



CAD COMPACT

5153136600 - CAD-COMPACT 500 ADVANCED N8



Heat recovery units with high-efficiency counterflow aluminium plate heat exchanger (up to 88%) certified by Eurovent mounted in a galvanised steel double-walled enclosure with internal thermo-acoustic fireproof insulation (A1/M0) made of mineral wool 25mm mm. thickness.

Round inlet and outlet couplings. Only available in horizontal version.

Minimum outdoor air temperature -10°C. For lower temperatures it is necessary to use preheating batteries located in the suction of the outside air.

Plug fans with backward impeller blades. Single-phase EC motors with integrated electronic protection. IP44, Class B Low pressure drop F7 filters (ePM1 70%) in supply air side and M5 filters (ePM10 50%) in extract air side. It is possible to mount a second filter inside the unit (Delivered as accessory).

Control

Integrated control, located inside the electrical box and wired to all the components (fans, bypass, filter clogging detectors, temperature probes, etc.). Includes remote touch panel (wired). Main functionalities: Manual and automatic fan control (VAV, COP and CAV modes), by-pass management (free-cooling and defrost), control of external coils, weekly timer, alarm supervision. Modbus communication.

Applications

Air renewal in commercial premises, offices, hotels, public buildings, schools.

Requested working points

	Supply	Extract
Airflow	271 m ³ /h	271 m ³ /h
External static pressure	150 Pa	150 Pa
Air density	1,2 kg/m ³	
Inlet temperature/%RH in winter	-10/90 °C/%	20/50 °C/%
Inlet temperature/%RH in summer	32/45 °C/%	26/50 °C/%

Working points

	Supply	Extract
Airflow	271 m ³ /h	271 m ³ /h
External static pressures	150 Pa	150 Pa
	Unit	
SFP EN 16798-3	1,83 W/l/s	
Weight	63 kg	

Filter

	Supply	Extract
Airflow	271 m ³ /h	271 m ³ /h
EN 779 Filter class	F7	M5
ISO 16890 class	ISO ePM1 55%	ISO ePM10 50%
energy class	B	C
Height	226 mm	226 mm
Width	319 mm	319 mm
Depth	48 mm	48 mm
Quantity	1	1
Initial pressure drop	23 Pa	18 Pa
Mid-life pressure drop	46 Pa	36 Pa
Max. for replacement pressure drop	69 Pa	54 Pa
Front speed	1 m/s	1 m/s

Filters Summary

	Supply	Extract
Total Design Filters Pressure Drop	23 Pa	18 Pa



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Heat exchanger

	Supply	Extract
Airflow	271 m ³ /h	271 m ³ /h
Type of heat exchanger	plate heat exchanger	

Winter - Air Inlet

Temperature	-10 °C	20 °C
Relative humidity	90 %	50 %

Winter - Air Outlet

Temperature	15,5 °C	0,2 °C
Relative humidity	13 %	99 %
Pressure drop	47 Pa	47 Pa
Thermal Efficiency	85 %	
Dry efficiency (EN308 / Balanced massflows)	78 %	
Sensible Heat	2,59 kW	
Total power	2,59 kW	
Condensation	1,1 kg/h	

SUMMER

Summer - Air Inlet

Temperature	32 °C	26 °C
Relative humidity	45 %	50 %

Summer - Air Outlet

Temperature	27,3 °C	30,7 °C
Relative humidity	59 %	38 %
Pressure drop	47 Pa	47 Pa
Thermal Efficiency	79 %	
Dry efficiency (EN308 / Balanced massflows)	78 %	
Sensible Heat	0,41 kW	
Total power	0,41 kW	

Fan

	Supply	Extract
Airflow	271 m ³ /h	271 m ³ /h
Motor type	EC	EC
External static pressure (unit)	150 Pa	150 Pa
Total static pressure (fan)	220 Pa	215 Pa
Fan speeds	2830 rpm	2915 rpm
Control voltage	7,1 V	7,3 V
Absorbed power per fan	0,070 kW	0,070 kW
Total absorbed power	0,070 kW	0,070 kW
SFPv	0,88 W/l/s	0,95 W/l/s

Observations

The unit system effect is taken into account in the fans performances



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Acoustic data

Supply - Lw

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
57	48	46	39	43	40	32	30	47	Outdoor air
60	58	63	58	60	62	56	49	67	Supply

Supply - LpA @ 1m

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
20	21	26	25	32	30	22	18	36	Outdoor air
23	31	43	44	49	53	46	37	56	Supply

Extract - Lw

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
58	49	46	40	44	41	33	31	48	Extract
60	58	63	59	61	63	57	51	67	Exhaust

Extract - LpA @ 1m

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
21	22	27	26	33	31	23	18	37	Extract
23	31	44	44	50	53	47	38	56	Exhaust

Surrounding - Lw

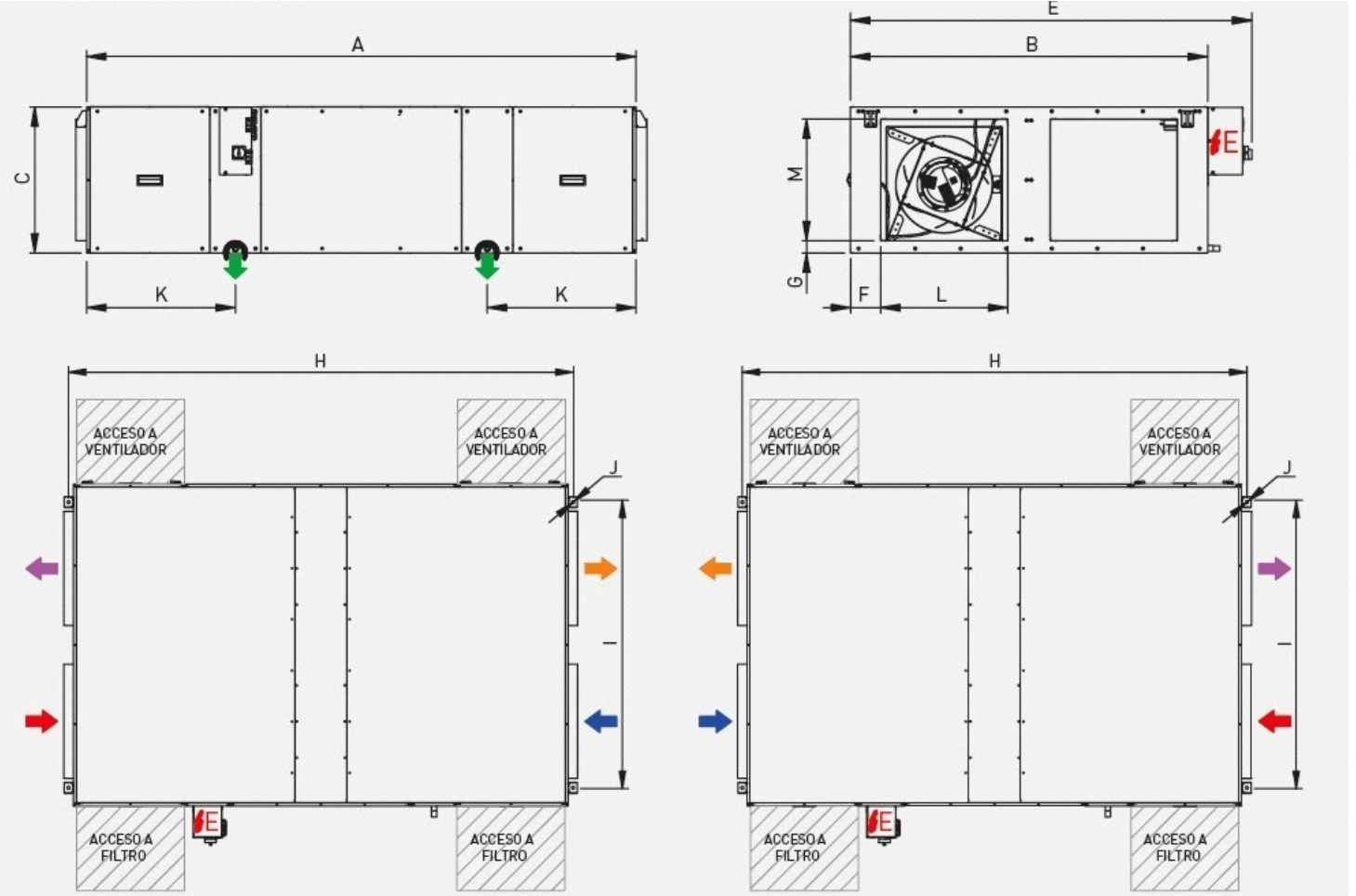
63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
74	60	54	45	40	42	43	37	53	Surrounding

Surrounding - LpA @ 1m

63Hz	125Hz	250Hz	500Hz	1000Hz	2000Hz	4000Hz	8000Hz	dB(A)	
37	33	34	31	29	32	33	25	42	Surrounding

Sound pressure at 1m. 42 dB(A), isolated source / spherical field (Q=1)

Dimensions and weights



A	B	C	D	E	F	G	H	I	J	K
1120	698	289	200	862	147	188	1163	546	12	256

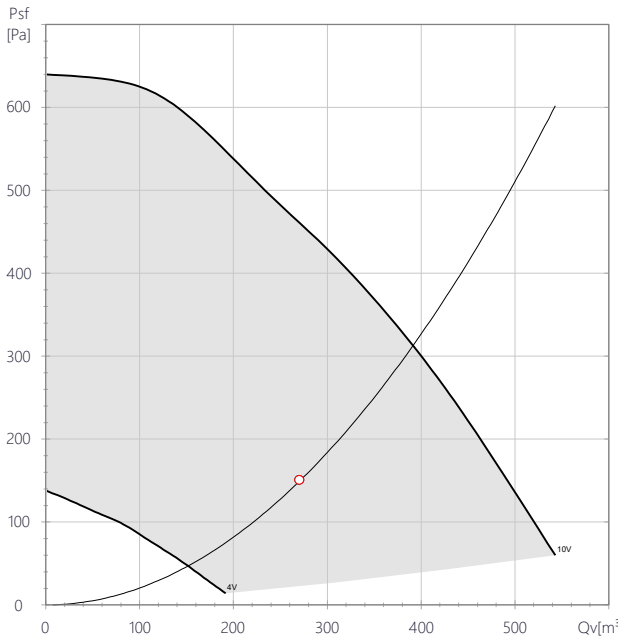


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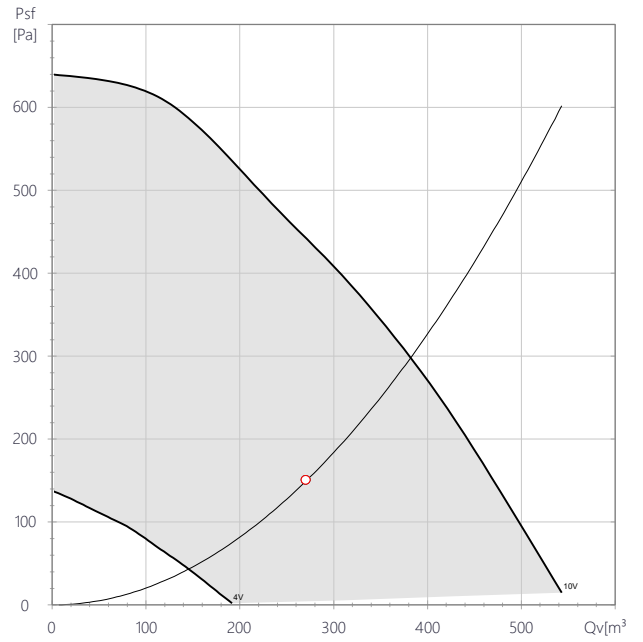
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Performance Chart

Supply



Extract





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ErP Data

Ecodesign

Commission regulation (EU) No. 1253/2014 of July 2014

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Information requirements (Annex V)

Ecodesign

Commission regulation (EU) N°1253/2014 of July 2014

Information requirements (Annex V)

Product description

CAD-COMPACT 500 ADVANCED N8

Manufacturer's Info

S&P

Identifier

-

Typology

NRVU bidirectional

Drive

VSD

Type of HRC

Recuperative

Thermal efficiency (%)

75

Qnom (m3/s)

0,13

Pelec (kW)

0,31

SFPint (W/m3/s)

1121

Face velocity (m/s)

1,8

$\Delta ps,ext$ (Pa)

125

$\Delta ps,int$ (Pa)

196

$\Delta ps,add$ (Pa)

NA

Static efficiency fans (%)

35

External leakage rate (%)

3

Internal leakage rate (%)

3

Filter performance

NA

Filter warning

Differential pressure switch

LWA dB(A)

57

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