

Safeguarding your investment: finding the right disinfection solution for your datacentre

MODERN DATA CENTRES ARE COMPLEX AND CONSIDERED MISSION CRITICAL

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Digital services are being relied upon now more than ever for remote working tools, streaming and online entertainment, healthcare and more. The ‘invisible infrastructure’ responsible for powering these digital services constitutes a significant business investment, so what data centre providers are doing to safeguard that investment and keep everything up and running—particularly during spikes in traffic—is key.

This underlying infrastructure that so many businesses rely on has critical needs of its own. Datacentres are extremely energy intensive and require a lot of cooling to operate—accounting for up to 60% of energy consumption in any facility.

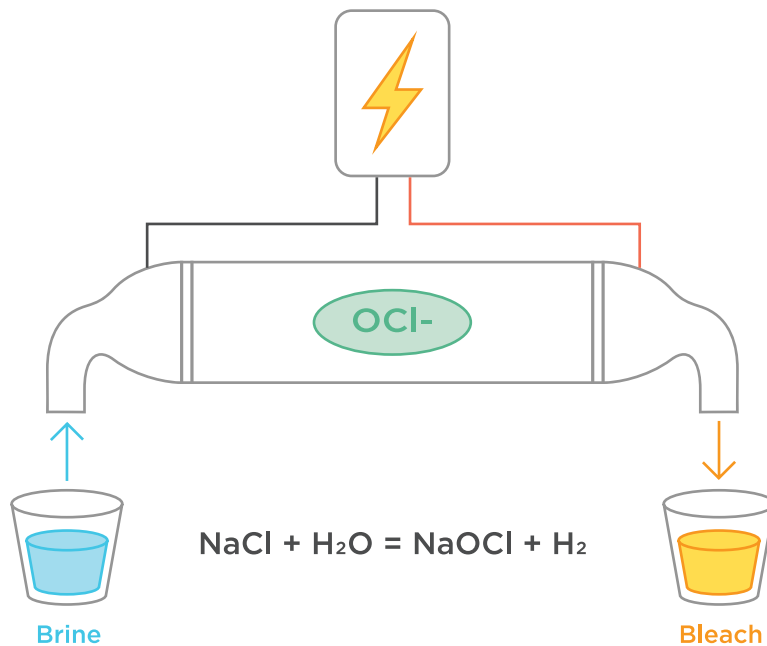
Water filtration and disinfection systems play an important role in keeping data centres cool—and

operational. Thousands of cubic metres of water flow through an average data centre cooling system each day. This water attracts and absorbs airborne contaminants on a continuous basis, contributing to the excessive creation of deposits like scale, corrosion, fouling and biological activity.

These deposits lead to a reduction in heat transfer efficiencies and if left untreated, will increase operating and maintenance costs and cause serious process issues, downtime and even outages.

Efficient, sustainable disinfection solutions like the **OSEC® system, UV and Ozone** can help reduce facilities’ energy costs, water waste, lost time and unplanned maintenance.





SAFE AND SIMPLE ON-SITE GENERATION OF SODIUM HYPOCHLORITE

OSEC® SYSTEMS

The OSEC® system is an on-site hypochlorite generating system that creates a sodium hypochlorite solution through the electrolysis of brine—consuming only water, salt and electricity.

The system is designed for fast and economical installation, safe operation and easy maintenance. Operation of the system is completely automatic, making it ideally suited for remote or unmanned locations like datacentres.

One of the benefits of the OSEC system is that it eliminates dependence on commercial chlorine supply and the problems inherent in the transport and handling of bulk hypochlorite. Which means for datacentre staff, it's safer.

The system design is inherently secure and sustainable. OSEC system users are protected throughout the life of the product and are provided with a 100% safe disinfectant for water treatment.



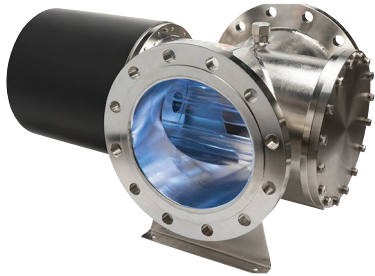
BENEFITS

- Highest process efficiency yields fast return on investment (ROI)
- Reliable operation minimizes maintenance and reduces the risk of potential downtime
- Compact skid design minimizes integration engineering and can be an ideal design for chlorine conversions and retrofits
- Configurable system provides complete solution to seamlessly integrate into a treatment facility.

UV

Ultra-violet light systems (UV) are simple, but effective. They enable the proven inactivation of micro-organisms such as bacteria, viruses, moulds and pathogens without the use of chemicals.

UV is generally used for disinfection and removal of organic and inorganic contaminants, including chlorine, ozone and total organic carbon.



UVC light causes up to 6 different types of damage in DNA and RNA.

UV light technology is often used where conventional chlorine disinfection cannot be applied and can be used in the advanced oxidation process to achieve new levels in treatment performance.

BENEFITS

- Better water quality
- No storage, handling or transportation of bulk chemicals
- Water reuse capabilities to meet sustainability objectives
- Effective at inactivating a wide range of microorganisms including chlorine tolerant pathogens, cryptosporidium and other water borne pathogens.

OZONE

Ozone is one of the most powerful oxidising agents currently permitted for commercial use. It is 51% stronger than chlorine with a kill rate of 3.125 times fasterⁱ.

Ozone owes its biocidal effectiveness to its ability to oxidise organic material in bacterial membranes, which weakens the cell wall and leads to cell rupture causing immediate death of the cell.

For this reason, ozone is capable of destroying all bacteria, algae and biofilms with no risk of resistance build up or immunity. Even resistant and problematic aqueous micro-organisms are readily and rapidly inactivated by ozone.

Since ozone is highly reactive and has a short half-life, it can be difficult to store and transport. Ozone should be generated on site for the most effective and immediate use.



Ozone is a highly effective sanitizer, often reducing microbial counts by 5-6 log in 2-3 minutes.

BENEFITS

- No pollutants are created as the ozone gas is produced on site without chemicals
- Any wastewater produced is safe to enter waterways and surface drains
- Wastewater can be used in other grey water applications
- No chemical manufacture is required, reducing transport and eliminating the need for chemical drums, boosting sustainability
- Increased self-sufficiency with zero risk of running out of chemical stock and delivery complications.

i. https://thetpa.uk/enviro_solutions/ozone-water-treatment/

HOW WE CAN HELP

Evoqua offers a complete portfolio of advanced water treatment packages to cover all applications.

As a leading provider of disinfection systems, we understand the importance of meeting our customers' service needs quickly and comprehensively.

We help optimise your power usage effectiveness (PUE), reduce your water wastage, increase your system uptime and reduce maintenance.

At Evoqua, we base our comprehensive, multi-technology range of disinfection solutions on the specific needs of the client—not on products we're trying to sell. And with our global reach, we can ensure we're offering efficient and sustainable technology to our local customers all over the world.

BOTTOM LINE BENEFITS? A MORE EFFICIENT AND PROFITABLE DATACENTRE BUSINESS

- Increase energy efficiency by up to 10%
- Minimise system downtime and annual cleanings
- Maximize chemical programme effectiveness
- Support effective microbiological control
- Decrease maintenance costs by up to 50%
- Reduce chemical and biocide use by up to 75%
- Reducing water waste by up to 40%
- Reduce overall cost of operation
- Work with an experienced team who have over 200 datacentre installations worldwide.

Evoqua is a major global player in data centre cooling water treatment solutions. Our 100-year experience and breadth of portfolio is underpinned by the value we place on sustainable technologies to ensure efficient operations and a longer, more efficient lifecycle for your datacentre infrastructure.

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