iAIRE MATED RECOVERY VENTILATOR (ERV) SPECIFICATION

Part 1 – Quality Assurance

A. Unit shall be designed in accordance with UL Standard 1995.
B. Unit shall be ETL tested and certified.
C. Unit casing shall withstand Federal Method Standard No.141 (Method 6061) 500-hour salt spray.
D. The unit shall be AHRI 1060 certified.
E. Insulation and adhesive shall meet NFPA 90A requirements for flame spread & smoke generation.

Part 2 – Product

A. Unit shall be a factory assembled, single piece unit. Contained within the unit enclosure shall be all factory wiring with a single, pre-determined point of high power input and a single location to land control power.
B. The cabinet shall be constructed of galvanized steel coated with a painted finish.
C. The cabinet shall be insulated on the tempered side of the ERV with R4.2 insulation or higher.
D. The cabinet shall be designed to withstand hurricane force winds.
E. The exhaust air stream shall have a back draft damper to prevent air penetration during off cycles.
F. Blowers shall be directly driven with high efficiency motors. The units shall be at or above 80% efficient at converting. electrical power to fan power. This high efficiency package is all one piece so there are no belts or pulleys.
G. Standard filters are 2” pleated filters having a minimum MERV rating of 8.
H. The unit will have a by-pass damper that is capable of bringing in 100% outside air.

Part 3 – Mating to RTU

A. The mated combination or ERV & RTU shall be constructed to prevent short cycling of air from the supply to the exhaust without going through the HVAC system.
B. The ERV should bolt on to the RTU without the need for equipment supports, feet, sleeper rails or any additional support under the ERV.
C. The mated combination of the ERV & RTU shall be capable of withstanding hurricane force winds.

Part 4- Controls

A. The unit shall be microprocessor controlled.
B. The operator interface shall consist of push button interface and a back-lit LCD screen. No external device should be necessary to program or set-up the ERV.
C. Unit controller shall control both ERV & by-pass damper (or RTU economizer).

PART 5 – Options

A. Airflow control - The unit shall be capable of allowing the operator to control the unit based on outside airflow (CFM). The airflow will self-balance the unit to the operator input CFM regardless of static. This control also allows for a low CFM alarm to be established meeting the requirement in LEED certification.
B. IAQ control – The ERV/RTU combination shall be equipped with ionization devices appropriate for the RTU airflow, VOC & CO2 sensors. The ionization devices will help purify the air in the space. The controller will take the input from the CO2 and VOC sensors to determine the amount of air that is required in the space and then control the unit to bring in the appropriate amount of outside air.