

A-Pack Technologies delivers easier to program and easier to use filling and closing machines

Thanks to the Integrated Architecture solution from Rockwell Automation, the Swiss company could help its customers improve productivity

Challenge

- A-Pack Technologies wanted to equip its 550 filling and closing machine for vials and cartridges with a high-level hardware and software, to help its customers to improve productivity with an easier-to-use machine

Solutions

- Allen-Bradley® ControlLogix™ L61 controller with point I/O modules
- Allen-Bradley® Kinetix® 6000 multi-axis servo drives
- Allen-Bradley® MPL motors for 24 axes
- Allen-Bradley® PowerFlex® 40 drives
- Allen-Bradley® PanelView™ Plus 1250 terminal
- RSLogix™ 5000 software

Result

- Easy-to-program and easy-to-use filling and closing machine, thanks to a common control, motion, drive and information platform
- Minimised problems during installation as well as during production



Background

Part of the Bausch Advanced Technologies Group, A-Pack Technologies is a Swiss company specialising in primary packaging machines for the pharmaceutical industry. "We develop the filling machines and complete process lines which meet the most stringent regulated industry's requirements", explains Jean-Luc Muller, CEO at A-Pack Technologies and Alphacos.

The Swiss company launched the 550 model, a filling and closing machine for vials and cartridges, featuring a high-speed continuous motion with speed of up to 600 pc/min.

Conceived for aseptic filling, this machine can be delivered partially or totally isolated against the operator and is suitable for through-the-wall installations. It also includes an adjustable main transport system for quicker and easier size changeovers. All the machine parts in contact with the product can be easily disassembled and sterilised, while an integrated inspection system provides the rejection of faulty containers. An Integrated Process Control system provides very accurate dosing: the user can perform individual adjustments of the dosing pump, using the HMI.

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As Mr Muller explains: "The machine fills drugs into sterilised vials, which are automatically fed in from a washing machine and sterilisation tunnel. Dosing pumps (piston pumps or peristaltic pumps) place the right quantity of drugs in the vial, that is then closed automatically. The process continues on another machine called the 551, which is adjacent to the 550 (if lyophilisation is not required). Here the crimping operation takes place in order to make it sure that the vial is closed hermetically".

If requested, the vials can also be filled with liquid drugs and a lyophilisation process will be placed between the filling and the closing steps: which means in this case, a freeze-dried rubber stopper after the filling allows the removing of water from the vials, which have to remain a little bit open.

Challenge

"As machine builders, we have our own specifications and templates and we need to find an automation supplier who can adapt its solutions to our needs. With its modular and scalable supply, the Integrated Architecture™ solution from Rockwell Automation provides a proven, innovative and scalable solution for us. We decided to adopt this solution, because we found it provides unparalleled functionality, flexibility and scalability", says Mr Muller.

Solution

The automation core of the 550 model relies on the Integrated Architecture™ approach from Rockwell Automation. "We have been using products from Rockwell Automation since 2002",

Mr Muller adds. "The 550 model represents one of the most complete automation applications conceived in cooperation with the team from Rockwell Automation".

"The Integrated Architecture solution provides A-Pack Technologies with a single control and information platform, which helps reduce complexity and helps improve productivity"

A-Pack Technologies also required high-level hardware and software on its machine and found that Rockwell Automation products could answer its demand fully. The system implemented on the 550 model includes all key Rockwell Automation Allen-Bradley products: an Allen-Bradley® ControlLogix™ L61 PAC with Point I/O modules, Kinetix® 6000 multi-axis servo drives and MPL motors for 24 axes, 15 PowerFlex® 40 drives and a PanelView™ Plus 1250 terminal. All the devices are connected on EtherNet/IP and can be configured with the RSLogix™ 5000 software, which provides a common software package for process, safety, drive and motion control programming.

The Rockwell Automation Integrated Architecture solution provides A-Pack Technologies with a single control and information platform, which helps reduce complexity and helps improve productivity; as Mr Muller points out: "The automation and control system we implemented on our 550 model

is an integrated solution, which optimises the automation, mechanics and software's requirements of the machine. In building the system, we took advantage of the Rockwell Automation knowledge in automation and software and relied on Rockwell Automation specialists' ability to provide the components, which best fit every single application's needs".

Results

Adopting the Rockwell Automation Integrated Architecture solution, A-Pack Technologies could deliver an easier-to-use machine, making its customer's life easier than ever. "Customers care about the process used, coupled with their demand for more reliable machines which will help them to reach high productivity and to help reduce downtimes. Thanks to Rockwell Automation, we can provide an easier-to-program and easier-to-use filling and closing machine, helping to minimise problems during installation as well as during production. Furthermore, Rockwell Automation's worldwide presence provides customers with excellent reliability on its qualified support available. Including the right dose of automation, the 550 model is then the best solution for pharmaceutical manufacturers who want to improve their processes while helping to minimise waste and keeping costs under control." concludes Mr Muller.

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