

EVERGREEN™ SERIES ERVs

SINGLE-POINT EXHAUST, RESIDENTIAL



- ◆ Three-duct, single- and multi-family ERV
- ◆ 25–130 CFM with EC motorized impellers
- ◆ Ideal for bathrooms, laundry rooms and apartments/condos
- ◆ Mounts between most ceiling/floor joists
- ◆ Choice of preprogrammed quick-select or variable airflow setpoint
- ◆ Hard-wired electrical supply
- ◆ MERV 13 filter accessory



**VENTILATION SOLUTIONS
FOR EVERY APPLICATION**

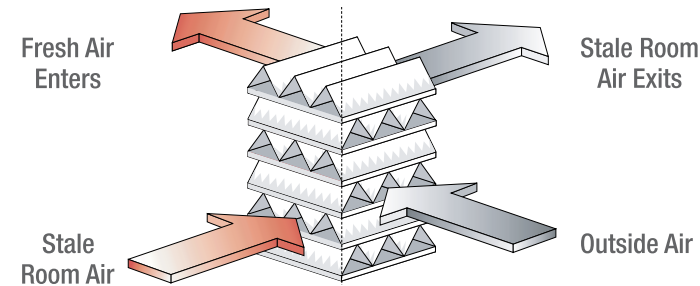
EVERGREEN™ SERIES: SINGLE-POINT EXHAUST, RESIDENTIAL ERVs

BALANCED VENTILATION & HIGHEST-QUALITY INDOOR AIR

As buildings get tighter to seal weather out, they seal in contaminants, causing a reduction in 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 about 90% of their time indoors, and indoor air can be two to five times more polluted than outdoor air.**¹

The solution to pollution is dilution achieved via increased and balanced ventilation, which can be done energy-efficiently, cost-effectively, and sustainably with RenewAire's energy recovery ventilation.

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



INCREASED VENTILATION VIA ERVs = BETTER HEALTH + LOWER BILLS

The American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) 62.2 committee has established a residential ventilation standard, known as *Ventilation and Acceptable Indoor Air Quality in Residential Buildings*. The goal of this standard and its continuous revisions are to not only **evaluate and recommend every building's minimum ventilation needs**, but also emphasize IAQ and its relationship with occupant health. **ERVs can reduce energy costs while meeting this standard.**

See the chart below to calculate the minimum ventilation required for your home: $.03 \times \text{sq. ft.} + 7.5(\text{bedroom} + 1)$. For example, a 2,500 sq. ft. home with 4 bedrooms requires a minimum of 113 CFM.

MINIMUM VENTILATION AIRFLOW REQUIRED BY HOME SIZE*

SQUARE FEET	<500'	501'-1000'	1001'-1500'	1501'-2000'	2001'-2500'	2501'-3000'	3001'-3500'	3501'-4000'
1 BEDROOM	30	45	60	75	90	105	120	135
2 BEDROOMS	38	53	68	83	98	113	128	143
3 BEDROOMS	45	60	75	90	105	120	135	150
4 BEDROOMS	53	68	83	98	113	128	143	158
5 BEDROOMS	60	75	90	105	120	135	150	165

* Infiltration credit not considered, please contact RenewAire to assist in selecting a unit that is best suited for your home.

RENEWAIRE CORE TECHNOLOGY

CERTIFICATION

- Commercial Units: 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 differential
- Residential Units: Certified by the Home Ventilating Institute (HVI) against standard CAN/CSA-C439-18 for an industry leading CFM/watt and energy transfer effectiveness
- 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 all residential products

EXCEPTIONAL PERFORMANCE

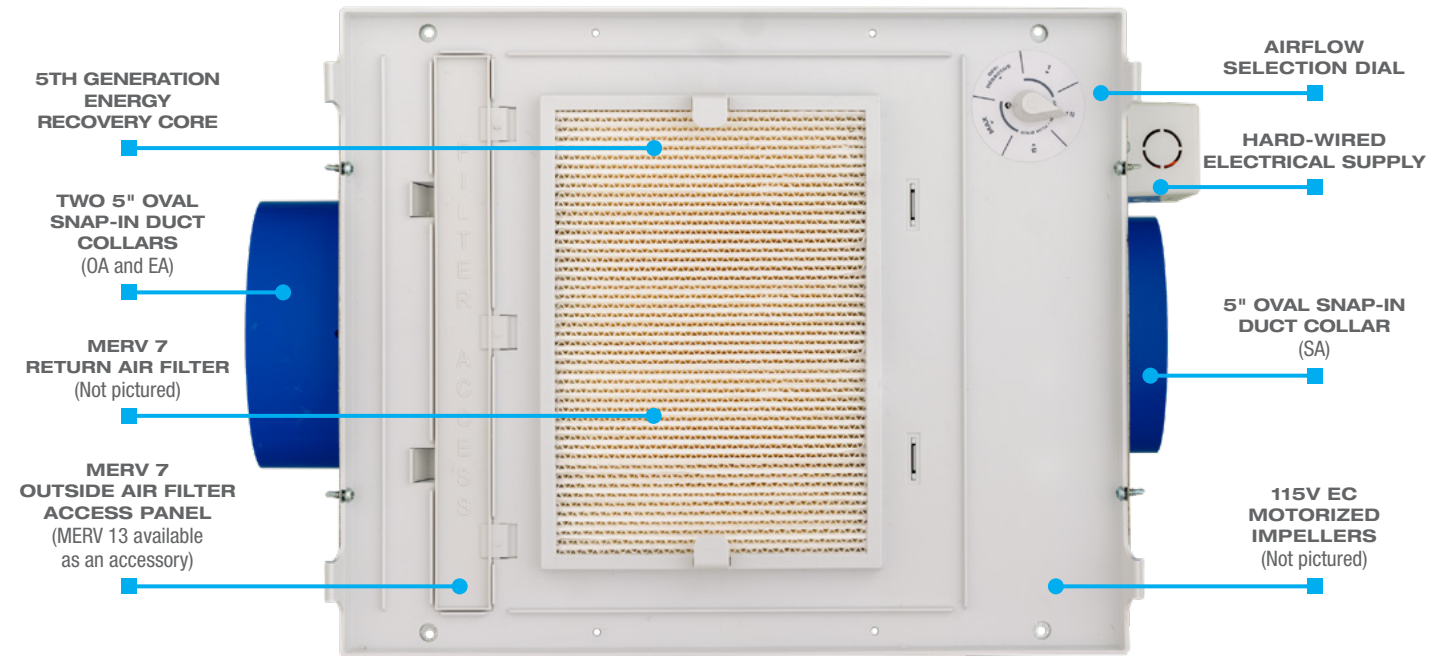
- Moderates heat and humidity via total energy recovery to maintain a comfortable indoor environment
- No need for frost protection or condensate pans
- Laminar airflow ensures that particulates do not accumulate in the core

REDUCED COSTS

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

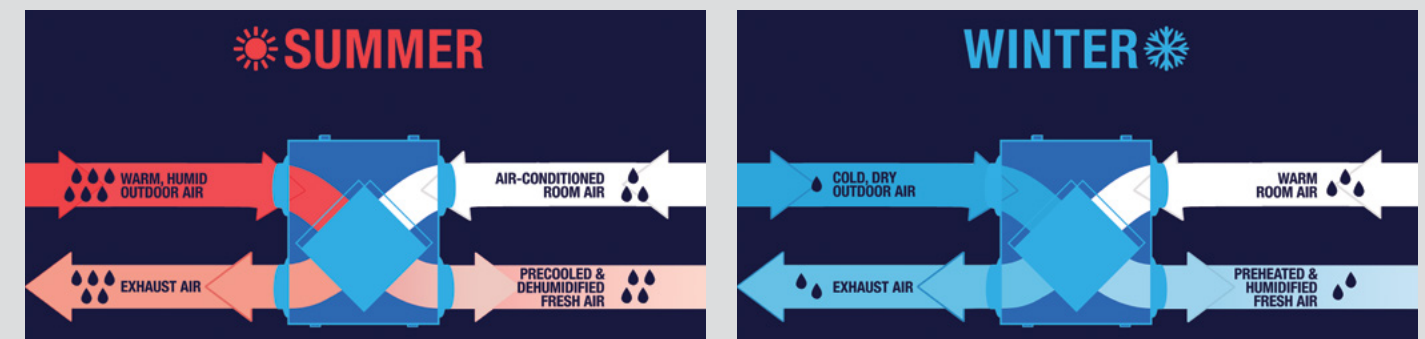
EVERGREEN™ SERIES

In response to growing demand for space-saving ventilation units, RenewAire developed the ceiling-mounted Evergreen Series. This energy recovery ventilator (ERV) is **low-profile, fits between most ceiling joists or ceiling cavity, and incorporates high-efficiency EC motorized impellers**. The Evergreen ERV allows selection of a preprogrammed quick-select or a variable airflow setpoint for easy installation and setup. Accessories include a MERV 13 filter for incoming outside air and control timers to further enhance IAQ.



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

¹ "Why Indoor Air Quality Is Important to Schools," U.S. Environmental Protection Agency (EPA), <https://bit.ly/2SoyRjC>.

APPLICATIONS



Evergreen™ SH is a three-duct ERV with a built-in return grille, and ducted supply, exhaust, and outside airstreams.

The unit is ideal for single-point exhaust applications such as bathrooms, laundry rooms, and smaller-sized residential spaces (e.g. apartments and condominiums).

Evergreen SH is designed to be installed with drywall up to the unit's frame, and can be **installed vertically, horizontally or at any angle** between most ceiling/floor joists to accommodate site restrictions.



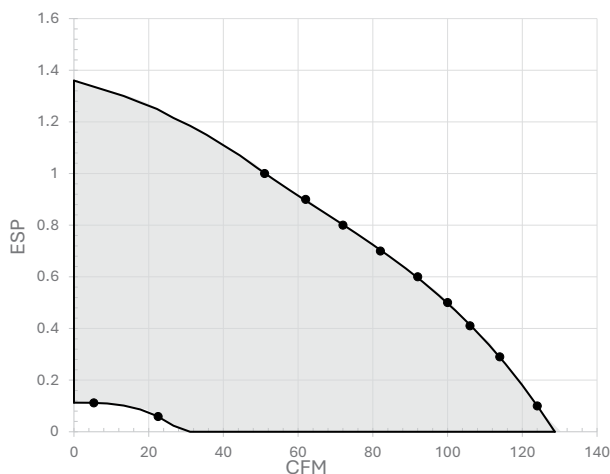
EVERGREEN SH

MODEL NUMBER	EG-110SB-H020-XE0
ELECTRICAL SUPPLY*	120V/60Hz Hard-Wired
VARIABLE AIRFLOW SETPOINT RANGE	25–130 CFM
QUICK-SELECT AIRFLOW SETPOINT	Minimum Exhaust of 30, 40, or 50 CFM
SPEEDS	Single
EC MOTORIZED IMPELLERS	Yes
CONNECTIONS	Three 5" Oval Collars
SWAPPABLE AIRSTREAMS	No
UNIT DIMENSIONS	17" L x 11 7/8" W x 11 3/4" H
GRILLE DIMENSIONS	20" L x 17" W x 1" H
WEIGHT	17 lbs.
MOUNT	Built-in Mounting Flanges
FILTER	MERV 7, MERV 13 (Outside Air MERV 13 Available)
CORE WARRANTY	10-Year
UNIT WARRANTY	5-Year
FAN EFFICIENCY	2.4 CFM/watt at 57 CFM
EXAMPLE RATING**	61% SRE at 34 CFM
CERTIFICATIONS	 

* Electrical power to be hard-wired in field by a licensed contractor.

** For all rating points, please refer to the HVI website certified products directory. HVI rating point 32°F.

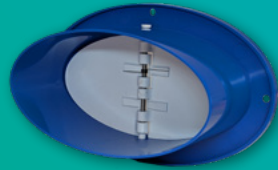
OPERATING AIRFLOWS



- = Actual tested sample points
- | = Operating curves, airflow held constant as static pressure varies

ACCESSORIES

DAMPERS



**Duct Collar with
Backdraft Damper**

CONTROLS

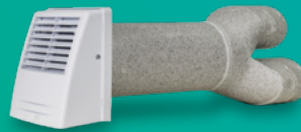


**Standard Voltage
Countdown Timer (SVCT)**

LOUVERS & WALL VENTS



6", 8" White or Brown



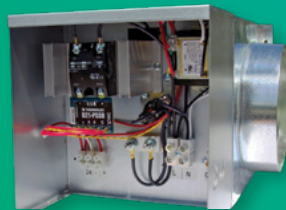
Concentric Vent

FILTERS



**MERV 13 Filter for
OA Airstream**

HEATERS

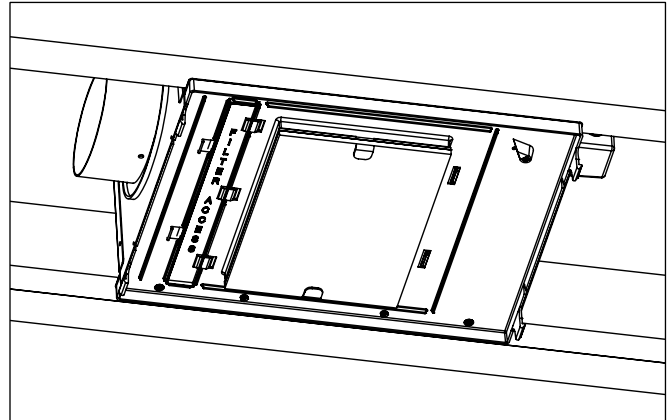


**RH Series Electric Duct Heater
1kW, 2kW, 3kW**

INSTALLATION & MAINTENANCE

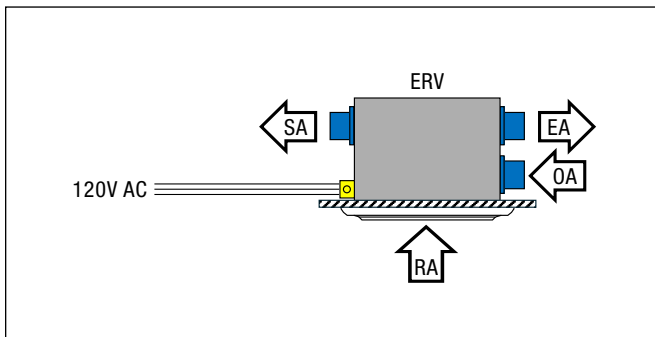
INSTALLATION

- ◆ Integrated mounting flanges for ceiling/floor joist installation
- ◆ Three 5" oval duct collars for easy duct connections
- ◆ Easy installation for stand-alone applications or supply air can be ducted into HVAC system ducts



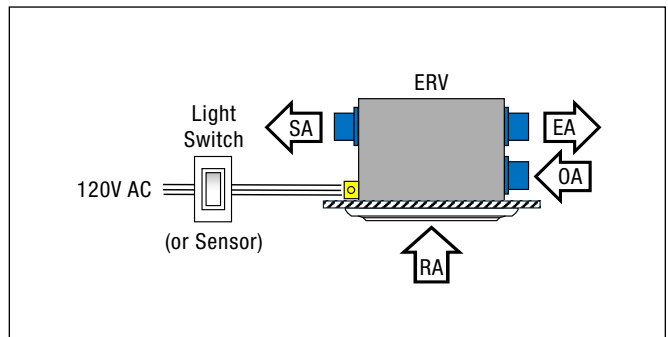
UNIT MOUNTED BETWEEN CEILING JOISTS

CONTROL STRATEGIES

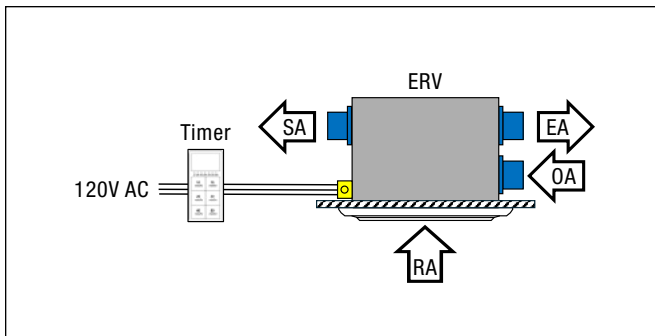


CONTINUOUS AIRFLOW (NO CONTROLS)*

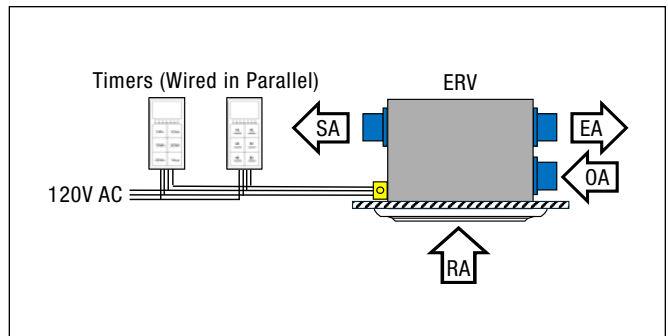
* Code may require switch/disconnect to cut power to unit



INTERMITTENT AIRFLOW VIA MANUAL SWITCH OR SENSOR



ADJUSTABLE CONTINUOUS/INTERMITTENT VIA PERCENT OF HOUR TIMER OR COUNTDOWN TIMER



ADJUSTABLE CONTINUOUS/INTERMITTENT VIA PERCENT OF HOUR TIMER AND COUNTDOWN TIMERS

MAINTENANCE

Disposable filters should be checked and replaced as needed. Additionally, once a year, vacuum the bottom core face using a soft brush. The RenewAire core does not need to be washed, as particulates do not accumulate in the core.