

Aqua

The Temperature
Control People.

Case Study | Food & Beverage



**Aqua Pro Chiller
Supports Distillery in
Sustainability Drive**

Client

Aqua Pro Chiller Supports
Distillery in Sustainability Drive

Challenge

Replacement of mains to
drain cooling system

Solution

Aqua Pro chiller



Thunderflower Distillery is an award-winning micro distillery based near Exeter, Devon. They specialise in crafting small batch gins and spirits and sustainability is the cornerstone of their business philosophy.

They are committed to making their new, purpose built facility a carbon neutral operation, across all areas, from operation to packaging and deliveries. Aqua were delighted to be invited to help them with a closed loop temperature control system so that they could ensure the environmental impact of their distilling process was minimal.



Solution

A site visit quickly ascertained that Thunderflower would be able to dramatically reduce their water wastage by moving away from mains to drain cooling and implementing a closed loop chiller system.

We supplied and delivered an Aqua Pro chiller unit, which Dominic installed so that it's powered by their solar initiative, resulting in a completely sustainable process.

With a closed loop system there is zero water wastage, so the distillery achieves their goals instantaneously.

In addition, our Aqua Pro chiller range has pretty impressive environmental credentials itself. For example, the units operate on low GWP (Global Warming Potential) and zero ODP (Ozone Depletion Potential) refrigerants, as standard. Operating on either R513A or R454B, both refrigerants have a GWP rating which is 70%+ lower than R410A which is a refrigerant commonly found in process chillers.

Results

With the addition of the Aqua Pro closed loop system, no valuable water resource is used as cooling water during distillation. With the distillery running on solar power, Thunderflower have achieved their goals in an incredibly short time.

"It's been incredibly rewarding working with Dominic and the team at Thunderflower Distillery," comments Aqua Sales Engineer, Joe.

"Lots of companies have corporate goals around sustainability, but it's been great to see how Thunderflower have achieved their aim so quickly. The team shared a stat with me early on that with the mains to drain cooling they estimated each bottle of gin produced saw 15 to 20 bottles of drinking water being poured down the drain. This isn't uncommon within the industry, but what sets Thunderflower apart is their real commitment to making a difference and inciting change and I'm proud to have supported them in that journey."

Situation

Owner & distiller, Dominic, was keen to reduce the amount of energy used by the business overall, as well as the amount of waste water generated during the distillation process.

By utilising grant support, they invested in a solar power set up, consisting of 34 roof panels and batteries so that they could generate and store energy to be used during peak distilling times. Any additional energy could simply be returned to the grid. But this still left the issue of waste water to be addressed.

"One of the hidden costs of distillation is cooling water" explains Dominic.

"Typically, even in a small distillery like this, we can be going through two thousand to three thousand litres of mains water in cooling every run. That mounts up over a year to hundreds of thousands of litres of good quality water. It's a terrible waste of a precious resource."



Are you a distiller looking for help with your temperature control? Why not chat with the team today on 0333 004 4433 or email sales@aquacooling.co.uk