

PREVIOUS PACKAGING WORK

MULTI-PACK AUTOMATION ~ \$700,000

This multi-pack automation program utilized CSMI Engineering, Procurement and Construction services associated with an automated multi-pack line installation. The automated approach for multi-pack production operations were as follows:

- 1. Bag Singulation & Bag Inspection
- 2. Pick / Place / Load PPL) Module
- 3. Carton/Caddie Erection and Closing
- 4. Case Erector & Caddie Casepacker
- 5. Case Palletizer

LINE RELOCAITON ~ \$2,000,000

The objective of this project was to relocate (10) existing packaging lines from co-manufacturer to client site. This included demolition, installation and integration into plant systems.

AUTOMATION ~ \$1,000,000

The objective of this project was to eliminate "touches" from case packaging. This automation would reduce packaging costs with added benefits of increased manufacturing flexibility and net capacity. This included automating (10) lines and relocating existing lines and swapping equipment between locations.

LINE AUTOMATION DESIGN - \$1,000,000

The objective of this project was to design engineer an automated packaging line including; equipment procurement, installation, commissioning and integration with other plant systems.

LINE ENGINEERING SERVICES ~ \$60,000

The objective of this project was to design engineer electrical power and network connectivity to the plant system equipment and to perform a design review of the client provided pneumatic package.

WAREHOUSE CONTROLS ~ \$50,000

This project included engineering (mechanical, electrical and controls automation) from secondary packaging to warehouse ensuring FIFO and preventing product waste due to expiration.

LINE EVALUATION ~ \$10,000

The objective of this project was to evaluate weighing systems for multiple packaging lines in to improve product consistency throughout the packaging department.

LINE ASSESSMENT ~ \$50,000

The objective of this project was to provide Engineering services for the assessment and development of Form Fill and Seal packaging lines. This included line function and opportunities, equipment specifications, and facility requirements.

FUNCTIONAL DESIGN - \$15,000

The objective of this project was to provide design engineering and layouts for multiple lines that incorporated a single rotary lift table to facilitate multi line loading of the new shipping/display cases for bulk bags. In addition, provide an equipment and installation scope, schedule and budget for implementation.

DESIGN & ENGINEER MANAGE

1750 East Golf Road, Suite 490 Schaumburg, Illinois 60173 www.csmius.com Karen Eng 847-605-0080 keng@csmius.com

D&B DUNS Number: 10-400-0096 • WEBENC: 2005115114 • NAICS Code: 541330 • FEIN: 27-0194054