



The Natural Choice for Fresher Air



RenewAire Applied Products **CA-Series • PA-Series**

*Flexible ERV for
Limitless Applications and Airflows*



Overview

Some ventilation projects require more flexibility than packaged ERVs allow. RenewAire offers both indoor and outdoor cabinets of ERV cores in insulated sheet metal cabinets with MERV 8 or MERV 13 filters. Realize your energy-efficiency goals with RenewAire's Applied Products family of ERVs.

- Cost effective energy recovery for virtually any air handling system
- Complete flexibility in locating field supplied blowers
 - great for acoustically sensitive applications
- AHRI certified performance data for efficiency and cross leakage
- UL tested flammability and smoke generation that meets NFPA 90A and 90B test standards for commercial applications
- Ten year core performance warranty

CA-Series

| Model | Airflow |
|----------------|---------------|
| CA2XIN, CA2XRT | 500 - 2,200 |
| CA3XIN, CA3XRT | 750 - 3,300 |
| CA4XIN, CA4XRT | 1,000 - 4,400 |



- Cores stacked side-by-side horizontally
- Each cabinet contains 2, 3, or 4 energy exchange cores
- Indoor (IN) and outdoor (RT) models available
- Indoor cabinets can be stacked up to five high (*with support structure*) accommodating up to 20,000 CFM (*NOTE: outdoor cabinets cannot be stacked*)
- Side access service door(s)
- Double wall construction optional

PA-Series

| Model | Airflow |
|---------|----------------|
| PA6XIN | 1,500 - 6,600 |
| PA8XIN | 2,000 - 8,800 |
| PA9XIN | 2,250 - 9,900 |
| PA12XIN | 3,000 - 13,200 |

Modular vertical stacks of cores protected by US Patent 5,660,228



- Cores stacked vertically 3 or 4 cores high
- Each cabinet contains 6, 8, 9, or 12 energy exchange cores
- Indoor (IN) models only
- Indoor cabinets can be joined together lengthwise to accommodate unlimited airflows
- Top access service panels
- Shipped knock down (K) or factory assembled (A)
 - Each component fits through 3 foot swing door, which is ideal for tight applications

Installation and Application

- Applied series are ideal for applications where a fan powered ERV may not meet exacting space or location requirements
- Applied Series do not have condensate pans or drains so orientation possibility is increased
- Retrofit applications and applications where egress is an issue are greatly enhanced
- Blower selection and sizing, as supplied by others, can meet the demanding requirements of any application

Applied Series Unit Selection

Step 1: Determine Number of Energy Exchange Cores

To maintain laminar airflow through RenewAire energy exchange cores it is important that the airflow falls within the range of 250 – 1,100 CFM per core. Use this simple procedure to determine roughly the number of cores required for the project:

1. Divide the higher of the two Design Airflows (this will be either exhaust or fresh air) by 750 CFM. This value is used because it is RenewAire's AHRI certification airflow point.
2. Round the result of step #1 up to the nearest whole number. This is a good beginning point to determine the number of cores required for the project.
3. Using the whole number from step #2, select an Applied Product with the same number of energy exchange cores.

Step 2: Fine-Tune for Desired Thermal Performance

Review the Airflow Performance and Core Performance curves for the chosen Applied Product and fine-tune the unit selection based upon the desired efficiency and/or acceptable ERV internal static pressure while ensuring that a minimum airflow of 250 CFM or conversely a maximum airflow of 1,100 CFM per core is still maintained. This may involve jumping to the next larger size unit.

RenewAire's Applied Series is covered by RenewAire ERVCalc software. This resource is another tool to fine-tune unit selection.

Blower Selection and Sizing

Any style and construction of external blowers may be used. It is important to consider system total static pressure when sizing and selecting blowers.

Blower Static Pressure Calculation Worksheet

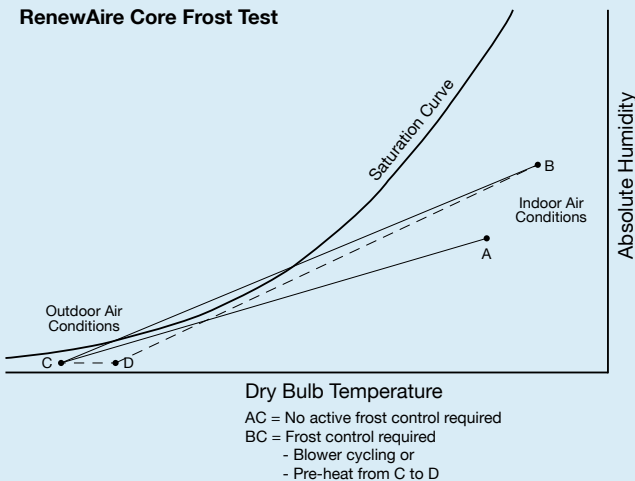
| Exhaust Blower | | Outside Air Blower | |
|-------------------------------|-----------------|-------------------------------|-----------------|
| Design Airflow | _____ (CFM) | Design Airflow | _____ (CFM) |
| Ductwork Static Pressure | _____ (in. H2O) | Ductwork Static Pressure | _____ (in. H2O) |
| ERV Internal Static Pressure* | _____ (in. H2O) | ERV Internal Static Pressure* | _____ (in. H2O) |
| Dirty Filter Allowance | _____ (in. H2O) | Dirty Filter Allowance | _____ (in. H2O) |
| System Loss Allowance | _____ (in. H2O) | System Loss Allowance | _____ (in. H2O) |
| Total ESP | _____ (in. H2O) | Total ESP | _____ (in. H2O) |

*Refer to specific unit airflow versus static pressure chart.

Suitable Exhaust Airstreams

As long as the exhaust airstream is taken from an area within the occupied space where occupants are allowed to breathe without special equipment, RenewAire's Applied Series is suitable for those applications. Applications such as natatoriums, or indoor swimming pools, where a high, continuous source of indoor relative humidity is present are generally not suitable. High temperature industrial process exhaust or exhaust that exceeds 122 degrees Fahrenheit is also not suitable.

RenewAire Core Frost Test

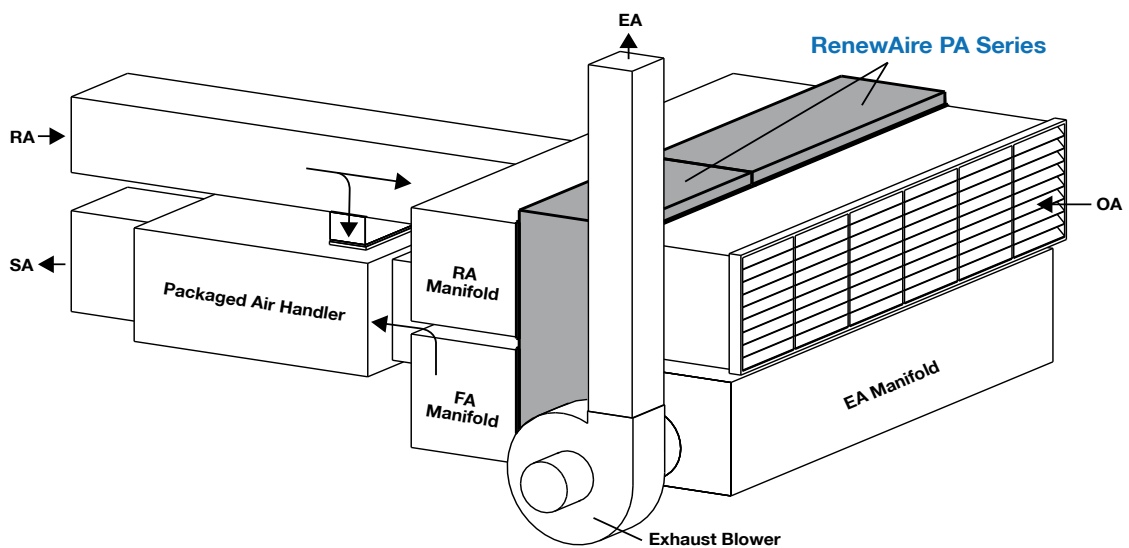
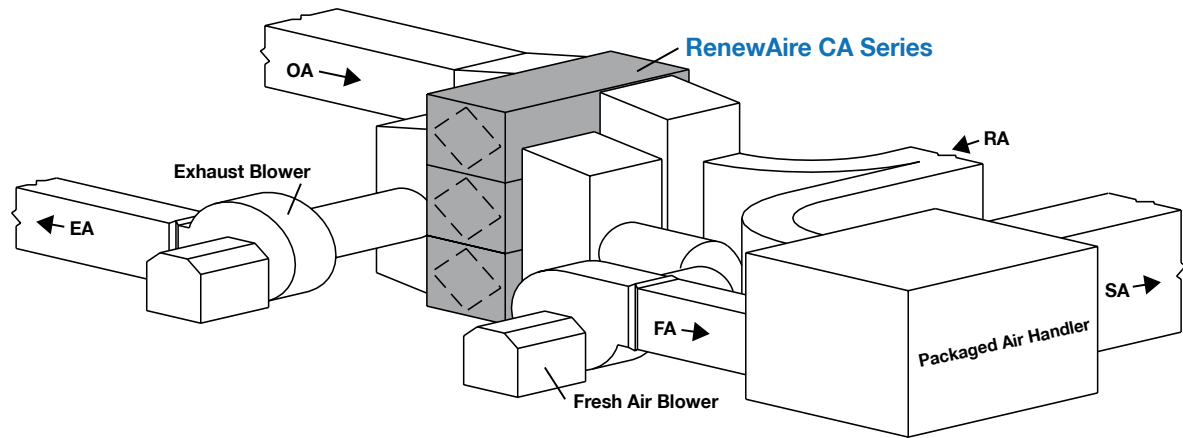


Frost Control

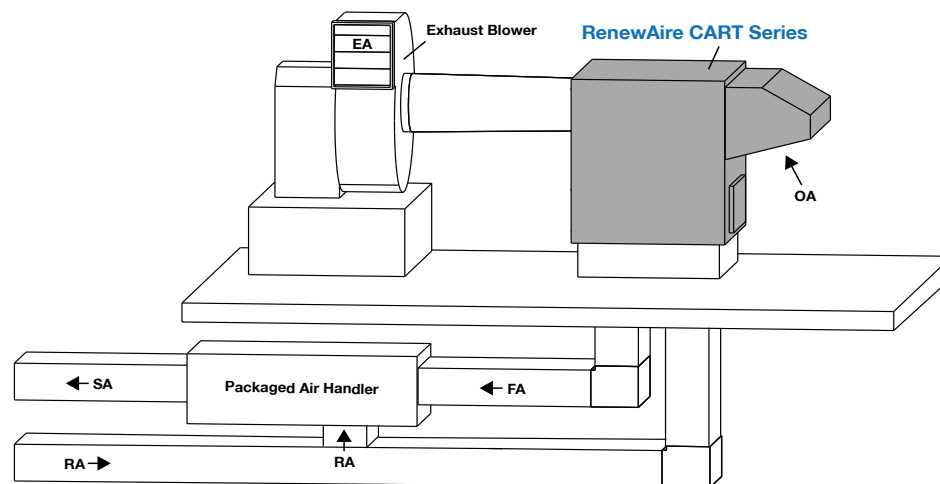
RenewAire's ERV energy exchange core performs without condensing or frosting under normal operating conditions (defined as outside temperatures above -10°F and inside relative humidity below 40%). Occasionally, more extreme conditions will not affect the usual function, performance or durability of the core. However, to ensure good product performance, avoid crossing the saturation curve (see chart below) on a psychometric chart.

Refer to individual product Guide Specifications and Installation and Operation manual for more information.

Indoor Model Application Examples



Outdoor Model Application Example



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