



CASE STUDY

Weener Plastics: Turnkey Chiller Replacement

Weener Plastics is a full service global supplier of innovative plastic packaging solutions, with a strong focus on the functionalities: dispensing, containing and closing. The company designs, develops and manufactures added value caps, closures, roll-on balls, jars and bottles for the personal care, food & beverage and home care markets.

Weener Plastics has 29 facilities in 19 countries worldwide. One of these facilities is in Dromcolliher, Co. Limerick. Here, production is focused on making plastic roll-on balls used in health products. Sustainability is an integral part of Weener's strategy and this was part of the reason for choosing Sirius for this chiller replacement project.

The Solution

This turnkey chiller replacement project required the replacement of the existing RC Chiller with a 600kW QUANTUM Air-cooled Chiller from Engie Refrigeration. It also included the installation of new pipework, valves, pumps and a plate heat exchanger.

Sirius was contracted as the designer as well as overseeing the project to completion. Energy savings and sustainability were a priority with this project, so the chiller selected was the Engie QUANTUM Turbocor® with its complete energy package to monitor and display energy performances in real-time.

The plate heat exchanger was designed to incorporate the use of an existing well onsite whereby the well water is pumped through the plate heat exchanger and returned to the well. This allows for the process water to be pre-cooled before entering the chiller. This concept was developed with the client to establish a higher EER value in the chiller since the QUANTUM Chillers run more efficiently at part-load.

The Result

On completion in September 2020, this project delivered exceptional energy savings with **EER values of up to 12.0** recorded. The graph below shows the accumulated cost saving of €144,135 from October 2020 to March 2023. This amounts to over **400 tonnes of CO₂ saved so far**. This trend shows the Engie Turbocor Chiller **saving** Weener Plastics over **€60,000/annum** when compared to the old chiller.

