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Constructions Specifications Institute (CSI) Division 23 Heating, Ventilation, and
Air Conditioning (HVAC) specifications for subsection 70-75

PART 1 - GENERAL

A. General Requirements.

1. The enthalpy plate energy exchanger shall transfer both sensible and latent energy between outgoing and incoming air streams in a cross or counter flow arrangement.

PART 2 – PRODUCTS

A. Product Specification

1. 2.1 The enthalpy plate exchanger media shall be coated with hydrophilic resin. The hydrophilic resin shall allow the exchange water by direct vapor transfer using molecular transport without the need of condensation.
2. The plate exchanger shall be constructed of alternate layers of corrugated spacer and liner material coated with a hydrophilic resin. Using a unique triangular flute design, the enthalpy plate shall transfer both sensible and latent energy. Maximum recommended operating air pressure drop should not exceed 1.2 inWS.
3. Frame supporting enthalpy matrix shall be constructed of G90 Galvanized material with end caps constructed of 18 gauge galvanized plates.
4. The enthalpy plate exchanger shall operate at temperatures between -40 °F and 140 °F (-40 °C and 60 °C). 2.10

B. Performance

1. 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. The enthalpy plate exchanger shall withstand pressure differentials of at least 5" w.g.
2. Fire resistance: Following UL1995 (Heating and Cooling Equipment), the enthalpy plate exchanger shall be a UL Recognized Component and bear the UL Certification Mark (tested under UL723 with success by the UL laboratory). The exchanger shall have a flame spread of less than 25 and a smoke developed of less than 50 when rated in accordance with ASTM E84. Exchangers only tested "in accordance to" UL723 shall be unacceptable.
3. Bacteria & mold resistance: The membrane shall not promote the growth of mold or bacteria and must have successfully passed ASTM-G21 testing.
4. Warranty: The enthalpy plate exchanger shall have a warranty of at least 5 years against manufacturing defects.

