

KLIMA-THERM DELIVERS OUTSTANDING CHILLER SOLUTION FOR ICONIC CITY OF LONDON BUILDING

Klima-Therm and LH plc worked together to deliver a major chiller replacement and upgrade project for one of the City of London's most iconic buildings.

It required disassembly and removal of two existing chillers from the building's sub-basement plant room, and replacement with two high performance, ultra-high efficiency Turbomiser chillers.

Replacement was necessary as the existing chillers, two Hall Screws operating on R22, were nearing the end of their working life and the refrigerant was subject to phase-out under environmental legislation. In addition, the plant was proving expensive to operate and maintain.

Continuity of cooling

A key requirement was that continuity of cooling for the building had to be maintained throughout the project. An additional challenge was that chilled and condenser water pipework also had to be replaced along with the chillers.

Klima-Therm's Tim Mitchell and LH's Paul Davis worked closely with building services specialist MEIT Consultants on the equipment specification and on-site logistics. The new chillers chosen were two Geoclima Turbomiser TMH 1700.34.SP water-cooled units, each with a cooling capacity of 1.7MW.

A third existing chiller on site, a McQuay centrifugal unit, was not part of the replacement project, and therefore available to assist in the change-over process. It was a project requirement that, at any one time, one Hall chiller must be operating with the McQuay chiller on standby.

Plant room reinforcement

The plant room is situated in a lower basement level, with limited double-door access via a corridor from an underground vehicle bay. All plant and materials had to be transferred from street level on a vehicle lift, and through the building via a service corridor. The plant room floor was constructed of open decking, and needed to be reinforced in order to support the extra weight during transfers.

The Hall chillers were decommissioned, disassembled and removed in a phased sequence, and the replacement Turbomisers delivered into the plant room in sections, to meet the size limitations of access to the site.

continued over



Equipment data file

The new chillers selected were two Geoclima Turbomiser TMH 1700.34.SP water-cooled units, each with a cooling capacity of 1.7MW.

An existing McQuay centrifugal chiller was not part of the replacement project, and therefore available to assist in the change-over.

“A key requirement was that continuity of cooling for the building had to be maintained throughout the project. Water pipework also had to be replaced along with the chillers.”

Interconnecting chilled and condenser water pipework was modified to suit the requirements of the new chillers. Particular attention was given to recommissioning the inverter-driven pumps, to deliver the correct chilled water requirement according to the chiller selection.

Conditions maintained

Following successful completion of the project, it was reported that conditions inside the building have been maintained at the set level despite periods of sustained hot weather. This had been a problem for some time with the previous chillers.

In addition, use of the low energy, low start-up current Turbomiser chillers has meant that plant can be run when the building is on generator supply, something that was not possible before.



Successful completion

Following successful completion of the project, it was reported that conditions inside the building have been maintained at the set level despite periods of sustained hot weather. This had been a problem for some time with the previous chillers.

“Particular attention was given to recommissioning the inverter-driven pumps, to deliver the correct chilled water requirement according to the chiller selection..”