

System Selection

For quick help, HPT applications engineers will need the following:

- Air flow
- Supply/exhaust dimensions
- Distance between air streams, horizontal and vertical
- Temperatures: dry bulb, wet bulb for each air stream

Applications



Laboratories



Medical Facilities



Manufacturing



Educational Facilities

HEAT PIPE TECHNOLOGY

advanced energy recovery and dehumidification



THE SMART™ WATER-GLYCOL ENERGY RECOVERY SYSTEM
From HPT™

The ultimate cross-contamination-free energy recovery system capable of handling 100,000 cfm or more, distances up to 200 feet and over 50% effectiveness.

When side-by-side is not possible, longer distances and a highly effective systems approach are required.

NOW AVAILABLE FOR
MULTIPLE AIR STREAMS



HEAT PIPE TECHNOLOGY

advanced energy recovery and dehumidification

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SMART

HPT's SMART™ Water-Glycol Pump system draws on our expertise in the energy recovery field, in making optimized heat pipe heat exchangers, and brings that technology into water coils. By designing the whole system, HPT is able to provide a solution that outperforms other glycol systems, with sensible effectiveness at 50% for a 6 row system at 500 FPM. This is key when trying to meet ASHRAE Standard 90.1 Section 6.7.7.3 for Laboratory Exhaust Systems.

Applications

For years, the energy recovery market struggled with implementing energy recovery projects when air streams were far apart, be it due to design considerations, building layout or potential contamination of supply air by exhaust air in buildings such as labs, hospitals and similar facilities. Design engineers were faced with two options: Design a very basic system using generic coil software, and have a local contractor put it together and get what you can out of it, or a hard to justify, elaborate, complex and very expensive approach offered by some vendors. HPT found out there is a real need for a systems approach, whereby one entity takes responsibility for the whole system. Then, through extensive R&D, HPT was able to optimize the coil heat exchangers, drawing on our vast experience in this field. Controls, VFDs, pumps and other components were then designed to fit on a compact skid, making this a system, easy to install, functional and yet affordable.

This product is used in applications where two air streams are not in close proximity due to contamination concerns, or other design issues.

Product Features

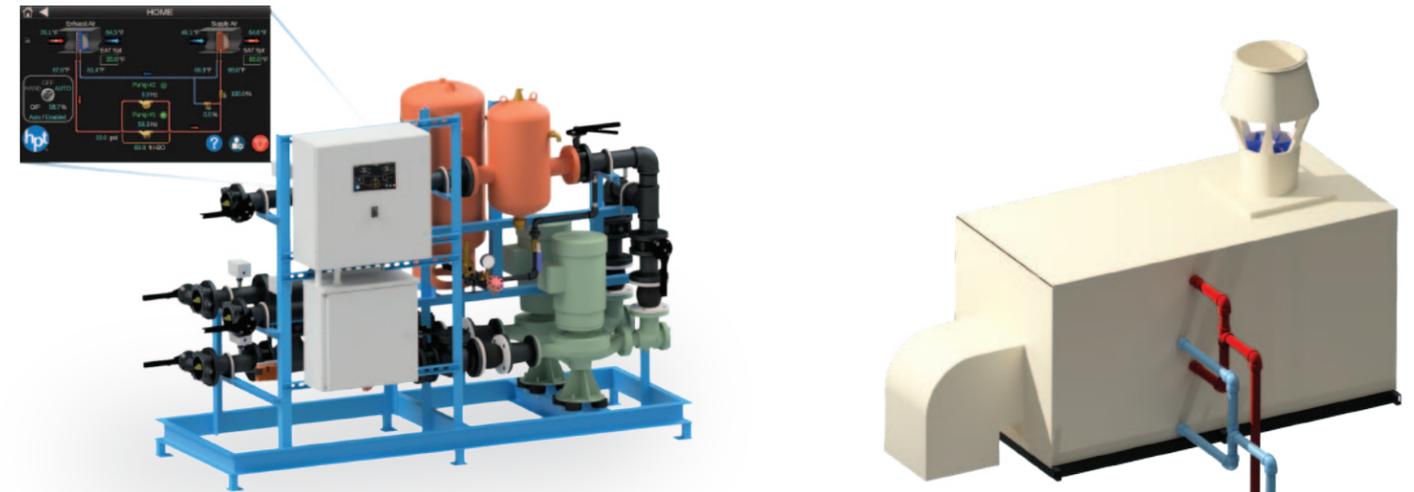
- 50% effectiveness compared to the average industry 35%. Complies with ASHRAE 90.1.
- Single-source responsibility for design, supply and warranty
- Intelligent control that keeps the system running at peak efficiency and minimizes wear and tear on pumps
- Easy to use 10" touch screen interface for local pump and set point management
- Connects to BAS via MODBUS/BACnet allowing for easy access to critical system performance
- Options include one or two pumps providing redundancy and increasing life of pumps
- Up to 200 feet of separation between air streams, covering most applications
- Many great features included at lower cost than other glycol systems
- 5 Year warranty offers "peace of mind" and assurance product is supported

Components

The system comprises a pump skid, coils and air sensors, which all ship from HPT. The contractor will pipe between coils and skid, wire the power supply, Building Automation System (BAS) and air sensors, and provide standard hydronic services such as startup and installing insulation. The skid includes all the hydronic components, electrical components and water sensors, which are all fully installed in the factory and ready to use. HPT assumes responsibility for the entire system.

Control

The system controller modulates valve positions and pump speeds to maintain optimal performance during different times of the year, including heating, cooling, economizer and frost control. The 10" touchscreen interface provides a tactile and intuitive representation of the system so maintenance personnel can easily see system performance in real time. For remote interfaces, the controller can communicate with your BAS via BACnet or Modbus and using MSTP or Ethernet. It can also operate independently with full automatic control.



Why SMART™?

System Design – HPT is responsible for the entire system including: pump selection, coil heat exchangers and controls; providing a single point of responsibility for our clients.

Modular – Using pre-engineered modules means HPT can configure a system to match your exact requirements, whilst keeping the cost down.

Affordable – Drawing on our long energy recovery expertise, HPT was able to design a highly functioning system at an affordable price.

Reliable – Using proven components that are known for quality and reliability and with added design features, including automatic pump switching, makes this system highly reliable.

Technology – HPT's proprietary technology provides our clients with the highest system effectiveness and lowest energy consumption.

