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Chiller replacement project at Castlewood saves council over £1000 a week in energy costs

High efficiency Turbomiser chillers installed at North Somerset Council's headquarters in Clevedon are saving the organisation more than £1000.00 a week in energy costs.



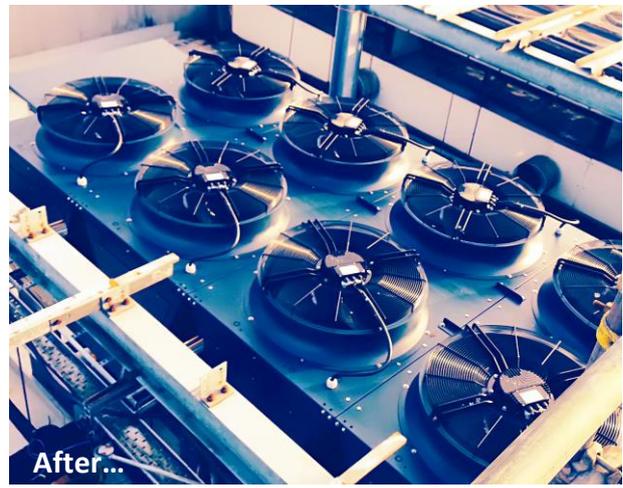
Cool-Therm installed two Turbomiser TMA 400kW chillers at the council's building at Castlewood earlier this year, working closely with the council's M&E and energy management department.

The high efficiency, oil-less chillers, which run on virtually frictionless magnetic levitation bearings, replaced three aging Hitachi machines which were approaching the end of their operational life.

The existing chillers, rated at 569kW each, were considered to be oversized for the application following major changes to the building's occupancy and usage, resulting in high maintenance costs, poor control and reliability.

Cool-Therm carried out a turn-key project for the client involving the safe removal of the existing chillers, replacing them with new Turbomiser machines. The changeover was successfully completed while maintaining continuity of cooling to the building, so that it could continue to function as normal.

The project took two months to complete, and involved the staged removal of existing units and installation of new chillers with major work completed out of office hours to minimise disruption on site.



Crane lifts posed a particular challenge due to the location of the building near the sea front, with high winds and unpredictable conditions affecting roof-top working.

The Cool-Therm team worked closely with Steve Hodges, Principal Mechanical, Electrical and Energy Engineer, North Somerset Council, to ensure the existing chillers were removed safely and the new Turbomiser craned accurately into position. Accurate placement was important as the new Turbomiser chillers were manufactured with connection positions designed for hook-up to the existing fixed on-site services.

Due to the proximity of the site to the sea, and the risk of metal corrosion from onshore wind and salt-laden air, the heat exchange coils on the chillers were treated with a heavy duty Heresite protective coating designed for use in harsh environments.

The chillers, which have an ESEER rating of more than 4.9:1, are equipped with a MODBUS gateway, enabling their performance to be monitored via the



internet and any alarms to be interrogated and diagnosed remotely. Following the installation, the council reports that the chillers are saving in excess of £1000.00 in energy running costs a week.

Steve Hodges said: "The Turbomisers offer a proven high efficiency solution, and the results to date confirm the anticipated savings. We are very pleased with the high quality approach and professionalism of Cool-Therm in delivering the turn-key package, and look forward to the savings that will continue to accrue over the life-time of the plant."

ENDS

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