



Frequently Asked Questions about the Rear Door Heat Exchanger

1. How much heat is removed from my rack using the Rear Door Heat Exchanger?

The cooling capacity varies based on several factors, including water temperature and flow rate, air temperature and flow rate, and heat load. In moderately dense racks, under 10kW, the heat load is completely removed in normal operating conditions. Ultra-high density racks have the heat load significantly reduced. For example, a 30kW blade server rack will typically have over 18kW of heat removed. Depending on the operating conditions, capacity is even higher and in some cases 30kW of heat can be removed from the rack.

2. How is condensation avoided with use of the Rear Door Heat Exchanger?

By using coolant that is maintained above the dew point of the facility whitespace there is no condensate generated on the Rear Door Heat Exchanger (RDHx) coil.

3. How is the coolant maintained above the dew point?

If the facility's water is not within the recommended specifications, a Coolant Distribution Unit (CDU) should be purchased. The CDU will create a secondary cooling loop and isolates the rear doors from the facility water supply, while providing recommended temperature control. Vette is a supplier of floor and rack-mount CDUs.

4. What other components are necessary for using the Rear Door Heat Exchanger?

Vette recommends using a secondary cooling loop in conjunction with the RDHx. This consists of the CDU, piping and treated water.

5. Can Vette supply hoses with quick connect couplings?

Yes, hose kits are available in factory tested sets with pre-cut lengths from 10 to 50 feet (approx. 3 to 15 meters).

6. Where are the coolant connections located on the Rear Door Heat Exchanger?

There are Supply/Return quick connect couplings located at the bottom hinge area of the RDHx. In addition, there are 2 Schrader valves (for air bleeding) at the top of the door and 1 drain valve at the bottom of the door.



7. What are the recommended flow rates of chilled water through the Rear Door Heat Exchanger?

Flow rate through the RDHx is 6-10 gallons per minute (23 – 38 L/s).

8. What is the pressure drop through the Rear Door Heat Exchanger?

The liquid-side pressure drop is 7 psi at 10 GPM (48 kPa at 38 L/min).

9. Is there a redundant water circuit?

The secondary cooling loop can be designed with redundant pumping systems to provide an even higher level of fault tolerance.

10. What kind of monitoring devices within the Rear Door Heat Exchanger?

Since the product has no moving parts, none are required. However a Coolant Distribution Unit can monitor several doors simultaneously for key data points such as pressure and flow rates.

11. What size racks will the Rear Door Heat Exchanger fit on?

The product currently fits on 42U IBM Enterprise racks. Additional racks sizes and models will be available soon.