



Line 3 Packaging Upgrade

CHALLENGE

In 2014 Burton's had a requirement to expand the volume of product production.

DPS Group was to provide an improved packaging system to meet the increased demand on their production packaging system.

This project was followed by a subsequent second phase in 2016, after another DPS Group led upgrade to Burton's Sheeter Laminator system, ultimately required a further 50% increase in the volume of product being produced.

SOLUTION

- Siemens Simatics S7-1500
- Control Techniques M300
- Profinet
- Siemens Comfort HMI

RESULTS

- A new control system which meets the significant demands
- More flexibility for future capacity growth
- Fully integrated production line
- Minimal downtime – and it's consequential effect on existing production
- All completed on time

PROJECT AREAS



Project management



Automation solutions



Turnkey systems



Electrical division

PROJECT OVERVIEW

In September 2012, a national newspaper ran a campaign for the nation to pick it's "favourite 1980s snacks".

Top of the charts was "Fish n' Chips" a savoury snack which was made by Burton's Foods.

This unexpected turn of events sparked significant demand for the return of the product, which required Burton's to manage.

DPS Group were tasked with working alongside Burton's project managers and mechanical sub-contractors to provide the automation and control solution.

It was essential to build in flexibility, to ensure that future expansion was possible, something which was ultimately required in phase two.

Maintaining production was vital to Burton's and so minimising downtime, and mitigating risk was a crucial part of the project.



DPS Group - One Integrated Solution - Case Study

OUR INTEGRATED SOLUTION

DPS Group had to provide a flexible, variable speed drive control system for 30+ conveyors, and six individual bagging and wrapping machines.

This involved providing the full electrical installation and control system with recipe control for the various products.

Our systems engineers worked with our client to produce a detailed Functional Design Specification (FDS) which met the requirements of the User Requirements Specification (URS).



With integration to a number of OEM Machines, we provided a Totally Integrated Control System.

This was carried out using Siemens and Control Techniques hardware to create a flexible design solution.

In total during the first phase of the project, 35 CT M300s drives were installed.

Such was the significant demand for Fish n' Chips, as well as other popular Burton's products, that DPS Group were commissioned – in a separate project – to upgrade the company's Sheeter Laminator.

This resulted in a 50% increase in capacity, which had to be matched by the Packaging Production system.

For the second phase, a major rework of the mechanical layout of the conveyors required DPS Group to develop significant alternations to the electrical and control system.

An innovative solution to the electrical installation was also required to minimise disruption and downtime.

In total an additional 22 drives were installed as well as a number of new control panels.

To provide full flexibility, all PLC devices were intelligently connected on Profitnet, which was important based on the different products being produced.

Ultimately, a range of popular products are now produced on site, including:

- Fish n' Chips
- Cartoonies
- Huggy Bears
- Cathedral City Baked Bites
- Cheese Thins



Systems director **Martin Brownlee** admitted this was a complicated project.

"It was undoubtedly challenging," he explains.



"The two phases of the upgrade, along with the full line upgrade presented a number of technical and time challenges," he said.

"However, with precise planning and our flexible team of engineers we managed to meet Burton's needs well within the required timescales, providing a flexible, robust and innovative solution to the client's requirements." ■

HIGHLIGHTS

- High Availability, Mission Critical System
- Minimal downtime with robust risk mitigation plans in place
- 57 CT M300s installed
- Developed flexibility for future expansion, if required
- Project completed on time
- Happy "Fish n' Chips" fans!



ABOUT DPS GROUP

DPS Group is trusted to provide a range of integrated solutions across eight core sectors, delivering the highest standards of safety, quality, environmental compliance, and customer service.

Our customers benefit from the collaboration between our:

- **Systems expertise:** design, engineering and project management
- **Customer services:** electrical, instrumentation and control construction
- **Product strength:** strong brand partnerships and quality product



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