



High power densities in datacenters demand a radical questioning of cooling design.



The answer?
The delta T from
Datacentience.



The Future of Datacenter Cooling



USE ANY STANDARD RACK

delta T units slide into any standard rack, just like a server. Upgrade existing facilities or add additional capacity within the same physical space, without downtime or disruption to the server room. Make more efficient use of available space, and specify only what you need, when you need it, reducing capital costs.

Choose the semi-recessed option* and create an insulating air curtain across the front of the rack, to improve efficiency and prevent hot air recirculation without additional rack hardware.

REDUCE POWER DRAW, LOWER RUNNING COSTS

Through more intelligent design the delta T can improve energy consumption by up to 50% for the same cooling performance.

Capturing the hot air exhaust from the rear of the servers and cooling it using chilled water coils yields a 10% reduction in chiller compressor running costs. In northern climates the delta T can run without chiller power, providing free cooling for more than half the year.

The delta T operates with half the waterside pressure drop of comparable close coupled cooling units, and a fourfold reduction in fan power against equivalent traditional downflow cooling units. Using the semi-recessed position further improves the energy efficiency of the fans by one third.

REDUCE COMPLEXITY, LOWER CAPITAL COSTS

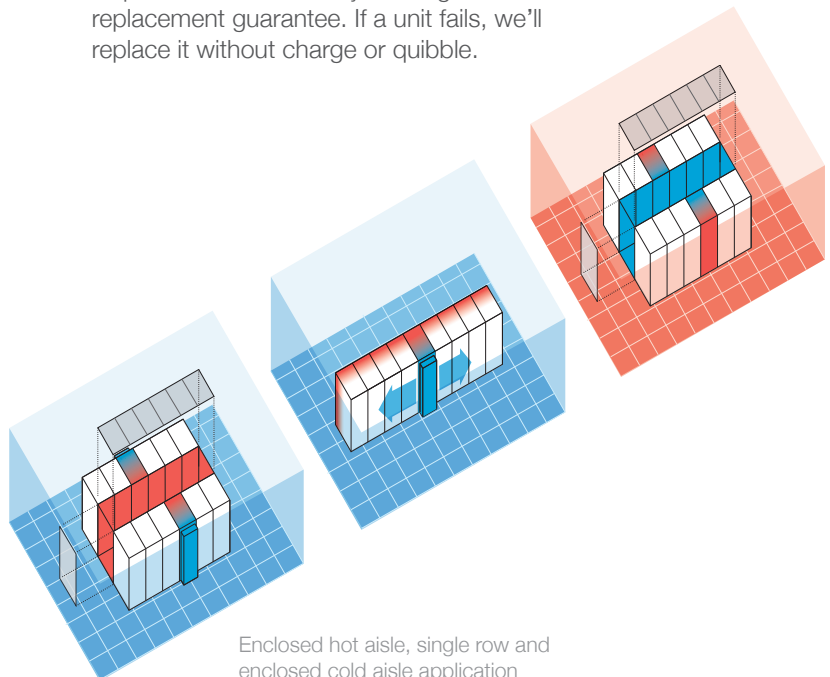
Installed at rack level, the delta T eliminates the need for a raised floor plenum, and with it all the associated structural complexity (and cost) in the datacenter.

You can achieve true fail-safe cooling redundancy with fewer units than a traditional CRAC solution (because airflow patterns are local and more predictable), again reducing capital costs.

Day to day running and servicing is straightforward with industry-standard controls.

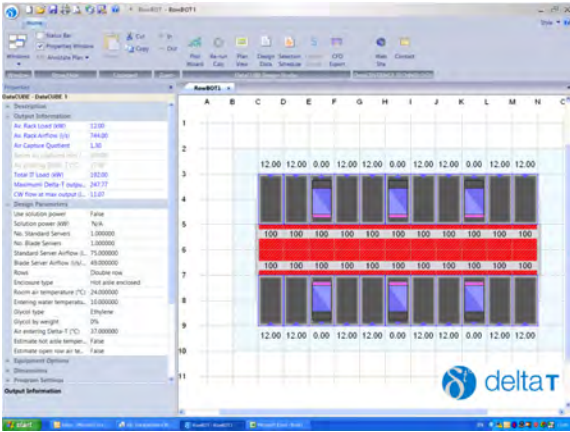
GUARANTEE PERFORMANCE AND IMPROVE AVAILABILITY

The units can slide in and out of a standard rack easily and without shutdown. That helps us offer an industry-beating full unit replacement guarantee. If a unit fails, we'll replace it without charge or quibble.

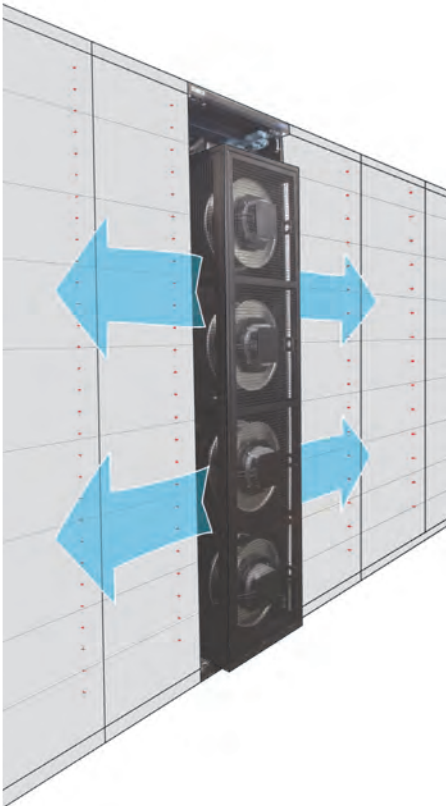


* Patent pending

Enclosed hot aisle, single row and enclosed cold aisle application



Design assurance with RowBOT



Fits in any rack fully or semi recessed

DATA CENTIENCE: BETTER IDEAS

We don't make blade servers or rack systems.

We focus on the supporting technology: the things that make the servers work, and keep on working, like power and cooling.

By looking harder at these often ill-considered areas we are aligning datacenter design with real business needs: with the need for flexibility in an uncertain age; with economic pressures on space utilization and power consumption; with the social pressure to reduce your carbon footprint.

We work with partners, and through them offer powerful tools to support datacenter room design. Leading the way is RowBOT, a sophisticated and exclusive modeling program.

The RowBOT reflects our deep rethinking of how cooling could be better implemented in HD datacenters. It brings a step change in the time required to design a rack and row-level cooling solution, whether for a new build or within an existing installation. It lets you compare hot and cold aisle, enclosed and open configurations, taking the guesswork out of designing an effective cooling solution.

Together with the delta T, the RowBOT empowers the IT team by making the server rack the self-contained basis of datacenter design, removing the need to consider the more complex physics of room-based cooling, as well as the structural barriers to upgrades or retrofit.

Find out more from our website, www.datacentience.com, where you can download the Technical Data Manual for a full product description, technical details and specification data. You will also find a lot more there about the thinking behind the delta T including a white paper on hot and cold aisle design.

In the meantime, if we can help in any way, just call us or drop us an email.

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