



FREE-COOLER HELPS LOWER OPERATING COSTS FOR THE UK'S LARGEST INDEPENDENT HATCHERY



THE CHALLENGE

P.D. Hook Hatcheries is a family run business that has grown to become the UK's largest independent hatchery capable of producing 9 million day old chicks and 6 million chickens a week. Due to the size of the operation and growth of company, the demands put on the temperature control equipment had increased significantly and therefore a more efficient solution was required.

THE SOLUTION

Our Regional Sales Manager met the client on site in April 2018 to discuss fitting a new tank and pipework. On inspection, they noticed the current chiller system was taking up a large amount of room and wasn't operating as efficiently as a modern system. The solution was to replace the current 35,000 litre water tank with a significantly smaller 3000 litre weir tank, allowing the current chillers to provide the cooling but with new more efficient process and chiller pumps installed. Both pumps were sized based on the current pumps on site to make sure the flow and pressure rates remained the same and therefore minimised any disruption.

The system was supplied on a skid to help reduce the onsite time with the connections from the chiller pumps requiring to be mechanically connected to the pre-fabricated skid. The new process pumps were mounted on the skid and connected by new pipework onto the connection points.

In the space made available from removal of the 35,000 litre tank, a free cooling unit was installed to make use of the ambient air temperature throughout the year to reduce energy consumption costs. This is achieved by taking advantage of lower ambient air temperatures to help reduce the return water temperature before it enters the tank, thus saving energy consumption of the compressors.

THE RESULT

The smaller, more powerful chilling and free-cooling system installed in July 2018 was able to greatly improve the operating efficiency of the temperature control equipment. The lower energy consumption of the process resulted in energy savings of £26,000 per year and therefore pay-back on the capital investment would be made within 10-12 months.



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