



INDUSTRY: PAPER

CLIENT: FOURSTONES PAPER MILL (SAPPHIRE MILL)



2 Ply Tissue Paper Winder Turnkey Solution

BACKGROUND:

The Fourstones Group, one of the UK's longest established paper businesses, is growing rapidly into new product areas. The current success of the company is based on their philosophy of listening to their customers' needs and reacting to them.

Part of this expansion is building on the success of the recently commissioned PM4 Paper Machine to produce a two ply tissue paper by installing a 2 Ply Tissue Winder.

CHALLENGE:

Provide an innovative Drive and Control solution using latest technologies to maximise machine performance and safety, working in partnership with Fourstones design Engineers, mechanical and civil partners.

SOLUTION:



Turnkey systems

A complete turnkey solution for the project, meeting the demanding timescales and ever changing requirements



Project management

Fully integrated Project management bringing project delivery within the tight timescales and on budget



Automation solutions

Using cutting edge technology DPS provided a fully integrated Solution



Control panels

Design, build and test Drive, Control and Operator Panels including a Active Front End Drive System



Electrical division

Full electrical installation, testing and commissioning



Systems support

Complete after care support providing remote and on-site support as required

OUR INTEGRATED EXPERTISE

The sectors we work in:



The services we provide:



Control panels



Electrical division



Automation solutions



Systems support



Turnkey systems



Project management



Instrument division



Product sales



DPS Group

DPS Group - One Integrated Solution - Case Study

TECHNICAL DETAIL:

Machine Specifications:

- Base Weight - 15-24 gsm
- Maximum Unwind Diameter - 2200 mm
- Maximum Line Speed - 1200 metres per minute
- Sectional Speed Accuracy - +/- 0.1% of

Integrated Drive System

Unidrive M differentiates itself on performance with extremely fast current control algorithms and high switching frequencies. Active Front End (AFE) solutions deliver unparalleled torque precision and power quality.

- Unidrive M700 200KW Active Front End
- Unidrive M700 High Power Modular AC Drives
- MCI210 Co-Processor modules performing the cascade speed control

Integrated Automation

Through its many innovations, the new SIMATIC S7-1500 controller sets new standards for maximized productivity. The SIMATIC S7-1500 is seamlessly integrated in the Totally Integrated Automation Portal (TIA Portal) for maximum engineering efficiency:

- S7-1500F Programmable Automation Controller (PAC)
- ET200SSP/F Remote I/O Interface Modules
- TP Comfort HMI Operator Interfaces

Integrated Safety:

Fourstones are committed to safety and ensuring all machinery is design with the highest possible safety functionality. Utilising the extensive safety features provide by both the Emerson Control techniques Drives and the Siemens S7-1500F Failsafe Controller, DPS Group provided a fully integrated safety system in accordance with EN ISO 13849-1.

Integrated Networking:

Network solutions optimised to provide the perfect solution:

- Real Time Ethernet (IEEE 1588 V2) uses RTMoE (Real Time Motion over Ethernet) to provide real-time drive-to-drive synchronization Profinet Industrial Ethernet
- PROFINET with its flexible architecture and comprehensive scope of functions it enables innovative, flexible, and cost-saving machine automation

Delivery Partners:



ABOUT DPS GROUP



DPS Group provides a range of integrated solutions across a range of 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



We operate a socially responsible business, providing employment opportunities for young people, and supporting the community we serve via our DPS Local Heroes programme.

GET IN TOUCH

To set up an informal discussion about your project, email us via info@dp-sgroup.co.uk or call **01592 772577**.



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