

A CASE STUDY FROM KOHLER UNINTERRUPTIBLE POWER

Portal entrust Kohler with their critical power for over 15 years

Kohler Uninterruptible Power (KUP) have recently helped Polar Air Limited, a mechanical and electrical engineering company, replace an aging critical power protection infrastructure for Portal Group UK, who manage a data centre facility for a blue-chip company.

The aging system had been commissioned and maintained by KUP for over 15 years, and was identified as coming up to the end of its support by a Field Service Engineer, "at a routine preventative maintenance visit at the beginning of 2019, the uninterruptible power supplies were identified as coming towards their end of life, which we discussed with Polar Air." Explains John Inman, Business Development Manager at Kohler Uninterruptible Power.

During the discussions, Polar Air and Portal understood the importance of replacing the UPS systems: "after an informed conversation with John, we realised the UPS was coming to the end of its life, and to ensure continued support and maintenance to the critical asset we needed to look at a new power protection solution." Explains Andrew Fitch, Polar Air.

The aging system was four PowerWAVE 5000 Maxi uninterruptible power supplies, which worked in conjunction with a standby Generator capable of supporting a load of circa 750kW (N+1). They were located in a dedicated UPS room, external to the main data centre halls.

"It was important that we tried to match the new proposed system to what was already in place, Portal only reported a current system load of 200Kw, and it was



therefore an ideal time for the works to be undertaken. Normally, when working with our customers, we do not offer more than what is required." Inman explains.

KUP recommended four PowerWAVE 6000 250kVA each uninterruptible power supplies for this infrastructure, with three strings of Yuasa batteries. The PowerWAVE 6000 is a transformerless three phase UPS, parallelable up to 5MVA. Offering both intelligent energy management and maximum power protection, it uses less energy, achieves significant cost reductions, saves on valuable floor space and has a reduced impact in the environment.

Replacing any UPS can be a costly exercise, but at KUP we explore how we can use what is already in place, to save not only money but time as well: "We were thankful that KUP could fully utilise existing components, like the battery racks, DC cabling and DC isolators – it saved Portal further expenditure and it greatly increased the speed and ease of commissioning." Explains Andrew Fitch.

The original installation was configured with the DC cabling running between the UPS modules and the battery strings housed within steel trunking fixed directly to the floor. This presented a challenge to

the design team, as it would have prevented the units being swapped out without a complete system shutdown, which simply could not happen given the downstream business critical equipment being supported. This was overcome by the installation of a permanent but accessible bespoke steel platform to allow each UPS modules to be swapped out independently with the remaining units still supporting the load.

Commissioned in July 2020, Portal Group UK continues to be a loyal customer to KUP "with excellent service offerings and knowledgeable staff, we know we are working with a trustworthy supplier who have our best interests at heart." Finishes Derek Clogg Managing Director at Portal Ltd.

Portal Group UK:
www.portalgroup.uk.com

Polar Air:
<https://polarair.co.uk/mechanical-electrical>