

# Solutions in Action



*United Converting*  
Tissue converting equipment



A leading US customer requested a new United Converting Nexus C line for its production facility. It chose United Converting and Rockwell Automation in order to achieve higher production performance



Allen-Bradley ControlLogix programmable automation controller (PAC)



Allen-Bradley Kinetix 6500 servo drive

Founded in 2004 with the aim of developing and manufacturing equipment for the tissue converting industry, United Converting Srl now satisfies the needs of a globalised market with respect to the growing demand for machinery and services capable of meeting modern production requirements.

The company supplies a complete service, from the design and development of new machinery, to the upgrade and optimisation of existing lines, through paper manufacture and processing, ultimately increasing the final value of the products.

Despite still being a young company, United Converting has successfully built and installed a number of converting lines deploying the latest technologies. The company has also developed new converting systems that are patented worldwide.

Thanks to the extensive experience of its technicians, it is able to supply an extremely customised engineering service, using the latest technologies available on the market and is able to respond to unique requests for product customisation to enable tissue converters to achieve exact and innovative product specifications.

In a recent project, a leading US customer needed a new converting line for its production facility. The customer turned to United Converting thanks to the OEM's flexibility, competency and the high-level of technology

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adopted in its machines and lines. For this application, United Converting chose Rockwell Automation as the primary automation supplier in order to develop a machine that would leverage the Rockwell Automation Integrated Architecture in addition to the market-leading position that Rockwell Automation enjoys in the United States.

The line, based on the United Converting Nexus C line, can be used for kitchen roll or toilet paper comprises multiple individual modules, which are then interconnected to act as one production solution. The first module comprises three unwinders, which take big large paper reels and unwinds them and layers them before feeding them into a lamination unit. The three-ply paper structure is then embossed and glued together before a rewinder takes paper off the line and onto a final out roll. This roll is then transferred to sealing unit where a line of glue is applied to seal the last part of the roll. The three metre long roll then reaches an accumulator after which a saw is used to cut it into small rolls, which are then sent to a packing line. Next to the primary converting line there is also a machine that makes the cardboard cores for the centre of the rolls.

At the heart of the machine is an Allen-Bradley ControlLogix® programmable automation controller, working in tandem with an Allen-Bradley GuardLogix® controller for the safety infrastructure. The primary motion and rotational axes are controlled by both servo and AC motor solutions driven by Allen-Bradley Kinetix® 6500 servo drives and Allen-Bradley PowerFlex® variable-speed drives. Completing the control solution is a variety of Allen-Bradley POINT™ I/O solutions and an Allen-Bradley PanelView™ Plus 6 HMI.

According to Gianluca Giometti, CEO and Technical Director at United Converting: "We always look to try and simplify our systems in terms of hardware and software and by using EtherNet/IP and Rockwell Automation hardware and software we were able to achieve this regarding the initial programming and the subsequent user interactions.

We also benefit from the solution's scalability, so we can adapt it for other machines with far less engineering effort. Data exchange was also simplified, as was the ability to share the software development between multiple users simultaneously. EtherNet/IP also delivers a single-network solution for data, motion, safety and I/O and plays a prime role in our big focus on the Connected Enterprise, giving our customers the ability to expand the communication possibilities both within their own factory and for any remote support we can provide from either Italy or from our recently established US office.

"The machine is now at the customer site and is performing as expected," he concludes. "From my point of view, the customer service we achieved from Rockwell Automation in Italy was extremely good especially with regards to the engineering team, who as well providing better service than we get from other suppliers, also had a lot of knowledge about our processes. Finally, thanks to a special I/O card that we developed for the ControlLogix PAC, we were able to significantly enhance one of our patented roll-changeover steps, speeding it up by a factor of four thanks to the greater precision on offer!"

**For more information, contact:**

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