



Reconfigured product groupings convey from left to right through this in-line bundling machine, shown here in its single-lane configuration. Shrink-wrapped products discharge from a heat tunnel at right.



# ***Multipacker*** *keeps pace with* *club store* *growth*

**One multipack bundling machine replaces four shrink wrapping systems at Advanced Packaging's new Stockton, Calif., distribution center, saving \$300,000/yr in labor and increasing efficiency 40 percent. LLDPE film switch trims material costs 75 percent.**



**T**he growth of club stores has given birth to new types of packaging - larger sizes, multipacks, product combos and so on. This market phenomena has also spawned a new type of contract packager or packer/repacker such as Advanced Packaging & Distribution Specialist of Stockton, Calif.

Starting up just last November, Advanced has already increased its warehouse space from 70,000 to 120,000 sq ft. And it plans to open two more distribution centers this fall.

Advanced receives truck and railcar loads of case-packed product from various grocery product manufacturers. These customers designate what flavors and/or sizes Advanced needs to reconfigure into bundled multipacks. Packs run the gamut from a bunch of bananas to twin-packs of bagged charcoal, from unsupported groupings of glass and plastic bottles or aluminum and steel cans to 24-packs within paperboard or corrugated trays and cases.

Advanced then distributes these bundled multipacks primarily to warehouse stores such as Sam's, Cosco and The Price Club located throughout 11 western states.

Warehouse sales comprise 90 percent of the company's volume. The balance of these multipacks are shipped to grocery chains and military installations. Advanced ships product to nearly all 50 states and exports to Japan, Mexico and Canada. Advanced leases refrigerated trucks so that it can receive, package and distribute chilled and frozen products as well.

To achieve more versatility and keep pace with diverse customer demands, Advanced worked closely with its packaging machinery/materials distributor Garms Packaging Supply to procure a continuous-



*To meet the diverse needs of club stores, Advanced Packaging reconfigures product packs into customized groupings—such as these mixed flavors of fruit juices. The bundle, or tray-pack in this instance, is placed on a layer of LLDPE film on top of a conveyor. Steel rods on the conveyor form "buckets" that carry product. The tray-pack pushes into a film curtain, above, formed by the sealing of a top and bottom film roll. A reciprocating seal bar assembly simultaneously seals and cuts the film between tray-packs, below.*



motion multipack machine from Polypack and shrink film from Armin.

The Polypack CMB-32 L in-line machine accepts virtually any configuration of bottles, boxes and odd-shaped unsupported product groupings, wraps the bundle with a high-clarity Armin linear low-density polyethylene film, then sends the unit through a shrink tunnel. It also handles conventional 24-count tray-packs.

"The machine allows us to ship 40-percent more packages during each shift than we did with the four former L-bar sealing systems," says Advanced president Larry Hauger. "The four L-bar sealers and shrink tunnels we had could only be used for

unsupported products as large as a six-pack of soup cans," he notes. "And, these machines could wrap a maximum of about 20 packs a minute.

"We can also run the line with 10 employees now compared with the 20 it took for the four L-bar sealers," Hauger continues. "That ends up saving us between \$150,000 and \$300,000 a year in labor, depending on whether we run one or two daily shifts. That will pay for the machine pretty quickly.

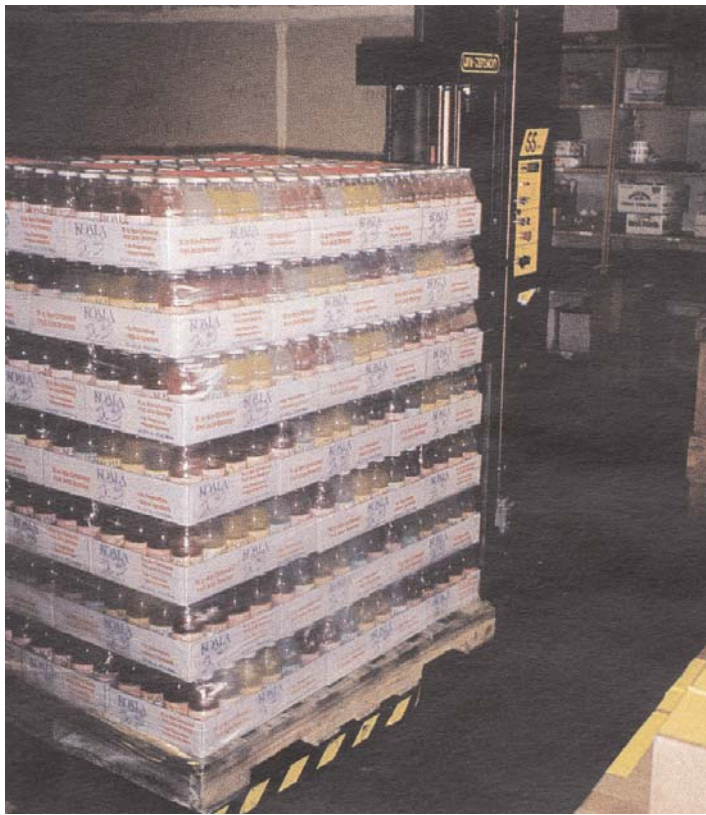
"And," he adds, "the machine uses a film that costs us 75 percent less than the multilayer polyolefin structure we had used with the former sealing systems." Advanced's new-found

versatility hasn't gone unnoticed. The CP's growing customer base includes several large food and beverage companies, such as Best Foods Div., CPC Intl. Inc., Pet Inc., Clearly Canadian and Koala Springs. Hauger conservatively estimates first-year sales will top \$5.5 million.

## Bundled to go

Advanced runs the Polypack line on one or two shifts per day, depending on production needs. The machine uses two rolls of Armin's 2-mil 1004-Series LLDPE film. The first roll is mounted below the product-carrying conveyor. The film web unwinds upward through dancer bars to the top of the conveyor. Motor-driven rollers automatically dispense and index the film along the top surface of the conveyor.

Operators place product groups on top of the film, within article "buckets," with promotional coupons or literature placed on top of the product. These buckets are formed by steel rods that allow operators to adjust their pitches to accommodate various products or packages to be bundled.



*After products are bundled and shrink-wrapped, operators place them on pallets for stretch wrapping in 70-ga LLDPE film, Advanced ships palletized product primarily to warehouse clubs in 11 western states.*

are becoming increasingly important to both grocery product manufacturers and retailers. In many instances, grocery chains now require packaged and case-bundled goods similar to those sold at warehouse stores. This requires creative packaging such as the inclusion of promotional products, coupons and the mixing of flavors within the same case. With our bundling and shrink wrapping equipment, we're in position to meet those needs and continue to grow."

More information is available:

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The conveyor indexes the product and film toward a "curtain" of film that descends from the second film web mounted at the top of the Polypack machine. To wrap the first product grouping, a seal bar seals together the leading edge of film from the top roll to the edge of the film that indexes along the surface of the conveyor. As the conveyor moves forward, the product actually pushes into the sealed film so that the top film layer drapes over the leading edge, top and trailing edge of the product/package.

The product grouping indexes forward, pulling the film just beyond a reciprocating seal bar assembly. This triggers a thermostatically controlled hot seal bar that reciprocates just upstream of the film-wrapped product. The hot seal bar is actuated by a photocell that directs the bar downward to the film where it simultaneously seals and cuts the film between

packages. The seal bar retracts back to its home position, then repeats the process with the subsequent product grouping,

Meanwhile, the loosely wrapped and sealed multipack moves through a shrink tunnel that uses thermostatically controlled heater banks and forced air circulation to shrink the film tightly around the products.

Bundles are then hand-stacked onto pallets and stretchwrapped on an IPM 55-Series stretch wrapper that uses Borden's 70-ga TLC-G linear LDPE film, usually in 20-in. web widths. Pallet loads are trucked to customer distribution centers, primarily within the 11 western states, permitting product shipments directly to warehouse, supermarket and military facilities.

The versatility afforded by the Polypack machine gives Advanced a powerful customer service tool. As Hauger concludes: "Value-added services at the regional level