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January 2010

PACKAGING DIGEST®

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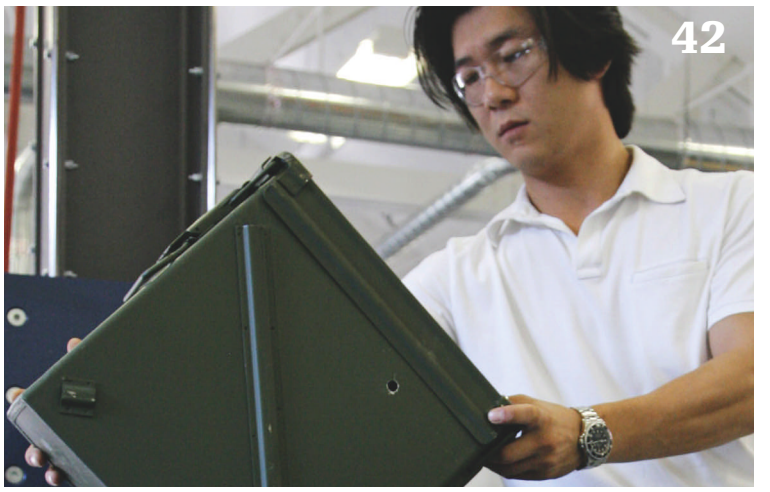

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Vivo! Photo-Quality Digital Label Printer

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The Vivo! digital color label printer is designed for manufacturers who need fast-turnaround on "short-runs" of labels for printing just-in-time, private label packaging, and export labels. The Vivo! digitally prints photo-quality labels at high speeds, up to 3 ips in 600 dpi CMYK color and is cost-effective for moderate-high volumes of labels, from 100s to 10,000s per batch. The Vivo! is a toner-based printer, similar to a laser printer, and printed labels are extremely resistant to fading, abrasion, and moisture. Prints onto paper and synthetic die-cut labels and tags.
QuickLabel Systems, 877-757-7978.
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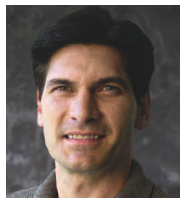

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packaging concepts

New organic wheat vodka

Blue Ice Vodka announces the inception of Blue Ice Organic Wheat Vodka, the American brand's first line extension since its introduction to the market in 2001. Blue Ice Organic Wheat Vodka continues the tradition of founder Jim Myerson's commitment to producing premium spirits reflective of the quality and purity of Idaho's natural resources. "In a crowded market inundated with fly-by-night brands, here today, gone tomorrow, Blue Ice has successfully circumvented this fate by focusing on the fundamental priorities of today's modern-day consumer," says Kevin Egan, vp of sales and marketing for 21st Century Spirits.

The clear bottle was designed to compliment the flagship Blue Ice potato-vodka package, which is packaged in a blue bottle. The bottle is a sculpted work of art created by package design firm, **Flowdesign Inc. (www.flow-design.com)**. It is tall, slender and ergonomically designed to make pouring easy. The elegant bottle looks great on the back shelf at a bar or restaurant and in the home as well. "The challenge was to differentiate the Organic Wheat from its flagship brand, "Blue Ice potato vodka," says Dan Matauch, owner of Flowdesign. "We looked at several alternatives, but eventually came to the consensus that the clear bottle with the brown-toned label best suited the organic wheat line extension. We kept the core brand elements of the Blue Ice font, bottle and label shape of the flagship brand, but added wheat stalks, the USDA organic logo and color changes to help consumers recognize the brand's unique organic properties."

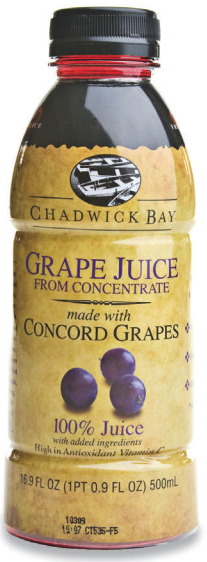
The Organic Wheat Vodka, which sells for about $30, is distributed nationwide. The glass bottle and the pressure-sensitive label are supplied by **Devon Intl. (www.devonintl.com)**.

Value-driven drinks in hot-fill PET

Cliffstar Corp., Dunkirk, NY, a private-label beverage supplier, now offers the Chadwick Bay line, its own brand of beverages, produced by Harborside Inc., a Cliffstar subsidiary. The line includes single-serve enhanced juice, enhanced water, organic juice and smoothies bottled in attractive, lightweight PowerFlex™ PET bottles from **Amcor PET Packaging (www.amcor.com).**

The shelf-stable drinks are Cliffstar's first foray into the private-branded beverage market. The company studied the U.S. market and identified a price gap between national brand and private-label products, according to Matt Walker, Cliffstar's marketing director. "This is the appropriate time to introduce a premium, mid-tier alternative that gives retailers a less costly, more value-driven product option," explains Walker. The new bottle also creates an innovative look, he says, that will allow Cliffstar to surge ahead of consumer trends and quickly introduce more appealing and innovative products. The dome-shouldered, long-neck bottles are portable and breakage-resistant, lightweight, recyclable and can help reduce transportation costs. Consumers are drawn to the attractive features of the PET bottle. Cliffstar already uses Powerflex PET bottles for many of its private-label beverages.

The PowerFlex bottle has a patented, panel-less design that takes hot filling at temperatures around 185 deg F to a new level. Available in12- to 46-oz sizes, the bottles feature a recylable PETG shrink sleeve label from **Hammer Packaging (www.hammerpackaging.com)** that provides striking graphic esthetics.



Spiral closure tops fragrance with drama

Inspired by the delicate and dramatic silhouette of a Kimono-draped woman, Lancome's Hypnose Senses' package design emulates the spiraling flow of fabric. The ultra-contemporary yet timelessly elegant package is capped by a Surlyn closure developed at **Rexam's (www.rexam.com)** Simandre-based Center of Excellence.

"This challenging project resulted in a closure with crisp, clean lines and a look that only the use of Surlyn—because of that material's superior transparency, ability to withstand demanding production processes and fragrance compatibility—can deliver," says Elisabeth Benoît, cosmetic closures sales director, personal care, Rexam.

"We have a long history with Lancome," she says. "For a prestige fragrance such as Hypnose Senses, the only acceptable closure is a work of art that communicates the magic of the Lancome brand."

Launch pad

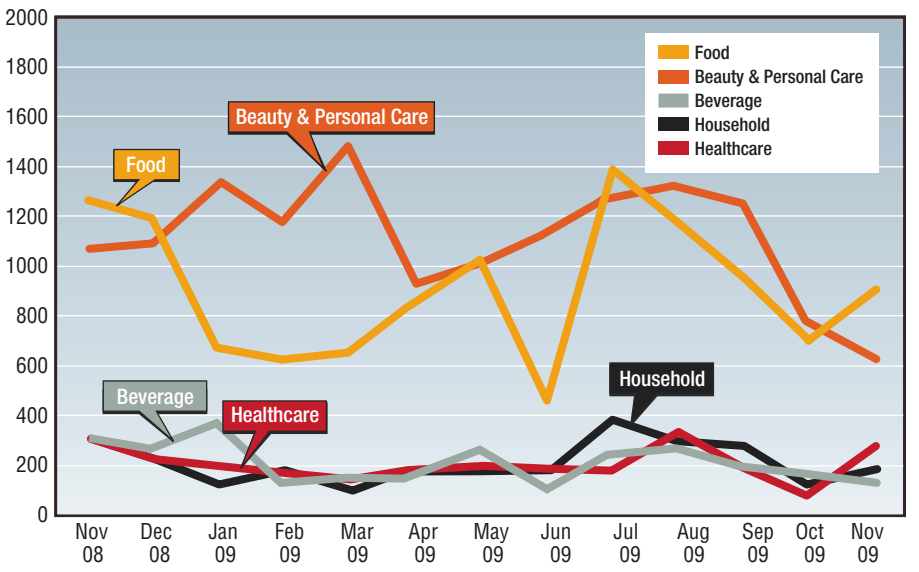
New Product of the Month

Fruit smoothie in a beeker

HIP & HOT

Consumers are looking for more natural nutrition and balanced meals rather than simply cutting out certain ingredients such as sugar, fat or sodium. This trend is also evident in their choices of snacks and drinks. In the Netherlands, The Fruit Lab is launching fruit smoothies that claim to be "freshly squeezed for gourmets." Fruit Lab claims its brand is for fruit lovers, with fresh fruit from varieties such as Alphonso mango, Willamette raspberry and Senga Sengana strawberries. But the packaging is really the standout. The bottles are shaped to resemble laboratory flasks and bear a "flavor dimension" logo. The Fruit Lab defines its smoothies with flavor characteristics of bitter, sweet and sour; a circle represents each flavor's intensity.

New Products Launched in the U.S.



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WWW.mintel.com/gnpd

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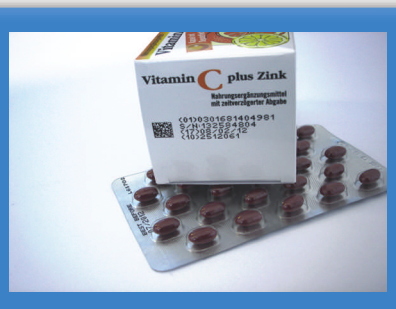
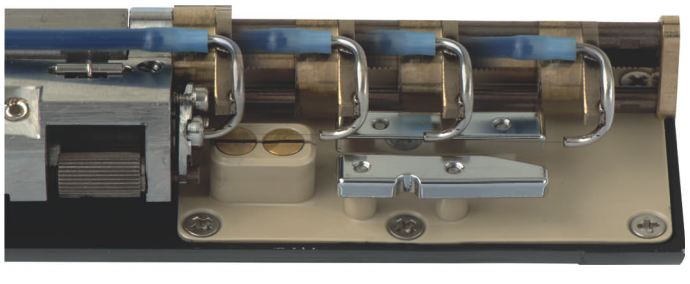


Sealed Nozzle Technology



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packaging concepts food

Redesigned ice cream packaging serves up nostalgia

Previous packaging for Good Humor ice cream treats strongly emphasized the connection to Unilever's global ice cream brand, Heart; the newly designed Good Humor in-home and out-of-home packaging emphasizes the heritage and history of the American brand instead.

To reinvigorate the packaging with a nostalgic feel, Unilever commissioned **Anthem! (www.anthemww.com)** for an extensive identity exploratory. After which, the companies decided to move away from the red double-heart shape, which was the trademark of the global brand, and instead use imagery and coloration that harkens to the Good Humor heritage.

The new logo incorporates a visual representation of a Good Humor ice cream truck in blue. To emphasize the new branding, packaging for Good Humor's filled cones feature a swirl pattern that ensconces the new logo. Type treatment for each confections' flavor/variety designation also was standardized.

Canadian pasta shakes things up in sustainable packaging film

Nature's Farm, a Manitoba-based Canadian pasta company, selects NatureFlex™ sustainable, compostable film from **Innovia Films (www.innoviafilms.com)** to wrap its line of gourmet pastas. The family-owned business also has a poultry operation producing eggs. In 1993, after several years of careful research and some time as a "designer-egg" wholesaler, the company introduced

Nature's Pasta™ to its lineup, and the tasty product now appears on the menus of some of North America's best eating establishments.

Packed in-house on a **Bosch (www.boschus.com)** Terra 25 vf/f/s machine that runs up to 15 packs/min, the pasta in clear film bags was a wise choice, according to company founder, Hermann Grauer. "We are committed to ecological sustainability and stewardship. NatureFlex is sustainable, lessens environmental impact and has fitted into our production line process with only minimal adjustment required," he says. "The reaction to the packaging has been very positive and enthusiastic."

The film begins life as wood and begins to decompose in a compost bin (or an industrial compost environment) within a matter of weeks, Innovia says.

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comment

John Kalkowski, Editorial Director

Let's toss one back to salute an icon of packaging

It's no coincidence that a beer can graces the cover of this month's *Packaging Digest*. January 2010 marks the 75th anniversary of the commerical use of cans as containers for beer. Our cover story on p. 18 details how Boulevard Brewing of Kansas City has launched a highly decorated aluminum can for its craft wheat beer and installed a new packaging line to handle this conversion, along with its regular glass bottles.

Over the course of its use, the beer can has undergone myriad changes. Even though brewers first started considering the use of cans in the 1920s, those plans were interrupted by Prohibition and a couple of technical hurdles that had to be overcome. First of all, the can needed to withstand the 80- to 90-psi pressure of pasteurization without leaking or bursting. Perhaps more important, it was necessary to develop an effective liner that would prevent "metal turbidity," in which the beer reacts with metal to create a bitter taste. Engineers reportedly tried resin, flour, gum and even sprayed asphalt as a liner.

The can's first commercial use came in January 1934, when the American Can Co. supplied "Vinylite" plastic-lined, flat-top cans, as well as a new packaging line, to the Gottfried Krueger Brewing Co. of Newark, NJ, for use with their Finest Beer and Cream Ale, which was sold in Richmond, VA. By March, sales were up 550 percent. Shortly therafter, Pabst and Anheuser-Busch were the first major brands to introduce the use of metal cans.

One factor that slowed the adoption of beer cans was that converting packaging lines from handling glass bottles to cans was an expensive proposition. Still, brewers were excited at the prospects. They could employ many more sizes and shapes while utilizing a much larger part of the container and more colors to promote the brand. The cans didn't have to be returned to a bottling plant for reuse and didn't require a deposit. Cans weighed less than glass bottles and could be easily stacked for shipment.

That was when a can of beer cost about 10 cents. Since then, many improvements have been made to the humble beer can. Aluminum with water-based internal coatings is now the preferred material. Pull-tops, pop-tops and twist-off closures made cans easier and safer to open. For convenience, the six-pack evolved as the most convenient pack for both cans and bottles, but the 12-pack isn't far behind for thirsty Americans. However, packaging innovation continues, and the plastic bottle now is poised to take over the beer industry. Plastic bottles are very light, virtually unbreakable, cheap to make and chemically inert. Has the beer can met its match?

John Kalkowski

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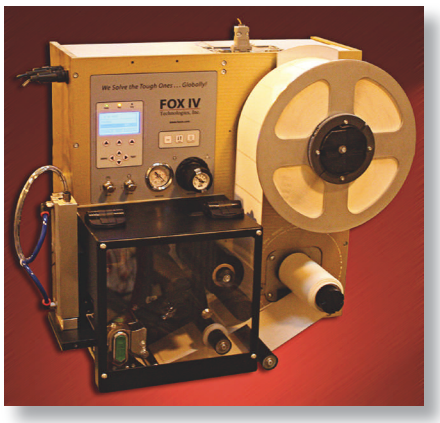
Tharo Systems Inc., 800/878-6833. **www.tharo.com**

Printer

The 5600 high-resolution, liquid ink-jet printer utilizes competitive glycol-ether (quick-dry) ink, providing an economic, high-quality, efficient way to maximize contrast while minimizing the ink deposit required, the co. says. The printer is designed for porous corrugated cases and trays, and combines advanced functionality with a compact design for competitive cost-per-print coding. The patent-pending, quick-drying liquid ink delivers opacity and prints on porous substrates in environmental conditions from 0 to 40 deg C at speeds up to 182 m/min.
Markem-Imaje, 866/263-4644. **www.markem-imaje.com**



Mini printer

Model 2010 BASIC Mini label printer applicator incorporates the Datamax M-Class Mark II printer and is designed as a global low-cost system. The mini printer has a small footprint of 18x13.6x18 in. Operators will find changing label and ribbon supplies easy by following the label and ribbon paths screen-printed directly on the center wall, with no threading diagram to try to decipher. The easy-access cover and modular components also make service and repair a snap, the co. reports, and one rugged, pressurized industrial housing contains the entire package. Menu prompts and messages are available in five languages and has an optional international language print capability.
FOX IV Technologies Inc., 877/436-2434. **www.foxiv.com**

Thermal-transfer printer

The 53LTc continuous-motion thermal-transfer printer costs 40-percent less than traditional thermal-transfer printers, the co. states. The new PR5 hand-held controller is half the size of the co.'s other hand-held controllers and features a USB port for faster, easier image uploads. The new user interface offers a selection of 12 languages and features 300-dpi resolution, printer-resident bar codes, cassette ribbon loading and a large 600-m ribbon capacity. With a best-in-class thermal printhead, the 53LTc also offers high-end performance at an affordable price, says the co. The printer can be equipped with an optional external Ethernet device to enable remote changeovers and centralized control of multiple printers via plant-wide networks.
Norwood Marking Systems, 800/626-3464. **www.itwnorwood.com**

Tamp labeler

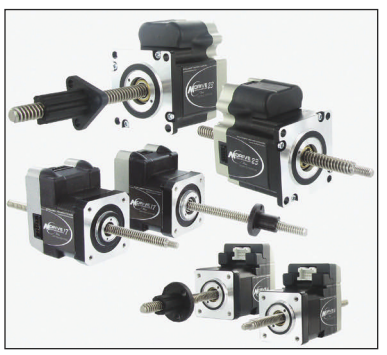
Model ST1000 label applicator is now available with a tamp application module. The labeler has a modular, simple, user-friendly design that's suitable for labeling assorted sizes and shapes of p-s labels. Top, bottom and side applications are easily accomplished with an angled U-arm for easy positioning of the applicator head to the container. With the tamp module, the labeler can be used for recessed areas, indexing lines and variable-speed lines.
ID Technology, 888/438-3242. **www.idtechnology.com**

Ink-jet printer

The SQ/2 Scorpion ink-jet printer is said to offer more versatility for printing high quality marks on a variety of products at a cost-effective price, the co. states. The printer is available as a water-based system for porous surfaces such as corrugated cases, or as a solvent-based system for printing nonporous products like plastics, metals, stretch films and coated corrugated, the co. says The SQ/2 Scorpion prints with two single-line printheads, or one Series 1600 printhead for bold, full character sizes and split-line capability from a single printhead. Whether users need separate printheads to print messages on two sides of a container, or a single printhead to print split-line small characters and/or bold characters on one side of a container, the printing system provides a flexible solution.
Squid Ink Mfg., 763/398-1735. **www.squidink.com**

Linear actuators

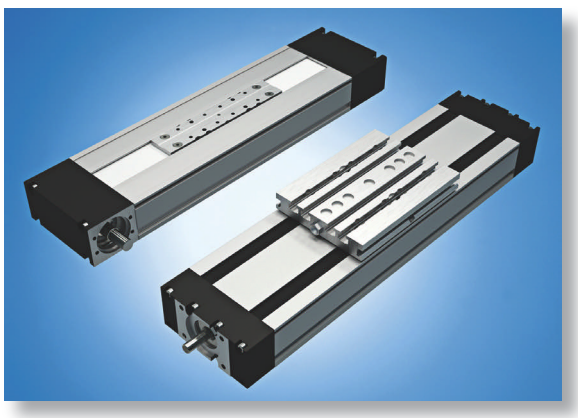
MDrive linear actuators are available in noncaptive and external shaft styles with a choice of three NEMA motor sizes (14, 17 and 23). The actuators have an input voltage range from +12 up to +75 VDC, nominal load limits of up to 200 lbs, and are capable of full microstepping with an operating range of –40 to +85 deg C for long life and trouble-free service in demanding environments, says the co.



Intelligent Motion Systems Inc., 860/295-6102. **www.imshome.com**

Compact modules CKK and CKR compact modules are now available in size 9-70 to simplify the handling of lighter loads in pick-and-place, assembly and other automated applications. Users can choose between ball-screw (CKK) and toothed-belt (CKR) versions with identical connection dimensions, common accessories and mounting components. The ready-to-install linear modules ship in customer-specified lengths cut to the millimeter: Up to 600 mm for the ball-screw version and 1,500 mm for the toothed-belt model. Each compact module consists of a rigid, 70x32-mm aluminum housing, including the carriage plate. Two ball-rail systems feature smooth, precision guidance-even at fast travel speeds, says the co.

Bosch Rexroth, 847/645-3728.
www.boschrexroth-us.com



Tray sealer QX-Series tray sealers apply hermetic seals to many tray shapes and sizes, with models available for medium-speed, manual loading and models for fully automated sealing at up to 200 trays/min. The sealers can also be configured for gas flushing, vacuum gassing and seal-only operations. Tooling can be exchanged in minutes. An intelligent tool function automatically recognizes the correct tooling for each product preset to further speed changeovers. Maximum production time is assured with a redundant cutting and heating tools, the co. reports. Conveyors and belts can be removed without using tools. To simplify sanitation, the tray sealer is self-draining and has no inaccessible surfaces.

Heat and Control Inc., 800/227-5980.
www.heatandcontrol.com

Case packer Model 800T case packer incorporates a case magazine, KD feed and servo-controlled product loading to ensure efficient packing. The floor-level case magazine allows a line attendant to load large case blanks without lifting. Cases feed from the top of the stack, fed by a combination gripper and slidebar system that stabilizes large cases as they feed the packer. A mechanical case-opening device utilizes multiple grippers to open each case and square it prior to packing. Products are precisely packed by the servo-controlled loading ram and guided into the case by stainless-steel packing funnels that protect exterior graphics and shrink wraps. Cases may be sealed with tape or hot melt adhesive.

A-B-C Packaging Machine Corp., 800/237-5975. **www.abcpackaging.com**

Dumper The TIP-TITE™ dumper accommodates gaylords and other boxes, including truncated corner boxes, from 36 to 48 in. in length and 39 to 44 in. in overall height. The container platform is raised by a single hydraulic cylinder, creating a dust-tight seal between the top edge of a box (or rim of a drum) and the underside of the containment hood. Twin hydraulic cylinders then pivot the platform-hood assembly, with the container intact, to either 45, 60 or 90 deg beyond horizontal, including a motion-dampening feature at the termination of container rotation. An optional, gasketted, top discharge gate, actuated by twin pneumatic cylinders, provides a large opening with a chute for the passage of non-free-flowing bulk solids that may otherwise bridge across smaller openings, and the gate allows control of the material discharge. The dumper can be constructed of stainless steel for food, dairy, pharmaceutical or industrial applications (shown), and of mild steel with durable industrial coatings.

Flexicon Corp., 888/353-9426. **www.flexicon.com**

new products equipment

Wrapper The Delta FLOBAG wrapping machine is designed to replace premade heat-shrinkable bags used in meat and cheese industries. The hygienic design combines a robust and reliable long-dwell sealing head to produce hermetic seals at speeds of 60 packs/min while leaving one end open for vacuum packaging. A quick-change jaw-sealing system can be used with laminated films for MAP applications. The main features include PC-controlled, electronic multi-axis technology, variable cutoff length, a no-product/no-bag device, misplaced product detection and automatic size-change functions. Auto feeding systems are available.
Ilapak Inc., 215/579-2900. **www.ilapak.com**

Bag gripper An adjustable bag gripper handles a variety of applications and eliminates the need for costly custom tooling, says the co. Can be adjusted quickly and easily for different production runs using a simple handwheel. The gripper works with plastic, woven cloth and paper bags containing heavy products including grain, chemicals, petfood, minerals and resin. The gripper uses stainless-steel fingers for both strength and their ability to withstand harsh manufacturing environments. A decker mechanism facilitates accurate bag drop once the bag is positioned over a pallet, which is crucial for a tightly packed pallet. In less than 30 sec, the bag width can be changed from 12 to 21 in., the co. says.
SAS Automation, 937/372-5255.
www.sasgripper.com

Seed counter The "SEED CALC" counter is designed with seed-count packaging trends in mind. It calculates the correct target weight in open-mouth bags with various seed counts including the popular 120,000 or 140,000 seeds. The operator can enter the variables into the TE-100 controller, and the scale will automatically set the target weight and set points accordingly. The three entries required are Sample Seed Count, Sample Weight and Seeds Per Bag. The data are converted by the T-4000 controller into the proper weight needed for the given parameters. For example, a 1-lb sample contains 2,700 seeds. If the required seed count in the bag were 140,000, the TE-100 would automatically set the target weight at 51.85 lb. The operator can manually input the setpoints at any time if the "seed calc" operation mode is not required.
Taylor Products, 888/882-9567.
www.magnumsystems.com

Label applicator The ST-2650 stretch-sleeve label aplicator applies LDPE sleeve labels to 80 containers/min. The label applicator's built-in intelligence and three axis electronic servo-motion controls achieve a "one-cycle" changeover rate. Operators enter a new speed and/or a new label release height on a color touchscreen interface panel, and the label applicator automatically adjusts for the new parameters within one cycle. This unit is designed for high-throughput labeling of bottles, jugs and other containers up to 5-L in capacity. Features of the machine include identification of I/O status and fault history on the maintenance screen of the operator panel, as well as valves and sensors that can be changed without having to open the electrical panel door where quick connect cabling is housed.
Axon Corp., 800/598-8601.
www.axoncorp.com

October 31–
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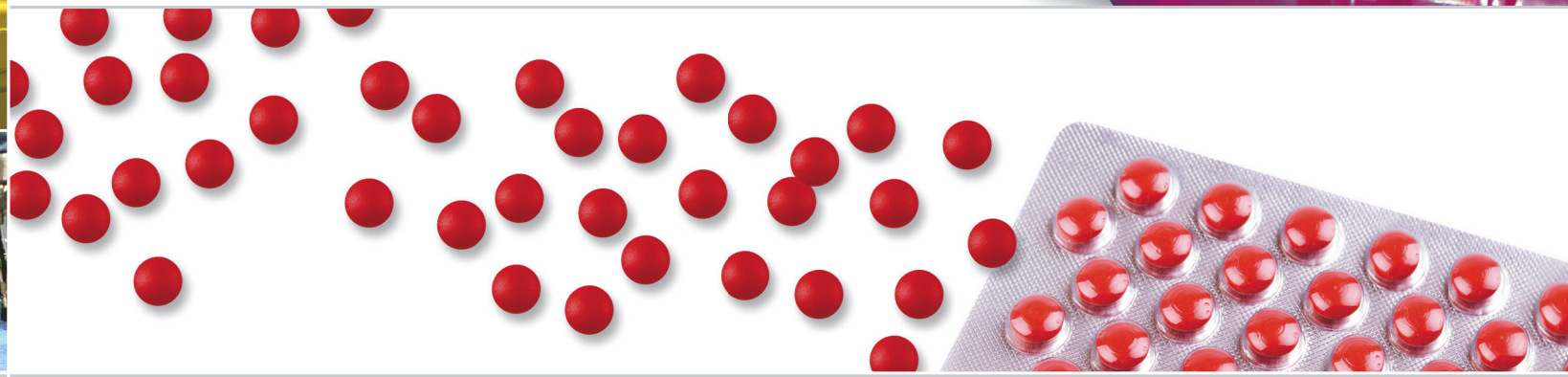

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Flexible Packaging

Wine pouch The BarrelPaq™ double-gusseted standup pouch takes the bag-in-box concept to a new level, the co. reports. FlexSource™ USA, CLP Packaging Solutions and ITW Fastex have developed a patented pouch structure featuring a specialized ITW tap. Available in 1.5-, 2-, 3-, 4- and 5-L capacities, the pouch eliminates the outer paperboard box and uses a high-barrier performance laminate, with or without foil in its composition. Offers sturdy dispensing performance and comes with a choice of assorted high-performance taps, including ITW's Tru-seal® and Unitap® fitments. Can be filled on standard bag-in-box packaging lines, or single-, dual- and four-lane fill-tap machines supplied by PSG ABT by Abtech. Inhibits bacteria and infestation and can be retorted and aseptically packaged.
PPI Technologies Group, 941/359-6678. **www.ppitechnologies.com**

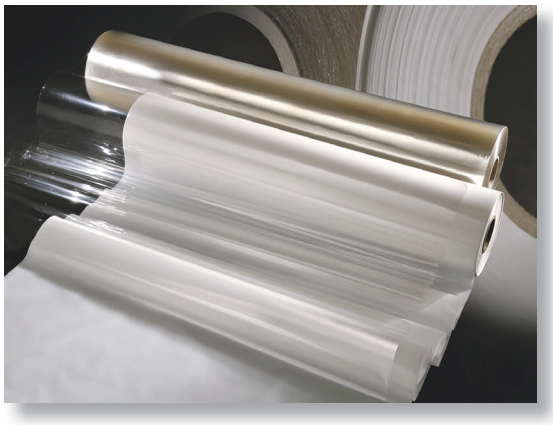
PETG film NeoAffinia™ PETG, a new film introduced for shrink-sleeve label applications, has a distinctive matte finish, providing a soft and velvety touch. Labels made from it present a differentiated, natural look on the store shelf. The white film also provides superior light-barrier protection for products that are negatively impacted by exposure to light. With a light barrier provided by the shrink sleeve label, it creates the opportunity for marketers and manufacturers to consider replacing more expensive multilayer films or pigmented containers. Furthermore, the product boasts a 70-percent-plus shrinkage rate, which makes it well suited for highly contoured containers.
Printpack Inc., 516/935-3965.
www.printpack.com

Rollstock Flavorseal® rollstock maintains a consistent thickness even after the pocket is formed, making it suitable for preserving quality in fresh and processed meats, cheeses, poultry and frozen fish, the co. states. Superior sealability means faster production times and less product waste. Processors can fill more packages/min, dramatically reducing unit costs vs. filling individual bags. In addition, the films are compatible with all major roll stock packaging machines and are compliant with FDA and USDA regulations and recommendations.
CMS, 866/769-1500.
www.cmsflavorseal.com

Ovenable bag Oven Ease™ ovenable bag for bone-in or boneless products such as ribs, roasts, whole turkeys, roasters and hams is available in widths from 8 to 16 in. The ovenable bag allows preseasoned items to be cooked inside the same material in which they're packaged, reducing prep time, cleanup time and, in some cases, cooking time. The ovenable package can be used with cook-from-raw or reheat applications. Withstanding temperatures of up to 400 deg F for 2 hr or 375 deg F for 4 hr, the bags can cook a rack of ribs in about 1hr and a whole roaster in 1.5 hr, according to the co. The ovenable bag is vacuum-packed, so it's freezer-ready.
Cryovac, 800/845-3456.
www.cryovac.com

Stretch film High-gloss Trayloc™ AF film is engineered to bead moisture so packages stay clear of condensation, creating a more appetizing product presentation. Package appearance is further enhanced by the film's low shrink-initiation temperature, which helps create a skintight fit with no crow's feet or dog-ears. The film has excellent stretch recovery to maintain a tight, attractive, protective package throughout distribution and the film won't become brittle with age and is printable for high-impact shelf appeal without labels, sleeves or bands, the co. says.
Bemis Clysar, 888/425-9727.
www.clysar.com

Filter film UV filter film, normally used in the packaging of luxury foods that can suffer UV discoloration, is helping scientists from Halle University in Germany to measure the effects of climate change in one of the world's most northerly regions. The scientists' study of algae and plankton in ponds in Lapland is tracing the effects of UV radiation caused by a hole in the arctic ozone layer. The UV filter film is used by packaging technologists as a transparent window material for cartons of delicate products such as white chocolate and seafood, which can be affected by discoloration when exposed to bright light in the retail environment. The cellulose acetate films for labels, carton windows and print laminations are also biodegradable and compostable and are made of woodpulp from sustainable sources.
Clarifoil, 44 0 1332 681 835.
www.clarifoil.com



MAP packaging Modified atmosphere packaging (MAP) increases the shelf life of fresh and refrigerated food products, the co. states. For perishable food in particular, shelf-life can have a great influence on value. The growth in markets such as healthy foods and snacks has driven the requirement for both attractive presentation and extended shelf life for products such as organic fruit, vegetables, nuts, dried fruit and cereals. The freshness of these products is largely determined by air-ventilation and the preservation of humidity within the packaging. To achieve this, a series of precise and consistent perforations are produced using a laser. Multi-chamber trays used for multi-component snacks require perforating differently, to optimize the storage life of the ingredients within that particular chamber.
Rofin-Baasel, 44 0 1327 701 100. **www.rofin.co.uk**

Shrink labels Full-body shrink labels manufactured with the co.'s Embrace™ copolyesters can maximize marketing messages at the point-of-purchase. By investing in packaging with 360-deg graphics, packagers can reduce marketing and advertising costs. The labels offer eco-friendliness and tamper-evidence and enable brands to utilize a package's entire surface area to promote the benefits of a product and enhance shelf-impact. The co says that the copolyesters provide numerous design options and can be printed with thermochromatic, metallic and glow-in-the-dark inks.
Eastman Chemical Co., 423/229-4229. **www.eastman.com**

Barrier film New FeatherWeight™ barrier film provides sustainability advantages in cereal, snack, baking mix and other high-barrier applications, the co. reports. The film uses less plastic resin, energy and landfill space while processors benefit from freight savings and reduced operation costs due to fewer roll changes. The barrier film also offers machinability and puncture-resistance and can run on existing machinery. The lightweight film also delivers an easy-open seal and high clarity that reveals the product inside.
Alcan Packaging, 773/339-8583. **www.featherweightfilm.com**

Beer is golden at **Boulevard Brewing**

State-of-the art, 500 bottle/min packaging line at **BOULEVARD BREWING CO.** runs a new 16-oz aluminum bottle of unfiltered wheat beer, as well as a range of other brews in Heritage and longneck glass bottles.

After being washed in a 60-valve rinser, bottles enter a 78-valve filler, top. The last item in the monobloc system is a 13-head crowner. Rinsing solution discharges from the inverted bottles in the rinser, below.

Jack Mans, Plant Operations Editor

Founded in 1989, Boulevard Brewing, Kansas City, MO, has grown to be the largest craft brewer in the Midwest, with a capacity of 140,000 barrels in 2009. The company completed a new brewhouse facility in 2006 and installed a state-of-the-art, $6-million bottling line in 2008.

"Our intent for the new line was to work more efficiently, improve quality and possess the flexibility needed for future projects like the new aluminum bottles," says Jeremy Ragonese, director of marketing.

The company produces a variety of craft beers, but its specialty is unfiltered wheat beer, which, along with its flagship offering, pale ale, comprises more than 80 percent of Boulevard's sales. Boulevard runs its new 16-oz aluminum bottles of unfiltered wheat beer (see the accompanying sidebar), which it introduced in 2009, as well as its other brews in its longstanding Heritage glass bottles and its relatively new longneck glass bottles on the new line.

Boulevard employs a time-honored technique known as bottle conditioning to help its beers taste fresher, better, longer. Once it has brewed, fermented and filtered the beer as usual, Boulevard then adds a small amount of yeast to the beer just before bottling. The packaged beer is then transferred to a temperature-controlled warehouse, where it is held for two weeks to allow a secondary fermentation to take place in the bottle.

This secondary fermentation consumes much of the residual oxygen, greatly enhancing the stability and longevity of the beer and producing a depth of flavor.

Continued on page 20

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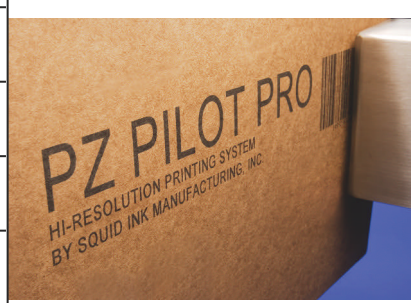
Back-up ink suppy	YES	NO
Print height	2.1"	2.1"
Print resolution	180 dpi	180 dpi
Remote printhead option	YES	NO
Compressed air requirement	NO	YES (90 psi)



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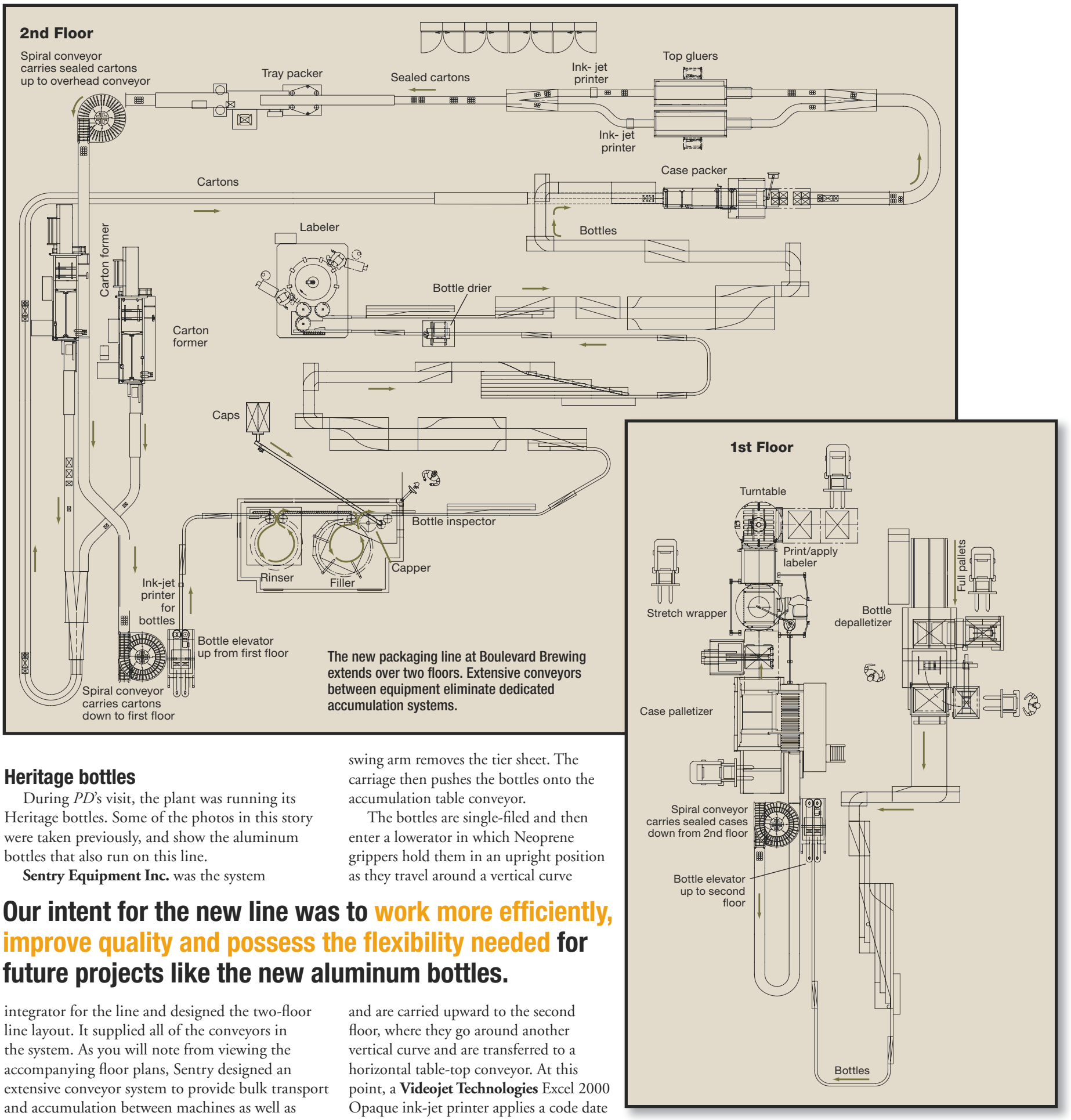

The new packaging line at Boulevard Brewing extends over two floors. Extensive conveyors between equipment eliminate dedicated accumulation systems.

Heritage bottles

During *PD*'s visit, the plant was running its Heritage bottles. Some of the photos in this story were taken previously, and show the aluminum bottles that also run on this line.

Sentry Equipment Inc. was the system integrator for the line and designed the two-floor line layout. It supplied all of the conveyors in the system. As you will note from viewing the accompanying floor plans, Sentry designed an extensive conveyor system to provide bulk transport and accumulation between machines as well as single-filing the bottles when necessary. The bulk conveyors provided enough bottle accumulation that separate accumulation equipment was not required.

Our intent for the new line was to work more efficiently, improve quality and possess the flexibility needed for future projects like the new aluminum bottles.

The bottles, which are received stacked eight-layers high on pallets, are depalletized, one layer at a time, by a machine from Sentry. The glass bottles are supplied by **Saint Gobain** and the aluminum bottles are supplied by **Exal Corp.** A pallet of bottles is placed on the infeed conveyor and moved into the depalletizing zone. Once the pallet is in the static position, each layer is removed by the robotic carriage and placed at the bottle-conveyor level, where the swing arm removes the tier sheet. The carriage then pushes the bottles onto the accumulation table conveyor.

The bottles are single-filed and then enter a lowerator in which Neoprene grippers hold them in an upright position as they travel around a vertical curve and are carried upward to the second floor, where they go around another vertical curve and are transferred to a horizontal table-top conveyor. At this point, a **Videojet Technologies** Excel 2000 Opaque ink-jet printer applies a code date to the shoulders of the bottles.

Monobloc rinser/filler/crowner

The bottles then enter a monobloc system from **Krones** consisting of a 60-valve Variojet rinser for treating the nonreturnable bottles, a 78-valve Mecafill VKPV counter-pressure filler and a 13-head crowner. Bottles are transferred into the rinser by a screw and infeed starwheel where plastic clamps developed especially for the rinser firmly hold the bottles at the bottle neck and the body.

As the turret rotates, the containers are swung upwards through 180deg, after which spraying nozzles positioned directly underneath the neck finish injecting the rinsing medium into the bottles. The bottles are then returned to the upright position and are transferred through the discharge starwheel onto the conveyor. A screw mounted beside the conveyor maintains the precise spacing of the bottles as they travel to the filler, where they enter through another infeed starwheel.

With the new Krones bottling line, the brewery revamped its technology. Before being fed to the bottling line, the beer is warmed up in a flash pasteurizer, yeast and sugar are added in the pipe

Continued on page 22

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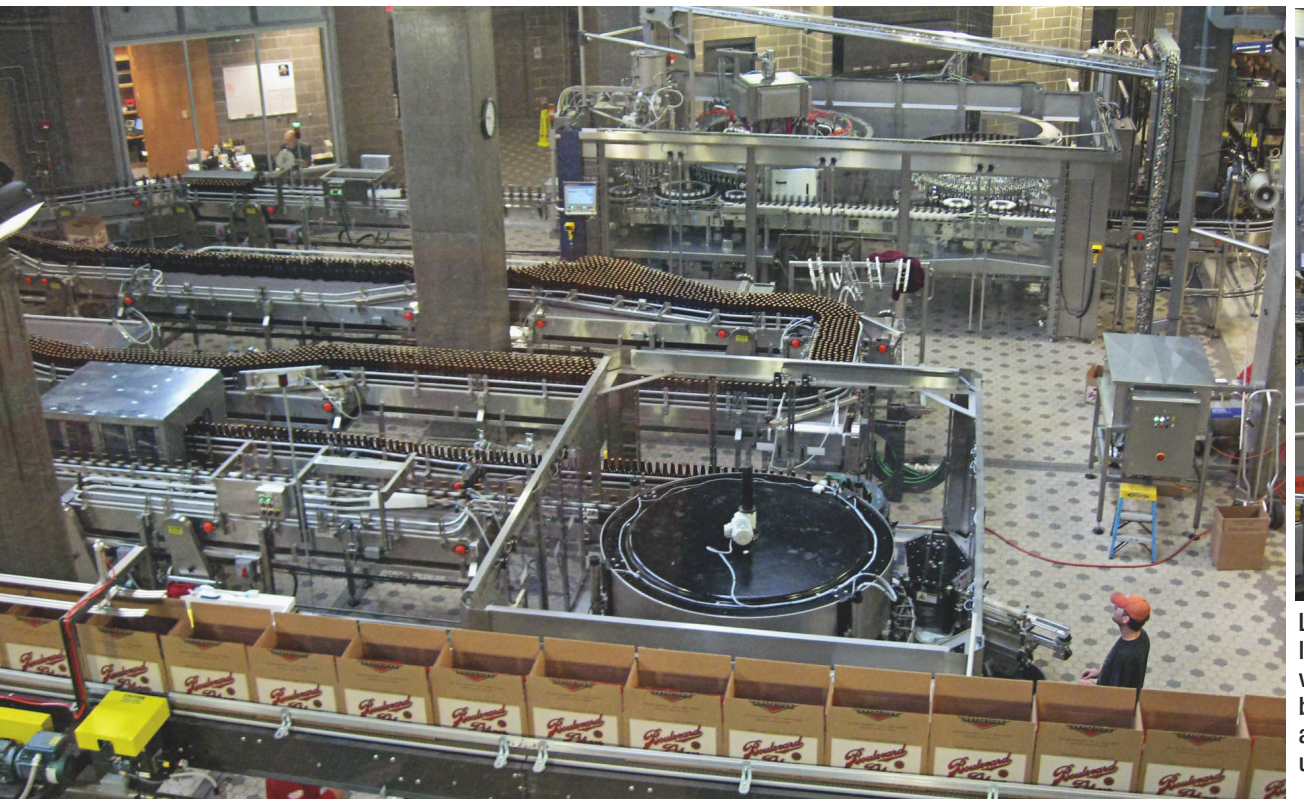

Left, view of the second-floor equipment looking from the labeler (bottom) to the rinser/filler/crowner (top). Note the varying bottle density on the conveyors as they go from bulk transport to single filing.The three-station labeler, above, applies front, back and neck labels. An inspection unit after the filler checks the fill level in the bottles.

to the filler, and the beer is filled warm at about 68 deg F. This warm-filling produces a higher carbon-dioxide content, post-fermentation begins earlier and the duration of in-bottle fermentation is thus shortened by two to three days.

The Krones Mecafill is an electro-pneumatic filling system that integrates a vacuum feature that enables double pre-evacuation of the bottles, thus assuring low oxygen pickup during the beerbottling operation. As a bottle enters the rotating turret, the pneumatic lifting cylinder presses it onto the filling valve until a gas-tight seal is formed.

This connects the bottle to the ring bowl. In this position, the gas needle and the product stem in the filling valve are closed. Following an electronic pulse, the vacuum valve opens and draws a vacuum that reduces the percentage of air in the bottle to about 10 percent.

The pneumatically controlled gas needle then opens the connection to the ring bowl and carbon dioxide flows into the bottle, after which the pneumatically-controlled vacuum valve opens again, producing another vacuum within the bottle. This reduces the air concentration in the bottle to approximately 1 percent.

The gas needle then opens and admits the gas

mixture from the ring bowl, through the vent tube, into the bottle. As soon as the pressures in the bottle and the ring bowl are equal, the product stem opens and filling begins. The product flows along the vent tube into the bottle, and a small spreader mounted on the vent tube guides the liquid to the bottle's inner sidewall, thus ensuring a gentle product flow.

After a short settling phase, the snifting valve opens the connection to the clean-in-place channel which allows the pressure in the bottle to equalize with the outside atmospheric pressure, after which the bottle is lowered and transferred to the discharge starwheel.

The Mecafill VKP filler can be cleaned-in-place by placing cups on the lifting unit so they are pressed onto the filling valves. This results in a closed circuit through which the cleaning solution can flow into the ring bowl, the centering bell and through the open snifting and vacuum valves.

Bottles leaving the filler travel onto an infeed starwheel that delivers them into the crowner. Crowns are dumped into a floor hopper, travel up a magnetic elevator to an overhead sorter/feeder. The crowns then travel down a chute to a transfer plate where they are precisely centered on the mouth of the bottle. A bottleneck centering system for the bottles entering the crowner ensures that even bottles with inaccurate dimensions are reliably sealed. The crowns are positioned on the crowning head, which lowers as the crowner rotates, until the closing ring presses it onto the bottle mouth. When the crown is secured, the lifting cam raises the crowning head, and the bottle discharges from the

Aluminum beer bottle wins award

In the spring of 2009, Boulevard Brewing introduced its top-selling, unfiltered wheat beer in a spectacular 16-oz aluminum bottle from Exal Corp. The new bottle is particularly aimed at venues that do not allow glass, such as golf courses, swimming pools, sporting events and the like.

"If you're out mowing the lawn, out at the golf course or at the pool where you can't have glass, you can now drink Boulevard unfiltered wheat beer in an aluminum bottle," says John McDonald, Boulevard's founder and president. McDonald says the idea came from one of the early designs for a beer can, called a conetop. He said it was designed to fit on the same equipment that runs glass bottles, which made it attractive to Boulevard because the company had recently installed a $6-million bottling line.

Exal received the 2009 "Best In Category" Quality Award for Excellence in Metal Decorating from the International Metal Decorators Association (IMDA) for Boulevard's aluminum bottle. Competing in the Miscellaneous Products category, the container Exal developed for Boulevard Brewing's unfiltered wheat beer was the only aluminum bottle package to be honored at the IMDA annual convention held in Chicago last May.

Unique in its innovative design and bold graphics, the 66-mm impact-extruded aluminum container is a recyclable aluminum bottle that features a distinct neck profile topped with a crown finish, a closure initially used exclusively with glass. Exal applies a food-grade, modified white epoxy coat to the interior of the bottle and bakes it on.

Next it applies the opaque yellow coating to the outside of the bottle followed by the remaining graphics and printing on an 8-color offset press. The complete image is applied to a blanket that applies it to the bottle, which is then cured to cross-link the coatings. Finally, an over-varnish is applied.

The cartons are conveyed to the high-level infeed of a palletizer, top. After each layer of cases is placed on the pallet, the pallet lowers. When the pallet is filled, it discharges from the machine at floor-level. A print-and-apply labeler applies a label to each pallet load.

machine through a starwheel.

The bottles travel through a Krones Checkmat inspection system to check fill levels before being conveyed to a Krones Topmatic cold-glue labeler with 36 bottle plates. This is one of the areas where Boulevard uses a long, serpentine conveyor to provide accumulation capacity. The conveyor is initially a bulk configuration, but it narrows down to single file as it nears the labeler. The bottles travel through a drier just ahead of the labeler to augment label adhesion.

Three-station labeler

A feedscrew maintains bottle separation and meters the bottles into the labeler's infeed starwheel, which, in turn, transfers the containers to the revolving container table, where a centering bell descends to hold the bottle in place as the label is applied. The unit is equipped with three labeling stations to apply front, back and neck labels. The rubber-coated glue pallet in each labeling station is given a very thin film of glue from a gluing roller made of hardened steel.

The pallet picks up a label from a magazine, applies a film of glue to the label and then transfers the label to the gripper cylinder, which places the label precisely on a container as it passes by on the container table. The label is held in place on the container while being smoothed out with a brush and sponged roller. The labeled containers travel through a discharge starwheel onto the conveyor. The Topmatic labeler can be equipped with up to four labeling stations, each capable of attaching two or more labels. The labels are supplied by **Mainline Printing**.

After traveling another serpentine route, the bottles enter a Model Versatron case packer from **Standard-Knapp**. The bottles enter the case packer in bulk and oscillators direct them into lanes separated by lane guides. The bottles then move onto a dead plate, where they are stopped and timed by overhead brakes, which release each group of bottles onto riding strips.

When the riding strips are full and a case is in place, sensors shift the riding strips, allowing the bottles to funnel down through grid fingers and drop into a case. To minimize bottle shock as the bottles drop into the

Continued on page 24

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Workshops – Monday, March 15, 2010
Conference – Tuesday, March 16 - Wednesday, March 17, 2010
Rosen Plaza Hotel, Orlando, FL

www.sustainability-in-packaging.com

Strategies to keep sustainability sustainable

These days it seems that the word "sustainability" follows us from company meetings, to stores, to our homes, and is applied to everything from economics to product choices to agriculture. Looking through the buzz and media hype, it is undeniable that corporate social responsibility is inextricably linked to corporations' brand identity and reputations. When it comes to packaging, sustainability is an integral part of innovation, not a new and passing trend. Whether it is cost-cutting, capturing a new consumer trend, perfecting performance or building a brand, sustainability needs to be weaved into your packaging decisions.

Over the last three years, the **Sustainability in Packaging** conference has grown and continues to reflect and examine the current trends and provide the most up-to-date information. Since its inception, the conference has attracted a great diversity of companies and delegates representing the entire packaging supply chain. The structure of plenary sessions followed by topic specific tracks allows delegates to tailor the program to your needs, covering topics ranging from strategic sustainability goals, materials, innovative design solutions, supply chain synergies, waste management and recycling to brand image and communication with customers and partners.

The 4th annual **Sustainability in Packaging 2010** will be the forum to share ideas, learn from successes and challenges, get inspired, create partnerships and continue the dialogue with the industry colleagues about the collective sustainability challenge. Use this opportunity to create a custom agenda and learn from leaders in the industry, who will cover a wide breadth of topics and present real-life case studies.

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WORKSHOPS – MONDAY, MARCH 15, 2010

LCA Analysis

Workshop 1 – Monday, March 15, 8:30 am – 12:00 pm (separate fee required)

Join this interactive workshop to explore the practice of LCA, defining goals and scope, doing life cycle inventory and interpreting results.

Including presentations from Franklin Associates, a Division of ERG, EarthShift, Ciba Expert Services
More details to follow

Packaging Your Sustainability Strategy

Workshop 2 – Monday, March 15, 1:00 pm – 4:00pm *(separate fee required)*

This interactive workshop will demonstrate the benefits of an integrated approach to sustainability strategy. After a brief overview of market forces driving sustainability and a scan of leading best practices in sustainability strategy, participants will engage in a series of interactive exercises specifically designed to:

- Identify key stakeholders groups who can help or hinder their strategy
- Help align core business drivers and sustainability opportunities
- Build awareness of the importance of target-setting and reporting
- Drive buy-in from both management peers and direct reports

Participants will gain an appreciation for how disparate CSR initiatives can be strengthened, reinforced and even reinvigorated through an integrative and holistic approach to strategy development and deployment.

social media spotlight
Sustainability in Packaging LinkedIn Group:
www.tinyurl.com/sustpackLI
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CONFERENCE AGENDA – TUESDAY, MARCH 16, 2010 - WEDNESDAY, MARCH 17, 2010

DAY 1

7:30 Registration and morning refreshments

8:00 Opening remarks
Olga Adamovich, Conference Director, PIRA
John Kalkowski, Editorial Director, PACKAGING DIGEST & CONVERTING

8:15 KEYNOTE
David Yarnold, Executive Director, ENVIRONMENTAL DEFENSE FUND

8:45 **The global packaging and sustainability accord**
- Why brand owners and retailers established one global framework
- Common principles and definitions
- Indicators and metrics for packaging and sustainability
- The Consumer Goods Forum business case for the project

Julian Carroll, Managing Director, EUROPEN

9:15 **Sustainable packaging indicators and metrics framework**
- Trends driving the proliferation of packaging metrics
- Unique challenges of measuring packaging sustainability
- Developing a common set of metrics
- Using the metrics and measuring progress

Katherine O'Dea, Senior Fellow, SUSTAINABLE PACKAGING COALITION

9: 45 **Living in an "eco-friendly" world: Negotiating the fine lines between "green" packaging claims and verification**
- Wading through the language to get to what's really being claimed
- Creating a system for verification of claims
- Legitimate vs. non-legitimate certifications and verification
- Achieving "buy-in" from your purchasing teams

Lee Kane, EcoCzar, WHOLE FOODS MARKETS

10:15 Networking break

10:45 **Brand owner's perspective: Morton Salt**
- How to achieve sustainable benefits economically
- Grab the low hanging fruit
- Understanding your products/targets/supply chain
- Benefits that the consumer understands

Thomas Oris, Procurement Manager, MORTON SALT

11:15 PANEL DISCUSSION
Extended producer responsibility
Moderator: **Victor Bell, President, EPI**
Panel members:
1. **Scott Vitters, Director Sustainable Packaging, THE COCA-COLA COMPANY**
2. **Peter Skubna, Manager, Environmental Affairs, THE HUDSON BAY COMPANY**
3. **Garth Hickle, Product Stewardship Team Leader, MINNESOTA POLUTION CONTROL AGENCY**
4. **Derek Stephenson, President, STEWARDEDGE, INC.**

12:15 Lunch will be served for speakers and delegates

	Materials & Design: Update on Bioplastics	Branding and sustainability /Recycling and Waste Management	Looking Beyond Packaging
1:30	Opening remarks from the chair **Andy Sweetman, Business Development and Sustainability Manager, INNOVIA FILMS UK** **Chairman, EUROPEAN BIOPLASTICS ASSOCIATION**	Opening remarks from the chair **John Kalkowski, Editorial Director, PACKAGING DIGEST & CONVERTING**	Opening remarks from the chair **Paul Siracusa, Executive VP, CHURCH & DWIGHT CO., INC.**
1:40	**The A, B, C's of biodegradable plastic** • Defining biodegradable, compostable, and degradable plastics • The four major ASTM certifications for plastics and what do they mean **Leslie Harty, President, MAVERICK ENTERPRISES**	**Customer involvement is key to sustainable practices** • Internal viewpoints vs. customer demands • The value of visits • Organizing activity the easy way • Simple steps, big results **David Martin, Packaging and Product Engineering Lead, HERMAN MILLER INC**	**Strategic evolution: Moving beyond being less bad** **Nina Goodrich, Director Sustainnovation, ALCAN PACKAGING**
2:10	**Bioplastics in flexible packaging - The pro's & con's versus conventional plastics** • An holistic approach to sustainability in packaging • Bioplastic packaging materials • The pro's and con's - Environmental, technical and commercial **Andy Sweetman, Business Development and Sustainability Manager, INNOVIA FILMS UK** **Chairman, EUROPEAN BIOPLASTICS ASSOCIATION**	**Sustainability without sacrifice** • What is important to consumers from a sustainability stand point nowadays • How do eco-trends impact business objectives • How sustainable packaging fits into the context • What is Tetra Pak doing in light of all this? **Carla Fantoni, Vice President, Communications U.S. & Canada, TETRA PAK, INC. USA**	**Metrics for sustainability** **Denise Lefabvre, Director Packaging and Equipment Development, PEPSICO, INC.**
2:40	**Challenges and opportunities for bio-based and biodegradable packaging** • Growing interest in bio-based and biodegradable packaging • Latest trends and how industry is responding • Use of bio-based materials as part of the solution to environmental concerns • Reality of current infrastructure **Robert E. Hogan, Global Marketing Director, ZIP-PAK**	**Making it real: Understanding product packaging's impact on the green market place and capitalizing on opportunity** • The realities and rational behind what consumers think and believe about product packaging relative to health, sustainability and green-oriented marketing claims • Overview of demographic segments and their response to marketing messages • Avoiding "greenwashing" backlash **Suzanne Shelton, President & CEO, SHELTON GROUP**	**How to create sustainable value by preventing waste** • Use of life cycle thinking to reduce overall impacts • Packaging innovations that prevent waste in the value chain • Making the linkage between packaging, value and sustainability **Dr. Ron Cotterman, Executive Director, Sustainability, SEALED AIR CORPORATION**
3:10	Networking Break	Networking Break	Networking Break
3:40	**Brand owner's perspective on bioplastics** **Speaker TBC**	**Reinvigorating recycling** • Waste Management perspectives on recycling • Recycling trends, opportunities, and challenges • Consumer and product oriented recycling innovations **Paul Lignon, WASTE MANAGEMENT GREEN OPS**	**EPR, the Canadian way, threat or opportunity** • The history of extended producer responsibility in Canada • The proposed Ontario legislation • The producers' reaction **James Downham, President & CEO, PACKAGING ASSOCIATION OF CANADA**
4:10	**Novamont's New Biorefinery** • The 2nd generation Mater Bi • Retail, packaging and shopping bags • New Developments: Coatings,Lamination and Multylayer structures **Stefano Facco, Director Business Development, NOVAMONT SPA**	**The environmental impact of plastics recycling** • Using LCA to evaluate environmental impacts • Using LCA to measure impacts of recycled HDPE, LDPE, LLDPE, PS and PE **Speaker TBC**	**Certification and compliance** **Speaker TBC**
4:40	**How to avoid confusion in biopackaging waste management** • Evolving US marketplace and value chain • Standards & certification – US and global • Opportunities and challenges **Norma McDonald, NA Sales Manager, ORGANIC WASTE SYSTEMS, INC.**	**Speaker TBC**	**Water Sustainability** **Speaker TBC**
5:10	Panel discussion with speakers from this session	Panel discussion with speakers from this session	Panel discussion with speakers from this session
5:40	**Networking reception for conference participants**		

DAY 2

	Materials & Design	Supply Chain Sustainability
8:00	Opening remarks from the session chair **Simon Smith, Sr. Consultant, Business Intelligence, PIRA INTERNATIONAL**	Opening remarks from the session chair **Michael Rubenstein, Chief Growth and Innovation Officer, ALCAN PACKAGING**
8:05	**Sustainability as a team sport, and not a spectator sport** • Collaboration within the outdoor & cycling industries • Aligning our behaviour with our corporate core purpose • Re-thinking packaging design **Eric Abraham, Packaging Manager, RECREATIONAL EQUIPMENT INC. (REI)**	**Sustainability in the grocery aisle** **Speaker TBC**
8:35	**Case study: Sustainable packaging in the office furniture industry** • Understanding the impacts of a product lifecycle using Life Cycle Assessment • Reducing the carbon footprint of a delivered product • The ultimate goal of sustainable packaging design **Mark Bonnema, Principal Sustainability Engineer, Packaging Engineering Manager, HAWORTH INC.**	**What are the challenges matching retailers' needs and the offers from vendors?** **Rosalyn Bandy, Sustainability Manager, DAYMON WORLDWIDE**

9:05	**A multidimensional approach to package sustainability**
	• Creating effective and sustainable solutions
	• Metal packaging case studies:
	  • Reducing carbon footprint
	  • Economic success through self-differentiation and value-added features on retail shelf
	  • Satisfying social needs
	Daniel Abramowicz, EVP Technology and Regulatory Affairs, CROWN HOLDINGS, INC.
		Case study: Sustainability in the Crate & Barrel supply chain
		• Introduction to Crate & Barrel
		• Market conditions
		• Sustainable packaging initiatives
		• Sustainability efforts in the supply chain
		Kimberly Brining, Senior Packaging Manager, CRATE & BARREL

9:35	Networking Break	Networking Break
10:00	**The impacts and benefits of source reduction in PET packaging** • Benefits of source reduction • Critical parameters impacted by source reduction • Technologies to facilitate package lightweighting • New lightiweight package designs that meet technical and market requirements **David Clark, Global Director, Sustainability, AMCOR PET PACKAGING**	**What are your global data needs and how are you addressing them?** • Overview of the global data needs • Bills of materials • Design for environment • Internal benchmarking • Extended producer responsibility **Victor Bell, President, EPI**
10:30	**Spotlight on secondary packaging: Applying 'primary' principles to retail ready packaging** **Patrick Smorch, Director Packaging Sustainability, GEORGIA PACIFIC's INNOVATION INSTITUTE**	**Responsible fiber sourcing: Protecting forests and avoiding controversy when buying paper packaging** • Chain of custody • Avoiding controversial sources • Responsible forestry • Recycling and reduction • Forest Leadership: Stakeholder engagement, supply chain management and on the ground projects as a model for excellence in sourcing other fibers including bamboo and bio- plastics **Andrew Goldbert, Director, Corporate Engagement, DOGWOOD ALLIANCE**
11:00	**Sustainable and effective secondary packaging** **Speaker TBD, PIRA INTERNATIONAL**	**The lost link of the supply chain: How to use package converters to maximize sustainability initiatives** • Speaking different languages • Looking at practical examples • Creating collaborative solutions **Andrew Strickenburg, Sustainability Project Manager, SOUTHERN CHAMPION TRAY**
11:30	**Green labels** **Jeff Salisbury, President, LABEL IMPRESSIONS, INC**	**Greening the supply chain with process efficiency for eco-friendly packaging** • Improving process efficiency • Using operations platforms for managing manufacturing operations • Extending the platform to the supply chain **Jordan Berkley, Director of MES Product Management, APRISO CORPORATION**

12:00 Lunch will be served for speakers and delegates

1:00 **Designed to matter – Sustainable packaging**
- P&G sustainability goals for 2012
- Sustainable packaging success stories
- Sustainability toolkit for designing & developing sustainable packaging
- Future challenges to 2020

Alan Blake, Associate Director, PROCTER & GAMBLE, GLOBAL PACKAGING SUSTAINABILITY

1:30 **Adapting the Walmart Scorecard to Europe**
- Why is the Walmart packaging sustainability scorecard being changed for UK subsidiary Asda?
- What metrics are being developed and how will they affect suppliers?
- The latest sustainability thinking being built into the scorecard
- Ramifications for the US

Gary Parker, Head of Sustainability, CIBA EXPERT SERVICES

2:00 **Regulatory trends affecting sustainable packaging**
- The news affecting your package's sustainability
- Global regulatory trends related to sustainability

Suzanne Matuszewski, Manager, Global Sustainability and Regulatory Compliance, GRAHAM PACKAGING COMPANY LP

2:30 **If you don't change direction, you'll end up where you're headed: Story determines outcomes**
- Outcomes depend on systems and systems depend on stories
- Why we don't see systems or remember our stories
- Reducing unsustainability does not create sustainability
- Seven benefits of leading in a regenerative economy
- GreenOps- Toward a closed loop sustainable packaging system

Joe Laur, Senior Manager, Community Engagement and Development, GREENOPOLIS .COM

3:00 Closing remarks from the chair. Conference concludes.

Check back for future agenda updates!

For complete conference information and to register visit us online at www.sustainability-in-packaging.com

cases, a two-axis servo system allows the Versatron to actually catch the product as it descends into the case. The lift table moves the case to the up position and waits for a full grid.

When the grid is full and the riding strips shift to the side and initiate the bottle descent, the lift table simultaneously moves the case downward on a velocity curve that ultimately achieves the same speed as the bottles at the point of contact.

Cases and cartons, which are supplied by **Pratt Industries**, are formed on a CE70 erector from **Pearson Packaging Systems**. Boulevard has two of these units. Starting with corrugated blanks that are stacked on edge on the horizontal bed of the high-capacity magazine, the CE70 automatically erects and bottom seals the cases. Vacuum cups that are mounted on a traveling arm pull a blank from the magazine, rotate it 90 deg and place it into the flight lugs. It is then transferred past the flap plow, prefolding the case's bottom minor and major flaps.

A caliper-equipped pickuparm grips the major flaps and erects the case with the minor flaps prefolded. The erected case is then transferred through the glue section to the sealing section where opposing mandrels positively seal the flaps. The sealed case is discharged through an uprighting chute and dropped onto a conveyor that delivers it to the packer.

Filled cases leaving the packer travel to Pearson Model CS40G case sealers that use hotmelt glue. Boulevard runs two of these units in parallel to keep up with production. Minor flaps are folded, a **Nordson Corp.** adhesive melter applies glue to the case and then the major flaps are folded, closing the case and compressing the top to ensure secure closure. Two Linx ink-jet coders from **Diagraph, an ITW**, one after each case sealer, apply lot codes to the tops of the cases leaving the case sealers.

The cases then travel to a Standard-Knapp Traymore tray former/packer that places them in trays. Boulevard produces six- and 12-pack cases as well as a 24-bottle loose pack, and these are all packed into trays. A Diagraph IJ 3000 large-character ink-jet printer applies lot codes to the trays as they leave the packer.

The cases and trays travel up a powered spiral conveyor from **Ryson** and discharge onto a horizontal conveyor running just beneath the ceiling that carries them to the other side of the room. There, they discharge onto a spiral conveyor that carries them down to a conveyor running just beneath the ceiling of the first floor.

Palletizing and stretch wrapping

The cartons are conveyed to the high-level infeed of an Alvey A-780 palletizer from **Intelligrated**. After each layer of cases is placed on the pallet, the pallet lowers one layer. When the pallet is filled, it discharges from the machine at floor level. Particularly suited for single-line applications in the food and consumer goods industries, the A-780 utilizes high-level infeed and right-angle pattern formation to achieve outstanding pattern flexibility.

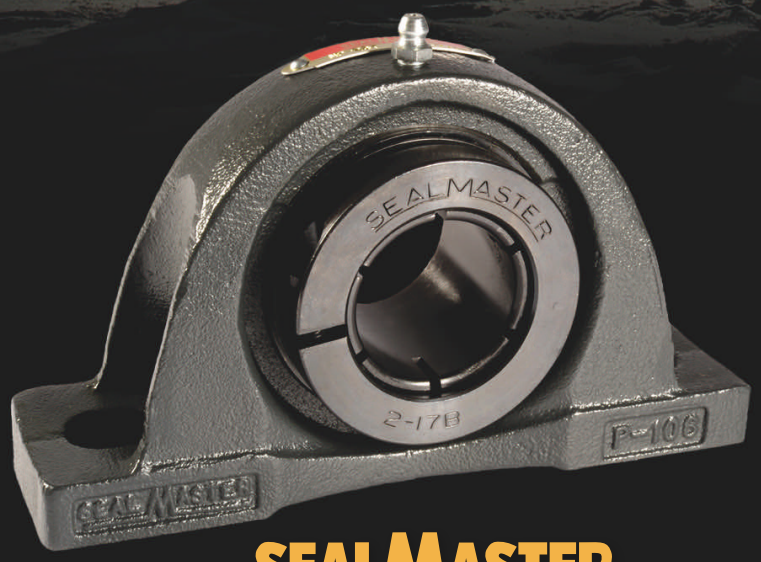
Pallet loads of product travel directly to a **Lantech** Q Series semi-automatic turntable stretch wrapper. In this operation, a roll of film is mounted on a tower. The operator attaches the free end of the film to the pallet and then triggers the operation.

The turntable rotates and pulls the film off of the roll, which moves up and down on the tower to completely encase the pallet in film. When the proper amount of film has been applied, the system stops, and the operator cuts the film and attaches the end to the pallet. As the pallet leaves the shrink wrapper, a Diagraph PA4600 labeling system prints and applies a label to the load.

"Clearly, it's been a substantial upgrade for our brewery," says Steve Mills, chief operations officer, Boulevard Brewing Co. "Our bottling line plays an integral role in delivering a beer that betters industry standards, and the gains in efficiency and flexibility will continue to pay dividends for years to come."

More information is available:

Diagraph, an ITW Co., 800/722-1125. **www.diagraph.com.**
Exal Corp., 330/744-2267. **www.exal.com.**
Intelligrated Inc., 513/701-7300. **www.intelligrated.com.**
Krones, Inc., 414/409-4000. **www.kronesusa.com.**
Lantech, 502/267-4200. **www.Lantech.com.**
Mainline Printing, 785/233-2338. **www.mainlineprinting.com.**
Nordson Corp., 770/497-3700. **www.nordsen.cocm.**
Pearson Packaging Systems, 800/732-7766. **www.pearsonpkg.com.**
Pratt Industries, 770/918-5678. **www.prattindustries.com.**
Ryson Intl. Inc., 757/898-1530. **www.ryson.com.**
Sentry Equipment Inc., 434-525-0769. **www.sentryequipment.com.**
Standard-Knapp Inc., 860/342-1100. **www.standard-knapp.com.**
Saint Gobain Containers Inc., 323/562-5100. **www.sgcontainers.com.**
Videojet Technologies Inc., 800/843-3610. **www.videojet.com.**



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The stylish PET jars feature raised images of tomatoes and their stems, below. Left, after they're hot-filled, the jars are capped on a rotary system.

Jarring improvements to pasta sauce

LiDestri Foods' new sustainable PET jar featuring **VERTICAL COMPENSATION TECHNOLOGY** is helping its Francesco Rinaldi pasta sauce fly on the packaging line and off the shelf.

Lauren R. Hartman, Senior Editor

You can't have your cake and eat it, too, right? Not necessarily, as in the case of LiDestri Foods, Fairport, NY. When LiDestri moved in July 2009 to a new, sustainable, monolayer PET jar from **Constar Intl. Inc.,** it didn't give up anything. It gained a custom, branded container design, a more consumer- and earthy-friendly package and significant production efficiencies.

Constar produces LiDestri's new Francesco Rinaldi wide-mouth, hot-fillable jars using a proprietary, recyclable PET and a two-step injection/stretch blow-molding process, coupled with trimming technology.

Considered one of the largest producers and copackers of pasta sauce, salsas and other jarred foods, LiDestri also offers Francesco Rinaldi sauces in glass and HDPE containers in various sizes in addition to the new PET jarHowever, they wanted a PET package with a rigid feel and a distinctive look. LiDestri produces more than 2 million jars of product a day at its four USDA-approved manufacturing facilities.

The company also produces beverages, spirits, infused oils, vinegars, cooking wines, syrups and jams using hot-fill, cold-fill and retort technology.

The new 45-oz jar's round shape improves production-line efficiencies.

Consumers searching for pasta sauce at the supermarket will find it difficult to resist the new look for LiDestri's 45-oz size of Francesco Rinaldi pasta sauce. More sustainable than the former PET jar with side grips, the new 45-oz hot-filled jar with a 63-mm neck finish is 8 g lighter and features a continuous circle of lifelike, plump tomatoes, dimpled at the tops and punctuated with stems, as if they were fresh-picked. These three-dimensional tomato shapes ringing the shoulder of the transparent jar are made even more lifelike by the tasty red tomato sauce inside. The heightened shelf appeal

Filled bottles exit the capper, above, and head to the labeler, which applies a one-piece wraparound label without having to be oriented, improving line efficiency and enhancing the label billboard space.

Jars emerge from the filler structurally sound, with no paneling or collapsing after hot filling and the cooling process that follows.

of the new jar is enhanced by iconic detailing in tribute to LiDestri Foods' 50-year history in the food industry. Constar used its CONSTruct™ advanced-predictive engineering software to achieve the lightweighted design. The software allows Constar to design, model and manufacture PET containers that deliver the performance desired using less material—11 percent less—in the case of the LiDestri jar.

Measurable container weight savings can be achieved for both glass-to-plastic conversions and plastic-to-plastic conversions, Constar says.

Constar creates sophisticated modeling before the packages are produced to help predict performance/points of failure, which helps avoid lesser-performing package designs.

A stock version of the jar also is available for LiDestri's private-label pasta sauces.

Constar achieves the essential rigidity needed in this case using its Vertical Compensation Technology™ (VCT), a patented design process that accommodates the initial heat of hot filling and the proceeding cooling process without paneling or collapsing. The rigidity of LiDestri's new jar is similar to glass and imparts a quality brand image, according to LiDestri.

The technology also eliminates the need for vacuum panels and provides a number of benefits in the 45-oz pasta sauce jar format, compared with LiDestri's former side-grip jar.

The wraparound label offers more billboard space for marketing and this jar can be stacked higher and reduces damage in warehousing and distribution.

It's also a monolayer structure, which eliminates the risk of delamisnation, says Suzanne Cohen, Constar's senior marketing manager,. "Delamination poses the potential for esthetic and

Continued on page 30

After the jars are capped and labeled, they are grouped in multiples of eight for tray packing, above. The Francesco Rinaldi brand of pasta sauce is the first application of the VCT technology for hot-fill foods. The round shape facilitates labeling, while the distinctive shoulder featuring the tomato design creates a signature for the brand.

performance issues," she says.

The Francesco Rinaldi jars are the first application of Constar's VCT technology for hot-fillable foods. Earlier this year, Arizona Beverage Co. commercialized the technology for a line of hot-filled, ready-to-drink beverages (see *PD*, March 2009, p. 6, or www.packagingdigest.com) in panel-less PET bottles.

Smoother labeling

Another benefit has to do with the jar's new shape. While the former side-grip jar had convenient hand holds, it created great difficulty in labeling because it wasn't symmetrical. The former side-grip shape required pressure-sensitive spot labels. LiDestri instead wanted a fully-round jar that could accept a wraparound label, which would improve production-line efficiency and eliminate the need to orient the container, says LiDestri Foods' Mark McAndrew, corporate engineering projects manager. "The new container is also made of PET, which we wanted, and the round shape improves production-line efficiencies over the former grip shape. We like the wraparound label, which offers more billboard space for marketing of the product."

Alex Fioravanti, Constar's marketing director, explains further: "The VCT technology eliminates the labeling problem, because this jar doesn't need to be oriented. The easy-to-hold feature moves up through the shoulder, which flows into the neck opening."

Front- and back-panel labeling the former jar made it difficult to align the labels and resulted in slowed labeling speeds and more waste, McAndrew says. The **Pace** orienter remains in place on the sauce packaging line because LiDestri continues to run other container sizes on the line that require orientation, he adds.

The revised jar has round, horizontal ribs and accepts a roll-fed label provided by **Fort Dearborn.** It's capped with a two-piece closure supplied by **Crown.** McAndrew says that another bonus was that the company didn't have to modify any of its existing equipment to run the new container, though it did purchase changeparts and uses a different labeler, this one being a **Krones** system.

Another bonus is improved top-load strength,

Spicing things up

LiDestri Foods and Unistel, a division of Continuing Development Services Corp., (CDS) have announced they will parnter together on packaging spices. The deal could add several jobs for people with disabilities, the companies say.

The collaboration will involve LiDestri using CDS Unistel's spice-packaging plant in Rochester, NY, which also packs seasonings and other dry-food products.

"To be able to expand our offerings to our customers is one thing, but to be able to do it by sourcing additional goods from CDS, and thus help employ our fellow citizens with developmental disabilities, brings tears of joy to my eyes," states John LiDestri, president and CEO of LiDestri Foods . "We will be able to grow the importance of our company to our customers because we will be able to ship them more and diverse products. At the same time, we are helping to fulfill our corporate social responsibility."

CDS Unistel provides job training, individual placement and support work opportunities for more than 230 individuals with developmental disabilities.

The filled, sealed jars are loaded in counts of eight into corrugated trays on a combination tray packer/shrink tunnel and are shrink-wrapped into snug bundles.

which nearly doubled, McAndrew says. "This jar can be stacked higher, and reduces damage in warehousing and distribution."

Independent testing conducted by the **Rochester Institute of Technology** showed that the jar incorporating VCT technology is able to be stacked (as finished product in case loads) as many as five pallet loads-high.

Fioravanti says that while PET containers have been used to package hot-filled products before, VCT technology provides improved performance in production.

Symmetrical and sustainable

Giovanni (John) LiDestri, president and CEO of LiDestri, concurs. "Our previous PET jar was a challenge to run due to the labeling complexities. This slowed our lines down, which reduced output. When you're as busy as we are, speed isn't only desirable, it's absolutely necessary. The

VCT design is symmetrical, the labels go on cleanly and without distortion, so there are fewer line stoppages and reduced spoilage from misapplied labels. The new package has given us a more stable, predictable labeling process, and that has made a positive impact on our overall efficiency."

The jars are filled with sauce on a rotary **Elmar** system and then capped on rotary equipment from **Fowler Products.** Labeling on the Krones equipment is next. The filled, sealed jars are then loaded in counts of eight into corrugated trays on a Krones tray packer/shrink tunnel and are shrink-wrapped with clear film. Reducing the amount of corrugated in its finished shipping containers is another measure that LiDestri recently took to improve sustainability, McAndrew says.

Smooth running

Today, the jars run smoothly on the line, and LiDestri enjoys the benefit of providing retailers and consumers with an eye-catching, enviro-friendly package. Accepted by curbside-recycling programs, the PET containers can be recycled into a host of new packaging as well as items like sleeping bags, clothing and even auto tires.

More information is available:

Constar Intl. Inc., 215/552-3700. **www.constar.net**
Crown Holdings Inc., 215/698-5100. **www.crowncork.com**
Fowler Products Co., 877/549-3301. **www.fowlerproducts.com**
Fort Dearborn Co., 847/357-9500. **www.fortdearborn.com**
Krones Inc., 414/409-4000. **www.kronesusa.com**
Pace Packaging, 973/227-1040. **www.pacepkg.com**
Rochester Institute of Technology, 585/475-2411. **www.rit.edu**

Trends for 2010

Seven key observers identify the economy, sustainability, private branding and other developments likely to **IMPACT PACKAGING** during the coming year.

John Kalkowski, Editorial Director

If it were easy to foretell the future, we'd all be millionaires. However, predicting what's ahead for the packaging community in 2010 is not like picking horses at the racetrack. *Packaging Digest* reached out to seven packaging observers to discover their informed opinions on what trends are likely to impact packaging in the coming year.

Not surprisingly, respondents unanimously mention sustainability as a major trend that will continue to affect operations in packaging. However, several foresee some new twists on the sustainability imperative in 2010.

In a sure sign that the U.S. has not fully recovered from its worst economic slump in decades, the economy is listed as another major concern for packagers. At the same time and perhaps because of the slowdown, private branding has shown impressive growth and is developing into a trend to watch. Product and food safety also are likely to impact packaging, the seven say, while offering observations on other developing topics such as consolidation, material costs, color coding, value promises, open innovation and the integration of product processing and packaging.

Trends likely to affect packaging during 2010

	Trend 1	Trend 2	Trend 3	Trend 4
Jane Chase Institute of Packaging Professionals	Sustainability	Economy	Food Safety	
Pat Conroy Deloitte, Consumer Products	Economy	Sustainability	Product Safety	
Marla Donahue Flexible Packaging Assn.	Sustainability	Consolidations	Food Safety	Material Cost / Availability
Lynn Dornblaser Mintel Corp.	Product Value Promise	Sustainability	Color Coding	Private Brands
Michael Richmond Packaging & Technology Integrated Solutions	Open Innovation	Sustainability	Private Brands	
Glenn Ventrell Sara Lee Corp.	Private Brands	Sustainability	Microwave Packaging	
Chuck Yuska PMMI	Sustainability	Economy	Private Brands	Packaging/ Processing

Economy drives many trends

The current economic situation is a major driver for the trends affecting packaging, says Pat Conroy, vice chairman, consumer products, at Deloitte.

Since the start of the global recession, Conroy says, consumers, for obvious reasons, have taken a keener interest in searching for value in the products they purchase. He adds that there is evidence to suggest that these changes in buying behavior will last beyond the economic recovery. Additionally, in many industrialized countries the consumer base is undergoing a longer-term shift as the large Boomer group reaches retirement age and starts to spend less.

With many consumers believing that products simply have too much packaging, Conroy says manufacturers are downsizing and lightening the protective covering that goes around their products. "The benefits from these efforts are that many companies are realizing material savings in cost structures and increased demand from green consumers," he adds.

Chuck Yuska, president and CEO of the Packaging Machinery and Manufacturers Institute (PMMI), says his group recently conducted focus groups with 85 senior executives from consumer product goods (CPG) comapanies.

Based on these discussions, he says trends sprouting from the recession include increased demand for refurbished or upgraded packaging machinery, surges in demand for copacking and contract-packaging operations and consumers' new-found affection for private-label products.

Just as importantly, Yuska says, lean principles are cutting across all levels of companies' operations. CPGs are cutting costs throughout their businesses, reducing labor costs through automation and technology, rigorously evaluating all expenditures, upgrading and consolidating facilities for the sake of productivity and eliminating non-core or poorly performing business lines and products.

Consolidation's competitive impact

As a result of this, Marla Donahue, president of the Flexible Packaging Association, says consolidations will continue to impact most segments of packaging with fewer packaging suppliers creating increased competition.

Despite the widespread economic weakness, Conroy says global consumer interest in sustainability has not lessened.

"Consumers are increasingly interested in their personal impact on the environment and are demanding more from manufacturers. Further, escalating disposal costs from governments are creating new demand for packaging," she adds.

The economy is a big driver of how consumers make their choices, says Jane Chase, president of the Institute of Packaging Professionals (IOPP). Chase doesn't expect there to be a huge change in direction on sustainability, but that there will be demand for much more clarity around the messaging. "There have been some sustainability claims by companies that may be questionable, and consumers are really looking to get clarity

around what is really sustainable," she says. The need to define sustainability is growing, according to Yuska. "Consumers want to know what it means when a package is sustainable, and that means CPGs and other end users need to know, too."

Yuska says that he expects to see more discussion about codes, standards and oversights. "Expect plenty of discussion across borders, markets and industries about who defines the sustainable shade of green," he says. In the meantime, sustainability strategies within CPG operations will continue to emphasize reduction in energy, air and water use, as well as quality management, he says.

Consumers are interested in their personal impact on the environment and are demanding more from manufacturers.

Harmony sought on sustainability

While sustainability considerations have become a fact of life, according to Donahue, there is an emerging strong push for coordinated and cooperative efforts in packaging sustainability. She says that the U.S. packaging industry will definitely be impacted by the work of International Organization for Standardization (ISO) to harmonize packaging sustainability, with the possibility of bringing in elements of the European Union's Packaging Directive. In addition, the CEO Forum's Global Packaging Initiative and the Walmart-supported Sustainability Index Consortium will be creating measurement tools that packaging manufacturers will have to consider. "Climate change efforts around the world will also contribute to the need to consider sustainability in packaging decisions," Donahue says.

Sustainability is definitely here to stay, says Glenn Ventrell, director of packaging innovation and development for Sara Lee Corp. "A lot of people thought sustainability would go the way of RFID or be killed by the recession."

Companies are understanding and increasingly using life-cycle assessments to look at the tradeoffs between rigid and flexible packaging, he says, pointing out that with flexible packaging, two pallets of materials can equal a whole truckload of rigid incoming materials. Packagers and their suppliers are making advances in manufacturing flexible packaging from renewable resources such as sugar cane, Ventrell says, and he expects that dynamic to continue.

He explains that bioplastic can't be used in every application, but if the economics pay off, it's a good alternative. Ventrell says we will see more companies investigating these alternatives and there will be some successes.

"It won't be a wholesale movement at this point. It's too new for a lot of companies," he says. "Procurement is thinking it's too expensive. Supply chains are thinking it won't run on their lines efficiently or fast. However, companies that get out ahead of it will have a definite advantage. Mainstream companies will follow."

Lynn Dornblaser, director, CPG Trend Insight at Mintel Intl., agrees that a major trend in sustainability will be the growing use of bioplastics such as polylactic acid (PLA), which is currently being used most often by small companies for very specific products, such as bagged salads. However, she indicates that she expects Coca-Cola's PlantBottle, which has 25 percent PLA content, will have a significant impact on the market.

"If Coke can make it work, I think that it has the potential to create a lot of change when it comes to plastic bottles," she says, explaining that use of the bottle would allow consumers to engage in environmental responsibility without having to do anything differently.

"There are astounding numbers on how much petroleum would be saved. This would really resonate with consumers," Dornblaser says. "If it's successful, I would assume Coca-Cola would roll it out across all their beverages, and their competitors would be forced to follow suit."

Overall, there will be continued development in sustainability efforts, says Michael Richmond, president of Plastics & Technology Integrated Solutions (PTIS). "It will be more than incremental. It's about beginning to make some investment and think from a systems point of view to make it more than just an efficiency and productivity effort, which is then labeled as 'sustainable.'"

Private-label branding has never been as strong as it is right now.

Private brands are growing

Shifting consumer preferences in a slow-growth economic environment will likely continue to impact retailers and CPG manufacturers and their suppliers, says Conroy. Many retailers looking to improve margins are undergoing shelf-space rationalization, seeking to keep only the products that are most in demand. Additionally, interest in private-label products continues to ramp up, he tells *PD*.

With the current economic downturn, Ventrell says, "We're going to see people shopping on price who didn't shop that way before."

A lot of people thought sustainability would go the way of RFID or be killed by the recession.

Consumers' frugal frame of mind will continue to encourage a hunt for value, Yuska says, with national "value products" and private-label brands as viable options. This mindset is forcing brand owners to reformulate, rebrand and reprice products to avoid competing strictly on price. It's also increasing the importance of the package as a differentiator. "While consumers are also more

Continued on page 34

educated about the products they buy, they are still seeking, and positively responding to, innovations in products, packaging, advertising and branding," he says.

Packaging enhances value

Nationally branded consumer product companies concerned about losing market share are responding to these changes by offering enhanced value to their core customer base. As part of this effort, packaging is changing, particularly in many price-sensitive categories. Some companies are redesigning packaging to more strongly differentiate their brands.

"This is a very fascinating time in the U.S., when it comes to branded versus private-label because private-label branding has never been as strong as it is right now," says Dornblaser.

Packaging uniqueness is going to be a major differentiator for successful products, she says, adding that color coding on packaging within a product line to differentiate that packaging is another developing trend. She says a recent Mintel survey shows 64 percent of people in the U.S. say they like to see color-coded packages to help them distinguish between products. She uses Vitamin Water as an example, where every label color is for a different flavor and signifies a different functional benefit. "This simplifies the consumer shopping experience," she says.

Open innovation requires more than just innovation, according to Richmond. He says open innovation is looking outside the company's four walls for creative ideas and thinking that gets implemented into something successful.

"Some companies have recognized the need to go outside the company for innovation," Richmond says. "There are some 'not-invented-here' attitudes that need to go by the wayside."

Food-safety concerns

Food safety is the number-one issue for the public and will continue to affect packaging materials, according to Donahue.

Improving packaging to help prevent a large recall...is often far less than the cost of losing many customers.

As a result, companies are seeking new packaging that helps ensure healthy and safe products, according to Conroy.

He explains that recalls can be particularly damaging to a company's bottom line so packaging that can help prevent mislabeling, spoilage, product tampering, contamination or damage will likely be in demand. RFID-enabled packaging, in the years ahead, will help improve traceability, which is particularly important to fresh produce and meat companies.

"Most companies understand that the added expense of improving packaging to help prevent recalls or a liability case is often far less than the cost of losing many customers because of an unhealthy or unsafe product," Conroy says.

Concerns go beyond preventing product recalls. Health issues are encouraging consumers to seek out smaller portions and better-for-you versions of packaged food products. This is increasing the demand for new packaging. Ventrell points to microwave packaging innovations that tie in with healthy living and foresees more steaming and susceptor technology, which both browns and cooks foods, in microwave packaging.

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Sparkling finish for French champagne

A new presentation box and secondary packaging, and **THE NEW, INTEGRATED CASE-PACKING AND PALLETIZING LINE** supporting them provide a sparkling finish for Veuve Clicquot's champagnes.

Linda Casey, Associate Editor

Veuve Clicquot Ponsardin, Reims, France, has been innovating its bottling and packaging operations since Barbe-Nicole Clicquot Ponsardin simultaneously became a widow and the head of the champagne house when she was only 27 years old.

The first innovation of Widow Clicquot's is the *table de rummage*. Designed in 1816 to eliminate sediment (lees) from the champagne fermenting process, this table was cut with large, sloping holes pierced into its top where wine bottles could be placed head-down and gently turned over long stretches of time. This progressively brings the lees down into the neck of the bottles, easing their removal, reducing the amount of champagne lost during disengorgement and producing a sparkling wine of higher clarity.

Recently *PD* was invited to the champagne house to view the company's newest packaging innovation and the new case-packing and palletizing line supporting it.

From object to experience

The innovation is Veuve Clicquot's DesignBox, a paperboard box, which Stephane Bernelas, lead engineer of new packaging development, says was created with two primary design objectives: To enhance the luxury perception of Veuve Clicquot; and reinforce the champagne house's image as a pioneer in the champagne bottling industry.

The telescoping box features a die-cut opening on its outer left wall that encourages consumers to push the inner half out from its sleeve and reveal the champagne bottle inside. This bilateral action aims to transform the DesignBox from a static packaging element to part of the champagne drinking experience.

The result of a collaboration between Veuve Clicquot and its paperboard packaging provider **Seyfert GmbH**, the box also represents the house's eco-conscious philosophies. To encourage recycling of the secondary packaging, the mono-material box uses no protective coatings; has less than 5 percent of the packaging's total weight coming from inks, glues and solvents; and is made from forest products certified under the **Forest Stewardship Council**. The boxes also are delivered as flats that are erected onsite, thus reducing transportation needs and carbon dioxide emissions.

These eco-conscious manufacturing decisions did not negatively impact the esthetics of the brightly printed box. The rigid fluting that enables the box to have the same strength of a standard box with less paper also was discovered to be a superior printing surface.

3 Line five was designed to support THREE events

- The debut of the Veuve Clicquot DesignBox
- The debut of new secondary packaging
- An increase in production capacity to 8,500 bottles/hr.

Rewarding research

In order to effectively casepack and palletize the new packaging though, Veuve Clicquot was obliged to modify its operations.

The winery considered proposals from several vendors for the new end-of-line setup. Of all the

The new DesignBoxes travel up the infeed conveyors into the AN110 gantry packer.

The two-axis AN110 gantry packer is a multi-function machine with a payload of 250 kg (products and tooling). The AN110 packer, above, orients Veuve Clicquot DesignBoxes for proper facing.

proposals, one stood apart for its content and the reputation of the presenter. "**Cermex** put forth the most innovative solution, presented an in-depth prestudy and is known for its design office," recalls Yorick Roullet, the engineer in charge of implementation of the new production line.

All in a year's time

The new line, which is designated as line five at the champagne house's Reims bottling facility, was completed one year after Cermex was awarded the business. With close collaboration between the technical, production and maintenance departments at Veuve Clicquot, the new line was developed to support three upcoming events: First and foremost, the debut of Veuve Clicquot DesignBoxes; the launch of new cases for bottles to be sold without boxes; and an increase in production capacity to 8,500 bottles/hr, which Roullet says is high for the champagne industry.

To develop the line, Cermex drew upon three of its technology focuses: robot integration; automated format changeovers; and protection of the product as well as the quality of the finished packaging—to create a line that could handle 16 different formats initially, with the option of facing the presentation boxes and the bottles in the future.

The new line can handle 75 cl standard, lightweight, special or Grande Dame champagne bottles; 75 cl standard, lightweight or special champagne bottles in the Veuve Clicquot DesignBox in three sizes; 75 cl standard, lightweight, special or Grand Dame bottles in corrugated trays of three or six bottles lying flat, top-to-tail, then packed in a wraparound case of six to 12 bottles and, in the future, packed in a new secondary packaging for six bottles; and Veuve Clicquot DesignBoxes for individual 75 cl standard, lightweight, or special bottles packed in wraparound cases of six or 12 lying on their base or on their sides; and in the future, packed in a new secondary packaging for six bottles.

Keeping it compact

The line was installed in July 2009 and comprises two F272.40 tray erectors. One is newly purchased while the other was salvaged from another line

Continued on page 38

Nine technologies preserve and ensure high-quality packing

- Detection of non-glued trays at the gluing station and the expulsion of noncompliant trays.
- Another detecting device is located where the tray erector's two outfeed lanes merge into one lane, and the device identifies trays that are incorrectly glued.
- A step-by-step bracket conveyor transfers trays and DesignBoxes between the AN110 gantry and WB case packer.
- Bottle infeed/transfer is engineered to prevent contact with the bottle labels.
- Transfer of presentation boxes in a raised position avoids scuffing of the bar codes on the boxes' base.
- A vision system at the labeling zone outfeed checks the presence and position of product labels on filled cases.
- A bar-code reader verifies the presence of a bar-code label.
- A checkweigher and sorter validates that the case is complete.
- A high-performance servo-driven system at the P4 palletizer's infeed turns cases at +/-90 and 180 deg, which allows continuous operation with no jolting.

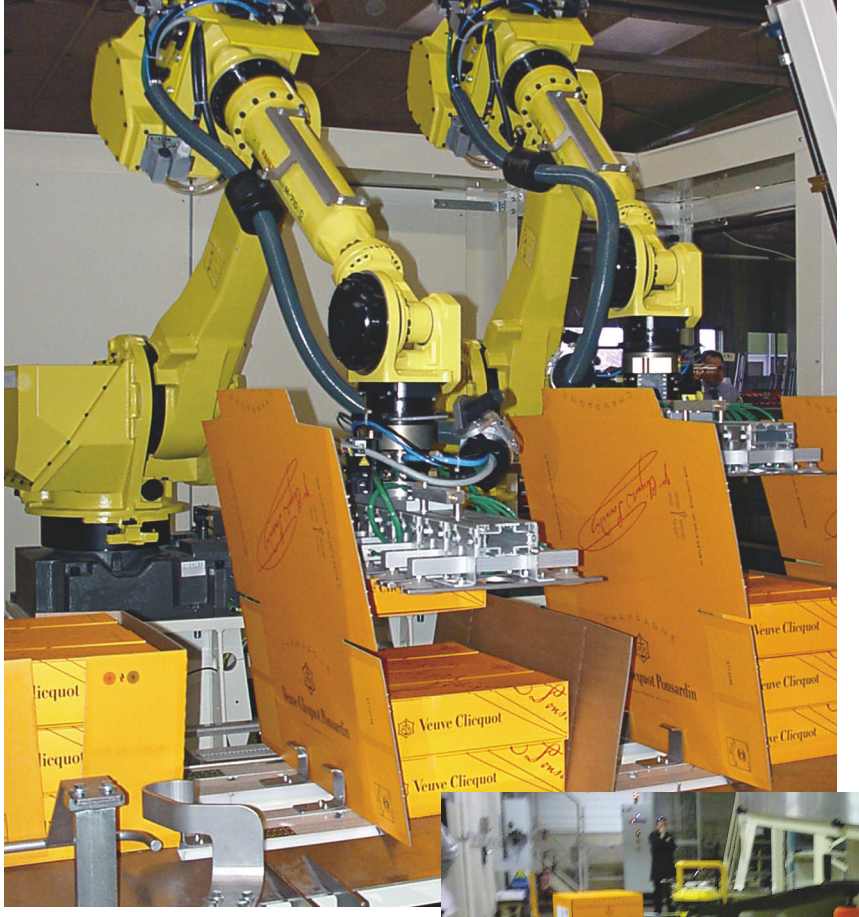
at the facility; two bottle or carton infeed lanes; a AN110 gantry packer; a WB45.80 wraparound case packer; a labeling and checkweighing area; rejection area; a spiral conveyor that lifts filled cases to a second level for palletization; two infeed lanes for palletization; a P432.20 palletizer; and **Schneider Electric** controls.

On the day of *PD*'s visit, Veuve Clicquot was packing champagne in its new DesignBoxes. The boxes and bottles entered the AN100 gantry packer through its two infeed lanes.

The AN100 has three features that protect the product and the packaging: An infeed/gripping system that is engineered to avoid contact with the bottle labels; specifically selected suction cups that prevent marking of the products; and the transfer of DesignBoxes in a raised position, which avoids scuffing the base, thus protecting the integrity of the barcode.

Roullet explained that marking is not just an important esthetic concern with champagne bottling, it also can affect the integrity of the bottles themselves. "There are seven kilos of pressure inside a champagne bottle, so marks can cause the bottles to explode," he remarked.

Filled boxes were transferred from the AN110 gantry packer to the WB45.80 wraparound case packer via a step-by-step bracket conveyor to minimize rubbing during transit. Integrated into this multi-function case packer are two **Fanuc** M710-50 kg



Two robots, integrated in the WB45.80 case packer, place oriented DesignBoxes into wraparound cases, above. A print-and-apply labeler, right, places a bar-coded label onto one side of a sealed wraparound case.

robots that enabled the machine to handle 16 formats at speeds up to 25 cases/min. Both Fanuc robots also are synchronized to finish packing two cases at the same time.

Filled cases moved to a checkweighing and labeling area. There are four labelers in this area. Two labelers apply preprinted labels to one side of the cases. The other two labelers are print-and-apply devices from **Zebra Technologies**, which print a bar-coded label and applies those labels to the other side of the cases.

These labels fulfill an important quality-control function as well as an informational purpose. "The labels guarantee that the cases have never been opened," Roullet explains.

A **Cognex** vision system then checked the presence and position of the case labels.

The newly labeled cases then moved up an **AmbaFlex** spiral conveyor to a second level. This enabled Veuve Clicquot and Cermex to keep the packaging line footprint to 25 linear m, which is important because the line is fitted between a wall and another line.

Once conveyed above the packing equipment, filled cases were divided from one lane into two conveyor lanes. A servo-driven case-turning system at the P432.20 layer-by-layer palletizer's infeed oriented the cases for palletizing. Oriented cases were then stacked by the P432.20 using a patented system that can prestack two to three complete layers, which Cermex says enables the machine to reach a maximum speed of 8.5 layers/min while maintaining a compact footprint.

Preprinted labels are applied to wraparound cases, below. The labels serve a quality-control as well as an informational need as they assure the recepient that the boxes have not been opened since leaving the winery.

Pallets travel up a spiral conveyor in preparation for palletization. The end-of-line system's two-level layout enables it to fit between a wall and another line.

Tradition of 'inherited audacity' continues

The newly installed end-of-line system will help the renowned champagne winery keep up with demand for its current package and bottle formats and sizes. It also was engineered with the champagne house's future in mind as Veuve Clicquot continues its tradition of packaging innovation with new sizes and formats.

More information is available:

Cermex Inc., 678/221-3570. **www.cermexinc.com**
AmbaFlex Inc., 877/800-1634. **www.ambaflex.com**
Cognex Corp., 508/650-3000. **www.cognex.com**
Fanuc Robotics America Inc., 800/477-6268 . **www.fanucrobotics.com**
Forest Stewardship Council—U.S, 612/353-4511. **www.fscus.org**
Schneider Electric, 888/778-2733. **www.schneider-electric.us**
Seyfert GmbH, 33 32-650-5500. **www.seyfert.de**
Zebra Technologies, 866/230-9494. **www.zebra.com**

Eight performance characteristics

The high performance of Veuve Clicquot's line can be partially attributed to eight characteristics:

- The automation of adjustments enables quick changeover times,
- The integration of atypical robots allows maximum use of their functionality for automatic changeover of the tooling,
- A reduction in weight of tooling, a user-friendly HMI and maximum access to all machines on the line,
- Quality controls installed throughout the line,
- The compact layout of all of the integrated equipment on the line, such as the numerous intermachine conveyors, four labelers, the checkweigher and sorter, the case elevator and the lane divider for packaging upstream from the palletizer, optimizes use of floorspace,
- Atypical methods to orient products and packages,
- Access to machine data from the champagne house's intranet,
- A new patented system for pre-stacking two or three complete pallet layers that enables the palletizer to achieve a maximum speed of 8.5 layers/min without an increase in the machine's footprint.

After having its bar code label checked by a vision system, a carton is moved onto one of the many step-by-step conveyors. A rejected carton would have been sent to one of the two reject lanes on the right.

Already equipped with an earlier stretch wrapper from the same supplier, Buffalo Rock became an alpha testing site for the No Film Break model, below. The machine is now in place permanently, running up to 55 pallets/hr.

Bottler bets on **stretch wrapper** and wins

Buffalo Rock Co., adds a no-film-break stretch-wrapping machine to **ELIMINATE BOTTLING-LINE STOPPAGES AND OPERATOR INTERVENTION.** The wrapper 'digests' damaged film rolls to increase film yield.

Lauren R. Hartman, Senior Editor

Buffalo Rock Co., a Birmingham, AL, family-owned Pepsi and Cadbury Schweppes bottler, is nimble enough to make the right decisions quickly. So, when given the opportunity to shake down an alpha model of **Lantech's** patent-pending No Film Break stretch-wrapping machine in 2008, it took the offer right away.

"At the time, we were planning to buy an equivalent Lantech rotary-arm machine and determined that this alpha machine trial was a low risk to us, with the manufacturer standing behind it and able to monitor its performance through an online connection," recalls George Garrison, general manager of manufacturing at Buffalo Rock. "This technology was brought to us by our film supplier, from whom we purchased the Lantech wrapper. In the worst case, we'd have a few days of downtime to bring in a standard machine if the new one experienced excessive stoppages," he adds.

Far from being a source of line stoppages, the new wrapper is all but ignored by Buffalo Rock's line operators, who tend to it only for film reloads. In fact, the No Film Break machine is so predictable, Garrison says, that line operators often load it with scuffed or partial rolls of film that have caused stoppages on other stretch-wrapping machines in the plant. As a result, overall film yield at the plant has improved.

"It's hard to say by how much it has improved, because we have seven other wrappers without this technology. A guess would be 15 to 20 percent," Garrison tells *PD*. "Most of the savings comes from being able to run rolls of film that may have a defect, that wouldn't run on other wrappers. We can now run that kind of film on our new wrapper," he says.

A first in the plant

Having success with an earlier Lantech stretch wrapper, Buffalo Rock again contacted

Closeup, right, shows 2-L bottles being wrapped in 70-ga film with about eight revolutions/pallet.

equipment/film distributor **Piedmont National** about getting another wrapper, Garrison remembers. The type of machine that the bottler needed was similar to an all-new model Lantech was readying for field trials with its patent-pending No Film Break technology.

Garrison says that a critical issue with this equipment or any other stretch wrapper is consistent output of the bottling line. "When we run 40 to 55 pallets an hour, any stoppage at the stretch wrapper requires immediate response from the operators," he says. "That's been a non-issue with this particular machine, and a first in our plant. The uptime improvement and the ability to consume entire rolls of film are both great advantages to us."

Being one of the largest Pepsi bottlers and a full-line vending, catering and foodservice supplier, Buffalo Rock is now also the largest General Foods distributor. Founded in the late 1800s, the company established itself in the soft-drink business with its own product line, Buffalo Rock Ginger Ale, which it still makes today. Its main plant in Birmingham operates eight production lines for bag-in-box, canned and bottled beverages, supplying 45 million cases/year to its own distribution centers in the region, as well as others.

On the end of the eighth bottling line, which bottles assorted Pepsi products, the company began installing a **Busse/SJI** depalletizer, an ArrowFlo® air conveyor from **Arrowhead** and other systems. In 2008, it installed a new 80-valve **Bevcorp** bottle rinser/filler, a new palletizer from **PAI/Production Automation Inc.** and the Lantech stretch wrapper. The line now fills 400 2-L bottles and 800 20-oz bottles/min.

"After seeing videos of this new stretch-wrapping machine wrap loads without tearing the film from a roll of stretch film that had a hole cored into the side of it, we agreed to accept it," says Garrison. "And that's the way it has performed for us ever since—head and shoulders above anything we have seen before."

Metered film payout

The new rotary-arm straddle machine was designed for high-speed operations like Buffalo Rock's, with an in-line high-speed palletizer. Rated to wrap pallets at speeds up to 80/hr, and available with an option for 100 pallets/hr, the machine can handle various consumer and industrial products as well as shelf-ready packages and order-picked loads of mixed goods.

The No-Film-Break technology uses a metered film payout as the film roll carriage feeds prestretched film that recovers on the load to produce containment force. The machine also includes a Pallet-Grip® load-locking device, which bottom-wraps a load to the pallet and twists the film into a cable along the lower edge of the film web. According to Lantech, the film cable is wrapped with 50 percent more wrap force than without the film cable process. The film cable is secured below the deck of the pallet, while the remaining film web stays above the deck to secure the load. During the wrapping cycle, the machine positions the Pallet-Grip film cable above a forklift entry area, which allows a forktruck to pick up the load without puncturing the bottom wrap of film and compromising containment.

Using a visual management system, the stretch wrapper tracks the number of loads wrapped per film roll and how many pallets can be wrapped with film remaining.

Tracking data

Another feature that Lantech is introducing on the machine is a new visual-management system that provides detailed productivity reports to floor personnel or, via Ethernet, to a central monitor. Data tracked and charted in the machine control include machine capacity vs. true utilization, stoppages for starvation, film blockages or breakages, loads wrapped/hr and the shift, day, week and month. The system also tracks all of the loads wrapped per film roll and reports how many pallets can be wrapped with the film remaining on the roll. The latter lets operators budget their time efficiently for reloading the film. The machine easily consumes the film down to the roll core without the usual end-of-roll tears. "Certainly all stretch machines can run a roll of film down to the core," Caudill explains, "but film breaks increase dramatically as the roll diameter decreases, so operators normally discard a partial roll and reload with a fresh roll to prevent line stoppages."

The game to beat

While Buffalo Rock prefers to use 30-in.-W rolls of film, the No Film Break machine typically works with 20-inch rolls. The bottler uses 70-ga **Sigma** film (which the company obtains from Piedmont National), and has been averaging 161 pallets per roll with eight revolutions per pallet, according to a recent check of data in the machine's systems.

Rated to wrap pallets at speeds up to 80/hr, the system, above, uses a metered film payout method to wrap loads without tearing the film, even if the film is damaged.

After seeing the machine wrapping loads without tearing from stretch film that had a hole in it, we agreed to accept it.

Overall, Buffalo Rock is pleased with its new stretch-wrapper addition. The improvement in line uptime and the machine's ability to consume entire rolls of film are both welcome advantages, Garrison sums up. "It's amazing to watch this machine run rolls of film that have caused film tears on other machines," he says. "Our loads all look good and snug coming off this machine. If we were to need another wrapper any time soon, we would consider the No Film Break technology as the game to beat."

More information is available:

Lantech.com, 800/866-0322. **http://lantech.com**
Arrowhead Systems, 920/235-5562. **www.arrowheadsystems.com**
Bevcorp, 440/954-3500. **www.bevcorp.com**
Busse/SJI Corp., 920/326-3131. **www.arrowheadsystems.com**
PAI, Production Automation Inc., 334/281-4970. **www.palletizers.com**
Piedmont National, 800/849-8225. **www.piedmontnational.com**
Sigma Stretch Film, 201/507-9100. **www.sigmastretchfilm.com**

Laboratory workers at the Picatinny Arsenal in Rockaway, NJ, use a combination of industry-standard and custom testing equipment to ensure that the packaging meets tough military specifications.

Packing the Army's guns & ammo

New Jersey laboratory tests and develops **WEAPONS PACKAGING** that leaves virtually no room for design errors.

Joe Ogando, Contributing Editor

At first glance, the packaging the U.S. Army uses for its guns and ammo looks a bit like it's stuck in a time warp. Even though the weaponry itself has increasingly gone high-tech, the packaging still consists mostly of steel or wood containers that look like they could have seen action in World War II.

Outward appearances, however, can be deceiving. Today's military containers aren't your grandfather's ammo boxes. The military relies on packaging designs and materials that are every bit as modern as the weapons and ammunition inside.

Much of the Army's weapons packaging falls to the engineers working for the Armament Research, Development and Engineering Center (ARDEC) at Picatinny Arsenal in Rockaway, NJ. "Our mission is to package everything designed at Picatinny, and that's about 95 percent of the military's ground firepower," says Mike Ivankoe, supervisory packaging engineer for ARDEC. The list of "products" they package ranges from small arms to huge howitzers and all the munitions that go into those weapons.

Electronics need protection

Ivankoe says a couple of trends over the past 10 years or so have made well-designed packaging more important to the military than ever. One is the growing use of electronics, which makes weapons more effective but also more delicate and costly. For example, Ivankoe and his team have designed packaging to protect precision-guided munitions costing tens of thousands of dollars per round. There's also been an ongoing trend to make munitions safer during storage and transport.

"There's been a growing awareness over the past 10 years that packaging is a crucial part of a munitions system—not just something you strip away and leave on the battlefield," he says.

In some ways, the design goals for military and civilian packaging don't differ all that much. "Our packaging protects against a variety of environmental threats, just like commercial packaging," says Ivankoe. He cites resistance to temperature extremes, moisture, impact, UV radiation, electromagentic interference and vibration as a few examples. And just like their commercial counterparts, ARDEC's packaging engineers also design with cost, weight and size constraints in mind.

There's been a growing awareness over the past 10 years that packaging is a crucial part of a munitions system.

What sets the military apart, however, is how severe the environmental threats can be. According to Steven Sicoli, an ARDEC packaging engineer, Department of Defense specs call for the packaged weapons and munitions to withstand temperature extremes from -65 to 160 deg F as well as drop tests–up to 7 ft without damage to the product and up to 40 ft without detonation. Packaged goods are also put through vibration tests at high and low frequencies to simulate the many different transportation conditions, as goods make their way from the factory to the battlefield.

In addition, military packaging has to meet longevity standards that include a lifespan of 20 years in protected warehouse settings and more than two years under field conditions. Finally, the military assesses packaging for its ability to hold up against nuclear, biological and chemical weapons. "We have to worry about of lot of things industry doesn't worry about," Sicoli says.

One application that highlights the difficulty in creating military packaging involves the Excalibur GPS-guided artillery round, which debuted in Iraq in 2007. Ivankoe notes that this 155-mm precision round bristles with guidance-related electronics, which add a fragility factor to an otherwise rugged munitions product. Passing the 7-ft drop test on the packaged round's nose end was particularly difficult and required many engineering hours. "Creating the Excalibur packaging was a herculean task," he says.

Designing a 'cocoon' for shells

That task fell largely to packaging engineer Peggy Berkowitz, who came up with a foam-and-plastic "cocoon" that allowed the round, which weighs more than 150 lb when packaged, to pass all of its drop tests. Designed with input from finite element-analysis (FEA) software, the cocoon consists of 9# foam, 20# HDPE sheet and a structural plastic load spreader—all arranged with attention to the extrusion orientation of the plastics. Berkowitz says she had to shoehorn the entire structure into the 1.5-in. space between the Excalibur's nose and the interior wall of its wooden exterior container. "We had a limited amount of space, given the impact requirements," she recalls.

Noting that the use of electronics is on the upswing in weaponry and munitions, Ivankoe predicts that more and more military packaging will

require the same kind engineering approach that went into the Excalibur package. He says more and more of the packaging has to double as a Faraday cage and provide shielding against electrical fields.

Another important aspect of ARDEC's packaging mission is preventing munitions from blowing up–at least until they're supposed to blow up on the battlefield. Fire, bullets, fragments from other projectiles and various types of impact shocks can all cause unwanted detonation, and ARDEC's packaging increasingly helps mitigate these threats as part of a design approach known as "Insensitive Munitions," or IM.

IM's stringent thermal and impact requirements dictate that the mechanical design of the munition, the selection of its energetic materials and its packaging all work together as a system. "A lot of the IM requirements cannot be met unless the munition and its packaging are designed as a system," Ivankoe says. For that reason, ARDEC's packaging engineers serve as part of the munitions design team from the beginning of a project. "There have even been cases where munitions designers have made changes to the munitions to accommodate the packaging."

Compliance poses challenge

Yet even with a systems design approach, IM compliance isn't easy to achieve. Sicoli notes that very few products pass the full battery of IM tests required of all new munitions. In fact, the most recent example he cites was the XM155 Spider Grenade program from 2005.

Ivankoe credits IM, which has been ramping up since the 1980s, as raising the profile of the packaging in the military. "Packaging is no longer seen as something sacrificial," he says.

Indeed, some of ARDEC's most interesting packaging innovations are rooted in IM compliance. One case is a patented "ionmer window" that has been integrated into different types of metal munitions containers. Injection-molded from **A. Schulman's** Formion ionomer, the window melts at roughly 260 deg F, creating a vent in the side of the container if a fire breaks out. It's a key piece of IM packaging technology because the vented munitions burn rather than detonate.

Limiting plastics...for now

For all of the success that foams and the ionmer window have had in solving specific problems, don't expect the military to abandon its fiberboard tubes and metal boxes in favor of plastic outer containers or overpacks any time soon. These traditional container styles have had a long track record when it comes to meeting durability and cost requirements.

"So far, plastics haven't been good choice for us," says Sicoli, explaining that low-cost thermoplastics have trouble standing up to the thermal and mechanical load requirement of the military.

Still, there have been some nearly successful attempts to create all-plastic "ammo" containers.

Ivankoe and Sicoli pointed to one recent project to create a glass-filled thermoplastic composite package for mortar shells. This "monopack" was created as a handy alternative to the current pair of fiberboard tubes in a metal overpack. "The soldiers like the composite pack in principle," Sicoli says. And the container passed its initial gamut of impact and IM tests. The stumbling block is cost.

In the meantime, there is plenty of work to do to improve the traditional metal containers. ARDEC's packaging engineers are looking at corrosion-resistant coatings for metal ammo boxes instead of painted versions. ARDEC has also launched a way to come up with a set of interlocking containers that form a cube regardless of the containers' sizes. The new container design would replace the 18 container varieties with just six, which would cut costs. Says Ivankoe, "If we have to customize, we will. But we try not to reinvent the wheel."

More information is available:

A. Schulman Inc., 800/547-3746.
www.aschulman.com
Cincinnati Test Systems, 513/367-6699.
www.cincinnati-test.com
Lansmont Corp., 831/655-6600. **www.lansmont.com**

Custom test gear

ARDEC this summer unveiled a revamped Packaging Design & Prototyping laboratory. Located on the grounds of Picatinny Arsenal, the lab handles much of the Army's day-to-day testing requirements. Tests that involve actual live munitions, though, take place on a firing range.

The lab's lineup of test equipment includes several pieces customized for the gamut of packaging tests required by military standards. They are:

A leak tester from Cincinnati Test Systems. According to Steven Sicoli, the packaging engineer who led the efforts to revamp the lab, the leak tester is used to verify that munitions packaging holds a seal against 3 psi of internal pressure. "We run everything through the leak test after impact tests, to make sure that the seal is intact," he says. Cincinnati Test Systems customized the tester with a fixture that holds different sizes of rectangular ammo containers in the test chamber. It also added a test probe so that cylindrical containers, which don't fit in the test chamber, can be leak-tested through a testing port.

A vibration table from Lansmont. The table takes care of tests that simulate transport of goods over different road surfaces and in different modes of transportation. A 5 Hz test, for example, simulates loose cargo transported over a rough road. Higher-frequency tests are used to simulate the periodic vibrations associated with single-track vehicles. Sicoli says the vibration table is central to the POP, or "performance-oriented packaging," standards imposed by the Department of Defense.

An impact tester from Lansmont. Suitable for drops up to 8 ft, the lab's drop tester has also been customized with a custom impact surface that meets Mil Spec 1904. Before the purchase of this tester, engineers at the lab conducted drop tests by dropping packaged goods from a crane onto a metal floor plate. The new tester features instrumentation and a testing workstation that allows much better data collection than the "drop-it-from-the-crane" method. Rob Kim, a simulation and modeling engineer for ARDEC's Packaging Div., uses the data to validate the results from his FEA simulations, for example.

Aside from the custom equipment, standard thermal chambers and a small machine shop round out the design and prototyping lab's capabilities.

The **WEST COAST'S BIGGEST PACKAGING EVENT** offers special-focus pavilions, co-located shows and a conference on medical packaging design.

WestPack: California dreamin' and fortunes greenin'

David Bellm, New-Media Editor

California will become a mecca for packaging professionals from around the world next month, when WestPack returns to the Anaheim Convention Center, Feb. 9 to 11.

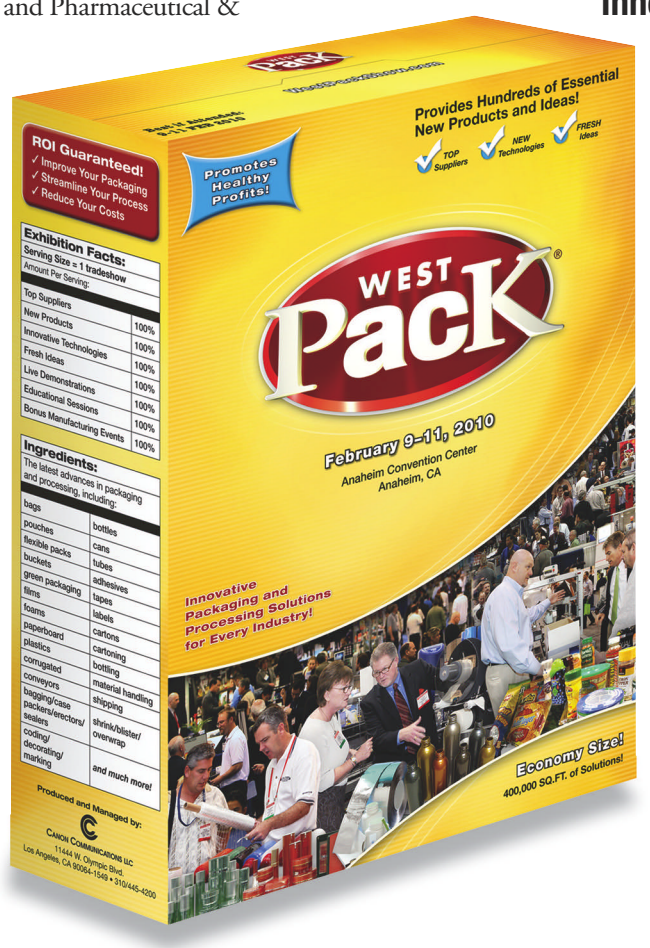
WestPack attendees get hands-on opportunities to evaluate new equipment, technology and materials that can lower costs, reduce waste, and increase efficiency. Visitors are exposed to a multitude of new, more cost-effective methods to help improve product and business margins.

Representing a broad range of industries and market segments, WestPack 2010 includes five special-focus pavilions on a wide array of subjects, including: Contract Packaging and Outsourcing Services; Cosmetic and Personal Care Packaging; Green Packaging; Material Handling & Logistics; and Pharmaceutical & Nutraceutical Packaging.

In addition, WestPack hosts a number of co-located events. Of particular interest to packaging professionals is Automation Technology Expo (ATX) West, which focuses on the latest technological advances in custom automation and assembly, robotics, control software and more.

Also popular among attendees is the Green Manufacturing Expo (GMX), which is co-located with WestPack. This event showcases software, materials, products and technologies that allow manufacturers to enhance sustainable manufacturing efforts. Within GMX, the Green Packaging Pavilion will be featured.

Other co-located events of interest include MD&M West; Electronics West; Pacific Design & Manufacturing; and PLASTEC West.



Innovation briefs

WestPack visitors can attend a variety of Innovation Briefs, short presentations given on a wide array of key topics, including: Anti-counterfeit technology; sustainability and automation; induction sealing technologies; rapid prototyping systems; and more. All of the Innovation Briefs presentations are included free with show registration and are conducted at WestPack's Innovation Briefs Theater, Booth 3541.

Representing a broad range of industries and market segments WestPack includes five special-focus pavilions on a wide array of subjects.

Lean factory showcase

WestPack is a showcase for the Lean Factory Group. This association comprises some of America's leading Lean Manufacturing product and service providers. These companies include trusted partners in the lean transformation of the early 1990s; they have worked closely with many of the world's leading companies for training, consulting and physical factory conversions.

The mission of the Lean Factory Group is to promote successful lean transformations through an event called the Lean Roadshow, at Booth 4091.

As part of the Lean Roadshow, WestPack visitors have opportunities to attend free educational sessions that demonstrate the importance of a data-driven approach to line design, the need to create an environment that supports lean with the right equipment and infrastructure and the tools to create a visual factory.

Attendees can witness the step-by-step creation of a perfect lean production environment, culminating in an actual build demonstration on an optimum lean line.

Space is limited for this complimentary feature, so visitors should indicate interest in attending the Lean Factory when they register.

Medical-device packaging conference

WestPack attendees also can register for a day-long conference session on medical-device packaging, offered at the co-located MD&M West Conference.

The medical-device packaging conference will be held on Monday, Feb. 8, the day prior to the opening of the main WestPack show.

WestPack 2010 will be held at the Anaheim Convention Center. Show registration is free for attendees who pre-register online. Attendees will otherwise be charged the $55 expo-only registration fee in order to register onsite.

For more information or registration, go to **www.westpackshow.com**

system integration

This is the last in a year-long series of columns summarizing the findings of the "Automation in Packaging" study, conducted by *Packaging Digest* and *Control Engineering* magazines last year (see www.packagingdigest.com/automationresearch).

Previous installments of this series have elaborated on the study's principal findings related to packaging automation in general and packaging integrators in particular. Topics have included what packaging integrators actually do, why packagers choose particular integrators, how packagers and integrators can work together, and who is responsible for what is in a typical packaging automation project.

The study found that packagers are generally quite satisfied with the design and implementation services provided by their system integrators, but there's still some room for improvement. Here are some of the comments packagers offered when asked to identify ways that system

Packagers should advise system integrators on how to improve their services

integrators could make their services more attractive (in no particular order):

- "An important factor is follow-through and follow-up."
- "Be flexible enough that your system design will be indistinguishable from our in-house designs.
- "Be honest in what you can and can't deliver. Also, if it takes eight weeks, tell me and make it happen.
- "Cost, cost, cost."
- "Service and support after the installation are more important than price up front."
- "Closer work/partnership with machine builders."
- "Ensure subcontractors and vendors meet all listed specifications. Understand the implication of other options and explain these to me."
- "Be more creative and never say it can't be done the way we want."
- "Allow customer input."
- "It's not the integrators, it's convincing the internal support that they will never be as good as the integrators."
- "Make sure you look at all packaging options. Don't just push equipment you are familiar with or tied to from a business perspective." See "Vendors and Integrators Both Cooperate and Compete," *PD,* November 2007, and "Automation Contractors vs. System Integrators," *PD,* August 2008.
- "Talk to the people who actually specify the material used on the machine for good integration."
- "The ability to add additional or peripheral equipment to machines and the handshaking between them is critical." Also see "Open Architecture Systems Can be a Mixed Blessing," *PD*, June 2008.
- "24-hour tech support." Several of these points have been explored in greater detail in related articles from *PD* and *CE.*

Consulting Editor Vance J. VanDoren, Ph.D., P.E., contributes articles on process control, advanced control and systems integration. Dr. VanDoren also edits Control Engineering's annual Automation Integrator Guide. Dr. VanDoren previously served the industrial automation industry as an applications engineer for General Electric and as a product marketing and development engineer for Texas Instruments' Industrial Automation Division. He currently manages a firm of consulting engineers in Lafayette, IN, where he develops custom control strategies for advanced process-control applications.

Newly installed ink-jet printers at Highland Wholesale Foods have eliminated the need for manual application of preprinted case- and tray labels with spray glue.

Marked improvements

Low-cost **INK-JET PRINTER** reduces labor requirements for Highland Wholesale foods, enabling the canned foods copacker to streamline operations and continue its value pricing.

Linda Casey, Associate Editor

Highland Wholesale Foods Inc., Stockton, CA, has replaced its manual tray and case labeling with ink-jet marking—resulting in more streamlined operations and reduced labor needs. "We would cut the label to fit the box end and glue it to the box with spray glue," explains John Sodaro, production manager for Highland Wholesale Foods. "This hand application was slow and very labor-intensive."

The 'value' of relationships

Founded in 2002, Highland Wholesale Foods Inc. is a copacker specializing in canned food products and is led by company president and CEO Greg Stagnitto, who also is Sodaro's nephew.

Both men have a strong background in agriculture. "For 47 years, I was a farmer in Maryville, CA, growing peaches," Sodaro explains. "Every summer, my nephew would come and help my Dad and I harvest peaches. My nephew knows how you pick peaches, how you take care of the bins, how you get them to the receiving stations and from there, how they get to the cannery.

"His father, Frank, also was involved in Allied Food Distributing, which was a company just like ours, but went bankrupt years ago," Sodaro adds. "Through his dad, he learned the business. My nephew knows how produce is picked and processed. Now he's on the distribution end."

This knowledge helps Highland Wholesale Foods establish longstanding relationships with the agriculture and cannery businesses to buy canned foods at the value pricing necessary to resell to the corrections industry. "We distribute to all of the state and federal prisons in the United States," boasts Sodaro.

Low-cost labeling

The foods arrive at the copacker processed and packed in unlabeled cans called "brights," which are stored in Highland Wholesale Foods' warehouse.

When an order comes in, Highland Wholesale Foods instructs its label supplier, **Valley Printing,** to prepare labels with the appropriate nutritional information. "We have on file the nutritional statements from many of the canneries around here because we are a label house," says Scott Gibson of Valley Printing's digital prepress department. "We make sure that all of the labels that we print are as compliant that we can. We're not lawyers, but we have been in the label business for 50 years."

The label job is imposed using **Kodak** PREPS Imposition Software, which enables Valley Printing to optimize press runs by allowing several jobs to be printed using one set-up—a practice called gang-run printing. Minimizing makereadies reduces setup cost, which results in cost savings that Valley Printing passes on to its customers.

The imposition then is trapped using a **Rampage** image processor, which then sends the plate-ready data to a **Fujifilm** Dart Luxel CtP device. The Dart Luxel platesetter images a Kodak plate, which is mounted on a six-color **Heidelberg** press. The six-tower press is used to print and coat the labels. Printed labels are finished on one of Valley Printing's many guillotine cutters.

Noting room for improvement

When the labels arrive at Highland Wholesale Foods, they are loaded onto one of the copacker's many labeling lines. Operators manually place the appropriate brights into the labeler's infeed.

After labeling, the cans are manually moved from the labeler's outfeed into trays and cartons, which are supplied by a number of vendors, including **Associated Packaging**.

During one of his customer support visits to Highland Wholesale Foods, Sean Rhodes, packaging specialist and sales partner at Associated Packaging, noticed the manual application of preprinted labels to filled cases and trays. "I noticed they were doing the tray and case labeling by hand," Rhodes explains. "At the end of their lines, they'd have one or two employees literally sticking labels on every case."

Part of the reason Highland Wholesale Foods manually applied labels was its need to control expenses so it can keep its value pricing. "They're not going to put $14,000 into a printer," Rhodes comments. "When you can tell them: 'Hey look, for under $1,500, we can eliminate a guy just applying labels at the end of your line. What are you looking at? You're looking at a week's worth of ROI (return-on-investment).'"

The low-cost printer that Rhodes recommended is a **Digital Design Inc.** Evolution I, a high-resolution printer utilizing **Hewlett-Packard** thermal ink-jet technology. While Rhodes presented a good argument

Double-stacked trays of canned peaches are marked, shrink-wrapped and hand-palletized for distribution.

An operator removes an imaged printing plate from the plate processor.

for the printer's benefits, Highland Wholesale Foods didn't jump to buy right away.

Low maintenance, high productivity

To convince the copacker, Rhodes placed a demo unit on one of the corrugated case packout lines. After a week, Highland Wholesale Foods purchased the device.

"With these machines from Digital Design. we have zero downtime on them," Sodaro exclaims. "We're marking 10 to 11,000 cases per cartridge, depending on the size of the print and how long the text is—and these machines don't clog."

The low maintenance requirements of the Evolution 1 are by design. "This is as close to maintenance-free as you can get," notes Steve Firmender, sales and marketing manager for Digital Design Inc. "Just like your desktop printer, these cartridges start right up in the morning. You might need to do a simple wipe on the cartridges, depending on the environment that the printers are in. There is no air or anything else that is used to keep contaminants or particles in the air away from the cartridge."

Not just cases anymore

Highland Wholesale Foods has expanded its use of the Evolution 1 to beyond just case marking. It now also ink-jets onto trays before they are shrink-wrapped in **Arpac** tunnels. "After seeing the speed and the quality prints on the boxes, it was just a matter of time before we put the printers on all of our production lines," Sodaro remarks.

In total, the copacker owns 12 Evolution 1 printers that print 27- to 29-character messages onto cases, trays and even double-stacked trays.

Produce arrives at the copacker, processed and prepacked in unlabeled cans called 'brights.'

More information is available:

Digital Design Inc., 800/967-7746. **www.evolutioninkjet.com**
The Arpac Group, 847/678-9034. **www.arpac.com**
Associated Packaging Inc., 562/944-7379. **www.associatedpackaging.com**
Fujifilm Holdings America Corp., 800/877-0555. **www.fujifilmusa.com**
Heidelberg USA Inc., 770/419-6600. **www.heidelberg.com**
Hewlett-Packard Development Co., Specialty Printing Systems, 800/752-0900. **www.hp.com**
Kodak, 866/563-2533 http://graphics.**kodak.com**
Rampage Systems Inc., 781/891-9400. **www.rampageinc.com**
Valley Printing, 209/537-4561. **www.valleyptg.com**

sustainability

Economic downturn pressures sustainable packaging progress

Hanging on by the skin of our teeth seems to be a good characterization of 2009. A year ago, the packaging community was riding a wave of layoffs and corporate contraction. The free-floating anxiety of being in the midst of a total financial collapse has abated and replaced with a nagging uncertainty if we are going to bounce or stagger out of a global recession. Whatever the course, we seem headed to a new "normal," as the confidence that drove exuberant, debt-funded consumption over the past 15 years is gone. Many companies recognize the importance of sustainability as a model for resiliency and adaptability in uncertain times and a critical strategy to face an increasingly challenged future. A recent survey by *Packaging Digest* and the SPC confirms this and indicates that rather than investing less, many companies are investing more on sustainability-related initiatives than ever before.

The focus on cost savings in 2009 drove eco-efficiency to new heights. Packaging that provided gains in lightweighting and dematerialization were the stars of the DuPont Awards for Packaging Innovation. But there are signs that eco-efficiency efforts are plateauing in some formats, which suggests innovation is needed to take packaging to the next level. Companies working on a variety of environmental issues are going to find many avenues with which to bring value to customers in 2010.

After five years of working on how to improve the environmental profile of packaging, the packaging community is positioned to respond to this development. There are a few lessons regarding packaging design, materials and innovation that can be brought to bear on products. Responding to the need to measure performance against a variety of environmental and other sustainability attributes, the Consumer Goods Forum initiated the Global Packaging Project to develop an understanding of the definitions, principles and metrics needed to evaluate the sustainability of packaging. This effort has centered on globally harmonizing indicators and metrics and how brands will request information from suppliers. Trials of these metrics will begin in the first quarter of 2010.

In December, the first meeting of the International Standards Organization TC122 subcommittee on Packaging and the Environment committee was held in Stockholm. Using the European CEN standards and Asian guidelines for environmentally conscious packaging as a start, this ISO subcommittee will develop international standards for source reduction, reuse, recycling, energy recovery, chemical recovery, composting and biodegradation within the next two years.

The down economy has had profound impacts on state and local governments, with California teetering on bankruptcy. With more pressure on scarce dollars, states and local governments see cost savings in Extended Producer Responsibility (EPR), and California is looking to adapt it specifically for packaging.

We have experienced a year of having to do more with less. The case for sustainability became clear in 2009, which positions us for great innovation and progress in 2010.

Anne Johnson is the director of the Sustainable Packaging Coalition, a project of GreenBlue (www.greenblue.org). For additional information, email info@sustainablepackaging.org.

PACKAGING DIGEST WEBCAST

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Amy Zettlemoyer-Lazar
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Speakers

John Kalkowski
Editorial Director, Packaging Digest & Converting

Anne Johnson
Director, Sustainable Packaging Coalition

The results of Packaging Digest's fourth comprehensive research survey reveal the growing awareness of sustainability and the influential role it plays in packaging decisions. If sustainability has an impact on your packaging business, join us for this Webcast to learn where your market stands on the issue NOW.

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3. An update on Walmart's scorecard and efforts to improve sustainability in packaging.
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Crushing **label** challenges

New label printer/applicators on 17 tomato-packing lines are providing multiple benefits at Palmetto, Fla.-based **WEST COAST TOMATO.**

Edited by **Jack Mans,**
Plant Operations Editor

Packaging labels play a key role in the supply chain. A well-designed label communicates important product information, helps manufacturers and shippers comply with government and industry regulations and standards, and (if bar codes are involved) acts as the cornerstone for automated tracking and shipping applications.

However, for a label to accomplish any of those tasks, it has to stay on the case. Just ask the staff at West Coast Tomato, a Palmetto, FL-based tomato-packing company that solved its labeling problems with a redesigned print-and-apply system, along with modifications to its material-handling equipment.

West Coast Tomato is a high-volume tomato packer that sells produce to restaurants, grocery stores, repacking companies and other customers across the country. While the plant is capable of processing and packaging up to 1 million lb of fruit in a single day, its labeling system had bogged down operations to the extent that management was ready to scrap the printers and start over.

Under USDA requirements, produce companies have to properly label each case of their product. West Coast, however, was only achieving 50-percent label accuracy with its previous system. "We had a very maintenance-intensive system," says John Darling, systems manager at West Coast Tomato.

"Our customers were complaining about the labels not being on the cases or falling off when they were delivered," he says. "We worked on that system for two or three years, trying to get it to operate correctly, and then we started looking for a replacement."

The plant operates 17 lines, each with its own print/apply station to label the cases. Two different automated fillers, each handling a different type of tomato, feed 25-lb cases of fruit to each line. As those cases merge, photoelectric eyes trigger the print/apply system to produce the correct label, depending on which filler the case came from, and apply the label as the case moves down the conveyor.

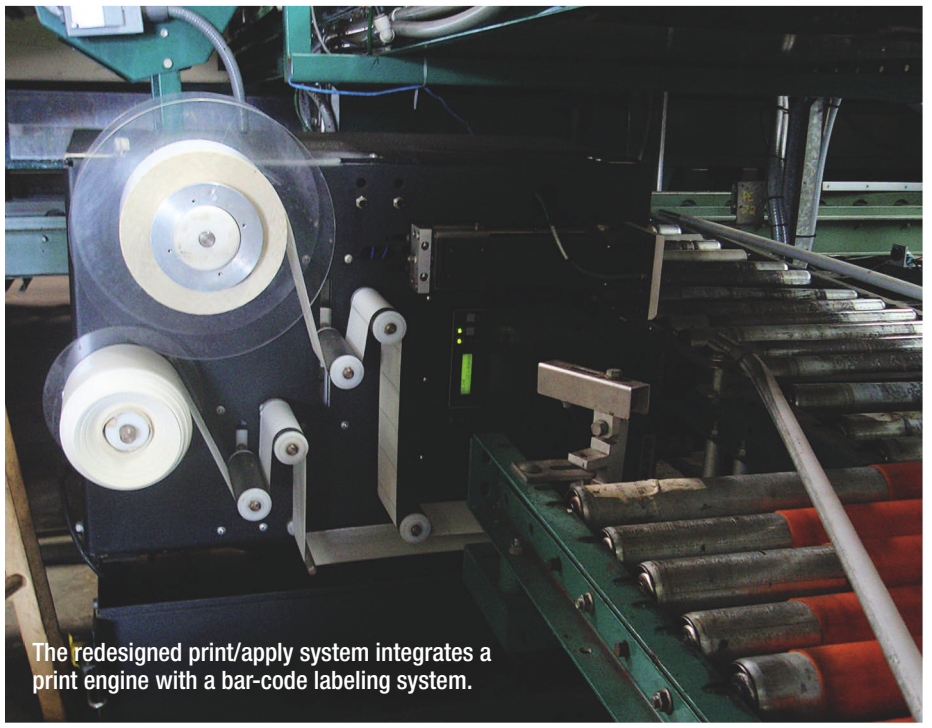
The system never worked correctly, according to David Moore, maintenance manager at West Coast Tomato. Cases were not only mislabeled, but the print/apply system was not able to effectively attach the labels. That meant that even if the labels made it onto the correct cases, they frequently fell off prior to shipment. "The cases weren't stopped at the applicator,' says Moore. "The labels would sort of get blown onto the cases, but they would just barely touch them."

The people at Cheetah were systematic, and had an excellent knowledge base. Our rate of missing labels has been reduced to virtually zero.

An employee had to manually check each pallet and re-apply any missing labels; a time-consuming

Two different automated fillers, each handling a different type of tomato, feed 25-lb cases of fruit to each line. As those cases merge, photoelectric eyes trigger the print/apply system to produce the correct label, depending on which filler the case came from, and apply it as the case moves down the conveyor.


Urethane covers on some of the conveyor rollers upstream of the labeling area improves case flow, and pneumatic case stops on the live roller conveyors help index and control the random flow of cases.


The redesigned print/apply system integrates a print engine with a bar-code labeling system.

process that led to even more errors. Employees also had to periodically scrape hundreds of stray labels off of the plant floor. The issues with the labeling system, combined with some conveyor problems, led to frequent jams and work stoppages, which negatively impacted the plant's processing throughput.

Taking a second look

West Coast Tomato originally thought an ink-jet system would solve its printer problems. They contacted local labeling and material handling systems integrator **Cheetah Systems LLC** to help them with their conveyor setup. But when Cheetah personnel saw what was happening with the printers, they suggested it would be less expensive to simply redesign the print/apply system. "They were so distraught with the original system, I don't think they believed we could get a label on every case in the right place each time,' says Gary Gatewood, vp at Cheetah.

Solving the label accuracy problem required fixes to the printer/applicator setup and to the material-handling equipment. Cheetah installed urethane covers on some of the conveyor rollers upstream of the labeling area to improve case flow, and then added pneumatic case stops to the live roller conveyors to index and control the random flow of cases. This ensured proper label adhesion and placement.

Improving label accuracy was more complex. Because two separate fillers feed each line, the printing system has to be able to distinguish which of two possible labels should be applied to each case while also communicating with a central label-control system. "West Coast Tomato had 17 lines and 34 fillers all being controlled by one central computer, with all of that data going back and forth," Gatewood says. "There were a lot of data crashes."

The Cheetah team decided that the most economical solution would be to modify the firmware, which was supplied by **Sato America Inc.** so that the printer at each line could store both label formats locally, and then load the correct one into the print buffer, based on input from the photoeye system.

Sato provided the patented, custom firmware modification, and Cheetah utilized the onboard PLC of the printer/applicator, so that the labeling operation could be controlled locally.

Cheetah deployed the initial prototype system in 2006 on a single line using the Sato M8459Se print engine along with Cheetah's Model 313-LPA-T bar-code labeling system, then expanded the solution to six more lines the following season.

System benefits:

- Achieves 95-percent accurate label placement
- Improves throughput and production speed
- Reduces material cost due to decreased label size
- Reduces downtime caused by label-system failures
- Reduces need for manual label checking and relabeling so employee was reassigned to additional duties
- Provides opportunity for additional label-based automation

West Coast now operates the Cheetah/Sato system on each of its 17 lines.

At the end of the second season of operation, Cheetah developed a new Windows® XP-based backend label-control system to replace the existing software, which was developed by an out-of-state vendor and was no longer supported. Cheetah embedded Sato's Label Gallery label-design and printing software into the system, allowing West Coast to select the label formats for each line using Label Gallery, and then load them into the printer memory.

Cheetah worked with West Coast to test and evaluate new adhesives to make sure the labels stayed in place. They also reconfigured the label applicator to accommodate a reduced label size. Cheetah supplies West Coast with Sato labels for the application and provides maintenance and support for the print engines, which Darling says has been "critical to keeping the process running smoothly."

Labels stay in place

The new label system easily achieved West Coast Tomato's primary goal of meeting its labeling requirements. "We have a 95-percent success rate in getting the labels on the cases, which is pretty miraculous in the tomato-packing industry," Darling says.

One employee, who previously spent most of the day checking cases and labels, has been assigned additional duties, and there are no longer piles of labels on the floor that have to be picked up by the cleaning crew.

According to Darling, the plant previously experienced 10 to 15 stoppages per day, due to the old labeling system, but "we basically don't have stoppages now," he says. "We react to a label applicator not working maybe two or three times per day."

"As long as we maintain the distance between the cases, we can just push them through left and right," Moore says. "It has really helped increase our speed." Now that the label system is working correctly, West Coast will be able to move forward with a planned automated palletizing system. The Sato/Cheetah system will play a key role in that project by providing scannable bar-code labels on every case.

While it took several years to complete the design, programming and implementation, Darling and the rest of the staff at West Coast are pleased with the way the system has improved plant performance and customer service. Darling credits the Cheetah Systems team for its holistic approach.

"Identifying all of the problems in the process and coming up with modifications to overcome those was challenging," Darling says. "The people at Cheetah were systematic, and had an excellent knowledge base. Labeling is a notorious problem in the tomato packing industry, but you can see on our pallets that all of the labels are consistently placed. Our rate of missing labels has been reduced to virtually zero."

More information is available:

Cheetah Systems LLC,
727/642-1668. **www.cheetahsystemsllc.com**
Sato America Inc.,
704/644-1650. **www.satoamerica.com**

newsmakers

MOVERS & SHAKERS

Sonoco names M. Jack Sanderas executive vp of global consumer businesses.

Crown Holdings Inc. promotes Thomas A. Kelly to senior vp—finance and Kevin C. Clothier to vp and corporate controller, succeeding Kelly.

Kiki Chosid
Conversource Inc.
customer service mgr.

Conversource Inc. appoints Kiki Chosid as customer service manager.

OMAC selects Uwe Keiter, B&R Global Account Management (B&R Germany), as the representative for technology suppliers in the executive committee of the OMAC Packaging Workgroup.

David Cybulski
Lenze-AC Tech
vp of finance

Lenze-AC Tech appoints David Cybulski vp of finance.

Motion Controls Robotics Inc. names Earl Raynal sales manager.

Windmoeller & Hoelscher Corp. hires Bob Duren as business development manager for its form-fill/seal division and James Nelson as technical manager of extrusion systems.

Motion Controls Robotics Inc. names Earl Raynal sales manager.

Blaige & Co. appoints Ben Brashears executive advisor, focusing on the packaging and chemicals markets.

The Aluminum Association elects Kevin Kramer, president, Alcoa Growth, to serve on the association's board of directors and appoints him to the board's executive committee.

GROWING & GOING

Yaskawa Motoman Mexico expands its facility to nearly 20,000 sq ft.

ABB reorganizes its automation divisions into two new divisions—Discrete Automation and Motion and Low Voltage Products.

Seegrid Corp. expands and moves its Pittsburgh headquarters to a 30,000-sq-ft facility.

BUYING & ALLYING

Key Technology appoints Métodos Rápidos S.A. de C.V. as its sales representative in Mexico.

A. Schulman Inc. acquires ICO, Inc.

CELEBRATING

Tegrant Corp., Alloyd Brands announce Sustainable Forest Initiative Certification for promoting responsible forestry practices.

Klöckner Pentaplast Ltd. (Crumlin, Wales, UK) receives the 2009 Caerphilly Business Forum Award.

new products equipment

Stretch wrapper The Octopus™ 808 twin automatic rotary ring series stretch wrapper with dual film carriages wraps up to 150 loads/hr. The stretch wrapper provides high throughput, wrapping loads twice as fast with less film changes. The two film carriages operate simultaneously to double the wrapping speed, while still operating independently to provide optimal load containment. The high-speed performance of the stretch wrapper can provide the user opportunities to combine multiple production lines into one wrapper, saving space and money. The stretch wrapper can also be programmed to continue wrapping, utilizing a single carriage if a film break occurs in order to provide redundancy and minimize downtime.
ITW Muller, 800/628-6787. **www.itwmuller.com**

Denester/loader A rotary multi-magazine denester/loader reduces the frequency of reloading containers into the denester and has quick-change magazines for rapid changeover from one container to another. Low-level sensors signal if the desnester should be reloaded. The machine also features continuous- or intermittent-motion conveyors, dual-drive section conveyors for filling and lidding, system speeds of up to 60/min and no-container/no-fill/no-lid system controls. Other features include a depositor-docking station, single-stack or high-speed rotary cup/tub denesting, tool-free cup/tub magazine tooling and high-speed spinning rod-lid denesting.
Hinds-Bock Corp., 877/292-5715. **www.hinds-bock.com**

Shrink bander The F-160 Evolution shrink bander applies shrink bands around the lids of tapered and straight-walled tubs. The bander is fully mechanical and needs no vacuum, pneumatics or spinning knives. F-160 Evolution uses dual servos for product handling and sleeve feeding while its compact components create a small machine footprint; the fully enclosed, stainless-steel version of the system easily accepts washdowns. F-160 shrink banders apply tamper-evident bands sized 1- to 2.3-in. in height and 2.5 to 6.75-in. dia to tubs and containers used for dairy spreads, ice cream, oatmeal, prepackaged delicatessen foods, cultured products, yogurt and dessert toppings.

PDC Intl., 203/853-1516.
www.pdc-corp.com

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EZ-Tek Industries, 800/877-5658.
www.eztek.com

Weigh/bagging An integrated, high-speed bagging system for lightweight baked goods includes a 14-head Primo Weigher and dual VS horizontal baggers. To reach required speeds, the co. reduced the product travel time between the scale and baggers. This was achieved by eliminating product spiraling with the weigher's individual lane chutes and a catch box system that allowed the product to be double staged. This increased production rates by 40 percent, successfully cycling at more than 60 bags of pita chips/min in increments of 200 g. The VS bagger automatically positions a premade wicketed bag, opens it and for waits for product. After loading, the VS bagger side shifts the bag to the sealer, positions a new bag and repeats the cycle.
Weighpack Systems, 514/422-0808.
www.weighpack.com

packademics

Center for Packaging Innovation and Sustainability at Michigan State University is set to blaze a new trail

The word "new" appears in front of my name most times these days as the "new" director of the School of Packaging at Michigan State University (MSU). At this writing, I have been on board for about two months, and have been through what feels like a much longer time, as I came upon very challenging times here at MSU. Right now, the university is facing unprecedented budget cuts, and our college is going through a major reorganization.

Additionally, my time and attention have been focused on getting the Center for Packaging Innovation and Sustainability organized and moving forward. Be assured, that it's serious. It's funded and is moving forward at a fast pace. Improving the global sustainability of packaging took a huge step forward last January when the Coca Cola Co. came forward with $400,000 to establish the center. We now have another three founding members on board, and other large donors are in the wings.

The center will be housed at the school and will serve as a think tank for packaging innovation and sustainability, while acting as a research and education hub to measure and reduce packaging's environmental impact.

Through academic partners in the Colleges of Engineering, Business/Supply Chain Management and Biosystems and Agriculture Engineering, the center will provide a platform for both collaborative, nonproprietary research and proprietary work to develop innovative packaging that can reduce production costs and improve sustainability. Under my direction, this center will not operate as academic centers usually do. We are not going to assemble a team of researchers and then bring in projects that suit that team's areas of expertise. Rather, we are going to ask industry what they need in research related to sustainability and what is needed in outreach and education.

Those issues will then be brought under the center's administration, where we will work both in partnership with and independent of MSU researchers to effectively address the issues of sustainability, discover environmentally and economically operative solutions and consider new ways to manage environment impact throughout the value chain.

True sustainability requires that economic, environment and ethical considerations be taken together. We cannot tackle each issue separately and then hope to successfully integrate them later.

The science community must have a voice in the dialogue, and science-based guidelines and audits must ensure continuous improvement and greater accuracy in measuring the effectiveness of any particular course of action. In addition, multi-disciplinary research and whole-system studies are needed to understand how the imposed changes will affect entire systems.

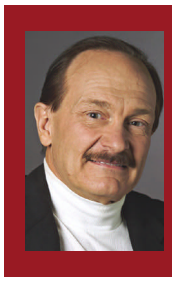
It was clear that a new type of partnership was needed to bring academia (sciences, packaging, engineering, supply chain, social science, etc.) together with packagers, industry and other stakeholders to implement a holistic approach to packaging sustainability.

A more holistic view will strengthen the role of science in finding appropriate solutions to issues and addressing the ways in which any proposed change will affect the entire system.

At the next Packaging Executives Forum planned for Jan. 26, I will lay out the center's mission, governance, its areas of research and its intention to meet outreach and education needs.

But, the forum meeting will also be a working session. I will ask tough questions of packaging community participants about how the new center should focus its efforts in their arena, which is now mired with more questions than answers.

In time, that will change as the new center begins its important work on both a national and global scale. Look for updates on MSU's Center for Packaging Innovation and Sustainability in this column in the coming year.



Dr. Joseph Hotchkiss is the director of the School of Packaging and the Center for Packaging Innovation and Sustainability at Michigan State University, East Lansing, MI.

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5 top online stories of 2009

"Flammable!" Should packaging for adult diapers carry warnings?

Are adult diapers a fire hazard that requires special warning on the packaging? The family of an elderly man who burned to death while smoking on a deck believes so.
www.packagingdigest.com/flammable

ABB Robotics featured in *Terminator Salvation* movie

The visibility of ABB Robotics reached a new level when Warner Brothers Studios released the new *Terminator Salvation* movie to North American audiences. ABB robots shared starring roles in the fourth of the *Terminator* film franchise.
www.packagingdigest.com/terminator

10 Innovative packaging ideas

How do you create innovative packaging that stands out from competitors and grabs attention on the shelf? Here are 10 great places to start, no matter what kind of product you're marketing.
www.packagingdigest.com/10ideas

Sex-line cereal box

A typo on Oregon-based Peace Cereal's packaging resulted in a phone-sex number being posted on the box. The health-oriented brand's packaging, which was supposed to have the company's 800 number, instead carried the number of a phone sex line.
www.packagingdigest.com/sexline

Kraft will chop number of suppliers

Kraft Foods Inc. announced plans to cut its base of suppliers in half. Included among the cuts will be packaging suppliers for a number of the company's brands.
www.packagingdigest.com/kraftsupply

Talk back!

Here's what readers are saying at www.packagingdigest.com/talkback:

None of us could open the twist-off top. . .I was so pissed that it was the end of my Miller Beer drinking for the rest of the trip. By the way, I do have a good grip, I am just under 300 lb and can hurt most men in a handshake if I put on the pressure.
David Malmquist, in response to "Miller Lite launches pint-size aluminum bottle."

Is it just me, or do they somewhat sound pathetic and desperate?
Mimi, in response to "Grolsch beer gets redesign as part of brand repositioning"

The science they use to claim they make PET biodegradable is a joke. All these companies are doing is making a material that at best degrades into small pieces. It's environmentally unsound.
Richard Smith, in response to "Kum & Go stores introduce artesian water in biodegradable bottle."

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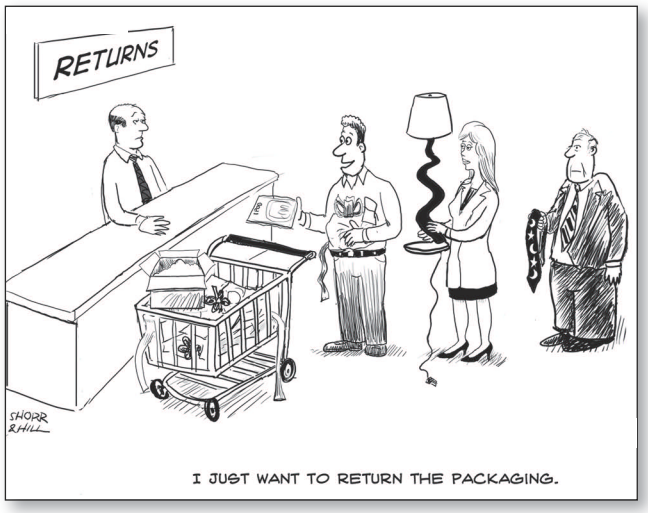

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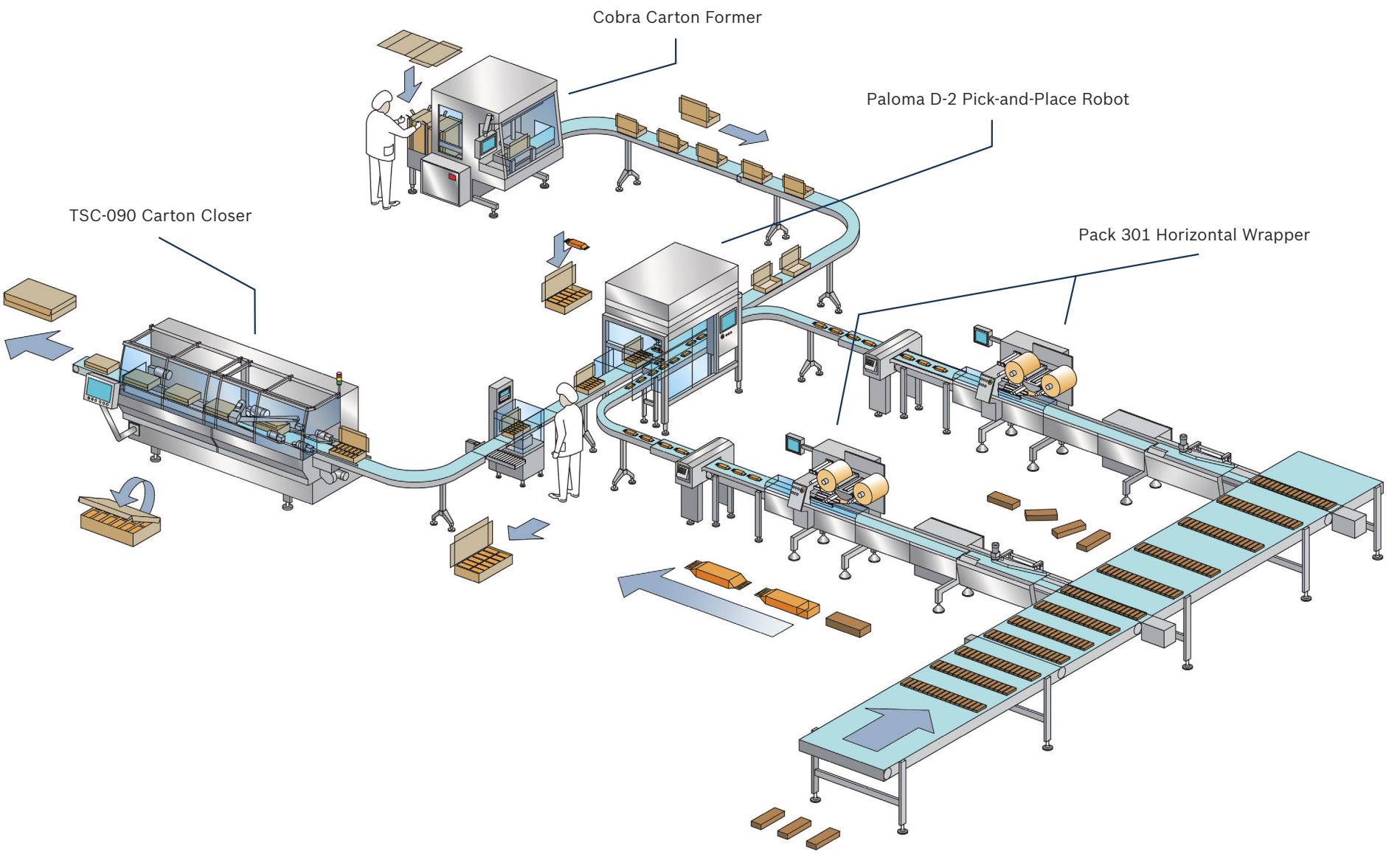

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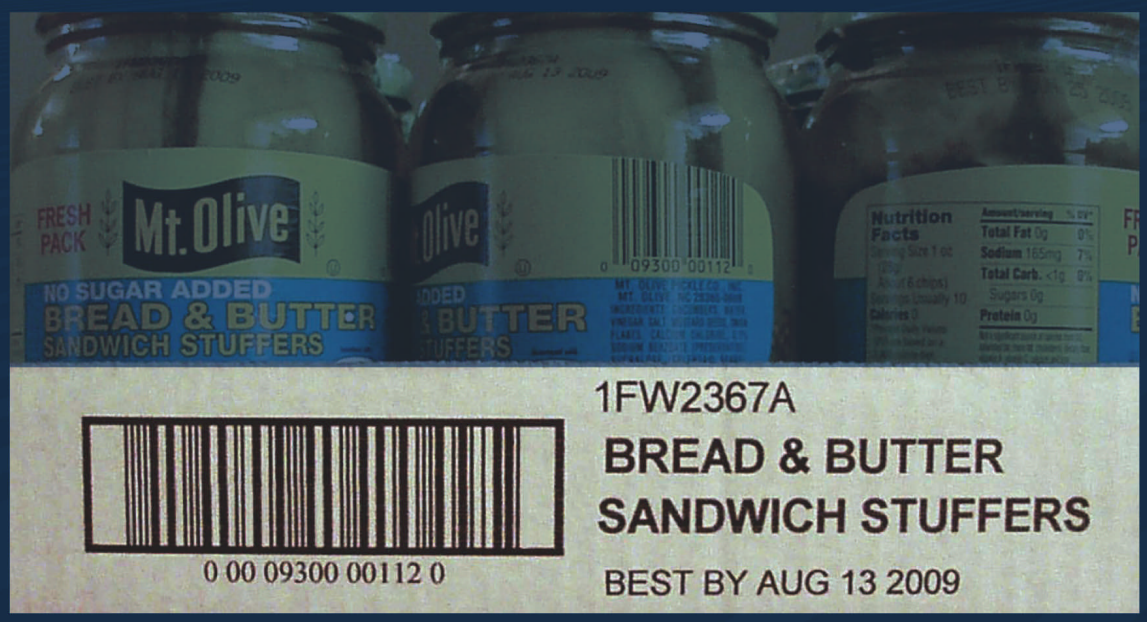

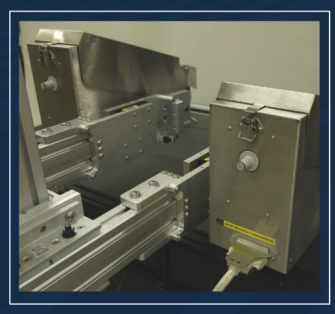

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