UNPACKING THE COMPLEXITIES TO DELIVER INNOVATIVE VFFS MACHINERY

Introduction

Often overlooked or not consciously considered as a consumer, packaging plays a pivotal role in many aspects of your day to day life. From retaining fresh contents to ensuring hygienic deliverables and to brand recognition, it is crucial that this element is executed well.

Catering to the ever-growing demand within the packaging industry, ADM Packaging Automation have been servicing this industry for over 20 years producing world class customised machine packaging solutions.

Constantly aiming to elevate the benchmark for efficiency, accuracy and speed, ADM develop and design packaging machinery to reinforce itself as a leader in innovative packaging automation, supplying flexible packaging solutions for dry and liquid products across Australia and South East Asia.

Project Overview

With that said, ADM developed the ADM-W Series Vertical Form Fill Seal (VFFS) machine employing innovative technology to advance a machine that ultimately improves customers' consistent quality to the marketplace and reduces the risk of downtime.

Through years of experimenting, trialling different things, auditing pain points, and documenting innovative elements, ADM have developed this machine to encompass the top echelon of components to satisfy customers' usability and efficiency. The VFFS machine features vacuum pulldown belts, tool-less former change over, torque controlled endseal force, film tracking and is fully washdown friendly, making it an efficient packaging solution.

Underpinned by an attitude of continuous improvement, the overall system of this sophisticated machine was required to be upgraded, delivering an element of simplicity, and this is where ADM teamed up with local supplier, NHP Electrical Engineering.

Due to the costly and time-consuming nature of replacing and sourcing new equipment after failure on the production floor, there was one major factor to consider before choosing the supplier of the products to be used in the upgrade of the packaging machine.

"If you can buy equipment that is locally supported like it is with NHP, it's of great benefit. We find that with offering the right support and the right backup we minimise downtime significantly, which allows us to be a strong, local business for local customers that they can fully depend on," said ADM Packaging Automation's Technical/Sales Manager, George Fakhry.

Competing with international corporations in the industry, ADM derive a passion to set themselves apart from the rest with a local touch. This elevates the reliability and personal service supporting the product itself.

"Our aim is to improve efficiency, increase productivity and ultimately deliver a reliable packaging solution that helps customers grow their business. With the dependability and support of NHP, it pays to manufacture locally," Mr. Fakhry continued.

The Solution

With a strong focus on the power of local backing, combined with a global network of suppliers, NHP formed a complete source for product and service support. Making up the suite of products supplied was the Allen-Bradley® PanelView™ 800 touch screen operator interface providing a view into the packaging machine system designed with the Connected Components Workbench software.

"Leveraging off our partnership with Rockwell Automation, our solution comprised of their quality products as well as specific training for ADM personnel to better design and implement an innovative packaging machine," commented NHP's Automation – Business Development, Austin Gan.

Also specified in the NHP solution was the Allen-Bradley® CompactLogix™ 5370 controllers which controls the Allen-Bradley® Kinetix® 5500 Servo Drives, supporting Integrated Motion on EtherNet/IP™. With its innovative, compact design, the Kinetix® 5500 drive helps minimise machine footprint and simplifies system wiring.

Featured in this modular design are the Allen-Bradley® PowerFlex 525 compact drives, which can be configured using the Connected Components Workbench and offer embedded EtherNet/IP™ communications, USB programming, and standard safety features that are suited perfectly for this application. For seamless integration and simple cable connection, the Allen-Bradley® Bulletin 1783 Stratix® 2000 Unmanaged Ethernet Switch was also installed.

"One of the major reasons we chose NHP was all of the equipment is compatible with each other. The ethernet connectivity between the PLC, Servos and drives reduced wiring complexity, panel space and commissioning times and together formed a complete system we could fully rely on," said ADM Packing Automation's Engineer, Richard Crighton.

With plans to expand their offering as the business continues to grow, NHP look forward to supporting ADM Packaging Automation as they strive to service the expanding, flexible packing industry with market leading packaging solutions.

(l-r) David Kenney (Technology Specialist- Industrial Automation and Motion, NHP), Richard Crighton (Engineer, ADM Packaging Automation), George Fakhry (Technical/ Sales Manager, ADM Packaging Automation) and Austin Gan (Automation- Business Development, NHP)

Project Fact File

Project: ADM Packaging Automation

Location: Melbourne, Victoria

Details: Details: ADM Packaging Automation partnered with NHP to deliver an overall system upgrade for their ADM-W Series Vertical Form Fill Seal (VFFS) machine, delivering an element of simplicity.

NHP Products/Services:

• Allen-Bradley® PanelView™ 800 touch screen operator interface

• Allen-Bradley® CompactLogix™ 5370 controllers

• Allen-Bradley® Connected Components Workbench software

• Allen-Bradley® Kinetix® 5500 Servo Drives

• Allen-Bradley® Integrated Motion on EtherNet/IP™

• Allen-Bradley® PowerFlex 525 compact drives

• Allen-Bradley® Bulletin 1783 Stratix® 2000 Unmanaged Ethernet Switch