

# Automation Control for Flow Wrappers/Horizontal Form, Fill and Seal (HFFS) Machines

## Advantages

- **Extended machine lifecycle** - Flexible electronic synchronized drives replace rigid mechanical systems with mainshaft, gears and cams. Noise and vibration are also reduced by decoupling mechanical components.
- **Maximum flexibility** - Easy synchronization to upstream or downstream machines or processes.
- **Increased productivity** - Increased cycle rates by replacing mechanical transmission components with servo technologies. Recipe storage allows for automated format change.
- **Increased product quality** - Phase correction using registration mark control improves seal and cut accuracy.
- **Reduced downtime** - No homing after downtime (in case of product jams or power failure) by using servo motors with absolute encoders.
- **Jump start programming** - Reduce development time by using the flow wrapper code template for the Logix platform.

*For flow wrappers, Rockwell Automation offers a broad range of control solutions that utilize the Logix Control Platform.*



Photo courtesy of Bosch Sigpack

## Overview

Flow Wrappers or Horizontal Form, Fill, and Seal (HFFS) machines are used in the consumer products industry for a wide variety of packaging applications. Various products like cookies, biscuits and crackers are wrapped and sealed while being transported on a conveyor. The wrapping material is flexible and typically heat-sealable plastic. Paper is also used and sealed by glue.

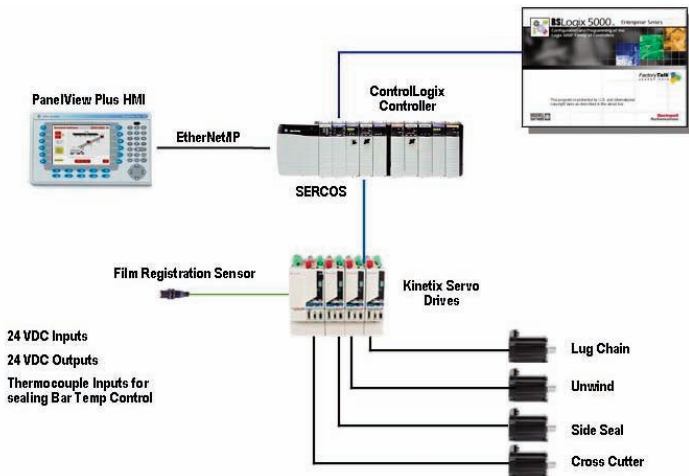
## Solution

For flow wrappers, Rockwell Automation offers a broad range of control solutions that utilize the Logix Control Platform. For applications where speed is very important and a primary factor, the Allen-Bradley® ControlLogix® programmable automation controller (PAC) is the controller of choice. For other applications where machine speed is not essential, the Allen-Bradley CompactLogix™ PAC can more than adequately meet machine builders' needs. The CompactLogix L4x controller bridges the gap between the ControlLogix controller and the CompactLogix L2x controller. The Logix Control Platform with integrated motion is an integral part of Rockwell Automation Integrated Architecture™, which combines networking, visualization, and information technologies to help you lower your Total Cost to Design, Develop, and Deliver<sup>SM</sup> machinery. Unlike conventional control architectures, it provides fully integrated, scalable solutions using a single control platform and a single development environment. This enables machine builders to efficiently re-use engineering designs to help reduce development time and cost and greatly enhance business performance. In addition, Rockwell Automation has developed a modular flow wrapper machine code template based on industry standards that helps reduce development time and leverage best practices.

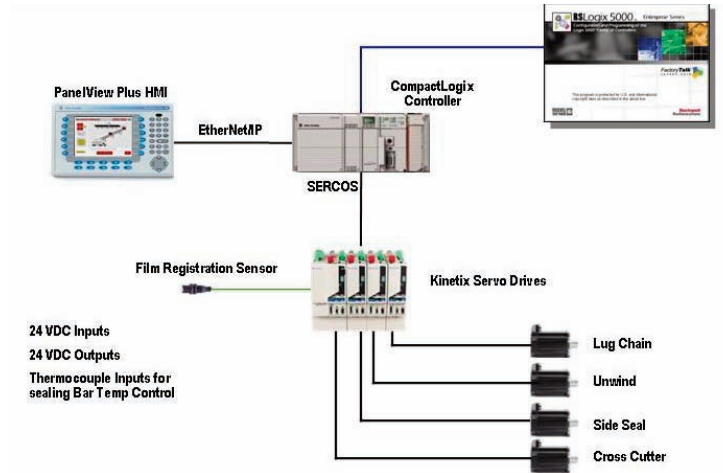
LISTEN.  
THINK.  
SOLVE.®

# Typical Architectures

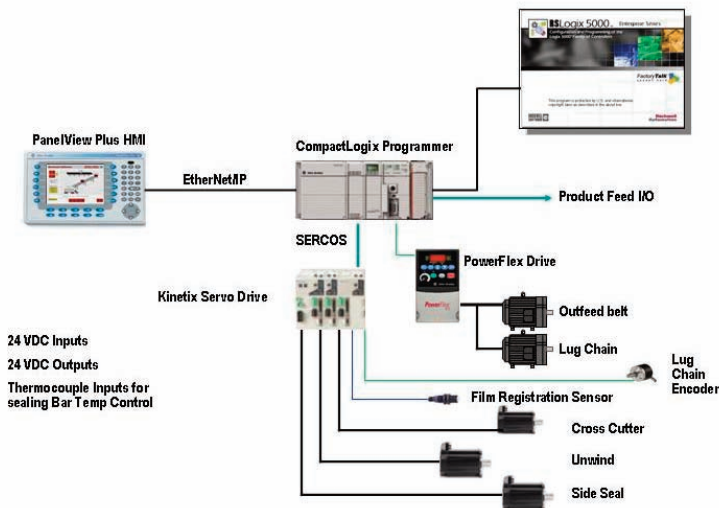
## HFFS Machine – ControlLogix L6x All Servo System



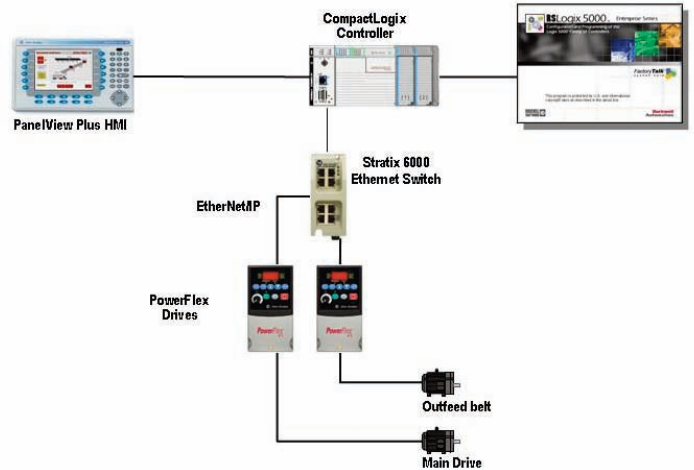
## HFFS Machine – CompactLogix L4x All Servo System



## HFFS Machine – CompactLogix L4x with Servos & VFD



## HFFS Machine- CompactLogix L2x with EtherNet/IP



Rockwell Automation solutions deliver improved production capabilities and reduced total cost of ownership by providing unparalleled functionality, flexibility and scalability. Machine builders can respond more quickly to customer or market demands, reduce maintenance costs and downtime and easily gain access to actionable plant and production information for improved management and decision-making.

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