

VIRTUS Data Centres

Minimising Water Usage

Water usage in data centres starts with cooling. But why do data centres need cooling? Put simply, data centres are full of computers, also known as servers, which generate heat. One of a data centre's primary functions is to maintain these servers at an optimal temperature.

VIRTUS, like many data centre operators, uses water as part of its cooling system.

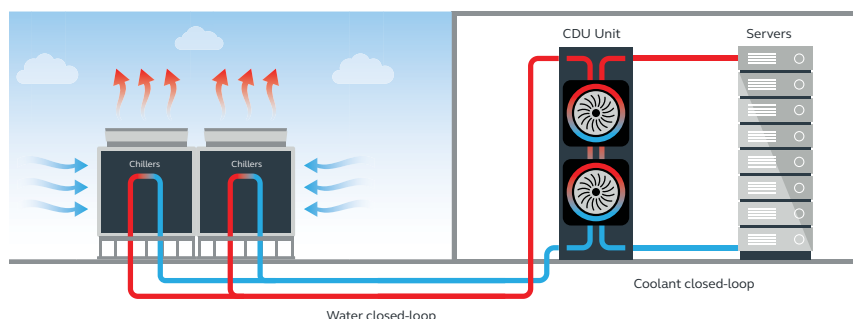
At VIRTUS, we use two main methods of cooling:

Air

Air cooling is the more traditional method, and remains highly effective. Modern air-cooled systems can support supercomputers and high-performance computing (HPC) environments.

Liquid

Liquid cooling is increasingly being used to support HPC, particularly for AI workloads. This is the super-powerful computing that powers machine learning, etc.



CDUs and Coolant

A Coolant Distribution Unit (CDU) is a specialised piece of equipment used for cooling servers in a data centre. It circulates coolant around servers to carry heat away from them, preventing them from overheating. Crucially, the coolant is not water, it's a non-conductive fluid.

Whether we use air or liquid cooling, the closed-loop cooling system is an integral part of the solution.

When we construct the data centre, we fill up the closed-loop. The vast majority of this water stays in the system for the entire lifecycle of the data centre is and reused constantly

VIRTUS

Real-life example

VIRTUS' LONDON8 facility, located in West London, provides 18MW of IT load and is an average-sized UK data centre. In 2025, we topped up the water loop with only 527 litres. That sounds like a lot, but let's give it some context.

According to Water UK, the average UK household of four uses just under 200,000 litres of water per year. **The cooling system at LONDON8 uses 0.3% of the water a family of four uses over the same period.**

LONDON8, or any of our other closed loop facilities, **use less water for their cooling than a dishwasher.**

“But I have read that data centres use vast amounts of water?”

We can't speak for all operators, but we can for ourselves. All of VIRTUS' data centres built in the last decade use closed-loop cooling systems. This requires very minimal top-ups. In the UK, most modern data centres will utilise a similar system.

Comparisons Across Other Sectors

“The characterisation of UK data centres as water-hungry infrastructure does not hold up to evidence. The sector accounts for just 0.2% of England's non-household water use - less, in total, than the water lost by water companies through leakage every single day.”

Source: WRC Group report, 2025

Total potable water use by data centres in England is approximately 1.88 million m³ per year. Water companies in England lose 2,869 megalitres per day to leakage - that is more than 1,000 times the data centre sector's total annual consumption, lost every single day through ageing distribution pipes.

The Environment Agency found that 19% of all water put into England's supply is lost as leakage before it reaches customers.

We Don't Stop There – Water Stewardship

When it comes to water, we go further. VIRTUS continues to explore opportunities to reduce reliance on potable water.

Several of our sites harvest rainwater for use in landscaping and even for flushing toilets.

By combining closed-loop cooling and wider water-efficiency measures, VIRTUS aims to minimise water use while also supporting the digital infrastructure that businesses and communities rely on every day.