Aqua

The Temperature Control People.

Chiller Efficiency Top Tips

How to Improve the Efficiency of your Chiller

There's a lot of pressure on individuals, businesses and organisations to increase plant reliability, reduce energy consumption and lower the carbon footprint of their operations on the environment.

In most applications, chillers are the single largest energy consuming piece of equipment within a building.

By increasing the efficiency of your chiller plant, you can expect to:

- Increase the service life of the asset
- Reduce your on-going operating costs
- Improve your green credentials

Here are 5 ways you can increase the efficiency of your chiller and make energy savings:

1 Check the refrigerant charge

Over or under charged refrigerant circuits can lead to a **~9% reduction in energy consumption**.

2 Clean the chiller condenser

Cleaning a heavily fouled chiller condenser could lead to an **energy saving of up to 10%,** compared to a lightly fouled chiller condenser where you could expect to save 1-3%.to a ~9% reduction in energy consumption.

3 Replace the thermal expansion valve

By replacing a thermal expansion valve with an electronic expansion valve, **energy savings of around 14% are possible**, but this varies on the loading of the chiller.

4 Replace fans

Replacing the fans of an air-cooled chiller, air handling unit (AHU) or cooling tower can lead to an **energy reduction of around 6%.**

They can be replaced by EC fans, or by the addition of an inverter. The same goes for water pumps. They can either be swapped out for new, high efficiency units, or an inverter can be added – this will save energy by up to **25%.**

5 Utilise free cooling or economiser cooling

When the outdoor temperature is below the chilled water set point temperature, heat can be removed from the cooling system without the use or with minimal use of the compressors.

Free cooling can **reduce the chillers annual energy consumption by as much as 20%-50%.**

To find out how much energy you could be saving on your cooling equipment, while increasing its lifespan please call us on **0333 004 4433** or email **service@aquacooling.co.uk**