

Governmental Solutions in Action
Solutions for Energy Recovery & Dehumidification

**Gwinnett County
Police Training Center
Lawrenceville, GA**

The Project:

Incorporate energy Efficient Dehumidification into a 70,100 CFM air handler.

The Solution:

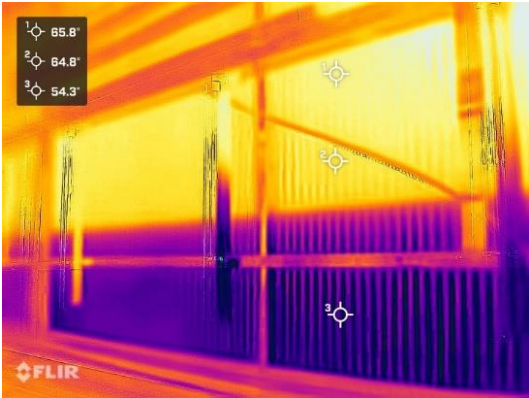
Carolina Heat Pipe partnered with Daikin Applied to custom design and install a ST-Mach 1 TRAHP™ 4-Row modulating heat pipe system for this project. CHP installed the TRAHP system in our Georgia facility and then shipped to the jobsite. This large Indoor Air Handler required special rigging for installation at the jobsite.



The Thermosyphon Run Around heat pipe system was controllable to prevent overheating while maintaining dew point temperature. This single zone constant volume system was designed to support a new 50 yard indoor firing range at the Gwinnet County Police Training Facility.

Performance Results:

At design load conditions, the ST Mach 1 TRAHP™ system provides 78.4 tons of cooling load reduction and 941.3 MBH of free reheat.



CHP utilizes Infrared Imagery to validate performance as part of site start up services. The image shows the temperature change as the heat pipe passively transfers heat energy from the precool to the reheat coils. The heat transfer process requires no pumps or external energy, only gravity and latent heat vaporization of the refrigerant in the closed heat pipe circuit.

The TRAHP™ system requires only simple maintenance of periodic coil cleaning for the life of the air handler.

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