

Rear Door Heat eXchanger V2

Increase equipment density while saving on energy costs



The Rear Door Heat eXchanger V2 delivers an industry-leading cooling system that uses chilled water to provide cooling for individual server cabinets. It is designed to increase equipment density in data centers, and helps reduce the need for inefficient computer room air conditioning units, saving you money and reducing your server footprint. The Rear Door Heat Exchanger V2 supports the 42U 1100 mm Enterprise V2 Dynamic Rack and IBM PureSystems and Flex System™ products.

Increased cooling efficiency

Using the Rear Door Heat eXchanger V2 can nearly eliminate the recirculation of hot air in your data center, requiring fewer inefficient computer room air conditioning units and delivering up to 20 percent energy savings¹.

Increased server densities

The Rear Door Heat eXchanger V2 has an industry-leading efficiency of 100 percent at a 30 kw load², simplifying air flow planning and nearly eliminating server room hot spots, which allows server racks to be placed closer together and more densely populated.

Simple to install and use

The Rear Door Heat eXchanger V2 replaces the back door on the 42U Enterprise V2 Dynamic Rack server cabinets easily. Provided with a source of chilled water (available from System x partners), the system provides significant advantages over traditional air cooling systems. The complete solution fits on two standard data center floor tiles.



Specifications

Machine type model	175642X
Air movement	Provided by servers
Door dimensions	Depth: 129 mm/5 in. Height: 1950 mm/76.8 in. Width: 600 mm/23.6 in.
Door assembly weight	Empty: 39 kg/85 lbs./Filled: 48 kg/105 lbs.
Water volume	9 liters/2.4 gallons
Water temperature (must be above dew point)	18° C/64.4° F for ASHRAE Class 1 Environment 22° C/71.6° F for ASHRAE Class 2 Environment
Water flow rate	22.7 liters/6 gallons to 56.8 liters/15 gallons per minute
Heat removal	100% - 30 kw, 90% - 40 kw @ 18°C water temp, 27°C inlet air temp.
Water connections	3/4 inch quick connect
Supported racks	42U 1100 mm Enterprise V2 Dynamic Rack: part number 93634PX, 42U 1100 mm Enterprise V2 Dynamic Expansion Rack: part number 93634EX

For more information

To learn more about the Rear Door Heat eXchanger V2, visit: ibm.com/systems/x/options/rackandpower/cooling.html or contact your System x representative or Business Partner.

- ¹ A large CRAC unit requires approximately 10KW to run, and will provide up to 150KW of cooling, depending upon how hot the air is returning to the CRAC. In contrast, the Cooling Distribution Unit (CDU) used to provide chilled water to the Rear Door Heat eXchanger uses only about 2.5KW to provide 150KW of cooling. So, the electrical usage of a CDU is as much as 75% less than for the air-cooled CRAC.
- ² 100% heat removal at 14 gpm flow of 18 deg. C water; up to 120% heat removal at 15 gpm flow of 12 deg. C water. (The additional 20% applies to heat removed from ambient air.) Other percentages apply with different flow rates and temperatures.

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