

Aqua

The Temperature
Control People.

Product Overview



Why Aqua?

At Aqua we love temperature control! With our reputation as The Temperature Control People, we have 25 years of experience designing, supplying, installing, and servicing equipment for all industry sectors.

We're passionate about adding to the success of our customers' businesses. Whether that's giving you a competitive edge, speeding up your drive towards nett zero and/or increasing your profit margin, we can help.

Our team are always up for a challenge and they're a great bunch of talented people, committed to helping you achieve the best for your business and your customers.

You'll often hear us talking about the "Aqua Difference." That's because we believe we do things differently. We strive to build partnerships with our customers and want to make a real, tangible difference to your business.



How Can We Help?

Putting our great range of equipment aside, there's a number of ways in which we support clients.

Here are just a few:



We Make Things Easy

When it comes to customer relationships, we're in it for the long haul! With Sales, Hire & Service teams, we can help with all aspects of temperature control as your business evolves. We keep things simple, take away the hassle and give you total peace of mind.



System Design

From a completely bespoke cooling system to a custom built chiller or cooling skid, our in-house design team will take an idea from concept to reality, using the latest 3D modelling technology.



Project Management & Installation Service

Our Project Engineers can support with all the mechanical & electrical services required, including civil works. They'll be there to help you every step of the way, right through to final commissioning.



24/7 Support

For many businesses, equipment downtime just isn't an option, so we're always here for you. Our Hire & Service teams support 24/7 and are based across the UK, so we're never far away.



Sustainability

Temperature control has an impact on industry, business, society, and the planet. Whilst energy efficiency has always been at the heart of our product design, never has it been more important than it is today.

We take our role seriously and are committed to making a difference to the world we live in.



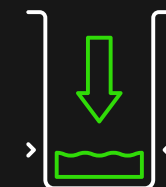
All our process chillers operate on low GWP refrigerants, including R513A & R454B and natural refrigerants R744 (CO2) & R290 (propane).



Our optimised free cooling chillers can cut the energy demands of your process cooling system by over 80+%.



Aqua's heat pump range dramatically reduces your reliance on gas and enables you to reclaim your waste heat and repurpose it.



Optimised adiabatic cooling system, keeps wastewater & energy usage to an absolute minimum. When compared to a traditional cooling tower set up, our adiabatic technology uses up to 1000 times LESS water!

Our Product Range



Chillers

From 1kW to 1MW+, capable of fluid temperature requirements from -45°C to +30°C. Process specific design, operating on a range of low GWP, zero ODP and natural refrigerants.



Free Cooling

Integrated free cooling chillers from 16kW to MW+, or free coolers which can be retrofitted to existing equipment.



Heat Pumps

Air to water, water to water and reverse cycle heat pumps, achieving hot water up to 120°C. Units operate on refrigerants including R290 and HFO.



Cooling Towers

From 150kW to MW+, with a temperature range of 23°C to 60°C. Available in stainless 316 or 304, galvanised or GRP construction. Options for low noise.



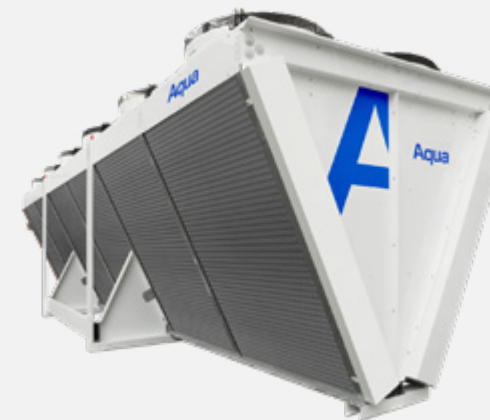
Single Temperature Control Units

Sole UK agent for Single Temperature Control Units, synonymous within the industry with quality, reliability, and energy efficiency.



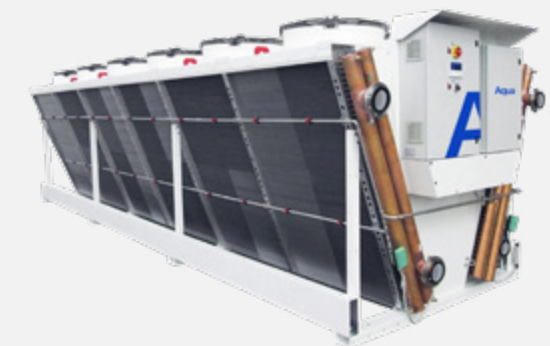
Immersion Chillers

Air and water cooled chillers for oil & emulsion cutting fluids. From 3.6kW to 48kW, with stainless steel coil evaporator.



Dry Air Coolers

Diverse range of coolers which can be custom designed to suit temperature, space and noise requirements.



Adiabatic Coolers

Optimised operation with inverter driven spray pump & EC fans, keeping water usage and electrical consumption to a minimum. From 50kW to MW+.



Free Cooling Upgrade Saves Dairy £80k / year

One of Scotland's largest, independent dairy farms invited Aqua to propose a new, energy efficient, cooling system that would support their expanding product range.

Situation

The dairy had installed a new ultrafiltration (UF) plant to facilitate in production of their protein yoghurt product. There were two legacy chiller units on site, along with heat exchangers. One heat exchanger was being upgraded with a new scrape surface version. As a result of these changes, cooling capacity needed to increase.

Solution

Aqua designed and supplied a custom designed solution, comprising two air cooled Aqua Pro Plus packaged chiller units, and a stand-alone free cooler.

The dairy process was able to be configured to include a separated return from the ultrafiltration plant and heat exchangers. This resulted in an average return temperature of 18°C, making free cooling a possibility.

The free cooler can be used to precool – or completely cool – the return water. If the process is running with free cooling, it eliminates the need for the chillers to operate which reduces energy consumption, operational costs, and carbon footprint.

A significant benefit with the system is that the chillers will work at part load (or less) for most of the time. This subsequently increases equipment lifespan and keeps maintenance costs low.

But the benefits don't stop there. Our Aqua Pro Plus chillers use R454B refrigerant, with a Global Warming Potential (GWP) rating of just 466. That's an incredible 78% less than the GWP of R410A refrigerant.

Valves installed on each process vessel ensure cooling is automatically directed to where it's needed. Plus, it allows different vessels to have different temperatures. Because the valves only open to allow fluid in when the tank requires glycol, energy used is considerably less.

Finally, two inverter driven pumps, on run and standby basis, were incorporated, along with extra connections so that, should production expand further, additional pumps can be easily added.

"This is a great example of how a legacy cooling system can be upgraded to achieve fantastic year on year energy savings" explains Scotland Sales Director, John Lowe.

Results

From the outset, the dairy has a more efficient, robust, and future proofed process. They also achieve an enhanced level of quality control on the end product. The run and standby pump configuration gives reassurance that production can continue, uninterrupted, should a fault ever occur.

As far as energy savings go, the free cooling cost £60,000 in capital outlay. We predict the dairy will save £80,000 each and every year, giving an extremely short payback term.



Free Cooling Chiller Upgrade for Bristol Aquarium

Bristol Aquarium is home to thousands of aquatic creatures, with over 40 displays and 250 different species. The animals come from across the world, and the aquarium is committed to conservation, sustainability, and education.

As a longer-term solution, they ordered an Aqua EcoPro free cooling chiller. Aqua's EcoPro units have fully integrated, optimised free cooling. Free cooling can cut process energy costs by over 80%+ by using the lower ambient air temperature to cool, rather than mechanical compressor cooling.

Aqua's EcoPro units also operate on sustainable refrigerant R454B, which has a Global Warming Potential (GWP) 78% lower than commonly used refrigerants like R410A.

Additionally, with an Aqua free cooling chiller, it's possible to achieve free cooling at higher ambient temperatures than with other chiller brands.

Situation

Bristol Aquarium reached out to us because they needed a sustainable, energy efficient solution to control the temperature of their tanks and keep their air handling system cool.

The Aquarium had been hiring a chiller on a long-term rental agreement from another supplier. However, the unit often malfunction and struggled to cope in the warmer weather. Each time this happened, tank temperatures rose, putting the animals in danger.

A number of the species housed at the Aquarium are extremely sensitive to temperature changes so reliable, precise temperature control is absolutely essential.

They decided to purchase a new unit in the hope of resolving the legacy issues. However, when further challenges were encountered, Bristol Aquarium decided to source an alternative supplier and approached Aqua.

Solution

Aqua supplied a 340kW rental chiller which was quickly delivered to site and installed so that the facility was operational, and the inhabitants of the Aquarium were safe and secure in the interim.

Result

Understandably, the Aquarium's primary concern was the safety of their aquatic inhabitants.

Once their rental solution was installed, we could turn our attention to what would be best for them for the future. Sustainability was key, so the combination of free cooling and low GWP refrigerant was ideal. Also, as well as significantly improving their carbon impact, they'll reduce their energy costs substantially and protect the lifespan of their chiller.

For Bristol Aquarium's General Manager, Sunny, it's not just the chiller that's important but the whole offering, including customer service and technical support.

"It's such an essential piece of kit for us, so we need to make sure that we're working with people who understand how important it is, who are on the phone for help and we really get that with Aqua Cooling, so we're really grateful to work with them."





Sales. Hire. Service.

Discover the Aqua
Difference...



0333 004 4433



aquacooling.co.uk



sales@aquacooling.co.uk

