Case study 498

Medical research facility seeks huge cooling hire package for planned shutdown

The prearranged shutdown of a biomedical research institution in London was certainly a proposal that warranted a great deal of preparation, with the customer outlining various stipulations long before we began devising a suitable course of action.

A fault had been identified in the building's cooling system, requiring the immediate replacement of a number of pump seals and valves. With freezer farms, UPS rooms and data centres all constantly reliant upon a source of air conditioning, there was simply no scope for decommissioning their chillers unless the same cooling duties could be temporarily delivered by substitute units.

However, reservations regarding their ability to accommodate a large temporary chiller, and the high costs associated with this, prompted our engineer to explain that there was a much more economical alternative available.

At this stage, it was agreed that deploying multiple split type air conditioners around the most temperature-sensitive areas would be the most practical option. We estimated that more than 50 of our PAC 22 units would be needed across the application, which required us to make a number of adjustments to guarantee there was enough power to accommodate such a large amount of kit.

The client provided us with a 3-phase 63A supply, but this would only have allowed us to run a fraction of the units at any one time. With revisions badly needed and the time of the shutdown now fast approaching, we delivered distribution boards and cabling to help convert the power to a 13A single phase supply.

Incredibly, this whole changeover took less than three hours – removing the project's final stumbling block and paving the way for our units to be installed in the identified hot spots.

At the customer's request, an engineer was stationed at the facility during the out-of-hours shutdown so that any issues that might have arisen could be quickly rectified. Naturally, we're very pleased to report that nothing unexpected occurred, with their whole process completed in less than four hours.

Despite the client being braced for the eventual solution to cost in excess of six figures, we were able to exceed their expectations on every front and implement a comprehensive turnkey package for less than a fifth of the sum originally mooted.

Nominal cooling duty 6.47 kW
Air flow (Max) 1,310 m3 /h
Typical cooled area 156 m3
Power supply 230 V 1 ph 50 Hz Run 11 A
Also available in 230 V 1 ph 60 Hz
Indoor noise level (max) 62 dBA @ 3 metres
Outdoor noise level (max) 62 dBA @ 3 metres
Indoor weight 122 kg
Outdoor weight 20 kg
Indoor dimensions (L x W x H) 810 x 390 x 1,240 mm
Outdoor dimensions (L x W x H) 560 x 280 x 520 mm
PAC line length 5 metres (max 30 metres)
Control Automatic thermostat*
Average power consumption 2.38 kW/h
Optional cold air duct 2 x 200 mm x 5 metres
*Capable of operating down to 10°C