

# Rittal – The System.

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## Behind the scenes at BBC Elstree: Rittal's bespoke IT solution at an iconic studio

CUSTOMER REFERENCE

IT (Broadcasting)



**Customer:** BBC Elstree Studios  
**Industry:** Broadcast & Media Production  
**Established:** 2014  
**Headquarters:** Borehamwood, England

For more than a century, BBC Elstree Studios has played a central role in UK television production, developing a steady flow of iconic, high-profile dramas and entertainment programmes. The site's edit suites and technical teams are in constant use for most of the year to support these intensive production schedules.

The BBC approached Rittal to create a new central technical area for Elstree, working from a common understanding within both teams that this was a site with a tightly constrained footprint, and one where the 24/7 creative output could not be interrupted.

Rittal created a bespoke, containerised solution for the edit suite and managed the installation and commissioning around studio activity, meaning that it could be introduced without impacting ongoing filming or vital broadcast output.

The project reflects a partnership approach, where both the Rittal and BBC teams worked together to navigate the issues around introducing new infrastructure within a live production site. The result is a technical solution that fully meets the needs of world-leading broadcast operations.

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Rittal’s team successfully navigated a busy, live working environment and avoided any disruption of our on-site filming and production teams.”

Danny Popkin,  
Project Manager, BBCStudioworks

## THE PROJECT

### The Challenge

- A new central technical area needed to be built within a restricted footprint, all while keeping filming and broadcasting running 24/7

### The Solution

- 13-metre IT container housed 18 VX IT racks
- 40kW of N+1 cooling using Blue e+ technology

### The Challenge

In 2023, the BBC reshaped its Elstree footprint, selling the site and retaining around one-third through a leaseback arrangement with Fairbanks Studios.

The area being sold off contained the BBC’s central technical area, so a new tech area for data processing and storage had to be built and commissioned. However, the new setting presented some significant challenges and restrictions.

Firstly, the site was very limited in terms of available space. That meant the best option was to create and install an outdoor, self-contained solution within which to house the new tech area.

Secondly, Elstree is a very busy, working site. It operates as a high-intensity TV production environment, supporting filming and broadcasting five days per week across 50 weeks of the year. The new tech area needed to be installed and commissioned within a live environment without disrupting the ongoing studio operations.

Finally, its design needed to meet the broadcaster’s strict requirements in areas such as resilience and energy consumption, meet their technical demands, and, importantly, keep noise levels to a minimum due to the close proximity of the site’s filming area and editing suite.

The BBC engaged Rittal to develop a high-quality solution that would meet these requirements and deliver outstanding long-term performance.

### The Solution

In response to the brief, the Rittal team designed a fully integrated, modular containerised data centre solution, carefully tailoring it to the BBC’s brief.

The proposed 13-metre IT container housed 18 VX IT racks, and was configured with hot and cold aisle containment supported by 40kW of N+1 cooling using Blue e+ technology. This highly efficient, non-water-based climate management system makes extensive use of free cooling, eliminating the need for external chillers or pipework and any associated groundworks.

A separate four-metre utility container was designed to be bolted-on to the main IT container, for the system’s UPS and LV switchgear together with its own Blue e+ cooling units.

Other adaptations which were built into both containers included: 200mm plinths under the cabinets to create an underfloor plenum for cable routing; additional overhead cable trays and ducts to segregate power and data; and the capacity to isolate individual racks for safe maintenance.



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Fire safety was addressed through sealed ducting and VESDA-based detection, while resilience was ensured through N+1 redundancy across both cooling and power systems, including a 30-minute UPS provision.

Rittal's team maintained regular, close collaboration with their BBC counterparts throughout the project lifecycle, including arranging a visit for the team to a live IT container installation within an operating Data Centre at KUKA Industries in Frankfurt prior to placing the order.

Six months later, the BBC team was invited to the Rittal container factory in Germany, to inspect, and make any final changes ahead of completion and shipping to the Elstree studio. As a result, changes were made to cable entry slots, and an expansion slot for an additional IT cooling unit was relocated, therefore allowing for an additional 5kW cooler to be installed at a later date.

Once delivered, the final containers were installed and commissioned by a Rittal approved Service partner without any disruption to the site's busy ongoing filming and production activities.

Danny Popkin BBCStudioworks Project Manager, advises: **"We're delighted. This is a highly efficient tech area compared to our previous set-up, and is fully aligned to our requirements."**

**"The Blue e+ cooling makes maximum use of free cooling which minimises energy consumption and supports the BBC's carbon reduction objectives. At current usage levels, we're finding that the system uses free cooling for the greater part of the time."**

**"The integrated metering and remote monitoring provides us with 24/7 visibility of the system's performance to ensure we are achieving optimal operational levels. It's also quiet enough to allow the production teams to work in the adjoining spaces, which was a vital consideration within the specification."**

**"Both the installation of the containers and subsequent commissioning of the infrastructure were seamless. Rittal's team successfully navigated a busy, live working environment and avoided any disruption of our on-site filming and production teams."**

The system is supported by a five-year warranty and regular servicing package from Rittal, which includes after-sales services such as 24/7 support, maintenance and troubleshooting in order to minimise downtime, identify efficiency improvements as well as upgrades throughout the container lifespan.

## The Outcome

With the new system performing above expectations and delivering efficiency gains, BBC Elstree now benefits from IT infrastructure that aligns perfectly with its operational and sustainability goals. Danny Popkin's team continues to see the advantages of improved visibility, reduced energy consumption, and uninterrupted production workflows - exactly what the project set out to achieve. For Rittal, it marks another successful partnership built on listening, adapting, and delivering.



[VX IT Racks - click here](#)



[Blue e+ Cooling - click here](#)

For further details on Rittal Products visit [www.rittal.co.uk](http://www.rittal.co.uk)

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