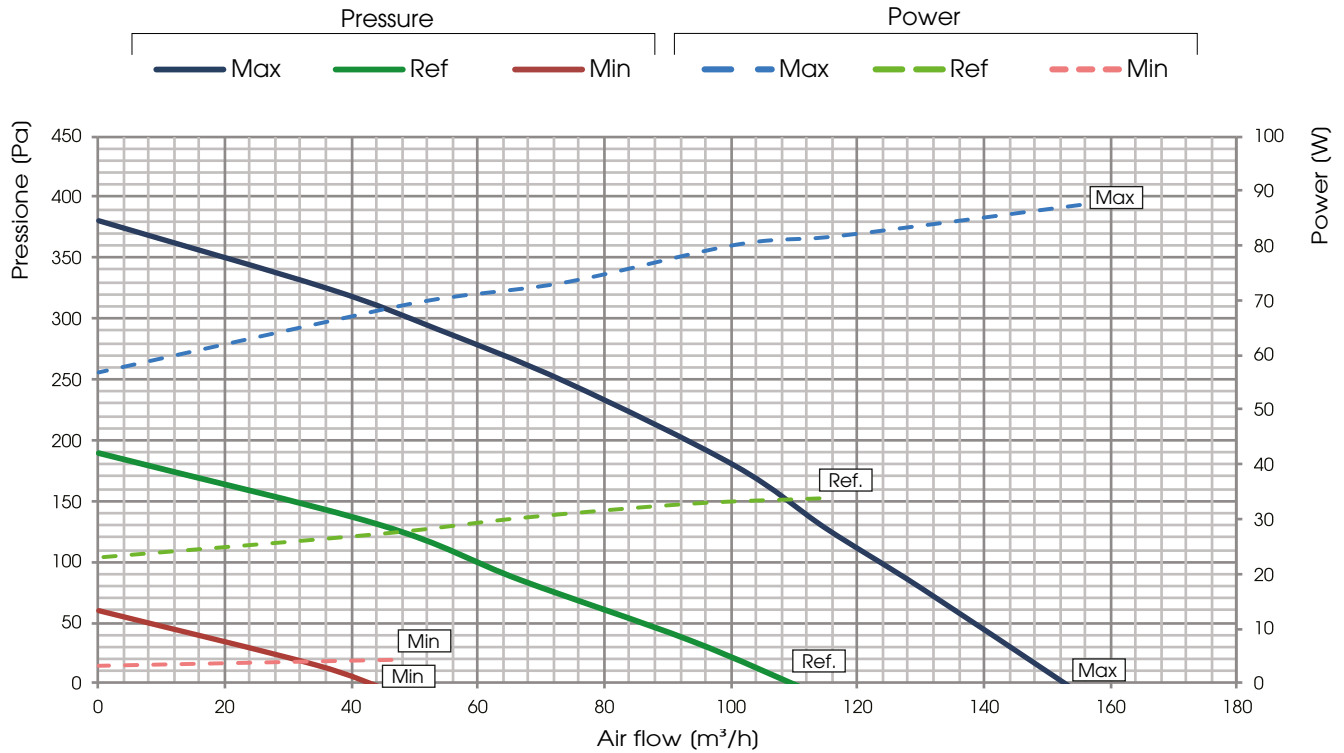


PERFORMANCES (UNI EN 13141-7)

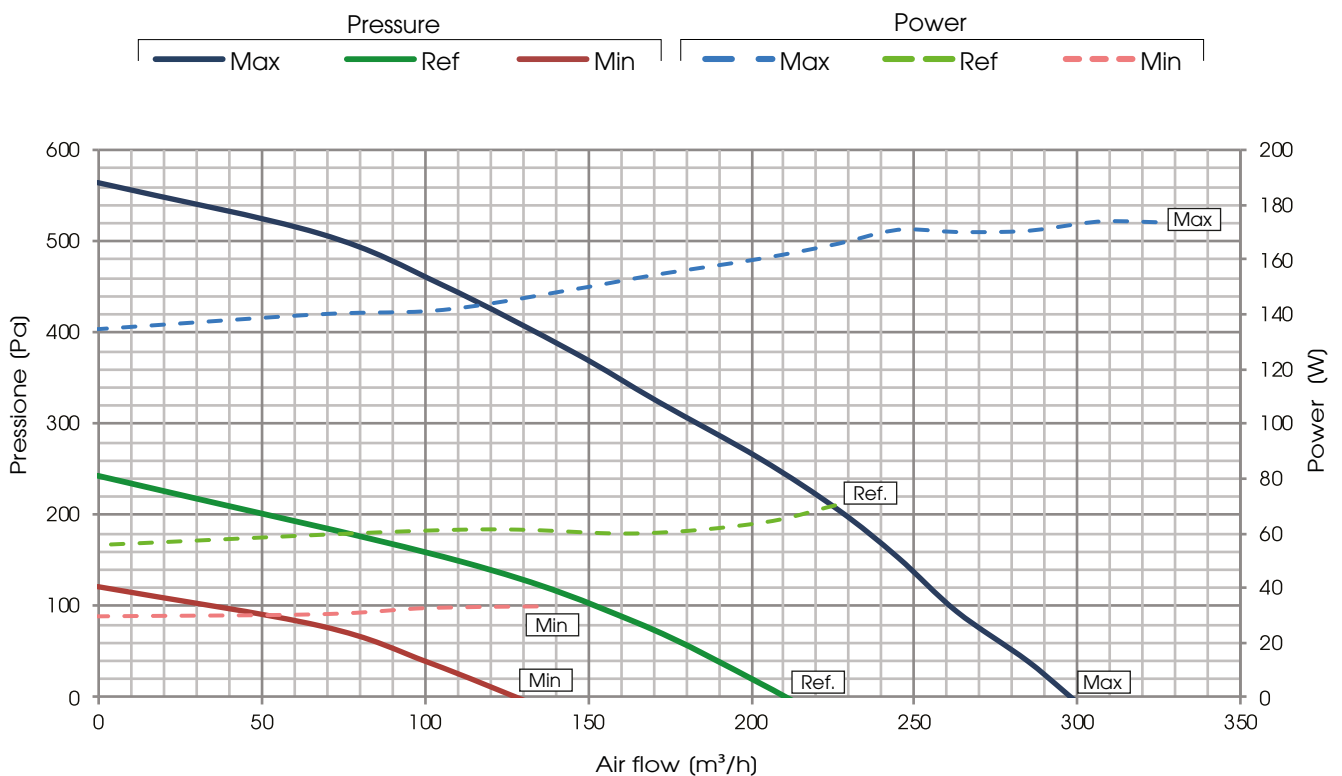
The unit must be ducted properly: UTEK authorizes the use only according to its performance diagram shown into this catalogue

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

FLAT-V 1 ENT



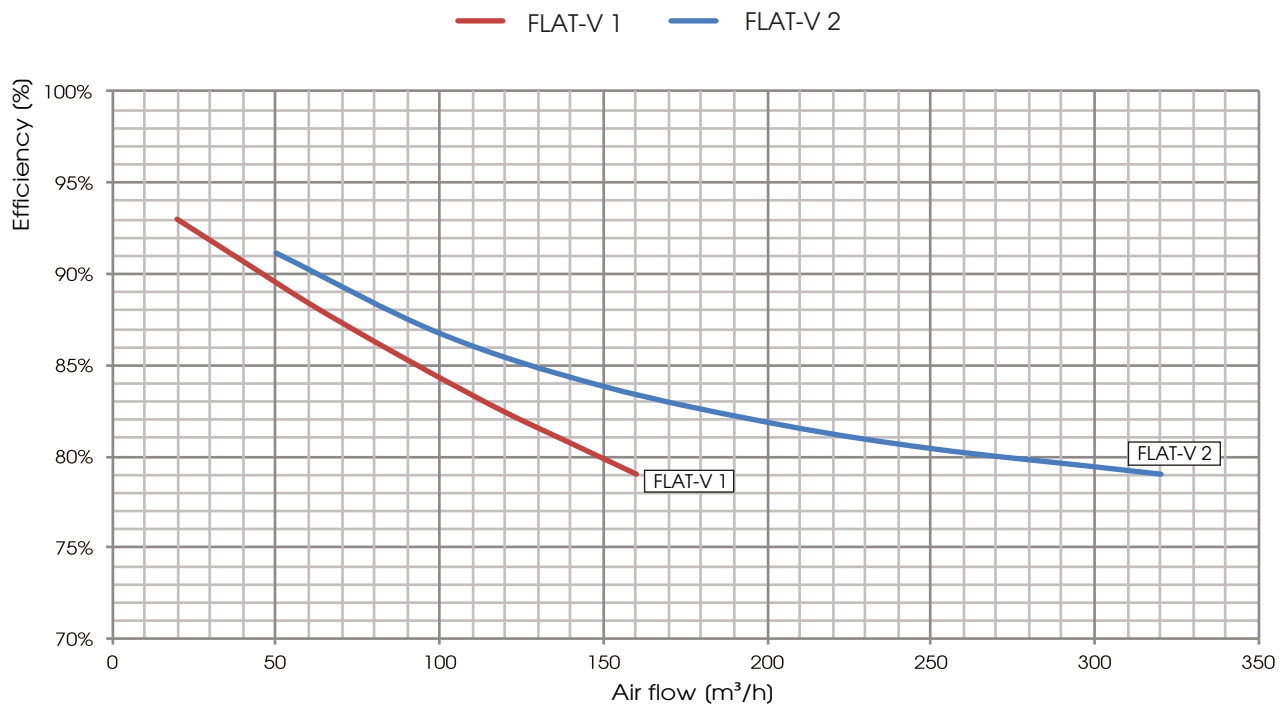
FLAT-V 2 ENT





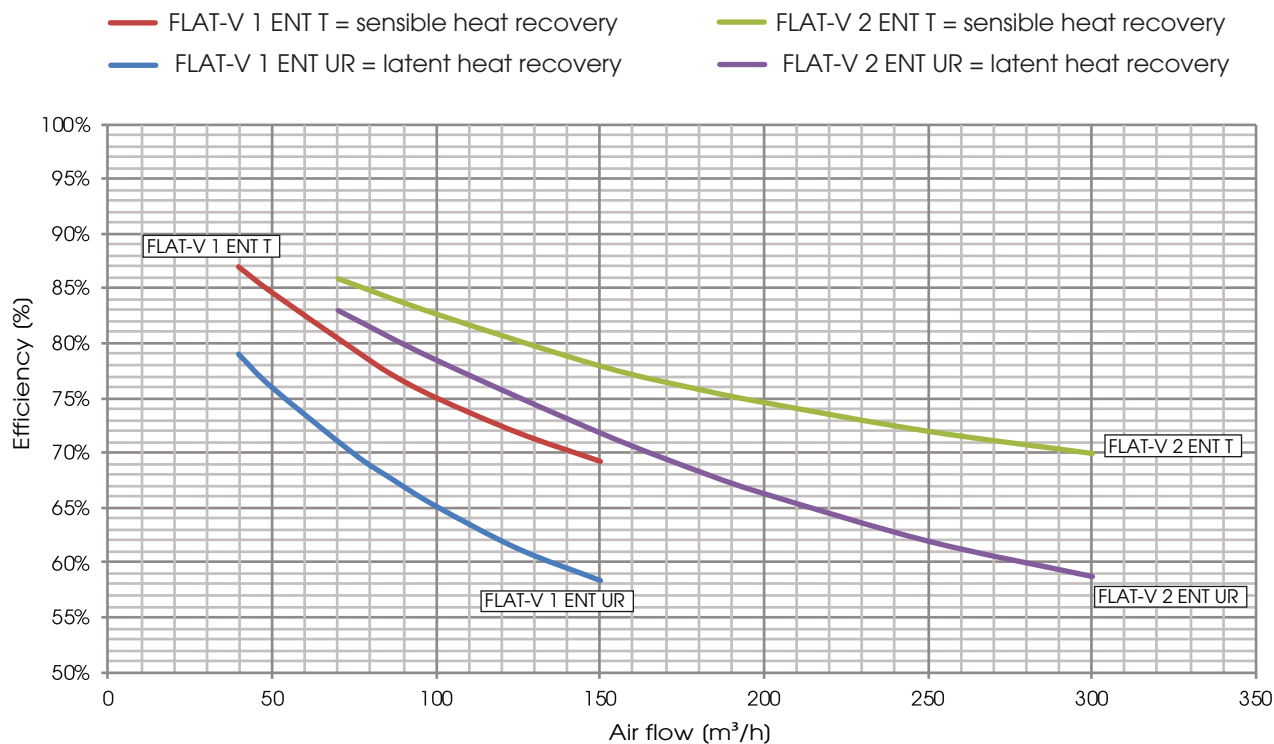
HEAT RECOVERY PERFORMANCE (sensible efficiency)

Values referred to the following conditions (UNI EN 13141-7): T_{bs} external air 7°C; U.R. external 72%; T_{bs} environment 20°C; U.R. environment 38%



HEAT RECOVERY EFFICIENCY (sensitive and latent efficiency)

Values referred to the following conditions (UNI EN 13141-7): T_{bs} external air 7°C; U.R. external 72%; T_{bs} environment 20°C; U.R. environment 38%





TEST LEAKAGE FLAT-VER according UNI EN 13141-7

LEAKAGE	TEST CONDITIONS	FLAT-V 1 CLASS	FLAT-V 2 CLASS
ESTERNO	Positive pression 250 Pa	A3	A2
ESTERNO	Negative pression 250 Pa	A3	A2
INTERNO	Pressure difference 100 Pa	A3	A2

NOISE LEVEL

Lw Sound power level taken in accordance to UNI EN ISO 3747 CLASS 3

	NOISE FROM THE CASE (dB)							
Unit FLAT-V 1	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L _w dB(A)
100%	58,5	69,8	61,2	49,0	42,6	34,5	40,3	63,2
REF	52,7	62,8	50,7	43,6	32,3	27,7	37,6	55,5

	NOISE IN THE DUCTS (dB)							
Unit FLAT-V 1	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L _w dB(A)
100%	59,8	71,1	67,4	59,4	53,6	50,6	52,5	67,7
REF	53,9	64,0	59,2	48,7	43,9	41,0	42,7	59,5

	NOISE FROM THE CASE (dB)							
Unit FLAT-V 2	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L _w dB(A)
100%	59,9	66,0	64,1	49,0	44,7	39,1	40,9	62,9
REF	52,6	63,5	51,0	42,2	36,4	30,9	38,9	56,1

	NOISE IN THE DUCTS (dB)							
Unit FLAT-V 2	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L _w dB(A)
100%	58,4	72,2	66,2	57,7	55,0	53,0	62,0	68,3
REF	51,4	70,3	53,7	49,5	47,3	43,4	49,2	62,6

ELECTRICAL DATA

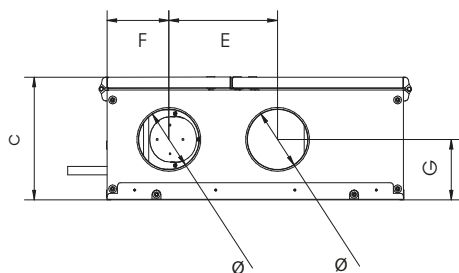
UNIT	FAN				UNIT FLAT-V	
	Power *(W)	Supply	Courrent max.(A)	Insulation class	Supply	Courrent max.(A)
FLAT-V 1	2 X 50	230 V, 50/60 Hz 1F	2 X 0,46	IP 54 classe B	230 V, 50 Hz 1F	1,0
FLAT-V 2	2 X 85	230 V, 50/60 Hz 1F	2 X 0,75	IP 54 classe B	230 V, 50 Hz 1F	1,6

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



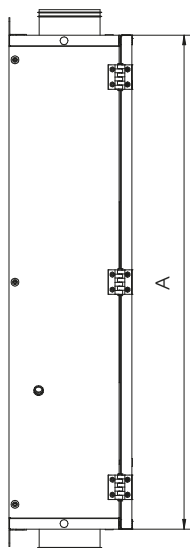
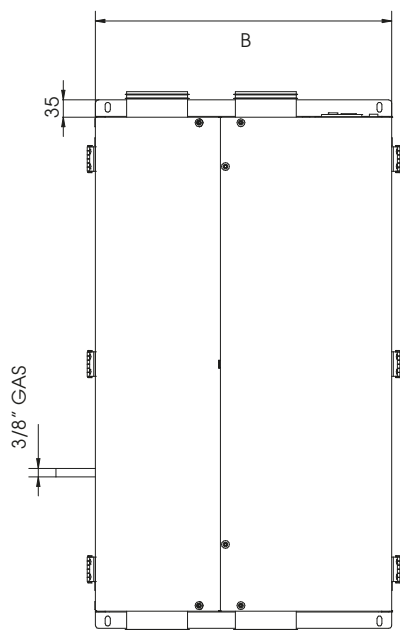
FLAT-V 1 e 2

DIMENSIONS (mm) WEIGHT (kg)



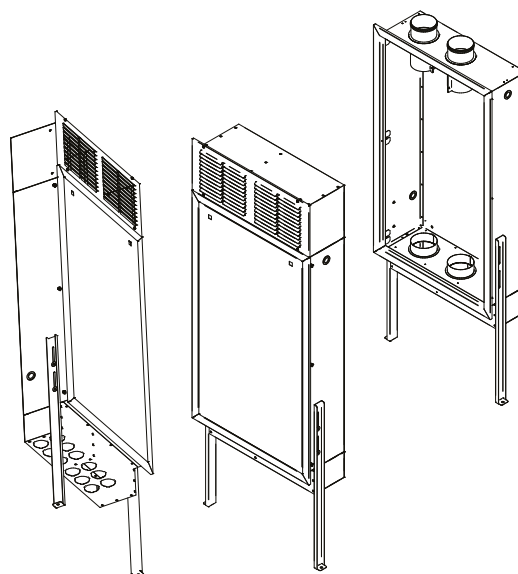
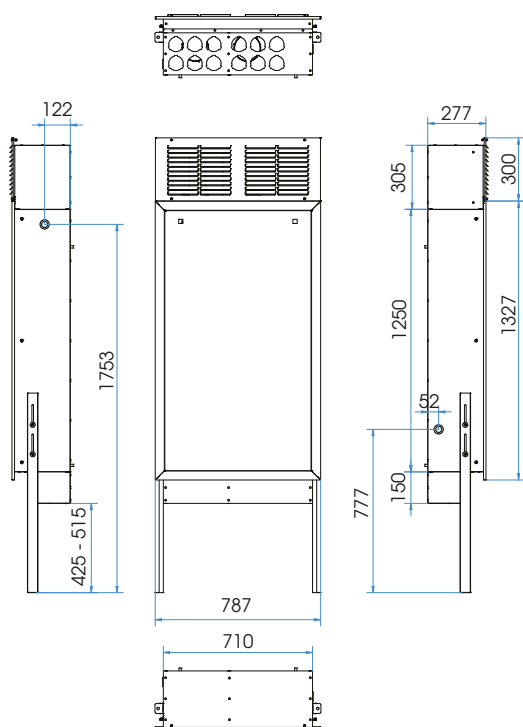
UNIT	A	B	C	E	F	G	Ø	Weight (kg)
FLAT-V 1	1000	600	248,5	248	97	122,5	125	34
FLAT-V 2	1060	650	273	320	145	124	160	41

NOTE: the FLAT-V1 is represented in the image on the slide;
the condensate drain of the FLAT-V 2 is on the opposite side



FLAT-V 1 RECESSED FRAME (available as an accessory)

DIMENSIONS (mm) WEIGHT (kg)

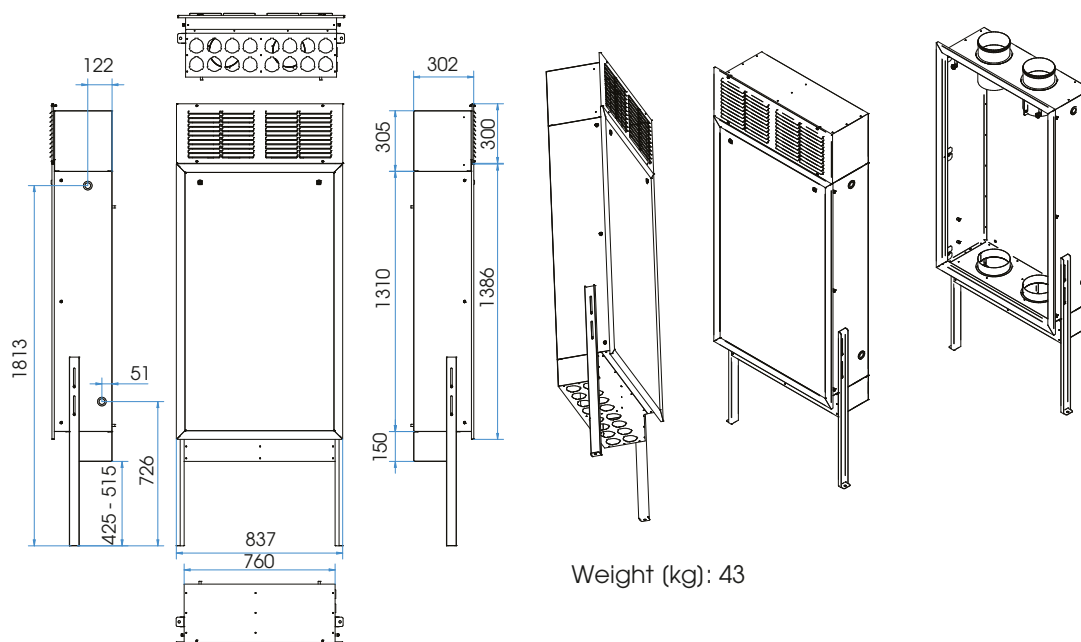


Weight (kg): 39,2



FLAT-V 2 RECESSED FRAME (available as an accessory)

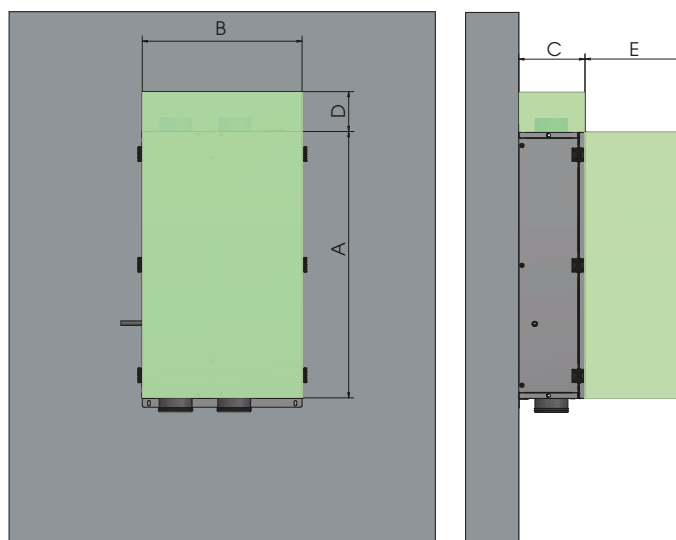
DIMENSIONS (mm) WEIGHT (kg)



FLAT-V 1 and 2 Wall Installation

Minimum required space for maintenance (mm)

NOTE: the FLAT-V1 is represented in the image on the side; the condensate drain of the FLAT-V 2 is on the opposite side



UNIT	A	B	C	D	E
FLAT-V 1	1000	600	248.5	150	380
FLAT-V 2	1060	650	273	150	350

Electrical resistance

DATI RESISTENZA ELETTRICA DI PRE RISCALDAMENTO

Model	Supply	Power (kW)	Courent (A)	No. of stages
FLAT-V 1/2	230V, 50Hz, 1F	0.5	2,2	1

N.B. - for POST treatment batteries see the Tecno-price list ACCESSORIES

A	Manufacturer's name C.L.A. S.r.l				
B	Manufacturer's model identifier	FLAT 1 V BP CTR-S SV	FLAT 1 V BP EVO-PH SV	FLAT 2 V BP CTR-S SV	FLAT 2 V BP EVO-PH SV
C	Specific energy consumption (SEC) (kWh/m².a)	-69,7	-71,3	-68,8	-70,3
	COLD TEMPERATE	-32,8	-34,1	-32,9	-34,1
	WARM	-9,1	-10,2	-9,7	-10,8
	SEC class	B	A	B	A
D	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	Recovery	Recovery	Recovery	Recovery
G	Thermal efficiency of heat recovery (%)	84,9%	84,9%	82,0%	82,0%
H	Maximum flow rate (m³/s)	0,0375	0,0375	0,082	0,082
I	Electrical power input at maximum flow rate (W)	84	84	171	171
I	Sound power level (Lwa)(dB)	55,5	55,5	56,1	56,1
K	Reference flow rate (m³/s)	0,026	0,026	0,057	0,057
L	Reference pressure difference (Pa)	50	50	50	50
M	SPI (W/m³/h)	0,348	0,348	0,314	0,314
	Control factor CLTR	1	0,95	1	0,95
N	Control typology	Manual control (no DCV)	Clock control (no DCV)	Manual control (no DCV)	Clock control (no DCV)
O	Declared maximum internal / external leakage rates (%)	16.0/16.0	16.0/16.0	6.9/5.9	6.9/5.9
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 The filter alarm is signaled on the Control System display: the intermittent "Dirty Filters" message will appear. "To maintain the energy efficiency of the UVR, it is recommended to replace the filters when reported." The writing is positioned near the filter 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.utek-air.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)	480	440	440	400
W	The annual heating saved (AHS) for each type of climate (kWh/a)	2000 (WARM)	2010 (WARM)	1950 (WARM)	1970 (WARM)
		8650 (COLD)	8690 (COLD)	8450 (COLD)	8500 (COLD)
		4420 (AVERAGE)	4440 (AVERAGE)	4320 (AVERAGE)	4350 (AVERAGE)

A	Manufacturer's name C.L.A. S.r.l				
B	Manufacturer's model identifier				
C	Specific energy consumption (SEC) (kWh/m².a)	COLD	FLAT 1 V ENT BP CTR-S SV	FLAT 1 V ENT BP EVO-PH SV	FLAT 2 V ENT BP CTR-S SV
		TEMPERATE	-64,1	-66,0	-64,9
		WARM	-29,5	-31,0	-30,8
			-7,1	-8,4	-8,7
			B	B	B
					B
D	Declared typology				
E	Type of drive installed		UVR - UVB	UVR - UVB	UVR - UVB
F	Type of heat recovery system		Variable speed	Variable speed	Variable speed
			Recovery	Recovery	Recovery
G	Thermal efficiency of heat recovery (%)		77,3%	77,3%	75,6%
H	Maximum flow rate (m³/s)		0,034	0,034	0,073
I	Electrical power input at maximum flow rate (W)		84	84	171
I	Sound power level (Lwa) (dB)		56	56	56
K	Reference flow rate (m³/s)		0,024	0,024	0,051
L	Reference pressure difference (Pa)		50	50	50
M	SPI (W/m³/h)		0,377	0,377	0,319
N	Control factor CLTR		1	0,95	1
	Control typology		Manual control (no DCV)	Clock control (no DCV)	Manual control (no DCV)
			17,3/17,3	17,3/17,3	7,7/6,6
O	Declared maximum internal / external leakage rates (%)		-	-	7,7/6,6
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				
	The filter alarm is signaled on the Control System display: the intermittent "Dirty Filters" message will appear. "To maintain the energy efficiency of the UVR, it is recommended to replace the filters when reported." The writing is positioned near the filter 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.utek-air.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)		517	471	444
W	The annual heating saved (AHS) for each type of climate (kWh/a)		1889 (WARM)	1905 (WARM)	1865 (WARM)
			8172 (COLD)	8243 (COLD)	8066 (COLD)
			4177 (AVERAGE)	4214 (AVERAGE)	4123(AVERAGE)
					405
					1882 (WARM)
					8142 (COLD)
					4162 (AVERAGE)

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

**AZIENDA CON SISTEMA
DI GESTIONE QUALITÀ
CERTIFICATO DA DNV GL
ISO 9001**

**AZIENDA CON
SISTEMA DI GESTIONE
AMBIENTALE CERTIFICATO
DA DNV
ISO 14001**



the Dealer
FLAT-V_2020_5_EN



HEAT RECOVERY VENTILATION UNITS for RESIDENTIAL BUILDINGS