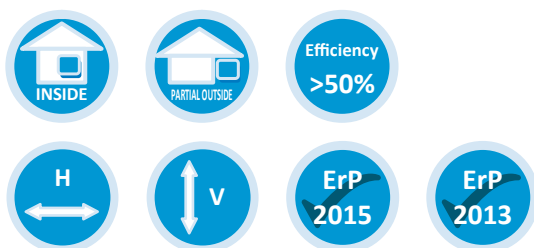


# REC



## Heat recovery unit

### Double panel



These heat recovery units are suitable for residential and commercial applications and offer a real energy saving in forced ventilation plants, by using an aluminum plated cross-flow heat exchanger, able to transfer more than 50% of heat which otherwise would be lost with air exhaust.

These units may be integrated with traditional heating and cooling systems (such as fan-coils, water heaters, heating underfloor etc.) and can operate both in summer and winter seasons.

The series consists of 10 models, with airflow rate from 100 m<sup>3</sup>/h to 6000 m<sup>3</sup>/h, particularly suitable for false ceiling installation and they may be appropriately ducted allowing air supply and air suction directly in the room.

Fully removable panels (sandwich type) with mineral wool insulation assure thermal and acoustic efficiency and excellent accessibility for maintenance and inspection. G4 efficiency class air filters, side or bottom removable, is as standard, F6 efficiency class compact filter as

option. The condensate drain tray with lower drainage connection is in aluminum. Direct driven double inlet forward curved blade fans are coupled to multi speed motors. The unit can be supplied with alternative types of control to suit client requirements: simple 3 step fan speed regulator, proportional thermostatic regulator and an enhanced electronic control for the whole system: it handles heating, cooling, fan speed, free-cooling mode, defrosting of heat exchanger, antifreeze protection, activation of electric heater, dirty filter alarm, CO2 sensor for best indoor air quality, external dampers, serial connection with MODBUS protocol and scheduling internal clock.

The external by-pass for free-cooling is made by a special motorized system that keeps the same airflow when the unit is working in the standard way or in free-cooling.

Adiabatic cooling section is very useful in summer mode with dry climate conditions.

### Accessories

- RACD: Round adapter for circular duct
- IWC: Internal water heating coil
- PEH Pre or post electric heater
- EWC External water cooling coil section
- AD Adjusting damper
- FJ Flexible joint
- DMS 3 damper mixing box section
- RCH Roof cover - Horizontal unit
- RCV Roof cover - Vertical unit
- FC6 F6 class compact filter
- FSB6 F6 class soft bag filter
- FSB7 F7 class soft bag filter
- FSB8 F8 class soft bag filter
- IM Inverter driven fan motors
- EHH External hood - Horizontal unit
- EHV External hood - Vertical unit
- EHAS External humid/adiabatic cooling sec.
- EFC External by-pass for free-cooling
- SL Support legs H 180 mm (kit 4 pcs)
- MEC Multifunction electronic control
- V23E 3 way valve with actuator for EWC
- V23I 3 way valve with actuator for IWC
- MCP Multifunction control panel

# REC Heat recovery unit - Double panel

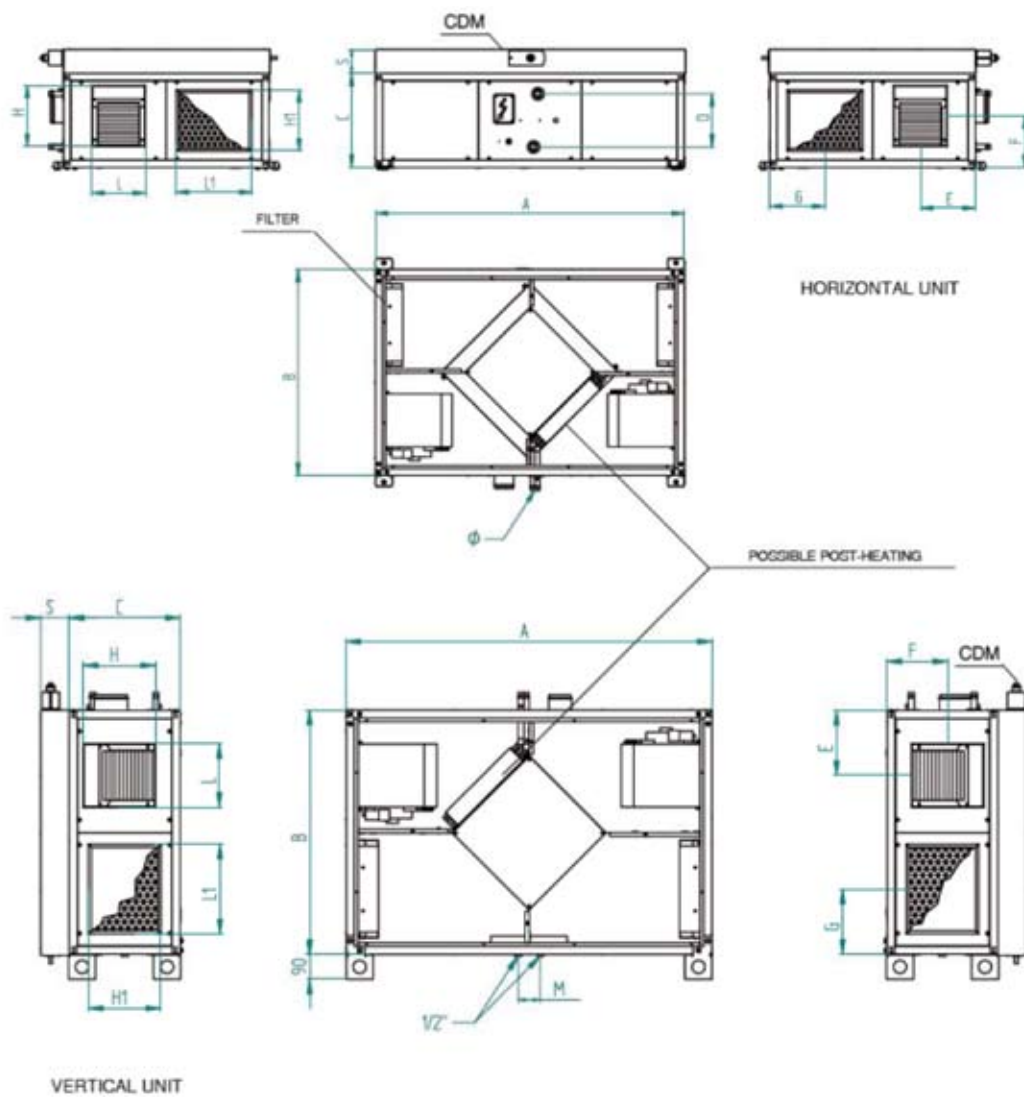
Winter			Fan speed	29	55	100	140	190	250	320	400	500	600
Airflow rate	Max	m <sup>3</sup> /h	300	500	930	1300	1900	2500	3200	4000	5000	6000	
	Med	m <sup>3</sup> /h	200	300	800	1200	1400	1700	2600	-	-	-	
	Min	m <sup>3</sup> /h	100	150	710	1000	1000	1150	2100	3000	4000	5000	
External static pressure	Max	Pa	163	121	121	118	125	120	114	114	99	188	
	Med	Pa	184	136	136	112	97	56	164	-	-	-	
	Min	Pa	167	144	144	72	82	46	142	61	139	208	
Sound pressure level a 1 m	Max	dB(A)	51	51	52	62	58	56	59	62	64	64	
	Med	dB(A)	50	47	49	57	54	51	53	-	-	-	
	Min	dB(A)	44	41	45	46	42	45	51	55	59	62	
Maximum current		A	1.40	1.40	3.00	5.60	7.80	7.60	12.6	6.60	11.2	10.8	
Maximum power input		kW	0.34	0.34	0.72	tbd	1.80	1.92	3.00	6.60	7.23	7.73	
Specific fan power		W/(m <sup>3</sup> /s)	1376	1019	tbd	tbd	1172	1019	1301	tbd	1428	1594	
Efficiency grade N			37.9	37.9	49.0	tbd	44.8	43.3	42.4	59.8	51	48.5	
2009/125/EC ErP compliant for year			2013	2013	2015	2013	2013	2013	2013	2015	2015	2013	
Fan speeds		n°	3	3	3	3	3	3	3	2	2	2	
Poles		n°	2	2	4	4	4	4	4	4	4	4	
Minimum protection degree			IP 32	IP 32	IP 44	IP 55	IP 20	IP 20	IP 20	IP 55	IP 55	IP 20	
Minimum temperature class			B	B	F	B	B	B	F	B	F	F	
Electrical power supply		V-Ph-Hz	230-1-50						400-3+N-50				
Efficiency (1)	Max	%	53.3	58.7	57.0	51.6	50.3	55.5	53.9	54.9	53.8	53.1	
	Med	%	55.7	62.2	58.0	52.1	52.1	57.9	55.2	-	-	-	
	Min	%	59.6	66.8	58.8	53.1	54.0	60.3	56.6	56.7	55.3	54.3	
Recovery heating capacity (1)	Max	kW	1.30	2.40	4.40	5.60	7.90	11.5	14.3	18.2	22.4	26.5	
	Med	kW	0.90	1.60	3.90	5.20	6.10	8.20	11.9	-	-	-	
	Min	kW	0.50	0.80	3.50	4.40	4.50	5.80	9.90	14.1	18.4	22.6	
Supply temperature (1)	Max	°C	7.1	8.3	7.9	6.7	6.4	7.6	7.2	7.4	7.2	7.1	
	Med	°C	7.6	9.1	8.2	6.8	6.8	8.1	7.5	-	-	-	
	Min	°C	8.5	10.1	8.3	7.0	7.3	8.7	7.8	7.9	7.5	7.3	

(1) Fresh air -5°C 80% RH, ambient air 20°C 50% RH

Summer			Fan speed	29	55	100	140	190	250	320	400	500	600
Airflow rate	Max	m <sup>3</sup> /h	300	500	930	1300	1900	2500	3200	4000	5000	6000	
	Med	m <sup>3</sup> /h	200	300	800	1200	1400	1700	2600	-	-	-	
	Min	m <sup>3</sup> /h	100	150	710	1000	1000	1150	2100	3000	4000	5000	
Efficiency (2)	Max	%	46.2	50.8	49.3	44.8	43.7	48.0	46.7	47.5	46.7	46.1	
	Med	%	48.2	53.7	50.2	45.2	45.2	50.1	47.8	-	-	-	
	Min	%	51.4	57.5	50.9	45.6	46.8	52.1	49.0	49.1	47.9	47.1	
Recovery cooling capacity (2)	Max	kW	0.30	0.50	0.90	1.10	1.60	2.30	2.80	3.60	4.40	5.20	
	Med	kW	0.20	0.30	0.80	1.00	1.20	1.60	2.40	-	-	-	
	Min	kW	0.10	0.20	0.70	0.90	0.90	1.10	1.90	2.80	3.60	4.50	
Supply temperature (2)	Max	°C	29.2	29.0	29.0	29.3	29.4	29.1	29.2	29.1	29.2	29.2	
	Med	°C	29.1	28.8	29.0	29.3	29.3	29.0	29.1	-	-	-	
	Min	°C	28.9	28.5	28.9	29.3	29.2	28.9	29.1	29.1	29.1	29.2	

(2) Fresh air 32°C 50% RH, ambient air 26°C 50% RH

## Dimensions, connections and weight



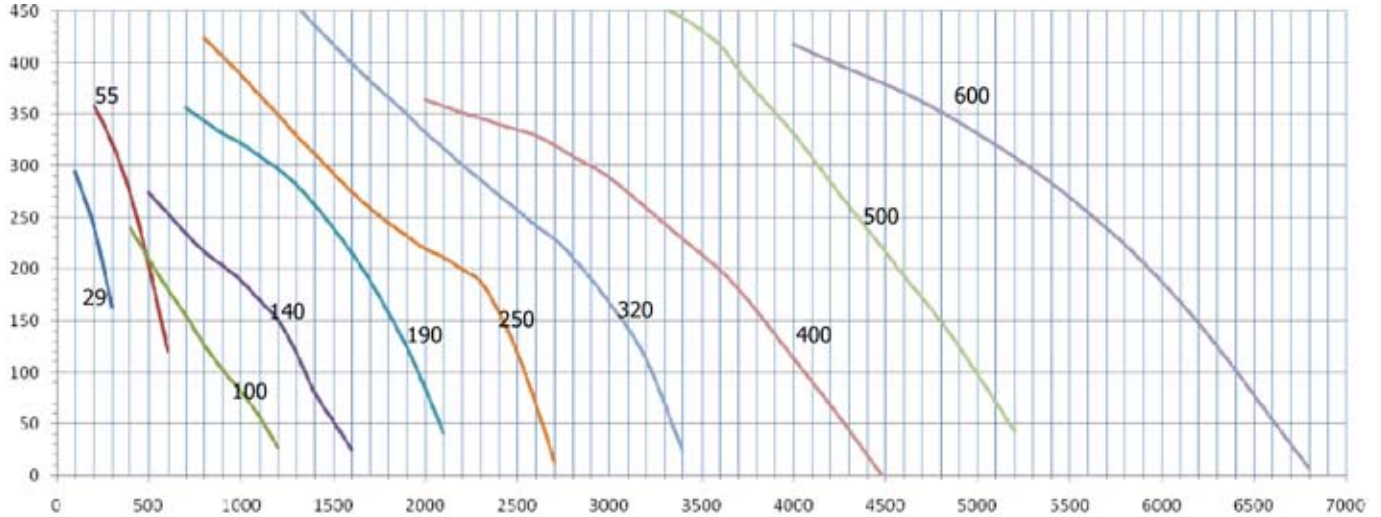
		29	55	100	140	190	250	320	400	500	600
A	mm	990	990	1175	1350	1450	1700	1700	1700	1700	1900
B	mm	750	750	900	900	900	1230	1230	1230	1350	1450
C	mm	270	270	410	410	470	490	530	630	705	755
D	mm	-	-	230	230	280	305	305	405	480	530
Ø	inch	-	-	¾" F	¾" F	¾" F	¾" F	¾" F	¾" F	1" F	1" F
E	Mm	197	197	241	241	241	323	308	308	353 (278)	379 (334)
F	Mm	170	170	236	tbd	286	287	328	377	427 (353)	420 (379)
G	Mm	197	197	241	241	241	323	323	323	353	379
H	Mm	94	94	215	tbd	266	266	294	294	294 (335)	347 (399)
H1	Mm	151	151	267	267	323	347	387	486	555	615
L	Mm	166	166	232	tbd	240	303	335	335	335 (294)	399 (347)
L1	Mm	273	273	331	331	331	501	501	501	555	615
M	mm	-(119)	-(119)	-(81)	-(81)	-(81)	-(131)	-(101)	-(101)	-(101)	-(101)
S	mm	75	75	75	75	100	150	150	150	175	200
WEIGHT	kg	39	45	65	91	99	140	155	179	235	273

## Sound level

Model	SWL [dB] per octave band [Hz]								SWL		Supply SPL			Return SPL			Outside SPL		
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)	at 1m	at 5m	at 10m	at 1m	at 5m	at 10m	at 1m	at 5m	at 10m
											dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)	dB(A)
<b>29</b>	78.6	79.4	77.6	69.0	70.4	71.4	66.9	62.2	84	77	63	52	46	60	49	43	51	40	34
<b>55</b>	78.6	79.4	77.6	69.0	70.4	71.4	66.9	62.2	84	77	63	52	46	60	49	43	51	40	34
<b>100</b>	72.4	78.9	75.9	71.1	72.8	73.7	71.7	69.0	83	79	65	53	48	62	50	45	52	40	35
<b>140</b>	94.1	86.9	92.4	85.6	80.9	81.8	82.7	78.2	98	90	76	64	59	73	61	56	62	50	45
<b>190</b>	90.7	82.9	90.1	79.4	78.6	79.5	79.3	75.5	94	87	72	61	56	69	58	53	58	47	42
<b>250</b>	93.1	85.9	87.2	77.4	76.5	76.6	73.8	69.1	95	84	69	58	53	66	55	50	56	45	40
<b>320</b>	103.4	83.2	88.7	78.6	80.0	79.9	77.6	72.6	104	87	72	61	56	69	58	53	59	48	43
<b>400</b>	95.4	89.0	92.5	87.7	81.5	82.6	83.5	79.0	99	91	76	65	60	72	61	56	62	51	46
<b>500</b>	110.0	89.9	93.6	84.2	84.1	84.5	82.8	78.5	110	92	76	66	61	73	63	58	64	54	49
<b>600</b>	111.0	90.9	94.6	85.2	85.1	85.5	83.8	79.5	111	93	77	67	62	74	64	59	65	55	50

At high fan speed, nominal airflow, supply ducted, return free inlet; SWL = Sound Power Level, SPL = Sound Pressure Level

## Airflow rate – External static pressure performance – Max air speed, no accessory



**Aerfor S.r.l.**  
Via Contarina n. 11  
35028 - Piove di Sacco - Padova - Italy

Tel +39 389 2939160  
fax +39 049 5806928  
e-mail : info@aerfor.com  
Pec: aerfor@registerpec.it  
PIVA 02703580304  
R.E.A. : RO-159632

[www.aerfor.com](http://www.aerfor.com)