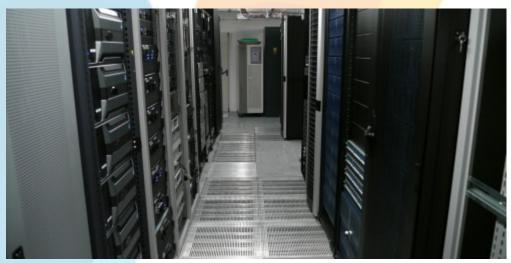
## CASE STUDY

## **BASEMENT DATA CENTRE**





This was no straight forward installation. The prime objective with any data centre is in producing a resilient system that future proofs the client against technology changes. Given we had no external plant space, only a basement car parking area, the fabric of the building was floored from the offset.

We consulted with the client and after a couple of meeting were able to fully understand cooling requirement. Given the business imperative nature of the room a backup (N+1) configuration was engineered, meaning the client would have a system installed as standby should any one system fail. There were discussions surrounding N+2 arrangements, and the room engineered in such a way to consider this at a later date.

We consulted with the landlord who agreed to make changes to the basement and gave us permission to locate and engineer the plant area in such a way we were able to reject the heat efficiently. In addition to this we liaised with Stulz (equipment manufacturer) and selected the condensers based upon high ambient (desert) conditions, in excess of 40c. This would further improve the reliability of our plant. Finally the client requested we manufacture a bespoke control panel that would alarm, load shed and allow remote interrogation of the plant. A panel was engineered that had capabilities to email and SMS, the client with any system faults, power cuts or high temperature activations.

Air Options continue to maintain the room and work with the client. The systems have proved to be extremely reliable since installation and our client please with the results. We are able to engineer computer rooms and data centres with the requirement of a few kilowatts, up to many megawatts of cooling.

| Building:                    | Lower Basement   |
|------------------------------|--|
| Location:                    | Monument, London   |
| Manufacturer:                | Stulz  |
| Heating & Cooling:           | Full Function (Humidification, Dehumidification & Cooling) |
| Ventilation:                 | Inergen Extract & Fresh Air Make<br>Up                     |
| Appointment Objectives:      | Data Centre Air Conditioning & Ventilation Installation    |
| Engineering<br>Achievements: | N+1 Performance, Resilience & Scalable                     |
| Budget:                      | £150,000 + VAT   |
| Timescale:                   | 4 Months   |
| Project Success:             | 100%   |

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