

Liquid Cooled Server Farm at major Government site

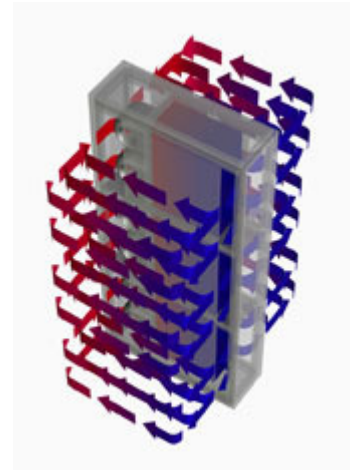
Rittal UK is pleased to announce the implementation of a liquid cooling solution for servers at a major Government site

Miniaturisation of servers and higher packing densities has led to increasing problems with heat dissipation within server racks. The traditional hot aisle cold aisle forced air cooling methodology can no longer eliminate hot spots within the data centre where heat loads of up to 20kW per rack can be a reality.

At a major Government institution, the total overhaul of their IT infrastructure led to the requirement for mirrored data centres to be built from scratch. In such a sensitive environment, the institution's key requirements were highly secure data rooms that could house server farms, which utilised current and future technology.

At a very early stage, it was recognised that forced air-cooling would not be able to handle the expected heat loads on a per rack basis. Rittal's expertise in the field of air to water heat exchanger technology led to their Liquid Cooling Package being identified as the solution that would ensure the perfect environment for the installed servers.

As the lead contractor on the project, Rittal then researched and identified key partners who were able to deliver the other elements of the Data Centre build. A secure room was a functional requirement of the project and Rittal were able to call upon sister company Lampertz to build a modular ECB S certified security room that has SEAP approval and protects against fire, water, explosions, corrosive gases and electromagnetic fields.



A thorough understanding of the data centre environment was needed for the highly complex task of designing and implementing the pipe work required to take the coolant from the Rittal supplied chillers to the 82 Liquid Cooling Packages located on the two sites. A specialist provider of air conditioning systems to the IT market was the ideal partner to handle this undertaking as well as installing a comfort cooling system for the two dark sites.

With so many services running under the raised access floor (including leak and fire detection, electrical bus bars, drainage pipes etc), co-ordination of all services was critical. Rittal turned to a service provider to fulfil this task and at the same time to take responsibility for installation of all electrical works and project management of the implementation phase.

The new data centres offer this Government institution the ability to install up to 60 racks at each site with over 8kW heat dissipation on a per rack basis. The innovative products developed by Rittal, combined with the expertise and experience of the both partners have further ensured that current and future server generations can be accommodated in the coming years.

Components: UPS, re cooler, rack, LCP, IT-room

Wish to know more about this project?

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