



indoor air quality and energy saving

TECHNICAL DATA



UNIT	ENERGETIC CLASS
DEH-V 1	B
DEH-V 1- HYDRONIC	
DEH-V 2	A
DEH -V 2- HYDRONIC	

UNIT	ENERGETIC CLASS
DEH-V 1- ENT.	B
DEH-V 1- ENT.- HYDRONIC	
DEH-V 2- ENT.	B
DEH-V 2- ENT.- HYDRONIC	



DEH-V



HEAT RECOVERY VENTILATION UNITS of CLIMATIZATION and DEHUMIDIFICATION



DEH-V

Residential heat recovery ventilation unit with dehumidification in combination with radiant cooling systems. The unit is able to perform the dehumidification function of both the air contained in the volumes on which the machine is installed and the new air. DEH-V has been designed to be used in combination with radiant cooling systems, but, it can also be used independently. The relative humidity probe integrated into the unit allows DEH-V to activate the dehumidification function autonomously or at the request of the external control system. Thanks to the water coil, DEH-V, it can regulate the supply air temperature thus avoiding the main heating / cooling system having to deal with the renewal air.

- ePM1 55% (F7) filter on supply air flow, 65% Coarse filters (G4) on extraction and 40% Coarse filters (G2) on recirculation air flow
- Vertical configuration for floor or wall installation

PERFORMANCES

Range: nr. 2 models:

- DEH-V 1 with air flow 300-150 m³/h
- DEH-V 2 with air flow 500-250 m³/h

Range: nr. 2 models with enthalpy heat exchanger:

- DEH-ENTHALPIC 1 with air flow 300-150 m³/h
- DEH-ENTHALPIC 2 with air flow 500-250 m³/h

Both versions (with sensitive or enthalpy exchanger) are available with a water coil only, without refrigeration circuit (DEH-HYDRONIC).

STRUCTURE

- External double-paneled plastofilmed structure insulated sandwich with polyurethane foam (25 mm thick)
- zinc magnesium for the inside (internally isolated)
- Condensate collection tanks in zinc magnesium and condensate drains in the lower part
- Basic configuration: microprocessor control electronic and electrical panel pre-wired on board of the unit (plug & play)
- Configuration with CO₂ probe for automatic management of the renewal air flow
- Refrigerant circuit with hermetic compressor (alternative piston)
- Internal recirculation damper
- **Installation inside buildings, with temperatures between + 0 ° and + 45 ° C**

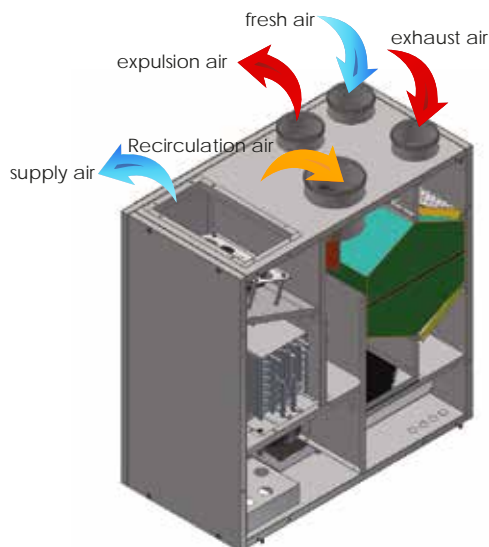
CONTROLS

DEH dehumidifiers are delivered in the plug & play version, with EVO remote terminal. The control allows you to:

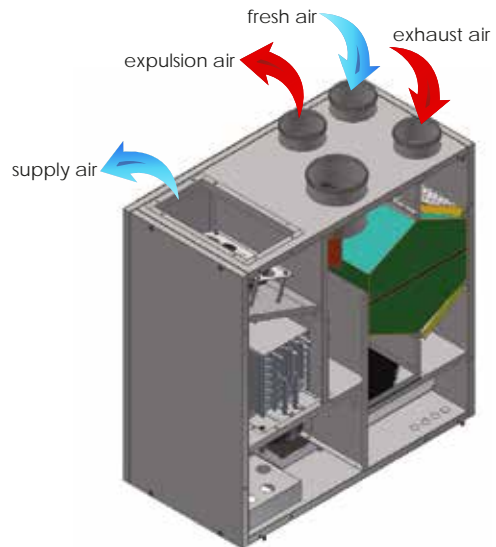
- Manual or automatic selection of fan speed via CO₂ probe (optional)
- One digital input for dehumidification start and stop (via remote system, for example from the control unit of the radiant system)
- Summer and winter thermal integration management (via 3-way valve, optional)
- Automatic heat exchanger frost prevention by unbalancing fans or electrical resistance
- Possibility of interfacing in home automation protocols via MOD-BUS RS485 (on request)
- Weekly chrono-thermostat
- Digital inputs with dedicated function; inputs = STOP EXTRACTION, remote ON-OFF; change of season; enabling integration / dehumidification; output = alarm generic, booster
- Total circulation activation, instead of partial (standard) acting on the fresh air damper with the motor modulating (optional)
- Manual season change from panel or entrance digital, or automatic from external T (T < 16 ° C = winter, T > 24 ° C summer, change to reaching set-point 1st time; T = 16 ÷ 24 ° C = the "origin" season follows)
- Remote viewing of all alarms via display EVO (on request)

For a more complete view of the characteristics of the control systems, please refer to the respective manuals.

DEHUMIDIFICATION CONFIGURATION top view



VMC CONFIGURATION top view

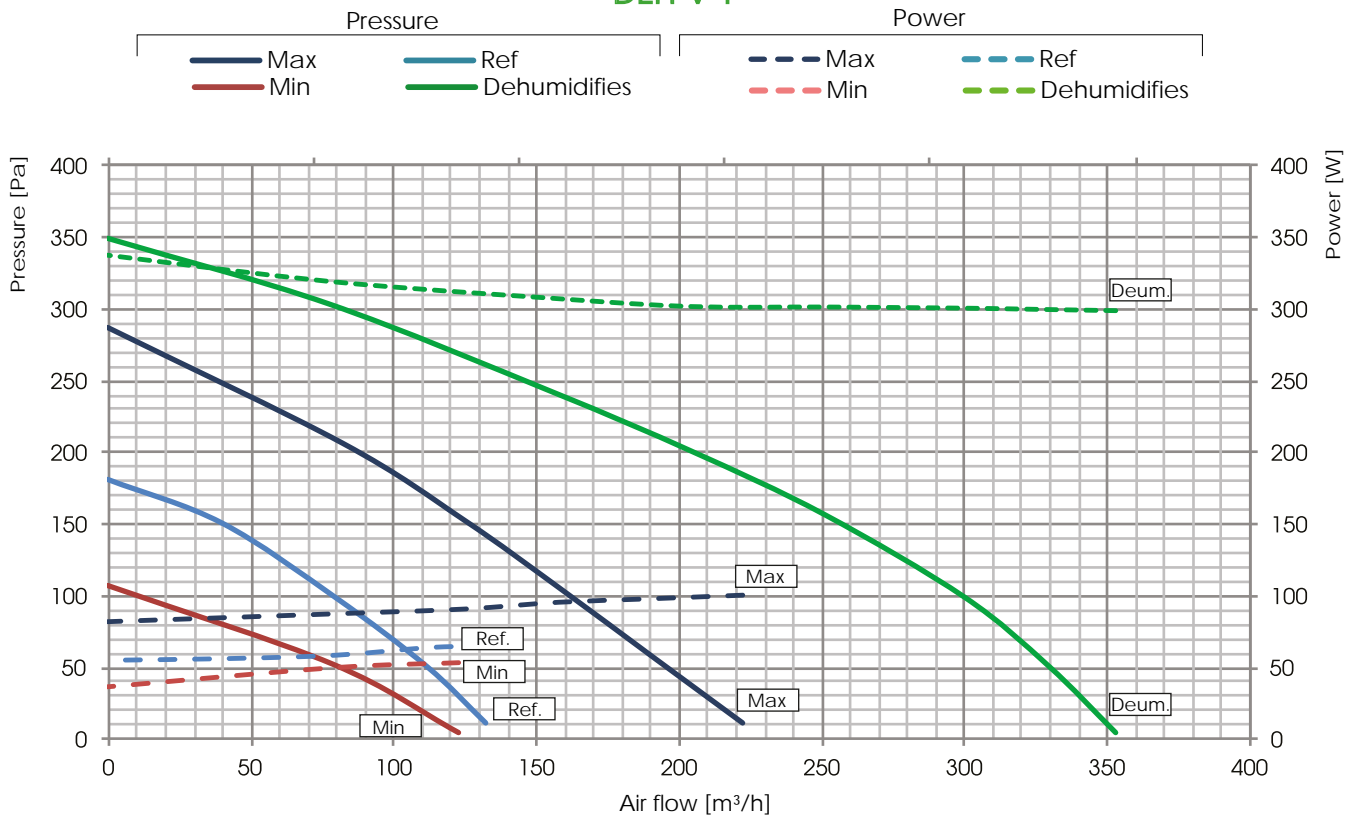




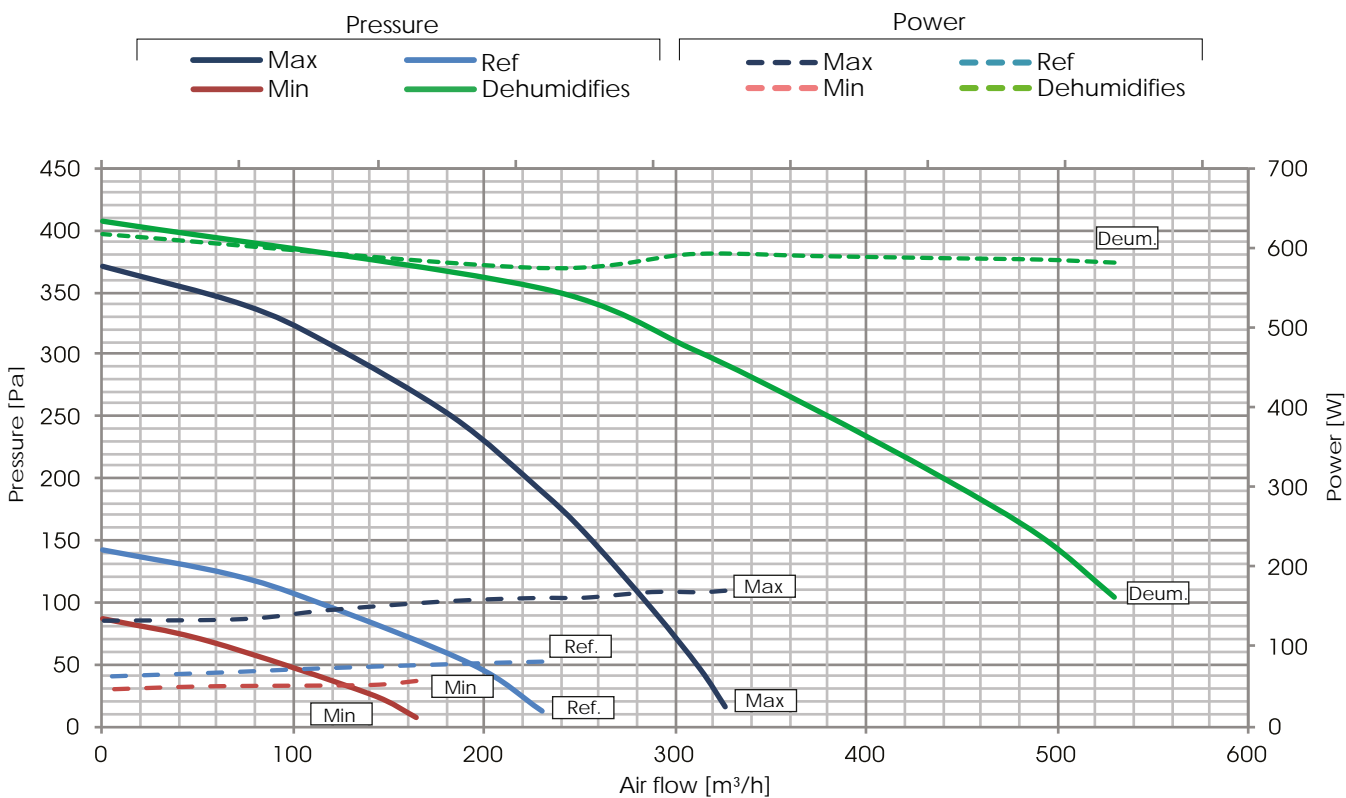
PERFORMANCES (UNI EN 13141-7)

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.

DEH-V 1



DEH-V 2

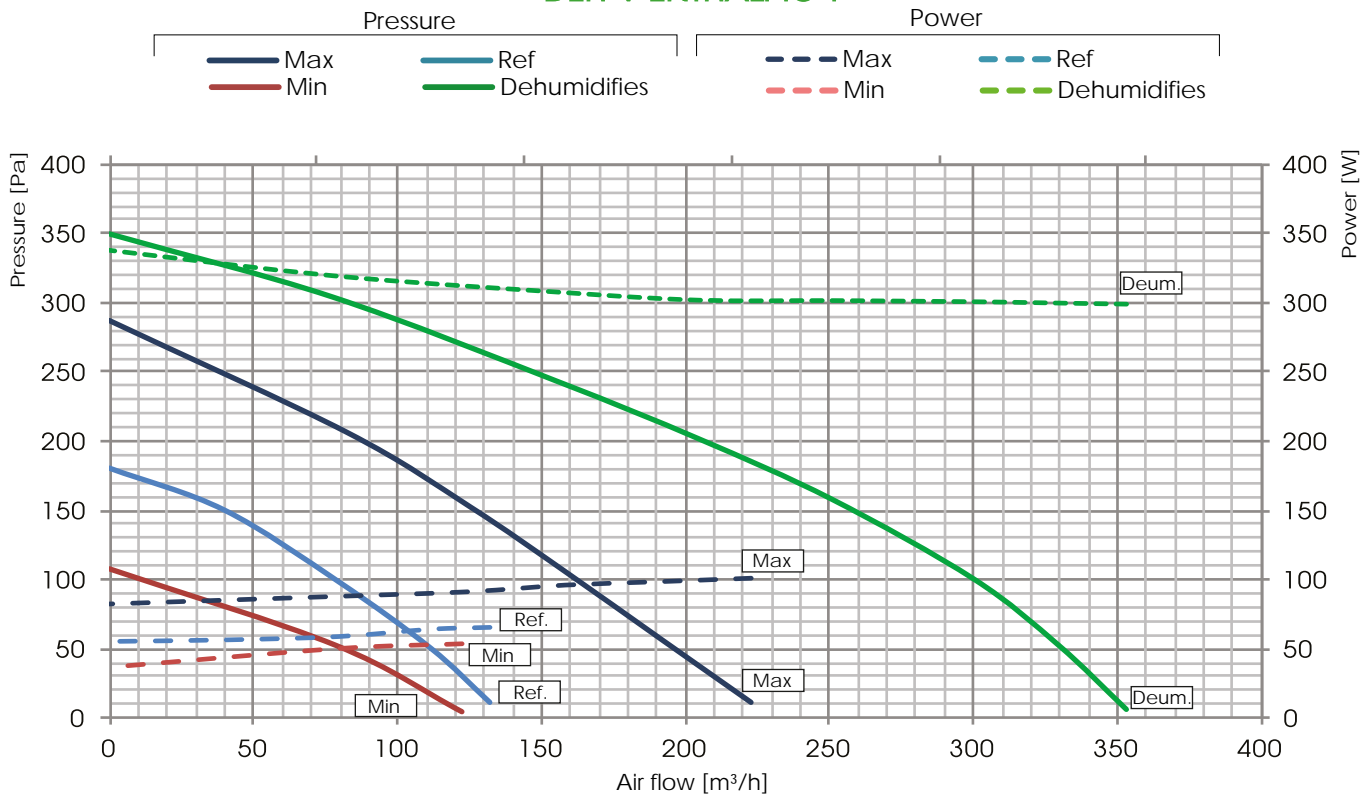




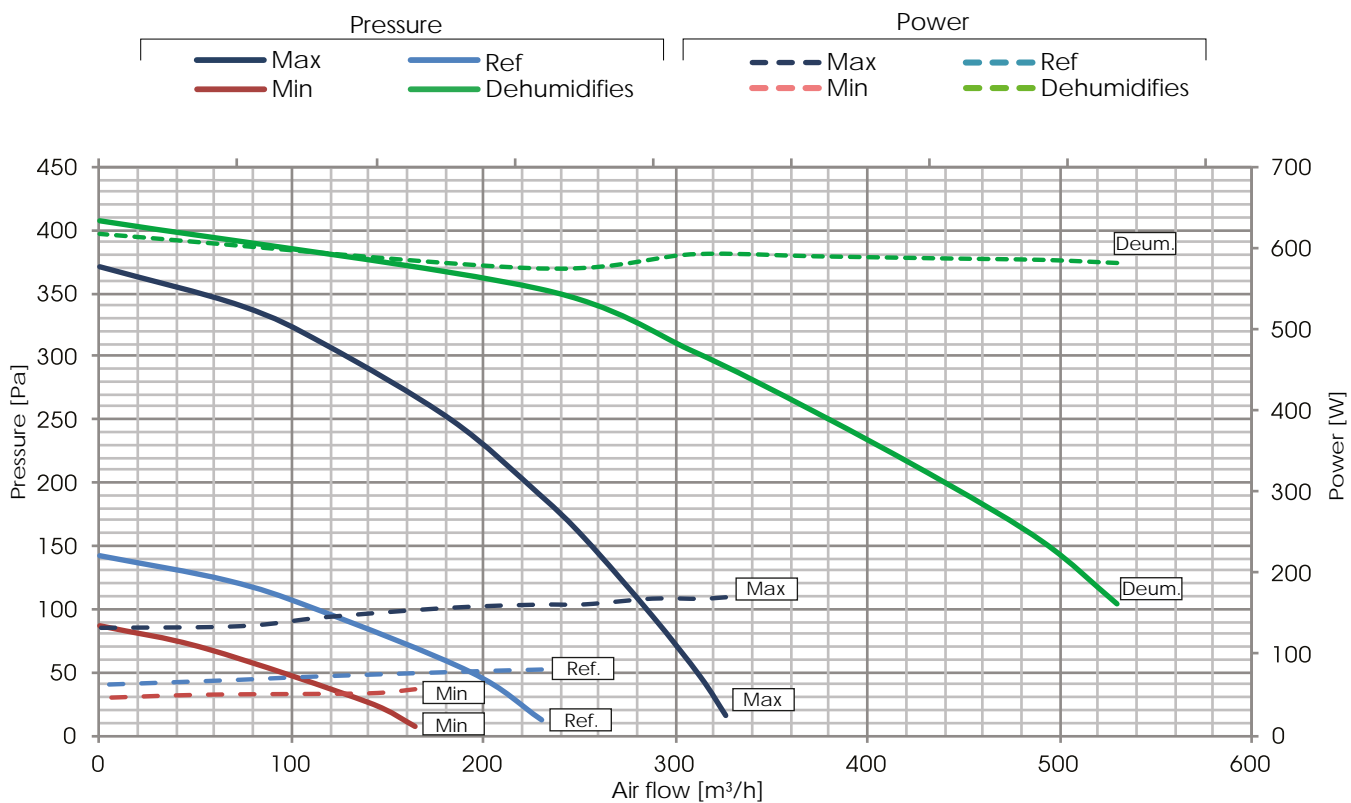
PERFORMANCES (UNI EN 13141-7)

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.

DEH-V ENTHALPIC 1



DEH-V ENTHALPIC 2



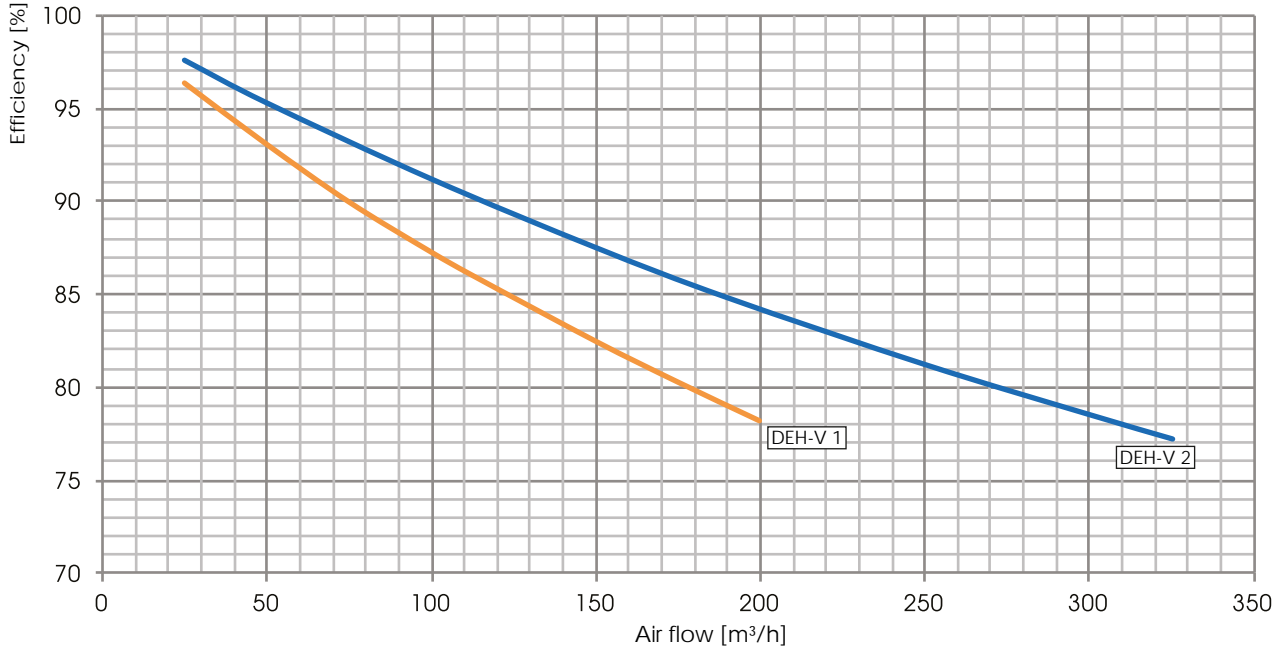


HEAT RECOVERY PERFORMANCE (sensible efficiency)

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%

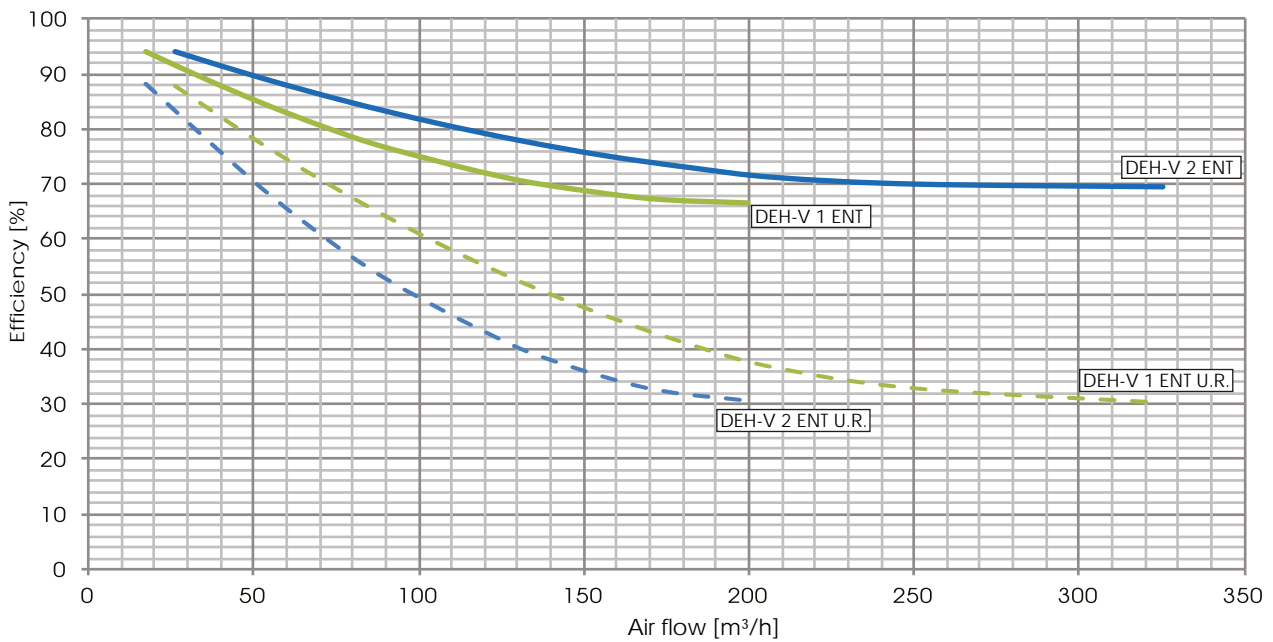
DEH-V

— DEH 1 — DEH 2



DEH-V ENTHALPIC

— DEH 1 - ENT / T — DEH 2 - ENT / T - - DEH 1 - ENT / U.R. - - DEH 2 - ENT / U.R.



T = temperature, sensible heat recovery / U.R. = relative humidity



DEH 1 (all)

TEST LEAKAGE according UNI EN 13141-7

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

DEH 2 (all)

TEST LEAKAGE according UNI EN 13141-7

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

NOISE LEVEL

Lw Sound power level taken in accordance to UNI EN ISO 3741 CLASS 1

Unit DEH-V 1 NO Dehumidification	NOISE FROM THE CASE (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	54,0	61,8	59,9	51,7	48,2	38,7	30,2	59,6
REF	49,7	55,8	51,5	45,1	42,4	31,9	23,1	52,3

Unit DEH-V 1 NO Dehumidification	NOISE IN THE SUPPLY AIR DUCTS (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	71,7	63,3	54,4	43,2	29,5	29,8	24,2	58,4
REF	65,3	55,0	47,3	38,4	23,7	25,3	21,1	51,3

Unit DEH-V 1 NO Dehumidification	NOISE IN THE EXHAUST AIR DUCTS (Hz)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	63,1	68,1	67,1	41,9	40,3	48,4	39,1	65,6
REF	54,1	61,6	56,8	35,5	33,6	41,0	28,7	56,5

Unit DEH-V 1 Dehumidification	NOISE FROM THE CASE (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	53,7	61,7	60,5	50,6	47,7	37,3	26,8	59,8
REF	49,7	56,4	51,9	44,2	42,2	30,8	21,4	58,6

Unit DEH-V 1 Dehumidification	NOISE IN THE SUPPLY AIR DUCTS (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	72,3	63,7	57,0	44,6	35,0	38,6	31,3	59,6
REF	64,3	55,1	50,3	39,2	28,5	30,8	22,7	51,9

Unit DEH-V 2 NO Dehumidification	NOISE FROM THE CASE (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	54,4	58,4	52,8	46,1	51,4	38,9	30,5	56,3
REF	45,9	52,8	45,4	43,2	39,5	30,0	22,0	48,9

Unit DEH-V 2 NO DEUMIDIFICA	NOISE IN THE SUPPLY AIR DUCTS (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	76,8	51,8	55,8	47,4	37,2	36,8	30,6	61,6
REF	65,8	49,5	49,1	39,0	30,1	28,0	24,9	51,9

Unit DEH-V 2 NO Dehumidification	NOISE IN THE EXHAUST AIR DUCTS (Hz)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	66,0	58,8	59,8	40,9	45,2	47,3	42,1	59,0
REF	52,8	50,6	50,8	36,2	39,2	39,5	28,6	50,2

Unit DEH-V 2 Dehumidification	NOISE FROM THE CASE (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	56,2	58,8	58,9	50,9	51,2	43,0	30,9	59,1
REF	51,4	56,8	45,9	45,5	44,4	33,0	23,0	52,1

Unit DEH-V 2 Dehumidification	NOISE IN THE SUPPLY AIR DUCTS (dB)							L _w dB(A)
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
MAX	78,8	50,9	64,7	47,6	44,3	47,1	37,6	65,4
REF	69,8	50,8	53,5	46,0	35,1	37,3	24,7	56,1



ELECTRICAL DATA

	FAN	UNIT				
		Supply	Current max	Supply	Current max	Insulation class
DEH-V 1	Expulsion Supply	230 V, 50/60 Hz 1F	2,10 A	230V, 50 Hz, 1F	3,5 A	IP 44 IP 54
DEH-V 2	Expulsion Supply	230 V, 50/60 Hz 1F	4,90 A	230V, 50 Hz, 1F	7,5 A	IP 54 IP 54

maximum compressor current; for actual consumption see the graphs, where:

. dotted curves MAX, REF and MIN = consumption in VMC phase (total 2 fans)

. dotted curve DEUM = consumption during the dehumidification phase (total 2 fans + compressor)

GAS

UNIT	Gas	GWP	Kg of Gas	Tons CO2
DEH 1 V	R134A	1430	0,37	0,52
DEH 2 V	R134A	1430	0,48	0,68

Contains fluorinated greenhouse gases governed by the Kyoto protocol

VERSION WITH COMPRESSOR

UNIT	Indoor air			Outdoor air			Water				Cooling capacity				
	Air flow [m³/h]	Temp [°C]	Umidity [%]	Air flow [m³/h]	Temp [°C]	Umidity [%]	Water flow H₂O [l/h]	Input [°C]	Output [°C]	ΔT [°C]	ΔP [kPa]	Coil H₂O [W]	Compressor [W]	Tot. [W]	Condensate [l/day]
DEH-V 1	150	26	55	150	33	55	200	15	19,4	4,4	4	990	988	1978	26,8
								18	21,2	3,2		730	987	1717	20,7
								21	23,4	2,4		560	1017	1577	17,3
DEH-V 2	250	26	55	250	33	55	350	15	19,8	4,8	3	1950	1542	3492	46,0
								18	21,9	3,9		1610	1607	3217	33,1
								21	23,9	2,9		1190	1608	2798	30,0

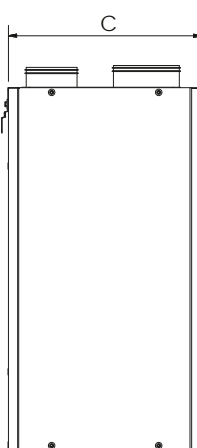
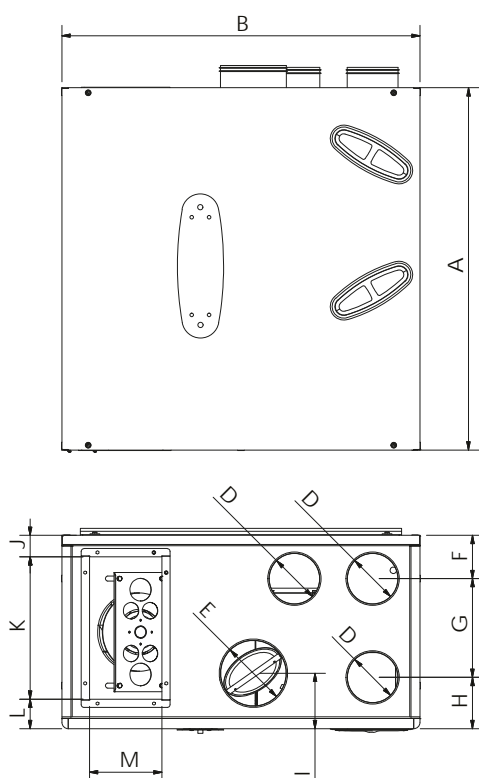
* Only dehumidifies

HYDRONIC VERSION (dehumidifies only with H₂O battery)

UNIT	Indoor air			Outdoor air			Water				Cooling capacity				
	Air flow [m³/h]	Temp [°C]	Umidity [%]	Air flow [m³/h]	Temp [°C]	Umidity [%]	Water flow H₂O [l/h]	Input [°C]	Output [°C]	ΔT [°C]	ΔP [kPa]	Coil H₂O [W]	Compressor [W]	Tot. [W]	Condensate [l/day]
DEH-V HYD. 1	150	26	55	150	33	55	200	16,3	9,3	8	8	1970	-	1970	26,3
							300	14,8	7,9	17		2370	-	2370	33,8
							400	13,9	6,9	28		2610	-	2610	38,3
							350	15,3	8,3	5		3360	-	3360	44,8
DEH-V HYD. 2	250	26	55	250	33	55	525	13,7	6,7	11	11	4110	-	4110	57,9
							700	12,6	5,6	18		4530	-	4530	66,4

DIMENSIONS (mm) WEIGHT (kg)

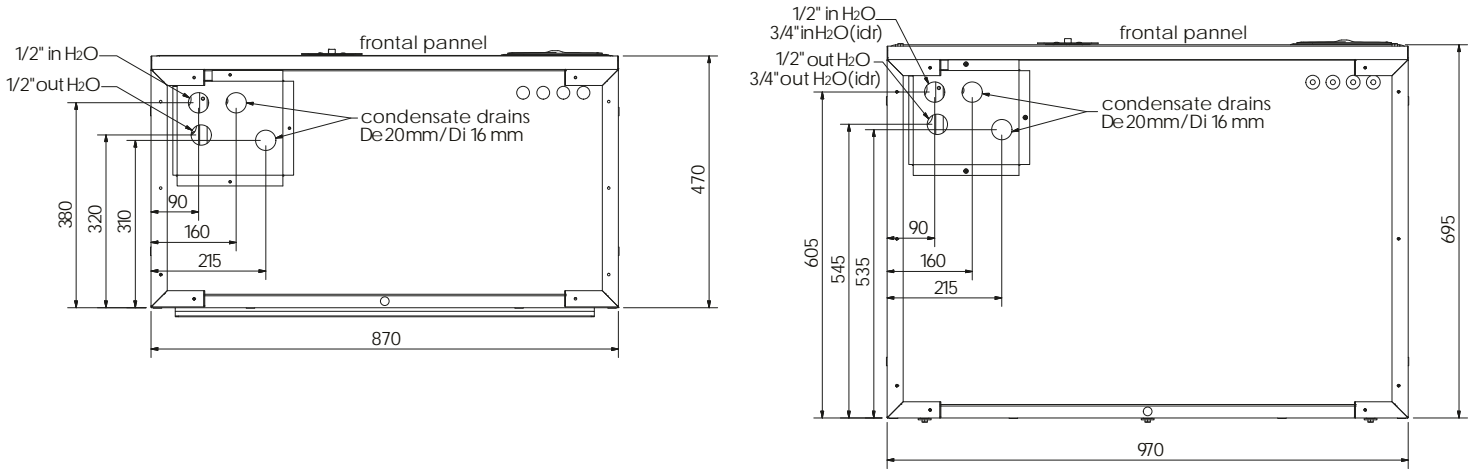
MODEL	A	B	C	D	E	F	G	H	I	J	K	L	M
DEH-V 1	880	870	470	125	160	105	240	125	135	52	346	72	176
DEH-V 2	980	970	695	160	200	175	345	175	225	62	512	121	246



Weight: DEH-V 1:	82 kg
DEH-V 2:	111,5 kg
DEH-V 1 - ENT:	85 kg
DEH-V 2 - ENT:	114,5 kg
DEH-V 1 HIDRONYC:	72 kg
DEH-V 2 HIDRONYC:	82 kg
DEH-V 1 - ENT - HIDRONYC:	76 kg
DEH-V 2 - ENT - HIDRONYC:	85 kg

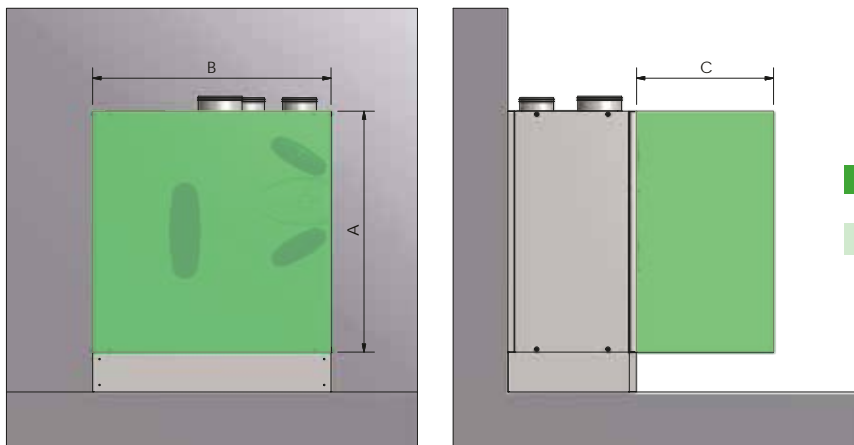


Position of condensate drain connections



DEH-V INSTALLATION FLOOR INSTALLATION

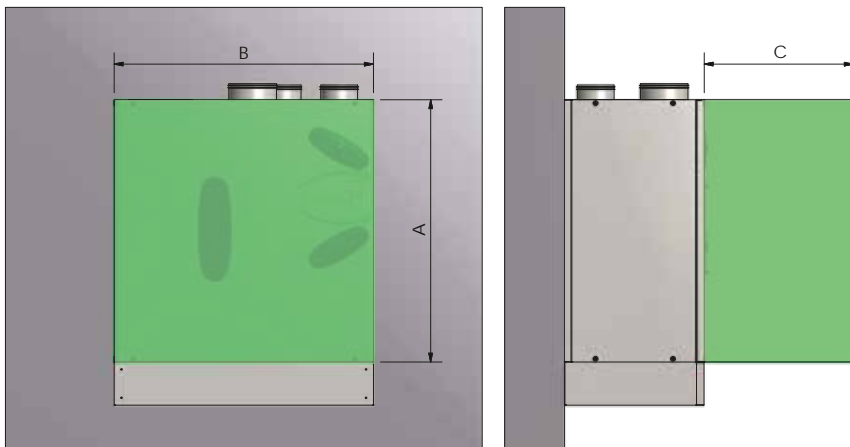
Minimum required space for maintenance (mm)



MODEL	A	B	C
DEH-V 1	880	870	470
DEH-V 2	980	970	700

WALL INSTALLATION

Minimum required space for maintenance (mm)



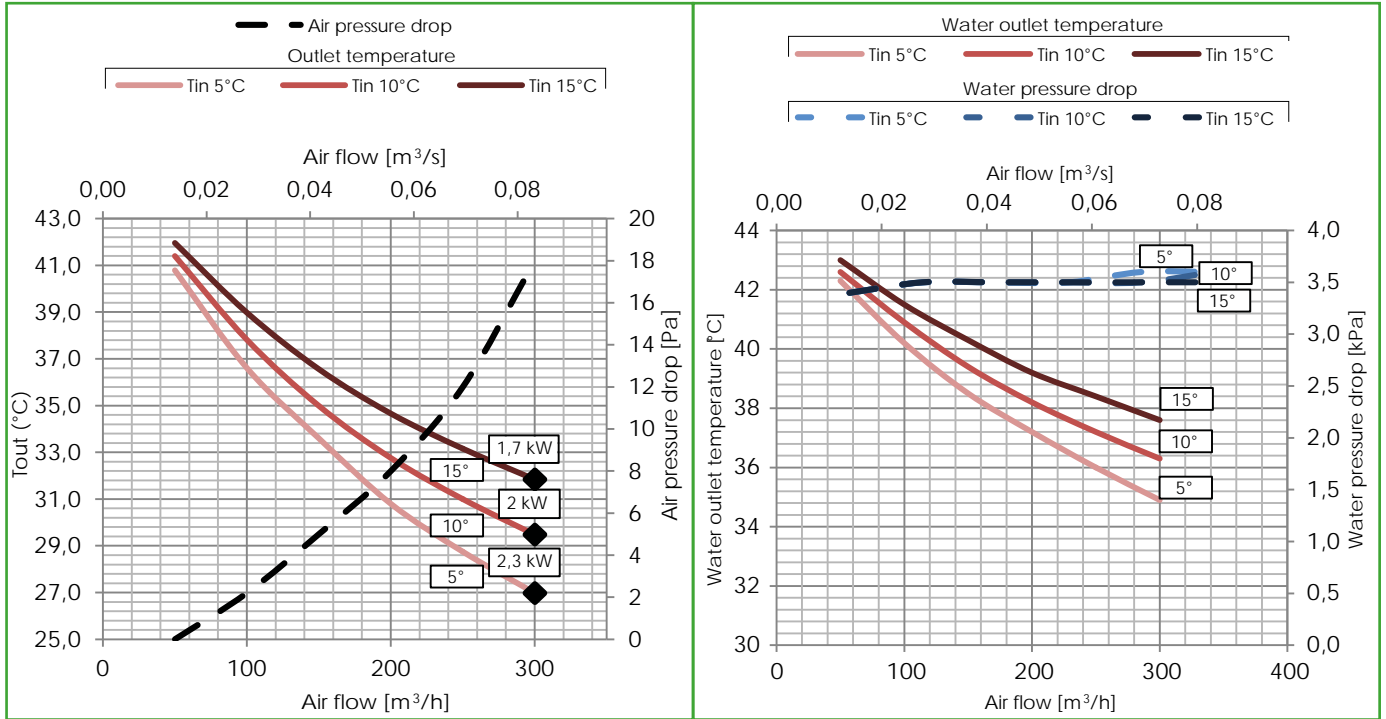
MODEL	A	B	C
DEH-V 1	880	870	470
DEH-V 2	980	970	700



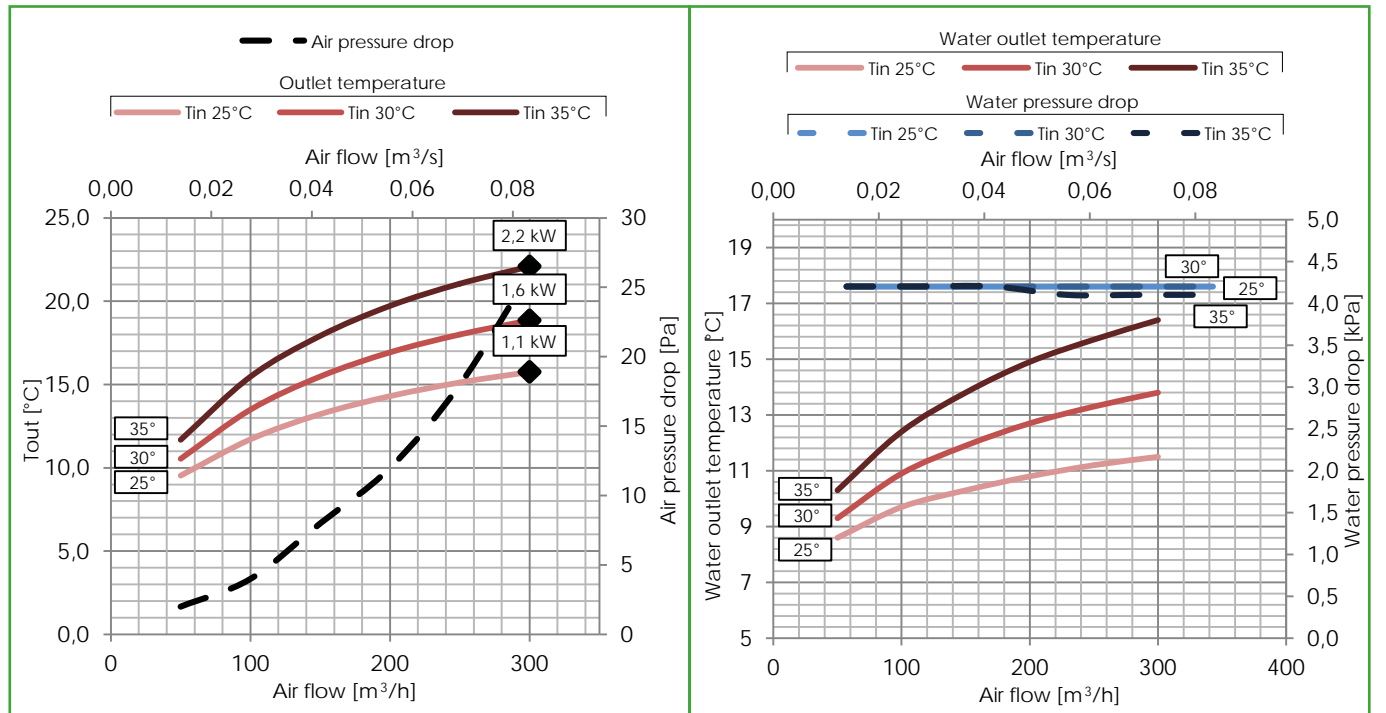
The way to read the graphs is specified within the accessories techno-list.

COILS DEH-V 1 / DEH-V 1 ENTHALPIC

COIL (+45°C/+35°C)

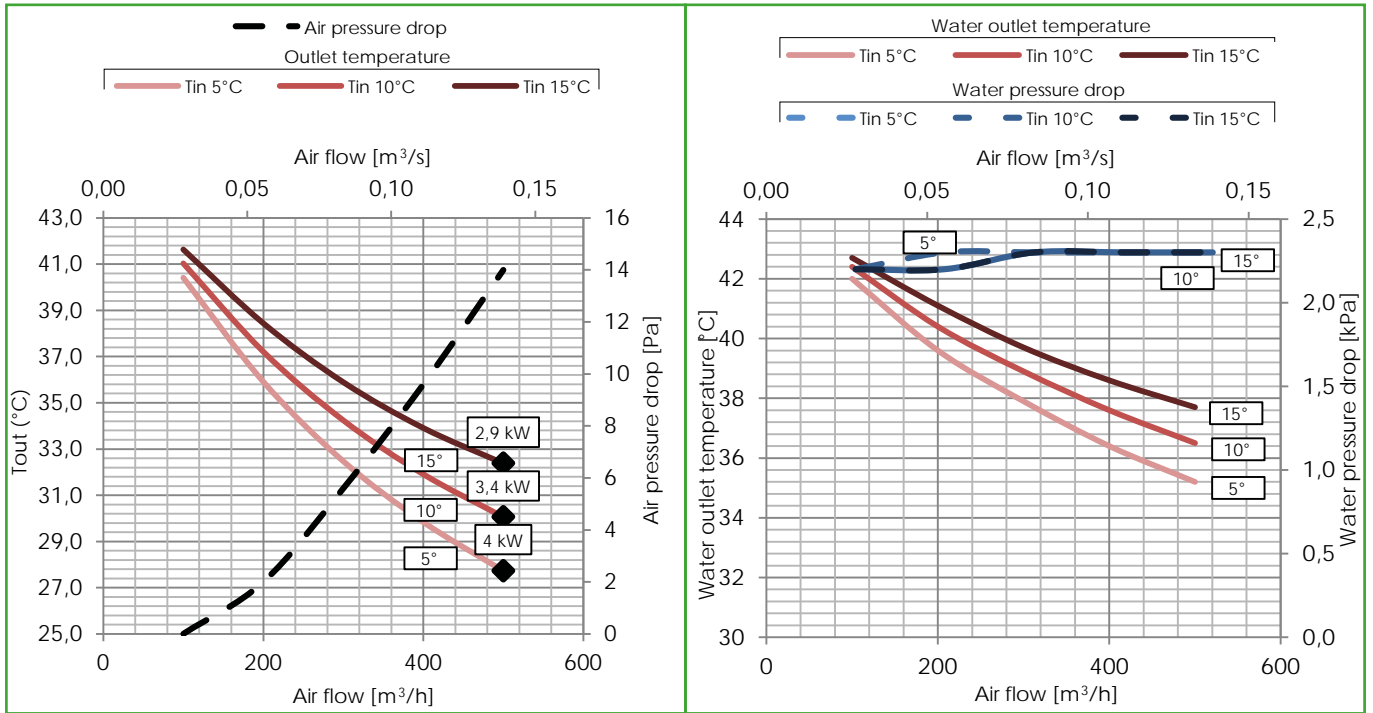


COIL (+7°C/+12°C)

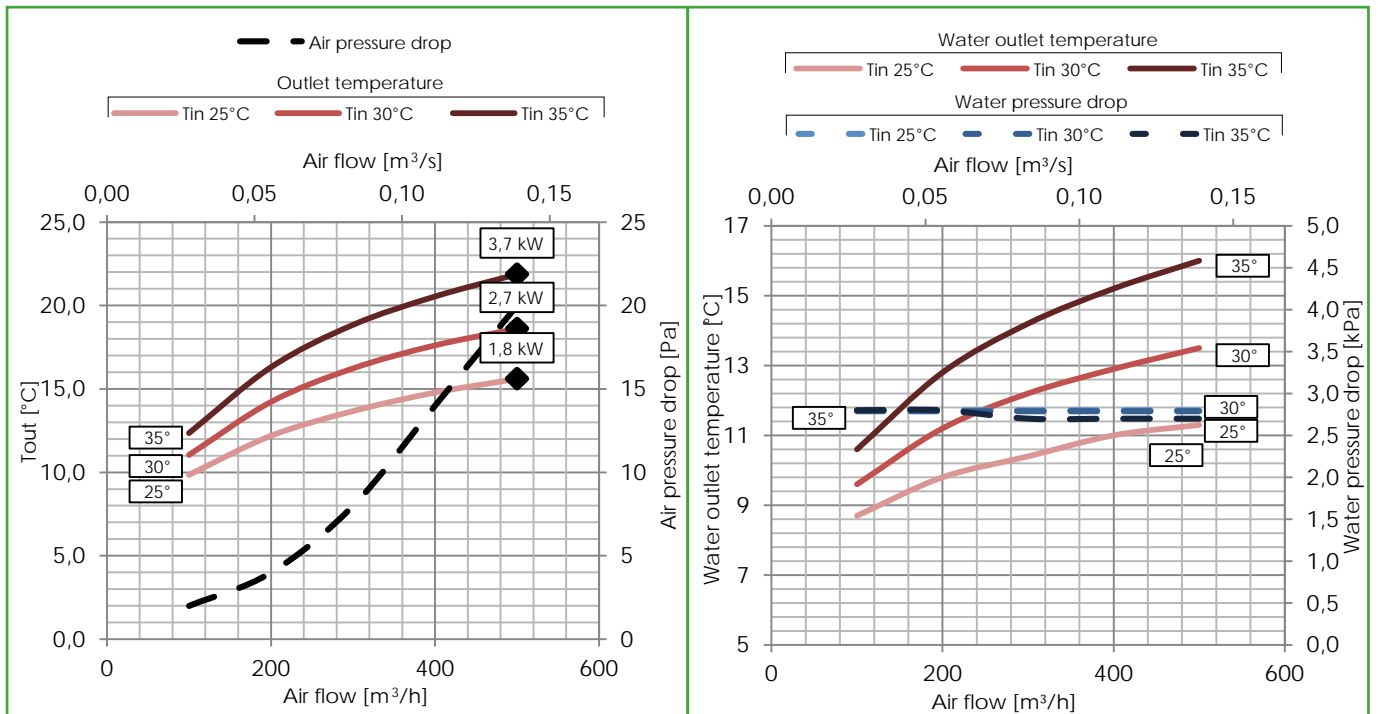




COILS DEH-V 2 / DEH-V 2 ENTHALPIC
COIL (+45°C/+35°C)



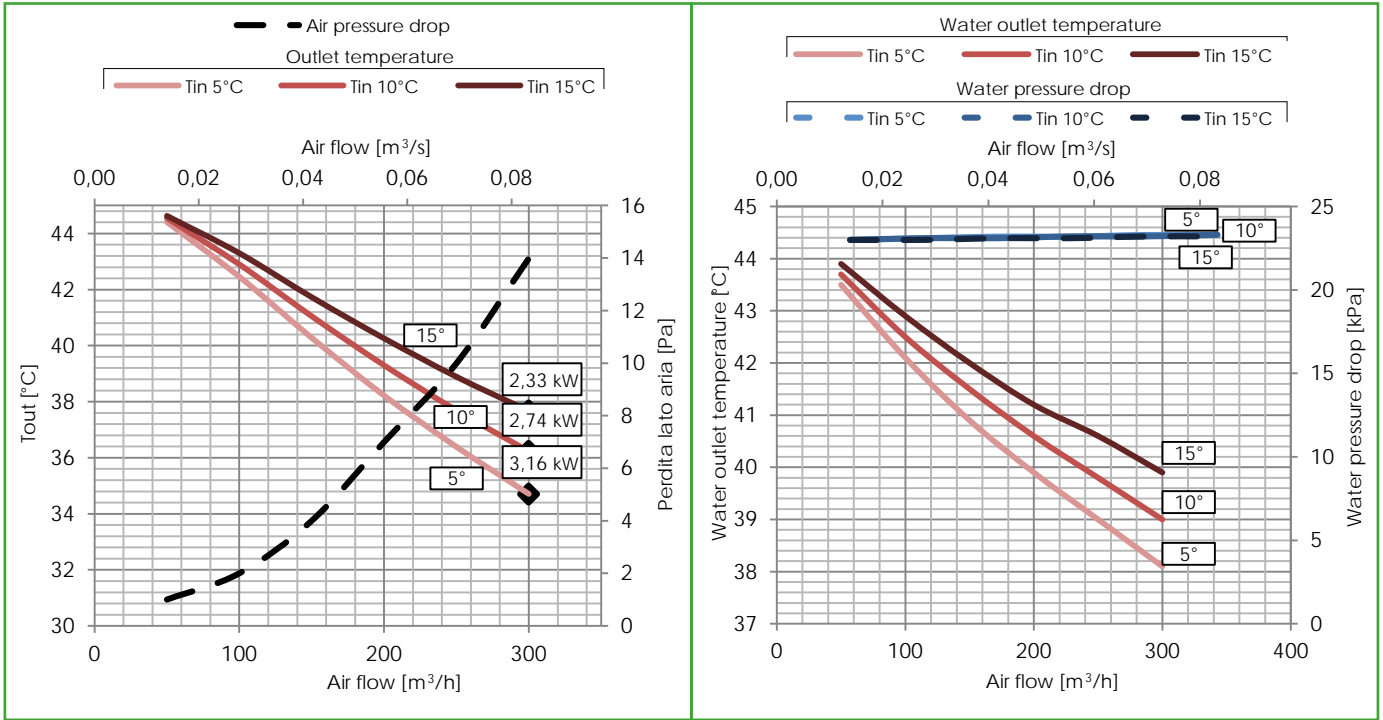
COIL (+7°C/+12°C)



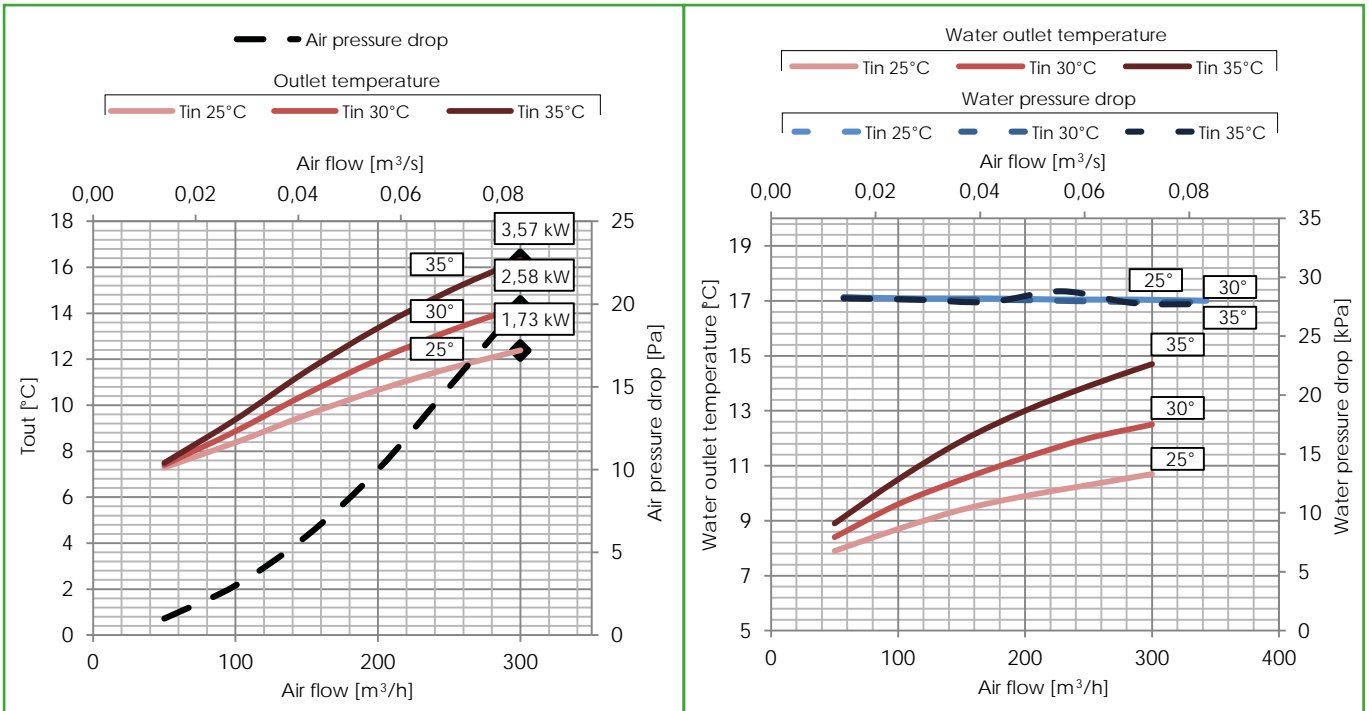


COILS DEH-V 1 HYDRONIC/ DEH-V 1 HYDRONIC ENTHALPIC

COIL (+45°C/+35°C)



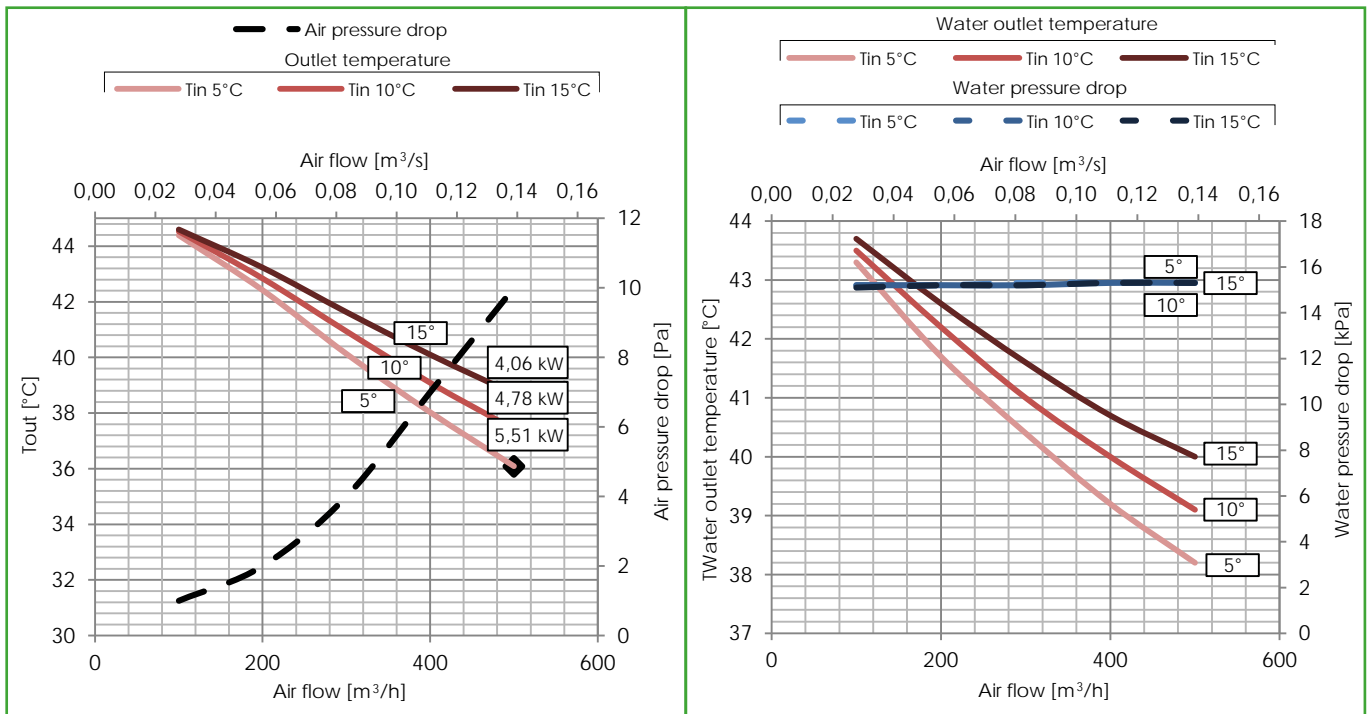
COIL (+7°C/+12°C)



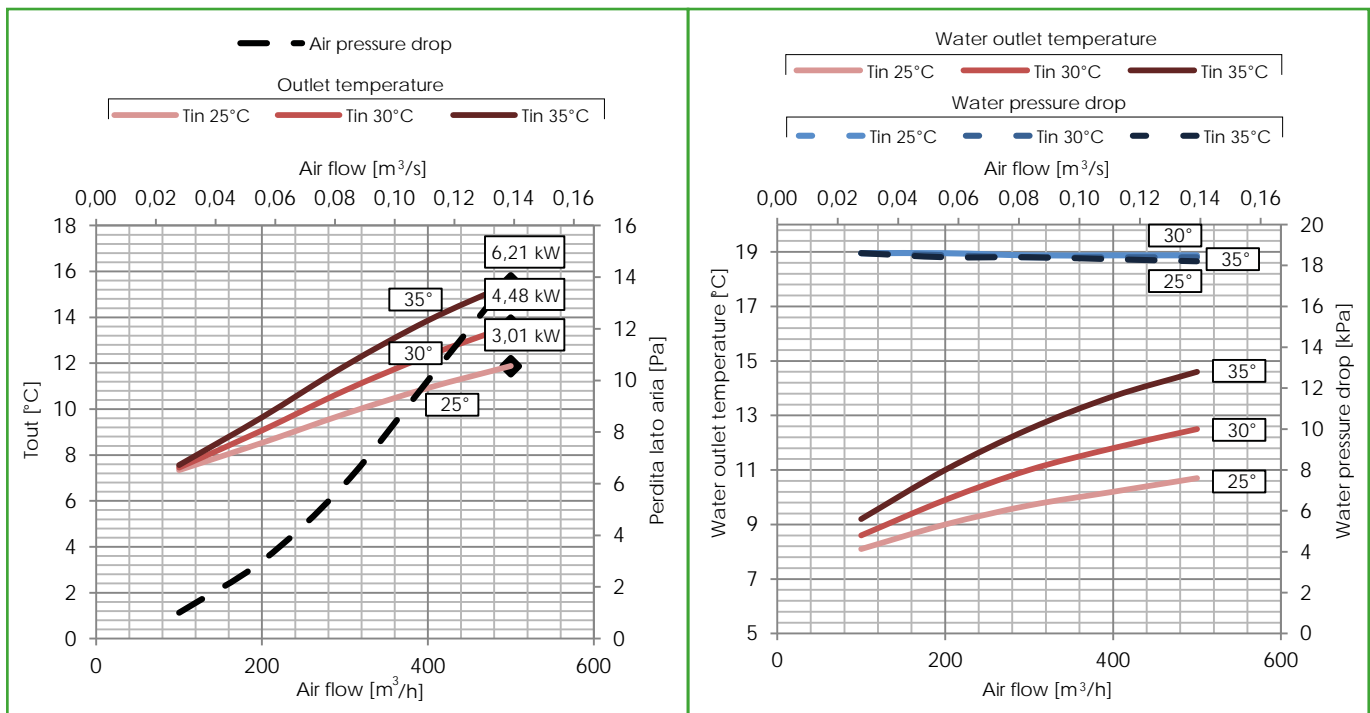


COILS DEH-V 2 HYDRONIC/ DEH-V 2 HYDRONIC ENTHALPIC

COIL (+45°C/+35°C)



COIL (+7°C/+12°C)



A	Manufacturer's name C.L.A. S.r.l.				
B	Manufacturer's model identifier	DEH-V 1	DEH-V 2	DEH-V 1 ENTHALPIC	DEH-V 2 ENTHALPIC
C	Specific energy consumption (SEC) [kWh/m ² ·a]	COLD -69,9 -32,0 AVERAGE WARM -7,6	-72,7 -35,2 -11,1	-63,1 -28,5 -6,1	-69,4 -32,4 -8,6
	SEC class	B	A	B	B
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	Recuperative	Recuperative	Recuperative	Recuperative
G	Thermal efficiency of heat recovery [%]	86,1	84,6	73,4	84,6
H	Maximum flow rate [m ³ /s]	0,045	0,075	0,045	0,079
I	Electrical power input at maximum flow rate [W]	128	255	128	255
I	Sound power level [Lwa][dB]	52	49	52	49
K	Reference flow rate [m ³ /s]	0,031	0,053	0,031	0,054
L	Reference pressure difference [Pa]	50	50	50	50
M	SPI [W/m ³ /h]	0,567	0,406	0,567	0,406
N	Control factor CLTR	0,85	0,85	0,85	0,85
N	Control typology	Clock control (no DCV)	Clock control (no DCV)	Clock control (no DCV)	Clock control (no DCV)
O	Declared maximum internal / external leakage rates [%]	6.3 / 7.2	6.3 / 4.7	6.3 / 7.2	6.2 / 4.6
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	Filter warning is signaled on the display of the control system: the flashing writing "DirtyFilters" will appear. "To preserve the energy efficiency of the MRVU, 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.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]	558	413	558	504
W	The annual heating saved (AHS) for each type of climate [kWh/a]	2046 (WARM)	2027 (WARM)	1890 (WARM)	2000 (WARM)
		8851 (COLD)	8769 (COLD)	8670 (COLD)	8080 (COLD)
		4525 (AVERAGE)	4483 (AVERAGE)	4180 (AVERAGE)	4430 (AVERAGE)

A	Manufacturer's name C.L.A. S.r.l.				
B	Manufacturer's model identifier	DEH-V 1 HYDRONIC	DEH-V 2 HYDRONIC	DEH-V 1 HYDRONIC HENTALPIC	DEH-V 2 HYDRONIC HENTALPIC
C	Specific energy consumption (SEC) [kWh/m².a]	COLD	-72,7	-63,1	-69,4
		AVERAGE	-32,0	-28,5	-32,4
D	SEC class	WARM	-11,1	-6,1	-8,6
		B	A	B	B
E	Declared typology	UVR - UVB	UVR - UVB	UVR - UVB	UVR - UVB
F	Type of drive installed	Variable speed	Variable speed	Variable speed	Variable speed
G	Type of heat recovery system	Recuperative	Recuperative	Recuperative	Recuperative
H	Thermal efficiency of heat recovery [%]	84,6	84,6	73,4	84,6
I	Maximum flow rate [m³/s]	0,045	0,075	0,045	0,079
J	Electrical power input at maximum flow rate [W]	128	255	128	255
K	Sound power level [Lwa][dB]	52	49	52	49
L	Reference flow rate [m³/s]	0,031	0,053	0,031	0,054
M	Reference pressure difference [Pa]	50	50	50	50
N	SPI [W/m³/h]	0,567	0,406	0,567	0,406
O	Control factor CLTR	0,85	0,85	0,85	0,85
		Clock control (no DCV)	Clock control (no DCV)	Clock control (no DCV)	Clock control (no DCV)
P	Mixing rate of non-ducted bidirectional ventilation units [%]	6.3 / 7.2	6.3 / 4.7	6.3 / 7.2	6.2 / 4.6
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.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]	558	413	558	504
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		8851 (COLD)	8769 (COLD)	8670 (COLD)	8080 (COLD)
		4525 (AVERAGE)	4483 (AVERAGE)	4180 (AVERAGE)	4430 (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

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

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



DEH-V_2022_0_IT



**HEAT RECOVERY VENTILATION UNITS of CLIMATIZATION
and DEHUMIDIFICATION**