

A Closer Look



The Project:

Georgia College & State University
Porter Hall
Milledgeville, Georgia

Educational Solutions
in Action
Solutions for Energy Recovery
& Dehumidification

Renovation of this 1939 building, home to the music department, included a new dedicated outdoor air system incorporating an energy efficient controllable heat pipe.



The Solution:

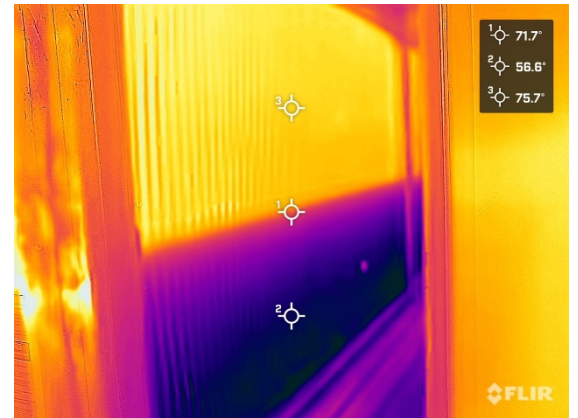
Carolina Heat Pipe designed, manufactured, and installed a custom 4-Row ST Mach 1 - TRAHP™ (thermosyphon run around heat pipe) into an 8,000 CFM "Daikin Applied" indoor air handler. The heat pipe system installed is fully controllable and can be modulated to provide energy efficient dehumidification.

Performance Results:



This specific 4 row TRAHP™ system can generate up to 25 degrees of sensible reheat at design load conditions. Due to the run around effect of the heat pipe technology, the system provides the equivalent of 18 tons cooling load reduction at the chiller plant while at the same time 220 MBH of free reheat.

The IR thermal image to the right provides validation for the passive reheat generated by the "Reheat Coil" of the TRAHP™ system, while entering air temperature off the cooling coil is 50°F.



The projected ROI on this project is 2.8 years.

The heat pipe requires only simple maintenance of periodic coil cleaning for the life of the air handler.

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