ERMS SERIES
Energy Recovery Module

STANDARD FEATURES
• AirExchange ERC Energy Recovery Wheel
• 500 hr salt spray test
• Galvanized steel cabinet with enamel finish
• Main control panel
• Available in 115 & 208 single phase and 208, 230, 460 & 575 three phase
• Belt drive supply and exhaust fan
• 24 volt control transformer
• Exhaust air stream filters
• Supply and exhaust air stream backdraft dampers
• ETL Certified, AHRI 1060 Certified, Designed in accordance to UL Standard 1995.

OPTIONAL FEATURES
• Filter maintenance indicator switch
• Energy recovery wheel maintenance indicator switch
• Blower maintenance indicator switch
• Energy recovery wheel purge
• Energy recovery wheel stop/jog control
• Electric pre-heat frost protection
• Low temperature lockout
• Supply and exhaust fan variable frequency drive
• Roof curb

Industry Leading 70-85%* Efficient

*Efficiency will depend on design conditions
DESCRIPTION
The Sterling ERMS unit is an outdoor rooftop mounted, electrically controlled outdoor air pre-conditioner utilizing an AirExchange Energy Recovery Cassette to reduce the heating and cooling load placed on the HVAC unit by untreated outside air. Outside air will be drawn through the ERMS cassette by the ERMS supply blower and shall be discharged directly into the rooftop unit return air. Units are available in sizes 800 to 19,000 CFM.

Energy Recovery Module utilizes a 70+% efficient energy recovery wheel which allows for a reduction in the size of the mechanical cooling and heating. Energy recovery wheel performance is AHR1 standard 1060 certified and the entire unit is ETL agency tested and certified.

ERC SERIES ENERGY RECOVERY WHEEL
The energy recovery wheel inside the ERMS unit transfers energy from the warmer to the cooler air stream by using counter-fl owing supply and exhaust air streams through a slowly rotating wheel (less than 60 revolutions per minute). The large energy-transfer surface is arranged to provide laminar air flow through the wheel causing the constant flow of recovered energy to represent up to 75% of the difference in total energy contained within the two air streams.

During both summer and winter, the energy recovery wheel transfers moisture entirely in the vapor state. This process eliminates wet surfaces that retain dust and promote fungal growth. The need for a condensate pan and drain is also eliminated. Because it is constantly rotating, the energy recovery wheel is always being cleaned by counter-fl owing air streams, first in one direction, and then the other. Because it is always dry, dust or other particles impinging on the surface during one half cycle, are automatically removed during the next half cycle. When ventilation air is introduced into a building, the cooling and heating equipment must be sized to handle both the building envelope load and the outdoor air ventilation load at the extremes of summer and winter design conditions. The use of an ERMS can significantly reduce the outdoor air ventilation load applied to the heating and cooling equipment, effectively decreasing the heating and cooling requirements. Wheel effectiveness will range from 70-85% depending on design conditions.

SUPPLY AND EXHAUST FAN
Supply and exhaust fans are provided as an integral part of the unit. An optional variable speed drive is available to further increase energy savings.

AIR QUALITY
Filters are provided for the outside air entering and the return air entering sides of the Energy Recovery Wheel. Supply and Exhaust air streams shall have back draft dampers to prevent air infiltration during OFF cycles.

SERVICE ACCESSIBILITY
Energy recovery wheel segments are removable without the use of tools to facilitate maintenance and cleaning.