



Upgrading Pasta Packaging Lines with Emerson Control Techniques Servo Drives

Packaging can be simple or complex, but any packaging process has to be done right to ensure a quality product. Automation has helped companies create a packaging process that is accurate, repeatable, and fast. However, some manufacturers can run into problems if their equipment becomes obsolete.

A pasta manufacturer was looking to upgrade their packaging line. This line was used to package the finished pasta into cartons and package the filled cartons into a case for shipment. The manufacturer already had an automated packaging line, but many of the components, such as the servo drivers, were obsolete, and repairs were becoming more frequent and difficult.

This pasta manufacturer called on Cimtec to design and install an upgraded packaging line that used products that would remain supported well into the future. The manufacturer and Cimtec generated a set of requirements for this upgrade, including:

- Replace the existing servo drives with new servo drives. The new servo drives must be able to interface with the existing PLC system, including inputs and outputs to minimize the amount of new wiring. The servo drives also must be purchased from a reputable and stable manufacturer that will allow the users to maintain these servo drives for the foreseeable future.

- The replacement servo drives must have position control capability and be able to store and execute motion programs.

- All programming and configuration tools must be Windows-based

- Local technical support must be available for updating the drive programs

- The drive changeover has to take place during an existing two-week shutdown period

Cimtec partnered with Emerson Control Techniques to specify new servo hardware and support products for this project. Emerson Control Techniques is a worldwide manufacturer of servo drives and motors. All of Emerson's products are scalable and well supported, which will allow the pasta manufacturer to maintain this new system and expand their capabilities as required.

For this particular project, Cimtec selected Emerson's Unidrive SP drive platform because it provides a variety of features and benefits, including:

- Emerson's Unidrive SP platform allows the installation of three option modules in each drive. Input and output expansion option modules are available in a variety of different versions, allowing flexibility to match the drive system to the existing I/O.



The EZ Motion option module allows motion programming through the sophisticated PowerTools Pro programming software.

The Unidrive SP provides flexibility on the feedback, so the drive can accept resolver position feedback rather than the standard encoder feedback. This allowed the existing servo motors to be used, resulting in a significant savings of both labor and material.

Emerson Control Techniques is a worldwide manufacturer of servo drives and motors and the Unidrive SP is a product that will be supported for many years.

Cimtec worked with the pasta manufacturer to convert all of the existing motion programs to be compatible with the Emerson Unidrive SP platform components. Cimtec's engineers created CAD drawings for the installation and electrical connections for the new drives. Cimtec personnel were on site during the two-week shutdown period and the complete retrofit was finished on schedule. This pasta manufacturer now has a reliable and up-to-date packaging control system that can be scaled as needed to meet the needs of the manufacturer, while maintaining high performance and quality.