



COMPASS

ENGINEERING GROUP

Case Study: JEGS

Delaware, OH Distribution Center

A completely renewed conveyor control system was needed in this distribution facility to address problems negatively impacting production costs and efficiency in distribution.

6/27/2007

COMPANY OVERVIEW:

In 1960, JEG Coughlin Sr. founded JEGS as a small speed shop. It has grown into a high-performance powerhouse that includes a race team (Team JEGS), 250,000 square foot warehouse, three retail stores, mail order, and a website. The 350+ employees at JEGS still strongly believe and practice their simply business philosophy: Customer care is #1.¹

**THE CHALLENGE:**

A comprehensive modernization and upgrade of the existing conveyor control system in the JEGS High Performance Company's distribution center at the Delaware, OH facility. Compass Engineering Group's expertise in the software and control solutions industry was requested to address some potentially serious problems with the system operation. The following deficiencies existed in the current system:

- Many computer critical components were obsolete and difficult (or impossible) to purchase
- Unsupported operating system software and hardware components increased the risk of extended down time
- Little communication to the plant network via standard reporting tools such as Access® or Excel®.

THE STRATEGY:

To address the challenge posed by JEGS, Compass Engineering Group generated a plan to remove the obsolete PC hardware and communications system from the controls system. Doing so enabled Compass Engineering Group personnel to improve the operation of the sortation system by implementing their own controls design and software package.

THE SOLUTION:

Compass Engineering Group first replaced the existing control system with a new supervisory system for providing sort destinations, sorter statistics, diagnostics, and interfaces to the JEGS High Performance WMS system. Then, to keep JEGS' systems up-to-date, a standard Microsoft Windows 2003 Server was deployed to improve system maintainability. Finally, the DH+ interface from the PLCs was replaced with an Ethernet connection to establish efficient communications across networks.

As the old systems aged, the issues mentioned above contributed to a reduction in reliability and an increase in maintenance costs. The proposed control system solutions offered by Compass Engineering Group eliminated the obsolete PC hardware and communications to assist in improving the overall functionality of the system. The benefits of the implemented solution included:

- New PC server hardware
- Advantages of using Microsoft Windows 2003 Server
- Added CORS client to allow for greater visibility to conveyor systems operation

- Simplified design to allow customer self-sufficiency
- Better connectivity to the plant network
- Additional production report capability (export to Excel, etc.) with plant network connection
- Flexible design to allow future enhancements and expansion
- Remote support available through VPN for PLC and PC monitoring and diagnostics
- Training in use of RSLogix 500 as well as SLC PLC application training
- Continued system support from Compass Engineering Group

THE END RESULT:

Upon project completion, the distribution center in Delaware, OH had a modernized and sophisticated control system solution. This enhanced technology established a more reliable communication architecture and aided in increasing production and decrease down time. As always, adhering to the highest and best practices in the control and software design industry, Compass Engineering Group provided JEGS a flexible solution that is capable of adapting to the demanding needs of control and software solutions.



¹ Information from www.jegs.com