

RFMAER – Heat recovery with heat pump system



Casing

Prepainted frame and fully removable sandwich panels with 20 mm thickness polyethylene/polyester thermal and acoustic insulation.

Recovery

High efficiency crossflow heat recovery aluminium heat exchanger plates with supplementary sealing; stainless steel drain tray, extended to all the cooling/heating components and heat insulated, complete with water trap.

Fans

Single speed double inlet forward curved fans, eventually matched with speed electronic regulator or supplied with built-in frequency converter motors.

Frigorific circuit

Heat pump refrigeration system (R407C) composed of scroll hermetic compressor, Cu-Al evaporator and condenser coils.

Standard filter

G4 efficiency class synthetic cell filters.

Control system

Internal electrical board for supplying all the electrical powers.
Microprocessor control.
Display for setting and for visualizing sensor and set-point temperature values, connected up to 20 m far from unit board.

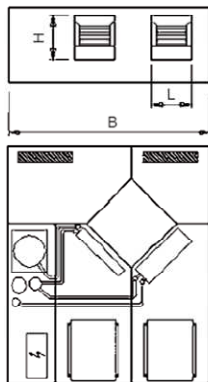
Accessories

- > Additional electric heater
- > Frequency converter fan-motors
- > Air filter pressure switch
- > F6 Compact filter
- > Adjusting damper
- > Antivibrating duct joint
- > Roof cover

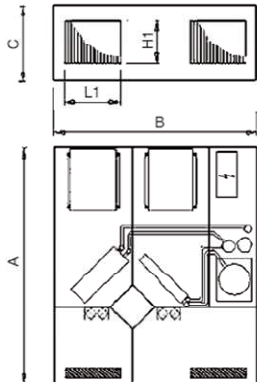
Versions

RFMAER T: 100% outside air

RFMAER P: 50% outside air and 50% recirculated air



T Model

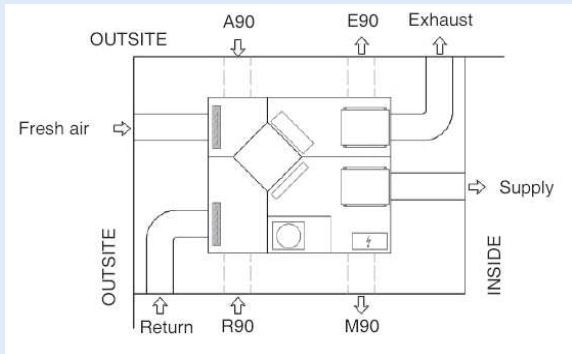


P Model

SIZE		14	19	25	30	40
TOTAL	mc/h	900	1400	2000	2600	3300
OUT.a.f.	mc/h "T"	900	1400	2000	2600	3300
	mc/h "P"	450	700	1000	1300	1650
ESP sup	Pa	210	190	175	170	180
ESP ret	Pa	170	140	125	110	110

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POSSIBLE INSTALLATIONS



The new stand-alone RFMAER units are dedicated to the refilling of room air and its thermal treatment.

The units are studied to have 2 effects:

- 1) Recover the 100% of the total external loads.
- 2) Give an extra capacity to the system (see the table below Leftover Power table)

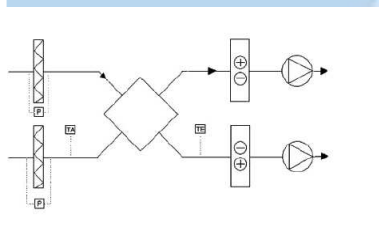
For the correct working of the unit it is important to respect these 2 data:

- A) Air flow rate (must be the same, or max. +10%, of the nominal air flow rate)
- B) On winter mode the external air temperature must be not lower than -5°C . Under -5°C is obligatory to use an additional electric heater. New limit must be calculate case by case.

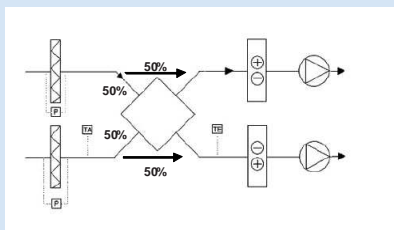
WORKING MODE

According to the set point temperature, room temperature and external temperature the electronic control set by it-self the working mode of the system. The working modes are the follows:

- HEATING MODE (with auxiliary electric heater if the unit has this accessory)
- ONLY VENTILATION MODE
- COOLING MODE



VERSION T



VERSION P

Leftover Power [W]					
SIZE	14	19	25	30	40
Cooling T version	1710	2620	3670	4860	6280
Cooling P version	2530	3900	5450	7160	9310
Heating T version	1420	1920	3670	4410	6290
Heating P version	2570	3570	5450	6810	9090

Winter air conditions: outside -5°C , room 20°C ; summer air conditions: outside 32°C db 50% RH, room 26°C db 50% RH

Freon temperature: evaporating $-7,5^{\circ}\text{C}$, condensating 45°C