WESTERN™
AIRCONDITIONING

indoor air quality and energy saving

ErP 2018

TECHNICAL DATA

EASY-T 6

VENTILATION UNIT WITH HEAT RECOVERY FOR COMMERCIAL AND INDUSTRIAL BUILDINGS

UTA
Non Residential Ventilation Unit (NRVU) for high air volume.

EQUIPPED
UTA is equipped with high efficiency counterflow heat exchanger (Eurovent certified) and backward blades EC fans.

STRUCTURE
The UTA is composed by three basic modules (two ventilation/filtration modules and a heat recovery/bypass module) which can be easily placed and mounted (fast mechanical and electrical connection). Each module is made of extruded aluminium profiles and double skin Aluzinc panels, sandwiched on injected polyurethane foam insulation, thickness 45mm and density 42 Kg/m3. UTA will be delivered with rectangular duct connections. Two sizes available both equipped with automatic total bypass: UTA 1 8.000 m^3/h @ 200 Pa and UTA 2 13.300 m^3/h @ 200 Pa. Post heating device (electric or water) and electrical pre heater device are integrated into the unit, while post cooling/heating water coil and direct expansion coil, are available as additional external module. The filtering sections are composed by modules (with standard dimensions) of F7 filters for the fresh air flow and M5 filters for the extraction air flow.

CONTROLS
UTA is delivered in plug&play configuration with two different control systems: EVO-PH and EVOD-PH-IP. The last one, to be used in BMS systems with Modbus protocol, is also available with RS485 connection. UTA is configured to run in constant air volume modality: both air flows (extraction and fresh air) are controlled. It's possible to upgrade the unit with two constant pressure kits (COP kits are optional). 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.

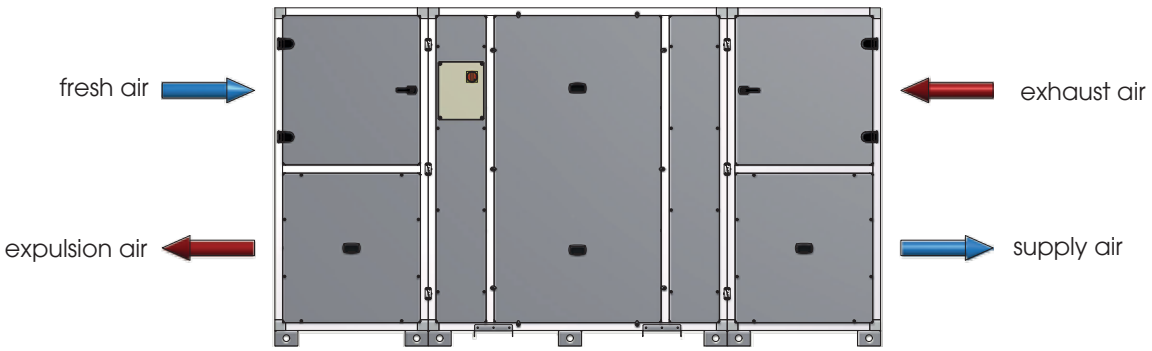
This control has a weekly time schedule for automatic unit control, it can be controlled by an external switch to activate the booster and it can automatically adjust the air flow when connected to an air quality sensor.

It supports post-air treatment accessories and it advises the user if filters needs 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.

ACCESSORIES
UTA can be equipped with other accessories such as:
. recycling module
. silencer module
. pre-filters and pocket filters
. R.H. of probe, CO_2 or CO_2 / VOC
. constant pressure operation kit
. protection roof for outside instalalzione
. grilles and damper

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

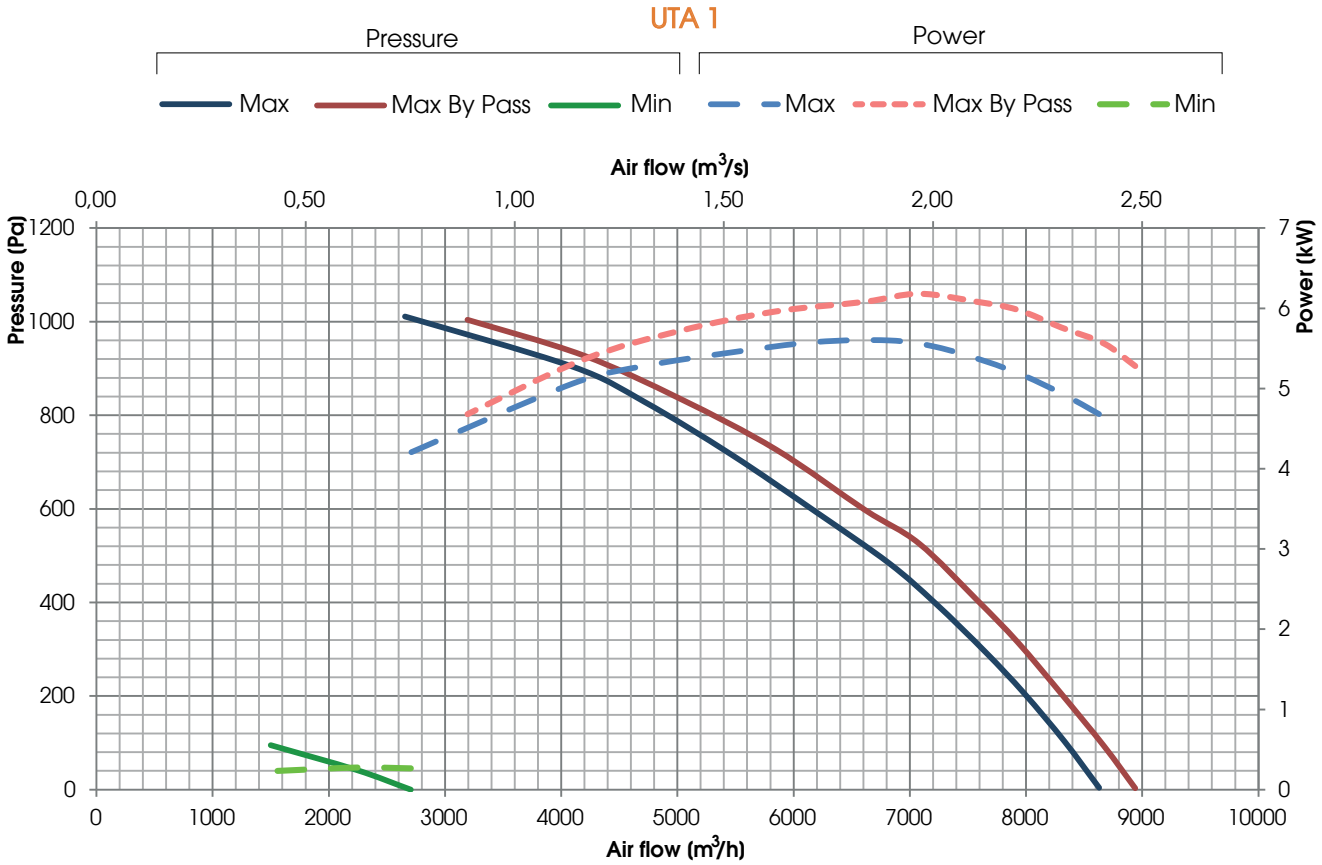


Counterflow heat exchanger made of aluminum manufactured by RECUTECH
RECUTECH participates in the Eurovent Certification Program

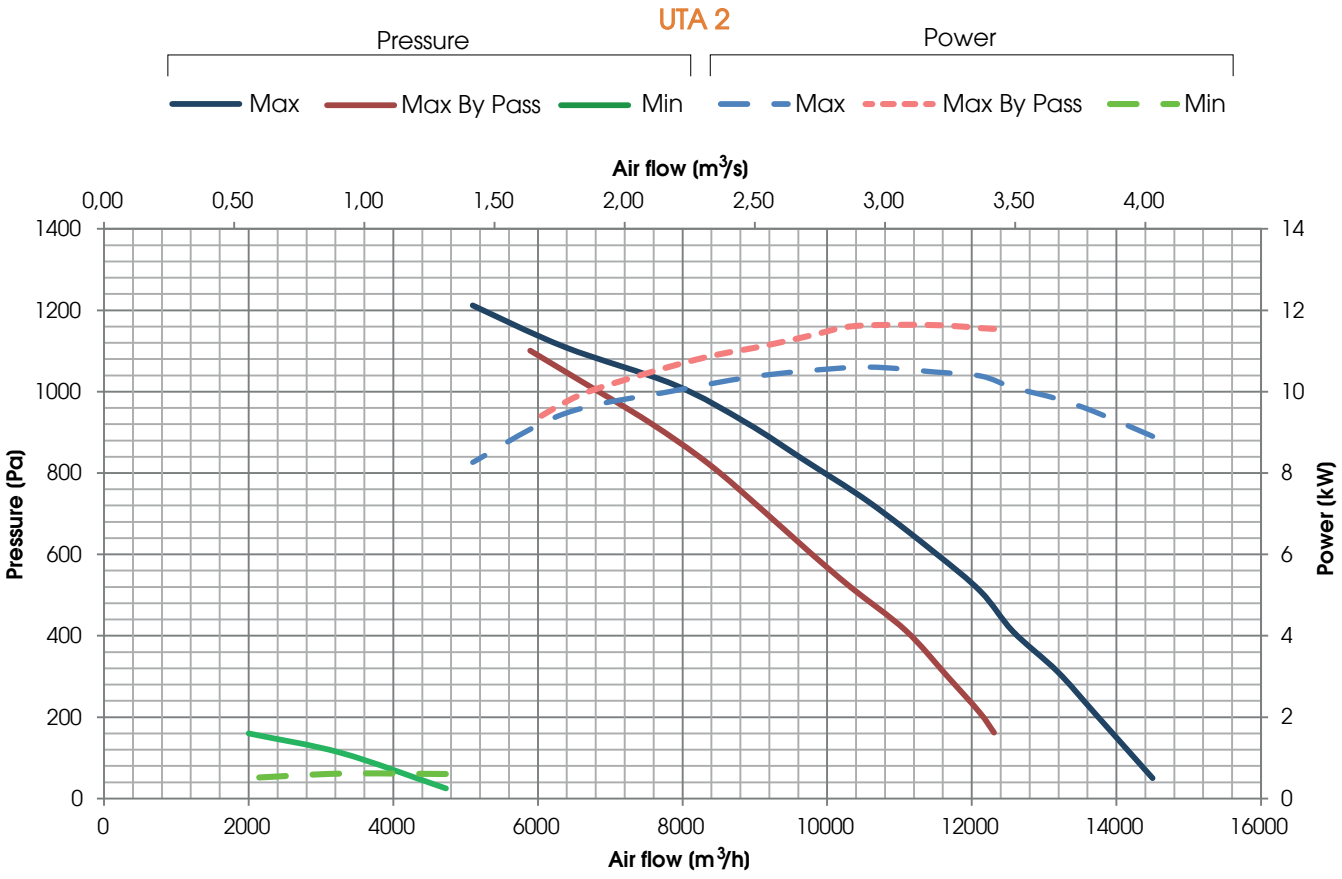
PERFORMANCE (UNI EN 13141-7)

The unit must be ducted properly: Western authorizes the use only according to its performance diagram shown into this catalogue
The declared performances are with CLEAN filters M5/F7, and guaranteed ONLY with the original filters low pressure drop.

UTA 1

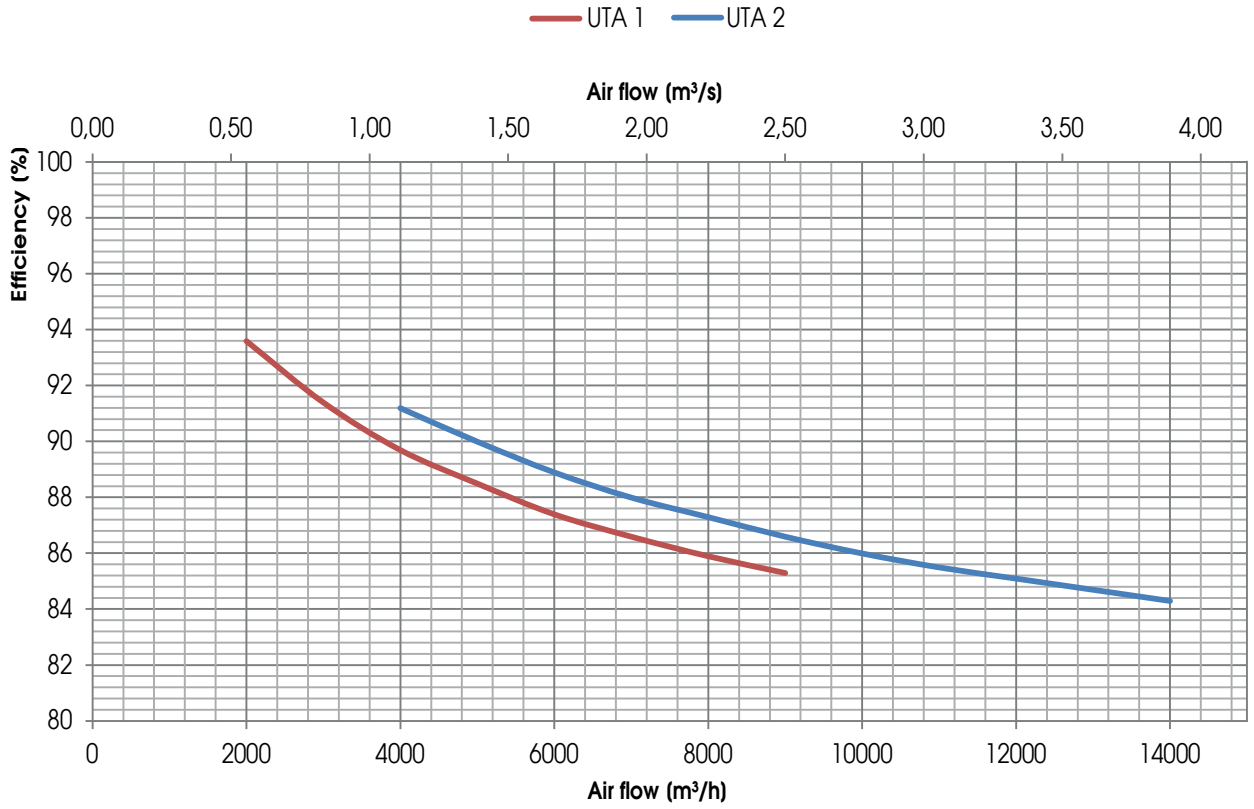


UTA 2



HEAT RECOVERY PERFORMANCE (sensible efficiency)

Values refered to the following conditions (UNI EN 13141-7): Tbs external air 5°C; U.R. esternal 72%; Tbs enviorment 25°C; U.R. enviorment 28%



ECODESIGN

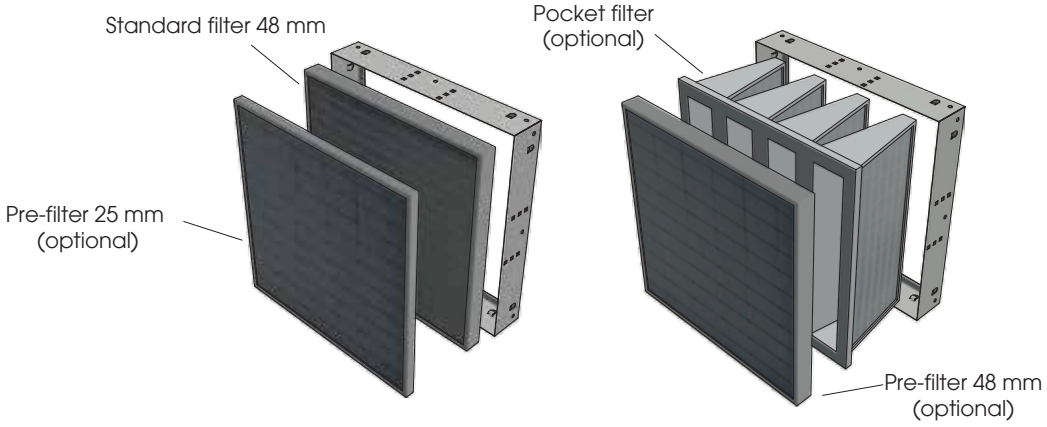
UNIT	η_{t_nvru} (%)	q_{nom} (m³/s)	$\Delta p_{s,ext}$ (Pa)	P (kW)	SFPint (W/(m³/s))	SFPint_lim 2016 (W/(m³/s))	SFPint_lim 2018 (W/(m³/s))	FACE VELOCITY (m/s)	$\Delta p_{s,int}$ (Pa)	η_{Fan} (%)	* internal LEAKAGE (%)	* external LEAKAGE (%)
UTA 1	83,7	2,22	200	5,146	1040	1401	1121	2,14	694	62,8%	3,4%	1,9%
UTA 2	83,7	3,38	500	10,355	1085	1401	1121	2,16	704	68,5%	3,1%	2,0%

* Percentage of the nominal flow

VALUES ACCORDING UNI EN 1886: 2008

UNIT	CASING STRENGTH	CASING LEAKAGE	FILTER CLASS	THERMAL TRANSMITTANCE	THERMAL BRIDGE
UTA 1-2	D1 (M)	L3 (M)	F7 (M)	T3 (M)	TB3 (M)

FILTER OPTIONS



NOTE: For use of pocket filters and pre-filters, contact the Technical Department for the pressure loss values

UTA 1

TEST LEAKAGE (UNI EN 13141-7)

LEAKAGE	TEST CONDITIONS	CLASS
OUTDOOR	Positive pressure 400 Pa	A1
OUTDOOR	Negative pressure 400 Pa	A1
INDOOR	Pressure difference 250 Pa	A2

NOISE LEVEL

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

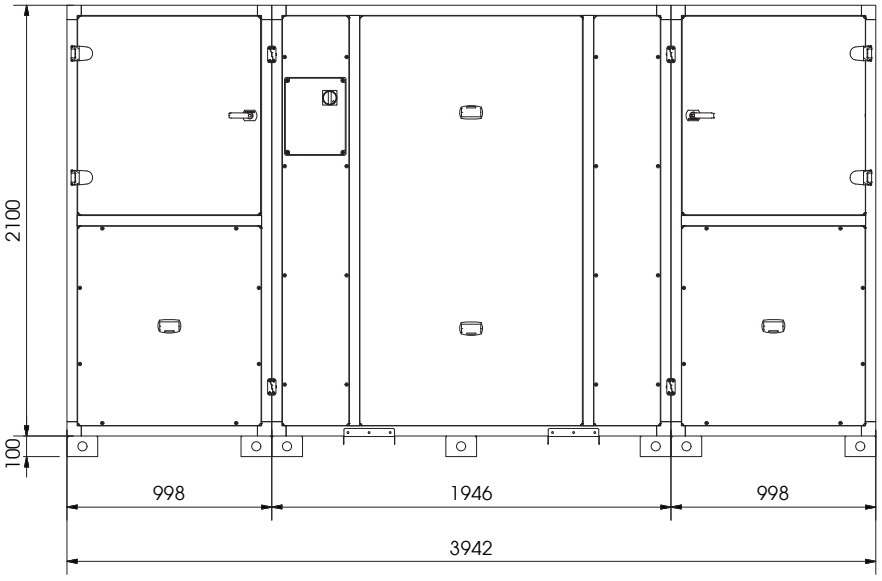
	NOISE FROM THE CASE (dB)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	71,6	85,3	76,7	70,7	61,7	52,6	57,4	79,2
75%	70,4	80,8	69,5	62,1	53,2	45,9	49,9	73,7
	NOISE IN THE SUPPLY AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	79,9	92,6	92,4	90,6	80,7	73,9	80,8	94,0
75%	78,2	85,6	86,8	82,3	73,3	65,0	73,4	87,0
	NOISE IN THE EXPULSION AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	80,3	93,7	93,0	93,4	82,6	76,1	84,1	96,0
75%	77,9	85,7	87,6	83,4	74,7	66,8	75,7	87,9
	NOISE IN THE FRESH AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	69,3	83,4	74,2	64,7	53,7	47,3	51,4	76,7
75%	67,2	74,1	64,0	53,5	46,5	38,1	54,5	67,3
	NOISE IN THE EXHAUST AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	67,5	82,4	78,1	68,6	56,6	51,9	58,2	78,1
75%	68,6	70,5	69,3	61,1	49,1	43,2	53,1	68,7

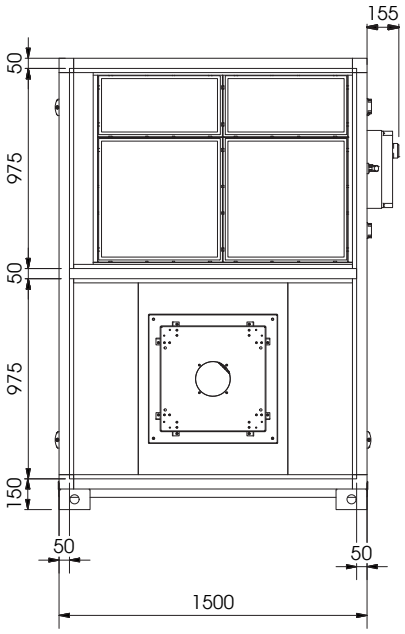
ELECTRICAL DATA

MATCHING	FANS				UNIT UTA 1	
	Power (W)	Supply	Current max.(A)	Insulation class	Supply	Current max.(A)
UTA1	2 x 2.900	400V 50/60 Hz 3F	2 x 4,80	IP54 CLASS B	400V 50 Hz 1F	10,0

DIMENSIONS (mm) WEIGHT (kg)

Weight: 966 kg





UTA 2

TEST LEAKAGE (UNI EN 13141-7)

LEAKAGE	TEST CONDITIONS	CLASS
OUTDOOR	Positive pression 400 Pa	A1
OUTDOOR	Negative pression 400 Pa	A1
INDOOR	Pressure difference 250 Pa	A2

NOISE LEVEL

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

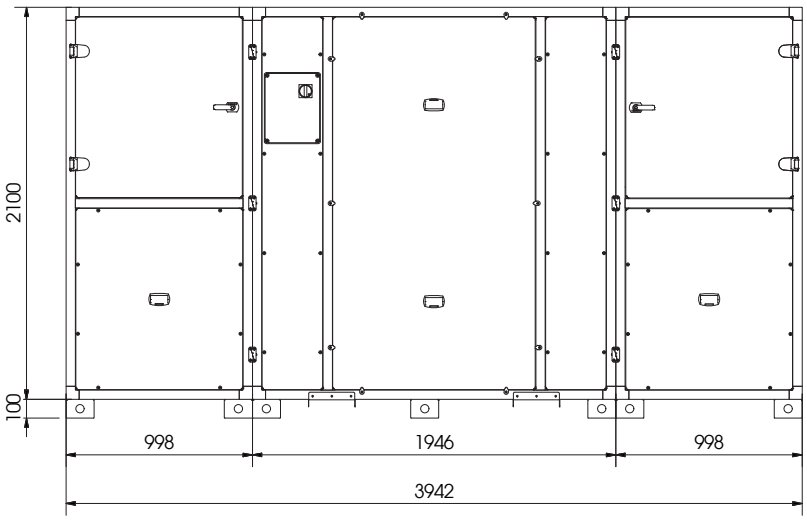
	NOISE FROM THE CASE (dB)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	75,4	92,3	81,1	75,0	65,4	59,5	61,8	85,3
75%	75,5	80,2	69,9	63,0	54,9	48,6	54,0	73,5
	NOISE IN THE SUPPLY AIR DUCTS (dB)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	79,6	96,4	93,8	88,5	80,0	75,5	77,9	94,3
75%	77,3	83,7	84,2	79,5	71,7	63,6	70,6	84,5
	NOISE IN THE EXPULSION AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	77,7	97,9	94,3	88,9	80,1	76,0	78,1	95,0
75%	78,6	84,6	85,8	79,8	71,5	64,3	71,3	85,5
	NOISE IN THE FRESH AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	67,1	85,8	77,8	67,4	59,7	52,7	50,5	79,5
75%	68,7	75,0	66,1	56,0	49,1	41,5	42,7	68,5
	NOISE IN THE EXHAUST AIR DUCTS (Hz)							
Fans	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	L_w dB(A)
100%	65,6	86,1	73,3	66,6	59,0	52,0	50,7	78,6
75%	68,1	73,4	64,6	57,9	51,0	42,6	44,1	67,3

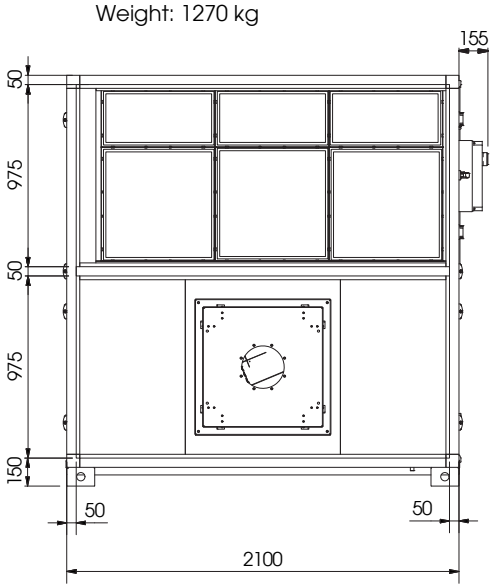
ELECTRICAL DATA

MATCHING	FANS				UNIT UTA 2	
	Power (W)	Supply	Current max.(A)	Insulation class	Supply	Current max.(A)
UTA 2	2 x 5.200	400V 50/60 Hz 3F	2 x 8,40	IP54 CLASS B	400V 50 Hz 1F	17,2

DIMENSIONS (mm) WEIGHT (kg)

Weight: 1270 kg



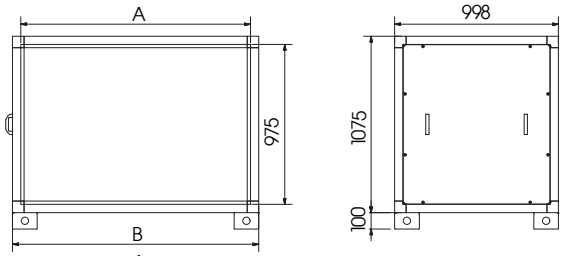


DIMENSIONS (mm) ADDITIONAL MODULES

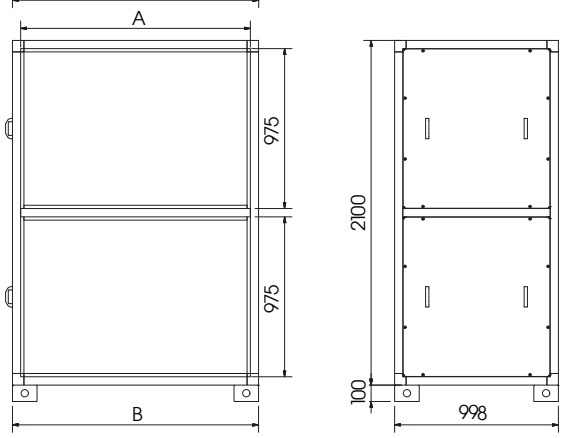
TABLE

UNIT	Dimensions (mm)	
	A	B
UTA 1	1400	1500
UTA 2	2000	2100

SINGLE MODULE
. Coil BA-AF / CAP
. Coil DX R410A
. dehumidification
. humidifies
. other use



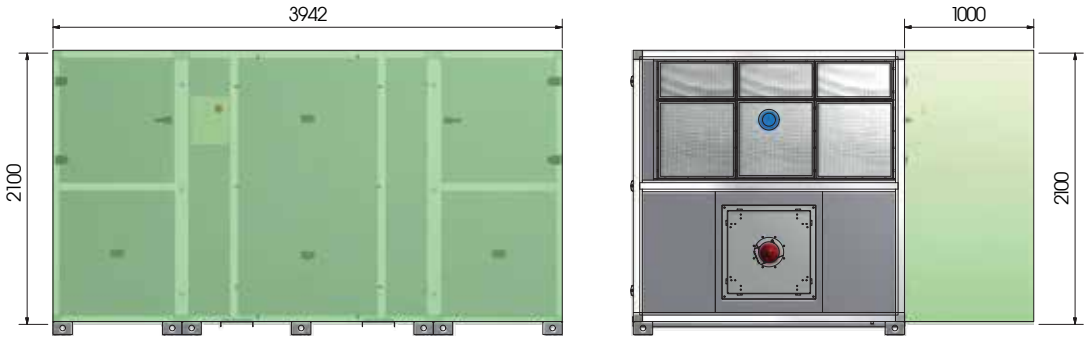
DOUBLE MODULE
. silencers
(Input and extraction)
. other use



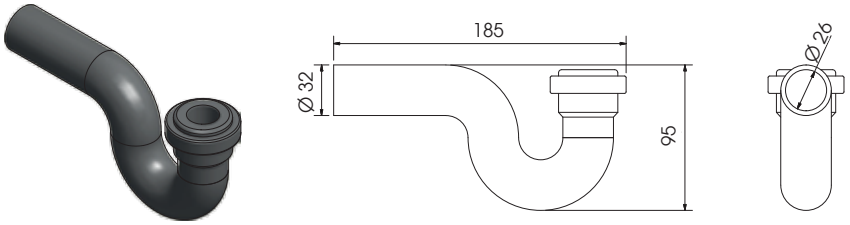
INSTALLATION UTA

FLOOR INSTALLATION

Minimum required space for maintenance (mm)



SIFONE STANDARD (mm)

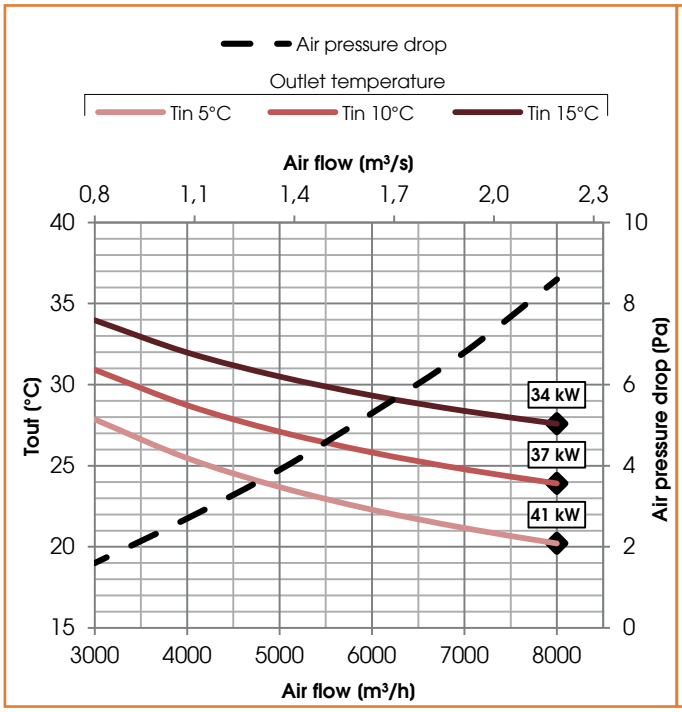


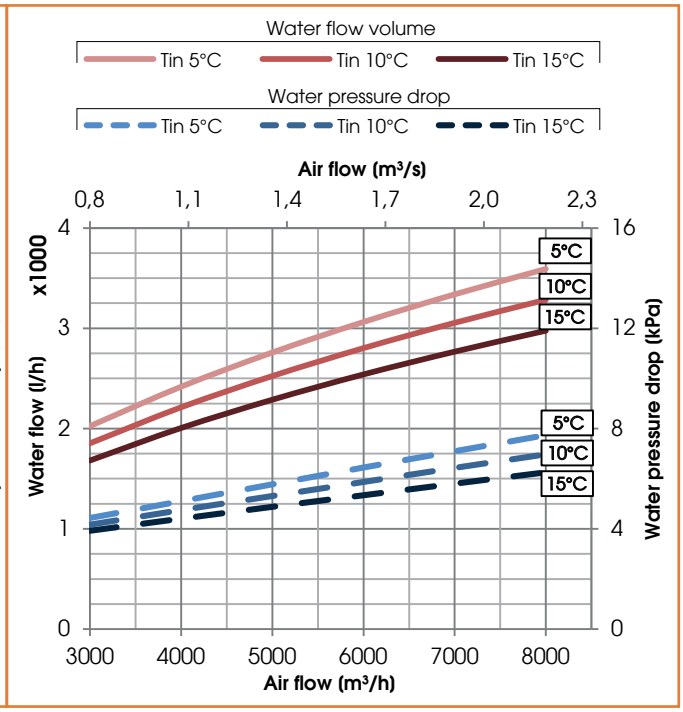
The way to read the graphs is specified within the accessories techno-list

COILS UTA 1

Heating water coil (70°C/60°C) - Single internal module

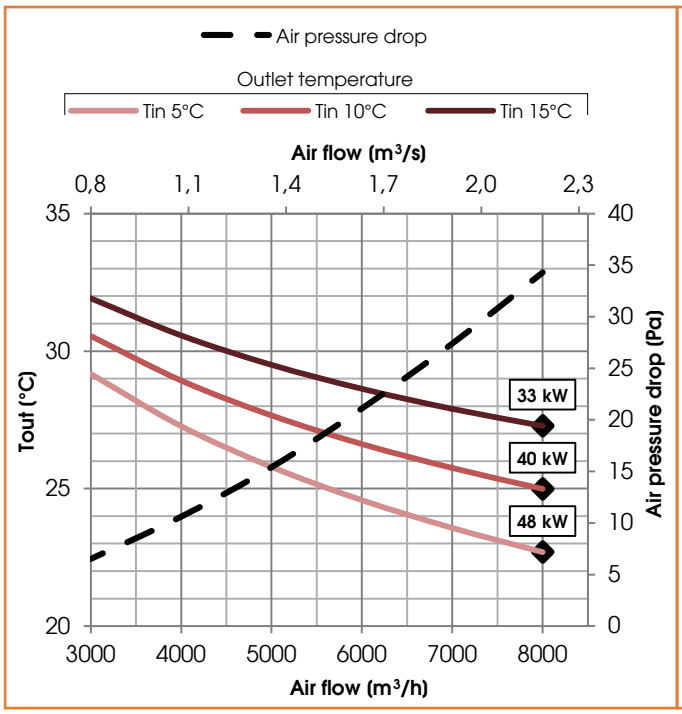
				MATERIALS		
Ø WATER ("gas)	N. ROWS	FIN PITCH (mm)	INT.VOL. (dm³)	TUBES	FINS	FRAME
1"	2	4,0	9	Cu	Al	Fe Zn

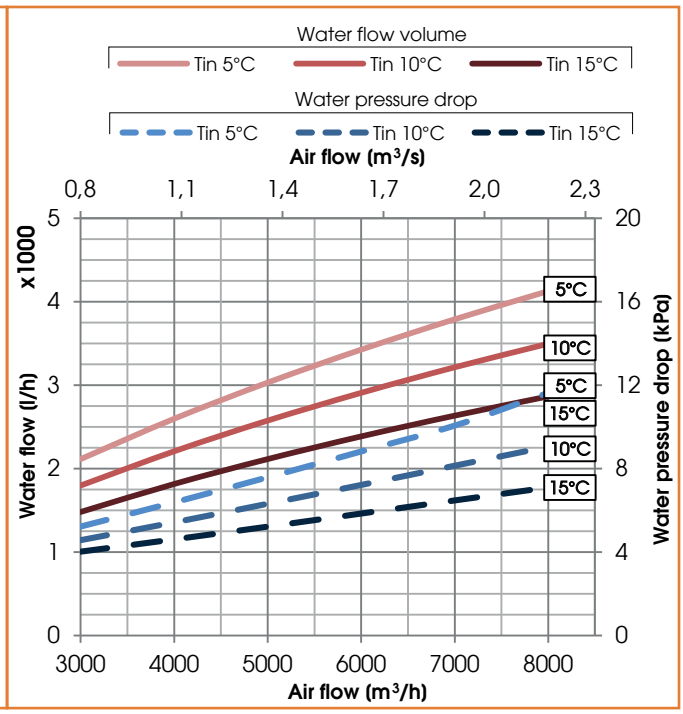




Heating water coil (45°C/35°C) - Single internal module

				MATERIALS		
Ø WATER ("gas)	N. ROWS	FIN PITCH (mm)	INT.VOL. (dm³)	TUBES	FINS	FRAME
1	2	2,5	13	Cu	Al	Fe Zn

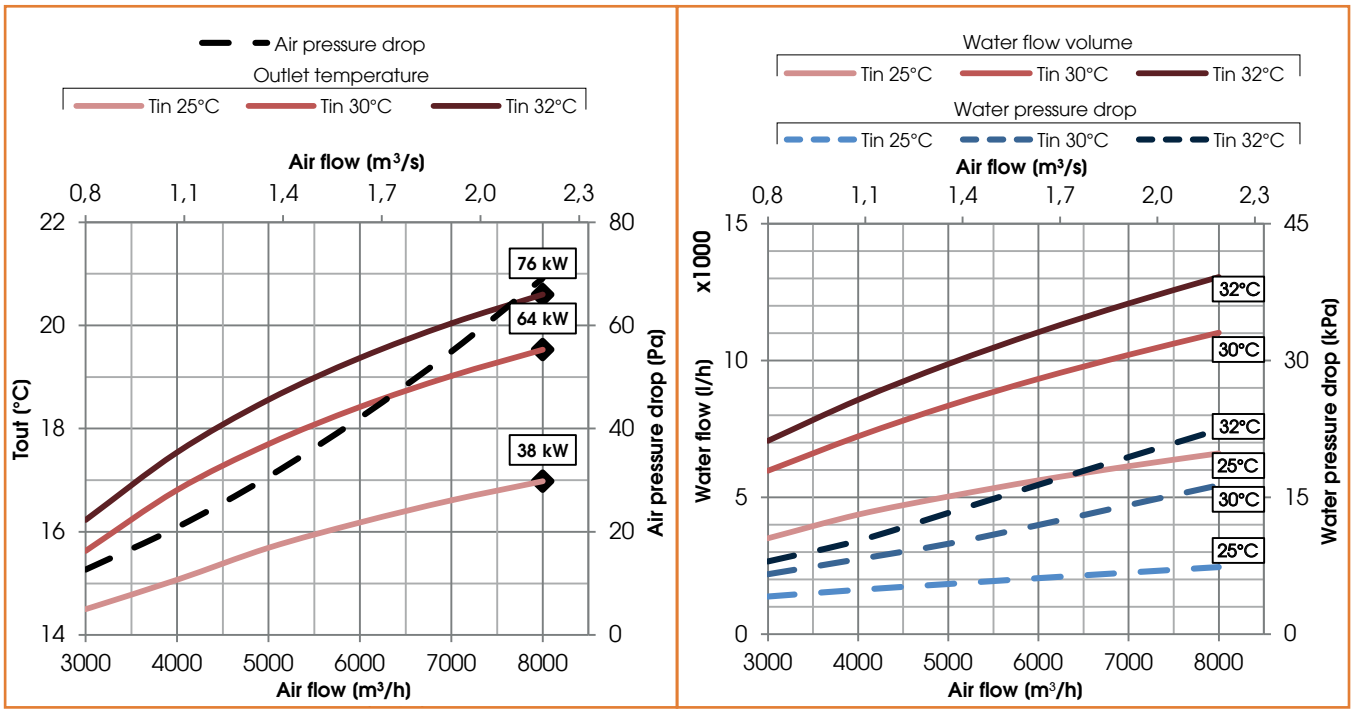




COILS UTA 1

Cooling water coil (7°C/12°C) - Single external module

				MATERIALS		
Ø WATER ("gas)	N. ROWS	FIN PITCH (mm)	INT.VOL. (dm³)	TUBES	FINS	TELAIO
11/2"	3	2,5	20	Cu	Al	Fe Zn



DX coil - Single external module

DIRECT EXPANSION COIL (R410A) TECHNICAL DATA						
Air flow (m³/h)	Tin (C°)	R.H in (%)	Power (kW)	Tout (°C)	R.H.out (%)	Air pressure drop (Pa)
8000	28	50	43,8	16,9	81	61

Ø Connection (mm)	Fin pitch (mm)	N. Rows	Int.Vol. (dm³)	T evap (°C)	T cond (°C)
42-28	4,0	4	16	5	50

Electrical heater

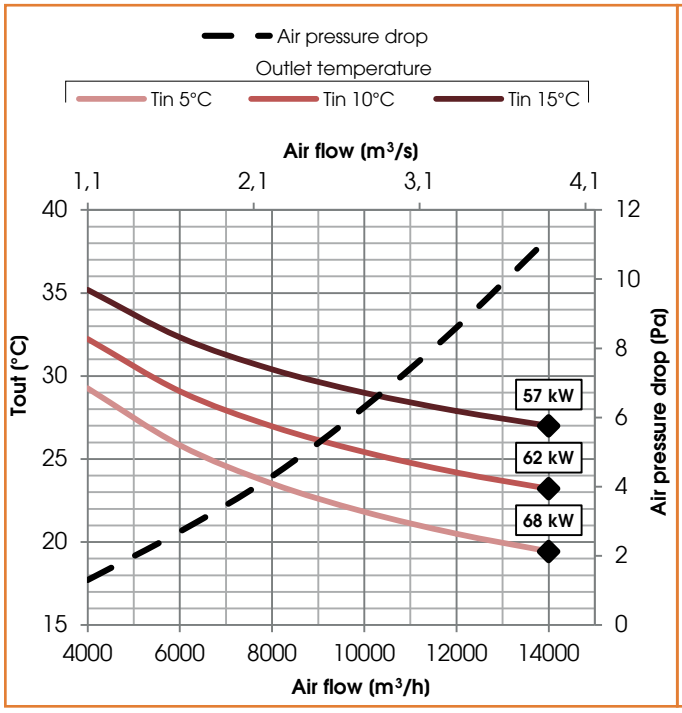
PRE-POST ELECTRICAL HEATER TECHNICAL DATA				
Unit	Power supply	Power (kW)	Current (A)	N. stages
UTA 1	400V, 50Hz,3F	24	34,8	1

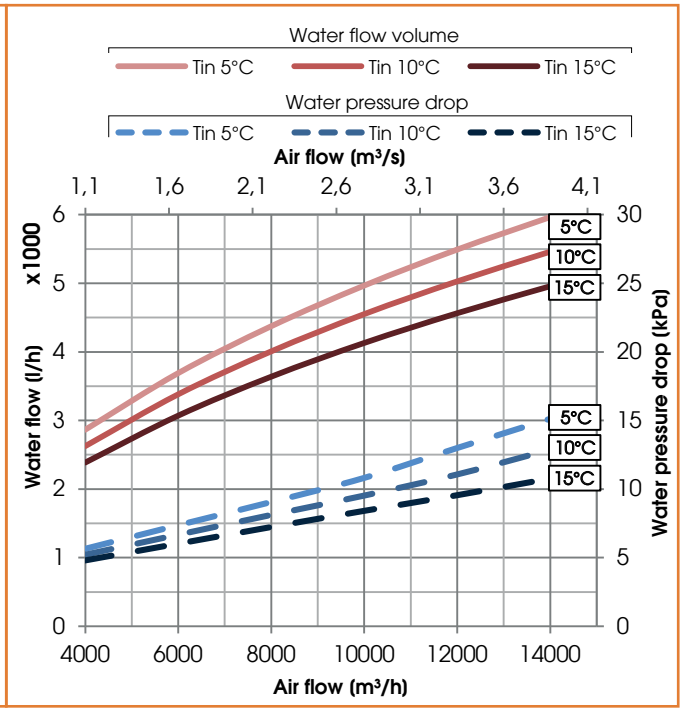
N.B. – for other batteries PRE or POST treatment see the Techno-list of ACCESSORIES

COILS **UTA 2**

Heating water coil (70°C/60°C) - Single internal module

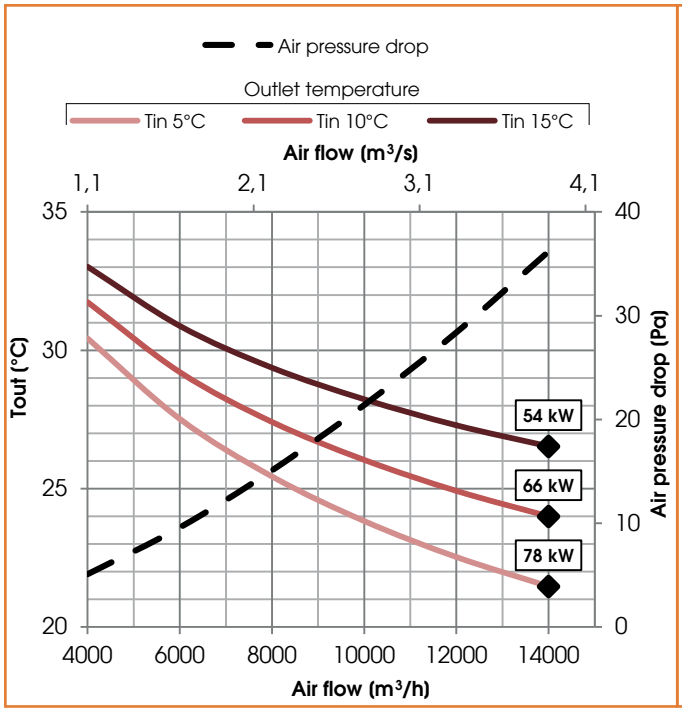
Ø WATER ("gas)	N. ROWS	FIN PITCH (mm)	INT.VOL. (dm³)	MATERIAS		
				TUBES	FINS	FRAME
11/4"	2	4,0	13	Cu	Al	Fe Zn

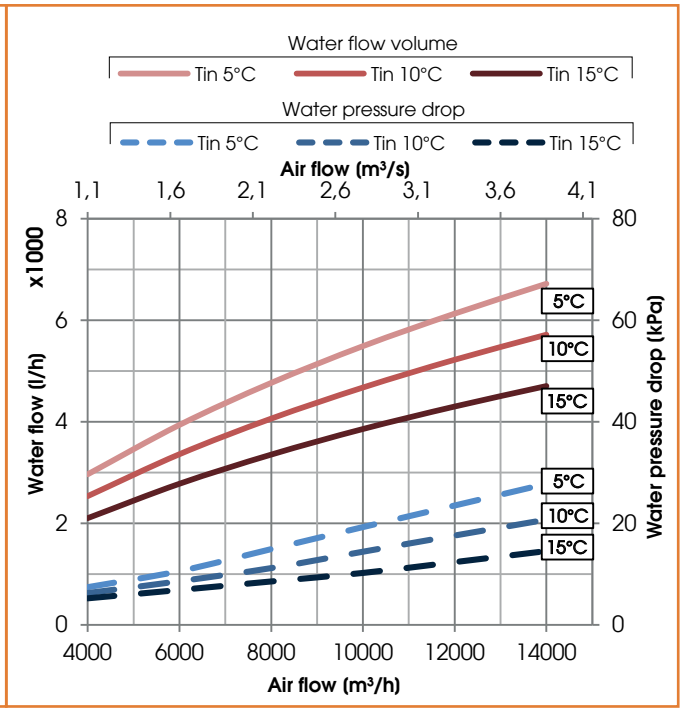




Heating water coil (45°C/35°C) - Single internal module

Ø WATER ("gas)	N. ROWS	FIN PITCH (mm)	INT.VOL. (dm³)	MATERIALS		
				TUBES	FINS	FRAME
11/4"	3	2,5	19	Cu	Al	Fe Zn

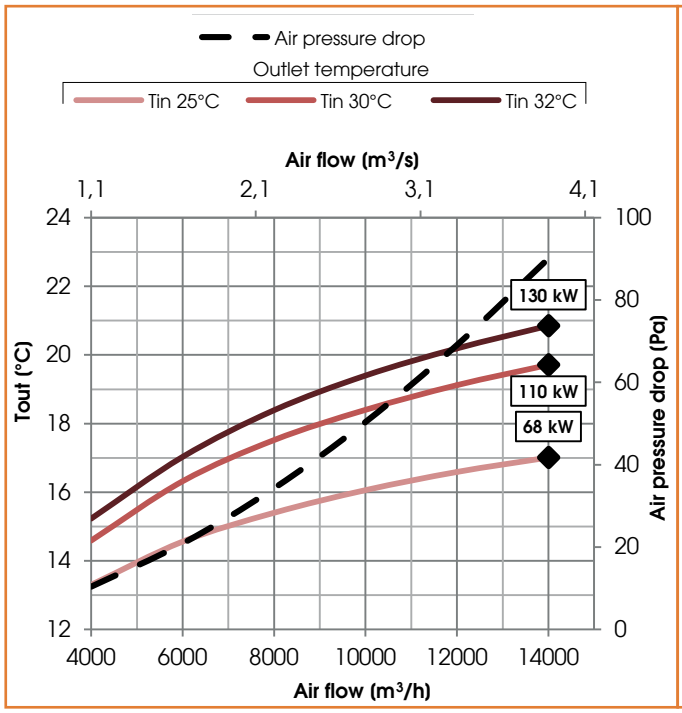


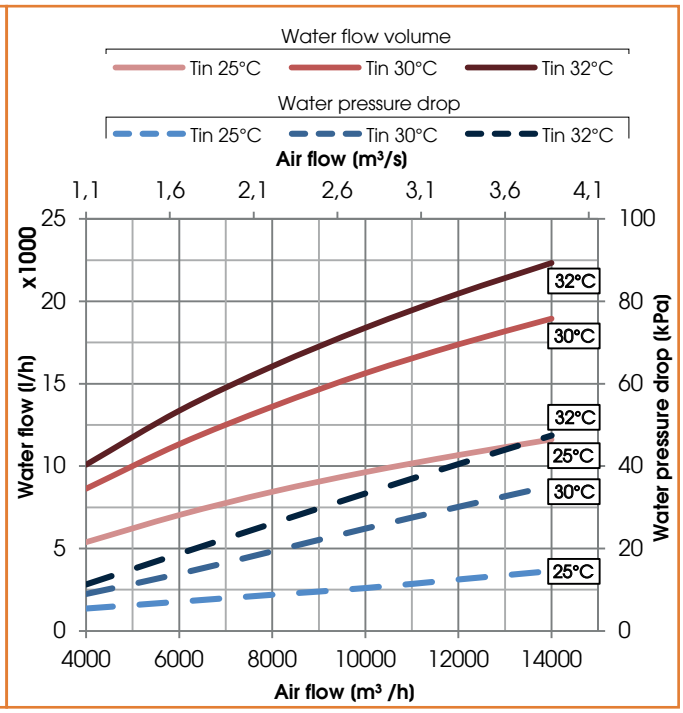


COILS UTA 2

Cooling water coil (7°C/12°C) - Single external module

				MATERIALS		
Ø WATER ("gas)	N. ROWS	FIN PITCH (mm)	INT.VOL. (dm³)	TUBES	FINS	FRAME
2"	3	2,5	29	Cu	Al	Fe Zn





DX coil - Single external module

DIRECT EXPANSION COIL (R410A) TECHNICAL DATA						
Air flow (m³/h)	Tin (°C)	R.H in (%)	Power (kW)	Tout (°C)	R.H: out (%)	Air pressure drop (Pa)
13000	28	50	66,7	17,6	80	68

	Ø connection (mm)	Fin pitch (mm)	N. Rows	Int.Vol. (dm³)	T evap (°C)	T cond (°C)
SINGLE CIRCUIT	54-35	4,0	4	24	5	50
DOUBLE CIRCUIT	2x35 - 2x28			23		

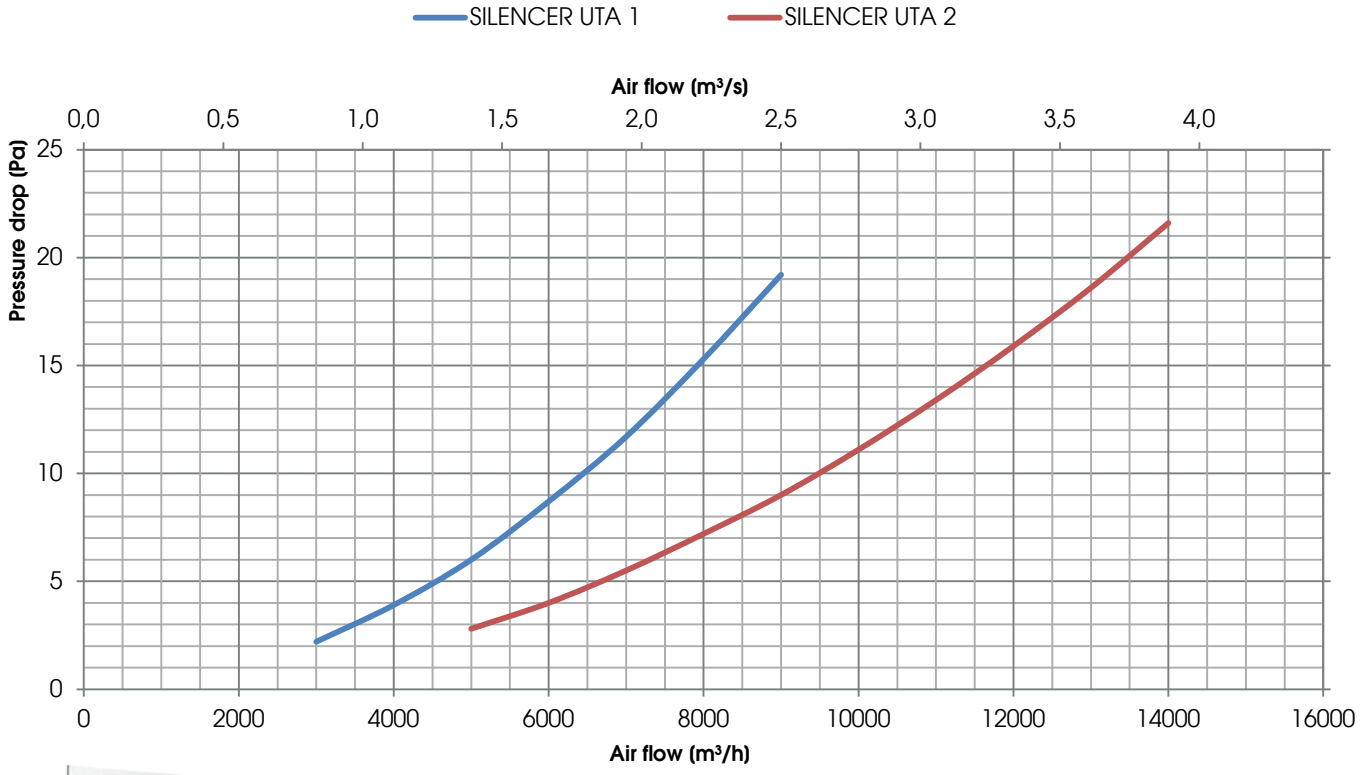
Electrical heater

PRE/POST ELECTRICAL HEATER TECHNICAL DATA				
Unit	Power supply	Power (kW)	Courrent (A)	N. stages
UTA 2	400V, 50Hz,3F	36	52,2	1

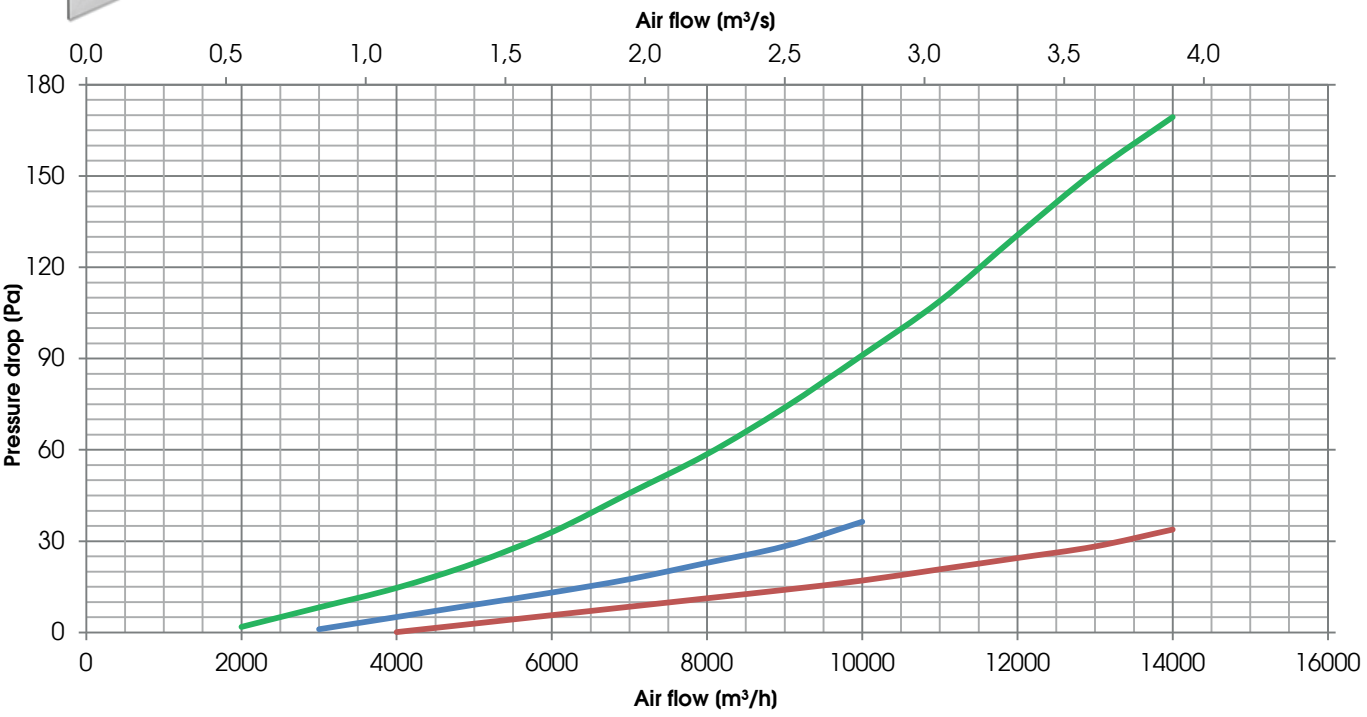
N.B. – for other batteries PRE or POST treatment see the Techno-list of ACCESSORIES

UTA SILENCER - double module

	ATTENUATION(dB)						
	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
SILENCER UTA 1	5	13	18	24	22	13	8
SILENCER UTA 2	5	15	21	27	25	15	9

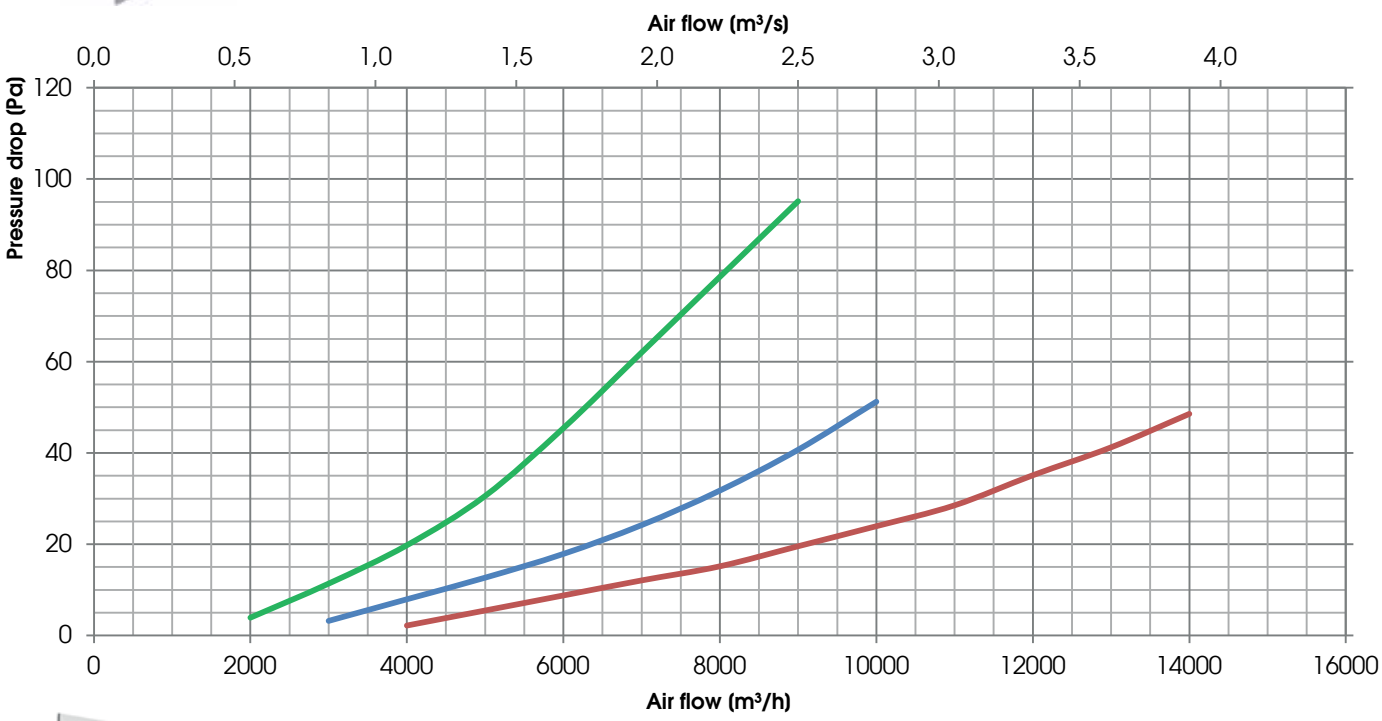


EXTERNAL LOUVER

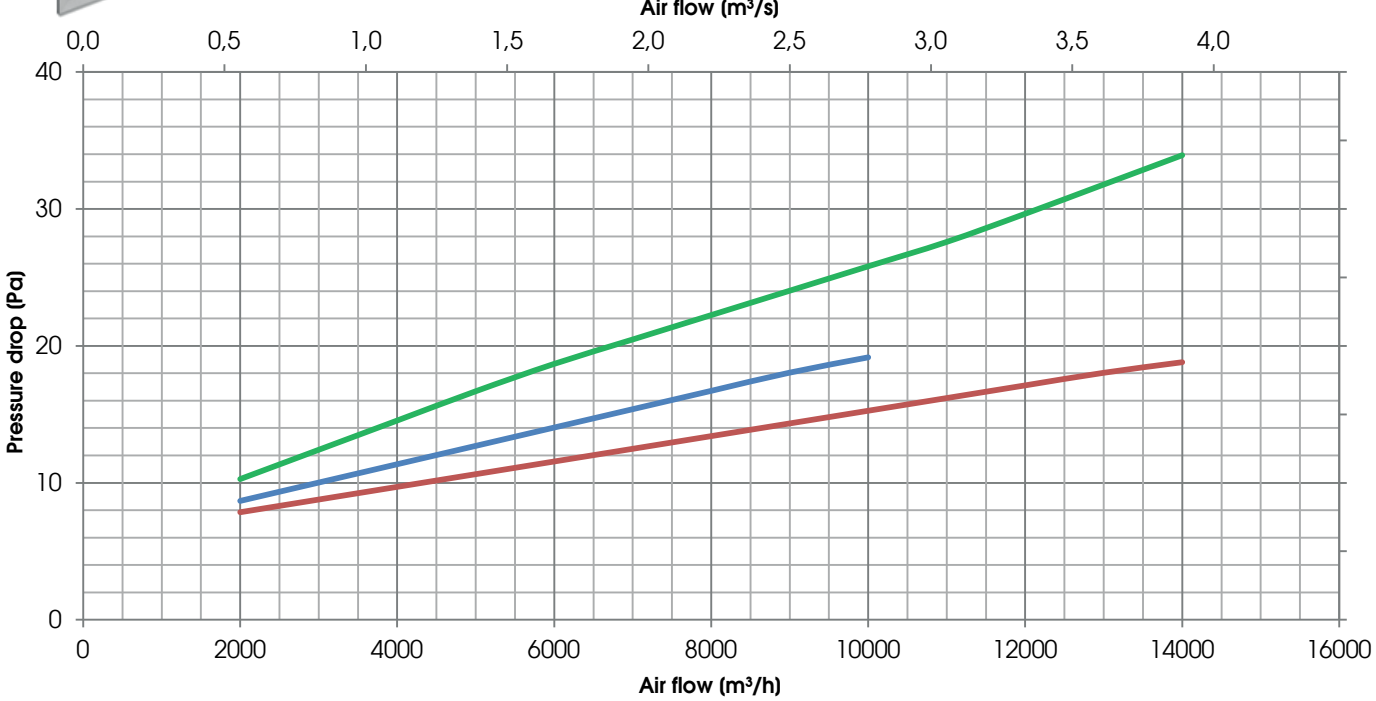


ACOUSTIC LOUVER

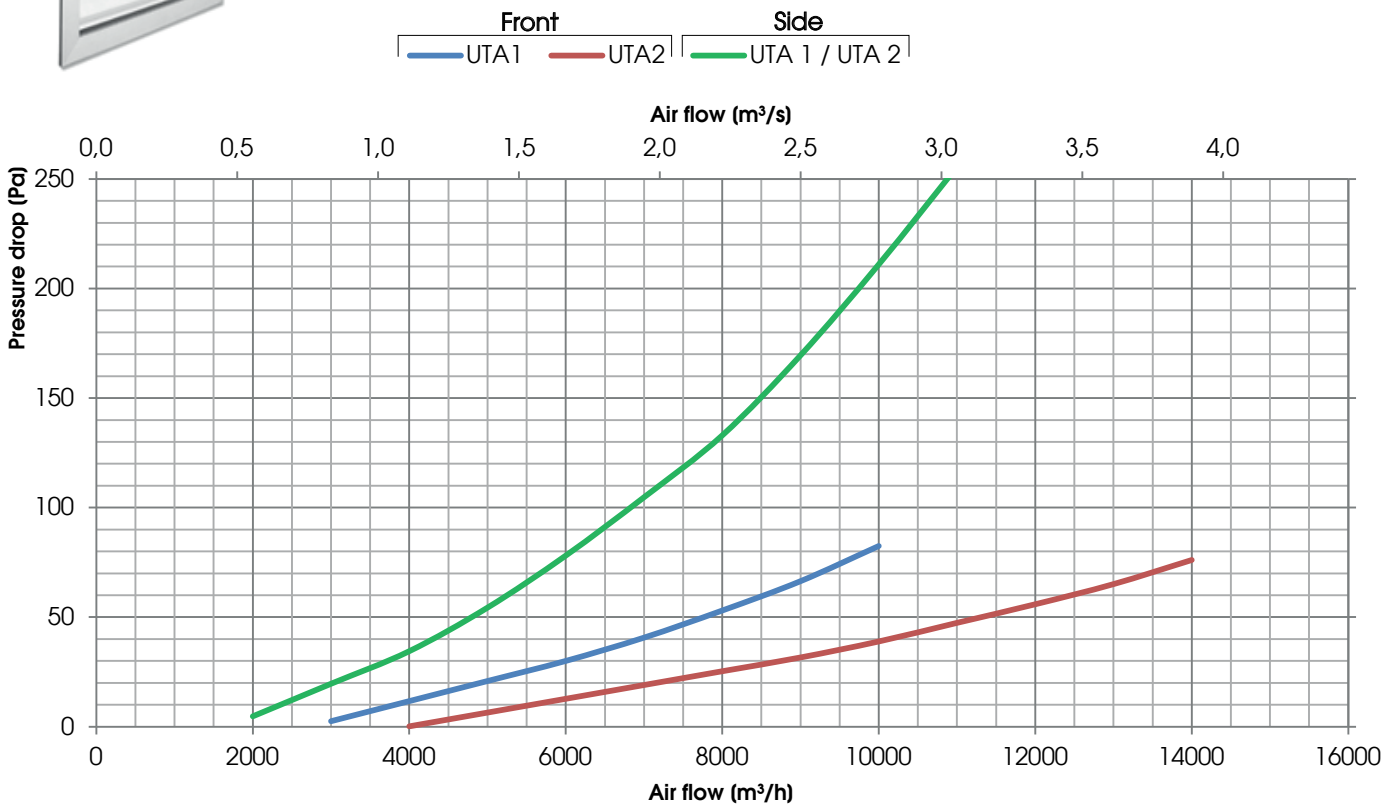
	DAMPING (dB)					
125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
6	8	10	14	18	16	15

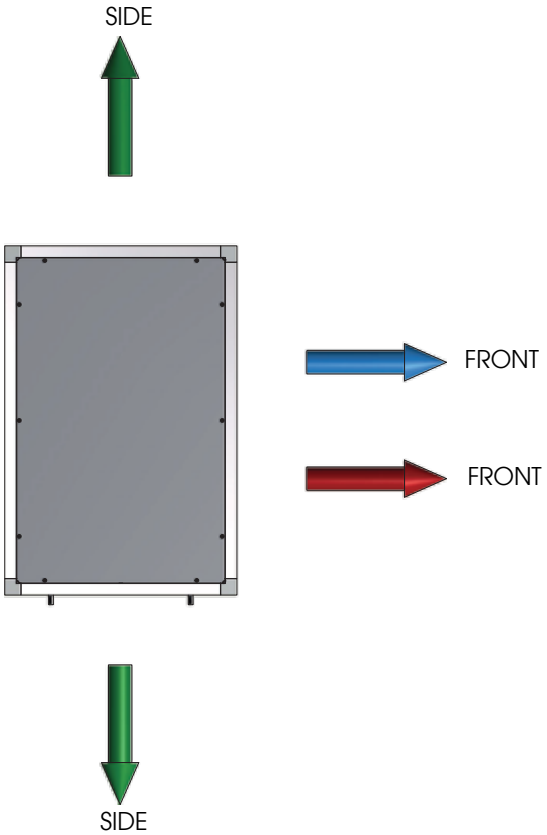


OVERPRESSURE DAMPER



EXTERNAL LOUVER WITH ADJUSTABLE BLADES





A	Manufacturer's name				
B	Manufacturer's model identifier	UTA 1 BP CAV EVO-PH SV	UTA 2 BP CAV EVO-PH SV		
C	Declared typology	UVNR / UVB	UVNR / UVB		
D	Type of drive installed	Multiple speeds	Multiple speeds		
E	Type of HRS	other	other		
F	Thermal efficiency of heat recovery (%)	83,7	83,7		
G	Nominal NRVU flow rate (m^3/s)	2,223	3,379		
H	Effective electric power input (kW)	5,15	10,36		
I	SFPint ($W/(m^3/s)$)	1040	1084		
J	Face velocity at design flow rate (m/s)	2,1	2,2		
K	Nominal external pressure (Pa)	200	500		
L	Internal pressure drop of ventilation components (Pa)	694	704		
M	Optional: internal pressure drop of non-ventilation components	-	-		
N	Static efficiency of fans used in accordance with Regulation (EU) No 327/2011 (%)	62,8	68,5		
O	Declared maximum external leakage rate of the casing of ventilation units (%)	1,9	2,0		
	Declared maximum internal leakage rate of bidirectional ventilation units or carry over (for regenerative heat exchangers only) (%)	3,4	3,1		
P	Energy performance, preferably energy classification, of the filters (declared information about the calculated annual energy consumption	F7/M5	F7/M5		
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	Casing sound power level (LWA) (dB)	79	85		
S					

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