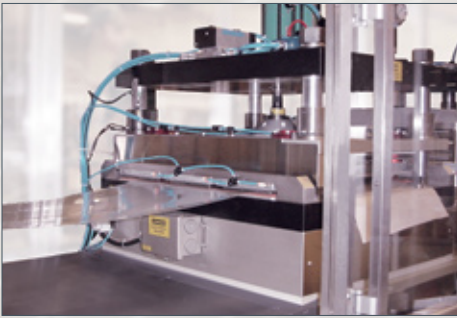


Medical/Pharmaceutical Film Handling & Sealing System

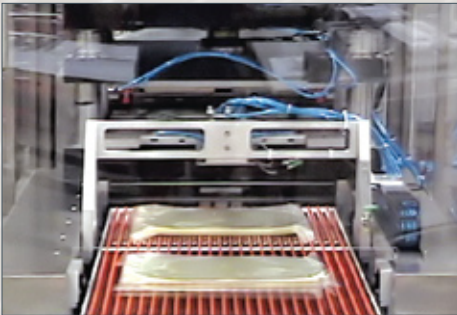
Dispense Film, Heat Seal, Cool, Cut & Stack Bags/Pouches



Process, Features & Benefits

Laminate films, either two separate rolls or a single 2-ply roll of varying thickness, are dispensed by means of AC-motor driven unwind reels, whose operation is governed by a Senix ultrasonic sensor that detects the roll diameter and compensates the motor speed accordingly to dispense film uniformly, as called upon by the festoon.

Linear servo motion adjusts the unwind reel horizontal location automatically, based on input from AccuWeb, Inc. edge detectors coupled with AccuWeb electro-mechanical linear actuators to insure satisfactory web alignment, thereby maintaining accurate linear film tracking for ensuing operations.



Film dispensation is by means of servo-motor driven nip rollers located downstream from the film unwinds, at a station located just after the cooling station. Film is festooned subsequent to the unwinds and monitored by means of optimum operation high and low level sensors, that operate nip rollers governed by an electromagnetic brake for film tension control. This process enhances film integrity by maintaining consistent uniform tension and a smooth film surface.

A section of film is indexed under a TOX-Powerpackage 8-ton press that performs a pneumatic-hydraulic operation consisting of an air-operated approach stroke, then a pneumohydraulic powerstroke and an air-operated return stroke. The press is tooled with a heated sealing die that is a part specific tool-less change part, whose temperature is accurately governed by a CALogix multi-loop temperature and process controller. The film is clamped in place by air bladders to prevent film stretch during sealing.

The lower sealing surface consists of silicone rubber covered with a thin Teflon sheet. Two Overhead LM Air Technology HEPA units provide laminar air flow from the film rolls to ceiling operation.

At the next dwell station, the film seal is trapped and cooled by means of upper and lower chiller plates. Subsequent to cooling, the film is indexed past a pair of Dusenberry razor blade slitters that trim off the excess side film that is gathered by powered take-up wheels. The servo-driven nip rollers are located just after the slitter station.

After slitting, the film passes through a second TOX-Powerpackage press that is 50-ton. Prior to passing under this press, a pick and place arm reaches through the press, grasps the film and retracts concurrently with nip roller movement by means of a synchronized servo-motor arrangement. Once in position, vacuum is applied to the lower platen to secure the film during cutting. This press is tooled with a steel rule cutting fixture that is a part specific tool-less change part. Various component patterns, singles and multiples, can be achieved.

Lastly, the pick and place retracts fully and deposits the component on a stacking lowerator that descends each time a new component is placed on top until a complete stack is created, where by the stack is lowered onto an exit conveyor for discharge from the machine.

More Information

For more information on this, and many other Farason projects, please visit our website at www.farason.com or call us at (610) 383-6224.