

Street Cranexpress Design and Install a Bespoke Hoist Panel

Hoist Panel Replacement for a 100t Crane

Project Overview

A global leader in steel production and engineering encountered equipment breakdown that risked disruption to their operations. The failure occurred on a 100-tonne forge crane, where the existing variable speed drive system broke down. In order to limit production downtime, they contacted Street Cranexpress to investigate and resolve the issue.

Street Cranexpress provided a quick response, sending engineers to assess the issue. Upon inspection, the team discovered the hoist panel was in poor condition and beyond repair. It was proposed a brand-new, bespoke hoist panel was the ideal solution. This included the design, manufacture, and installation of a new hoist control panel complete with a 160kW variable frequency drive and associated control components.

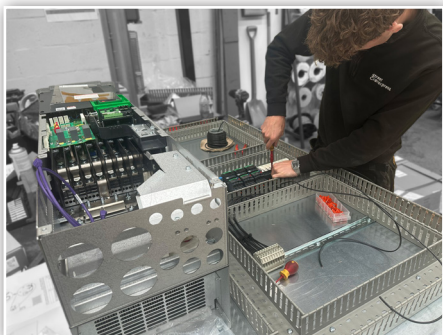
The Challenge

The primary challenge was speed: the crane was a critical part of their operations, and its downtime was already causing delays in production.

Another significant challenge was logistical. Installation of the new control panel and components required lifting heavy equipment into a tight overhead space, which needed careful forward planning and execution.

Our Solution

A preliminary design of the new hoist control panel was developed, verified, and approved within one week. Components — including the new 160kW VFD, contactors, relays, and circuit protection equipment — were sourced promptly through our trusted supplier, bxh Electrical Wholesale.



With components to hand, SCE project engineers assembled the panel at our Sheffield HQ workshop, followed by factory acceptance testing (FAT) to ensure operational integrity before being transported to site.

Installation Process



The on-site installation was executed over the course of one week, with safety and precision at the forefront:

- **Lifting and Positioning:** The new control panel and resistor banks were carefully lifted onto the crane using a mobile crane provided by PP Engineering. Given the limited headroom, this operation required detailed planning by SCE's appointed person to ensure safety and accuracy.
- **Electrical Integration:** Once in place, all electrical cabling was installed and terminated in line with the new schematics. A rotary encoder was mounted on the hoist motor shaft, with a new encoder cable routed through the festoon system to the panel. New resistor banks were lifted and secured in place with new cables installed from the resistor banks and linked up to the new panel.
- **Commissioning and Testing:** With the system fully installed, power was restored to the crane and the VFD settings were configured. Live testing followed, using customer-supplied test weights to ensure accurate load handling and hoist performance.
- **Handover:** Upon successful testing, full commissioning documentation, electrical schematics, and VFD manuals were delivered to the customer for future reference and maintenance.

Outcome



From initial contact to final commissioning, the entire project was delivered in just four weeks — demonstrating SCE's ability to respond rapidly to critical industrial failures with a complete, end-to-end solution.

Our customer now benefits from a modernised, reliable hoist system — ensuring long-term operational stability and minimising the risk of future unplanned downtime.