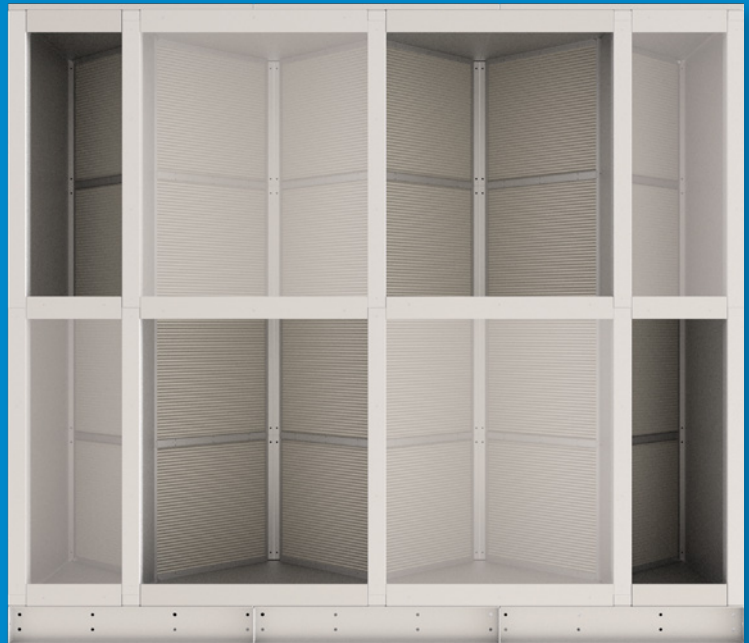


ENERGY RECOVERY CORE ARRAY **NEW!**

SA SERIES

DESIGNED FOR OEM

- ♦ 2,250–70,400 CFM
- ♦ Packaged core with plenum assembly
- ♦ Flexible and modular
- ♦ Large airflow capacities



SA SERIES ENERGY RECOVERY CORE ARRAYS

DEFICIENT INDOOR AIR QUALITY IS A THREAT

As new **buildings get tighter to seal weather out, they seal in contaminants**, causing deficient indoor air quality (IAQ). Typical contaminants include off-gassing from carpeting, furniture and building materials, excess humidity and mold, odors, cooking and cleaning fumes, CO2, hair and fibers, to name a few.

Deficient IAQ is a threat since it can harm occupant health and cognitive function, damage structures and hurt the bottom line. It's especially concerning since people spend, on average, about 90% of their time indoors¹, and indoor air can be two to five times — and up to 100 times — more polluted than outdoor air², indoor air quality has very real impacts on health and cognitive function.

ADVERSE EFFECTS OF DEFICIENT IAQ



HEALTH PROBLEMS

Deficient IAQ can cause allergies, headaches, coughs, asthma, skin irritations and breathing difficulties, as well as cancer, liver disease, kidney damage and nervous-system failure.



REDUCED PRODUCTIVITY

Berkeley Lab found that deficient IAQ can cost \$200 billion in debilitated worker performance and \$58 billion in lost sick time.³



COGNITIVE IMPAIRMENT

Harvard and Berkeley Lab found that CO2 — a constituent of exhaled breath — negatively impacts thinking and decision-making at levels commonly found indoors.²



DISEASE TRANSMISSION

Ventilation with outdoor air is vital to diluting airborne contaminants and decreasing disease transmission rates.



Ventilation can enhance IAQ and decrease the transmission of airborne infectious diseases, including COVID-19: https://bit.ly/COVID19_WP



RENEWAIRE VENTILATION SOLUTIONS IMPROVE HEALTH & WELLNESS

¹ “Indoor Air Pollution: Introduction for Health Professionals,” U.S. Consumer Product Safety Commission, <https://bit.ly/2Yk0czT>.

² “Why Indoor Air Quality is Important to Schools,” U.S. Environmental Protection Agency (EPA), <https://bit.ly/2SoyRJc>.

³ Romm, “Exclusive: Elevated CO2 Levels Directly Affect Human Cognition, New Harvard Study Shows,” Climate Progress, <https://bit.ly/2Vp6AE2>.

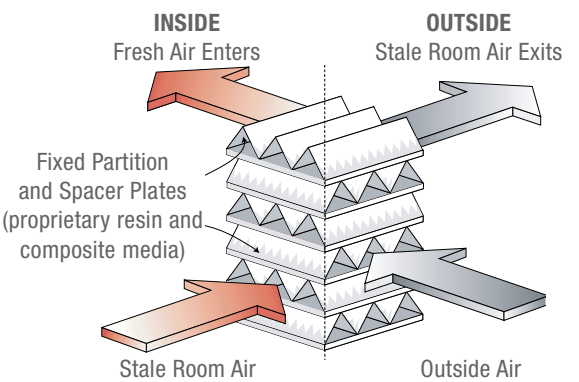
⁴ Alevantis, Berman, Mills, Perlman, “The Costs and Financial Benefits of Green Buildings,” U.S. Green Building Council (USGBC), <https://bit.ly/2KnP50c>.

HIGHEST-QUALITY INDOOR AIR VIA VENTILATION

The solution to pollution is dilution achieved via **increased and balanced ventilation**, which is the most effective way to realize cleaner and healthier indoor air. With enough controlled fresh and filtered outdoor air coming in to replace equal parts of stale indoor air via balanced design, IAQ will be enhanced.

This can be done energy-efficiently, cost-effectively and sustainably with RenewAire’s energy recovery ventilation solutions, which reuse otherwise-wasted total energy from the exhaust airstream to condition incoming outdoor air. The results are improved IAQ, greater ventilation efficiency and major energy cost savings.

AIRSTREAMS DO NOT MIX & POLLUTANTS ARE NOT TRANSFERRED ACROSS PARTITION PLATES



ASHRAE BUILDING CODES & STANDARDS

With the goal of building sustainably and creating healthy environments for all, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has written several standards and guidelines. **By enhancing IAQ and saving energy, RenewAire technologies provide the means to meet and exceed all ASHRAE standards and guidelines.** Following these parameters leads to greener structures and healthier occupants.

ASHRAE Standard 62.1: “Ventilation for Acceptable Indoor Air Quality” is the recognized standard for designing ventilation systems to achieve acceptable IAQ. ERVs play a key role by creating cleaner and healthier indoor air while optimizing energy efficiency.

ASHRAE Standard 90.1: “Energy Standard for Buildings Except Low-Rise Residential Buildings” is a benchmark for commercial building energy codes in the U.S. and across the world. ERVs are required in several instances based on climate zone and percent of outdoor air at full design airflow rate.

RENEWAIRE CORE TECHNOLOGY

CERTIFICATION

- ♦ Certified by the Air Conditioning, Heating and Refrigeration Institute (AHRI) for an industry-leading, low-to-zero Exhaust Air Transfer Ratio (EATR) at typical static pressure differentials
- ♦ Superior core flammability performance; passes UL-723 and UL-1812

MAINTENANCE

- ♦ RenewAire cores are easy to clean without removing them from the unit, and they never require washing

INNOVATIVE CONSTRUCTION

- ♦ Core exchanger material is cellulosic-based and doesn’t contain or use halogenated flame retardants or PVCs
- ♦ Manufactured with a galvanized steel frame

RELIABILITY

- ♦ An industry-leading 10-year structural and performance warranty for the static-plate core, two-year warranty for commercial products and five-year warranty for residential products

EXCEPTIONAL PERFORMANCE

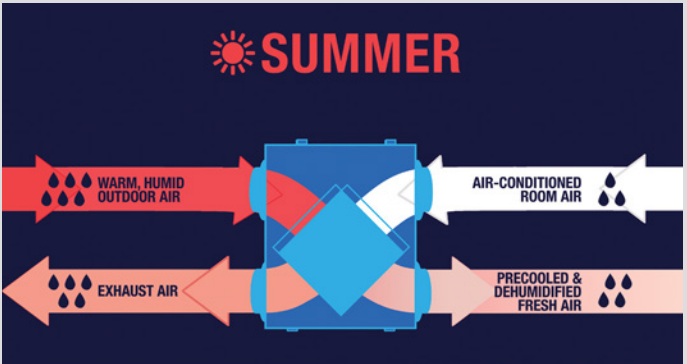
- ♦ Moderates heat and humidity via total energy recovery to maintain a comfortable indoor environment
- ♦ No need for frost protection or condensate pans
- ♦ Laminar airflow ensures that particulates do not accumulate in the core

REDUCED COSTS

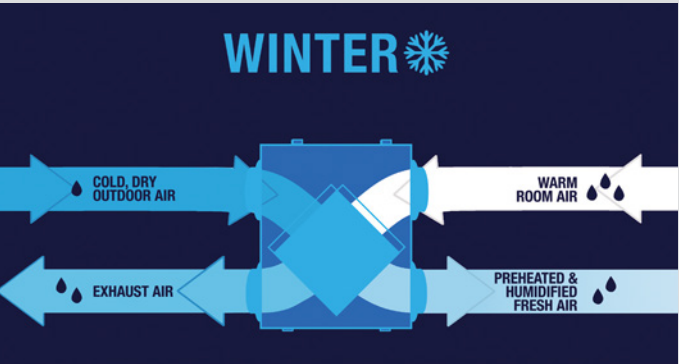
- ♦ Optimized energy efficiency via core energy transfer decreases ventilation energy requirements, which can result in smaller air conditioning and heating needs

RENEWAIRE ERVs TEMPER THE AIR

Our ERVs moderate the extremes of outdoor supply-air temperature and humidity year-round, providing a sustainable ventilation solution for every climate.



IN SUMMER, THE WARM, HUMID OUTSIDE AIR IS PRECOOLED AND DEHUMIDIFIED BY THE OUTGOING COOL INTERIOR AIR

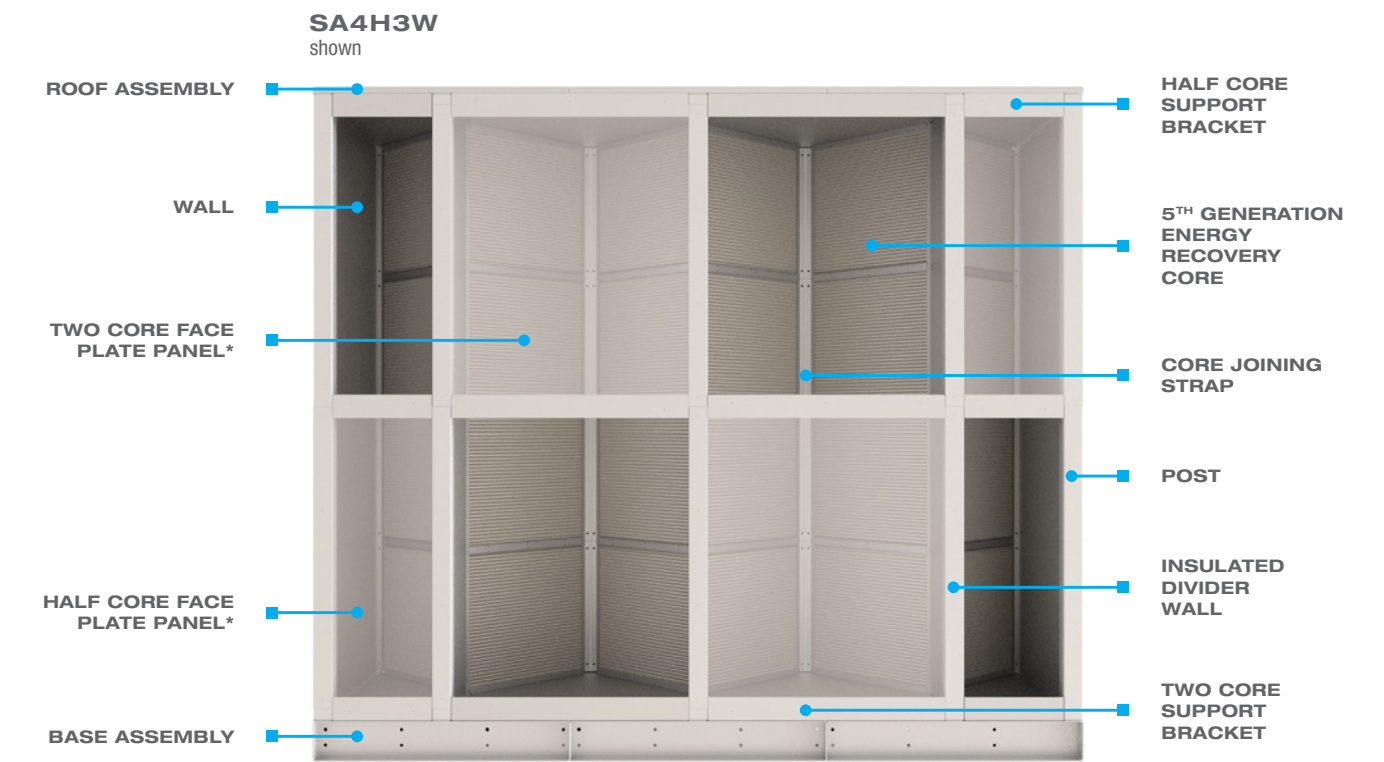


IN WINTER, THE COLD, DRY OUTSIDE AIR IS PREHEATED AND HUMIDIFIED BY THE OUTGOING WARM INTERIOR AIR

A CLOSER LOOK

SA SERIES

The RenewAire SA Series Energy Recovery Core Array is designed specifically for air-handling Original Equipment Manufacturers (OEMs). The SA Series provides low-to-zero cross-contamination at balanced airflow, **caters to larger airflow applications** and supports meeting and exceeding stringent ASHRAE standards. It's **differentiated by unique plenum channeling** for optimized core face area distribution for either crossflow or parallel airflow orientations. The SA Series can be assembled anywhere and sized for every project. It's the flexible, modular, easy-to-install solution ideal for all jobs, particularly retrofits and energy-wheel replacements.

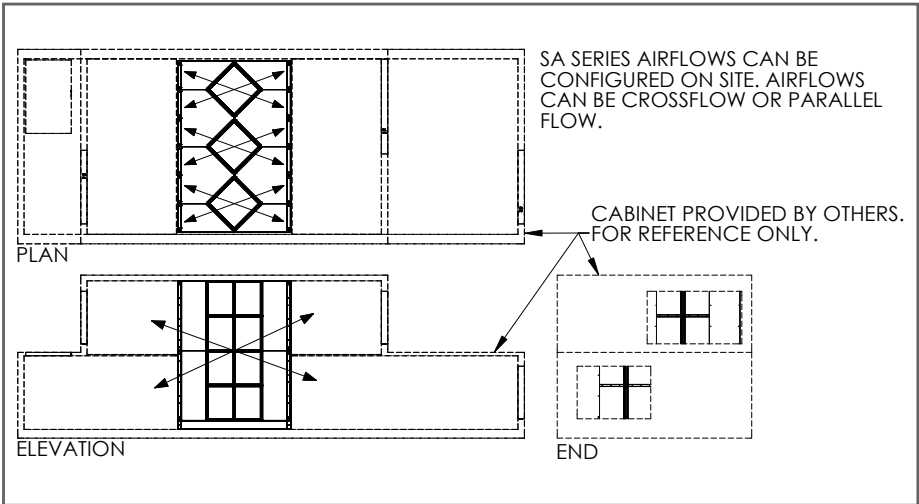


*Transparency used in diagram for visualizing interior of unit.

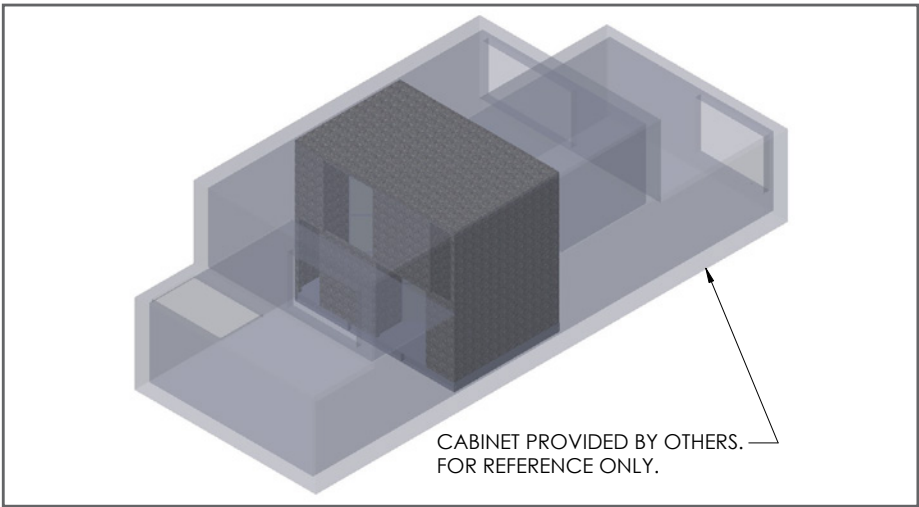


BUILT-IN ENERGY RECOVERY FOR CENTRAL STATION AIR HANDLERS

2D ILLUSTRATION



3D ILLUSTRATION



RENEWAIRE VENTILATION SOLUTIONS INCREASE MONETARY BENEFITS

GREEN BUILDING TRENDS

High-performance, green-building standards seek to reduce energy use and increase ventilation to improve health, wellness, IAQ and indoor environmental quality (IEQ). Sustainable design initiatives like ASHRAE Standard 189.1, LEED, 2030 Challenge, Living Building Challenge and WELL Building Standard have grown in popularity among architects, engineers, contractors and building owners alike.

RenewAire ventilation technologies create healthier and more comfortable indoor environments, while optimizing energy efficiency. This is done by reusing otherwise-wasted total energy from the exhaust air to condition incoming outdoor air. The results are exceptional IAQ, IEQ, energy reductions and cost savings.



RenewAire supports the

PILLARS OF SUSTAINABILITY

PEOPLE

- Reduce acute and chronic health problems
- Improve alertness and cognitive function
- Boost productivity

PLANET

- Committed to green manufacturing since 1982
- Protect the environment with less energy use
- Achieve a green structure with greater energy efficiency

PROFIT

- Can benefit from a short payback period
- Realize annual energy savings
- Trouble-free operations and maintenance



RENEWAIRE ERVs ARE THE SUSTAINABLE VENTILATION SOLUTION

MODEL INFORMATION

3 HIGH

	3 WIDE	4 WIDE	5 WIDE	6 WIDE	7 WIDE	8 WIDE
Airflow Range (CFM)	2,250–9,900	3,000–13,200	3,750–16,500	4,500–19,800	5,250–23,100	6,000–26,400
Cores (L125-G5)	9	12	15	18	21	24
Length	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L
Width	97 3/4" W	130 1/4" W	162 7/8" W	195 3/8" W	228" W	260 1/2" W
Height	65 5/8" H	65 5/8" H	65 5/8" H	65 5/8" H	65 5/8" H	65 5/8" H
Weight (lbs.)	1,300	1,675	2,049	2,424	2,798	3,172



3 high x 3 wide

4 HIGH

	3 WIDE	4 WIDE	5 WIDE	6 WIDE	7 WIDE	8 WIDE
Airflow Range (CFM)	3,000–13,200	4,000–17,600	5,000–22,000	6,000–26,400	7,000–30,800	8,000–35,200
Cores (L125-G5)	12	16	20	24	28	32
Length	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L
Width	97 3/4" W	130 1/4" W	162 7/8" W	195 3/8" W	228" W	260 1/2" W
Height	85 1/2" H	85 1/2" H	85 1/2" H	85 1/2" H	85 1/2" H	85 1/2" H
Weight (lbs.)	1,582	2,030	2,479	2,927	3,376	3,825



4 high x 3 wide

5 HIGH

	3 WIDE	4 WIDE	5 WIDE	6 WIDE	7 WIDE	8 WIDE
Airflow Range (CFM)	3,750–16,500	5,000–22,000	6,250–27,500	7,500–33,000	8,750–38,500	10,000–44,000
Cores (L125-G5)	15	20	25	30	35	40
Length	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L
Width	97 3/4" W	130 1/4" W	162 7/8" W	195 3/8" W	228" W	260 1/2" W
Height	105 3/8" H	105 3/8" H	105 3/8" H	105 3/8" H	105 3/8" H	105 3/8" H
Weight (lbs.)	1,863	2,384	2,908	3,431	3,954	4,477



5 high x 3 wide

6 HIGH

	3 WIDE	4 WIDE	5 WIDE	6 WIDE	7 WIDE	8 WIDE
Airflow Range (CFM)	4,500–19,800	6,000–26,400	7,500–33,000	9,000–39,600	10,500–46,200	12,000–52,800
Cores (L125-G5)	18	24	30	36	42	48
Length	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L
Width	97 3/4" W	130 1/4" W	162 7/8" W	195 3/8" W	228" W	260 1/2" W
Height	125 1/2" H	125 1/2" H	125 1/2" H	125 1/2" H	125 1/2" H	125 1/2" H
Weight (lbs.)	2,203	2,819	3,435	4,051	4,666	5,282



6 high x 3 wide

7 HIGH

	3 WIDE	4 WIDE	5 WIDE	6 WIDE	7 WIDE	8 WIDE
Airflow Range (CFM)	5,250–23,100	7,000–30,800	8,750–38,500	10,500–46,200	12,250–53,900	14,000–61,600
Cores (L125-G5)	21	28	35	42	49	48
Length	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L
Width	97 3/4" W	130 1/4" W	162 7/8" W	195 3/8" W	228" W	260 1/2" W
Height	145 3/8" H	145 3/8" H	145 3/8" H	145 3/8" H	145 3/8" H	145 3/8" H
Weight (lbs.)	2,483	3,174	3,864	4,554	5,244	5,934



7 high x 3 wide

8 HIGH

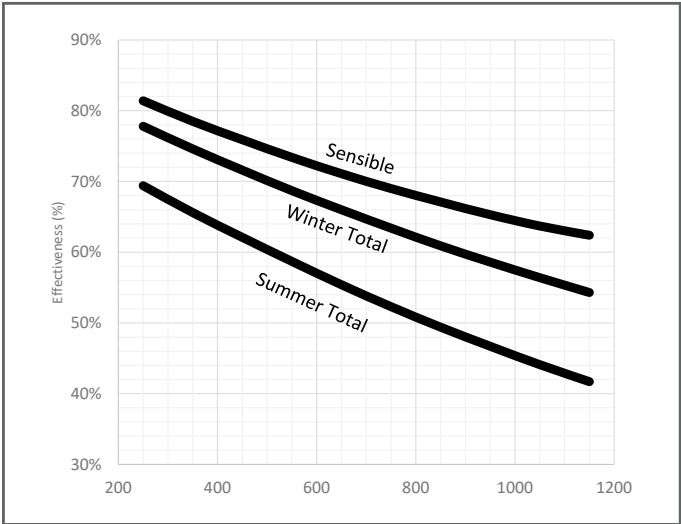
	3 WIDE	4 WIDE	5 WIDE	6 WIDE	7 WIDE	8 WIDE
Airflow Range (CFM)	6,000–26,400	8,000–35,200	10,000–44,000	12,000–52,800	14,000–61,600	16,000–70,400
Cores (L125-G5)	24	32	40	48	56	64
Length	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L	64 1/2" L
Width	97 3/4" W	130 1/4" W	162 7/8" W	195 3/8" W	228" W	260 1/2" W
Height	165 1/4" H	165 1/4" H	165 1/4" H	165 1/4" H	165 1/4" H	165 1/4" H
Weight (lbs.)	2,765	3,529	4,294	5,058	5,822	6,587



8 high x 3 wide

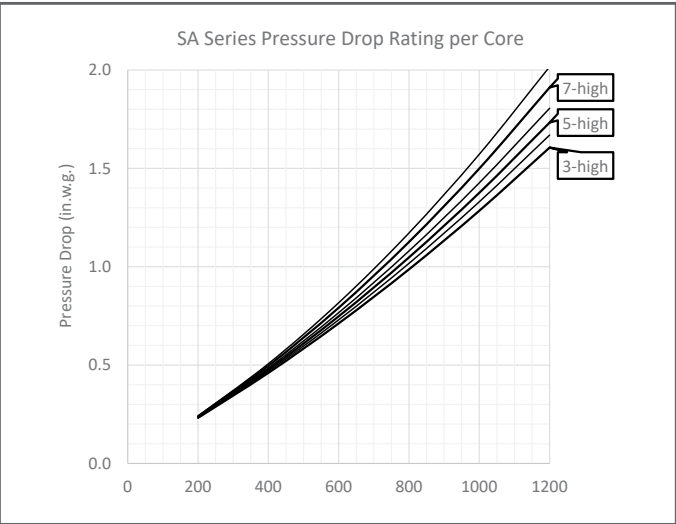
AIRFLOW RATINGS

CORE PERFORMANCE

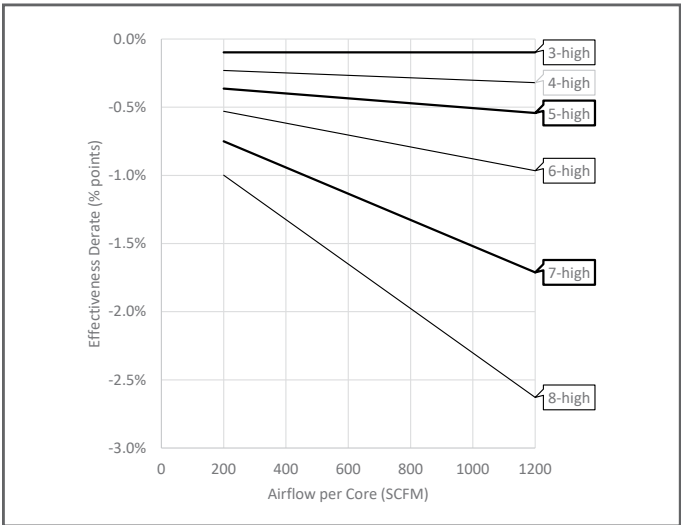


Rated at equal supply and return airflows.
Winter Conditions: Outside Air 35 db/33 wb (°F), Room Air 70 db/58 wb (°F).
Summer Conditions: Outside Air 95 db/78 wb (°F), Room Air 75 db/63 wb (°F).
Sea level. Certified ratings available in CORES. Latest certified software version number is listed at ahrinet.org/ERVcertification.

PRESSURE DROP RATING PER CORE

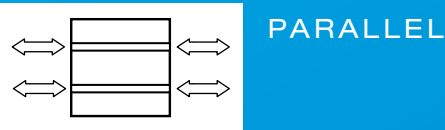
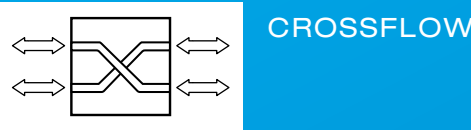



EFFECTIVENESS SUBTRACTION DERATE FOR PARALLEL AIRFLOW ORIENTATION



When parallel airflow orientation is used, flow is not optimally distributed to every exchanger and performance is slightly reduced. In this case the sensible and latent effectiveness shown in the Core Performance chart must be derated by the amount shown in the Effectiveness Derate chart.

AIRFLOW ORIENTATIONS



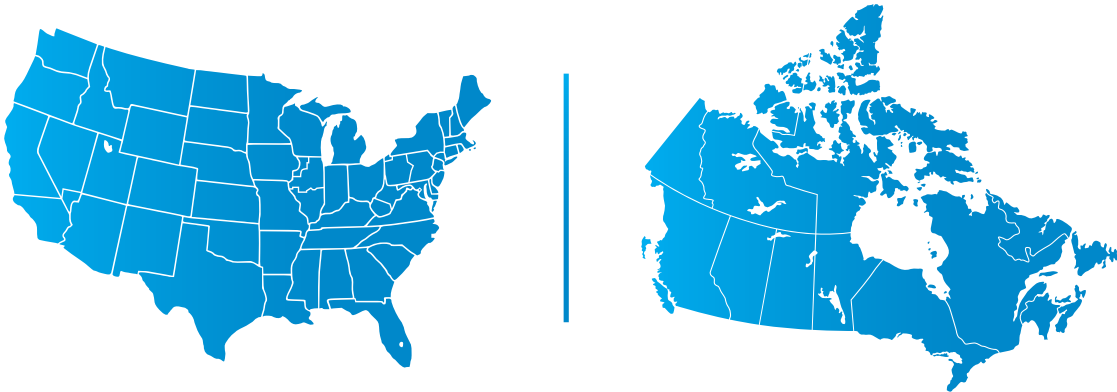
 SA Series airflows can be configured on site. Airflows can be crossflow or parallel and are fully interchangeable.



INSTALL AN ENERGY RECOVERY CORE ARRAY

FOR EXCEPTIONAL IAQ & ENERGY SAVINGS

To find a RenewAire representative in North America,
visit renewaire.com/how-to-buy/find-a-rep



RENEWAIRE EVERYWHERE

RenewAire ERVs can be applied everywhere across all residential and commercial buildings, and everything in between. Our technology excels in every geographic region, every climate and every size project.