

AIR DYN SYSTEM

heat recovery unit with thermodynamic system

- cod. ACC100003 - cod. ACC100004 - cod. ACC100005
- cod. ACC700004 - cod. ACC700005 - cod. ACC700006
- cod. ACC700007



DESCRIPTION

AIR DYN SYSTEM air renewal units feature the adoption of a dual energy recovery system, which would otherwise be wasted in the stale air expulsion phase: the first, static type, uses a cross-flow recovery unit with aluminium plates, and the second (in combination with the previous one), active type, uses a reversible refrigeration circuit.

Using a single, independent unit, this allows the simultaneous renewal of air with respect to comfort, reduction of associated thermal loads and savings in energy, all due to very high overall efficiency, both in winter and summer.

TECHNICAL SPECIFICATIONS:

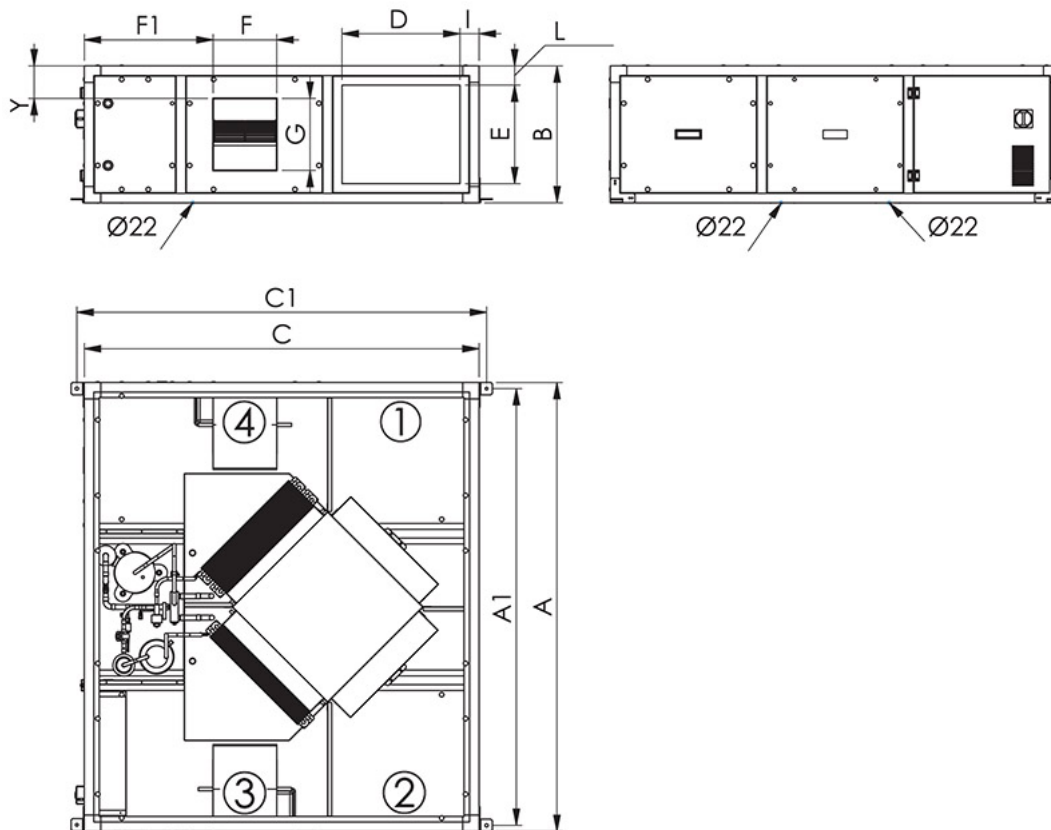
- Extruded aluminium profile frame, Anticorodal 63 alloy, with preloaded nylon knot joints.
- Sandwich-type infill panels 23 mm thick, in external pre-painted sheet metal (RAL 9002), internal galvanized sheet metal, with thermal/acoustic insulation in injected polyurethane with a density of 45 kg/m³.
- ☑ Filtration sections at the suction intakes, consisting of synthetic cell filters in efficiency class ISO 16890 COARSE 55% (G4 EN779), removable both below and laterally.
- ☑ Centrifugal fans with double inlet with forward blades with directly coupled electric motor.
- ☑ First stage of heat transfer (static) by means of a cross-flow air-air heat exchanger with aluminium exchange plates; lower condensate collection tank, extended to the entire area dedicated to heat treatment.
- ☑ Second heat transfer stage (active) by means of a heat pump cooling circuit (with R410A gas) consisting of hermetic compressor (rotary or scroll depending on the size of the machine), evaporating and condensing coils with 25x22 geometry with copper pipes and continuous aluminium finning, electronic expansion valve, liquid separator and receiver, 4-way valve for cycle inversion, high and low pressure switches, freon filter, liquid indicator.
- Internal electrical panel including adjustment and control panel.

ACCESSORIES

High efficiency filter ePM₁ 70%

Optional remote user terminal with interconnect cables

TECHNICAL DRAWING



- [1] Outdoor air intake
- [2] Room air intake
- [3] Treated air delivery
- [4] Foul air expulsion

DIMENSIONS

DIMENSIONS	MODEL 1000	MODEL 1500	MODEL 3000
A [mm]	1840		2040
B [mm]	410	500	550
C [mm]	1440		1690
A1 [mm]	1795		1995
C1 [mm]	1494		1744
D [mm]	400		500
E [mm]	250	350	410
F [mm]	233		299
F1 [mm]	703	470	571
G [mm]	264	264	264
I [mm]	85	85	85
L [mm]	80	75	70
Y [mm]	55	118	120

PERFORMANCE

MODEL	1000	1500	2300
Nominal flow rate [m³/h]	1000	1500	2300
Useful static delivery pressure [Pa]	195	155	155
Useful static intake pressure [Pa]	140	95	95
Sound pressure level [dB(A)]	62/49/54	67/54/57	65/51/59
Weight	185	228	267

functional limitations

MODEL	1000	1500	2300
Winter Limit Conditions Standard Configuration [°C]	min -10°C OUT and min 19°C 50% IN		
Range change flow %	+10		
Summer limit conditions [°C]	max 38°C 50% OUT and max 27°C IN	max 38°C 50% OUT and max 27°C IN	max 38°C 50% OUT and max 27°C IN
Range change flow %	+10		

ELECTRICAL DATA

MODEL	1000	1500	2300
Power supply [V] / ph / [Hz]	230/1/50	230/1/50	400/3+N/50
Absorbed current max [A]	13,2	20,2	10

PERFORMANCE IN HEATING

MODEL	1000	1500	2300
Efficiency static recovery %	50	50	50
Total heat output [W]	9410	14390	21190
Thermal power active recovery [W]	5010	7690	11090
Water side load loss [kPa]	5	18	23
Air side pressure drop [kPa]	43	34	37

COOLING PERFORMANCE

MODEL	1000	1500	2300
Efficiency static recovery %	50		
Total cooling capacity [W]	5840	8720	12830
Active recovery cooling capacity [W]	4890	7270	10580
EER global [W/W]	4,17	3,91	3,88
Water side load loss [kPa]	2	12	16
Air side pressure drop [kPa]	60	46	51

NOISE POWER IN OCTAVE BAND (e.g. nominal capacity 1500 m³/h)

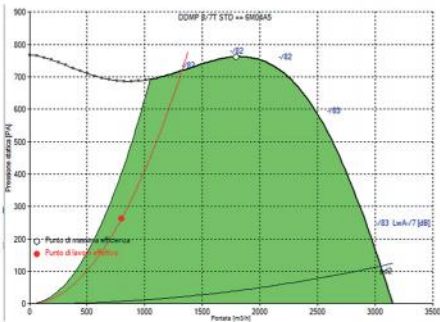
FREQUENCY [Hz]	Suction [dB]
63	80
125	78
250	78
500	75
1000	70
2000	64
4000	62
8000	61

EXTERNAL MACHINE VALUES (at 1.5 m)

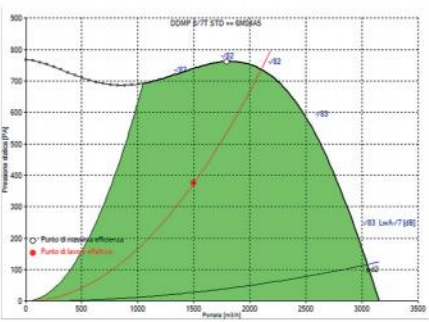
OCTAVE BAND [Hz]	Lps dB
63	52.6
125	55.2
250	57.6
500	49.2
1K	43.6
2K	40.5
4K	37.2
8K	31.1
16K	18.4
Total LIN level [dB]	60.8
Total weighted [dB(A)]	52.4

LOAD CAPACITY AND HEAD GRAPHS

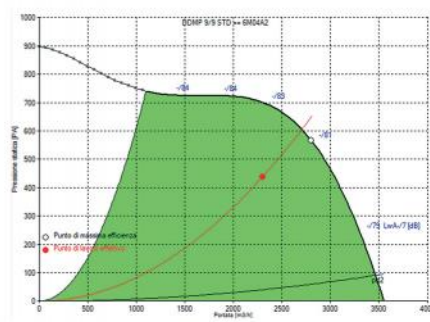
ACC100003



ACC100004



ACC100005



ITEMS

CODE	DESCRIPTION
ACC100003	
ACC100004	
ACC100005	
ACC700004	REMOTE USER TERMINAL FOR "AIR DYN SYSTEM"
ACC700005	COMPACT FILTER ePM1 70% FOR "AIR DYN SYSTEM" - 1000m³/h
ACC700006	COMPACT FILTER ePM1 70% FOR "AIR DYN SYSTEM" - 1500m³/h
ACC700007	COMPACT FILTER ePM1 70% FOR "AIR DYN SYSTEM" - 2300m³/h

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