

# IPE5 ENTHALPY PLATE EXCHANGER



## The biggest enthalpy plate exchanger on the market

Featuring our next generation Innergy R135 membrane, the IPE5 is now offering greatly improved effectiveness numbers to help you reach ASHRAE 90.1 requirements

easily. Furthermore, thanks to a completely redesigned assembly and fully automated production equipment, **the pressure drops were reduced by up to 30%.**

With a total of 8 square dimensions, 3 different spacings and totally adjustable width, the IPE5 plate exchanger pushes the barrier even further and gives you the best design flexibility ever available. Its robust construction now enables the manufacturing of plate exchangers up to 72" (6 feet) long in just one section. Not only does this make the IPE5 the biggest enthalpy plate exchanger of the industry, **but fewer sections also mean a simpler and easier installation in the ventilation unit.**

## Features

**3 different spacings to suit all different application needs (0.1", 0.14" & 0.16")**

**From 17" square to 50" square dimensions available (total of 8 square dimensions)**

**Completely adjustable width dimension (up to 72" in one section)**

**Pressure differential limit of 5"WC (0.14" and 0.16" spacing) or 2"WC (0.1" spacing)**

**AHRI 1060 certified cores for guaranteed performances.**

**The enthalpy plate exchanger is 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.**

**Highly bactericide membrane per AATCC 30-2013 (does not support the growth of mold or bacteria)**

**Standard 5 years warranty (10 years also available)**

**Square sizes that match perfectly with our Sensible Hoval plate exchangers product line.**



**innergy tech**

setting the standard  
for **energy recovery**

**innergytech.com**

**HEAT PIPES • PLATES  
WHEELS • CORES**



# IPE5 ENTHALPY SPECIFICATIONS

## 1. GENERAL SPECIFICATIONS

- 1.1 Furnish and install the IPE5 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 Innergy RC135 polymeric desiccant.
- 2.2 The hydroscopic polymer shall exchange water by direct vapor transfer using molecular transport without the need of condensation.
- 2.4 The plate exchanger shall be constructed of alternate layers of corrugated open mesh 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 and optimal energy transfer. Triangular flute openings are unacceptable.
- 2.6 The enthalpy plate exchanger shall be assembled into a strong, self-supporting frame made of aluminum corner extrusions and 16 gauge aluminum end plates.
- 2.7 The corners of enthalpy plate exchanger shall be sealed with a 2 components casting resin. The exchanger shall be silicone free.
- 2.8 The aluminum corner extrusions shall be hollow to accept mounting screws and shall provide a 45° corner support angle.
- 2.9 The enthalpy plate exchanger shall operate at temperatures between -40 °F and 140 °F (-40 °C and 60 °C).
- 2.10 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.
- 2.11 As specified in ASHRAE 52.2-2007, MERV 6 type filters shall be used on both faces of the enthalpy plate. Filters to be supplied by others.

## 3. QUALITY ASSURANCE SPECIFICATIONS

- 3.1 General: The manufacturer's quality procedures shall be ISO 9001-2008 certified.
- 3.2 Performance: 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.
- 3.3. Fire resistance: 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.
- 3.4 Bacteria & mold resistance: 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.
- 3.5 Longevity test (frosting/defrosting cycles): The exchanger must have successfully passed 1920 frosting/defrosting cycles with less than 10% change of its performance.
- 3.6 Warranty: The enthalpy plate exchanger shall come with a warranty of at least 5 years against manufacturing defects that could alter its function. Longer warranty periods shall be available upon request.