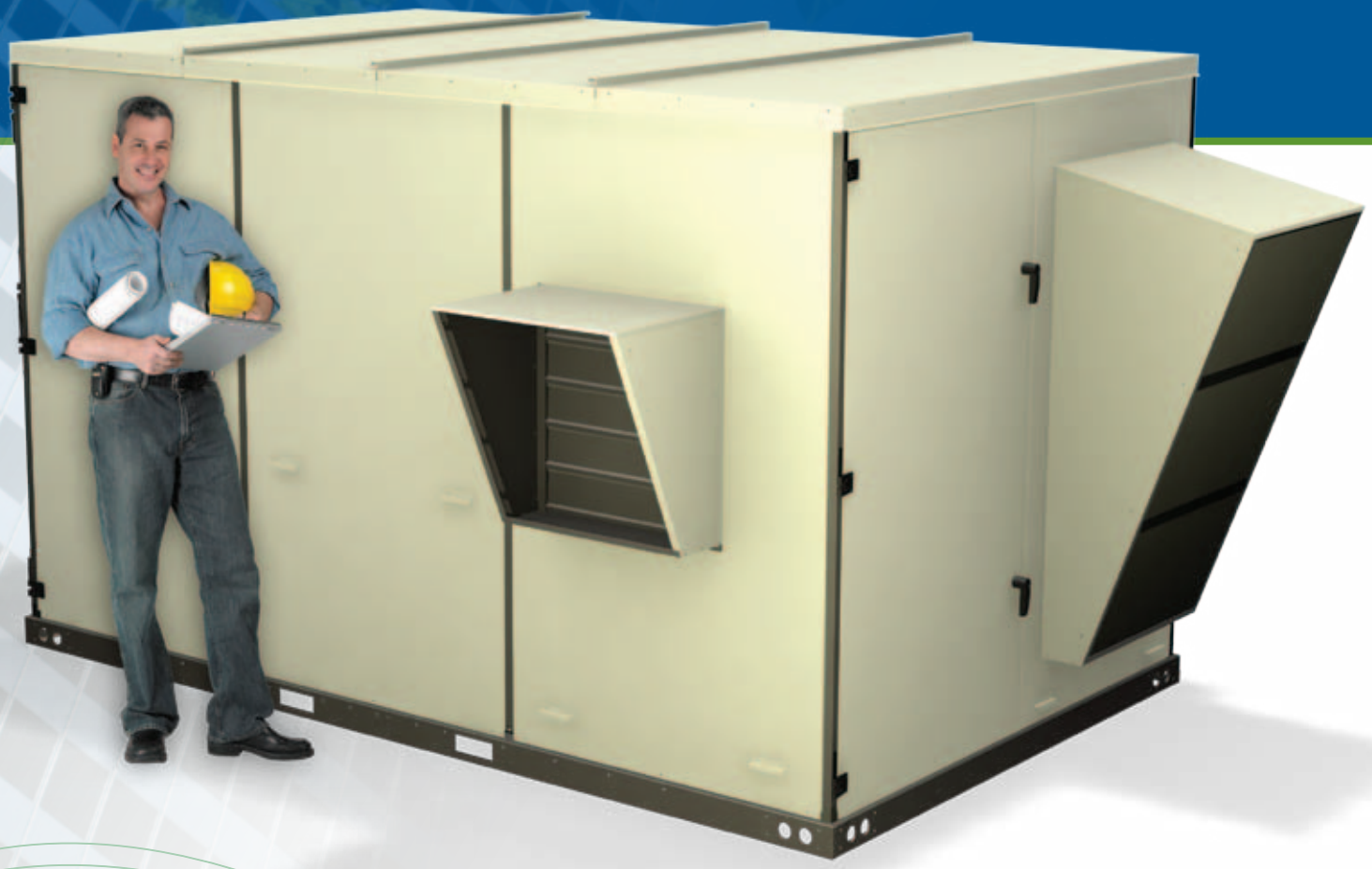
RUSKIN®

GO GREEN GO RUSKIN



The ENERVENT+ Advantage

- 600 – 12,000 cfm
- Supplemental Heating & Cooling

ENERVENT+

Regardless of building type or rating system, today's building must be as energy efficient as possible. The design of the HVAC system is critical to the success of the building's energy performance. Proper ventilation for occupant health and productivity must also be addressed. The quality of the indoor environment cannot be sacrificed for the sake of energy efficiency.

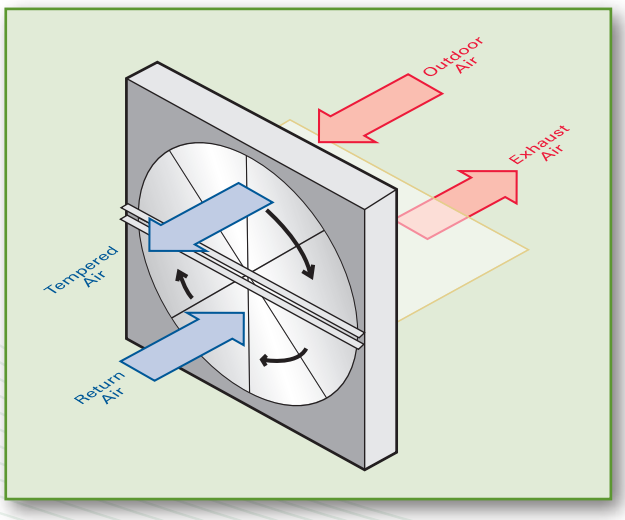
EnERVent+™ by Ruskin is your solution. Increased ventilation rates in combination with energy recovery products not only improve the indoor air quality but also reduce the cost associated with conditioning these larger amounts of outdoor air.

Benefits of Energy Recovery

Energy savings provide exceptional payback

Investing in energy recovery wheels in HVAC systems can provide quick payback in two areas.

- Initial cost savings can be achieved on main air handling units by reducing cooling load. Application software is available to calculate the load reductions and provide the energy and dollar savings in most areas of the United States and Canada.
- Annual savings are achieved by preconditioning the outdoor air.



LEED-EB and LEED-NC Credits

For Green Building designs, the EnERVent+ can assist the designer in acquiring credits for Energy and Atmosphere (EA) by optimizing energy performance and for Indoor Environmental Quality (IEQ) by providing the ability to increase ventilation leading to thermal comfort.

ASHRAE Compliance and IAQ

ERV's are an excellent choice to comply with outdoor ventilation requirements of ASHRAE 62. Introducing fresh, outdoor air to a building is a key component in sustaining excellent IAQ and occupant productivity. ERV's meet the minimum requirements for energy savings per ASHRAE 90.1 and will be a preferred method for saving energy in ASHRAE/USGBC/IESNA's new Standard 189.1 – *Standard for the Design of High Performance, Green Buildings Except Low-Rise Residential Buildings.*

■ **Standard Design Features**
● **Additional Design Choices**

■ **Powered by Lau Silent Pro Series forward curved blowers with isolation to reduce noise and vibration.**

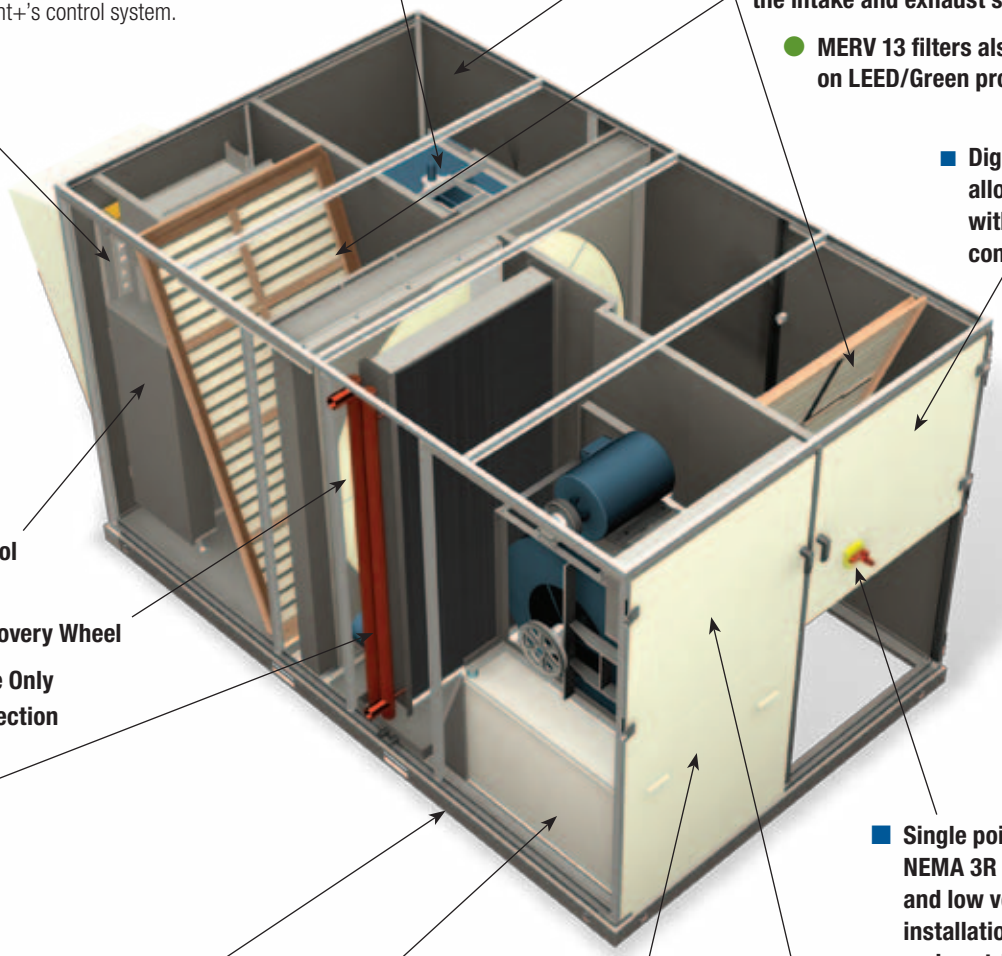
■ **Double wall construction with 1" fully insulated galvanized steel panels.**

● **Motorized Intake and Exhaust Dampers**
Ruskin's motorized dampers seal tight when the ERV is not in operation. These options are fully factory wired to EnERVent+'s control system.

■ **2" MERV 8 filters come standard for both the intake and exhaust sections of EnERVent+.**

● **MERV 13 filters also available on LEED/Green projects.**

■ **Digital control box that allows for integration with automated building control systems.**



● **Pre-heat Frost Control**

■ **Enthalpy Energy Recovery Wheel**
- ● **Optional Sensible Only**
- ● **Optional Purge Section**

● **Coil Options**
– Chilled Water (Shown)
– Hot Water
– Split DX
– 4 Pipe, both Chilled and Hot Water

■ **Single point wiring with fused NEMA 3R disconnect switch and low voltage strip for easy installation. Electric pre-heat and post-heat require field installed power.**

■ **Heavy duty double constructed insulated bottom to help ensure rigidity during transit and installation.**

■ **Hinged panel access doors, with quarter turn latches, allow easy access to energy recovery wheel, coils, filters and blowers.**

● **Post Heat**
– Staged Electric Heater
– Indirect Gas-Fired Heater

● **Optional Horizontal Discharge**

PRODUCT FEATURES

STANDARD DESIGN FEATURES

- **Double wall construction with 1" fully insulated galvanized steel panels.**
- **Heavy duty double constructed insulated bottom to help ensure rigidity during transit and installation.**
- **Powered by Lau Silent Pro Series forward curved blowers with isolation to reduce noise and vibration.**
- **Single point wiring with fused NEMA 3R disconnect switch and low voltage strip for easy installation. Electric pre-heat and post-heat require field installed power.**
- **Hinged panel access doors, with quarter turn latches, allow easy access to energy recovery wheel, coils, filters and blowers.**
- **2" MERV 8 filters come standard for both the intake and exhaust sections of EnERVent+.**
- **Digital control box that allows for integration with automated building control systems.**
- **EnERVent+ incorporates a new electronic technology for rotation sensing that sends a signal when the energy recovery wheel stops turning.**

ADDITIONAL DESIGN CHOICES

- **Frost Control**

  Blower Cycle Frost Control (Low Ambient Kit)
  This option cycles the intake blower on and off based on an exhaust air temperature set point. The lower volume of incoming air allows for the recovery wheel to defrost.

  VFD Frost Prevention
  A Variable Frequency Drive is used to slow down the energy recovery wheel RPM when the exhaust temperature decreases to a set point. This reduces moisture on the energy recovery wheel being exposed to outside air and therefore controls the frost. VFD frost control is available for EVT-62, EVT-88 and EVT-120.

  Pre-heat Frost Control
  This ensures continuous operation in cold environments by tempering the incoming air with up to 32.4 kilowatts as frost inducing temperatures are reached. EnERVent+ incorporates closed element pre-heat coils with a high temperature baked on aluminum or Incoloy coating to allow for extended life in a 100% fresh air stream.

- **EAMP Air and Temperature Direct Measuring**
  This Ruskin exclusive option provides digital air and temperature readouts from the intake and exhaust sections of the EnERVent+. Output is displayed digitally on the included controller with additional output available for a building automation control system.
- **EME Intake Louvers**
  Ruskin EME louvers incorporate the latest technology in wind driven rain louvers that have proven to be 100% effective in preventing water penetration during 50 MPH winds and 8" per hour rainfall rates.
- **VFD Blower Control**
  Variable frequency drives (VFD) control the speed of EnERVent+'s blowers. VFD's can be integrated with your building's automation system to maximize efficiencies and deliver precisely the amount of air needed.
- **Free Cooling Mode (Stop, Start and Jog)**
  Optional economizer controls allow free cooling when the outside air reaches a designated set point.
- **Electronic Temperature Control System**
  This works in conjunction with optional heating and cooling coils to temper air entering the occupied space back to ambient. Tempering the air entering the occupied space allows EnERVent+ to bring in 100% outside air without putting an additional load on the rooftop unit. The Electronic Temperature Control System can be integrated with a building automation system.
- **ERC – Sensible Only**
  This incorporates our standard Energy Recovery Cassette (wheel) without the desiccant coating. Typical applications for sensible only wheels include areas with high internal humidity such as pools, locker rooms, and saunas.
- **MERV 13 filters also available on LEED/Green projects.**
- **Unit available with either down discharge or horizontal discharge.**
- **Smoke Detectors**
  Duct mounted smoke detectors can be installed in both return and/or supply air streams. Signals from these smoke detectors can be set to start-up or shut-down the EnERVent+ unit if smoke is detected.
- **CO_2 Sensor**
  A CO_2 sensor option helps control indoor air quality based on CO_2 levels in the occupied space. High CO_2 levels can either trigger a response from the EnERVent+ unit by turning on the blowers to bring in fresh air or by modulating the blowers if a VFD option has also been selected.
- **Dirty Filter Sensor**
  The dirty filter sensor sends a signal to field wired alarm when filters need to be cleaned or changed.
- **Roof Curbs**
  Optional 14", 18", or 24" high roof curbs are available.
- **Remote Panels**
  EnERVent+'s control system is capable of outputting signals to a variety of optional remote display panels.
- **Replacement Wheel Segments**
  Pie shaped wheel segments are available for replacement so the entire wheel does not have to be replaced if a segment gets damaged.
- **Custom Paint**
  Send Ruskin your color requirements for an optional custom paint match.
- **GFCI Service Outlet**
  Optional field wired service outlet provides power for service equipment.

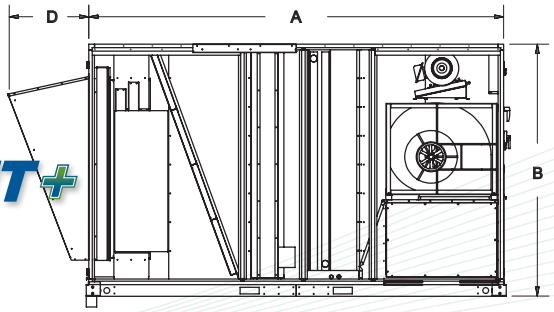
EnERVent+ HEATING & COOLING CHOICES

New Option

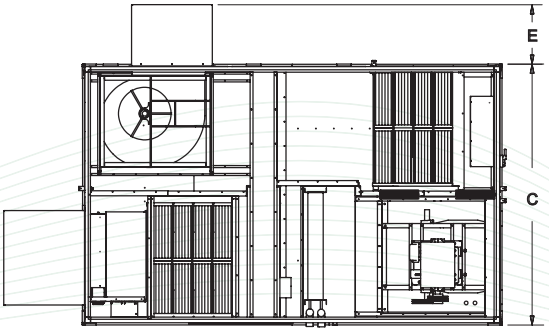
- **Indirect Gas-Fired Post Heat**
  2 Stage Indirect Gas Heat is available with up to 500 MBTUH to provide supplemental heat for supply air exiting the EnERVent+ unit.
- **Electric Post Heat**
  Staged electric heat is available with up to 120 kilowatts to provide supplemental heat for supply air exiting the EnERVent+ unit.
- **Chilled Water**
  Chilled water coils work in conjunction with chillers to cool the supply air exiting the EnERVent+ unit.
- **Hot Water**
  Hot water coil work in conjunction with hot water to heat the supply air exiting the EnERVent+ unit.
- **4 Pipe Water Coil**
  Combination of chilled water coil and hot water coil each with their own independent connections.
- **DX Coils**
  DX coils work with split system condensing unit using R410a refrigerant to cool the supply air exiting the EnERVent+ unit. All DX coils will have rifled tubing to increase efficiency.

SPECIFICATIONS

ENERVENT+



SIDE VIEW



TOP VIEW

DIMENSIONS *(Inches)* Base Unit

Model	A	B	C	D	E	Weight (lbs)
EVT-010 / EVT-019	77	43	45	15	10	1350 / 1500
EVT-028 / EVT-036	98	53	55	19	14	2350 / 2500
EVT-046 / EVT-062	116	66	68	23	18	2700 / 3000
EVT-074 / EVT-088	135	77	79	25	20	4700 / 5000
EVT-100 / EVT-120	144	87	88	28	22	5600 / 6000

DIMENSIONS *(inches)* Units that require any of the following options: Field Convertible Horizontal Discharge, Gas Heat, or 4 Pipe Water Coil

Model	A	B	C	D	E	Weight (lbs)
EVT-010/ EVT-019	94	47	52	15	10	1510 / 1670
EVT-028 / EVT-036	109	54	61	19	14	2610 / 2780
EVT-046 / EVT-062	131	67	74	23	18	3080 / 3330
EVT-074 / EVT-088	150	77	89	25	20	5210 / 5560
EVT-100 / EVT-120	162	88	101	28	22	6230 / 6670

PERFORMANCE

Model		EVT-010	EVT-019	EVT-028	EVT-036	EVT-046	EVT-062	EVT-074	EVT-088	EVT-100	EVT-120
CFM Range	MIN	600	900	1600	2400	3000	3400	5400	6400	7600	8000
	MAX	1000	1900	2800	3600	4600	6200	7400	8800	10000	12000
Supply Motor HP	MIN	1	1	1.5	2	2	3	3	5	5	7.5
	MAX	1.5	2	3	5	5	7.5	7.5	10	10	15
Exhaust Motor HP	MIN	1	1	1	1.5	2	2	3	5	3	5
	MAX	1.5	2	2	3	5	5	7.5	10	7.5	10
External Static Supply (in.wg)	*MAX	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0
External Static Exhaust (in.wg)	*MAX	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0	1.5 - 3.0

* Max external static pressure depends on the options selected.

RUSKIN®
Air & Sound Control
Specified by Many – Equaled by None

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