



CRITICAL INFRASTRUCTURES

Case study

New Port Tier III

Location: Qatar

Size: 3 x data halls each with 210 racks

Power: 1.5MW per data hall

About

Located in the heart of the Gulf sea, this is one of the world's largest greenfield port developments, playing a big part of the Qatar 2022 development vision.

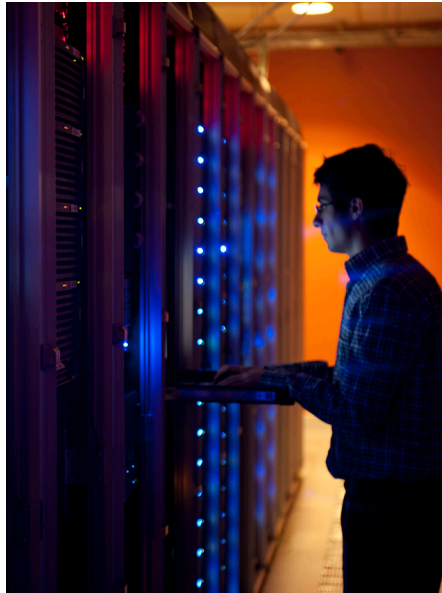


The Project

Sudlows DMCC supported the main consultant on the installation of a new data centre facility thanks to our experience with Tier III facilities and the capabilities of our data centre specialist mechanical teams.

Key Components

- Tier III concurrently maintainable design
- Common chilled water system with elevated temperatures for energy efficiency
- Cold aisle containment and cooling control system to allow high density rack deployment of up to 15kW per rack



Understanding the specific engineering requirements of a concurrently maintainable chilled water system was essential to the project.

Working within the confines of the building structure, the single floor specified for the project supported nearly 700 racks and required very close co-ordination of services. The external plant space also presented a challenge as it was limited to the roof which

meant limited space for the cooling requirements.

The facility comprised a total of 660 racks across three data halls while cooling was supplied via concurrently maintainable chilled water systems. High efficiency chillers were installed with variable fan CRAH units and a control system to optimise fan speed alongside the chilled water valve position.

Conclusion

Sudlows DMCC mechanical team worked together with the main consultant to design the entire HVAC system for the building including the data centre concurrently maintainable chilled water system.

The design was completed in 3D / REVIT and services co-ordination was managed between the electrical and ELV teams.

The result was an improved chilled water design that would provide leading efficiencies and control to the data centre environment. The project has also secured certification for Tier III.

“An efficient and reliable infrastructure was vital to the development of this high profile project.”

“Our experience in delivering certified Tier III data centres was vital in the delivery of the facility.”

John Rippingale, Associate Director at Sudlows DMCC

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CRITICAL INFRASTRUCTURES



ENTERPRISE SERVICES



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