

One Drop Too Many – Why Waterproofing Matters in Data Centres

It only takes a single drop. One unnoticed leak or one overlooked joint in a tank and the integrity of an entire data centre could be compromised.

Data centres are the backbone of nearly every industry – from finance and healthcare to logistics and public infrastructure. As these facilities grow in complexity and capacity, the demands placed on their supporting infrastructure increase exponentially. In environments where reliability is non-negotiable, the role of water and more importantly, water containment, becomes critical.

Data centres rely heavily on water, particularly for their cooling systems. As energy demands rise and equipment becomes more compact and powerful, the need for efficient and sustainable cooling solutions has never been greater. Yet with this increased reliance comes a heightened risk: water ingress, leaks or humidity build-up can pose serious threats to sensitive electronics and the overall infrastructure.

The Hidden Challenge: Waterproofing Below Grade and Water Tanks

Modern data centres often include underground structures such as cable trenches, equipment basements or utility corridors. These below-grade elements are continuously exposed to hydrostatic pressure, groundwater ingress, and capillary moisture transfer. Without robust waterproofing, the integrity of the entire facility can be compromised over time.

Additionally, reinforced concrete water storage tanks – integral to closed-loop cooling systems – must be watertight and chemically resistant to maintain water purity and system efficiency. Any loss of water or contamination within these tanks can have direct consequences on the data centre's thermal regulation, leading to overheating, shutdowns or accelerated equipment wear.

Vandex: Engineered Waterproofing for Critical Infrastructure

Vandex offers a comprehensive range of structural waterproofing solutions tailored for high-stakes environments like data centres. From cementitious coatings and crystalline technology to advanced joint solutions, Vandex products are designed to create watertight systems that resist pressure, chemical exposure, and the wear and tear of time.

Coordination Across Systems and Stakeholders

In facilities where multiple systems interact – HVAC, power, network infrastructure – waterproofing is no longer an isolated construction concern but part of an integrated risk mitigation strategy. For this reason, Vandex works closely with specifiers, contractors, and facility managers from early design through to post-installation quality assurance.

A holistic approach to waterproofing covers both structural elements such as below-ground walls and slabs, and functional components like water tanks and cooling towers. This improves sustainability by reducing water waste and structural damage, enhances safety by eliminating hidden moisture risks near sensitive equipment, and strengthens operational resilience to maintain system uptime under extreme conditions.

Protect Infrastructure. Preserve Data.

Integrating waterproofing from the very beginning is essential to securing the long-term reliability and efficiency of data centres. With Vandex's proven expertise and durable solutions, every part of the facility – from foundational structures to cooling systems – remains safeguarded against water-related risks, ensuring uninterrupted operation in an increasingly data-driven world.