

Powering Your Business

Location: London, England

Product: 2000 KVA MTU generator

Purpose:

To provide standby power for a data centre in London.

Primary Choice Factor: Design and build by YorPower



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Introduction

YorPower were approached by Interxion to supply, install and commission five 2,250kVA prime rated MTU powered generators for a major data centre in central London, on a design and build basis. The project also included a requirement to design, build and install bespoke remote cooling systems, to be located on the roof of an eight story building and a fuel system that was over 1,200 meters from the gensets.

Parameters

The building in which the data centre is located was not built for purpose and did not have any space available to house the five generators at ground level, or their associated fuel tanks or the bespoke cooling system. The only solution was to position each generator on the roof of the building, which would also include five 8,000 litre fuel day tanks. Structural surveys were required to ensure that the building was capable of handling not just the weight of the equipment and fuel but also that it could cope with the vibration and frequency noise resulting from the gensets running.

Specification

Following in-depth discussions with the client and their design consultants, the YorPower project team proposed a bespoke enclosure solution. Essentially, YorPower engineered five complete gensets, including complex automated fuel delivery, cooling systems and controls, electrical switchgear, protection and cabinets, five individual 8,000 litre fuel tanks, all into a space that would normally have required twice the footprint. Remote cooling, slab fuel tanks, diverting cooling air in and out of the enclosure, careful design and manufacture of attenuation, all contributed to getting the design right.

Site Preparation

Supporting steelwork for each generator was designed to include the cabling and access requirements of key services including fuel. The steel structures were designed to hold the fuel tanks and the generators on vibration dampers as well as the cooling radiators and their associated fans.

Logistics and Installation

Choosing the roof for the installation created several complications for the YorPower planning and installation teams. Three separate cranes were required to lift each 40 tonne genset into place. Delivering plant of this size and nature took logistics planning (10 separate trucks, all arriving on the same day) and required special permission from the controlling council.

Completion

Extensive site load acceptance testing, to prove compatibility and functional performance, commissioning and client handover was completed within 10 days. The client, contractor and the design team were delighted with the way scheme was executed from outline design to completion and handover.





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