

YORK® UNITIZED ENERGY RECOVERY VENTILATOR (ERV)

Superior air-flow



300-6,200 CFM

 **YORK**®

BY JOHNSON CONTROLS

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.

Unitized ERV by YORK® 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.

Using desiccant wheel technology provides energy recovery benefits

Energy savings, exceptional payback and improved comfort

Investing in energy recovery wheels in HVAC systems can provide payback in savings and comfort.

- Reduces cooling load at design temps up to 4 tons per 1,000 cfm of outside air.
- Reduces heating load up to 12,000 Btuh per 400 cfm of outside air.
- Initial cost savings can be achieved by pre-conditioning the outdoor air, which can reduce the cooling load and tonnage required to meet that load.
- Most HVAC systems will use approximately 80% of the load to control space humidity. The YORK® desiccant wheel technology will allow nearly 75% of the humidity entering through the outside air path to be exhausted to the outside through the exhaust airstream, which not only saves energy but improves comfort.

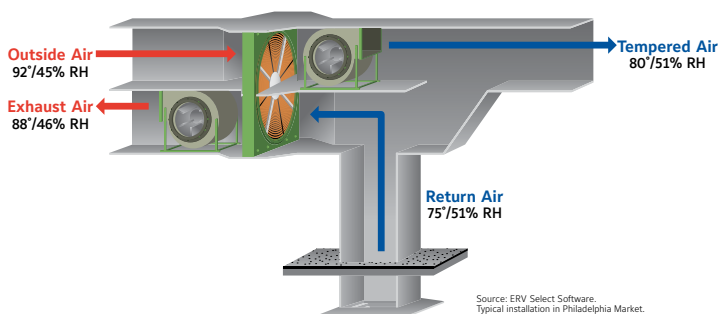
LEED-EB and LEED-NC credits

For Green Building designs, the UnitizedERV 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.

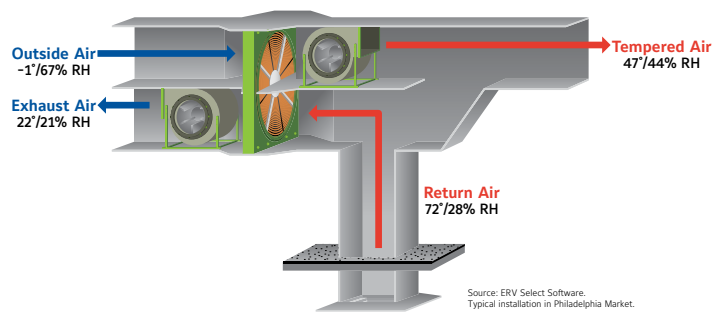
ASHRAE compliance and IAQ

ERVs 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. ERVs 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.

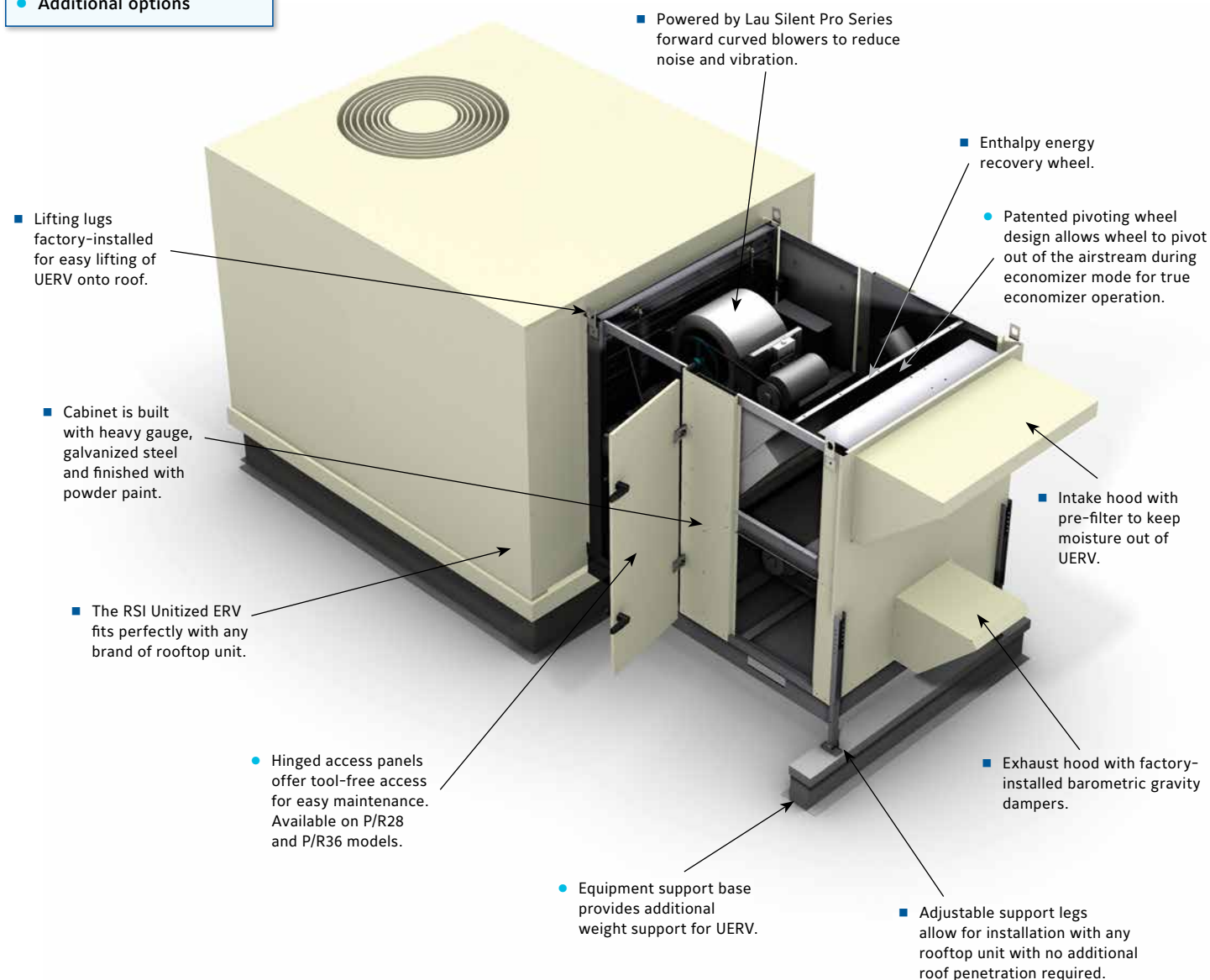
Typical HVAC System Using Energy Recovery
Summer Operation



Typical HVAC System Using Energy Recovery
Winter Operation



- Standard design features
- Additional options



Standard design features

- **Built with heavy gauge galvanized steel cabinet** with powder paint color-matched to any manufacturer's rooftop unit.
- **Powered by Lau forward curved blowers** to reduce noise and vibration.
- **All controls required to operate the unit** and interface with the rooftop unit are factory installed.
- Comes with an **interface wiring harness that connects the economizer directly to the ERV** with a single plug (P models).
- **Adjustable motor sheaves** so technicians can easily adjust blower speed.
- **Adjustable motor base** allows technician to easily adjust belt tension.
- **Balancing damper** provided for proper air distribution while ERV is in operation (R models only).

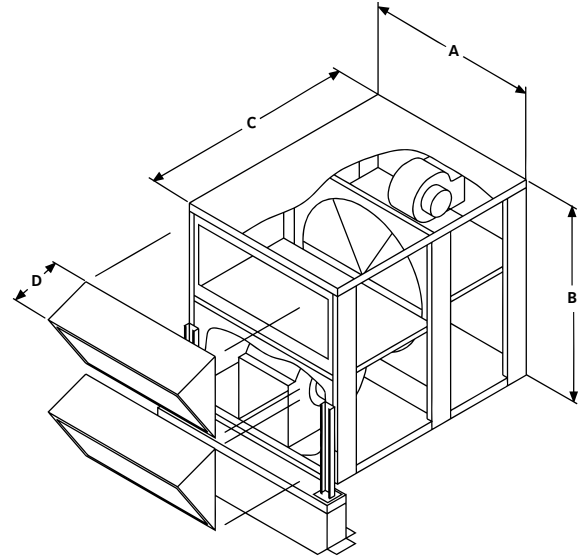
Additional design features

- **Patented pivoting wheel** – Allows the enthalpy wheel to pivot out of the airstream during economizer mode for true economizer operation.
- **Stop-start-jog** – Rotates the enthalpy wheel on a preset timer to prevent contamination of the wheel during economizer operation.
- **Electronic fan inlet air & temperature measuring station (EFAMS)** – The YORK® EFAMS device averages multiple velocity and temperature points at the fan inlet bell to provide highly accurate air measurement, and the output is digitally displayed on the LCD display on the EFAMS control transmitter.
- **Hinged access panels** – Give tool-free access for easy maintenance (available on P/R28 and P/R36 models).
- **Low ambient control kit** – Prevents frost formation on energy wheel if discharge air temperature falls below a field-selectable temperature setting.
- **Motorized intake and exhaust dampers** – Automatically open when UERV is operating and close when UERV is not operating.
- **Factory installed filters** – 2" MERV 8 filters for exhaust sections (select models).
- **Variable frequency drive (VFD)** – VFDs control the speed of the blower, and can be integrated with the building's automation system to maximize efficiency and deliver precisely the amount of air needed.
- **CO₂ sensor** – A CO₂ sensor can help control indoor air quality by bringing on the ERV when CO₂ levels are too high in the occupied space.
- **Wheel rotation sensor** – This electronic sensor will send an error signal when the wheel stops turning during ERV operation.
- **Sensible only energy wheel** – The standard Energy Recovery Cassette without the desiccant coating, for use in areas with high internal humidity such as pools, locker rooms and saunas.
- **Smoke detector** – Duct mounted smoke detectors can be installed in both the supply and return air stream, and they will signal the ERV to start up or shut down when smoke is detected.
- **Pressure gauge** – A factory installed pressure gauge will show the technician the pressure drop across the wheel, which can help in determining when maintenance is required.

Additional Design Features	Model		Model		Model		Model		Model		Model		
	R06	R11	P11	R20	P20	R28	P28	R36	P36	R46	P46	R62	P62
CFM Range	300-550	700-1000		1000-1700		1500-2800		2800-3600		3400-4600		4800-6200	
Patented pivoting wheel			•		•		•		•		•		•
Stop-start-jog	•	•		•		•		•		•		•	
Electronic fan inlet air & temperature measuring station (efams)				•	•	•	•	•	•	•	•	•	•
Hinged access panels		Call	Call	Call	Call	•	Call	•	•	Call	Call	Call	Call
Low ambient control kit	•	•	•	•	•	•	•	•	•	•	•	•	•
Motorized intake and exhaust dampers exhaust motor	•	•	•	•	•	•	•	•	•	•	•	•	•
Factory installed filters		•		•		•		•		•		•	
Variable frequency drive (vfd)				•	•	•	•	•	•	•	•	•	•
CO ₂ sensor	•	•	•	•	•	•	•	•	•	•	•	•	•
Wheel rotation sensor	•	•	•	•	•	•	•	•	•	•	•	•	•
Sensible only energy wheel	•	•	•	•	•	•	•	•	•	•	•	•	•
Smoke detector	•	•	•	•	•	•	•	•	•	•	•	•	•
Pressure gauge	•	•	•	•	•	•	•	•	•	•	•	•	•

Note: P models include the pivoting wheel option. R models are non-pivoting wheel.

Specifications



Dimensions *Inches (Millimeters)*

UERV Series	CFM	A	B	C	D
R06	300-550	24.75 (629)	24.63 (626)	34.56 (878)	8.00 (203)
R11	700-1000	32.13 (816)	33.50 (851)	44.75 (1137)	11.00 (279)
P11					
R20	1000-1700	37.25 (946)	37.50 (953)	54.38 (1381)	20.32 (516)
P20					
R28	1500-2800	42.63 (1083)	43.56 (1106)	52.25 (1327)	18.32 (465)
P28					
R36	2800-3600	46.68 (1186)	57.38 (1457)	60.00 (1524)	18.32 (465)
P36					
R46	3400-4600	52.68 (1338)	57.38 (1457)	60.00 (1524)	18.32 (465)
P46					
R62	4800-6200	58.88 (1496)	57.38 (1457)	60.00 (1524)	18.32 (465)
P62					

Performance data

Model		RO6	R11/P11	R20/P20	R28/P28	R36/P36	R46/P46	R62/P62
CFM Range	MIN	300	600	1,100	1,500	2,800	3,400	4,800
	MAX	550	1,000	1,700	2,800	3,600	4,600	6,200
Supply Motor HP		0.25	0.5	1	1.5	2	3	5
Exhaust Motor HP	Stationary	0.25	0.5	1	1.5	2	3	5
	Pivoting	N/A	0.5	1.5	3	3	5	(2) 5
Approx. Weight (lbs)		198	245	345	395	475	805	1075

At Johnson Controls, we truly understand HVAC systems. In fact, we produce some of the most robust HVAC equipment, parts and controls on the market today. But we don't just sell products. We also offer the expertise, services and strategic insight to make them work within your current system, optimizing your building's performance and lowering your overall costs. If you're interested in revolutionizing your HVAC system, contact and expert today. Otherwise, browse our full-suite of HVAC products.

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