* 1. Enthalpy Plate Heat Exchanger
     1. General Specifications
        1. Furnish and install the IPE5 enthalpy plate energy exchanger, to be manufactured by InnergyTech Inc.
        2. The enthalpy plate energy exchanger shall transfer both sensible and latent energies between outgoing and incoming air streams in a crossflow arrangement.
        3. The enthalpy plate exchanger must be manufactured in North America.
        4. The enthalpy plate exchanger manufacturer must have at least ten (10) years of experience in the manufacturing of energy recovery components.
     2. Product Specifications
        1. The enthalpy plate exchanger media shall be impregnated with InnergyTech RC135 polymeric desiccant.
        2. The hydroscopic polymer shall exchange water by direct vapor transfer using molecular transport without the need of condensation.
        3. The plate exchanger shall be constructed of alternate layers of corrugated open mesh aluminum material and polymeric desiccant impregnated media.
        4. The enthalpy plate exchanger shall have a unique rectangular flute design to provide very low pressure drop values and optimal energy transfer. Triangular flute openings are unacceptable.
        5. The enthalpy plate exchanger shall be assembled into a strong, self-supporting frame made of aluminum corner extrusions and 16-gauge aluminum end plates.
        6. The corners of the enthalpy plate exchanger shall be sealed with 2 components casting resin. The exchanger shall be silicone free.
        7. The aluminum corner extrusions shall be hollow to accept mounting screws and shall provide a 45° corner support angle.
        8. The enthalpy plate exchanger shall operate at temperatures between -40 °F and 140 °F (-40 °C and 60 °C).
        9. The enthalpy plate exchanger shall withstand, without more than 10 % increase of pressure drop, pressure differentials of at least 5" w.g. It shall withstand pressure differential of 10" w.g. without permanent deformation.
     3. Quality Assurance Specifications
        1. The manufacturer’s quality procedures shall be ISO 9001-2008 certified.
        2. The enthalpy plate exchanger shall bear the AHRI 1060 Certified Product Seal. Sensible, latent and total effectiveness along with pressure drop, EATR and OACF rating shall be clearly documented with performance tests conducted in accordance with ASHRAE Standard 84-91 and per the official AHRI laboratory. Exchangers that do not bear the AHRI 1060 certified seal shall be unacceptable.
        3. The enthalpy plate exchanger shall be a UL Recognized to UL 1995 requirements. Under the UL 1995 certification, a Flame Spread Index (FSI) < 5 and Smoke Developed Index (SDI) < 15 were determined to UL 723 testing requirements.
        4. The membrane shall not promote the growth of mold or bacteria and must have successfully passed AATCC30-2013 with no growth of Aspergillus Niger observed after 14 days.
        5. The exchanger must have successfully passed 1920 frosting/defrosting cycles with less than 10% change of its performance.