

In Development:

Integrated Energy Recovery Ventilator

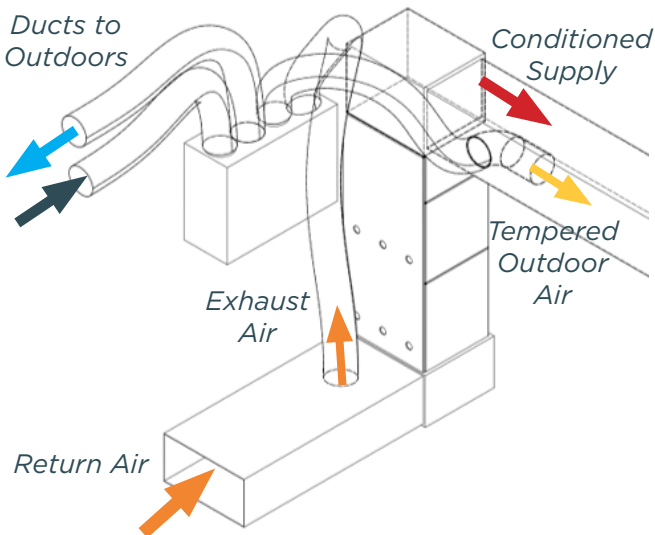


Steven Winter
Associates, Inc.



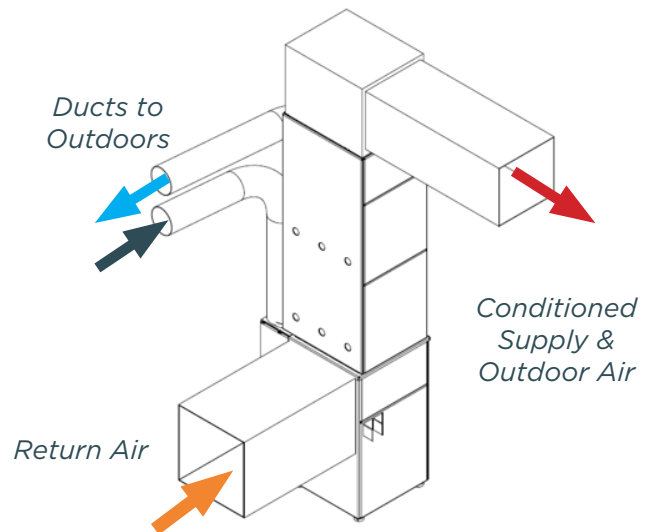
Far too often we see frustrating and difficult ERV installations that fail to meet ventilation requirements. With support from the DOE Building America program and industry partners, Steven Winter Associates is working to address this issue by developing an integrated ventilation system that makes balanced ventilation easier in homes.

Designed to fit into mechanical closets, the small-footprint ventilator will integrate with efficient forced-air systems. ECM fans maintain ventilation rates regardless of heating and cooling operation over a wide range of system configurations.



Traditional ERV Add-On

- Larger footprint and maintenance access requirements
- More difficult to install
- Inconsistent flow rates as ERV competes w/ AHU
- Defrost cycles: off, recirculation, exhaust-only, or electric resistance
- Can only commission at a single AHU speed



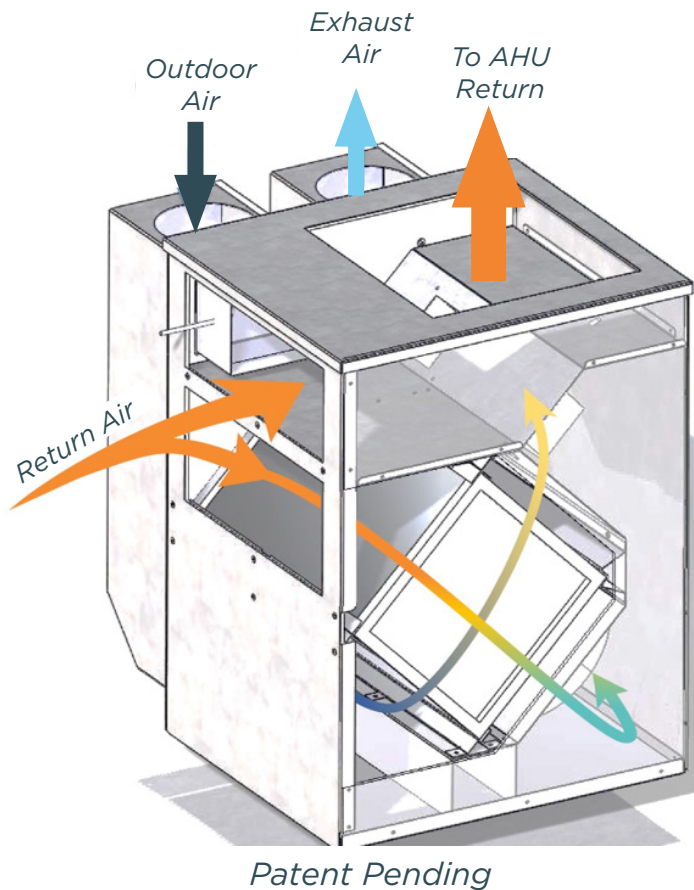
Integrated ERV

- Compact, small footprint
- Minimized connections
- Consistently maintains desired flowrates (even during frost prevention)
- Low electrical power
- Wide range of flow rates

Key Technical Partners:



Integrated Energy Recovery Ventilator



Compact: Connects to the return side of an air handler. Fresh air is distributed throughout the home through heating and cooling ducts. All maintenance needs are executed through the front panel.

Minimal Connections: Need only to provide ventilation inlet and outlet ductwork, resulting in two field connections (in addition to the normal AHU setup) instead of four connections typical of non-integrated ERV's.

Versatile: The unit will be able to accommodate systems up to 2 tons. Exhaust air can be diverted from return air as shown or ducted separately to provide targeted exhaust.

Steady Flow: Constantly modulating ECM fans ensure the delivery of the desired amount of exhaust and outdoor air under

40-120

Large CFM Range

Single Unit Specification: delivers ventilation flow rates from 40 cfm up to 120 cfm.



Energy Recovery: 70% sensible effectiveness, 50% total recovery efficiency at 120 cfm.



Enhanced Frost Prevention: During very cold weather, ventilation flow rates are continuously maintained by mixing return air into the OA stream. There is no need for recirculation, unbalanced ventilation, or power hungry electric preheat.



High Filtration: Designed for at least MERV 13 filtration of outdoor air.



Low Power: Prototypes delivered 120 cfm of ventilation with 40-80 Watts, including the AHU.



Prototype testing in occupied homes is scheduled for Q1 2019.

Send feedback or inquires to vics@swinter.com