

MINIMISING LOSS, MAXIMISING SAFETY

Improved Efficiency and Safety for Food Industry Processes

THE CHALLENGE

A blue-chip food production company faced a challenge in losing efficiency when packaging powdered goods caused by multiple breakdowns and slow cycle speeds as well as requiring more products to be put on a pallet for shipping. TAS was called in to design control panels that would ensure the efficiency and accuracy of weighing and batching these goods into secure bags of various sizes depending on the recipe selected while ensuring seamless sealing. The system then needed to control the next step in transferring the filled bags for distribution, requiring an automated robot system that could stack these bags onto pallets. Importantly, the pneumatic solenoid valves found in one of the existing electrical control panels needed to be moved to a separate panel to avoid a potential systems failure due to water in the compressed air source.



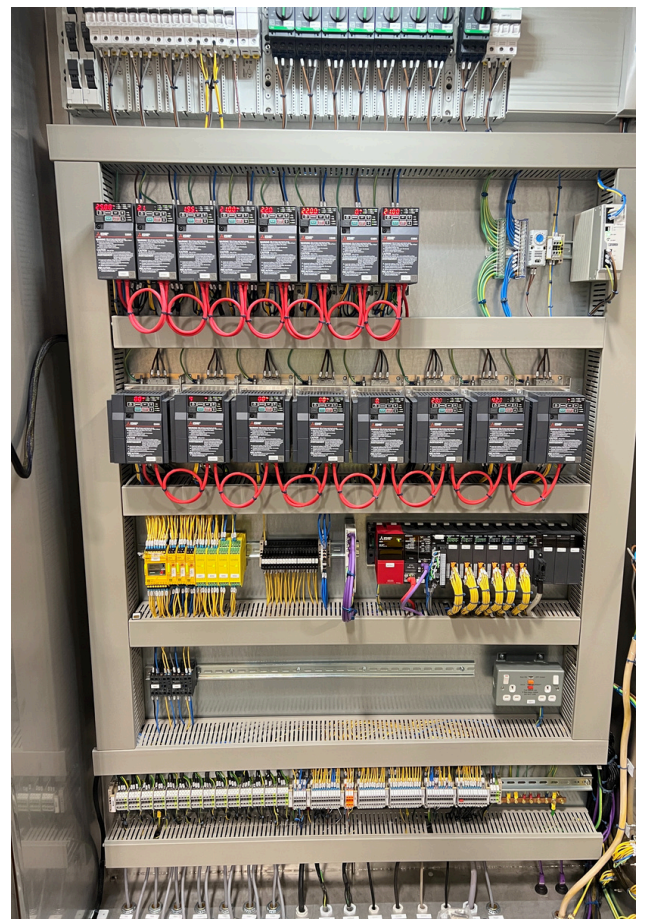
THE SOLUTION

Solution TAS defined, built, and implemented the design for three control panels to automate the handling of the packaging of powdered goods with precision and efficiency, one for the Batching System, one for the Pneumatics and one for the Conveyors and Robot control. The first system involved the batch processing of powdered goods into secure bags that had to be batched to tight tolerances. The bag was then sealed at the top using a stitching unit. TAS incorporated cutting-edge technology to automate the batching process, ensuring accuracy, reliability and consistency. Once packaged, the bags seamlessly moved through a network of conveyors, optimizing the flow of goods to the subsequent stages of the packaging process.

The second system automated a robotic station specifically designed to handle the stacking of bags. This robotic station skillfully received the bags and systematically arranged them onto pallets, stopping at the required height, determined by a laser measurement sensor, before moving on to the next pallet. The innovative solution not only expedited the packaging process but also ensured the secure and organized arrangement of goods for distribution.

THE IMPLEMENTATION

The implementation of these automated systems was a testament to our proficiency in automation and control systems. Our engineers and experts meticulously designed, installed, and commissioned these cutting-edge systems within the food industry's operational setup. Through rigorous testing and fine-tuning, we ensured that the systems seamlessly integrated into the existing infrastructure, minimizing downtime and maximising productivity.



THE RESULTS

The successful installation and commissioning of these bespoke automated systems by TAS not only met but exceeded industry standards for best practice packing solutions. The benefits realized by the included:

Enhanced Efficiency

The automation of the packaging process significantly improved efficiency, streamlining operations and reducing manual labour requirements.

Precision and Consistency

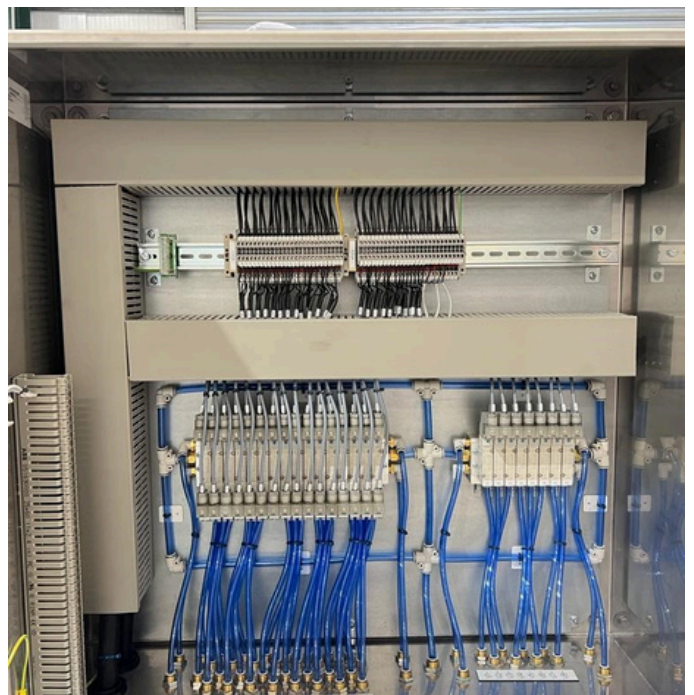
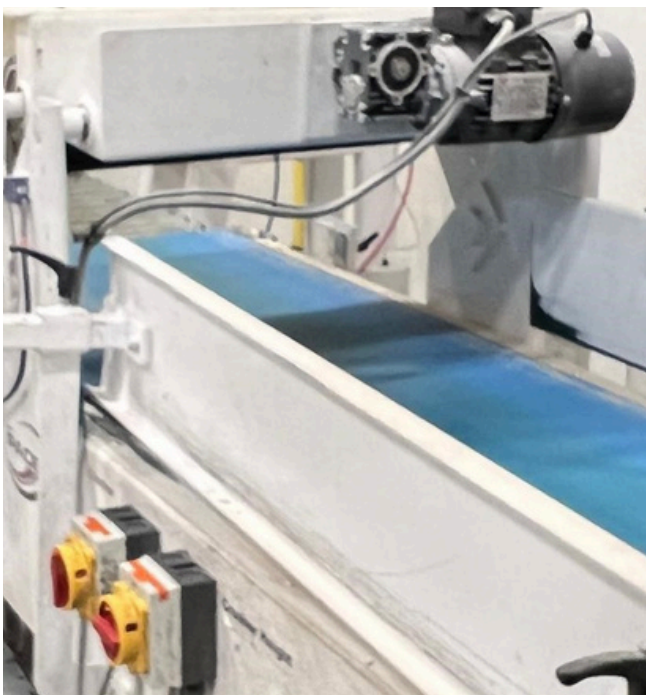
The systems ensured precise batch processing and consistent sealing, maintaining product quality and integrity.

Optimized Distribution

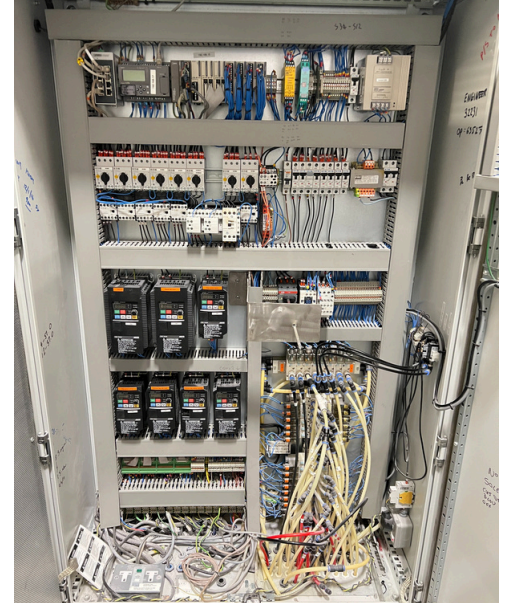
By efficiently stacking bags onto pallets, the systems facilitated easier handling and distribution, reducing logistical complexities.

Safety

Separating the pneumatics system ensured safety compliance requirements were met and potential systems failure if moisture got in eliminated the risk of systems failure due to moisture ingress.



BEFORE



CONCLUSION

Total Automated Solutions demonstrated its expertise in automation and control systems by delivering solutions tailored for the food industry. The successful installation and commissioning of these bespoke systems showcased TAS's commitment to innovation, efficiency, and delivering best-in class solutions that meet industry standards.

About Total Automated Solutions

Total Automated Solutions are market leaders in Automation, and Control. With expertise across all major brands of VSD Drive manufacturers, thus ensuring optimal performance for your operations. Also explore our VSD Drive Hire Panels, minimising uninterrupted production runs during emergencies, or you could hire for a trial run to witness firsthand the cost and efficiency benefits for your processes. www.tasweb.uk.

December 2023