

Tray and Shrink Automation Replaces Manual Case Packing, Increases Production

This manufacturer of natural and organic dressings, quick marinades and salsas is ranked among the top three brands in the natural/organic products industry and is one of the fastest growing brands in the country. The customer needed to increase production capacity and change its manufacturing process to satisfy growing demand. EDL Packaging Engineers' solution was ultimately chosen because of the flexibility, simplicity of the system, auto adjustment and willingness of EDL to work with the customer and tailor the system to its exact needs.

THE CHALLENGE

The packaging system needed to be extremely flexible. The customer wanted one line to package its products in bottles, jars and decanters, in multiple tray styles and pack sizes for all its distribution and supply chain methods. Currently, 32 products in 18 square and round bottles, jars and decanters and multiple packs, sizes from 6-24.

THE SOLUTION

EDL tailored a modular system that collates, forms and loads the tray and a continuous motion inline automatic wrapping system. Product and package selection is made through the system HMI product selection screen.

With a system of automatic and manual adjusters the tray loader is able to accommodate the range of containers and trays.

Once the tray is loaded, the product is wrapped in a sleeve of LDPE film. The sealer utilizes dual axis servo control to move the pack through the film web and complete the seal. The pack then passes through EDL's energy efficient shrink tunnel.

Since the processes were new to the customer, ease of changeover was of high importance. All adjustments are made in less than 10 minutes utilizing the system of automatic servo adjust or a simple hand wheel with digital readout ensuring precise and repeatable results.

EDL also tailored and produced conveyors to fit perfectly within the customer's new plant layout

SYSTEM IN-ACTION



ADDITIONAL FEATURES

- Easy load tray magazine allows for no stopping to load more materials
- Automatic splicer, with 20" diameter film roll capacity, for both top and bottom rolls eliminates need to stop machine
- Jib crane for lifting assist for ergonomic requirements and safety
- Semi-automated changeover process reduced changeover times

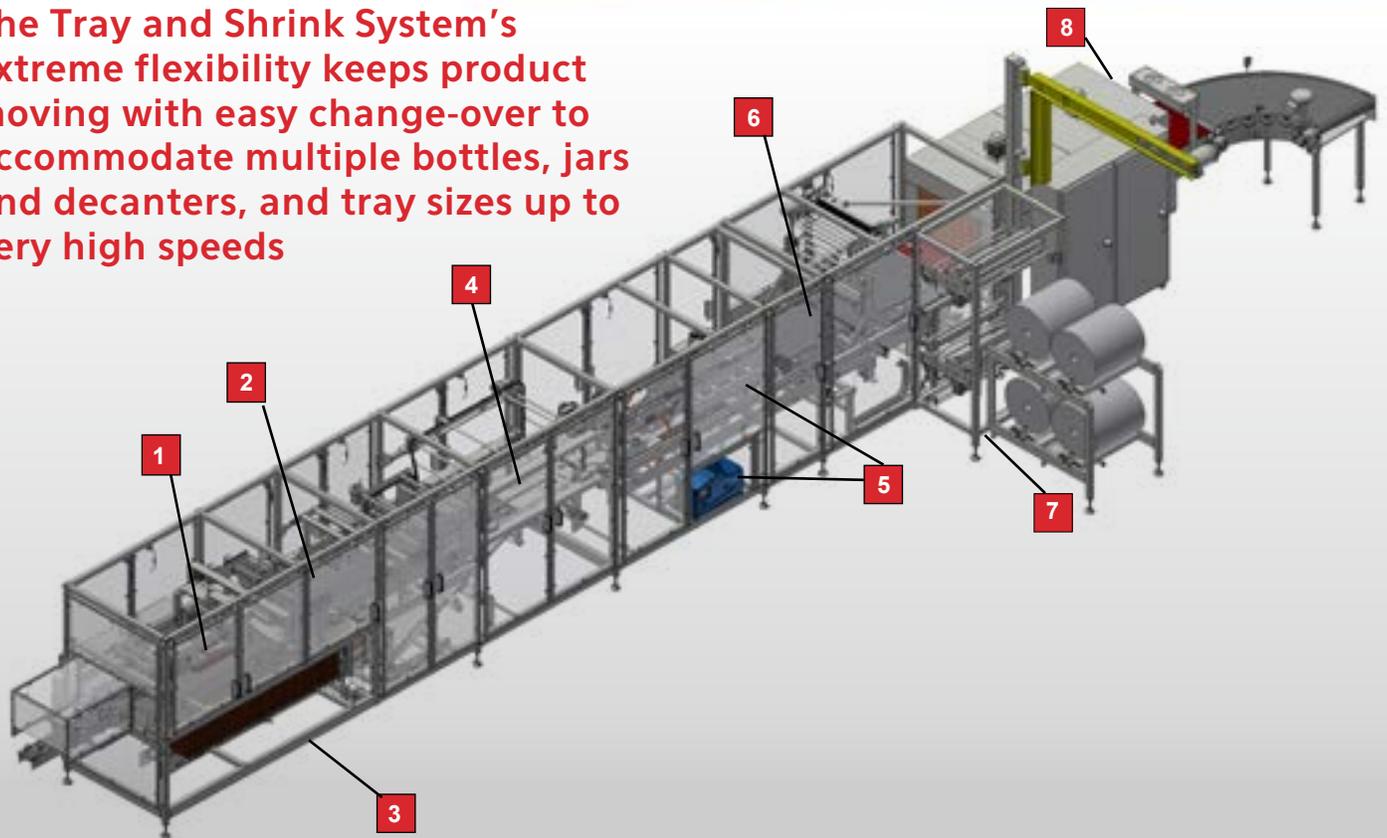
EDL Packaging Engineers, Inc.
1260 Parkview Road
Green Bay, WI 54304

P 920.336.7744

F 920.336.8585

www.edlpackaging.com

The Tray and Shrink System's extreme flexibility keeps product moving with easy change-over to accommodate multiple bottles, jars and decanters, and tray sizes up to very high speeds



SYSTEM RECIPE

Lane Diverter **1**

Servo controlled lane diverter, provides precise auto width adjustment and auto lane positioning, accommodates high throughput speeds



Collation Lane Guides **2**

Adjustable to conform to multiple product sizes and collation patterns. Includes product collating stop gates with photo eye sensors

Tray Blank Magazine & Infeed **3**

Provides extended capacity storage for corrugate tray blanks. Includes: vacuum pick, and lugged incline infeed conveyor, servo synchronized with the product infeed

Tray Loading **4**

A flighted tray transfer indexes a collation of product exactly into the position onto the corrugate tray blank using a variable frequency drive for control.

Tray Forming & Hot Melt Glue System **5**

Automatically forms side walls of corrugate tray and applies glue. Adjustable design to accommodate a host of tray sizes and styles. Includes servo driven automatic change over, to reduce down time



Continuous Motion Inline Wrapping System **6**

Wraps tray packs in a sleeve of LDPE film. Sealer utilizes dual axis servo control to move over the pack to apply the film then travel behind the product to complete the seal. Provides uninterrupted product wrapping.

Film System **7**

Design now includes automatic film roll splicing with dual active roll positions and external side load placement, eliminating the need to stop the machine during splicing or film replacement

High Efficiency Shrink Tunnel **8**

Ceramic fiber insulation in conjunction with a design without interior metal to metal contact creates an efficient design keeping the heat in the tunnel and the exterior surface from getting hot.