

EPE5000 PLATE EXCHANGERS

Enthalpy Plate Energy Exchangers



ARI certified product

Ideal for residential and light commercial ventilation applications!

Manufacturers of air handling units are always looking for solutions that will make their units stand out from their competitors. Keeping this in mind, Innergy tech introduces its new and unique enthalpy plate energy exchanger. The EPE5000 enthalpy plate energy exchanger is the alternate solution to energy recovery wheels in light commercial and residential ventilation systems. An ideal choice for schools, offices and residential applications.

When HVAC manufacturers are faced with a situation where their air handling units (AHU) create indoor air conditions too humid in warmer climates or too dry in cold climates due to greater code driven air exchange requirements, the solution is simple: the new EPE5000 Series from Innergy tech.

Features and benefits

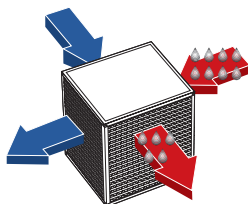
- No moving parts, trouble free operation
- Reduced noise and nearly no maintenance costs
- Recovers sensible (heat) AND latent (moisture) energies
- Bactericide desiccant; will not promote growth of mold or bacteria
- Unique rectangular flute design for low-pressure drop values and enhanced performances
- No defrost mechanism required when operating above 10 °F (-12 °C)
- Cross flow standard design
- Meets NFPA 90A and NFPA 90B measured under UL Standard 723
- ARI certified performances; Bears the ARI Standard 1060-2005 certified seal

Options

- Painted end covers
- Extruded plastic corners

Heat and moisture recovery without moving parts!

The EPE5000 Series installed in a ventilation system recovers both heat and moisture from one air stream and transfer them to the other without any moving parts. It supplies a continuous flow of fresh air providing a comfortable level of humidity at a minimal ventilation cost.



Operating Principle:

Summer operation

In summer operation, heat and moisture from the outside fresh air is transferred to the outgoing air, greatly reducing air-conditioning costs.

Winter operation

In winter, heat and moisture from the outgoing air is recovered and transferred to the fresh incoming air, greatly contributing to reduced heating costs.

Dimensional data

Model	Square size (S) (in/mm)	Diagonal (D) (in/mm)	Height (H) (in/mm)
12S	12/305	17/432	As requested
13.5S	13.5/343	19.09/485	As requested
15S	15/381	21.25/540	As requested
16.5S	16.5/419	23.33/593	As requested
18S	18/457	25.5/648	As requested
21S	21/533	29.75/756	As requested
24S	24/610	34/864	As requested

EPE5000 Specifications

1. General Specifications:

- 1.1. Furnish and install the EPE5000 enthalpy plate energy exchanger, to be manufactured by Innergy tech inc.
- 1.2. The enthalpy plate energy exchanger shall transfer both sensible and latent energies between outgoing and incoming air streams in a cross flow arrangement.
- 1.3. The enthalpy plate exchanger must be manufactured in North America.
- 1.4. The enthalpy plate exchanger manufacturer must have at least ten (10) years of experience in the manufacturing of energy recovery components.

2. Product Specifications:

- 2.1. The enthalpy plate exchanger media shall be impregnated with a RC134 polymeric desiccant.
- 2.2. The hygroscopic polymer shall exchange water by direct vapor transfer using molecular transport without the need of condensation.
- 2.3. Desiccant shall be bactericide. The desiccant shall be tested by a third party laboratory and the document showing the tests results shall be supplied to the air handling unit end user.
- 2.4. The core shall be constructed of alternate layers of corrugated aluminum material and polymeric desiccant impregnated media.
- 2.5. The enthalpy plate exchanger shall have a unique rectangular flute design to provide very low pressure drop values.
- 2.6. The enthalpy plate exchanger shall operate at temperatures between -40 °F and 113 °F (40 °C and 45 °C).
- 2.7. The enthalpy plate exchanger shall withstand, without more than 10 % increase of pressure drop, pressure differential of at least 2". It shall withstand pressure differential of 10" without permanent deformation or decrease of performance.
- 2.8. As specified in ASHRAE 52.2-2007, MERV 6 type filters shall be used on both faces of the enthalpy core. Filters to be supplied by others.
- 2.9. The enthalpy plate exchanger shall meet NFPA 90A and 90B requirements for flame spread, not to exceed 25, and smoke generation, not to exceed 50, through an ongoing testing and verification program using UL Standard 723. Tests according to UL900 are not acceptable.

3. Quality Assurance Specifications:

- 3.1. The enthalpy plate exchanger shall be a UL recognized component.
- 3.2. The enthalpy plate exchanger shall comply with the requirement of UL723.

- 3.3. The manufacturer's quality procedures shall be ISO 9001-2000 certified.
- 3.4. The manufacturer shall be a participant in the ARI Standard 1060-2005 certification program.
- 3.5. The enthalpy plate exchanger shall be warranted for at least 1 year against manufacturing defect that could alter its function.

4. Performance Specifications:

- 4.1. The enthalpy plate exchanger shall be listed in the ARI Certified Product Directory.
- 4.2. The enthalpy plate exchanger shall bear the ARI Certified Product Seal.
- 4.3. 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 ARI Standard 1060-2005.



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